

Whyte Yarcowie Wind Farm Pty Ltd

July 2026

Whyte Yarcowie Wind Farm Transmission Line and Battery Energy Storage System

Environmental Impact
Report

wsp



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Whyte Yarcowie Wind Farm Transmission Line and Battery Energy Storage System Environmental Impact Report

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WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Glossary

Annual Exceedance Probability	The likelihood of a flood event occurring in any given year.
Associated Infrastructure Licence	A licence under the <i>Hydrogen and Renewable Energy Act 2023</i> that authorises the licensee to construct, install, operate, maintain and decommission infrastructure associated with authorised operations on land.
Characteristic	Associated with a noise source, means a tonal, impulsive, low frequency or modulating characteristic of the noise that is determined in accordance with the Guidelines for the use of the <i>Environment Protection (Commercial & Industrial Noise) Policy 2023</i> to be fundamental to the nature and impact of the noise.
Construction Environmental Management Plan	A document that describes how activities undertaken during the construction phase of the Project will be managed to avoid or mitigate environmental or nuisance impacts, and how those environmental management requirements will be implemented.
Day	Between 7 am and 10 pm as defined in the <i>Environment Protection (Commercial & Industrial Noise) Policy 2023</i> .
dB	Decibel—a unit of measurement used to express sound level. It is based on a logarithmic scale which means a sound that is 3 dB higher has twice as much energy. We typically perceive a 10 dB increase in sound as a doubling of loudness.
dB(A)	Units of the A-weighted sound level.
Environmental Impact Report	A report that assesses the potential environmental impact of a proposed development in accordance with the <i>Hydrogen and Renewable Energy Act 2023</i> .
Heritage Place	Place designated by the South Australian Heritage Register as being a place of heritage value.
L_{eq}	Equivalent Noise Level – Energy averaged noise level over the measurement time.
$L_{eq,10min}$	Equivalent Noise Level – Energy averaged noise level over 10 minutes.
The Project	Whyte Yarcowie Wind Farm BESS and Overhead Transmission Line
Night	Between 10.00 pm on one day and 7.00 am on the following day as defined in the <i>Environment Protection (Commercial & Industrial Noise) Policy 2023</i> .
Project Area	Land contained within the BESS Area, Belalie Substation Expansion Area, Underground Cable Easement and Overhead Transmission Line Corridor.
Regulated activity	A ‘regulated activity’ as defined by the <i>Hydrogen and Renewable Energy Act 2023</i> .
Renewable Energy Infrastructure Licence	A licence under the <i>Hydrogen and Renewable Energy Act 2023</i> that is granted to construct, install, operate, maintain and decommission renewable energy infrastructure, include storage and transmission infrastructure.

Standing water levels	Measurement from the reference point to the groundwater level in metres.
Threatened Ecological Communities	A unique group of plants, animals and micro-organisms that is protected under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Topography	The physical appearance of the natural features of an area of land, especially the shape of its surface.
Operational Management Plan	A plan to developed to manage the potential environmental impacts from a licenced activity in accordance with the <i>Hydrogen and Renewable Energy Act 2023</i> .
Viewpoint	A position providing a view of the proposed development from where an assessment is made to consider landscape character and the likely potential of visual impacts which may result as a consequence of the development.
Zone of Theoretical Visual Influence	The defined area within which modification to the contextual landscape as a result of the proposed development could be discernible to the naked eye. A nominated radius (e.g., 5 km, 10 km, 15 km etc) from the centre of the proposed site is adopted as the likely furthest extent of the likely Zone of Theoretical Visual Influence.

Abbreviations

ABS	Australian Bureau of Statistics
AEP	Annual Exceedance Probability
AGD – AAR	Attorney-General’s Department – Aboriginal Affairs and Reconciliation
AH Act	<i>Aboriginal Heritage Act 1988</i>
AHD	Australian Height Datum
AIA	Aeronautical Impact Assessment
AIL	Associated Infrastructure Licence
ALARP	As low as reasonably practicable
Applicant	Whyte Yarcowie Wind Farm Pty Ltd
BAM	Bushland Assessment Method
BDBSA	Biological Database of South Australia
BESS	Battery Energy Storage System
bgl	Below ground level
BHA	High-level BESS Hazard Assessment
BMS	Battery management system
BYDA	Before You Dig Australia
CEMP	Construction Environmental Management Plan
CFS	Country Fire Service
CT	Certificate of Title
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEM	Department for Energy and Mining
DEW	Department for Environment and Water
DHUD	Department for Housing and Urban Development
DIT	Department for Infrastructure and Transport
DRMP	Decommissioning and Rehabilitation Management Plan
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EIA Criteria	Environmental Impact Assessment Criteria
EP Act	<i>Environment Protection Act 1993</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>

EPA	Environment Protection Authority
EPO	Environment Protection Order
FFR	Fast Frequency Response
FTE	Full-time equivalent
HA	Heritage Agreement
ha	Hectare
HP Act	<i>Heritage Places Act 1993</i>
HRE Act	<i>Hydrogen and Renewable Energy Act 2023</i>
HRE Regulations	<i>Hydrogen and Renewable Energy Regulations 2024</i>
INTG	Iron-grass Natural Temperate Grassland of South Australia
IHC	Independent Heritage Consultants
ISP	Integrated System Plan
km	kilometre
kV	kilovolt
LiFePO4	Lithium Iron Phosphate
LGA	Local Government Area
LSA Act	<i>Landscape South Australia Act 2019</i>
LSALT	Lowest Safe Altitude
m	metre
MNES	Matter of National Environmental Significance
MW	megawatt
MWh	megawatt hour
NEM	National Energy Market
NNAC	Ngadjuri Nation Aboriginal Corporation
Noise Policy	<i>Environmental Protection (Commercial and Industrial Noise) Policy 2023</i>
NPW Act	<i>National Parks and Wildlife Act 1972</i>
NSW SIA Guideline	<i>NSW Social Impact Assessment Guideline and Technical Supplement</i>
NV Act	<i>Native Vegetation Act 1991</i>
NVC	Native Vegetation Council
NYWAA Control Policy	<i>Northern and Yorke Water Affecting Activities Control Policy</i>
OMP	Operational Management Plan
OTL	Overhead Transmission Line

OTL Corridor	70 m wide, 19.5 km long easement within which the OTL will be situated
OTR	Office of the Technical Regulator
P&D Code	Planning and Design Code
PBGW	Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia
PBTL	Pygmy Blue-Tongued Lizard
PCA	Potentially Contaminating Activity
PDI Act	<i>Planning, Development and Infrastructure Act 2016</i>
PMST	Protected Matters Search Tool
PIRSA	Department of Primary Industries and Regions South Australia
PM	Particulate matter
Project	The Whyte Yarcowie Wind Farm Transmission Line and Battery Energy Storage System
RDA	Regional Development Australia
REIL	Renewable Energy Infrastructure Licence
SAHR	South Australian Heritage Register
SAPN	SA Power Networks
SEB	Significant Environmental Benefit
SEDMP	Soil Erosion and Drainage Management Plan
SEO	Statement of Environmental Objectives
SIA	Social Impact Assessment
SPR	Source, pathway, receptor
TEC	Threatened Ecological Community
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
Umwelt	Umwelt (Australia) Pty Limited
VA	Vegetation Association
VMZ	Vegetation Management Zone
WAA	Water Affecting Activity/Activities
Wind Prospect	Wind Prospect Group Pty Ltd
WHS Act	<i>Work Health and Safety Act 2012</i>
WSP	WSP Australia Pty Ltd
WTG	Wind Turbine Generator
ZTVI	Zone of Theoretical Visual Influence

Executive summary

The Whyte Yarcowie Wind Farm Project

The proposed Whyte Yarcowie Wind Farm comprises a wind farm with up to 47 wind turbine generators (WTGs) and a combined generating capacity of approximately 280 megawatts (MW). The Project is located outside of the township of Whyte Yarcowie, approximately 180 kilometres (km) north of Adelaide, South Australia. The proposed WTGs will be up to 250 metres (m) tall, with a rotor diameter of up to 190 m.

To support the wind farm, Whyte Yarcowie Wind Farm Pty is proposing to develop a battery energy storage system (BESS) with a capacity of up to 270 MW and a maximum 8 hour duration (2160 MWh), along with technology to provide Fast Frequency Response (FFR) services to support grid stability and ‘firming’ capacity for the wind farm. Additionally, an approximately 19.5 km long, single-circuit 275 kilovolt (kV) overhead transmission line (OTL) is proposed to connect the internal wind farm substation to ElectraNet’s existing Belalie Substation (the Project). The final capacity of the BESS is still to be determined, however will be developed to meet the Office of the Technical Regulator’s (OTR’s) final FFR requirements for the wind farm; but no more than 270 MW/2160 MWh.

The OTL will be located within a 70 m wide easement and supported by transmission towers (or poles) with a maximum height of 50 m tall and spaced approximately 400 m apart. The works will also include a necessary expansion of the Belalie Substation and supporting connection works to enable the OTL to connect to the substation.

An energy storage system with a name plate capacity of greater than 5 MW that is to be connected to a transmission or distribution network within South Australian land or coastal waters is a prescribed as an associated infrastructure activity under Regulation 3(2)(b) of the *Hydrogen and Renewable Energy Regulations 2024* (HRE Regulations) and is a *regulated activity* under the *Hydrogen and Renewable Energy Act 2023* (HRE Act). The transmission of energy obtained from a renewable energy resource within South Australian land or coastal waters is also considered a *regulated activity* under the HRE Act. Under the HRE Act, a person must not undertake a regulated activity unless the activity is authorised, or exempted from authorisation, under the HRE Act. Where approval for a BESS or transmission of energy has not been sought under the Renewable Energy Infrastructure Licence (REIL) for the associated exploration of the renewable energy resource, approval may be sought via an Associated Infrastructure Licence (AIL) under Section 23 of the HRE Act.

Whyte Yarcowie Wind Farm Pty Ltd is seeking AILs for the construction, operation and eventual decommissioning of the BESS, OTL and Belalie Substation expansion under the HRE Act. Two AILs will be sought for the Project; one covering the BESS and another covering the OTL and Belalie Substation Expansion. This Environmental Impact Report (EIR) has been developed to support the AIL applications. A REIL for the wider Whyte Yarcowie Wind Farm has been sought under REILA 2.

Applicant

The Applicant for the Whyte Yarcowie Wind Farm Transmission Line and BESS is Whyte Yarcowie Wind Farm Pty Ltd. Whyte Yarcowie Wind Farm Pty Ltd was incorporated in 2017 and is a subsidiary of Wind Prospect Group Ltd.

Project benefits

Once operational, the Project would supply the necessary connection of the Whyte Yarcowie Wind Farm to the Belalie Substation, which will support South Australia's energy demand by supplying approximately 500–600 MW of renewable energy into the South Australian grid. The inclusion of BESS would provide FFR services to support grid stability and 'firming' capacity to support energy demand at times when there is a shortfall in renewable energy generation. This ability to time-shift electricity supply from times where there is a surplus; to times where there is a shortage would support energy affordability. Furthermore, the addition of the Project in the market would support competition, in turn putting downward pressure on wholesale power prices.

The Project would support the South Australian Government's target to achieve 100% renewable energy by 2027 and would support the State to expand its role as a leading producer of renewable energy as well as helping to position it as a net exporter of renewable energy, increasing the national supply of clean and more reliable energy. The BESS and OTL are expected to generate up to 150 direct full equivalent jobs (FTE) time jobs during construction and up to 10 FTE jobs during operation.

Approval requirements

The Project is seeking two AILs under Section 23 of the HRE Act; one AIL to cover regulated activities associated with the BESS, and another to cover regulated activities associated with the OTL. Both AILs will cover connection works at the Belalie Substation for each respective component.

Under Section 61(2) of the HRE Act, an EIR must be developed in respect of a proposed authorised activity. Regulation 31(2) of the HRE Regulations prescribes information required in the EIR.

As required under Section 62 of the HRE Act, an AIL must not be granted unless an approved Statement of Environmental Objectives (SEO) for the regulated activity is in force. The SEO must address the matters outlined in the EIR; and, set out environmental objectives, leading performance criteria, and reportable incidents for undertaking the activity.

The Project SEO has been prepared for submission to the Department for Energy and Mining (DEM) as a separate report. The SEO has been developed to address both the BESS and OTL.

Project Area

Site location

The Project Area is located between Belalie East and Whyte Yarcowie, approximately 180 km north of Adelaide.

The Project Area is situated in the South Australian Mid North Region, across two Local Government Areas – the Northern Areas Council and the Regional Council of Goyder – and is situated within the traditional lands of the Ngadjuri Peoples.

Natural environment

The Project Area encompasses approximately 159.50 hectares and is situated on farmland, largely consisting of cropping and sheep grazing; with an elevation ranging from approximately 700 m Australian Height Datum at the Belalie Substation Expansion Area to approximately 550 m at the eastern end of the OTL.

There are no major watercourses or water bodies within the Project Area, although there are a number of minor drainage lines across the site.

Vegetation across the Project Area is predominantly non-native vegetation (cropping or exotic species). Only small amounts of native vegetation exist within the Project Area comprising approximately ~ 3.5% of coverage, consisting of mostly of open grassland and small amounts of shrubland. Native vegetation was assessed to be in poor to moderate condition. No remnant woodlands or mallee exists within the Project Area.

Local community

The Project's local social area of influence encompasses the small rural townships of Whyte Yarcowie, Terowie, Belalie East and Hallett; which together have a combined population of approximately 413 people, median age of 48 years, and 236 private dwellings. The nearest regional centre is Jamestown, located approximately 20 km northwest, with a total population of 1,549 people (Australian Bureau of Statistics, 2021a).

Whyte Yarcowie is a very small settlement with limited residential development and no active commercial premises. Nearby townships provide limited services, with Terowie including a 24-hour roadhouse and motel, campground facilities, corner store and community services, while Hallett offers a general store, café, motel accommodation, emergency services and recreational facilities, including access to the Heysen Trail. Belalie East does not offer any local community services or facilities.

Land tenure, ownership and zoning

The Project is being developed wholly on Freehold land, across seven landowners

Works within local and state-maintained roads will be required to facilitate OTL crossings, to create two new access points for the BESS Area, and to support road upgrades (if required). Vegetation clearance may also be required within local and state-maintained roads to support these works. Engagement with Councils and DEM will be undertaken to facilitate the required agreements to support these works.

The Project is wholly located within the Rural Zone of the Planning and Design Code (P&D Code). There are no Subzones applicable across the area. Renewable energy facilities are an envisaged land use under the zone.

Project description

Proposed development

Key elements of the Project seeking authorisation under the AILs include:

- BESS with capacity of up to 270 MW with up to 8-hour duration (270MW/2160 MWh). The BESS Area will also include the following key infrastructure:
 - BESS substation
 - harmonic filters
 - electrical buildings
 - maintenance and storage buildings
 - water storage tank(s)
 - underground cabling
 - hard stand areas
 - internal access roads
 - site access and parking
 - drainage and erosion control
 - lighting protection
 - communications towers (if required)
 - site fencing and security
 - business identification and safety signage

- underground cable connecting the BESS to the wind farm connection at the Belalie Substation Expansion
- 19.5 km long, single-circuit 275 kV OTL to connect the internal Whyte Yarcowie Wind Farm substation (proposed under REILA 2) to ElectraNet's existing Belalie Substation
- expansion of the existing Belalie Substation to grid connection of the OTL
- temporary construction infrastructure is likely to include:
 - construction compound
 - equipment laydown areas
 - fuelling stations
 - washdown bay (if required)
 - temporary concrete batch plant (if required)
 - temporary fencing and security.

Temporary construction infrastructure is anticipated to be located within the BESS area, however the final location will be confirmed during the detailed design stage.

Community and stakeholder engagement

Wind Prospect has been undertaking community and stakeholder engagement for the Whyte Yarcowie Wind Farm since July 2022. Due to the number of nearby wind farms (both operational and under development) in the local area, and the increase in community interest in clean energy, ongoing and transparent engagement has been critical to the community's acceptance of the Project. The Applicant has been committed to being responsive to issues and feedback as they are identified by the community, with key issues of interest including, vegetation and fauna, visual amenity, noise, roads, traffic management, accommodation for construction workforce, cultural heritage, land use, including potential disruptions to nearby agricultural operations, electromagnetic interference, fire management and community benefit sharing. Engagement activities undertaken by the Applicant include establishment of the Project website, Project newsletters, community 'drop-in' sessions, a community sponsorship fund, engagement with council and Traditional Owners, engagement with mining exploration licence holders and applicants and engagement with the South Australian Government.

Construction, operation and decommissioning

Construction of the Project is planned to commence in 2027 and is expected to take 18 months; concluding in 2028. Construction of the Project is expected to require approximately 150 FTE workers across the 18-month period; peaking across a 12-month period. The Applicant will utilise local workers and businesses for construction and transport, where feasible.

Discussions with relevant providers and stakeholders are ongoing. Construction access for the BESS Area will be from two proposed new access points off Canowie Road, at the northern and southern ends. Construction access for the Belalie Substation Expansion will be off Gilfillan Road, with additional (anticipated) new temporary access points. Ongoing operational access would be from the existing access points to the Belalie Substation. Construction access for the underground cable and OTL will be from various locations but will seek to utilise existing access points, where possible.

It is anticipated that access points for the BESS Area will be maintained and utilised for operation; though it is anticipated that all other construction access points required for the Project will be remediated upon completion of construction and commissioning.

Environmental assessment and technical studies

Native vegetation and fauna

The Project Area encompasses approximately 159.50 hectare (ha) and is situated on farmland, largely consisting of cropping and sheep grazing.

The Project Area is predominantly non-native vegetation (cropping or exotic species). Only small amounts of native vegetation exist within the Project Area (approximately ~ 3.5% of coverage), consisting of mostly open grassland and small amounts of shrubland. Across the Project Area, four native vegetation associations have been mapped, all occurring within or adjacent to the OHL Corridor:

- VA A7 – *Austrostipa pspp./Rytridosperma* spp. Very Open Grassland
- VA B7 – *Austrostipa pspp./Rytridosperma* spp. Very Open Grassland
- VA B14 – *Enneapogon nigricans* Grassland
- VA B15 – *Maireana rohrlichii* Shrubland¹.

Native vegetation was generally assessed to be in poor to moderate condition. No remnant woodlands or mallee exists within the Project Area.

The Project will required clearance of up to 0.99 ha of native vegetation clearance, which has been assessed as a Level 4 clearance under the *Native Vegetation Act 1993*. To support the Project, a native vegetation clearance application will be lodged with the Native Vegetation Council, and approval will be sought prior to the commencement of any clearance works.

10 fauna species were recorded within the Project Area during the field surveys, which included nine native and one introduced species. These include the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *National Parks and Wildlife Act 1972* (NPW Act) listed Pygmy Blue-Tongued Lizard (PBTL) (*Tiliqua adelaidensis*) (EPBC Act Endangered; NPW Act Endangered). As a result of identifying PBTL in proximity to the Project, the Project Area was subsequently amended to minimise impacts to known PBTL habitat as far as possible.

The ecological assessment undertaken for the Project recommended that the Project is not likely to impact any NPW Act or EPBC Act listed vegetation or fauna species, or Threatened Ecological Communities (TECs).

While the Project (in isolation) has been assessed as unlikely to impact any species or TECs listed under the EPBC Act, under the Act the Project is required to be considered holistically alongside the wider Whyte Yarcowie Wind Farm project. Potential impacts from the wider project were documented in an EPBC Referral and submitted to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 9 August 2024 for potential impacts to PBTL (*Tiliqua adelaidensis*), Southern Whiteface (*Aphelocephala leucopsis*), and Iron-grass Natural Temperate Grassland of South Australia (INTG) TEC. The Referral was deemed a controlled action on 27 June 2025 for impact to *listed threatened species and communities*, to be assessed via Preliminary Documentation. The DCCEEW assessment is currently in progress.

Surface water

A Desktop Hydrology Assessment was undertaken for the Project to assess potential impacts to water resources and undertake a high-level evaluation of hydrological and flood conditions across the Project Area. This assessment included an update a flood model previously prepared for the wider Whyte Yarcowie Wind Farm, with the purpose of identifying flow paths and providing a preliminary review of peak flood depth, peak flood levels and peak flow velocities for 1% Annual Exceedance Probability (AEP) and 10% AEP flood events across the Project Area. The assessment identified a number of minor flow paths across the Project Area, and a risk of ponding occurring near the north-east end of the OTL Corridor under the 1% AEP flood event.

¹ Identified adjacent to OHL Corridor. No impacts are proposed.

No significant flood risks were identified. Outcomes of the flood modelling have been presented as flood maps, and will inform the detailed design to protect Project infrastructure and minimise impacts to drainage lines and dams.

Aboriginal cultural heritage

The Project Area is within the traditional lands of the Ngadjuri Peoples and the Ngadjuri Nation #2 Native Title Claim Area. These lands extend from Angaston and Gawler north to Panaramittee and Yunta. Native Title has been determined not to exist within the Project Area.

Common Aboriginal sites in the region include sand dunes, water bodies, fresh water springs, rocky outcrops, ochre sources, play pans, gilgai, cane grass soaks, and certain native trees. Aboriginal sites are also expected to be more prevalent in proximity to permanent or reliable water sources.

Two Heritage Desktop Assessments were undertaken for the Project by Independent Heritage Consultants (IHC) which recommended that the Project Area presents a low risk of potential damaged to Aboriginal sites, objects or remains.

Non-Aboriginal heritage assessment

There are no registered non-Aboriginal heritage places within the Project Area. The nearest listed non-Aboriginal heritage place is the State heritage listed Coolootoo Shepherd's Hat (SA Heritage ID: 25045) located approximately 2.5 km south-west of the Substation Expansion Area. An additional State heritage places were identified approximately 8.5 km south-east of the OTL Corridor: Cappeedee Homestead & Woolshed (SA Heritage ID: 14872). No Local, World, National or Commonwealth heritage listed places were identified in close proximity to the Project Area.

A site visit (undertaken 11 December 2025) identified two areas that may present undocumented non-Aboriginal heritage; both along the OTL Corridor:

- partial stone wall on corner of Mitchell's Road and Sunshine Road; S330 H241300 of CT 5359/624
- relics of stone farm buildings off Mitchells Road; S362 H241300 of CT 5359/620.

The detailed design will seek to avoid all direct impacts to the identified undocumented non-Aboriginal heritage sites, and control measures will be implemented during construction to avoid risks of indirect impacts. As such, a permit will not be required under the *Heritage Places Act 1993*, as all impacts will be avoided.

Noise assessment

An Environmental Noise Assessment was undertaken to predict compliance of operation of the BESS component of the Project with the relevant noise goal levels under the *Environmental Protection (Commercial and Industrial Noise) Policy 2023* (Noise Policy). Other components associated with the Project are not expected to generate significant operational noise, and hence were not included in the assessment. Furthermore, while the Project is associated with the Whyte Yarcowie Wind Farm, the BESS is not considered integral to the operation of the wind farm and is located > 14 km from the wind farm whereby cumulative noise impacts from the wind farm are unlikely. As such, the BESS was assessed as a stand alone Project.

The Noise Policy provides goal noise levels to be complied with at sensitive receivers based on the P&D Code Zone in which the noise source and the noise receivers are located. The Noise Policy states that where compliance with the goal noise levels is achieved, the general environmental duty under Section 25 of the *Environment Protection Act 1993* is satisfied in relation to noise from a noise source. For the assessment, criteria for 52 dB(A) during the day (7:00 am to 10:00 pm) and 45 dB(A) during the night (10:00 pm to 7:00 am) was deemed to be the relevant criteria for identified noise sensitive receivers; all located within the Rural Zone of the P&D Code.

Modelling indicated that the Project would be compliant with the applicable noise goal levels (both day and night) at all noise sensitive receivers.

Traffic impact assessment

A Traffic Impact Assessment (TIA) was undertaken to assess the traffic demands and impacts of the Project.

The Project Area has road access off Canowie Road (two proposed access points for the BESS Area), Gilfillan Road (one temporary access point for the Belalie Substation) and various locations for the Underground Cable Easement and OTL Corridor, seeking to utilise existing access points, where possible.

During the 18-month construction period, the anticipated number of vehicle movements will be in the order of 364 vehicle trips per day which will be distributed across a number of roads for access to the site.

Oversize vehicles will be required to support construction of the Project and are expected to travel from Port Adelaide via Port River Expressway, Northern Connector, Northern Expressway, Horrocks Highway, Barrier Highway, Copperhouse Road, West Street, Barrier Highway then onto Wilkins Highway, followed by the local, unsealed road network, including Canowie Road, Gilfillan Road, Mitchells Road and Booborowie Road. This access route would minimise locations where oversize vehicles would need to travel through larger townships and ungazetted routes.

Intersections and access/egress points proposed to be utilised by the Project have been assessed as appropriate for the proposed works, although intersection upgrades may be required at the Wilkins Highway/Canowie Road intersection, which does not currently achieve the current turn requirements for the posted speed limit. The access points will be constructed to accommodate the largest design vehicles expected to enter and exit the site.

During normal operations, the Project is expected to be remotely operated, generating very small numbers of vehicles for ongoing operations and maintenance activities. Therefore, significant impacts to the road network are not anticipated.

Visual amenity

A Landscape Character and Probable Visual Effect Assessment (LVIA) was undertaken to consider the potential visual impacts of the Project.

The existing locality and landscape surrounding the Project Area is characterised by agricultural land uses, the topography of the Northern Mount Lofty Ranges and the township of Whyte Yarcowie to the northwest. Visually, the Project Area is contained by ridgelines, which produce a series of visual envelopes that contain the wide agricultural plain where the Project is situated.

The Zone of Theoretical Visual Influence (ZTVI) for the Project comprises a 10 km radius around the Project Area. Within this area, four viewpoints were inspected for further assessment.

The LVIA found that generally, visual impacts of the Project would be most prominent within the 5 km radius around the Project Area; after which impacts would significantly reduce and eventually become negligible beyond 10 km. It was recommended that the introduction of the OHL within the landscape is likely to be perceived as a series of vertical infrastructure set against the backdrop of the surrounding ranges. While the suspension towers could be visually prominent in the landscape, their spacing and design mean the visual effect is spread across the locality. Impacts from the Project (predominantly the OHL) are likely to be most impactful along Mitchells Road, where the landscape character is visually open and sparsely vegetated. It is anticipated that the OHL would have a moderate visual impact, which would reduce with distance due to screening and the presence of other renewable energy infrastructure reinforcing the locality's energy production and modified context.

Aviation

An Aviation Impact Assessment (AIA) was undertaken for the wider Whyte Yarcowie Wind Farm project to assess potential impacts and provide aviation safety advice in relation to air safety regulations and procedures. The assessment included consideration of impacts from the OHL proposed under this Project.

The Project does not propose any tall structure that constitute a ‘tall structure’ requiring reporting under *Advisory Circular AC 139.E-01 V1.0 – Reporting of tall obstacles* (Civil Aviation Safety Authority, 2021), i.e. the Project does not propose the construction of any structures with a height of 100 m or more. Furthermore, under normal operating conditions, the BESS will not produce any plumes that would post a risk to aviation safety.

The AIA identified a private aeroplane landing area (air strip) on land adjoining the OTL Corridor may be impacted by the OTL. Wind Prospect are currently in negotiation with the owners of this air strip to have this decommissioned to minimise risks to aviation safety, in accordance with the recommendations of the AIA.

Air quality

A high-level air quality assessment was undertaken for the Project, which considered the potential dust related air quality impacts from the construction and operation of the Project.

The background air quality in the Project area is typical of rural Australia.

The potential air impacts during the construction and operation of the Project were assessed using a risk based qualitative approach. During construction of the Project, dust emissions may be generated from earthworks and the concrete batching plant (if required). Odour emissions for some of the activities e.g. excavation works of potentially contaminated soil, may also occur although it is anticipated that any such occurrence would be localised and not impact sensitive receptors off-site. Impacts from the operation of mobile plant and machinery would depend on the number and power outputs of the combustion engines, the quality of the fuel and engine maintenance, however these sources are considered to be minor given their intermittent nature and low number of sensitive receptors that may be impacted.

Given the nature of the Project, ongoing operational air quality impacts are not expected, and would be limited mostly to airborne dust due to vehicle movement on unsealed access tracks.

During decommissioning, low levels of particulate matter of varying size fractions and vehicular emissions may be generated during but are not expected to impact on the receiving environment.

BESS hazards

A High-level BESS Hazard Analysis (BHA) was undertaken to identify risks associated with BESS specific hazards and identify mitigation measures for consideration during detailed design and operation of the Project. Key hazards associated with the BESS relate to thermal runaway and fire. The BHA recommended that when mitigated by suitable battery module design and fire containment systems, the residual risk of BESS fire is reduced to low level.

The BHA has presented a range of design consideration for the detailed design of the Project, to mitigate risks associated with BESS thermal runaway and fires, among a range of other common risks associated with BESS. Mitigation and management measures will be incorporated into the detailed design and implemented throughout all phases of the Project; including emergency response procedures, to ensure BESS hazards are reduced to as low as reasonably practicable.

Public health and safety

During construction, operation, and decommissioning of the Project, public and third-party health and safety impacts may result from improper use or maintenance of plant or machinery (including electric shock), fires, inappropriate handling of hazardous substances, improper traffic management, aviation incidents, improper handling or management of contaminated soils, nuisance from dust or noise, and injury from trips or falls.

Risks to the public and third parties will be managed through establishment of site security measures and in accordance with the mitigation measures set out in the EIR and SEO. The CEMP, OMP and DRMP will include measures to address the requirements of the *Work Health and Safety Act 2012*.

Social and economic impacts

A high-level Social Impact Assessment (SIA) was developed for the Project to determine potential positive and negative impacts associated with the construction and operation of the Project.

The SIA defined the social area of influence of the Project by considering stakeholders most likely to experience direct and indirect socio-economic impacts, and their geographic location, and provides a baseline summary of the current socio-economic conditions of the social locality surrounding the proposed Project. The SIA considered that the area of influence for the Project is likely to comprise the communities of Whyte Yarcowie, Terowie, Belalie East and Hallet.

The SIA recommended that construction and operation of the Project is likely to result in a combination of both positive and negative community impacts, including but not limited to economic benefits to the local economy through increased spending and employment opportunities, as well negative impacts from disruptions due to traffic, noise or air quality impacts during construction.

Potential social impacts of the Project will be managed through ongoing engagement with potentially impacted stakeholders, as well as implementation of appropriate management and mitigation measures to be implemented through the CEMP, OMP and associated sub plans. Furthermore, Wind Prospect have committed to implementing Benefits Sharing Programs throughout operation of the wider Whyte Yarcowie Wind Farm, to distribute benefits from the project to neighbouring landowners, residents and surrounding communities. Programs are being developed through consultation with surrounding communities and other relevant stakeholders.

Planning assessment

The Project Area is situated under the Rural Zone of the P&D Code. Currently land use within the Project Area is predominantly grazing and cropping.

The Project falls under the definition of a renewable energy facility, which is a form of development that is explicitly mentioned to contribute to the Desired Outcome (DO) of the Rural Zone, to support the economic prosperity of South Australia, as stated in DO1. Deemed to Satisfy Criteria/Designated Performance Feature (DTS/DPF) 1.1 identifies renewable energy facilities as a land use that is envisaged within the Zone.

The following relevant Overlays are applicable to the Project: Hazards (Bushfire – General/Regional), Hazards (Flooding – Evidence Required), Key Outback and Rural Routes, Gas and Liquid Petroleum Pipelines, Native Vegetation, Murray Darling Basin, and Water Resources. The DOs of these Overlays have been used to inform the scopes of assessments and technical studies undertaken in support of the Project.

Environmental impact assessment criteria and assessment

An environmental impact assessment has been undertaken for the Project in accordance with the HRE Act Environmental Impact Assessment Criteria (EIA Criteria). Relevant elements of the environment considered in the assessment include native vegetation, native fauna, water resources, site contamination, Aboriginal cultural heritage, non-Aboriginal heritage, noise, roads and traffic, visual amenity, aviation, air quality, BESS hazards, public health and safety, social and economic impacts, and planning and land use.

Corresponding environmental impact and significance assessment tables have been included in the discussion of each element of the environment. As required under the EIR Criteria, the tables identify potential impact events, source, pathway, receptor, confirmation of the source/pathway/receptor, project phase and uncertainties and assumptions.

For each potential impact event, appropriate control measures have been developed to manage and mitigate impacts.

The residual overall environmental significance of all impacts after the application of recommended control measures ranges from negligible to moderate; with all residual impacts being as low as reasonably practicable.

Conclusion

The proposed Whyte Yarcowie Wind Farm project comprises a wind farm with up to 47 WTGs with a generating capacity of approximately 280 MW. To support the wind farm, Whyte Yarcowie Wind Farm Pty Ltd is proposing to develop a BESS with a capacity of up to 270 MW/2160 MWh, along with a 19.5 km long 275 kV OTL to connect the wind farm to the existing Belalie Substation.

Whyte Yarcowie Wind Farm Pty Ltd is seeking AILs under the HRE Act for each the BESS and OTL, for the construction, operation and decommissioning of the Project. This EIR has been developed to support the AIL applications. An SEO has also been developed.

A number of detailed technical studies and assessments have been undertaken as part of the Project in order to gain an in-depth understanding of the potential issues, impacts, and corresponding mitigation measures required. Environmental management measures will be applied whenever necessary, to help mitigate any potential impacts of the Project upon either the biophysical or social environment.

Potential impacts of the Project will be managed under a CEMP, OMP and DRMP which will be developed to reflect the outcomes of this EIR and requirements of the SEO. The plans will incorporate a number of specialist sub-plans that will be developed in consultation with relevant South Australian regulatory authorities to support adherence to all relevant guidelines and policies.

1 Introduction

1.1 Whyte Yarcowie Wind Farm

Whyte Yarcowie Wind Farm Pty Ltd is proposing to develop the Whyte Yarcowie Wind Farm. The proposed development comprises a wind farm with up to 47 wind turbine generators (WTGs), with a maximum height of 250 metres (m) and an overall generating capacity of approximately 280 megawatts (MW). The proposed wind farm is located along the east and south of the town of Whyte Yarcowie, approximately 180 kilometres (km) north of Adelaide, South Australia. Whyte Yarcowie Wind Farm Pty Ltd have sought a Renewable Energy Infrastructure Licence (REIL) for the Whyte Yarcowie Wind Farm under Section 19 of the *Hydrogen and Renewable Energy Act 2023* (HRE Act); assigned REILA 2.

To support the wind farm, Whyte Yarcowie Wind Farm Pty is proposing to develop a battery energy storage system (BESS) with a capacity of up to 270 MW and a maximum 8 hour duration (2160 MWh), as well as an approximately 19.5 km long, single-circuit 275 kilovolt (kV) overhead transmission line (OTL) to connect the internal wind farm substation to ElectraNet's existing Belalie Substation (the Project).

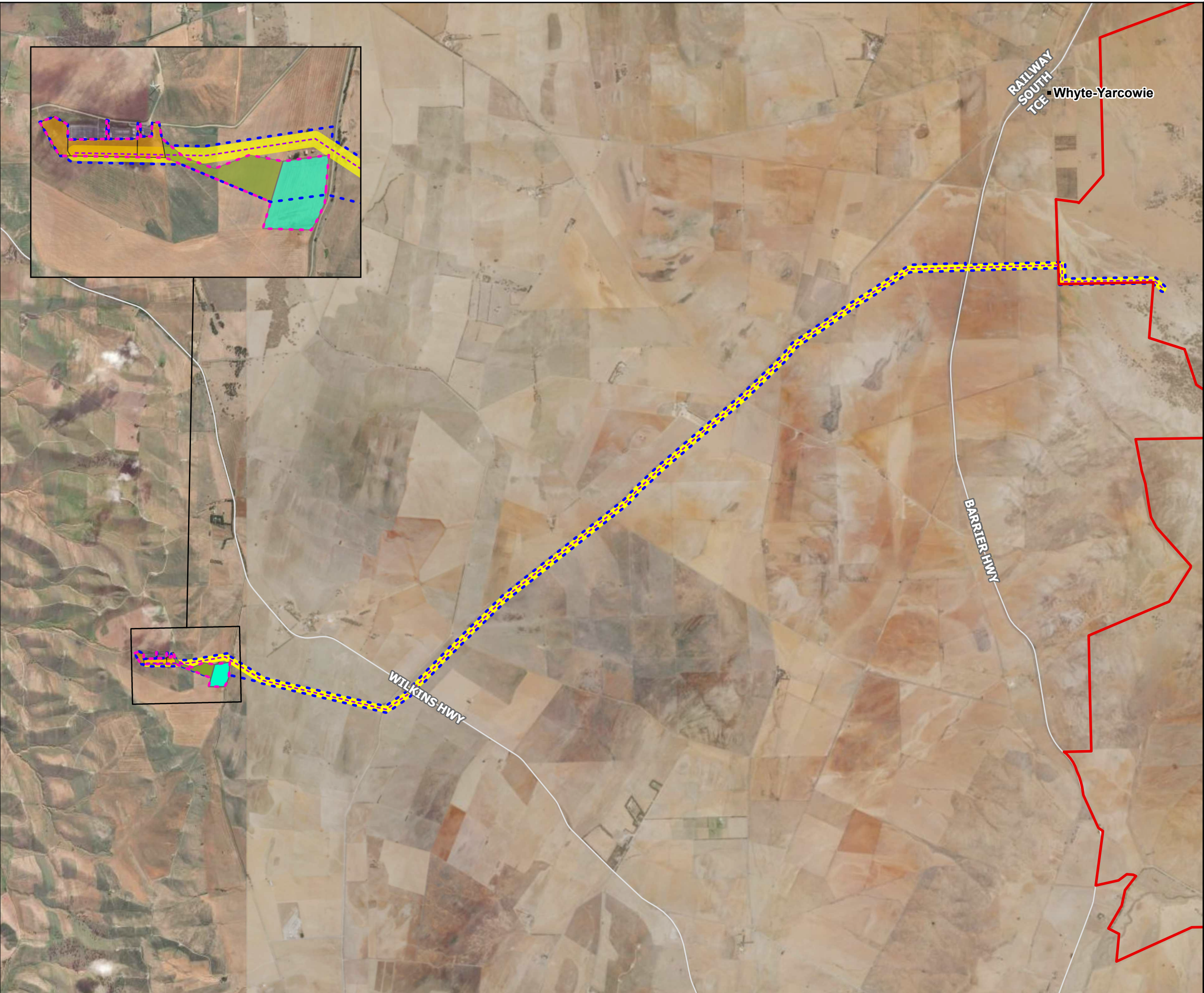
The BESS will be developed to provide Fast Frequency Response (FFR) services to support grid stability and 'firming' capacity for the wind farm. The final capacity of the BESS is still to be determined but will be developed to meet the Office of the Technical Regulator's (OTR's) final FFR requirements for the wind farm; but no more than 270 MW/2160 MWh.

The OTL will be located within a 70 m wide easement and supported by transmission towers with a maximum height of 50 m tall and spaced approximately 400 m apart. The works will also include a necessary expansion of the Belalie Substation and supporting connection works to enable the OTL to connect to the substation.

Associate Infrastructure Licences (AILs) are being sought for construction, operation and eventual decommissioning of the BESS, OTL and Belalie Substation Expansion under the HRE Act. Note that two AILs will be sought for the Project; one covering the BESS and another covering the OTL and Belalie Substation expansion. The proposed licence areas are shown below in Figure 1.1.

WSP Australia Pty Ltd (WSP) have been engaged by Wind Prospect Group Ltd on behalf of Whyte Yarcowie Wind Farm Pty Ltd to prepare the AIL applications and supporting documentation.

The BESS model, capacity, and layout; final transmission tower design and height, tower locations and spacing; and footprint of the Belalie Substation expansion will be subject to detailed design. To support the AIL application, supporting documentation has accounted for a worst-case scenario design utilising a maximum BESS capacity of 270 MW/2160 MWh and OTL design incorporating 50 m tall lattice towers. Furthermore, documentation has considered an extended investigation area for the Belalie Substation expansion; though it is expected that the final design will require a significantly smaller footprint.

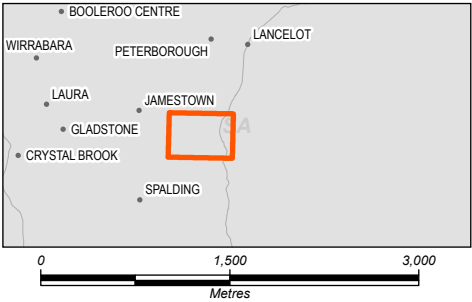


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 1.1
Licence Areas

Legend

- Localities
- State Managed Roads
- Wind Farm Boundary (REIL 2)
- BESS AIL**
 - BESS AIL Area
 - BESS Area
 - Underground Cable Easement
- Overhead Transmission Line (OTL) AIL**
 - OTL AIL Area
 - Belalie Substation Expansion Area
 - 70 m Transmission Line Easement
 - Transmission Line



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3
1:60,000 Date: 11/06/2026

Data sources: WSP, SA Government, MetroMap (Australia latest)
Vantor, Earthstar Geographics

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1.2 The Applicant

The Applicant for the Project is Whyte Yarcowie Wind Farm Pty Ltd. Whyte Yarcowie Wind Farm Pty Ltd was incorporated in 2017 and is a subsidiary of Wind Prospect Group Ltd (Wind Prospect).

Wind Prospect has developed eight wind farms in South Australia, seven of which are operational (Hallett I, II, IV and V, Snowtown, Mount Millar and Willogoleche); and is also currently supporting the development of the Brinkworth Solar Farm and Battery project.

WSP Australia Pty Ltd (WSP) has been engaged by Whyte Yarcowie Wind Farm Pty Ltd to support preparation of the AIL for the Project, under the HRE Act.

Applicant details are provided below in Table 1.1.

Table 1.1 Applicant details

Applicant details	
Name of Applicant	Whyte Yarcowie Wind Farm Pty Ltd
ABN	55 622 889 294
ACN	622 889 294
Project contact	Patrick Deveney, E: melbourne@windprospect.com.au
Postal address of Applicant	Level 5, 63 Pirie St, Adelaide, SA, 5000
Consultant contact	Tenille Anderson; E: Tenille.Anderson@wsp.com
Secondary consultant contact	Bronte Nixon; E: Bronte.Nixon@wsp.com
Postal address of consultant	Level 17, 83 Pirie Street, Adelaide, SA, 5000

1.3 Timing and staging

The Project is currently in the planning and concept design stage. Anticipated timeframes are presented in Table 1.2.

Table 1.2 Project schedule

Activity	Anticipated date
Wind farm REIL secured	Late 2026
BESS and OTL AILs secured	Late 2026
Secondary consents secured	2027
Construction commences	2028
Construction concludes	2030
Commissioning commences	2030
Full operation	2031
Decommissioning	From 2060

1.4 Scope of this document

This document has been prepared in accordance with the Environmental Impact Report (EIR) requirements outlined in Section 61 of the HRE Act and Regulation 32 of the *Hydrogen and Renewable Energy Regulations 2024* (HRE Regulations) (see Section 2.1.3).

The EIR has been prepared to support AILs for the Project in accordance with Section 23 of the HRE Act.

This EIR will:

- describe the activities that are expected to be undertaken for the Project
- describe the existing environment of the Project Area
- identify potential environmental impacts and consequences
- recommend measures to minimise the potential consequences.

A Statement of Environmental Objectives (SEO) that sets out the environmental objectives for this Project has been prepared. The SEO establishes criteria that determine how environmental objectives will be monitored and achieved. The SEO has been developed based on the findings of this EIR.

While two AILs will be sought for the Project – one AIL to cover regulated activities associated with the BESS, and another to cover regulated activities associated with the OTL and Belalie Substation expansion – the AILs will be supported by a single EIR and SEO.

1.5 Structure and content of the report

The structure of this EIR is outlined as follows:

- **Chapter 1 – Introduction:** provides an overview of the Project, the Applicant, and timing for activities proposed under the AIL application.
- **Chapter 2 – Legislative framework:** provides an overview of relevant legislation and the expected AIL application pathway.
- **Chapter 3 – Strategic context:** provides an outline of the Project benefits and objectives, and demonstrates consistency with state targets, local government guidelines and strategic directions.
- **Chapter 4 – Project description:** provides an overview of the key features of the Project, Project Area, and proposed construction, operation, and decommissioning activities.
- **Chapter 5 – Community and stakeholder engagement:** provides an overview of stakeholder engagement activities undertaken by the Applicant, matters raised, and the Project Consultation Plan developed to support consultation of the EIR and SEO under Section 61(4) and Section 63(3) of the HRE Act.
- **Chapter 6 – Environmental Impact Assessment:** provides an environmental impact assessment in accordance with the requirements set out by the Department for Energy and Mining's (DEMs) *Environmental Impact Assessment Criteria* (EIA Criteria) (2024).
- **Chapter 7 – Conclusion and recommendations:** provides a summary of the environmental assessment and its recommendations
- **Chapter 8 – Bibliography:** identifies the key reports and documents used to develop this EIR.
- **Chapter 9 – Limitations:** WSP limitations for this report.

2 Legislative framework

2.1 Hydrogen and Renewable Energy Act 2023

2.1.1 *Need for approval*

An energy storage system with a name plate capacity of greater than 5 MW that is to be connected to a transmission or distribution network within South Australian land or coastal waters is a *regulated activity* under the HRE Act and is prescribed as an *associated infrastructure activity* under Regulation 3(2)(b) of the HRE Regulations.

The transmission of energy obtained from a renewable energy resource within South Australian land or coastal waters is also considered a *regulated activity* and *associated infrastructure activity* under the HRE Act.

Under the HRE Act, a person must not undertake a regulated activity unless the activity is authorised, or exempted from authorisation, under the HRE Act.

Where approval for a BESS or transmission of energy has not been sought under a relevant REIL for the associated exploration of the renewable energy resource, approval may be sought via an AIL under Section 23 of the HRE Act.

2.1.2 *Approval pathway*

The Project is seeking two AILs under Section 23 of the HRE Act; one AIL to cover regulated activities associated with the BESS, and another to cover regulated activities associated with the OTL and Belalie Substation expansion

A REIL for the wider Whyte Yarcowie Wind Farm has been sought under REILA 2.

2.1.3 *Environmental Impact Report*

This EIR has been developed to meet the requirements of Section 61(2) of the HRE Act, which states that an EIR must be developed in respect of a proposed authorised activity. Specifically, it states that:

An environmental impact report must:

- a) *take into account the environment, cultural and other values as those matters are relevant to the assessment; and*
- b) *take into account risks inherent in the authorised operations to the health and safety of the public; and*
- c) *contain sufficient information to make possible an informed assessment of the likely impact of the authorised operations on the environment; and*
- d) *include an assessment of the environmental impact of authorised operations to which the report applies against the environmental impact assessment criteria; and*
- e) *be prepared in accordance with the requirements of the regulations.*

(Hydrogen and Renewable Energy Act 2023 - Version 11.7.2024).

Regulation 32(2) of that HRE Regulations prescribes that the EIR must contain the following information:

- a) *a description of the authorised operations to be undertaken and the location at which the operations are to be undertaken;*
- b) *a description of the specific elements of the environment that can reasonably be expected to be affected by authorised operations, with particular reference to the environment and existing land uses;*
- c) *data relating to biodiversity within the area of land to which the report relates that can reasonably be expected to be affected by authorised operations;*

- d) *an assessment of the cultural and heritage values of Aboriginal and Torres Strait Islander persons and other persons within the area of land to which the report relates that can reasonably be expected to be affected by authorised operations, and the public health and safety risks inherent in undertaking those operations (insofar as these matters are relevant in the particular circumstances);*
- e) *if relevant and required by the Minister—an assessment of the continuity of supply with respect to hydrogen;*
- f) *information on consultation that has occurred in accordance with the approved consultation plan, including specific details about relevant issues that have been raised and any response to those issues (but not including confidential information).*

(Hydrogen and Renewable Energy Regulations 2024 - Version 20.11.2025)

Table 2.1 identifies where the requirements of the HRE Act and HRE Regulations have been addressed within this report.

Table 2.1 Environmental impact report requirements

Legislative requirement	EIR section(s)
Section 61(2) of the <i>Hydrogen and Renewable Energy Act 2023</i>	
a) <i>take into account the environment, cultural and other values as those matters are relevant to the assessment; and</i>	Section 4.2 and Section 6
b) <i>take into account risks inherent in the authorised operations to the health and safety of the public; and</i>	Section 4.5 and Section 6.11
c) <i>contain sufficient information to make possible an informed assessment of the likely impact of the authorised operations on the environment; and</i>	Section 4 and Section 6
d) <i>include an assessment of the environmental impact of authorised operations to which the report applies against the environmental impact assessment criteria; and</i>	Section 6
e) <i>be prepared in accordance with the requirements of the regulations.</i>	See below
Regulation 31(2) of the <i>Hydrogen and Renewable Energy Regulation 2024</i>	
a) <i>a description of the authorised operations to be undertaken and the location at which the operations are to be undertaken;</i>	Section 4
b) <i>a description of the specific elements of the environment that can reasonably be expected to be affected by authorised operations, with particular reference to the environment and existing land uses;</i>	Section 6
c) <i>data relating to biodiversity within the area of land to which the report relates that can reasonably be expected to be affected by authorised operations;</i>	Section 6.1
d) <i>an assessment of the cultural and heritage values of Aboriginal and Torres Strait Islander persons and other persons within the area of land to which the report relates that can reasonably be expected to be affected by authorised operations, and the public health and safety risks inherent in undertaking those operations (insofar as these matters are relevant in the particular circumstances);</i>	Section 6.3
e) <i>if relevant and required by the Minister—an assessment of the continuity of supply with respect to hydrogen;</i>	Not applicable
f) <i>information on consultation that has occurred in accordance with the approved consultation plan, including specific details about relevant issues that have been raised and any response to those issues (but not including confidential information).</i>	Section 5

2.1.4 Statement of Environmental objectives

As required under Section 62 of the HRE Act, an AIL must not be granted unless an approved SEO for the regulated activity is in force. The SEO must address the matters outlined in the EIR; and, set out environmental objectives, leading performance criteria, and reportable incidents for undertaking the activity.

To meet the requirements of Section 62 of the HRE Act, an SEO has been prepared for submission to DEM (*Whyte Yarcowie Wind Farm Transmission Line and Battery Energy Storage System: Statement of Environmental Objectives – PS221341-WSP-ADL-ENV-REP-002 RevA*). The SEO has been developed to address both the BESS and OTL.

2.1.5 Certificate from the Technical Regulator

As required under Section 31(1)(d) of the HRE Act and Regulation 18(1)(k) of the HRE Regulations, a licence application for an electricity generating plant that is to be connected to the State's power system must be accompanied by a certificate from the OTR certifying that the electricity generation is compliant with the requirements of the Technical Regulator in relation to the security and stability of the State's power system. Furthermore, it is understood that the Technical Regulator considers a BESS to be a form of electricity generator, as it converts chemical energy to electrical energy.

The certificate from the OTR for the Whyte Yarcowie Wind Farm was issued on 2 April 2024 and addresses the OTR requirements for the BESS. The certificate from the OTR is attached in Appendix A.

The BESS component of this Project will be developed to achieve the final OTR requirements and will have a capacity of up to 270 MW/2160 MWh (but no less than 200 MW/400 MWh).

2.2 Other approvals

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), proponents proposing an action that may have a significant impact on a Matter of National Environmental Significance (MNES), or occurring on Commonwealth Land, must prepare a referral that will help the Commonwealth decide whether the proposal is a controlled action and requires assessment and approval under the EPBC Act.

Ecological assessments, including a combination of desktop searches and ecological surveys, were undertaken to identify the risk of the Project impacting on any MNES and other ecological matters.

Targeted reptile surveys were undertaken to support the ecological assessments and identified Pygmy Bluetongue lizard (PBTTL) (*Tiliqua adelaidensis*) (EPBC Act Endangered) within the boundary of an early iteration of the Project Area (Umwelt, 2026). The Project Area was subsequently amended to minimise impacts to known PBTTL habitat as far as possible.

In addition, desktop assessments identified that the EPBC Act listed Southern Whiteface (*Aphelocephala leucopsis*) (EPBC Act Vulnerable) and Blue-winged Parrot (*Neophema chrysostoma*) (EPBC Act Vulnerable) both have potential to occur within the Project Area, though the area has been assessed as unlikely to provide important habitat for these species (Umwelt, 2026).

Ecological assessments undertaken for the Project are discussed further in Section 6.1.

It should be noted that while the Project, in isolation, is unlikely to result in significant impacts to MNES; under the EPBC Act the Project is required to be considered holistically alongside the wider Whyte Yarcowie Wind Farm project.

Potential impacts from the wider project were documented in an EPBC Referral² and submitted to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 9 August 2024 for potential impacts to PBTL (*Tiliqua adelaidensis*), Southern Whiteface (*Aphelocephala leucopsis*), and Iron-grass Natural Temperate Grassland of South Australia Threatened Ecological Community (TEC). The Referral was deemed a controlled action on 27 June 2025 for impacts to *listed threatened species and communities*, to be assessed via Preliminary Documentation. The DCCEEW assessment is currently in progress. No vegetation clearance associated with the Project will occur until a decision has been received by DCCEEW.

2.2.2 Planning, Development and Infrastructure Act 2016

As the Project falls under the provisions of the HRE Act it does not require Approval under the *Planning, Development and Infrastructure Act 2016* (PDI Act).

The EIR and SEO for the Project will be referred to the Department for Housing and Urban Development (DHUD) for comment under Section 72 of the HRE Act, as a prescribed body administering the PDI Act. To support this referral, Section 6.13 of this EIR provides an assessment of the Project against the relevant provisions of the Planning and Design Code (P&D Code) established under the PDI Act.

2.2.3 Other State legislative approvals

A number of other environmental approvals, authorisations and permits may be required to support both the construction and operation phases of the Project. The key ancillary approvals are detailed in Table 2.2.

Table 2.2 Ancillary approvals

Approval or permit	Relevant legislation	Statutory authority	Relevance	Requirement
Assessment against the National Construction Code	<i>Planning, Development and Infrastructure Act 2016</i> (PDI Act) Regulation 37(1)(ca) of the HRE Regulations	Building Certifier (under the PDI Act)	Under the PDI Act and Regulation 37(1)(ca) of the HRE Regulations, development which constitutes 'building work' requires assessment against the National Construction Code.	Required as the Project proposes building work.
Environment Authorisation to undertake a prescribed activity of environmental significance	<i>Environment Protection Act 1993</i> (EP Act)	Environment Protection Authority (EPA)	Prescribed activities of environmental significance require a licence or exemption under the EP Act.	Required for the onsite concrete batch plant(s) (if required). The licence would be held or obtained by the concrete batch plant operator.
Native vegetation clearance approval	<i>Native Vegetation Act 1991</i> (NV Act)	Native Vegetation Council (NVC)	The removal of any protected native vegetation requires approval under the NV Act.	Required as the Project involves the clearance of native vegetation protected under the NV Act.

² The BESS and OHL footprint included in the EPBC Referral were based on an earlier iteration of the design, which has since been updated. The Preliminary Documentation report will be completed to reflect the BESS and OHL design as presented within this EIR.

Approval or permit	Relevant legislation	Statutory authority	Relevance	Requirement
Water Affecting Activities Permit	<i>Landscape South Australia Act 2019</i> (LSA Act)	Northern and Yorke Landscape Board	Required for creation or modification of a well, creation or modification of certain dams or other structures that collect or diverts water, direct impacts to a water course, lake or floodplain, or drainage or discharge directly or indirectly into a watercourse or lake.	Possibly required as construction will require water for both concrete batching (if required) and dust suppression, and may require the use of groundwater. Options for water sourcing are still under consideration and will be subject to a Water Supply Options Assessment to be undertaken prior to the commencement of construction. Furthermore, the Project may result in the disruption of minor flow paths across the Project Area, which may require a Water Affecting Activities (WAA) under the <i>Northern and Yorke Water Affecting Activities Control Policy</i> (Northern and Yorke Landscape Board, 2020) and LSA Act. Clarification regarding WAA Permit requirements will be sought from the Northern and Yorke Landscape Board and any required WAA Permits will be sought prior to the commencement of construction.
Section 23 authorisations	<i>Aboriginal Heritage Act 1988</i> (AH Act)	Minister for Aboriginal Affairs	Required for any damage, disturbance or interference with Aboriginal sites, objects or remains (where otherwise unavoidable).	Unlikely to be required. Cultural heritage assessments have been undertaken across the Project Area. The works have been deemed low risk and are not expected to impact any Aboriginal heritage sites, objects or remains. In the instance any unexpected discoveries are encountered during construction, the Project would seek to microsite the design to avoid impacts and would only seek authorisation under the AH Act as a last course of action.

Approval or permit	Relevant legislation	Statutory authority	Relevance	Requirement
Heritage permit	<i>Heritage Places Act 1993</i> (HP Act)	SA Heritage Council	Required to alter, damage or destroy places or objects of non-Aboriginal heritage significance	Not required. The Project will avoid all direct impacts to non-Aboriginal heritage places. It is intended that construction impacts will be managed such that indirect impacts are avoided.
Road Works Permit	<i>Road Traffic Act 1961</i>	Department for Infrastructure and Transport (DIT)	Required to carry out road works on roads managed by DIT.	Possibly required. The Traffic Impact Assessment (TIA) assessed DIT roads to be suitable for the expected construction traffic, however identified that an intersection of a DIT managed road may need to be upgraded to support construction traffic. Final permitting requirements will be determined and sought by the construction contractor, once engaged.
Road Works Permit	<i>Local Government Act 1999</i>	Councils	Required to alter public roads, including by carrying out works in, on, across, under or over a Council-managed road.	Required for the upgrades to the local public road network proposed as part of the Project.
Oversize Overmass Permit	<i>Heavy Vehicle National Law (South Australia) Act 2013</i>	National Heavy Vehicle Regulator	Required where vehicles exceed the gazetted mass, dimension or operating requirements of roads.	Required for the transport of plant and materials to site.
Wastewater Works Approval	<i>South Australian Public Health Act 2011</i>	SA Health	For on-site wastewater systems.	Required for the wastewater systems proposed as part of the Project.

3 Strategic context

3.1 Project benefits and objectives

The OTL will provide the necessary connection of the Whyte Yarcowie Wind Farm to the Belalie Substation, which will support South Australia's energy demand by supplying approximately 280 MW of renewable energy into the South Australian grid.

The inclusion of the BESS will provide up to 8 hours of discharge capacity; which will support grid stability and 'firming' capacity to support energy demand at times when there is a shortfall in renewable energy generation. This ability to time-shift electricity supply from times where there is a surplus to times where there is a shortage will support energy affordability, and furthermore, the addition of the Project in the market will support competition, in turn putting downward pressure on wholesale power prices.

The Project will support the South Australian Government's target to achieve 100% renewable energy by 2027 (Department for Energy and Mining, n.d.); and will support the State to expand its role as a leading producer of renewable energy as well as helping to position it as a net exporter of renewable energy, increasing the national supply of clean and more reliable energy.

Capital expenditure for the overall Whyte Yarcowie Wind Farm is estimated at over \$1 billion; with at least \$100 million to be spent directly within the South Australian economy during construction.. Economic impacts to the State and the region would stem from direct and indirect employment opportunities and the supply of goods and services.

The BESS and OTL are expected to generate up to 150 direct full equivalent jobs (FTE) time jobs during construction and up to 10 FTE jobs during operation.

Wind Prospect have committed to implementing Benefits Sharing Programs throughout operation of the wider Whyte Yarcowie Wind Farm, to distribute benefits from the project to neighbouring landowners, residents and surrounding communities. Programs are being developed through consultation with surrounding communities and other relevant stakeholders. Initiatives are still being finalised based on ongoing consultation but may include:

- **Neighbour Benefit Payments:** would include payments made to the nearest neighbours to recognise Project impacts to the surrounding landscape.
- **Community Benefits Fund:** would provide a pool of money that could be managed by a community committee and be allocated to various community projects, events and initiatives.
- **Subsidised electricity:** would propose discounted electricity for the community in the vicinity of the Project.
- **Household energy efficiency, solar and battery support:** would support initiatives to help households reduce their energy bills through efficiency measures of contributing to solar and battery installations.
- **Traditional Owner benefits sharing:** would support benefits sharing with the Ngadjuri People, as the Traditional Owners of the land on which the Project will be developed.
- **Community Sponsorship Fund:** this program is already in effect and provides an annual fund of \$10,000 per year to assist community groups and organisations in vicinity of the Project to improve their services, programmes, initiative and/or facilities.

3.2 Strategic Policy context

3.2.1 Australian Government policy context

The Project contributes to, and aligns with Australian Government policies and strategies, including the:

- *2024 Electricity Statement of Opportunities* (Australian Energy Market Operator (AEMO), 2024): the Project will help meet increasing demand for energy in the National Energy Market (NEM) through supporting the transmission of new renewable energy infrastructure and increasing energy storage capacity.
- *2024 Integrated System Plan (ISP)* (Australian Energy Market Operator (AEMO), 2024): the ISP establishes an optimal development path for energy generation, storage and network investments in the NEM, to support transmission to net zero by 2050. The ISP suggests that renewable energy, firmed with storage and backed by gas-powered generation, is the lowest-cost method to supply electricity to the network during the transition to net zero. The Project supports this overall plan by providing the necessary transmission infrastructure to support the Whyte Yarcowie Wind Farm and providing firming capacity through provision of the BESS.
- *Annual Climate Change Statement* (Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2025): the Annual Climate Change Statement provides an overview of Australia's progress to net zero emissions and reports on initiatives, programs and plans to support Australia's transition. The Project will contribute to meeting Australia's commitment to reach 82 per cent renewable electricity in the NEM by 2030, through provision of necessary transmission and storage infrastructure to support the Whyte Yarcowie Wind Farm.

3.2.2 South Australian Government policy context

The Project will support the South Australian Government's *Net Zero Strategy 2024-2030* (Department for Environment and Water, 2024), which establishes a state-wide commitment to reach and maintain 100% net renewable electricity generation by 2027 and net zero emissions by 2050. The strategy recognises that transmission and storage infrastructure plays an integral role in supporting the growth of renewable energy in South Australia.

3.2.3 Regional and local policy context

Each region in South Australia is covered by a Regional Plan that has been developed to guide land use and long-term infrastructure needs to support sustainable growth in that region. Regional Plans are an instrument under the PDI Act, so while not legislated under the HRE Act, they still hold relevance with regards to consideration of land use changes.

The relevant Regional Plan for the Project is currently the *Yorke Peninsula and Mid North Regional Plan* (Department for Housing and Urban Development, 2026). This plan was adopted in 2026 and outlines a 30-year planning vision for the region.

The Plan outlines five key outcomes:

- 1 **Outcome 1 – More housing in the right places:** focusing on increasing housing diversity and ensuring the timely and adequate supply of land, while also recognising the need to provide adequate infrastructure to facilitate housing growth.
- 2 **Outcome 2 – A strong economy built on a smarter cleaner future:** seeking to support local employment and foster existing and emerging industries; including renewable energy, along with agriculture, aquaculture, mining and tourism and recreation.
- 3 **Outcome 3 – A more climate-resistant and sustainable region:** supporting climate change adaptation to ensure the long-term liveability of cities and towns, the health and wellbeing of our communities and the resilience of the built and natural environment.

- 4 **Outcome 4 – An integrated and connected region:** promoting a coordinated approach to growth and economic productivity through integrated land use planning; incorporating transport, essential services and social infrastructure.
- 5 **Outcome 5 – Coordinated delivery of land use and infrastructure planning:** focusing on improved coordination of planning processes, governance and funding, and better systems for effectively reporting on and measuring implementation.

The Project directly supports Outcome 2 as it encompasses an emerging industry envisaged under this section of the Plan. The Plan recognises the renewable energy sector as a key contributor to the region's economy.

The Project also supports Outcome 3 by supporting the de-carbonisation of the energy grid and contributing to a zero-emissions energy source for communities and industry in the region. The Project has also been sited to avoid and protect areas with high-biodiversity value, which further aligns with Outcome 3.

DRAFT

4 Project description

4.1 Project overview

The Project proposes the construction and operation of a 270 MW/2160 MWh BESS, an approximately 19.5 km long, single-circuit 275 kV OTL to connect the internal Whyte Yarcowie Wind Farm to ElectraNet's existing Belalie Substation, and a necessary expansion to the Belalie Substation and supporting connection works to enable the OTL to connect to the substation.

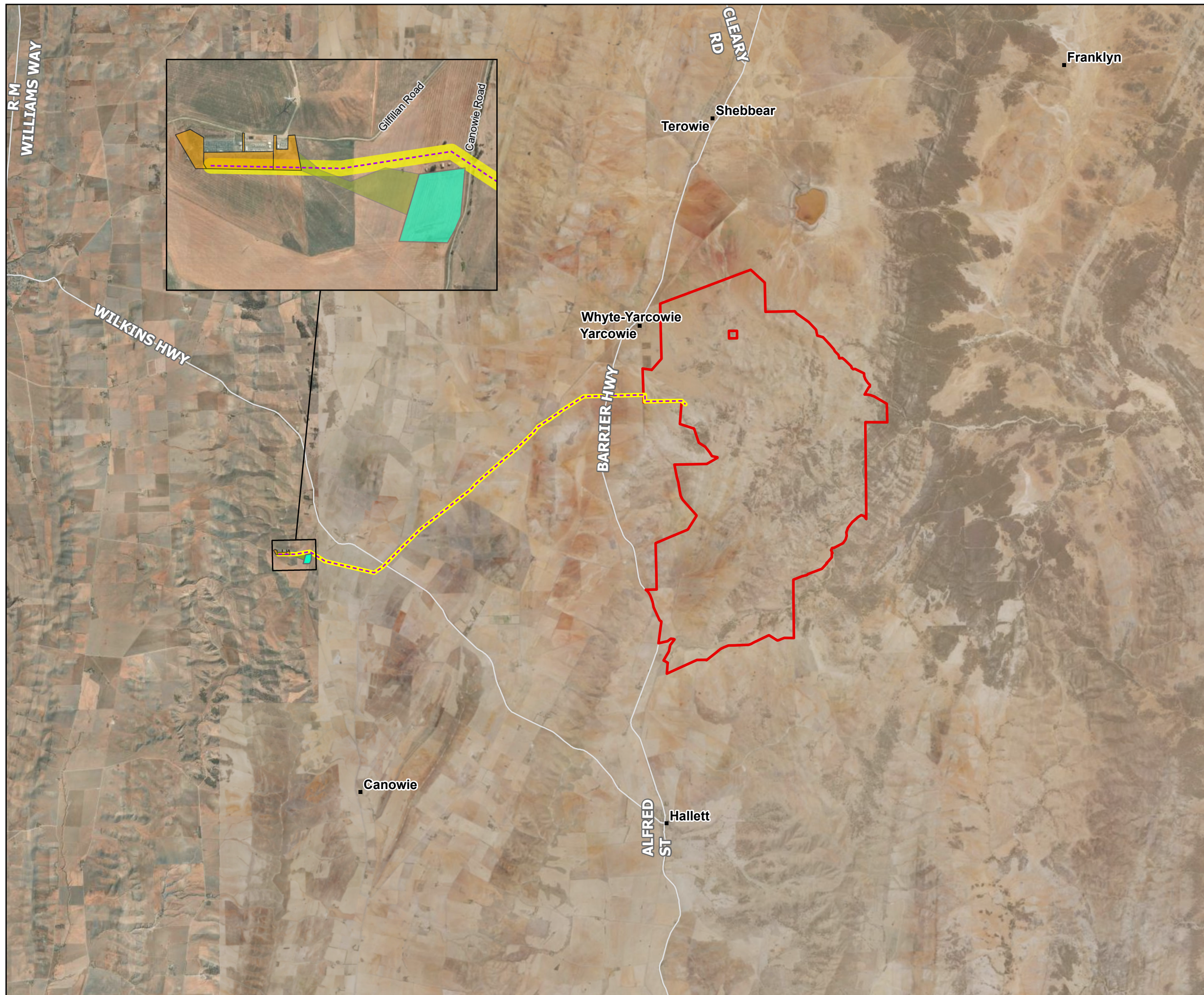
The purpose of this Project is to support the Whyte Yarcowie Wind Farm (REILA 2), which once operational, would supply approximately 280 MW of renewable energy into the South Australian grid.

4.2 Project Area

4.2.1 Site location and legal description

The Project Area is located between Belalie East and Whyte Yarcowie, approximately 180 km north of Adelaide. The Project locality is shown in Figure 4.1.

The Project Area is situated in the South Australian Mid North Region, across two Local Government Areas (LGAs): the Northern Areas Council and the Regional Council of Goyder.

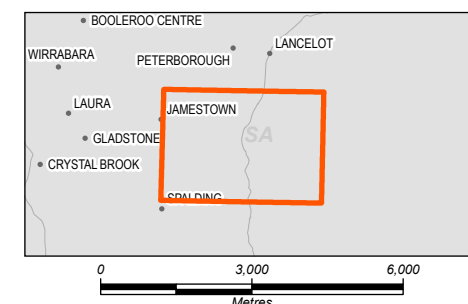


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.1
Project Locality

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REILA 2)



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:150,000 Date: 22/03/2026

Data sources: WSP, SA Government, World Imagery Earthstar Geographics
MetroMap (Australia latest)
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Certificates of Title (CTs) for the Project Area are detailed in Table 4.1 and shown in Figure 4.2. Copies of the relevant CTs are attached in Appendix B.

Table 4.1 Certificates of Title

Certificate of Title Volume/Folio	Parcel ID	Owner
<i>OTL Corridor</i>		
CT 5693/39	Section 395 of Hundred Plan 22050	Private freehold landowner
CT 5425/95	Section 389 of Hundred Plan 220500 and Section 516 of Hundred Plan 241300	Private freehold landowner
CT 5458/659	Sections 513, 558 and 565 of Hundred Plan 241300	Private freehold landowner
CT 5359/620	Sections 362, 358 and 359 of Hundred Plan 2413000	Private freehold landowner
CT 5359/623	Section 366 of Hundred Plan 241300	Private freehold landowner
CT 5803/636	Section 74 of Hundred Plan 241300	Private freehold landowner
CT 5359/624	Sections 330 and 332 of Hundred Plan 241300	Private freehold landowner
CT 5680/165	Section 333 of Hundred Plan 241300	Private freehold landowner
CT 6014/333	Blocks 38 and 39 of Deposited Plan 3347	Private freehold landowner
CT 6014/332	Block 37 of Deposited Plan 3347	Private freehold landowner
CT 6014/330	Blocks 35 and 36 of Deposited Plan 3347	Private freehold landowner
CT 6014/329	Sections 548, 549 and 550 of Hundred Plan 241300	Private freehold landowner
CT 5886/198	Sections 551 and 552 of Hundred Plan 241300	Private freehold landowner
CT 5720/115	Allotments of 202 Deposited Plan 12727 and Block 67 of Deposited Plan 3347	Private freehold landowner
CT 6097/877	Allotment 20 of Filed Plan 56012	Private freehold landowner
<i>BESS Area</i>		
CT 6097/877	Allotment 20 of Filed Plan 56012	Private freehold landowner
<i>Underground Cable Easement</i>		
CT 6097/877	Allotment 20 of Filed Plan 56012	Private freehold landowner
<i>Belalie Substation Expansion Area</i>		
CT 6097/874	Allotment 1000 of Deposited Plan 80854	Private freehold landowner

Works will also be required in road reserves to facilitate OTL crossings and to create two new access points for the BESS site, as well as temporary construction access. Vegetation clearance may also be required in road reserve. Impacted road reserves include:

- OTL crossings: Barrier Highway, Wilking Highway, Canowie Road, Booborowie Road, Sunshine Road, Merino Road, Stock Route Road, Pigeon Box Road, and Sheoak Road.
- BESS site access points: Canowie Road.

Agreements/deeds will be sought from DIT, Northern Areas Council and the Regional Council of Goyder to facilitate works in state and local road reserves.

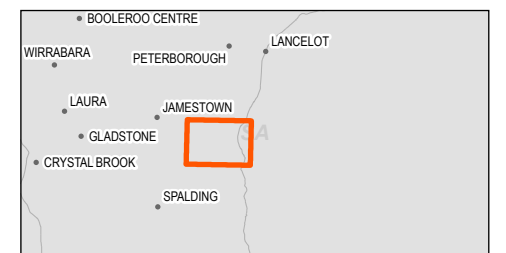


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.2
Certificates of Title

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 m Transmission Line Easement
- Wind Farm Boundary (REILA 2)
- Cadastre



0 1,000 2,000
Metres



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Scale ratio correct when printed at A3

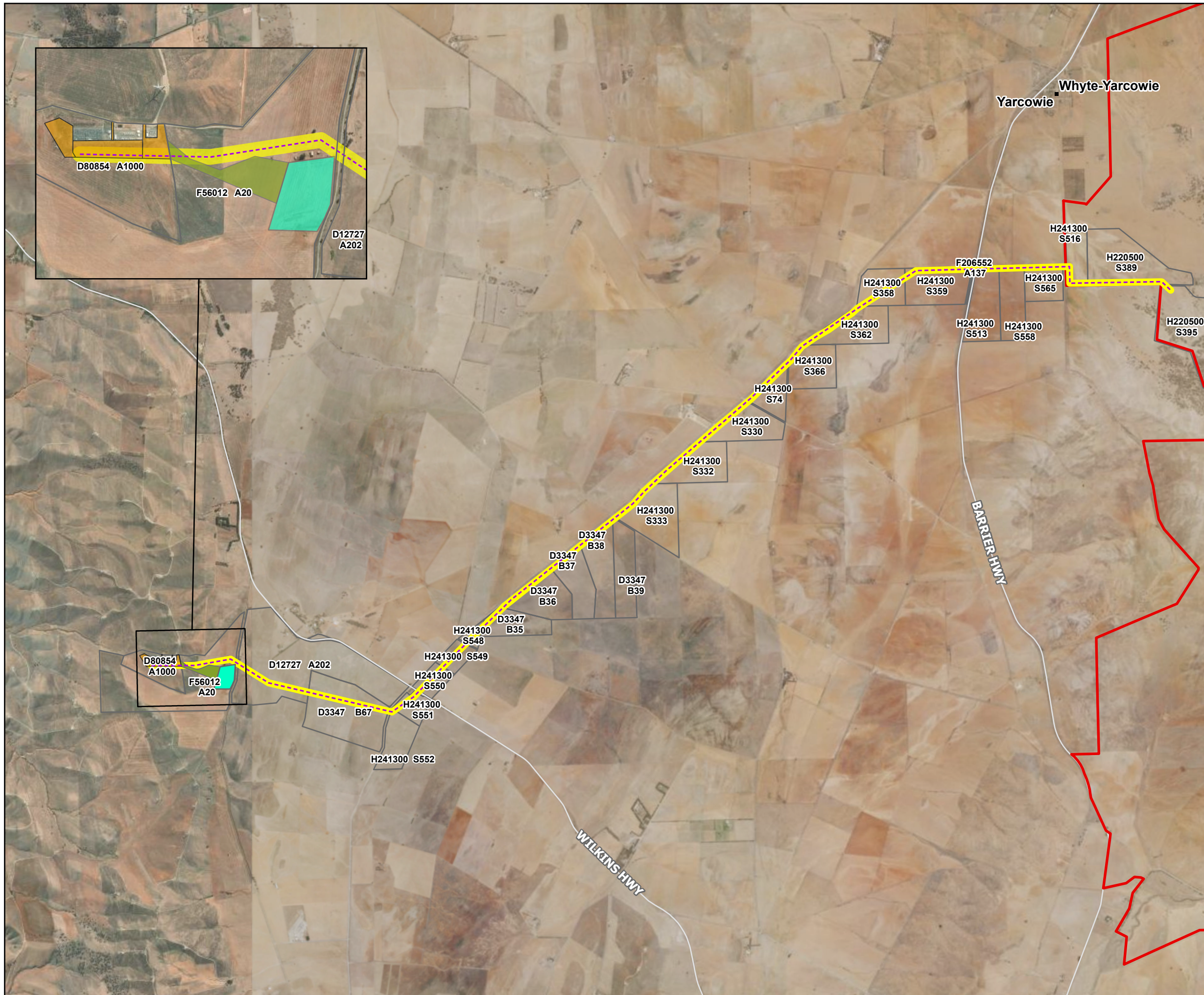
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Data sources: WSP, SA Government, MetroMap (Australia latest)
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4.2.2 Site description

4.2.2.1 Natural environment

The Project Area is situated within the traditional lands of the Ngadjuri Peoples.

The climate of the Project Area is described to be typically mediterranean, with seasons predominantly defined by mild wet winters and hot dry summers (Berkinshaw & McGregor), and has a mean annual rainfall of 519 mm (Queensland Government, 2025).

There are no major watercourses or water bodies within the Project Area, though there are a number of minor flow paths the site (discussed further in Section 6.2).

The Project Area encompasses approximately 159.50 hectare (ha) and is situated on farmland, largely consisting of cropping and sheep grazing; with an elevation ranging from approximately 700 m Australian Height Datum (AHD) at the Belalie Substation Expansion Area to approximately 550 m at the eastern end of the OTL. The elevation of the Project Area is shown in Figure 4.3.

The Belalie Substation Expansion Area (shown in Photo 4.1 and Photo 4.2) is located at the highest point of the Project Area. The area comprises a 10.07 ha site located off Gilfillan Road, adjacent to the existing Belalie Substation. The existing land uses are primarily related to the existing substation and transmission lines across the site. Agricultural activities place on land adjacent to the existing infrastructure.

An underground cable will be constructed between the Belalie Substation Expansion Area and the BESS Area. The Underground Cable Area is approximately 7.09 ha in size and located on agricultural land, which slopes steeply descending west to east toward the BESS Area (shown in Photo 4.3). The underground cable will pass under an existing OTL that connects to the Belalie Substation.

The BESS Area comprises a 10.20 ha site located off Canowie Road (as shown in Photo 4.4 and Photo 4.5). The site is mostly flat, with a gentle slope falling from west to east, and an elevation of approximately 630 m AHD. The site is currently used for agricultural cropping. Access to the BESS Area will be via two proposed new access points off Canowie Road.

The OTL will be located within a 70 m wide, 19.5 km long easement connecting the internal Whyte Yarcowie Wind Farm substation (proposed under REILA 2) to the Belalie Substation Expansion (the OTL Corridor). The corridor traverses hilly slopes near the Belalie Substation Expansion Area (as shown in Photo 4.2 and Photo 4.3), passing to the north of BESS Area (as shown in Photo 4.6), and continuing within a primary flat landscape in a mostly north-east direction toward the Whyte Yarcowie Wind Farm substation (as shown in Photo 4.7, Photo 4.8, Photo 4.9, Photo 4.10, Photo 4.11, Photo 4.12, and Photo 4.13). Land use along the OTL Corridor is primarily used for grazing and cropping. The OTL Corridor has been positioned adjacent to the existing road corridor for most of its length to minimise fragmentation of agricultural land. The width will allow for transmission towers to be micro-sited to avoid drainage lines, dams, and ecological and cultural features that may be present within the corridor. The OTL will have crossings on the following public roads: Barrier Highway, Wilking Highway, Canowie Road, Booborowie Road, Sunshine Road, Merino Road, Stock Route Road, Pigeon Box Road, and Sheoak Road.

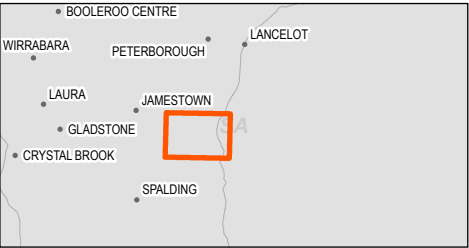


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.3
Elevation

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 m Transmission Line Easement
- Wind Farm Boundary (REILA 2)
- Contours



0 1,000 2,000
Metres



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:60,000

Date: 8/04/2026



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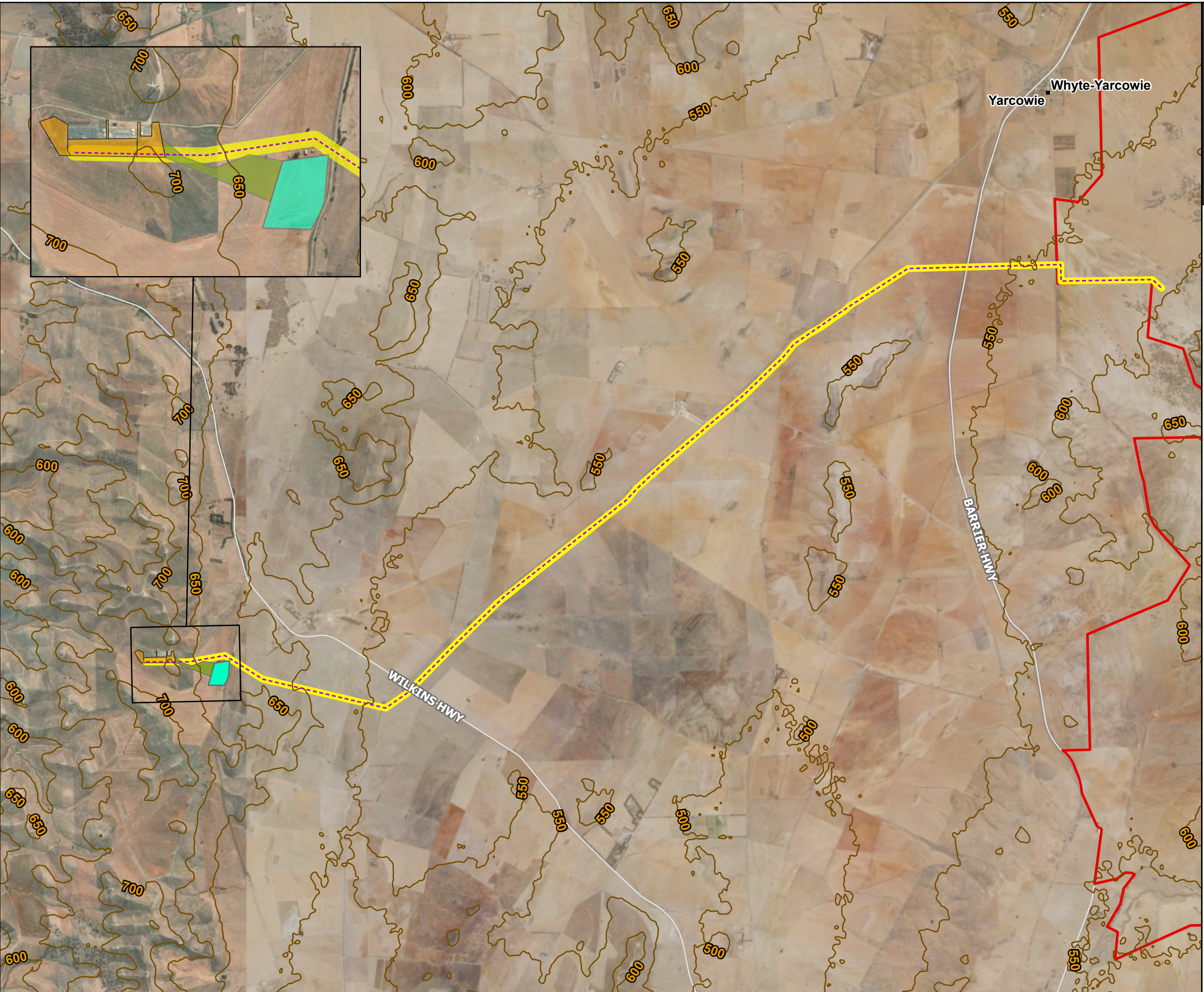




Photo 4.1 Western side of the Belalie Substation Expansion Area. View looking south-east toward existing Belalie Substation from Gilfillan Road. WTGs from the Hallet Wind Farm shown to the right



Photo 4.2 Eastern side of Belalie Substation Expansion Area and western end of the OTL Area. View looking south from Gilfillan Road, with the existing Belalie Substation shown on the right



Photo 4.3 Underground Cable Easement and OTL Corridor. View looking south-east from Gilfillan Road toward proposed BESS Area



Photo 4.4 BESS Area. View looking south-west from Canowie Road. WTGs from the Hallet Wind Farm shown in background



Photo 4.5 Canowie Road with BESS Area shown on right. View looking south



Photo 4.6 OTL Corridor (right). View looking east from Conowie Road toward Belalie Substation (background)



Photo 4.7 OTL Corridor. View looking south-east from proposed OTL crossing on Canowie Road



Photo 4.8 OTL Corridor and Wilkins Highway OTL crossing (right). View looking east from intersection of Wilkins Highway and Booborowie Road



Photo 4.9 OTL Corridor located adjacent (right) road reserve along Booborowie Road. View looking north-east along from road reserve of Booborowie Road



Photo 4.10 OTL Corridor located adjacent road reserve along Mitchells Road, showing OTL crossing of Jones Road. View looking east from Mitchells Road along Jones Road



Photo 4.11 OTL Corridor located adjacent road reserve along Mitchells Road, showing OTL crossing of Sunshine Road (behind tree line). View looking south-east from Mitchells Road along Sunshine Road



Photo 4.12 OTL Corridor traveling east across from Barrier Highway toward the proposed Whyte Yarcowie Wind Farm (REILA 2) site. View looking east from Barrier Highway OTL crossing



Photo 4.13 OTL Corridor along Sheoak Road. View looking east toward Whyte Yarcowie Wind Farm (REILA 2) from Pigeon Box Road/Sheoak Road junction

Vegetation across the Project Area is predominantly non-native vegetation (cropping or exotic species). Only small amounts of native vegetation exist within the Project Area comprising approximately ~ 3.5% of coverage; consisting of mostly of open grassland and small amounts of shrubland. The following Vegetation Associations (VA) were identified in the area:

- A7: *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland (0.20 ha) (refer Photo 4.14)
- B7: *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland (0.40 ha) (refer Photo 4.14)
- B14: *Enneapogon nigricans* Grassland (0.39 ha) (refer Photo 4.15)
- B15: *Maireana rohrlachii* Shrubland (0.00 ha) (refer Photo 4.16)
- Cropping (92.05 ha) (refer Photo 4.17)
- Exotic (59.13.20 ha) (refer Photo 4.18)
- Existing infrastructure (e.g. roads) (2.36 ha).

(Umwelt, 2026)

Native vegetation was assessed to be in poor to moderate condition. No remnant woodlands or mallee exists within the Project Area.

Vegetation within the Project Area and proposed impacts from the Project have been documented in a Native Vegetation Clearance Data Report prepared by Umwelt (Umwelt, 2026). Outcomes of the report are discussed further in Section 6.1. The full Native Vegetation Clearance Data Report is provided in Appendix C.



Photo 4.14 VA A/B7: *Austrostipa* spp./ *Rytidosperma* spp. Very Open Grassland. Photo taken within OHL Corridor near Barrier Highway



Photo 4.15 VA B14: *Enneapogon nigricans* Grassland. Photo taken within OHL Corridor along Mitchells Road



Photo 4.16 VA B15: *Maireana rohrlachii* Shrubland. Photo taken along OHL Corridor at Pidgeon Box Road crossing



Photo 4.17 Typical example of cropping land within the Project Area. Photo taken within the OHL Corridor along Mitchells Road



Photo 4.18 Typical example of exotic grassland within the Project Area. Photo taken near the Underground Cable Easement

4.2.2.2 Local community

The Project's local social area of influence encompasses the small rural townships of Whyte Yarcowie, Terowie, Belalie East and Hallett, which together have a combined population of approximately 413 people, a median age of 48 years, and 236 private dwellings. The nearest regional centre is Jamestown, located approximately 20 km northwest, with a total population of 1,549 people (Australian Bureau of Statistics, 2021a).

Whyte Yarcowie is a very small settlement with limited residential development and no active commercial premises, currently offering a community-run post office with restricted opening hours. Nearby townships provide limited services, with Terowie including a 24-hour roadhouse and motel, campground facilities, corner store and community services, while Hallett offers a general store, café, motel accommodation, emergency services and recreational facilities, including access to the Heysen Trail. Belalie East does not offer any local community services or facilities.

The Project's regional social area of influence sits within the Yorke and Mid North region (Regional Development Australia, 2025) and intersects the Regional Council of Goyder and the Northern Areas Council. They have combined population of 8,619 people and is characterised by a small, predominantly rural population living across dispersed townships. Across the regional social area of influence, the average household size is 2.2 people, with a high reliance on private vehicles and median weekly household incomes below the South Australian average in both LGAs (Australian Bureau of Statistics, 2021b). Burra acts as the largest township located in the Goyder LGA, while Jamestown is also the regional centre of the Northern Areas LGA.

4.2.2.3 Local economy

The local social area of influence notes agriculture, forestry and fishing as the top industry of employment at 13.8%. Sheep farming is specifically noted within this category as the top industry in Terowie (22.9%) and Hallett (17.6%), much higher than the South Australian average at 0.4%. Health care and social assistance and retail trade are also noted within the top three industries of employment at 4.8% and 1.7% respectively (Australian Bureau of Statistics, 2021a). Employment patterns within the local social area of influence highlight a strong reliance on agriculture-based livelihoods with limited economic diversification.

Across the regional social area of influence, the Yorke and Mid North region's gross regional product was \$5.22 billion in the year ending June 2024, representing a -1.9% since the previous year (economy.id, 2025). The region has a diverse economy, with existing industries including manufacturing, mineral smelting in Port Pirie, commercial fishing (also in Port Pirie), agriculture, viticulture, tourism, and food.

In 2023–2024, the Yorke and Mid North region's exports were dominated by agriculture, forestry and fishing, with 61.2% total exports by industry sector, significantly larger than South Australia (12.7%) (economy.id, 2024a). This reflects a strong reliance on primary production across the Project's regional social area of influence.

Across the 2023–2024 financial year, the agriculture, forestry & fishing industry sector was also the region's largest employer with 4,556 local jobs, equivalent to 15.5% of total employment in the region (economy.id, 2024b).

The Regional Development Australia's (RDA) *Yorke and Mid North Regional Roadmap (2018–2028)* notes that the region hosts South Australia's largest concentration of installed wind energy infrastructure, with over \$1 billion of development approvals for wind farms under consideration in the region (Regional Development Australia, 2017).

4.2.3 Land tenure

The Project is being developed wholly on Freehold land, across seven landowners.

Works within local and state-maintained roads will be required to facilitate OTL crossings and the creation two new access points for the BESS Area, the creation of temporary construction access points, and to support road upgrades (if required). Vegetation clearance may also be required within local and state-maintained roads to support these works. Engagement with Councils and DEM will be undertaken to facilitate the required agreements to support these works.

4.2.4 Zoning

The Project is wholly located within the Rural Zone of the P&D Code. There are no Subzones applicable across the area. The Project is defined as a *renewable energy facility* under the P&D Code, which is an envisaged land use under the Zone.

To support referral of the Project to DHUD under Section 72 of the HRE Act, as well as the identification of potential impacts from the Project, a planning assessment is provided in Section 6.13 which assesses the Project against the applicable policies of the P&D Code.

4.2.5 Existing infrastructure and services

A review of existing infrastructure and services within the Project Area was undertaken using a desktop assessment approach drawing on data sources including:

- Before you Dig Australia (BYDA) (Enquiry No. 52513310, 52513439, and 52513525)
- Location SA Map Viewer
- CTs.

Location SA Map Viewer and BYDA search results are attached in Appendix D.

The following CTs were identified as having easements during the review of CTs within the Project Area:

- CT 5885/198 – Sections 551 and 552 of Hundred Plan 241300:

- Subject to the easements(s) as provided for by Section 9 of the *Natural Gas Authority Act 1967*
- Subject to easements(s) over the land marked A to the Natural Gas Authority of South Australia (T 3011181).
- CT 6014/329 – Sections 548, 549 and 550 of Hundred Plan 241300:
 - Subject to the easements(s) as provided for by Section 9 of the *Natural Gas Authority Act 1967*.
- CT 6097/877 – Allotment 20 of Filed Plan 56012:
 - Subject to Easement(s) over the Land Marked C to Transmission Lessor Corporation of 1 Undivided 2nd Part (subject to lease 9061500) and Electranet PTY.LTD. of 1 Undivided 2nd Part (T5086488)
 - Subject to Easement(s) over the Land Marked B (TG 11755652).
- CT 6097/874 – Allotment 1000 of Deposited Plan 80854.

The BYDA and Location SA Map Viewer review identified approximate locations of existing services surrounding the Project Area. This includes the following:

- **NBN:** services located along Stock Route Road.
- **Epic Energy:** Epic Pipe Alignment and KP (Gas Pipeline), crossing the proposed OTL Corridor near Wilkins Highway.
- **SA Power Networks (SAPN):** SAPN Sub transmission & High Voltage Overhead Line, crossing the proposed OTL Corridor approximately 500 m Southwest of Jones Road.
- **Telstra:** several services located in and around the Project Area.

The approximate location of identified existing services is displayed in Figure 4.4.

The Project will be designed to avoid all impacts to existing services. It is noted that BYDA and Location SA Map Viewer plans may not be an accurate representation on the actual site conditions, and as such, surveys will be undertaken prior to the commencement of construction to physically locate and confirm the depth of existing utility services across the proposed construction footprint.

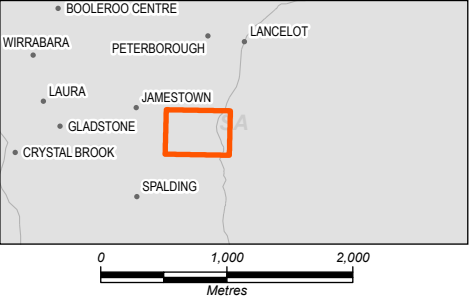
Furthermore, consultation will also be undertaken with relevant service authorities in relation to works in the vicinity of their assets, to understand requirements for working in proximity of these services.



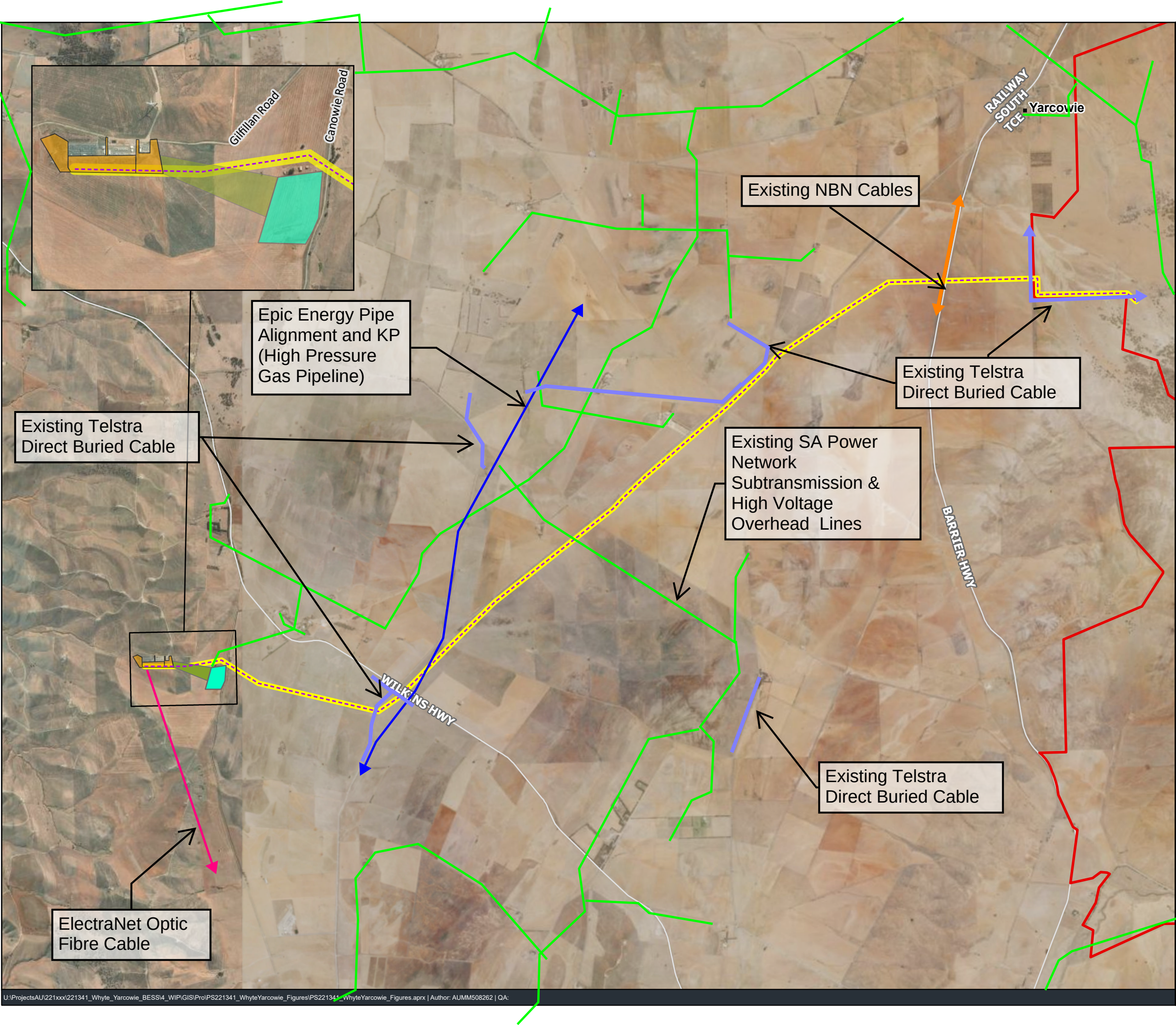
PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.4
Easements and Services

- Legend**
- Localities
 - State Managed Roads
 - BESS Area
 - Underground Cable Easement
 - Belalie Substation Expansion Area
 - Overhead Transmission Line
 - 70 m Transmission Line Easement
 - Wind Farm Boundary (REILA 2)



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4.2.6 Surrounding land use

The land use adjacent to the Project Area is mostly cropping and livestock grazing (sheep). A number of dwellings (both occupied and unoccupied) are sparsely distributed across the agricultural area, located on land zoned Rural.

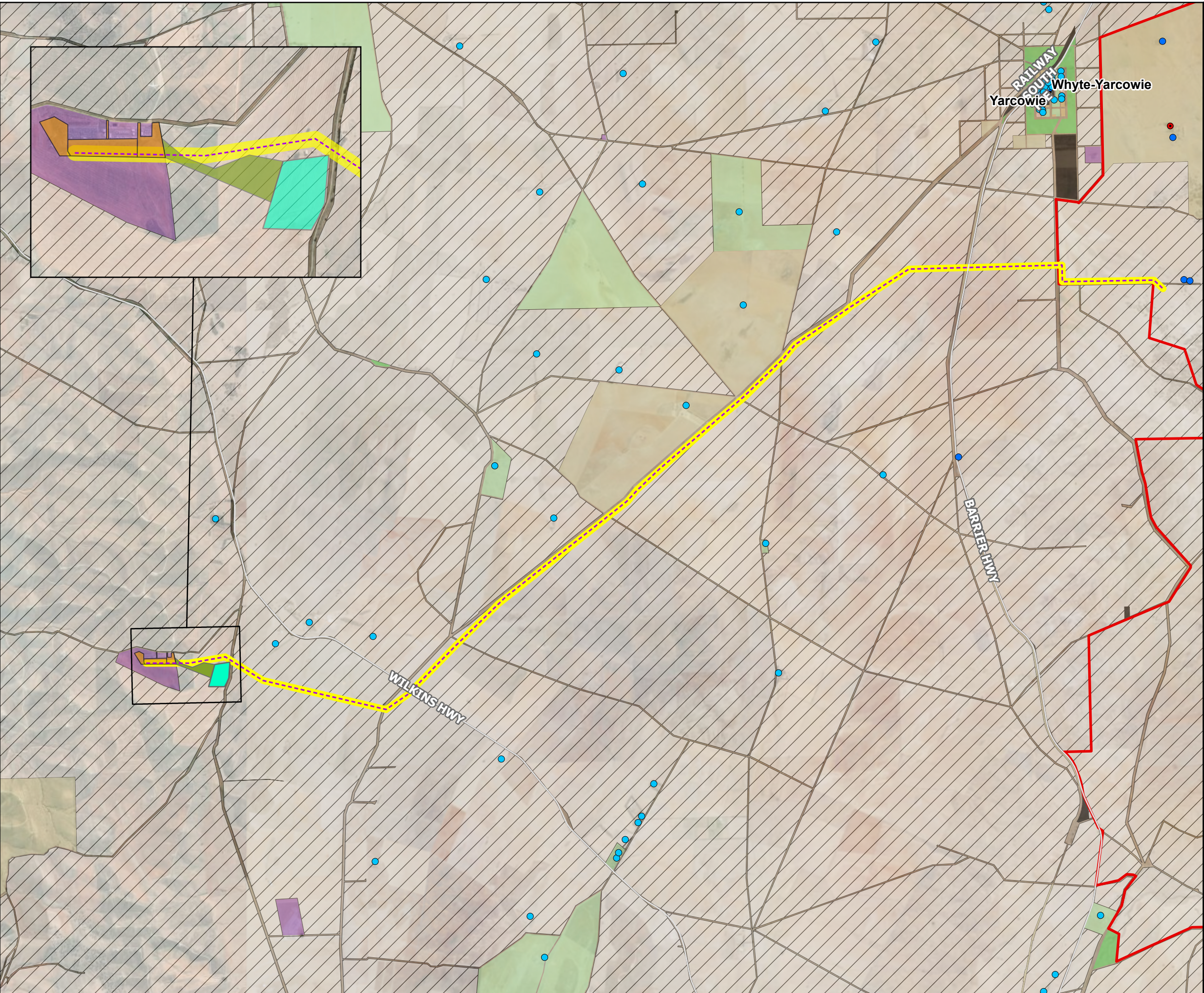
Belalie East, located approximately 1.2 km north-east of the BESS Area on the western side of the OTL Corridor, contains several dwellings and a number of farm buildings, but does not contain any community services or facilities.

Whyte Yarcowie, approximately 2.2 km north of the eastern side of the OTL Corridor, contains dwellings, a South Australian Country Fire Service (CFS) station and a town hall.

Adjacent land use, including nearby dwellings, is shown in Figure 4.5.

The Mid North Region is a key renewable energy region in South Australia; with good access to wind resources and proximity to the State's electricity transmission network, as well as compatible land uses and favourable zoning across large areas of the region. The nearest renewable energy projects to the Project Area include:

- Hallet Wind Farm (operational) – directly adjacent to the proposed Belalie Substation expansion
- Willogoleche Wind Farm (operational) – approximately 11 km south-east of the OTL Corridor
- Willogoleche Stage 2 Wind Farm (proposed – lodged for assessment under the HRE Act) – approximately 7 km south-east of the OTL Corridor.



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Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.5
Adjacent and Surrounding Land Use

Legend

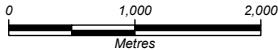
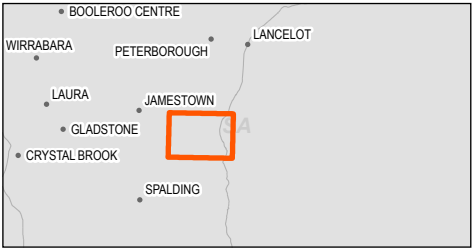
- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REILA 2)

Dwellings

- Dilapidated dwelling
- Involved dwelling
- Non-involved dwelling

Land Use

- Residential
- Vacant urban land
- Retail commercial
- Utilities / Industry
- Public institution
- Recreation / Reserves
- Rural residential
- Vacant
- Agriculture
- Livestock



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4.2.7 Mining and resources

There are two active Mining and/or Opal Exploration Licences under the *Mining Act 1971* that intersect the Project Area. These include:

- Rox 1 Pty Ltd – Mineral and/or Opal Exploration Licence – EL 6921
- ECOSSAUS Limited Mineral and/or Opal Exploration Licence – EL 6799.

(Department for Energy and Mining, n.d.a)

There is one active Petroleum, Geothermal and Gas Storage Licence under the *Petroleum and Geothermal Energy Act 2000* across the Project Area:

- ECOSSAUS Limited Petroleum, Geothermal and Gas Storage Licence – GSEL 766.

(Department for Energy and Mining, n.d.b)

There is one active Petroleum Pipeline Licence under the *Petroleum and Geothermal Energy Act 2000* across the Project Area (intersecting the OTL Corridor):

- Epic Energy SA Pty Ltd Petroleum Pipeline Licence (Moomba to Adelaide Pipeline) – PL 1.

(Department for Energy and Mining, n.d.c)

There are no Mining and Production Tenements across the Project Area (Department for Energy and Mining, n.d.d).

Active Mining and/or Opal Exploration Licences; Petroleum, Geothermal and Gas Storage Licences; and Petroleum Pipeline Licences across the Project Area are shown in Figure 4.6.

Engagement has been undertaken with these licence holders during the consultation process undertaken for the wider Whyte Yarcowie Wind Farm project to identify any risks of conflicting land uses between the Project and their plans for the exploration license areas. No issues were raised. Additional consultation will be undertaken with relevant licence holders under the Consultation Plan for this Project, discussed in Section 5.2.

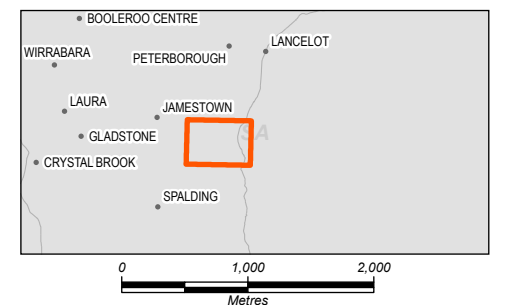


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Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.6
Tenements

Legend

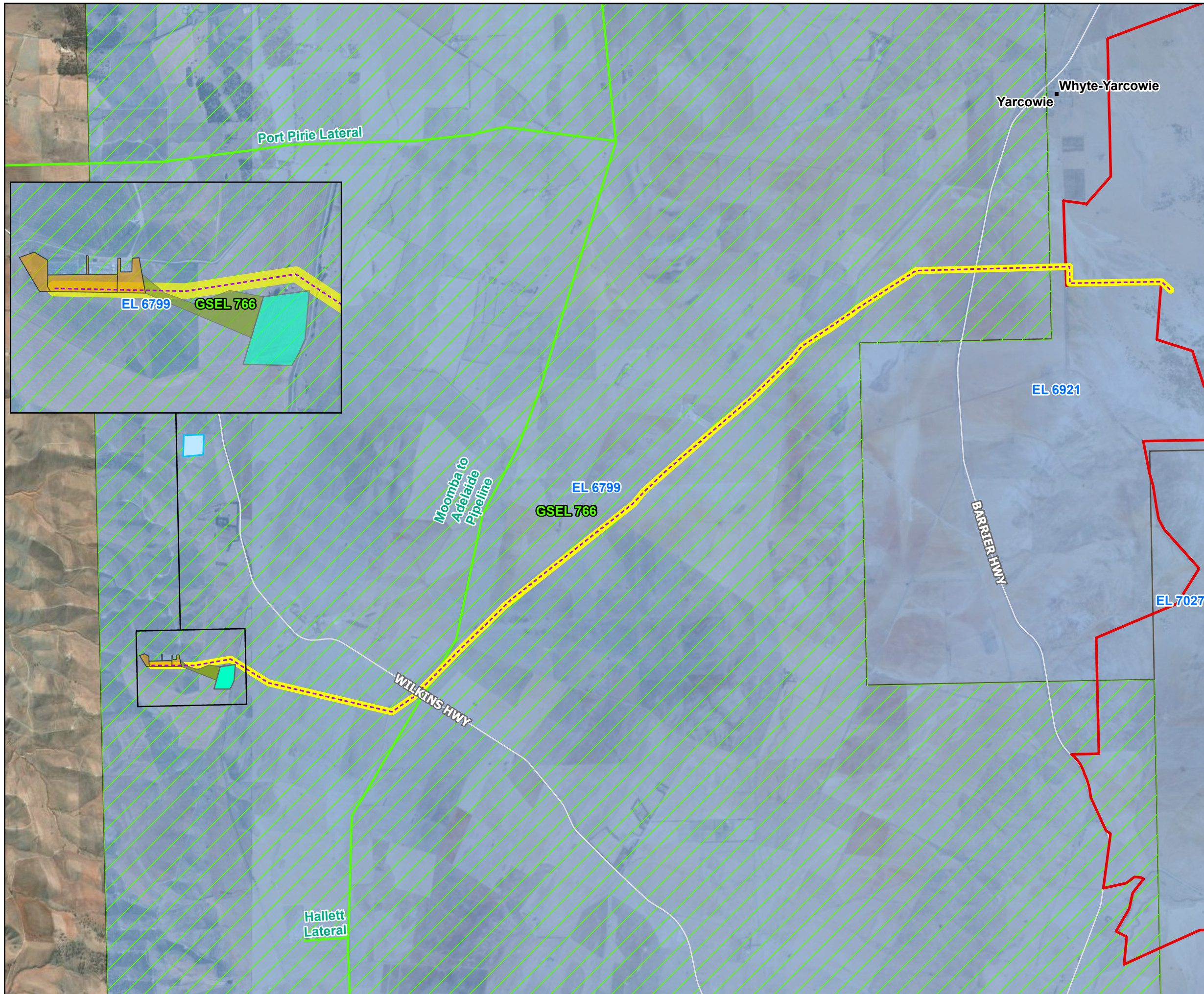
- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REILA 2)
- Mining and Resource Tenements and Licences
 - Petroleum Pipeline Licences
 - Gas Storage Exploration Licence
 - Mineral and Opal Exploration Licences
 - Extractive Minerals Lease



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4.3 Key components of the Project

Key elements of the Project seeking authorisation under the AILs include:

- BESS with capacity of up to 270 MW with up to 8-hour duration (270MW/2160 MWh). The BESS is expected to include around 432 Battery Pack Containers. The final number will be subject to detailed design and may increase/decrease depending on the requirements of the final supplier and BESS chemistry. The Battery Pack Containers will have an appearance similar to a shipping container and will be finished in neutral colours. An example of a typical BESS is shown in Photo 4.19. A 10.20 ha site has been investigated for the BESS Area, with the final BESS area expected to be reduced during the detailed design stage. The BESS Area will also include the following key infrastructure:
 - Power Conversion System (PCS)
 - transformer
 - BESS substation
 - harmonic filters
 - electrical building(s)
 - maintenance and storage building(s)
 - water storage tank(s)
 - underground cabling
 - hard stand areas
 - internal access roads
 - site access and parking
 - drainage and erosion control (including a detention pond, if required)
 - lighting protection
 - communications towers (if required)
 - site fencing and security
 - business identification and safety signage
- Underground cable connecting the BESS to the wind farm connection at the Belalie Substation expansion. The cable will be approximately 600 m to 1,200 m long, depending on the final design of the BESS and Belalie Substation expansion.
- 19.5 km long, single-circuit 275 kV OTL to connect the internal Whyte Yarcowie Wind Farm substation (proposed under REILA 2) to ElectraNet's existing Belalie Substation. The OTL will be located within a 70 m easement and supported by transmission towers or poles with a maximum height of 50 m tall and spaced approximately 400 m apart. An example of a typical 275 kV OTL tower is shown in Photo 4.20. The tower/pole height and design will be selected during the detailed design stage but this EIR has considered the use of 50 m tall lattice towers as a worst-case scenario. Unsealed access tracks will be developed within the OTL Corridor to support construction. Access tracks will have a width of approximately 6 m and may be maintained throughout operation, where required to support the ongoing maintenance of the OTL, or otherwise decommissioned upon completion of construction.
- The existing Belalie Substation will be expanded to facilitate grid connection of the OTL and BESS. The expansion will involve adding two new circuits to the Belalie substation, south of the existing Belalie Substation infrastructure, as well as some works on the existing infrastructure. It is expected that the second 275kV transmission line that currently bypasses the Belalie substation would be turned in. Design of the expansion will be developed by ElectraNet.
- Temporary construction infrastructure is likely to include:
 - construction compound
 - equipment laydown areas
 - fuelling stations

- concrete batch plant (if required)
- washdown bay (if required)
- temporary fencing and security.

Temporary construction infrastructure is anticipated to be located within the BESS Area but the final location will be confirmed during the detailed design stage.

The values and dimensions discussed in this section are preliminary only. Details will be confirmed through the final design phase of the Project.



Photo 4.19 Example of a typical BESS (Wax Design, 2026; Victoria State Government, 2023)



Photo 4.20 Example of a typical 275 kV OTL tower (Wax Design, 2026)

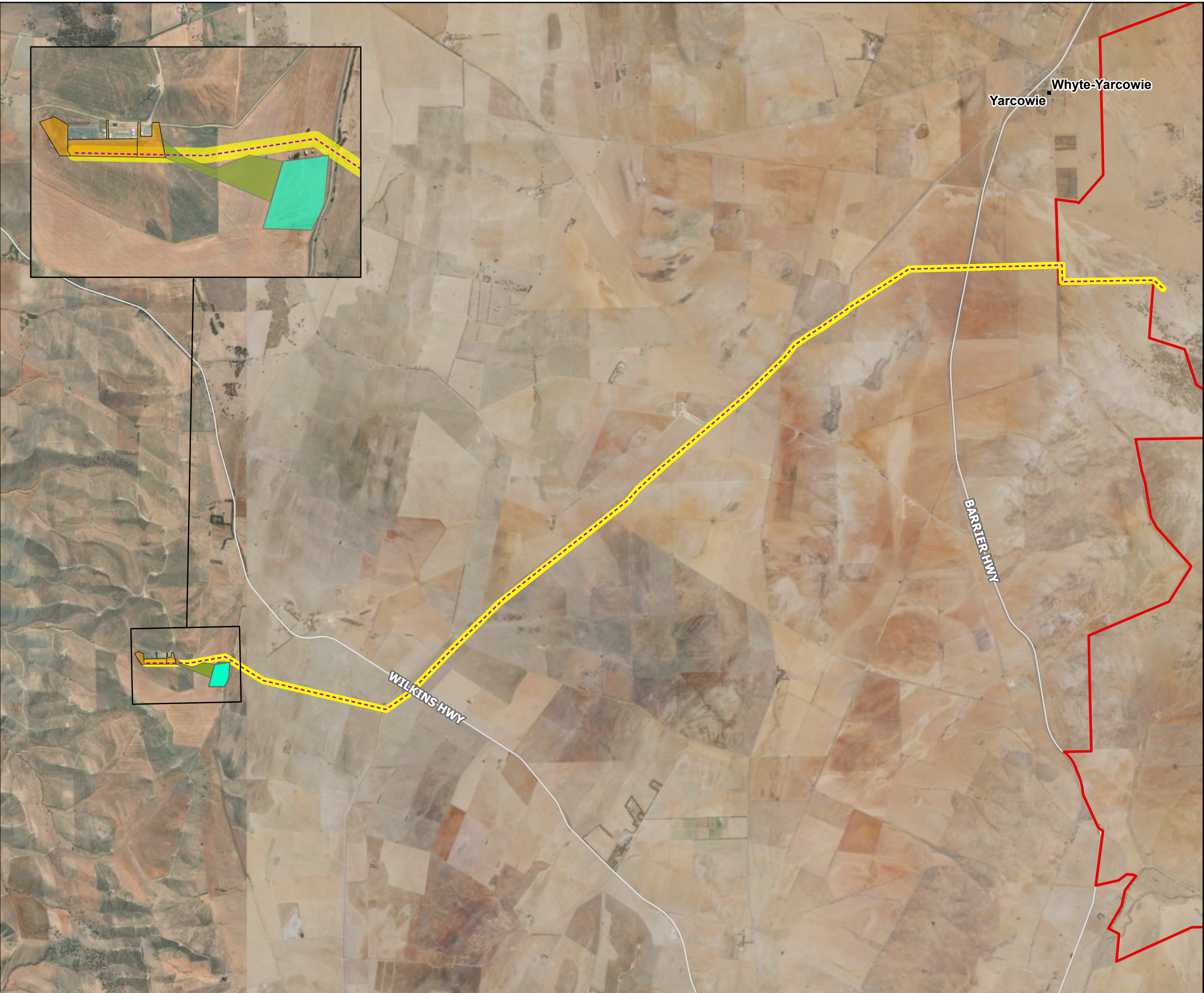
4.4 Proposed layout

The proposed preliminary layout for the Project is shown in Figure 4.7.

The final location of infrastructure, including BESS model and transmission tower/pole model and locations, will be subject to detailed design. Key considerations will be:

- final selection of the BESS supplier/model as well as suppliers for other infrastructure
- outcomes of detailed geotechnical investigations
- outcomes of ongoing stakeholder engagement.

As such, it is requested that allowance can be made for the provision of final infrastructure designs and locations (final designs) to occur at the Operational Management Plan (OMP) phase of the Project.

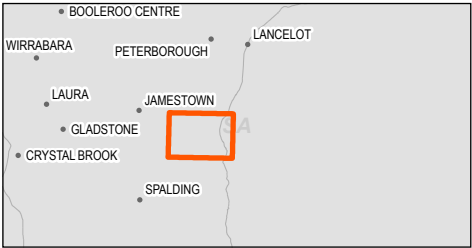


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 4.7
Project Layout

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 m Transmission Line Easement
- Wind Farm Boundary (REILA 2)



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4.5 Construction, operation, and decommissioning

4.5.1 Construction

4.5.1.1 Indicative timeline

Construction of the Project is planned to commence in 2027 and is expected to take 18 months; concluding in 2028.

4.5.1.2 Construction activities and staging

Construction of the Project is expected to require approximately 150 FTE workers across the 18-month period; peaking across a 12-month period.

The Applicant will utilise local workers and businesses, for construction and transport, where feasible. Discussions with relevant providers and stakeholders are ongoing.

Construction access for the BESS Area will be from two proposed new permanent access points off Canowie Road, one at each the northern end and southern end of the site. Construction access for the Belalie Substation will be off Gilfillan Road. It is anticipated that new, temporary access for the Belalie Substation Expansion will be required off Gilfillan Road to support construction activities, though ongoing operational access would be from existing access points to the Belalie Substation. Construction access for the underground cable and OTL will be from various locations, however will seek to utilise existing access points, where possible.

It is anticipated that access points for the BESS Area will be maintained and utilised for operation. Where possible, access tracks utilised for the OTL Corridor and Underground Cable Easement will be remediated upon the completion of construction and commissioning, where not required to support operation.

The roads adjacent to the Project Area provide appropriate site distances to allow safe access during construction (Empirical Traffic Advisory Pty Ltd, 2026). To minimise risks to road users, site access points will be as far away from intersections and on the outside of bends, to maximise sightlines.

Key construction activities will include:

- site preparation works, including establishment of pads, temporary construction facilities including the concrete batching plant (if required), fencing, preliminary civil works and drainage, and access road and internal track construction
- construction of hardstand areas and BESS slabs
- construction of buildings, ancillary infrastructure, installation of underground cabling (trenching), and connection of communications equipment
- construction of the BESS, substation expansion, and OTL
- removal of temporary construction facilities and rehabilitation of disturbed areas.

Where possible, stone and sand for concrete and tracks will be sourced from material excavated from WTG footings at the wind farm site (REILA 2). Any shortfall would be sourced from commercial quarries in the region.

Options for concrete sourcing are still under investigation and may involve one (or a combination) of the following:

- establishment of a dedicated, temporary concrete batch plant – likely within the BESS Area
- utilisation of temporary batch plants established for the wind farm (proposed under REILA 2)
- sourcing of concrete from a commercial facility.

The operator of the concrete batch plant (if the plant is required) will be required to hold a valid licence under the EP Act for concrete batch works.

In accordance the EPA's *Information Sheet: EPA 425/23: Construction noise (2023)*, construction activities, where possible, will be undertaken between the hours of 7.00 am to 7.00 pm Monday to Saturday. Some activities may be required to be undertaken outside of these hours, such as concrete pours, substation works, or OTL road crossings. Activities undertaken outside of the hours of 7.00 am and 7.00 pm Monday to Saturday will be restricted, where possible, to activities that are unlikely to cause impact to amenity of the area, or otherwise will not be undertaken without prior approval from the Northern Areas Council, Regional Council of Goyer (depending of the location of proposed works), or EPA (in the case of any concrete batch works).

4.5.1.3 Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) will be prepared prior to the commencement of construction. The CEMP will identify the environmental management and monitoring measures that would need to be implemented during the construction phase, consistent with the control measures outlined in the environmental impact and significance assessment tables presented in Section 6 of this EIR. The CEMP will:

- provide a framework for the management of potential environmental impacts,
- provide guidance to the contractor(s) and help them meet their obligations; particularly under the EP Act, as well as other relevant statutory requirements
- provide an overview of all environmental values of the Project Area in association with the implications of the construction methodology and provide detail of the individual environmental commitments of the Project
- outline and discuss the implications of all relevant legislation and state and Commonwealth guidelines that will need to be incorporated into management measures.

At a minimum, the CEMP will cover the following key issues:

- Aboriginal heritage; including a site discovery procedure and/or an individual Cultural Heritage Management Plan
- non-Aboriginal heritage
- air quality and dust suppression, including a Dust Management Plan (DMP)
- emergency and fire management, including requirements for the provision of basic fire-fighting equipment at each site, including fire extinguishers, knapsacks, and other equipment suitable for initial response actions
- flora and fauna
- weeds, pests, and diseases control
- materials, fuels, and waste management
- noise and vibration
- storage of hazardous substances
- traffic and access, including a Traffic Management Plan (TMP)
- water quality protection, including an individual Soil Erosion and Drainage Management Plan (SEDMP)
- health and safety in accordance with the *Work Health and Safety Act 2012* (WHS Act).

4.5.2 Operation

4.5.2.1 Operational activities

It is anticipated that the Project will have an operational lifespan of 30 years.

It is estimated that 5-10 permanent staff will be employed during the operational phase of the Project. Additional staff and contractors may be required during maintenance works. Staff will be employed from within the local region, where possible.

An OMP will be developed for the Project in accordance with Section 66 of the HRE Act, and Regulation 37 of the HRE Regulations. In accordance with the requirements of the Act and Regulations, the OMP will:

- specify the authorised operations proposed to be undertaken
- specify the statement of environmental objectives to which the plan applies
- specify how proposed authorised operations will be managed, including details of the management systems and controls that will ensure compliance with the relevant statement of environmental objectives
- and will set out:
 - policies of the licensee that address the achievement of regulatory requirements and objectives
 - resources that will be applied to effectively implement the plan
 - recognised industry practices and procedures that will be applied in:
 - undertaking authorised operations
 - achieving compliance with regulatory requirements
 - the manner in which building work (within the meaning of the PDI Act) carried out in connection with authorised operations will be assessed against the National Construction Code
 - processes for managing physical, operational, procedural or organisational changes in respect of authorised operations
 - systems that will manage risks allowing achievement of the regulatory objectives arising from undertaking authorised operations including:
 - the controls that will be implemented to eliminate or reduce risks associated with authorised operations
 - the systems that will ensure the implemented controls will be clearly defined and achieved
 - practices and procedures to ensure employees, contractors and visitors to the licence area have the appropriate competency, training (including ongoing training), induction and supervision
 - mechanisms for consulting and communicating with external parties in relation to authorised operations
 - systems to identify, investigate and report incidents arising from authorised operations
 - practices and procedures to be followed in the event of an emergency relating to authorised operations
 - the manner in which the effectiveness of a matter referred to in a preceding paragraph will be monitored, evaluated, audited and reviewed
 - the manner in which the licensee intends to comply with the statement of environmental objectives in force in relation to authorised operations
 - the day on which authorised operations will, or are proposed to, commence
 - any other relevant matter as determined by the Minister.

The OMP will be developed prior to the commencement of Project operation and submitted to DEM for approval.

4.5.2.2 Hours of operation

The Project will have capacity to operate on a 24 hour/7 day per week basis but is not expected to continuously operate. The occurrence and duration of operations would be based primarily on energy demand, commercial considerations, and permitting environmental factors.

4.5.2.3 Emergency management

An Emergency Management Plan will be developed for the Project. At a minimum, the plan will include the following key items:

- key responsibilities and authorities
- emergency contacts
- evacuation plan
- incident and injury management
- emergency preparedness information
- emergency response actions
- post-emergency investigations, rehabilitation, and records.

The Plan will be based on various relevant Australian Standards (including *AS 3745:2010 Planning for Emergencies in Australian Facilities*) and the Australasian Fire and Emergency Service Authorities Council *Wind Farms and Bushfire Operations Guideline* (AFAC Publication No. 2053) (2018).

Site personnel and visitors will be required to undertake a site induction prior to entering the site; and will include induction of key emergency management procedures.

The site will be clearly signed with emergency contact details and site layout with respect to emergency response and evacuation.

4.5.2.4 Bushfire management

A Fire Management Plan will be prepared in consultation with the CFS. The Plan will provide clear direction on management arrangements and maintenance requirements that will be implemented to manage fire risk, including clearly defined the roles and responsibilities as well as prevention and preparedness activities required throughout operations. The Plan will be reviewed and updated (where required) every 12 months, with any revised versions to be forwarded to the relevant CFS Regional Office.

Vegetation management zones (VMZ) will be established around the BESS units, substation equipment, inverter stations and operations and maintenance buildings. VMZs will be maintained with a minimum buffer of 20 m between structures and existing remnant vegetation and property boundaries.

The final location and extent of VMZs will be determined during detailed design and will be minimised as far as practical to reduce native vegetation impacts, whilst maintaining the safety of infrastructure, and site/emergency services personnel.

Access tracks within the BESS Area and Belalie Substation Expansion Area will be designed to accommodate emergency service vehicles, and will seek to meet the following specifications, unless otherwise agreed with the CFS:

- provision of two (2) separate and safe exit points located on opposite ends of the internal access tracks to enable multiple avenues of evacuation in the event of a bushfire
- be constructed with a formed, compacted, self-draining, all-weather surface
- a 6 m trafficable width for key internal access tracks, with all new internal tracks having a minimum trafficable width of at least 4 m. Where the trafficable width is less than 6 m wide, appropriately sized passing bays or turning areas, spaced no more than 200 m apart to support safe access for emergency response vehicles:
 - passing bays minimum width of 6 metres and length of 17 m, or
 - 'T' or 'Y' shaped turning area with a minimum formed length of 11 m and minimum internal radii of 9.5 m
- where required, cul-de-sac endings or dead-end roads are to include either:
 - a turning area with a minimum formed surface radius of 12.5 m, or
 - 'T' or 'Y' shaped turning area with a minimum formed length of 11 m and minimum internal radii of 9.5 m

- be constructed with a minimum external radius of 12.5 m for all road curves
- not exceed a gradient of 16 degrees (29%)
- incorporate solid all-weather crossings over any water-course capable of supporting fire-fighting vehicles with a gross vehicle mass of 21 tonne (t)
- be kept free of overhanging vegetation, with regular pruning undertaken along access tracks to maintain a minimum vehicular clearance of not less than 4 m width and a vertical height clearance of 4 m
- allow fire-fighting vehicles to safely enter and exit the site in a forward direction by incorporating a loop road around the site
- incorporate access gates that are readily accessible to attending fire service units, this maybe with the use of a Lockwood 003 type padlocks.

Static water supply systems will be provided within the BESS Area and will be suitably located and marked to support efficient firefighting access. Unless otherwise agreed with the CFS, the tank will provide 72,000 litres capacity, and will incorporate the following:

- both large and small-bore suction outlets
- access via all-weather construction, with a minimum formed road surface width of 4 m
- identified with signage in accordance with *AS 2419.1:2021 – Fire hydrant installations*
- hardstand areas capable of supporting fire-fighting vehicles with a gross vehicle mass of 21 t that is a distance equal to or less than 6 m from the water supply outlet.

The final layout of water storage tanks will be developed in consultation with the CFS. Tanks will be aboveground and suitably constructed out of concrete or steel.

BESS units will be fitted with smoke detection systems. Furthermore, all buildings, where relevant, will be designed to comply with the requirements of the National Construction Code.

Basic fire-fighting equipment will remain available during any maintenance activities, including fire extinguishers, knapsacks, and other equipment suitable for initial response actions.

4.5.2.5 Maintenance

During the operational phase, all infrastructure associated with the Project will remain the responsibility of the licence holder and its contractor(s).

A number of core activities will be undertaken onsite during the operation of the Project including scheduled and un-scheduled maintenance. Maintenance works will include monitoring of equipment, cleaning, repairs, and replacement of worn or broken parts and maintenance of access tracks.

4.5.2.6 Site security

The infrastructure within the BESS Area and Substation Expansion Area will be enclosed in high security fencing, likely a galvanised chainmesh fence of approximately 2.8 m to 3 m high with an anti-climb top (such as barbed wire). Access will be controlled by security gates to facilitate authorised access only. Fencing will be confined to the final infrastructure footprint within both sites; which is expected to be significantly smaller than the current areas under consideration.

CCTV will be established around the perimeter of fenced areas, along with security lighting.

Permanent security features, such as fencing, CCTV and lighting, is not expected to be required along the OTL or underground cable. Transmission towers (or poles) would be fitted with anti-climb technology, and infrastructure would be regularly inspected.

4.5.3 Decommissioning

The Project is expected to have an operational lifespan of approximately 25 years (unless extended subject to separate authorisation).

At the end of the Project lifespan, infrastructure will be decommissioned, dismantled and removed from site. Additional workforce will be required during the decommissioning phase but these requirements are currently unknown.

The EPA's waste management hierarchy (shown in Figure 4.8) will be applied throughout all phases of the Project; particularly decommissioning. Consideration would be given for infrastructure components that may be suitable for reuse or recycling.



Figure 4.8 EPA waste management hierarchy (Environment Protection Authority, 2024)

A Decommissioning and Rehabilitation Plan (DRMP) will be prepared which would outline the approach to be adopted to decommission infrastructure associated with the Project and rehabilitate the topsoil and native vegetation to its pre-construction condition suitable for current agricultural land uses.

Basic fire-fighting equipment will remain available during decommissioning activities, including fire extinguishers, knapsacks, and other equipment suitable for initial response actions.

5 Community and stakeholder engagement

5.1 Engagement undertaken

Wind Prospect has been undertaking engagement for the Project since July 2022. Due to the number of nearby wind farms (both operational and in development) in the local area, and the increase in community interest in clean energy, it is important to understand that early, genuine, and ongoing transparent engagement is the minimum local communities will expect. Wind Prospect is committed to an open and transparent consultation process with all stakeholders, providing accurate and timely information as the Project progresses through key phases. Wind Prospect is also committed to being responsive to issues and feedback as they are identified by the community and implementing flexibility to meet the needs of those whose input is sought.

Engagement has been undertaken with the following stakeholders for the wider Whyte Yarcowie Wind Farm Project, identified through stakeholder analysis:

- Host landowners
- Adjacent landowners
- Neighbouring and surrounding landowners
- Ngadjuri Nation Aboriginal Corporation
- Broader community members in Hallett, Whyte Yarcowie and Terowie, as well as the broader Goyder and Mid North regions
- The Regional Council of Goyder
- The Northern Areas Council
- The Minister for Trade and Investment and Housing and Urban Development and Planning
- The Department for Trade and Investment
- The Department for Energy and Mining (DEM)
- The Department for Infrastructure and Transport (DIT)
- The Department for Environment and Water (DEW)
- The Environment Protection Authority (EPA)
- The South Australian Country Fire Service (CFS).

Activities undertaken by Wind Prospect include:

- establishment of the Whyte Yarcowie Wind Farm website
- issues of Project newsletters
- regular Project updates in the Regional Council of Goyder's *Renewables Update newsletter*
- seven Project community information 'drop-in' sessions (between August 2022-November 2023)
- investment in community led initiatives as part of the Community Sponsorship fund
- consultation with the Regional Council of Goyder and Northern Areas Council
- individual discussions with nearby landowners (both involved and non-participating/neighbouring landowners)
- consultation with the Ngadjuri Nation Aboriginal Corporation
- consultation with relevant mining exploration licence holders and applicants
- consultation with State Government agencies
- consultation with State and Federal members of parliament.

Consultation activities focused on engagement around key parts of the Project and potential impacts and opportunities including:

- vegetation and fauna
- visual amenity
- noise
- roads
- traffic management
- accommodation for construction workforce
- cultural heritage
- land use, including potential disruptions to nearby agricultural operations
- electromagnetic interference
- fire management
- community benefit sharing.

5.1.1 First Nations engagement

The Project is located on the traditional lands of the Ngadjuri people. The Project acknowledges the Ngadjuri peoples as the traditional custodians of the lands within the Project's social area of influence.

The Ngadjuri Nation Aboriginal Corporation (NNAC) is a representative body for Ngadjuri People. NNAC was included in the first round of engagement with key stakeholders. In 2023, the Ngadjuri people received a native title consent determination across the area (noting that Native Title has been deemed not to exist across the Project Area).

This early engagement provided Wind Prospect with a valuable opportunity to build a relationship with Ngadjuri Elders and representatives, opening a dialogue grounded in listening and learning about the history and cultural significance of the Project Area. Wind Prospect has been keeping the NNAC updated with their activities in the area.

Ongoing engagement with NNAC will continue throughout Project planning and development, with the Project team remaining available to meet at NNAC's convenience and committed to transparently communicating the outcomes of cultural heritage assessments. The most recent meeting between NNAC and the Project team occurred in early April 2026 to provide the Board with an update on Project activities and progress. This included an introduction to the location of the OTL and BESS components of the broader Whyte Yarcowie Wind Farm Project.

Future engagement with NNAC includes the establishment of a Steering committee to discuss matters of mutual interest, the completion of heritage surveys within the Project's Construction Footprint and employment and benefits sharing commitments, and regular Project updates via the Steering Committee, for the life of the Project.

5.2 Consultation Plan

Sections 61(4) and 63(3) of the HRE Act requires consultation on a proposed EIR and SEO. Furthermore, Regulation 33(2) of the HRE Regulations requires that the applicant must present a Consultation Plan for approval that:

- a) *states the day on which consultation is due to commence and conclude; and*
- b) *includes a list of the following persons to be consulted as identified by the licensee:*
 - (i) *the owners of the land to which the report relates;*
 - (ii) *any Recognised Aboriginal Representative Body—*
 - (A) *in respect of the area of land to which the report relates; or*
 - (B) *in respect of a specific Aboriginal site, object or remains on the land to which the report relates;*
 - (iii) *if the land to which the report relates is not the subject of a native title determination and there is no Recognised Aboriginal Representative Body identified under subparagraph (ii)—any traditional owners of Aboriginal sites or objects on the land to which the report relates;*

- (iv) *any affected agency or instrumentality of the Crown;*
- (v) —
 - (A) *each council in respect of the land to which the report relates; or*
 - (B) *if any part of the land to which the report relates falls outside of council areas—the Outback Communities Authority established under the Outback Communities (Administration and Management) Act 2009; and*
- c) *describes the method of engagement to be used in consulting with the persons listed in the consultation plan including how the licensee intends to respond to relevant issues raised as a result of consultation; and*
- d) *focuses the engagement on the environmental objectives and assessment criteria necessary to be achieved to demonstrate that any potential consequences of the proposed authorised operations will be adequately managed and controlled; and*
- e) *identifies all relevant parts in the environmental impact report or statement of environmental objectives that are to be consulted on; and*
- f) *complies with any other requirement specified by the Minister to the licensee.*

A Consultation Plan has been prepared for the Project to meet the above listed requirements and is provided in Appendix E. The Consultation Plan was approved by the Sub Delegate of the Minister for Energy and Mining on 3 June 2026 and was approved on [date to be added once approved].

This EIR and associated SEO has been made available for viewing as per the consultation process established under the Consultation Plan.

Upon completion of consultation outlined in the Consultation Plan, a Consultation Report will be developed the sets out the following requirements as per Regulation 33(4) of the HRE Regulations:

- a) *the persons consulted; and*
- b) *any issues of concern raised by persons consulted; and*
- c) *the steps (if any) taken or proposed to be taken by the licensee to address those concerns.*

The Consultation Plan addresses Applicant-led consultation prior to submission of the EIR and SEO to DEM for approval, as required under Sections 61(4) and 63(3) of the HRE Act. Further consultation will occur after submission of the EIR and SEO to DEM, which will include public consultation of the EIR and SEO by DEM as required under Section 72 of the HRE Act.

5.3 Ongoing engagement

Consultation with the local regional community is ongoing. The community and stakeholders will remain actively engaged throughout all future stages of the Project, including the construction, operation and decommissioning phases. The outcomes of ongoing engagement will assist in informing the development of the Project's OMP and serve as a crucial feedback mechanism for the continuous monitoring and successful implementation of management and mitigation measures.

6 Environmental Impact Assessment

This environmental impact assessment has been undertaken in to address the Criteria established under the DEM's EIA Criteria (2024), which requires identification of the following:

- **Criteria 1** – Element of the Environment
- **Criteria 2** – Potential Impact Events
- **Criteria 3** – Confirmation of Impact Events
- **Criteria 4** – Control and Management Strategies and Uncertainty Assessment
- **Criteria 5** – Environmental Significance Assessment
- **Criteria 6** – Statement of Environmental Objectives.

The environmental significance assessment (Criteria 5) has adopted the methodology for assessing environmental significance established in DEM's *Environmental Impact Report -Renewable Energy Feasibility Permit – Met Masts* (2025), and considers the residual impacts of each impact event after implementation of the identified control and management strategies (Criteria 4). Under the EIA Criteria, impact events must be managed, limited or remedied to *as low as reasonably practicable* (ALARP).

Definitions used to assess the level of significance of potential impacts; determine the criteria for sensitivity of the receiving environment; and to determine the magnitude of each potential impact event are provided in Table 6.1, Table 6.2 and Table 6.3, respectively.

The residual overall significance of each impact event has then determined based on the Significance Assessment Matrix shown in Table 6.4. The significance of impacts is considered to be acceptable where it is *Negligible* or *Minor*, or where it is *Moderate* and has been mitigated to ALARP with application of appropriate control and management strategies.

Table 6.1 Definitions used to assess significance of potential impacts

Factor	Descriptions
Avoidance	Yes: Impacts can be avoided through the identified controls.
	No: Impact cannot be avoided through the identified controls.
Frequency	High: Impacts occur frequently or are present throughout the life of the Project.
	Moderate: Impacts occur several times during the lifespan of activities.
	Low: Impacts occur infrequently.
	Rare: Impacts not expected or only occur in exceptional circumstances.
Duration	Permanent: Impacts to the environment are permanent and non-reversible.
	Long lasting: Impact to the environment persist for a period of years but are reversible.
	Short term: impacts of less than a year duration and are reversible.
Extent	Widespread: Impacts occur on a regional scale.
	Moderate: Impacts extend beyond the Project Area and immediate surrounds without occurring on a regional scale.
	Localised: Impacts are limited to the Project Area and immediate surrounds.

Factor	Descriptions
Severity	High: Statutory reference values or environmental quality standards are exceeded.
	Moderate: Statutory reference values or environmental quality standards are not exceeded but the impact results in an increase in the occurring content/level.
	Low: Imperceptible or indistinguishable from natural background levels.
Cumulative	Yes: Receptors are already impacted by similar activities.
	Possible: Receptors could be impacted by similar activities depending on the site.
	No: Receptors are not already impacted by similar activities.
Sensitivity	See Table 6.2

Table 6.2 Criteria for sensitivity

Sensitivity	Description
High	The environmental value is protected as a result of Australia's international commitments. The environmental value holds a statutory protection (national parks, etc). The environmental value is intact. The environmental value is unique to the environment in which it occurs. It is isolated to the affected system/area which is poorly represented in the region, territory, country or the world. It has not been exposed to threatening processes, or they have not had a noticeable impact on the integrity of the environmental value.
Moderate	The environmental value is recorded as being important at a regional or local level. The environmental value is in a moderate to good condition despite it being exposed to threatening processes. It is relatively well represented in the systems/areas in which it occurs but its abundance and distribution are limited by threatening processes. Threatening processes have reduced its resilience to change.
Low	The environmental value is not listed on any recognised or statutory register. It is in a poor to moderate condition as a result of threatening processes. It is abundant and widely distributed or representative examples exists throughout the host systems/areas. There is no detectable response to change or change does not result in further degradation of the environmental value.

Table 6.3 Criteria for magnitude

Magnitude	Description
High	An impact that is widespread and/or is permanent or long-lasting. An impact that occurs frequently. Statutory reference values or environmental quality standards are exceeded.
Moderate	An impact that has a relatively large scope or is long-lasting. An impact that occurs several times during the lifespan of activities. Statutory reference values or environmental quality standards are not exceeded but the impact results in an increase in the occurring content/level.
Low	An impact with no or little effects on the receptor. The effects have a limited scope and are short-term. An impact that is infrequent.

Table 6.4 Significance Assessment Matrix (Department for Energy and Mining, 2025)

Sensitivity of Environmental Value	Magnitude of Impact		
	High	Moderate	Low
High	Major	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Negligible

6.1 Ecology (flora, fauna, weeds and pests, and conservation areas)

6.1.1 Methodology

Ecology impacts for the Project have been determined based on field surveys and an assessment undertaken by NVC accredited consultants Umwelt (Australia) Pty Limited (Umwelt). The assessment included:

- Background searches of using the Protected Matters Search Tool (PMST) and Biological Database of South Australia (BDBSA) to identify records of species sighted within 5 km of the Project Area.
- Three field surveys (flora assessments) undertaken 9-11 September 2024; 28 October 2024; and 25 February 2025. Flora was assessed using the Bushland Assessment Method (BAM).
- Targeted reptile searches for the nationally PBTL (*Tiliqua adelaidensis*) undertaken 28-30 October 2024 and 25-26 February 2025. The survey methods were consistent with the *Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the EPBC Act* (Department of Sustainability, Environment, Water, Population and, 2011).
- Desktop assessment to determine the likelihood of any threatened species of TECs identified in the background or occurring within the Project Area. The assessment was based on recency of records, habitat preferences and the results of the field surveys.

- Preparation of a Native Vegetation Clearance Data Report in accordance with NVC requirements to determine the extent of native vegetation requiring clearance due to the Project and likely impacts to flora, fauna and habitat. The Data Report included calculations of the Significant Environmental Benefit (SEB) required to offset the loss of native vegetation from the proposed clearance, in accordance with Division 5 of the *Native Vegetation Regulations 2017*.

Further information on the assessments undertaken is provided in the Native Vegetation Clearance Data Report (Umwelt, 2026) provided in Appendix C.

In addition, a desktop assessment of potential impacts to protected conservation areas has been undertaken by WSP via searches of relevant databases.

6.1.2 Existing environment

6.1.2.1 Vegetation

Vegetation across the Project Area is predominantly non-native vegetation (cropping or exotic species). Only small amounts of native vegetation exist within the Project Area comprising < 1% of coverage, consisting of mostly of open grassland and small amounts of shrubland. Table 6.5 outlines the VAs that were identified by Umwelt within the Project Area, along with a summary of the distribution across each of the Project components.

Table 6.5 Vegetation Associations mapped Within the Project Area

VA	Vegetation Description	Total (ha)
A7	<i>Austrostipa</i> spp. / <i>Rytidosperma</i> spp. Very Open Grassland	0.20
B7	<i>Austrostipa</i> spp. / <i>Rytidosperma</i> spp. Very Open Grassland	0.40
B14	<i>Enneapogon nigricans</i> Grassland	0.39
B15	<i>Maireana rohrlichii</i> Shrubland	0 ³
Subtotal native vegetation (ha)		0.99
-	Cropping	92.05
-	Exotic	59.13
-	Existing Infrastructure (e.g. roads)	2.36
Total (ha)		154.53

Native vegetation was generally assessed to be in poor to moderate condition. No remnant woodlands or mallee exists within the Project Area.

The location of VAs within the Project Area are shown in Figure 6.1.

³ Identified adjacent to the OHL Corridor. No impacts are proposed.

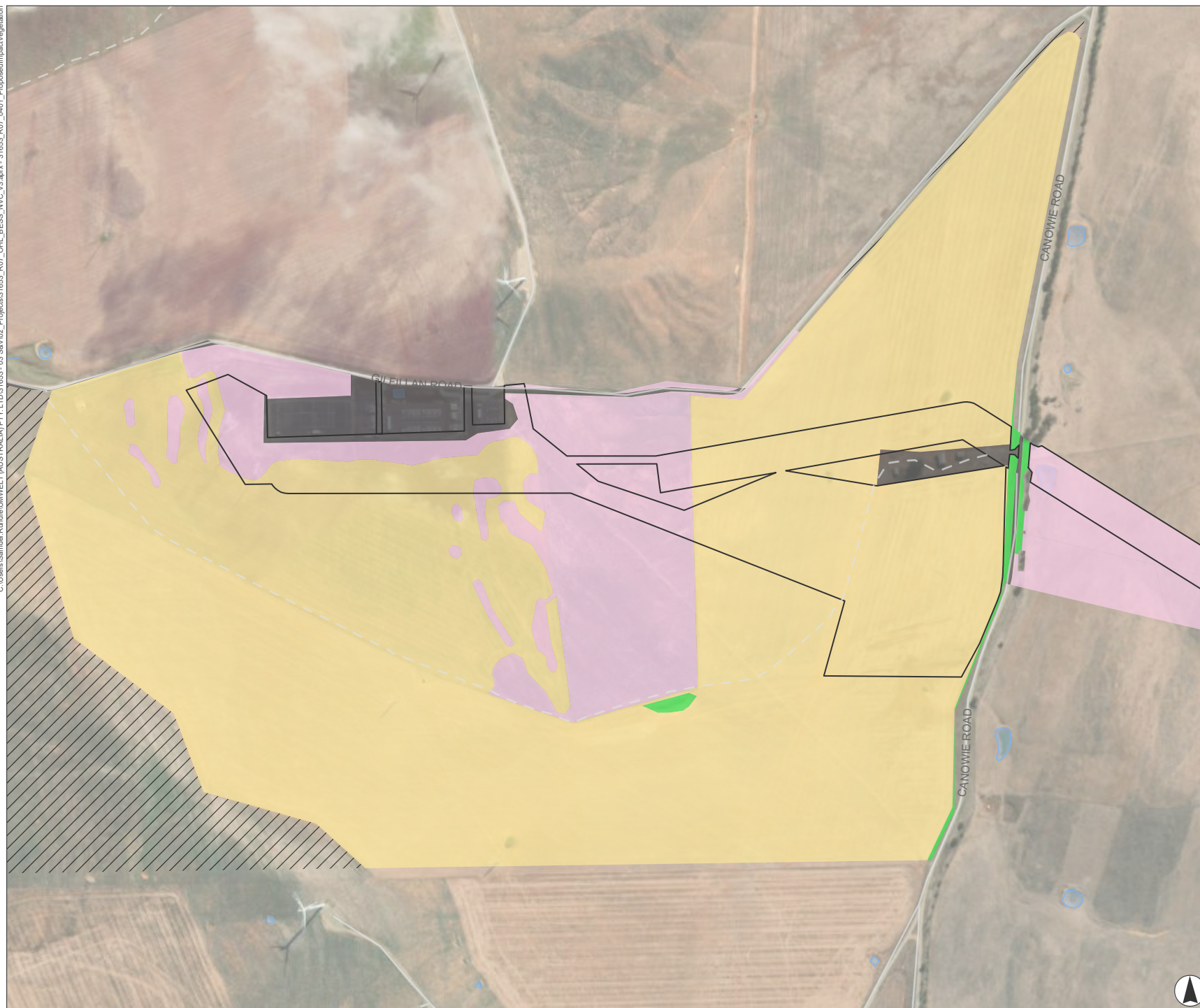


FIGURE 6.1a

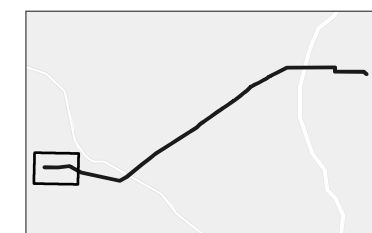
Map showing Proposed Impact to Vegetation
(map 1 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Waterbodies
- Watercourses
- Local Road
- Track

Vegetation Association

- Area Not Surveyed
- B7 *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland
- Cropping
- Exotic
- Roads/infrastructure



0 0.2 0.4
Kilometres

Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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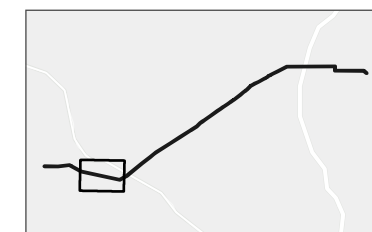
FIGURE 6.1b
Map showing Proposed
Impact to Vegetation
(map 2 of 8)

Legend

-  Project Area: BESS, OHL and Substation Expansion
-  Waterbodies
-  Main road
-  Local Road
-  Track

Vegetation Association

-  Exotic
-  Roads/infrastructure



Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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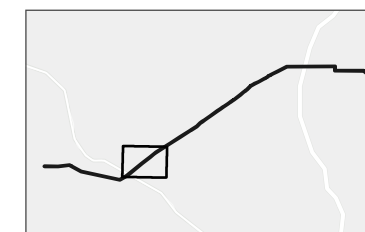
FIGURE 6.1c
Map showing Proposed
Impact to Vegetation
(map 3 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Main road
- Local Road
- Track

Vegetation Association

- Exotic
- Roads/infrastructure



Scale 1:10,000 at A4
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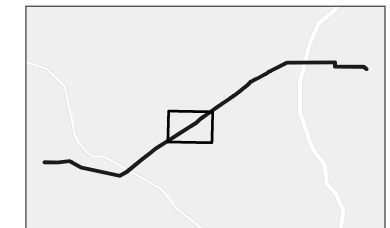
FIGURE 6.1d
Map showing Proposed
Impact to Vegetation
(map 4 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Waterbodies
- Local Road
- Track

Vegetation Association

- B14 *Enneapogon nigricans* grassland
- Cropping
- Exotic
- Roads/infrastructure



0 0.2 0.4
Kilometres

Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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FIGURE 6.1e

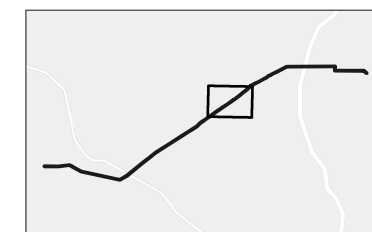
Map showing Proposed Impact to Vegetation
(map 5 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Local Road
- Track

Vegetation Association

- B2 *Maireana aphylla* shrubland
- B14 *Enneapogon nigricans* grassland
- Cropping
- Exotic
- Roads/infrastructure



0 0.2 0.4
Kilometres

Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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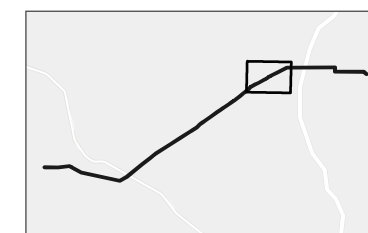
FIGURE 6.1f
Map showing Proposed
Impact to Vegetation
(map 6 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Waterbodies
- Local Road
- Track

Vegetation Association

- B2 *Maireana aphylla* shrubland
- B14 *Enneapogon nigricans* grassland
- Cropping
- Roads/infrastructure



0 0.2 0.4
Kilometres

Scale 1:10,000 at A4
GDA2020 MGA Zone 54

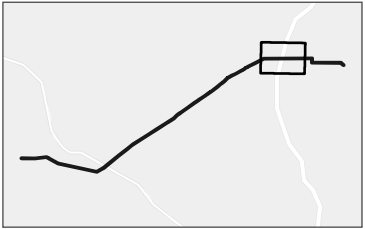


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FIGURE 6.1g
Map showing Proposed
Impact to Vegetation
(map 7 of 8)

- Legend**
- Project Area: BESS, OHL and Substation Expansion
 - Main road
 - Local Road
- Vegetation Association**
- B7 *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland
 - Cropping
 - Roads/infrastructure



Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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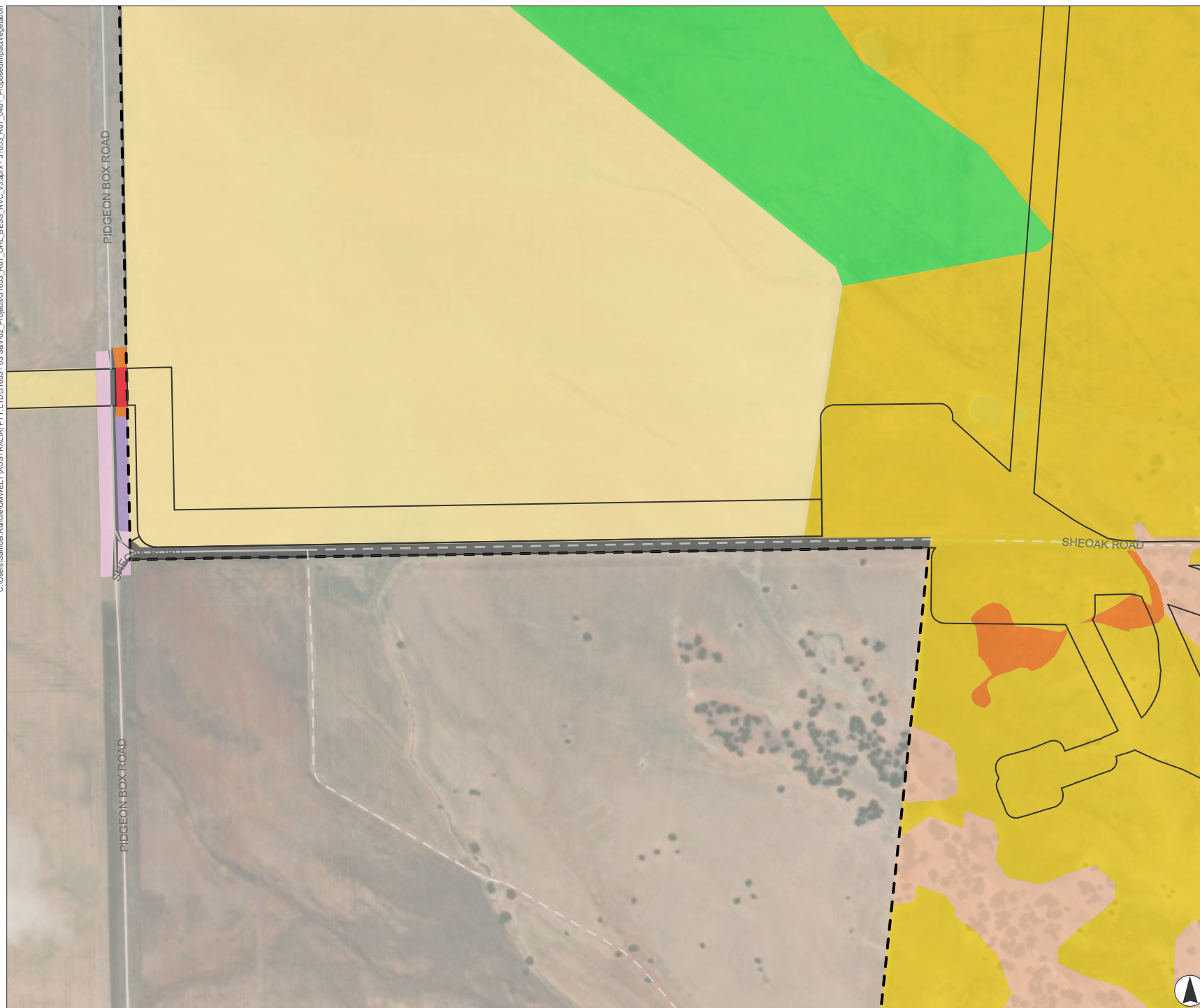


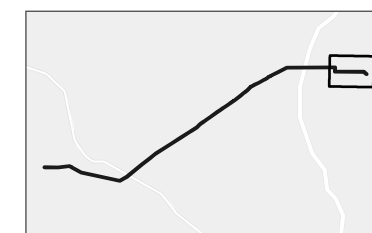
FIGURE 6.1h
Map showing Proposed Impact to Vegetation (map 8 of 8)

Legend

- Project Area: BESS, OHL and Substation Expansion
- Wind Farm
- Waterbodies
- Local Road
- Track

Vegetation Association

- A1 Lomandra Grassland
- A2 *Maireana aphylla* shrubland
- A3 *Eucalyptus porosa* Mallee Woodland
- A7 *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland
- B7 *Austrostipa* spp. / *Rytidosperma* spp. Very Open Grassland
- B15 *Maireana rohrlachii* Shrubland
- Cropping
- Exotic
- Roads/infrastructure



0 0.2 0.4
Kilometres

Scale 1:10,000 at A4
GDA2020 MGA Zone 54



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Threatened flora

Two NPW Act listed flora species were recorded within the Project Area during the field surveys:

- *Maireana rohrlachii* (Rohrlach's Bluebush) (NPW Act Rare). Thirty eight (38) individuals of this species were identified adjacent to the eastern half of the OHL Corridor.
- *Rumex dumosus* (Wiry Dock) (NPW Act Rare). Eight individuals of this species were recorded adjacent to the north-eastern part of the OHL Corridor along Mitchells Road.

One additional NPW Act listed flora species (*Cryptandra campanulata* (Long-flower Cryptandra)) was assessed as possibly occurring within the Project Area but this species was not identified during the field surveys.

No EPBC Act listed flora species were identified within the Project Area during the field surveys. Background searches identified that nine EPBC Act listed flora species may occur within the area, but these were subsequently assessed as unlikely to occur.

Threatened Ecological Communities

Database searches identified that two TECs might occur in the Project Area:

- INTG – Critically Endangered
- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia (PBGW) – Critically Endangered.

Vegetation surveyed within the Project Area was assessed against the definitions of each of these TECs and it was subsequently deemed that neither TEC is present within the Project Area (Umwelt, 2026).

6.1.2.2 Fauna

Ten (10) fauna species were recorded within the Project Area during the field surveys; nine native species and one introduced species.

One of the recorded flora species is an EPBC Act and NPW Act listed species, PBTL (*Tiliqua adelaidensis*) (EPBC Act Endangered; NPW Act Endangered).

In addition, the desktop assessment identified one additional threatened EPBC Act listed flora species (Southern Whiteface (*Aphelocephala leucopsis leucopsis*) (EPBC Act Vulnerable) as likely to occur within the Project Area, and one EPBC Act listed flora species (Blue-winged Parrot (*Neophema chrysostoma*) (EPBC Act Vulnerable, NPW Act Vulnerable) as possibly occurring within the Project Area. Neither of these were identified during the field surveys.

No additional NPW Act listed species were identified during the field surveys. Background searches identified three NPW Act listed flora species as possibly occurring within the Project Area (White-winged Chough (*Corcorax melanorhamphos*) (NPW Act Rare); Black Falcon (*Falco subniger*) (NPW Act Rare); Blue-winged Parrot (*Neophema chrysostoma*) (EPBC Act Vulnerable, NPW Act Vulnerable), though none of these species were identified during the field surveys (Umwelt, 2026)

Pygmy Blue-Tongue Lizard (*Tiliqua adelaidensis*)

As a result of identifying the PBTL (*Tiliqua adelaidensis*) in proximity to the Project, the Project Area was subsequently amended to minimise impacts to known PBTL habitat as far as possible.

Habitat suitability for PBTL has been conservatively mapped, and will be included in the Preliminary Documentation submitted to DCCEE for review as part of the EPBC approval process (discussed further in Section 2.2.1).

6.1.2.3 Weeds and pests

A number of introduced flora species were identified within the Project Area (WSP Australia Limited, 2026), including the following Declared weeds under the LSA Act:

- *Marrubium vulgare* (Horehound)
- *Echium plantagineum* (Salvation Jane).

Asphodelus fistulosus (Onion Weed), *Avena barbata* (Bearded Oat), and *Erodium* sp. (Long Heron's-bill/Cut-leaf Heron's-bill), whilst not Declared weeds, were also identified in the Project Area.

Only one introduced fauna species was identified within the Project Area (Umwelt, 2026):

- House Sparrow (*Anthus australis*).

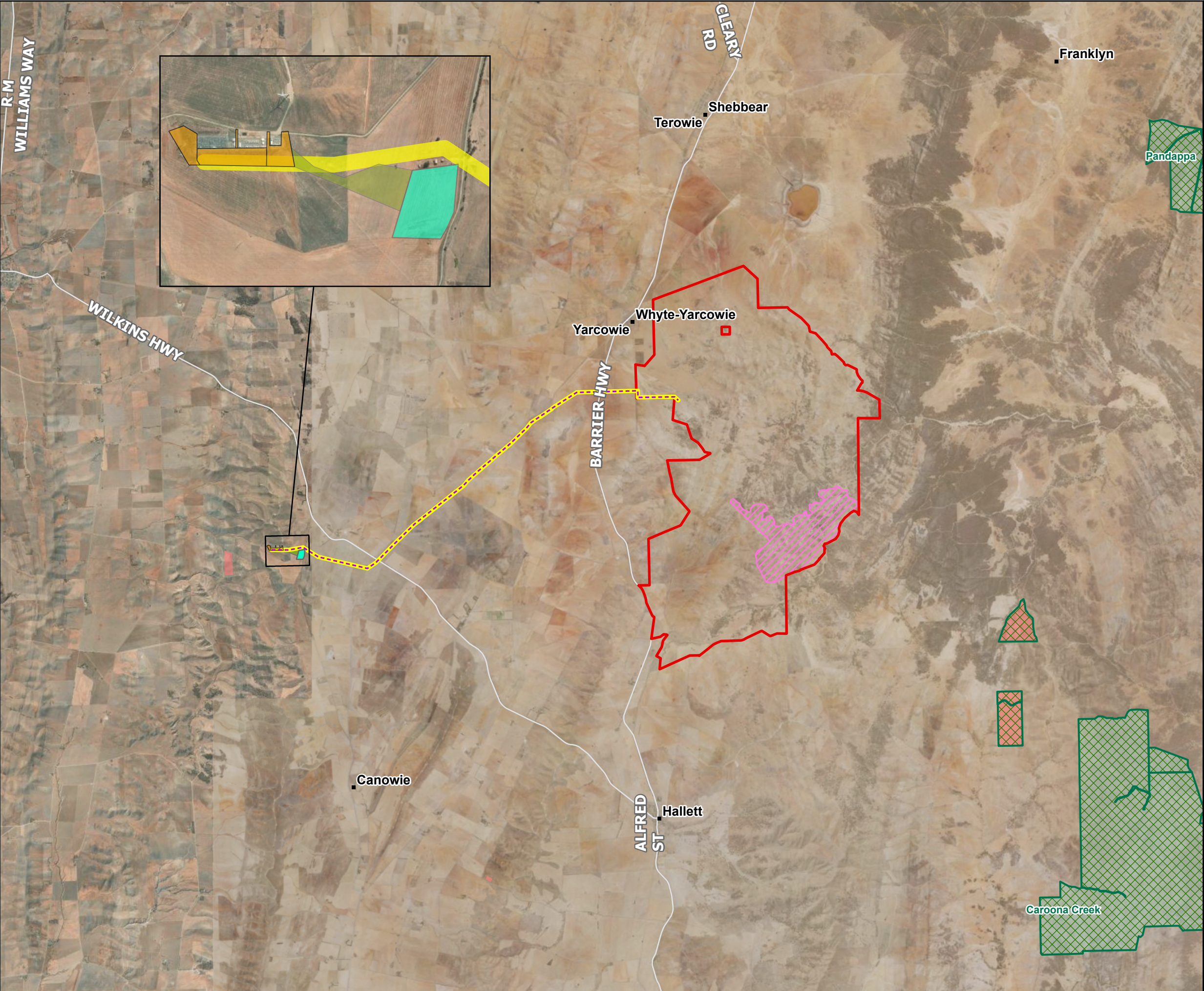
6.1.2.4 Conservation areas

Desktop searches were undertaken to identify the presence of protected conservation areas within 10 km of the Project Area. The desktop searches identified the following:

- No Conservation Parks protected under the *National Parks and Wildlife Act 1972* (NPW Act) area were identified within 10 km of the Project Area (Department for Environment and Water, n.d.)
- One Heritage Agreement under the NV Act was identified within 10 km of the Project Area:
 - Heritage Agreement (HA) 1590 (31.5584 ha) – approximately 1.35 km west of the Belalie Substation Expansion Area (Department for Environment and Water, n.d.)
- No SEB areas protected under the NV Act were identified within 10 km of the Project Area (Department for Environment and Water, n.d.)
- Planning and Design Code (PDI Act) areas:
 - State Significant Native Vegetation Overlay covering HA 1590, discussed above (PlanSA, n.d.)
- A Commonwealth Caring for our Country funded Environmental Stewardship Area is located approximately 4.5 km south-east of the eastern end of the OTL; within the Whyte Yarcowie Wind Farm site. The Environmental Stewardship Area covers an approximate 855 ha areas of *Lomandra* grassland. The Environmental Stewardship Area has been in place since 2011 and management funding expires in June 2026 (Umwelt, 2024a). Once funding has ceased, the area will no longer be considered an Environmental Stewardship Area, though native vegetation within the area will remain protected under the NV Act and potentially the EPBC Act. It should be noted that all impacts to this area have been avoided by the proposed construction footprint for the wind farm.

As the Project Area is not in close proximity to any protected conservation areas, no impacts are anticipated.

The nearest protected conservations areas to the Project Area are shown in Figure 6.2.

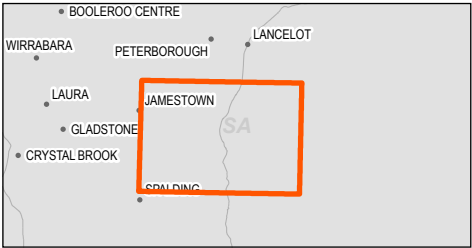


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 6.2
Conservation Areas

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REILA 2)
- Environmental Stewardship Area
- State Significant Native Vegetation
- Vegetation Heritage Agreements
- NPW and Conservation Properties



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:150,000 Date: 23/03/2026

Data sources: WSP, SA Government, World Imagery Earthstar Geographics
MetroMap (Australia latest)
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Table 6.6 summarises legislation and non-legislated standards, views of affected parties, and the key environmental receptors relevant to ecology.

Table 6.6 Summary of environmental elements – flora, fauna, weeds and pests, and conservation areas

Applicable legislation	Applicable standards / guidelines	Views of affected parties	Environmental receptor
<i>Native Vegetation Act 1991</i> (NV Act)	<i>Policy for a Significant Environmental Benefit 2024</i>	Desire for impacts to native vegetation, fauna and habitat to be avoided or minimised.	Health and preservation of native vegetation and biodiversity.
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	<i>Guide for calculating a significant environmental benefit 2024</i>	Importance of biosecurity to be managed across the lifecycle of the Project to prevent impacts from pest plant and animals.	Preservation of habitat for native fauna.
<i>National Parks and Wildlife Act 1972</i> (NPW Act)	<i>Guide for Applications to Clear Native Vegetation 2024</i>		
<i>Landscape South Australia Act 2019</i> (LSA Act)	<i>Heritage Agreement Policy 2023</i>		
<i>Planning, Development and Infrastructure Act 2016</i> (PDI Act)	<i>Significant Impact Guidelines 1.1</i> <i>Australia's National Biodiversity Strategy and Action Plan</i>		

6.1.3 Potential impacts

6.1.3.1 Vegetation

Clearance of native vegetation to support the Project will be unavoidable, however, the design of the Project has taken into account the requirements of the Mitigation Hierarchy for native vegetation clearance, established under the *Native Vegetation Regulations 2017*, which aims to minimise impacts to species and habitat protected under the NV Act and EPBC Act.

The design of the Project has been progressively informed by the ecological assessments and has sought to concentrate impacts within areas mostly void of native vegetation. The Project has avoided all impacts to identified PBTL habitat and will not impact on any TECs (Umwelt, 2026).

The Project has been sited to avoid impacts to threatened flora species, *Maireana rohrlachii* (Rohrlach's Bluebush) and *Rumex dumosus* (Wiry Dock). No clearance of these species is currently proposed.

The Project will result in clearance of up to 0.99 ha of native vegetation. Table 6.7 outlines the current native VA clearance areas for the Project. The detailed design and construction methodology will seek to further reduce this clearance, where possible. A further 151.18 ha of non-native vegetation (cropping and exotic species) is also proposed to be impacted.

Table 6.7 Vegetation Association clearance areas (Umwelt, 2026)

Vegetation Association	Clearance area (ha)
A7: <i>Austrostipa</i> spp. / <i>Rytidosperma</i> spp. Very Open Grassland	0.20
B7: <i>Austrostipa</i> spp. / <i>Rytidosperma</i> spp. Very Open Grassland	0.40
B14: <i>Enneapogon nigricans</i> Grassland	0.39
B15: <i>Maireana rohrlichii</i> Shrubland	0.0
Total	0.99

Native vegetation clearance has been assessed as a Level 4 clearance under the NV Act, and will require an SEB offset of 19.79 points, which is proposed to be met through a financial payment of \$14,855.68 (inc. admin fee). Approval for native vegetation clearance will be sought from NVC. No clearance will take place until appropriate approval has been received.

The Project has potential to cause indirect impacts to native vegetation due to the generation of dust during construction and the risk of altering hydrology which could impact the quality of native vegetation in proximity to the Project.

6.1.3.2 Fauna

The Project Area has sought to minimise impacts to known PBTL habitat as far as possible, and is not likely to impact important habitat for any other threatened or common fauna species.

Impacts to PBTL habitat are unavoidable due the position of this habitat in relation to the fixed location of the point of connection to the grid at the Belalie substation. The Project design has sought to minimise the impacts to this area of known PBTL habitat with construction methodology to be utilised that limits the extent of the construction impact on this habitat.

Indirect impacts to fauna may result from the Project, including increased vehicle movements causing fauna collision and temporary disturbance of fauna.

6.1.3.3 Weeds and pests

The field assessment identified that weed growth was present in and adjacent to the Project Area, which included two species of Declared weeds (*Marrubium vulgare* (Horehound), and *Echium plantagineum* (Salvation Jane)) under the LSA Act. As such, activity from the Project has an elevated risk of facilitating the spread of weeds within and from the Project Area through the movement of plant material or through soil on vehicles and equipment. This could lead to increased weed growth as well as a reduction in the quality of habitat for native flora and fauna species.

Furthermore, the movement of plant material or soil could potentially spread disease or pests that could impact on livestock or crops within or surrounding the Project Area.

6.1.3.4 Conservation areas

As discussed in Section 6.1.2.4, the Project will not impact any protected conservation areas.

6.1.3.5 Impact events

The impact events related to ecology are:

- **ECO1:** Loss of biodiversity, ecological value or soil quality.
- **ECO2:** Injury or death of native fauna.
- **ECO3:** Spread or incursion of weeds, pests or pathogens.

6.1.4 *Environmental impact and significance assessment*

Environmental impact and significance assessments for the identified impact events for flora, fauna, weeds and pests, and conservation areas are provided in Table 6.8, Table 6.9 and Table 6.10.

The impact and significance assessments detailed in the following tables indicate that expected impacts are generally in the **Moderate** category. The magnitude of impact events has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

DRAFT

Table 6.8 Environmental impact and significance assessment – ECO1: Loss of biodiversity, ecological value or soil quality

Ecology: Impact ID ECO1						
Impact event	Loss of biodiversity, ecological value or soil quality.					
Potential impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR* uncertainties and assumptions
	Clearance of native vegetation	Manual/ mechanical removal of vegetation and habitat.	Native vegetation	Yes – the ecology survey for the Project (Umwelt, 2026) has identified the presence of native vegetation, fauna and habitat within the Project Area. Native vegetation clearance will be necessary to support construction of the Project.	Construction	Ecology assessment and expected clearance is based on the preliminary design of the Project. The design will be subject to a detailed design process that may result in a change in impacts to native vegetation and fauna (likely a reduction). It has been assumed that the preliminary design represents a worst-case scenario and that impacts may be reduced through the detailed design process.
	Clearance of habitat for native fauna	Degradation of vegetation from repeated vehicle movements.	Native fauna		Operation	
	Degradation of native vegetation condition	Dust/waste deposition from vehicle movements and construction activities.			Decommissioning	
	Degradation of soil quality.	Soil disturbances from vegetation clearance and other earthworks.				
* Source, pathway, receptor (SPR)						

Control measures	Uncertainties regarding likely effectiveness of control strategies
Detailed design and micro-siting will seek to further minimise impacts to native vegetation. No clearance of native vegetation will occur until any required approvals under the NV Act and EPBC Act are in place. NVC's <i>Mitigation Hierarchy for native vegetation clearance</i> will be applied to proposed native vegetation clearance. Construction, operation and rehabilitation will be undertaken in accordance with any conditions applied to the native vegetation clearance approval under the NV Act and EPBC Act. The CEMP, OMP and DRMP for the Project will include standard procedures for minimising impacts to native vegetation and fauna, including (but not limited to) clearly delineating the area to be cleared to minimise the risk of clearance occurring outside of the approved disturbance footprint. During and after construction, any cleared areas that are not required to be used for the operational phase of the Project will be rehabilitated as soon as practical. Native vegetation clearance will be appropriately offset with a SEB determined based on the final clearance area. The SEB will be delivered in accordance with NVC's <i>Policy for a Significant Environmental Benefit 2024</i>. A DMP will be developed and implemented. Speed limits will be enforced on unsealed roads and access tracks. Vehicles transporting spoil or material to/from the Project Area will be covered immediately after loading. Land will be rehabilitated in agreement with relevant landowner(s) and in accordance with the EP Act, EPBC Act, LSA Act and NV Act. During decommissioning, consideration will be given to the EPA waste management hierarchy.	Moderate to high certainty of effectiveness of control strategies. There is a possibility for on ground conditions (e.g. vegetation, habitat fauna presence) to change between the time of the ecological survey and commencement of construction. This might impact the effectiveness of control strategies. Furthermore, approval for native vegetation clearance under the NV Act is yet to be received, and as such, conditions of approval (and subsequently, further control measures) are unknown.

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – vegetation clearance is necessary to establish Project, though will be minimised through implementation of appropriate control measures.		Expected impact is Moderate .
Frequency	Low – with implementation of control measures, clearance and/or degradation to vegetation and habitat is expected to occur during construction only.	Overall magnitude is Moderate .	
Duration	Moderate – all cleared vegetated areas will be rehabilitated; temporary clearance areas required to support construction will be progressively rehabilitated, while permanent clearance areas will be rehabilitated upon decommissioning of the Project. Furthermore, all clearance will be offset in accordance with NVC’s <i>Policy for a Significant Environmental Benefit 2024</i> The duration of regeneration/revegetation will depend on seasonal conditions.		
Extent	Localised – impacts to vegetation and habitat will be confined to the Project Area and isolated areas of road reserve.		
Severity	Moderate – the design has been sited to minimise areas of higher ecological value, including threatened flora species and PBTL habitat but some impacts are unavoidable.		
Cumulative	Moderate – the Project is associated with the wider Whyte Yarcowie Wind Farm. Vegetation clearance for the Project, combined with the wider clearance for the wind farm, may result in cumulative impacts to native vegetation and fauna habitat in the locality.		
Sensitivity	Moderate – native vegetation and habitat in the Project Area have been degraded by historic and ongoing agricultural activities, however ecological surveys have identified threatened flora and fauna in vicinity of the Project Area. Impacts to these species have been avoided and minimised, where possible.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unauthorised disturbance to native vegetation and fauna, and application of the Mitigation Hierarchy to any disturbance.	No unauthorised clearance of native vegetation. No clearance of listed threatened flora undertaken without required authorisations in place. No unauthorised reduction in native vegetation condition as a result of construction and decommissioning activities. Avoid the killing or destruction of native vegetation via dust deposition that would be classified as native vegetation clearance under the NV Act. All ecological data collected by an appropriately qualified professional and reported in accordance with HRE Regulation 32(2)(c).	Native vegetation clearance will be undertaken in accordance with the NV Act (including the mitigation hierarchy). All areas of native vegetation that are proposed to be cleared will undergo a pre-clearance check from a suitably qualified ecologist. Areas proposed to undergo native vegetation clearance within the vicinity of site works will be marked to prevent accidental unauthorised removal. Ongoing inspections will be undertaken throughout construction, operation and decommissioning to support the appropriate rehabilitation of disturbed areas in accordance with the CEMP, OMP and DRMP. Construction and decommissioning activities will be undertaken to minimise dust generation. To maintain compliance with the EP Act, dust management will be undertaken throughout construction and decommissioning. Vegetation condition and dust deposition will be monitored during construction and decommissioning works in accordance with the CEMP and DRMP.
	Decommission and rehabilitate land affected by authorised operations to agreed standards.	Rehabilitation undertaken in agreement with the relevant landowner and in accordance with the EP Act, EPBC Act, LSA Act and NV Act.	The final DRMP to be provided at least 6 months prior to decommissioning activities commencing, and is to be approved by DEM. Rehabilitation is to be included in the Project's schedule and budget. The approved DRMP to be adhered to for decommissioning and rehabilitation activities.

Table 6.9 Environmental impact and significance assessment – ECO2: Injury of death of native fauna

Ecology: Impact ID ECO2						
Impact event	Injury of death of native fauna.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project phase	SPR uncertainties and assumptions
	Earthworks and vehicle movements.	Direct collision by vehicle or machinery collision.	Native fauna.	Yes – the ecological assessment (Umwelt, 2026) has confirmed that native fauna utilised parts of the Project Area.	Construction Operation Decommissioning	External impacts on fauna mobility (such as weather, climate or infrastructure projects further afield) may impact fauna presence within the Project Area during different phases of the Project.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Construction, operation and decommissioning will be undertaken in accordance with any conditions applied under native vegetation clearance approval under the NV Act. Speed limits will be enforced on access tracks within the Project Area.					High certainty the control measures will be effective.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – it is not possible to entirely eliminate the risk of accidental injury or death to native fauna, however the Project will seek to minimise the risk through implementation of appropriate control measures.	Expected impact is Moderate .
Frequency	Low – any death to native fauna would be accidental and would only occur on an isolated basis.	
Duration	Long lasting – there is a chance of accidental death of fauna throughout all phases of the Project. Risks during operation would be significantly lower than the construction and decommissioning phases, due to lower traffic volumes on site.	
Extent	Localised – accidental death or injury to native fauna would be confined to the Project Area.	
Severity	Moderate – events would not have widespread impacts to threatened bird species as these are considered to only have a sporadic presence within the site. Furthermore, impact to PBTL habitat have been minimised where possible.	
Cumulative	No – given the low level of development in the locality, and rare frequency of events, cumulative impacts are unlikely.	
Sensitivity	Moderate – native vegetation and habitat in the Project Area have been degraded by historic and ongoing agricultural activities, however ecological surveys have identified threatened fauna in vicinity of the Project Area. Impacts to these species have been avoided and minimised, where possible.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unauthorised disturbance to native vegetation and fauna, and application of the Mitigation Hierarchy to any disturbance.	Incidents relating to accidental death of native fauna are monitored and investigated in accordance with the CEMP, OMP and DRMP.	Prior to any vegetation removal a fauna inspection will take place. The inspection will be undertaken by an appropriately qualified and experienced person(s) and will include all areas of native vegetation proposed for clearance, plus any additional areas (such as weedy vegetation or cropped land) as determined necessary by the appropriately qualified and experienced person(s). In the event that fauna is identified in the proposed clearance area, clearance will be monitored by suitably qualified ecologist, and where required the footprint will be micro-sited to avoid the fauna or where micro-siting is not possible, the fauna will (where appropriate) be relocated in accordance with relevant legislation including the EPBC Act and/or the NPW Act. Consultation will be undertaken with DEW prior to any relocation of fauna to confirm the suitability of relocating the subject species, and no relocation activities will be undertaken until appropriate fauna permits are in place.

Table 6.10 Environmental impact and significance assessment – ECO3: Spread of incursion of weeds, pests or pathogens

Ecology: Impact ID ECO3						
Impact event	Spread of incursion of weeds, pests or pathogens.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project phase	SPR uncertainties and assumptions
	Clearance of native vegetation. Soil disturbances.	Spread of weeds, pests or pathogens via poor vehicle hygiene.	Native vegetation Native fauna Livestock Landholders	Yes – native vegetation, native fauna, and livestock, and agricultural activities are present in vicinity of the Project and could be impacted by weeds, pests or pathogens if introduced by Project activities.	Construction Operation Decommissioning	Any plant material or dirt (other than verified clean fill) introduced or spread within the Project Area or as a result of Project works is assumed to be a potential source of weeds, pests or pathogens.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Weed and biosecurity measures will be documented in the CEMP, OMP and DRMP and will be developed to comply with legislative requirements. This will include management measures to control the establishment and dispersal of weeds, pests and pathogens throughout the Project Area and surrounds. Targeted control of isolated priority weed occurrences will be undertaken, as required. Weed and biosecurity measures will include, at a minimum: — Wash-bay facilities will be maintained on site to allow vehicles and equipment to be cleaned of plant material and soil where required — Prior to entering the site any machinery must be clean and free from soil and any weed/seed materials. Cleaned vehicles will be inspected by site management and declared clean prior to being granted permission to enter or exit the site — Vehicle and equipment hygiene records will be kept — Any weed outbreaks will be clearly identified on site — If spraying of weeds is required, it will be performed by a specialist contractor — Any weed outbreaks identified will be managed in accordance with the appropriate Northern and Yorke Landscape Board recommendations — The site shall be kept free of food waste or other attractants to pest animals — Sealed bins for putrescible site waste shall be used to discourage pest animals — Where pest species are observed within the Project Area, the control of these will be coordinated with the landholder. The construction contractor will be required to seek a permit under the LSA Act for the transportation of Declared weeds on public roads, should plant matter or soil contaminated by plant matter (including seeds) from Declared weeds require offsite disposal.					Moderate to high certainty that control measures will be effective. Risks relating to weeds and biosecurity may change throughout the lifespan of the Project, due to changes in surrounding land use and various outbreaks of weeds, pest or pathogens that may occur in proximity to the Project Area or along transport routes.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – vegetation and soil disturbance, as well as vehicle movements to and from the Project Area, will be required for the Project.		Expected impact Moderate .
Frequency	Low – vehicle interactions with vegetation will be avoided as much as practicable. Furthermore, weed, pest and pathogen outbreaks will be avoided, or frequency minimised through implementation of appropriate control measures.	Overall magnitude is Moderate .	
Duration	Long lasting – risks will be present throughout construction, operation and decommissioning due to activity and vehicle movements associated with the Project.		
Extent	Moderate – given the extent of the Project Area and distance of expected transport routes, the introduction or spread of weeds, pests or pathogens could impact a wider area, beyond the Project Area.		
Severity	Moderate – given the risk of impacts to land outside of the Project Area, there is potential for weeds, pests or pathogens to impacts nearby livestock or agricultural land uses, or nearby native vegetation and fauna. These risks would be managed through appropriate site hygiene procedures, monitoring, and management measures to be implemented in the case of any outbreaks.		
Cumulative	Possible – potential cumulative could result from other land uses in the region.		
Sensitivity	Moderate – native vegetation and fauna habitat in the area is largely degraded, but small patches of habitat for threatened species have been confirmed to exist nearby, and could be threatened by any outbreaks of weeds, pests or pathogens. Surrounding agricultural land uses could also be threatened by any outbreaks, if not appropriately controlled.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No introduction or spread of pest plants, pest animals or pathogens.	Pest plant, pest animals or pathogens identified onsite will be managed in accordance with biosecurity measures implemented in agreement with landholders and in consultation with the Northern and Yorke Landscape Board. No unauthorised transport of weeds Declared under the LSA Act. Pests, plants or pathogens spread or introduced as a result of the Project are reported and managed in accordance with the LSA Act. Annual inspections undertaken (in accordance with the CEMP, OMP and DRMP) show that the presence of weeds, pests and pathogens within the Project Area is consistent with or better than adjoining land or where this is not the case, observations are managed in accordance with available advice from the Department of Primary Industries and Regions South Australia (PIRSA) and/or the Northern and Yorke Landscape Board.	A permit under the LSA Act will be sought for any required transportation of Declared weeds on public roads. Biosecurity measures will be developed and implemented in agreement with landholders and in consultation with the Northern and Yorke Landscape Board. Vehicles and equipment entering the site must be clean and free of soil and plant material. Areas proposed to undergo native vegetation clearance within vicinity of site works shall be marked to prevent access to areas of vegetation to be retained and reduce the risk of weed spread. Vehicles access will be confined to designated access tracks, where possible. Ongoing inspections will be undertaken throughout construction, operation and decommissioning to monitor potential weed spread or incursion. Inspections will be undertaken annually (at minimum) and at specific locations to be approved under the CEMP, OMP and DRMP. Control measures will be implemented when an outbreak is identified.

6.2 Water resources

The assessment of potential impacts to water resources has been based primarily on the outcomes of a Desktop Hydrology Assessment undertaken for the Project. The full Desktop Hydrology Assessment is provided in Appendix F.

6.2.1 Methodology

The Desktop Hydrology Assessment was undertaken by WSP (2026) and sought to provide a high-level evaluation of hydrological and flood conditions of the Project Area. The assessment utilised the following approach:

- obtain and review available topographic, climate data and existing flood study information for the Project Area and surrounds
- delineate and define catchments areas contributing to surface water runoff within the Project Area
- identify constraints and limitations for the Project from a flood risk perspective.

Topographic data reviewed for the Project Area included 50 cm and 1 m LiDAR provided by Whyte Yarcowie Wind Farm Pty Ltd and satellite data (i.e. SRTM 1 arc-second, i.e., approximately 30 m grid resolution) obtained from ELVIS website (ANZLIC, 2011).

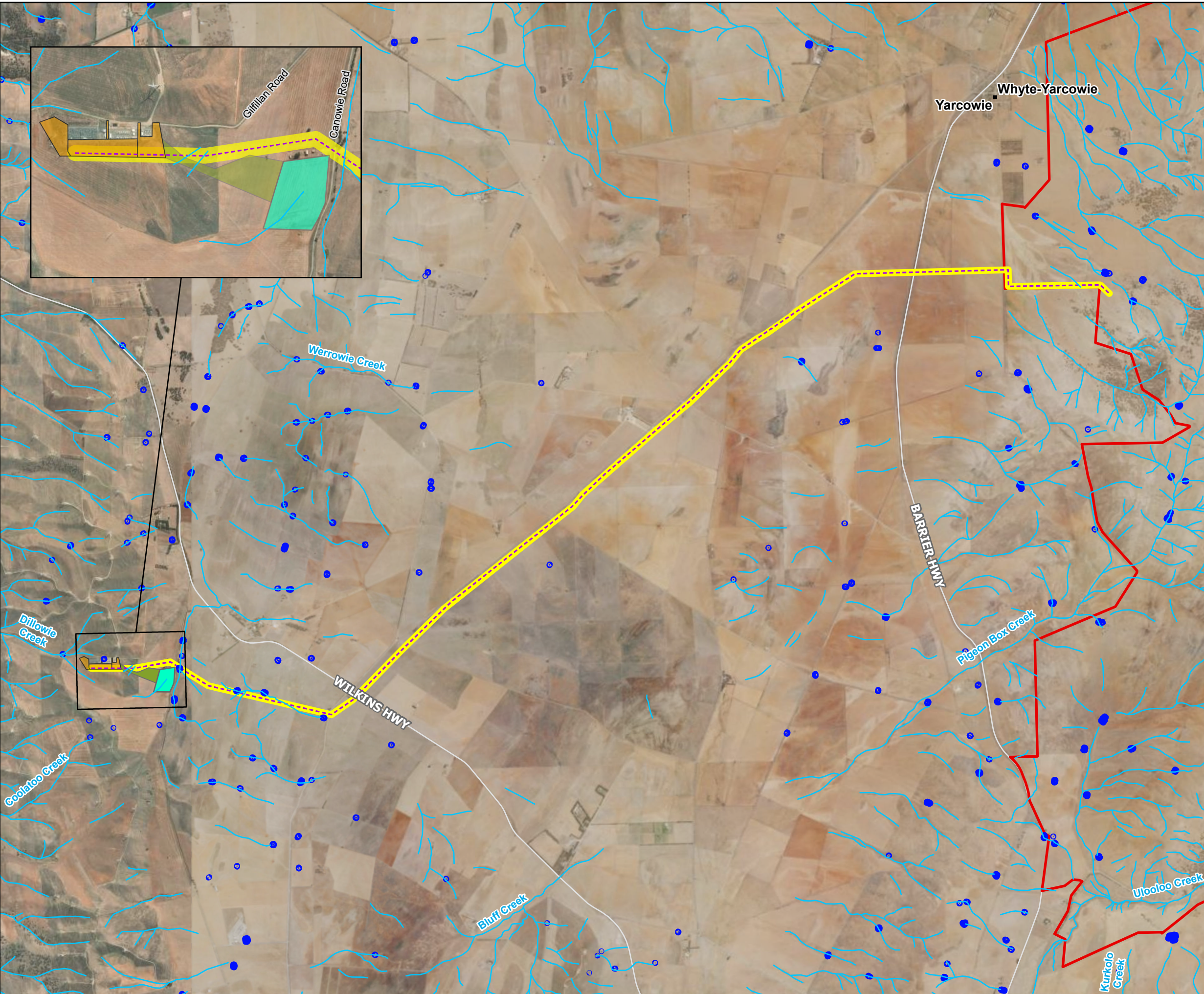
6.2.2 Existing environment

The Project Area is located in the Lower Murray River Catchment of the Murray-Darling Basin.

A search of the Water Courses and Water Bodies datasets via Location SA (Department for Environment and Water, n.d.a; Department for Environment and Water, n.d.b) identified that the Project Area contains no major permanent water courses or water bodies, however there are several minor drainage lines that intersect the proposed BESS Area and Underground Cable Easement, as well as the very western and eastern ends of the OTL. None of the identified drainage lines are identified as a priority watercourse under the *Northern and Yorke Water Affecting Activities Control Policy* (NYWAA Control Policy) (Northern and Yorke Landscape Board, 2020).

There are also several dams located within or adjacent to the western side of the OTL Corridor. The detailed design of the Project will be sited to avoid all direct impacts to these dams.

Drainage lines and dams located in close proximity to the Project Area are shown in Figure 6.3.

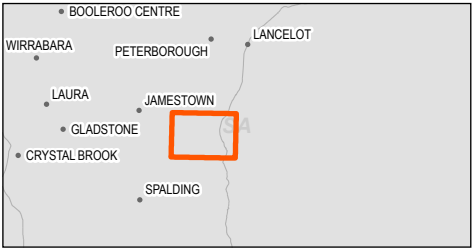


PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 6.3
Water Resources

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REILA 2)
- Watercourses
- Water Bodies



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3
1:60,000 Date: 23/03/2026

Data sources: WSP, SA Government, World Imagery Earthstar
Geographics
MetroMap (Australia latest)
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The Desktop Hydrology Assessment used topographic data to further delineate drainage lines, flow paths and contributing catchments for the Project Area, as shown in Figure 6.4. The topographic review identified a number of additional drainage lines and flow paths intersecting the length of the Project Area, feeding from catchments to the north-west of the Project Area.

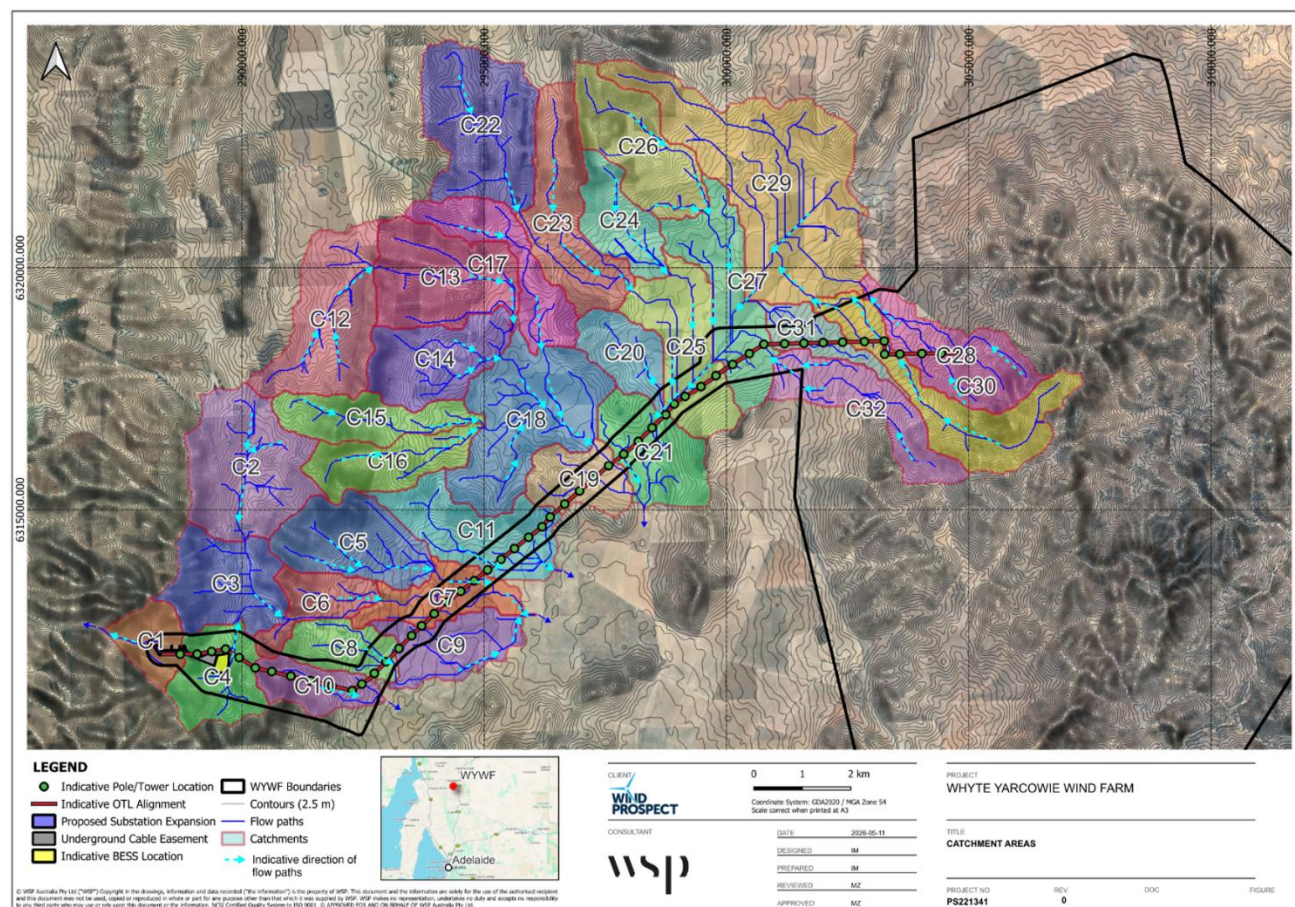


Figure 6.4 Catchment areas and flow paths (WSP Australia Limited, 2026)

The assessment then prepared an update to a flood model previously prepared for the wider Whyte Yarcowie Wind Farm (WGA, 2024) to include high resolution topography for the Project Area. The purpose of the flood model update was to further assess identified flow paths and to provide a preliminary review of the peak flood depth, peak flood levels and peak flow velocities for 1% Annual Exceedance Probability (AEP) and 10% AEP flood events across the Project Area. The 1% AEP and 10% AEP flood depth across the Project Area are shown in Figure 6.5 and Figure 6.6, respectively.

6315000.000

6310000.000

290000.000

295000.000

300000.000

305000.000



LEGEND

- | | | |
|-----------------------------------|----------------------|-------------|
| ● Indicative Pole/Tower Location | Peak Flood Depth (m) | 1.00 - 1.25 |
| ■ Indicative Substation Expansion | ≤ 0.02 | 1.25 - 1.50 |
| ■ Indicate BESS Location | 0.02 - 0.25 | 1.50 - 1.75 |
| ■ Underground Cable Easement | 0.25 - 0.50 | > 1.75 |
| ■ Indicative OTL Alignment | 0.50 - 0.75 | |
| ■ Hydraulic Model Extent | 0.75 - 1.00 | |

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CLIENT
WIND PROSPECT

CONSULTANT

wsp

0 1 2 km

Coordinate System: GDA2020 / MGA Zone 54
Scale correct when printed at A3

DATE	2026-05-11
DESIGNED	IM
PREPARED	IM
REVIEWED	IJ
APPROVED	MZ

PROJECT
WHYTE YARCOWIE WIND FARM

TITLE
**Peak Flood Depth (m)
1% AEP Storm Event
OTL Overview - Full Extent**

PROJECT NO
PS221341

REV.
0

DOC
Appendix A

FIGURE
1

CRS:EPSG:7854 - +proj=utm +zone=54 +south +ellps=GRS80 +units=m +no_defs



LEGEND

- | | | |
|-----------------------------------|----------------------|-------------|
| ● Indicative Pole/Tower Location | Peak Flood Depth (m) | 1.00 - 1.25 |
| ■ Indicative Substation Expansion | <= 0.02 | 1.25 - 1.50 |
| ■ Indicate BESS Location | 0.02 - 0.25 | 1.50 - 1.75 |
| ■ Underground Cable Easement | 0.25 - 0.50 | > 1.75 |
| — Indicative OTL Alignment | 0.50 - 0.75 | |
| □ Hydraulic Model Extent | 0.75 - 1.00 | |

CLIENT
WIND PROSPECT

CONSULTANT

wsp

0 1 2 km

Coordinate System: GDA2020 / MGA Zone 54
Scale correct when printed at A3

DATE 2026-05-11

DESIGNED IM

PREPARED IM

REVIEWED IJ

APPROVED MZ

PROJECT

WHYTE YARCOWIE WIND FARM

TITLE

**Peak Flood Depth (m)
10% AEP Storm Event
OTL Overview - Full Extent**

PROJECT NO
PS221341

REV.
0

DOC
Appendix B

FIGURE
4

The assessment identified that there is a likelihood for ponding to occur along the OTL Corridor between Mitchells Road and Stock Route Road; with peak flood depths reaching approximately 1.7 m for the 1% AEP event. The assessment recommended that the ponding was not anticipated to interact with infrastructure based on the preliminary design for the OTL under the 1% AEP event but advised that inundation may affect OTL poles during rarer events. No other significant flood impacts were identified across the Project Area. The detailed design for the Project will minimise risks posed by flood levels by locating Project components away from drainage lines and areas identified of being at risk of flooding or ponding.

A search of the Shallow Standing Water Level dataset was undertaken via Location SA (Department for Environment and Water, n.d.c). The search identified that the shallow standing water level at the BESS Area and Belalie Substation Expansion Area is likely to range from 10 to 20 m below ground level (bgl). The shallow standing water level along the OTL Corridor is likely to range from 5 to 500 m at various locations. It is anticipated that earthworks and excavations will be required within the BESS Area and Belalie Substation Expansion Area to provide a level surface for development of the two facilities. No significant excavations are expected to be required for development of the OTL. The detailed design for the Project will be informed by detailed geotechnical investigations which will confirm the absence (or presence) of groundwater within the Project Area. The detailed design will seek to avoid interactions with groundwater.

Table 6.11 summarises legislation and non-legislated standards, views of affected parties and lists the key environmental receptors relevant to water resources.

Table 6.11 Summary of environmental elements – water resources

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Landscape South Australia Act 2019 (LSA Act)</i> <i>Environment Protection Act 1993 (EP Act)</i> <i>Environment Protection (Water Quality) Policy 2015</i>	<i>EPA Guidelines: Industry: Construction environmental management plans</i> <i>Stormwater Pollution Prevention codes of practice</i> <i>EPA guideline 080/16 Bunding and Spill Management</i> <i>Guidelines for groundwater quality protection in Australia</i>	Concern regarding potential drainage issues and impacts to watercourses with relation to the construction of access tracks. Concern based on previous wind farms using bores and depleting aquifers. Interest in the sustainable use of groundwater resources to minimise the risk of negative impacts to the water table through drawdown. Concern regarding impacts to farmers of any water table lowering/stock water. Interest regarding the plan for accessing and the planned use of water during construction.	Preservation of water quality and no increase to flood risk. Preservation of groundwater quality.

6.2.3 Potential impacts

The Desktop Hydrology Assessment for the Project (WSP Australia Limited, 2026) identified a number of minor drainage lines have been identified across the BESS Area, Underground Cable Easement and some sections of the OTL Corridor, along with a risk of ponding near the OTL corridor between Mitchells Road and Stock Route Road. The assessment advised that ponding is not anticipated to interact with the OTL under the 1% AEP flood event, though it is possible that ponding could interact with the OTL poles during rarer flood events. The detailed design of the Project will seek to avoid impacts to these drainage lines; however where impacts are unavoidable, the design will incorporate appropriate drainage, such as culverts or swales, to minimise impacts to flow paths and reduce further risks of ponding around Project infrastructure.

The Project Area sits across the NY1 and NY3 Zones under the NYWAA Control Policy. Drainage works impacting drainage lines within the NY1 Zone will not require a WAA Permit under the NYWAA Control Policy, as the works will not be undertaken on any water course or drainage line delineated on Map 3 of the NYWAA Control Policy. Works impacting drainage lines within the NY3 Zone may require a WAA Permit, if the works are to be located within areas identified to be impacted by the 1% AEP storm events (refer to Figure 6.5). Clarification regarding WAA Permit requirements will be sought from the Northern and Yorke Landscape Board and any required WAA Permits will be sought prior to the commencement of construction.

The detailed design will seek to avoid all direct impacts to the dams reidentified within and adjacent to the western side of the OTL Corridor.

Storm events during construction may result in sediment impacting downstream watercourses or dams. Class 1 or 2 pollutants present during construction have the potential to enter waterways downstream and impact the environment. Class 1 or 2 Pollutants are listed under the *Environment Protection (Water Quality) Policy 2015*, which makes it an offence for a person must not discharge these pollutants into waterways or onto land from which it is likely they would enter a waterway.

Spills and leaks from construction vehicles may cause contamination and enter waterways or dams. Standard operating procedures should be followed during construction such that machinery is well maintained and do not enter the Project Area with any leaks present.

Once constructed, the Project would result in an increase to the quantity of impervious surfaces across the Project Area, particularly the BESS Area and Belalie Substation Expansion Area, and in turn could increase runoff and risk of erosion and pollutant contribution to the catchments. External surface flows may pass over the site and if not captured or diverted, increase the risk of erosion and pollutant contribution downstream. In addition, the increase in impervious area may increase flows from the hills in the area. Project components would ideally be built on a cut/fill basis to minimise hauling in and disposal of materials and would impact the existing flow regime of surface runoff in the area.

An increase in traffic loading in the area may increase the vehicle related impacts such as spills, collisions, dust and an increase in pollutant loading.

It is anticipated that earthworks and excavations will be required within the BESS Area and Belalie Substation Expansion Area to provide a level surface for development of the two facilities. The detailed design of the Project will be informed by detailed geotechnical investigations which will confirm the absence (or presence) of groundwater within the Project Area. The detailed design will seek to avoid interactions with groundwater.

During operation, the Project is likely to generate waste streams including operational equipment waste (for example), used transformer oil, chemicals for fire suppression system etc, as well as on-site office waste and waste generated by workers including general waste and recycling from everyday operations. While only minimal chemicals will be kept on-site during operation, potential pollutants from the operation of the Project must be mitigated against entering into surface flows and the stormwater network.

There is currently no reticulated water available within the Project Area. Water will be needed during construction, particularly to support concrete batching (in the instance that a batch plant is installed on site or batch plants developed within the wider Whyte Yarcowie Wind Farm Project Area are utilised) and to facilitate dust suppression. Water sourcing for the Project is still under consideration, though Wind Prospect recognises that water is a critical and limited resource in the region and that the responsible use and management of water are key factors in the Project's planning and execution. At this stage, it is intended that the majority of water (concrete batching and staff amenities) will be sourced via the Murray River (via the pipeline at Morgan), noting that there are alternative options to consider, which include sourcing groundwater at the site, or a combination of both. A confirmed water supply is yet to be established, and no current agreements are in place. The assessment is ongoing, and Wind Prospect are following a best practice assessment approach by undertaking the following:

- developing a list of potential options and completing a high-level go/no-go on
- detailed assessments of options to be further considered/progressed, to include both technical and approval feasibility
- site investigations to prove up a potential source and inform an impact assessment and any approval/licensing requirements.

The final decision will be guided by technical feasibility, environmental sustainability, regulatory compliance, and operational feasibility, and all required licences or permits would be sought prior to the commencement of construction.

6.2.3.1 Impact events

The impact events relevant to water resources are:

- **SW1:** Disruption of flow paths.
- **SW2:** Water quality impacts.
- **GW1:** Depletion of groundwater.

6.2.4 *Environmental impact and significance assessment*

Environmental impact and significance assessments for identified impacts events for water resources are provided in Table 6.12, Table 6.13, and Table 6.14.

The impact assessments detailed in the following tables indicate that expected impacts are generally in the **Moderate** category. The magnitude of impact events has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.12 Environmental impact and significance assessment – SW1: Disruption of flow paths

Water resources: Impact ID SW1						
Impact event	Disruption of flow paths.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Earthworks and stockpiling.	Obstruction of waterways.	Waterways and dams.	Yes – the Desktop Hydrology Assessment (WSP Australia Limited, 2026) determined that drainage lines exist across the Project Area and could be impacted by the Project design.	Construction Operation Decommissioning	50 cm and 1 m LiDAR was not available for the entirety of catchments reporting to the Project Area assessed in the Desktop Hydrology Assessment (WSP Australia Limited, 2026). This information was supplemented with satellite data obtained from ELVIS, which may be less accurate. Furthermore, no gauge data was available to inform the assessment.

Control measures	Uncertainties regarding likely effectiveness of control strategies
Key infrastructure components (e.g. the BESS, Belalie Substation expansion, and associated electrical infrastructure and buildings) will be located away from flow paths or raised such that the finished level of the proposed bench area of these components is above the design flood levels with appropriate free board. Where practicable, OTL towers/poles will be sited away from mapped flow paths. Where crossings are unavoidable, OTL towers/poles located within flood extent would be appropriately designed for flood actions, erosion/scour, debris impact and geotechnical conditions and consider structural stability, electrical clearance, operational risks and foundation performance under flood events. A detailed assessment will be undertaken to evaluate the necessity and feasibility of OTL tower/pole placement within the Zone 8 area identified within the Desktop Hydrology Assessment (i.e. areas subject to ponding). The final design will be developed such that pre-development flows of the wider catchment are not adversely impacted and will include an appropriate drainage network (culverts) to support the continuity of drainage lines, where required. Runoff from the Project Area will be limited by providing appropriately designed detention basin(s) or equivalent as required. Any required WAA Permits will be sought prior to the commencement of construction.	High certainty that proposed control measures will be effective. These are based on industry standard control measures that are well understood and that have been successfully implemented.

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – it is likely that the Project design will intersect drainage lines.	Expected impact is Moderate .
Frequency	Low – the detailed design of the Project will aim to further reduce impacts to flow paths. Stormwater design will aim to maintain development flows. Overall magnitude is Moderate.	
Duration	Long lasting – interruption of flow paths could be long lasting, but reversible.	
Extent	Localised – impacts will be limited to the Project Area and immediate surrounds.	
Severity	Low – it is expected that with implementation of control measures, impacts to the Project and to the relevant catchment will be minimal.	
Cumulative	No – given the low level of development in the area, it is unlikely that receptors will be impacted by similar activities.	
Sensitivity	Moderate – water resources in the region are scarce and fundamental to the long-term sustainability of agricultural land uses and ecological areas in the region.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable disturbance, including contamination of surface water drainage, water courses and waterbodies.	No damage to Project infrastructure as a result of 1% AEP flood event. No unauthorised WAA.	A post-development flood model will be completed within six months of commissioning to confirm assumptions around potential changes in flood risk and update the post-development flood modelling to include adopted mitigation measures. Stormwater detention and sediment control measures installed for the Project will be regularly inspected and appropriately maintained for their intended duration, in accordance with the CEMP, OMP and DRMP. Drainage works developed for the Project will be suitable for the anticipated volume and velocity of water of the catchment, particularly during storm events. Impacts to flow paths considered to be a WAA under the LSA Act and WAA Control Policy will be avoided where possible. Any unavoidable WAA will only be undertaken once an appropriate WAA Permit has been obtained.

Table 6.13 Environmental impact and significance assessment – SW2: Water quality impacts

Water resources: Impact ID SW2						
Impact event	Water quality impacts.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Earthworks and soil disturbance from construction and decommissioning machinery and vehicles. Vehicles or plant. Pollutants stored on site.	Soil disturbance. Spills or leaks from vehicles or plant. Improper storage of pollutants.	Water courses Dams and associated agricultural land uses Native vegetation	Yes – earthworks are required during construction and decommissioning and sedimentation could occur during storm events. Vehicles, plant and chemicals are expected to be required for all phases of the Project.	Construction Operation Decommissioning	Final location of earthworks are unknown.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Where not required for VMZs, all new earth batters (in cut or fill) will be reseeded with native grasses following construction works (excluding exposed rock batters). Stormwater detention and sediment control measures will include regular monitoring and maintenance to support compliance with <i>Environment Protection (Water Quality) Policy 2015</i> and EPA guidelines. Stormwater quality improvement devices such as a gross pollutant trap, combined sediment and oil interceptor device may be incorporated to improve stormwater quality prior to discharging into a stormwater basin.					High certainty that control measures will be effective, as they are based on standard industry practices.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – earthworks, fuels and oils, and chemicals will be required on site. Unforeseen storm events or other unexpected events may occur that will prevent complete avoidance of impacts.	Expected impact is Moderate .
Frequency	Low – with consistent application of control measures, impact events are expected to be infrequent.	
Duration	Long lasting – depending on the nature of the impact event, the impact could persist for a period of years, but could be remediated.	
Extent	Moderate – impact could extend beyond the Project Area, however are not likely to occur at a regional scale given the limited reach of catchments.	
Severity	Moderate – with implementation of control measures, the Project would be compliant with relevant legislation, however impact events could still result in a temporary decrease in water quality.	
Cumulative	No – given limited development in the area, receptors are not already impacted by similar activities.	
Sensitivity	Moderate – water resources in the region are scarce and fundamental to the long-term sustainability of agricultural land uses and ecological areas in the region.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable disturbance, including contamination, of surface water drainage, water courses and water bodies.	No impact on surface water quality due to inappropriate sediment and erosion control. No impact on surface water caused by spills or inappropriate storage of fuels and chemicals.	A SEDMP will be developed and implemented during construction and decommissioning. Any material reuse on site will be appropriately tested and classified prior to reuse. Appropriate hazardous material storage and fuel storage and handling procedures will be implemented on site in accordance with relevant legislation, standards and guidelines including the Stormwater Pollution Prevention codes of practice and EPA guideline <i>080/16 Bunding and Spill Management</i>. Records of all dangerous substances and chemicals on site will be maintained. Suitable spill kits will be installed on site to effectively manage spills, including spills to water. Spills or leaks are immediately reported and actioned. A register will be maintained detailing any spills and leaks, along with the implement corrective action(s).

Table 6.14 Environmental impact and significance assessment – GW1: Depletion of groundwater

Water resources: Impact ID GW1						
Impact event	Depletion of groundwater.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Extraction of groundwater for construction, operation and decommissioning activities.	Direct groundwater extraction.	Groundwater and groundwater dependent ecosystems Agricultural operations	Yes – groundwater dependent ecosystems and agricultural operations are present in the region. No reticulated water is available within the Project Area and groundwater use may be required to support the Project.	Construction Operation Decommissioning	Water sources for the Project will be determined via an options assessment, yet to be undertaken.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Water sources to support the Project will be determined via a water options assessment, which will include the following approach: — developing a list of potential options and completing a high-level go/no-go on — detailed assessments of options to be further considered/progressed, to include both technical and approval feasibility — site investigations to prove up a potential source and inform an impact assessment and any approval/licensing requirements. A water licence will be obtained for any groundwater extraction that may be required for the Project.					Moderate to high certainty the control measures will be effective, as they are based on a best practice approach.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – water high volumes of water will be required to support the Project. Depending on the outcomes of the water options assessment, avoidance of groundwater use may not be feasible.		Expected impact is Moderate .
Frequency	Rare – with proper assessment, licencing and monitoring, it is expected that detrimental depletion of groundwater due to the Project would be rare.	Overall magnitude is Moderate .	
Duration	Long lasting – groundwater is slow to replenish, however with appropriate monitoring, it is expected that any detrimental depletion would be identified early which would reduce the duration of impacts.		
Extent	Confined – the extent would be limited to a small number of extraction points (if required).		
Severity	Low – extraction would be capped and with appropriate monitoring, any detrimental depletion would be detected early; limiting the severity of impacts.		
Cumulative	Possible – excessive use in the Project Area and surrounds may lead to regional water table reduction.		
Sensitivity	Moderate – water resources in the region are scarce and fundamental to the long-term sustainability of agricultural land uses.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No adverse impacts to groundwater quality or groundwater resources.	No unauthorised extraction of groundwater. Groundwater extraction is monitored and metered use (if required).	No groundwater extraction will occur until an appropriate authorisation under the LSA Act is obtained. Extraction volumes to be recorded and audited.

6.3 Site contamination

6.3.1 Methodology

A limited desktop review was undertaken for the Project Area and surrounds to consider Potentially Contaminating Activities (PCAs) that may have occurred in the area and which may impact the Project. The review included a search of the EPA Public Register for information pertaining to environmental authorisations or new applications for licenses, site contamination, and Environment Protection Orders (EPOs) or Clean Up orders.

6.3.2 Existing environment

There are no records of properties within the Project Area on the SA EPA Site Contamination Index (Environment Protection Authority, 2025). The nearest records are in the town of Terowie, approximately 11.5 km north of the Project Area. There are six records in Terowie and the PCAs listed are Railway Operations and Fill or soil importation (Environment Protection Authority, 2025).

Furthermore, there are no EPA licenced facilities within the Project Area. There are EPA licences issued for activities in the following locations in proximity to the Project Area:

- EPA Licence no. 18902 issued to the ENERGYAUSTRALIA HALLETT PTY LTD for the activity Fuel burning not coal or wood – located on CT 5965/72, Block 76 Government Road, Canowie SA 5419 – approximately 3.4 km south of the Project Area.
- EPA Licence no. 51943 issued to the Regional Council of Goyder for the activity Waste Recovery Facility – located on CR 5762/122, Allotment 449, Barrier Highway, Terowie SA 5421 – approximately 3.8 km north of the Project Area.
- EPA Licence no. 10308 issued to EPIC ENERGY SOUTH AUSTRALIA PTY LIMITED for the activity of Fuel burning not coal or wood – located on CT 5883/938, 5792 Booborowie Rd, Canowie Belt SA 5420 – approximately 4.5 km south east of the Project Area.
- EPA Licence no. 51239 for the activity Petrol Stations – located on CT 5529/208, Lot 570 Railway Terrace East, Terowie SA 5421 (1 Barrier Highway) – approximately 10.2 km north of the Project Area.

There are no records of EPA environmental protection orders (EPOs) or Clean Up orders for properties within the Project Area or surrounding area (Environment Protection Authority, 2025).

A summary of environmental elements related to site contamination is provided below in Table 6.15.

Table 6.15 Summary of environmental elements – site contamination

Applicable legislation	Applicable standards / guidelines	Views of affected parties	Environmental receptor
<i>Environment Protection Act 1993 (EP Act)</i> <i>SA EPA (2010) Current Criteria for the Classification of Waste including Commercial and Industrial Waste (Listed) and Waste Soil</i>	<i>National Environment Protection Measures</i> <i>SA EPA (2013) Standard for the Production and Use of Waste Derived Fill</i> <i>Guidelines for the assessment and remediation of site contamination</i> <i>Site contamination: guideline for communication and engagement</i>	None	Human and environmental health is not impacted from contaminated material.

6.3.3 *Potential impacts*

Based on the desktop review undertaken, the site does not appear to present an elevated risk of site contamination; however, this is based on limited information and will be confirmed through further investigations undertaken prior to construction. As part of spoil management procedures, the contamination status of material should be assessed.

6.3.3.1 Impact events

The impact events relevant to site contamination are:

- **SC1:** Human and/or environmental health impacts from exposure to contaminated materials.
- **SC2:** Human and/or environmental health impacts from exposure to hazardous goods via spills/leaks.

6.3.4 *Environmental impact and significance assessment*

Environmental impact and significance assessments for the identified impact events for site contamination are provided in Table 6.16 and Table 6.17.

The impact assessments detailed in the following tables indicated that expected impacts are generally in the **Moderate** category. The magnitude of impact events has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.16 Environmental impact and significance assessment – SC1: Human and/or environmental health impacts from exposure to contaminated materials

Site contamination: Impact ID SC1						
Impact event	Human and/or environmental health impacts from exposure to contaminated materials.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Soil disturbance encountering previously unidentified contaminated soil.	Excavation and then exposure to contaminated material.	Human health Soil	Yes – while the desktop review did not identify an elevated risk of encountering site contamination, preliminary site investigations have not been undertaken and as such, the absence of contaminated material cannot be confirmed.	Construction	Soil or groundwater contamination may be present, even though it is not registered with the EPA. Assessment is based on EPA Site Contamination Index (Environment Protection Authority, 2025) and public register (Environment Protection Authority, 2025).
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Site won material may be re-used on-site provided it is appropriately tested and classified as suitable for the proposed land use, in addition to any geotechnical considerations. Soil may be re-used at an alternate site provided the requirements of SA EPA (2013) <i>Standard for the Production and Use of Waste Derived Fill</i> are met. Any soil surplus to on-site requirements and proposed for disposal off-site to a licensed waste facility shall be assessed utilising the criteria specified in SA EPA (2010) <i>Current Criteria for the Classification of Waste including Commercial and Industrial Waste (Listed) and Waste Soil</i>. Acceptance shall be subject to contaminant concentrations, associated waste classification and the licence conditions of individual waste receival facilities. Procedures for the safe handling contaminated soils will be documented in the CEMP and will include contingency for the discovery of potentially contaminated soil.					Moderate to high certainty the control measures will be effective. Control measures reflect risk based on desktop assessment. Additional measures may be required if further investigations identify an elevated risk.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – while the desktop review did not identify an elevated risk of encountering contaminated soil, further investigations would be required to confirm actual contamination status of the Project Area. Furthermore, the risk of previously undocumented PCAs or contaminated material will still remain, therefore avoidance cannot be confirmed.	Expected impact is Low .
Frequency	Low – the risk of encountering contaminated soils will be minimised through soil testing prior to construction.	
Duration	Short term – soil disturbance and the risk of encountering previously unidentified contaminated soils will mostly be confined to construction and are likely to be short term and reversible with implementation of control measures.	
Extent	Localised – appropriate testing and contingency will be in place to facilitate the appropriate handling, storage and disposal of potentially contaminated soils which will restrict the possible extent of potential impacts.	
Severity	Low – with appropriate testing and contingency in place, it is unlikely that contaminated soil would pose a risk to health if encountered.	
Cumulative	No – all soils requiring offsite disposal will be appropriately tested and managed in accordance with EPA guidelines which will limit the possibility for cumulative impacts.	
Sensitivity	Moderate – the spread of contaminated soils would require appropriate remediation to meet legislative requirements.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable exposure of humans, environment, and groundwater to contaminated material and hazardous substances.	Wastes (including hazardous substances) are appropriately handled, segregated and transported to an EPA licensed facility for recycling or disposal.	Any material reuse on site to be appropriately tested and classified prior to reuse. Any soil surplus to on-site requirements and proposed for disposal off-site to a licensed waste facility will be assessed utilising the criteria specified in SA EPA (2010) <i>Current Criteria for the Classification of Waste including Commercial and Industrial Waste (Listed) and Waste Soil</i>. During excavation works, spoil will be monitored for signs of contamination (i.e. odour, colour changes etc). The CEMP will include contingency for the discovery of potentially contaminated material.

Table 6.17 Environmental impact and significance assessment – SC2: Impacts to human and environmental health from exposure to hazardous goods

Site contamination: Impact ID SC2						
Impact event	Human and/or environmental health impacts from exposure to hazardous goods via spills/leaks.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Storage and use of fuels, oils and lubricants.	Spills via mishandling and/or machinery failure.	Flora Fauna Soil Surface water Groundwater Human health	Yes – hazardous goods requirements and maintenance needs yet to be determined, however it is expected that some hazardous goods will be required on site.	Construction Operation Decommissioning	Maintenance and refuelling areas may be located at various locations across the Project Area, variable in levels of sensitivity to potential receptors. Hazardous good requirements yet to be determined. Machinery refuelling method(s) yet to be determined.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Waste and hazardous materials will be stored and disposed of appropriately. Suitable spill kits will be installed on site to effectively manage spills. Site personnel will be required to undertake response training. Designated refuelling areas will be established.					Hazardous good requirements yet to be determined. While currently not anticipated, certain hazardous goods may require additional control measures.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – spills and leaks may occur during the use and storage of hazardous goods.	Expected impacts is Moderate .
Frequency	Low – uncontrolled spills/leaks are incidents by exception.	
Duration	Long lasting – depending on the nature of spills or leaks, impact could be long lasting but reversable with appropriate remediation.	
Extent	Localised – with implementation of appropriate control measures, it is anticipated that spills and/or leaks are unlikely to be of significant volumes that would extend beyond the Project Area and immediate surrounds.	
Severity	Moderate – with appropriate storage and spill response measures, impacts should be minimised, if not avoided.	
Cumulative	No – based on background searches, it is understood that receptors are not already impacts by similar activities.	
Sensitivity	Moderate – surrounding agricultural land uses and sensitive fauna habitat would be sensitive to potential impact events.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable exposure of humans, environment, and groundwater to contaminated material and hazardous substances.	Any spill or leak is immediately contained and removed or assessed in accordance with NEPM16 guidelines and remediated in a timely manner.	Appropriate hazardous material storage and fuel storage and handling procedures will be implemented on site in accordance with relevant legislation, standards and guidelines including the <i>Stormwater Pollution Prevention codes of practice</i> and EPA guideline <i>080/16 Bunding and Spill Management</i>. Records of all dangerous substances and chemicals on site will be maintained. Suitable spill kits will be installed on site to effectively manage spills, including spills to water. Spills or leaks are immediately reported and actioned. A register of spills and leaks and the implement corrective action(s) will be maintained.

6.4 Aboriginal cultural heritage

6.4.1 Methodology

Two Heritage Desktop Assessments were undertaken for the Project by Independent Heritage Consultants (IHC) (Independent Heritage Consultants, 2026a; Independent Heritage Consultants, 2026b). The aim of the assessments was to identify the risk of impact to Aboriginal heritage sites or object from the Project, identify the obligations of the applicant under the relevant Aboriginal heritage legislation, and advise appropriate management and mitigation measures to minimise the risk of impact.

The assessments were undertaken via:

- a search of the Attorney-General's Department – Aboriginal Affairs and Reconciliation (AGD – AAR) Taa Wika Register of Aboriginal sites and objects across the Project Area
- review of available background information, including previous Aboriginal heritage reports and ethno-history information
- undertaking an environmental landform analysis aimed at developing an understanding of the heritage context for the Project Area
- undertaking heritage risk assessment based on consideration of the activities proposed under the Project in associated with the outcomes of the Taa Wika search, background review and landform analysis
- provision of heritage management recommendations.

6.4.2 Existing environment

The Project Area is located on Ngadjuri traditional lands (Independent Heritage Consultants, 2026a). These lands extend from Angaston and Gawler north to Panaramittee and Yunta.

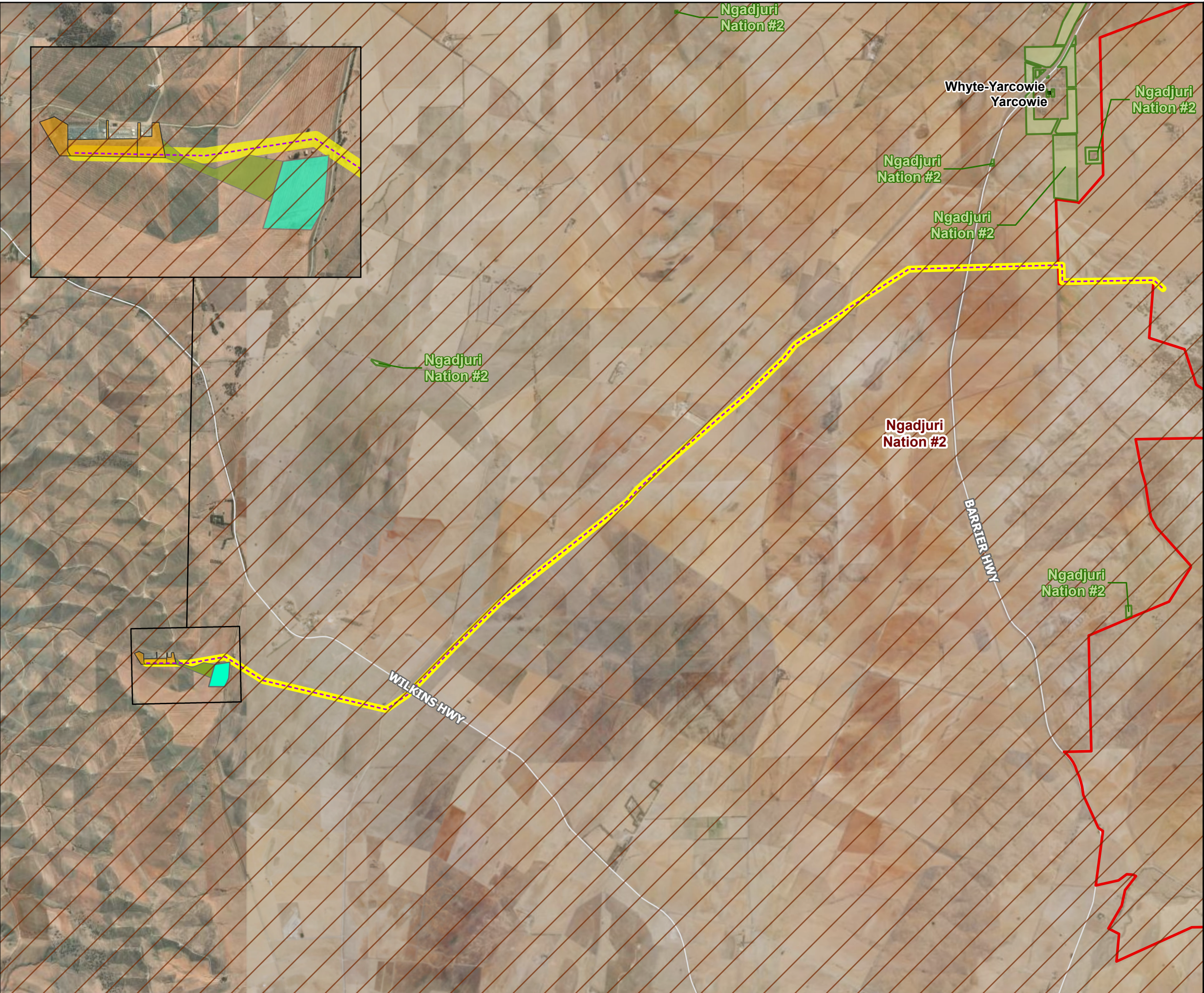
Common Aboriginal sites in the region of the Project Area include sand dunes, water bodies, fresh water springs, rocky outcrops, ochre sources, play pans, gilgai, cane grass soaks, and certain native trees. Aboriginal sites are also expected to be more prevalent in proximity to permanent or reliable water sources.

The Taa Wika search did not identify any Aboriginal heritage sites, objects or remains in close proximity to the Project Area.

In consideration of the Aboriginal heritage context for the Project Area, lack of certain environmental landforms and water sources, and extensive agricultural disturbance within the area, the assessments recommended that there is a low risk of the proposed works impacting unknown Aboriginal sites, objects or remains.

The Project Area is located within the Ngadjuri Nation #2 Native Title Claim Area (SCD2023/004/SAD84/2022), determined 7 July 2023. Native Title has been determined not to exist across the Project Area (National Native Title Tribunal, n.d.), as shown in Figure 6.7.

A summary of environmental elements related to Aboriginal cultural heritage is provided below in Table 6.18 **Error! Reference source not found..**



PS221341
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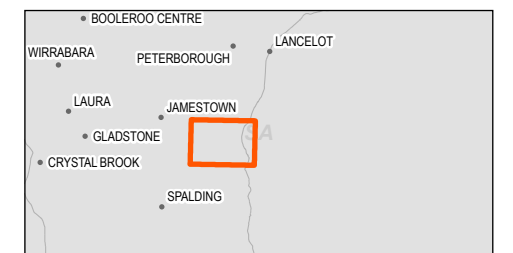
Figure 6.7
Native Title

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 mTransmission Line Easement
- Wind Farm Boundary (REIL 2)

Native Title Determination

- Native title does not exist
- Native title exists (non-exclusive)



0 1,000 2,000
Metres

Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:60,000 Date: 8/04/2026
Data sources: WSP, SA Government, MetroMap (Australia latest)
World Imagery Vantor

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Table 6.18 Summary of environmental elements – Aboriginal cultural heritage

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Aboriginal Heritage Act 1988 (AH Act)</i> <i>Aboriginal and Torres Strait Islander Act 2005</i> <i>Native Title Act 1993</i> <i>Coroners Act 2003</i>	<i>A guide to Aboriginal heritage in South Australia</i> (Attorney-General-s Department, 2025)	Discussions about the importance of developing a greater understanding of the heritage of the Ngadjuri people on the Project Area and beyond. This could include the development of heritage mapping of Ngadjuri country. Desire for the assessment and protection of Aboriginal heritage values on-site. Interest in methods of sharing of Project benefits with the Ngadjuri people through job creation, capacity building for the organisation, educational opportunities for Ngadjuri people.	Aboriginal sites, objects and remains Traditional Owners

6.4.3 Potential impacts

The risk of damage to Aboriginal sites, objects or remains for the Project has been assessed as low. As such, impacts are not anticipated. However, it is acknowledged that the risk of accidental damage to Aboriginal sites, objects or remains still exists despite the risk being assessed as low, particularly during any ground disturbing works, and that all Aboriginal sites, objects and remains as still protected under the AH Act.

6.4.3.1 Impact events

The impact event relevant to Aboriginal heritage is:

- **AH1:** Damage/destruction to Aboriginal heritage sites, objects or remains.

6.4.4 Environmental impact and significance assessment

An environmental impact and significance assessment for the identified impact event for Aboriginal heritage is provided in Table 6.19.

The impact assessment detailed in the following table indicate that expected impacts in the Low category. The magnitude of the impact event has the potential to be **Moderate** but with proposed control measures it is assessed as ALARP.

Table 6.19 Environmental impact and significance assessment – AH1: Damage/destruction to Aboriginal heritage sites, objects or remains

Aboriginal heritage: Impact ID AH1						
Impact event	Damage/destruction to Aboriginal heritage sites, objects or remains.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Earthworks impacting previously unidentified Aboriginal cultural sites, objects or remains.	Soil disturbances.	Aboriginal cultural heritage sites, objects and remains.	Yes – the heritage desktop assessments have identified that there are no known Aboriginal sites, objects or remains within the Project Area and that the risk of encountering previously unknown sites, objects or remains is low, but is not non-existent (Independent Heritage Consultants, 2026a; Independent Heritage Consultants, 2026b).	Construction Decommissioning	Potential for previously unidentified subsurface and/or obscured heritage sites and objects that may only be encountered during Project works. In the event that an Aboriginal heritage site, object or human remains be identified within or in close proximity to the construction footprint, the likelihood of finding additional heritage items may increase.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
An Aboriginal Heritage Survey will be undertaken, and any known sites or areas of significance will be avoided by the Project. A site discovery procedure will be developed in accordance with AGD-AAR's <i>Aboriginal heritage discovery protocol</i> and incorporated into the CEMP and DRMP to be implemented in the instance that a potential site, object or remain is discovered during ground disturbing works. The site discovery procedure will include appropriate processes for engagement of an Archaeologist to assist in the identification of any potential discoveries. Where avoidance of an Aboriginal heritage site, object or remain is not possible, authorisation will be sought under the AH Act. Heritage matters and procedures will be included in site induction, to be undertaken by all site personnel.					Moderate to high certainty that control measures will be effective. In the event that an Aboriginal heritage site, object or human remains be identified within or in close proximity to the Project, the likelihood of finding additional heritage items may increase and additional control measures may be required.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – while there are no known Aboriginal sites, objects or remains within the Project Area, and the Project has been assessed as a low risk of encountering previously unknown sites, objects or remains, the risk is not completely non-existent and therefore avoidance cannot be confirmed.		Expected impact is Low .
Frequency	Rare – if an impact event were to occur, this is expected to be a rare occurrence only.	Overall magnitude is Moderate .	
Duration	Permanent – if an Aboriginal heritage site, object or remain is unexpectedly encountered and damaged, these impacts could be permanent and non-reversible.		
Extent	Localised – impacts would be constrained to ground disturbing works within the Project Area.		
Severity	Moderate – with implementation of discovery protocols and site inductions, it is expected in the event of an unexpected discovery, all works would stop prior to damage occurring to the site, object or remains.		
Cumulative	Possible – if impacts were to occur, this could be cumulative to previous and potential future damage to Aboriginal heritage sites, objects and remains in the wider regions.		
Sensitivity	Low – the site has been deemed as a low likelihood of containing previously unidentified Aboriginal heritage sites, objects or remains.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unauthorised disturbance to Aboriginal cultural heritage sites and objects.	No incidents relating to the unauthorised damage to Aboriginal site, objects or remains. All works to be undertaken in accordance with the AH Act.	Heritage survey and ongoing consultation with NNAC to be completed prior to the commencement of construction. The Project design will be micro-sited to avoid any Aboriginal heritage sites, objects or remains where possible; if discovered during the survey. Where avoidance of an Aboriginal heritage site, object or remain is not possible, authorisation will be sought under the AH Act. A site discovery procedure will be incorporated into the CEMP and DRMP to be implemented in the instance that a potential site, object or remain is discovered during works.

6.5 Non-Aboriginal cultural heritage

6.5.1 Methodology

The assessment of potential impacts to non-Aboriginal heritage has been informed by the following:

- Heritage Desktop Assessment undertaken for the Transmission Line Corridor and Substation Expansion Area by IHC (Independent Heritage Consultants, 2026a), which includes a review of relevant databases, previous heritage reports and background information to establish the heritage context of the area, and a qualitative risk analysis to evaluate the level of risk of encountering an historic heritage sites
- a search of the South Australian Heritage Register (SAHR) via the South Australian Heritage Database (Department for Environment and Water, n.d.) and Australian Heritage Database (Department of Climate Change, Energy, the Environment and Water, n.d.)
- a site visit undertaken by WSP on 11 December 2025.

6.5.2 Existing environment

European pastoral occupation in the region surrounding the Project Area began in the early 1840's as part of the wider expansion of leasehold grazing practices across the Mid-North, which saw large pastoral leases established across the area. By the 1870s, the larger leaseholds were progressively subdivided for agricultural settlement, with the establishment of small mixed farms. Subsequently, a pattern of regular freeholder allotments, fences, paddocks and stone farm buildings was established across the landscape (Independent Heritage Consultants, 2026a). Given the historical context of the site, the following features could be present within the Project Area as evidence of the evolution of the area as part of colonial settlement:

- evidence of the original environmental conditions including palynological evidence of the soft landscape which could be found in undeveloped areas
- evidence of environmental impacts from settlement including clearing of vegetation and land forming
- evidence of early farming infrastructure relating to sheep grazing activities, land clearing and land division
- evidence of earlier iterations of roads, likely to be identified as various formed hard surfaces
- evidence of earlier iterations of bridges and drainage structures (culverts etc.).

The search of the SAHR did not identify any listed non-Aboriginal heritage places within 2 km of the Project Area. The nearest listed heritage place is the State heritage listed Coolootoo Shepherd's Hut (SA Heritage ID: 25045) located approximately 2.5 km south-west of the Belalie Substation Expansion Area. An additional State heritage places were identified approximately 8.5 km south-east of the OTL Corridor: Cappeedee Homestead & Woolshed (SA Heritage ID: 14872).

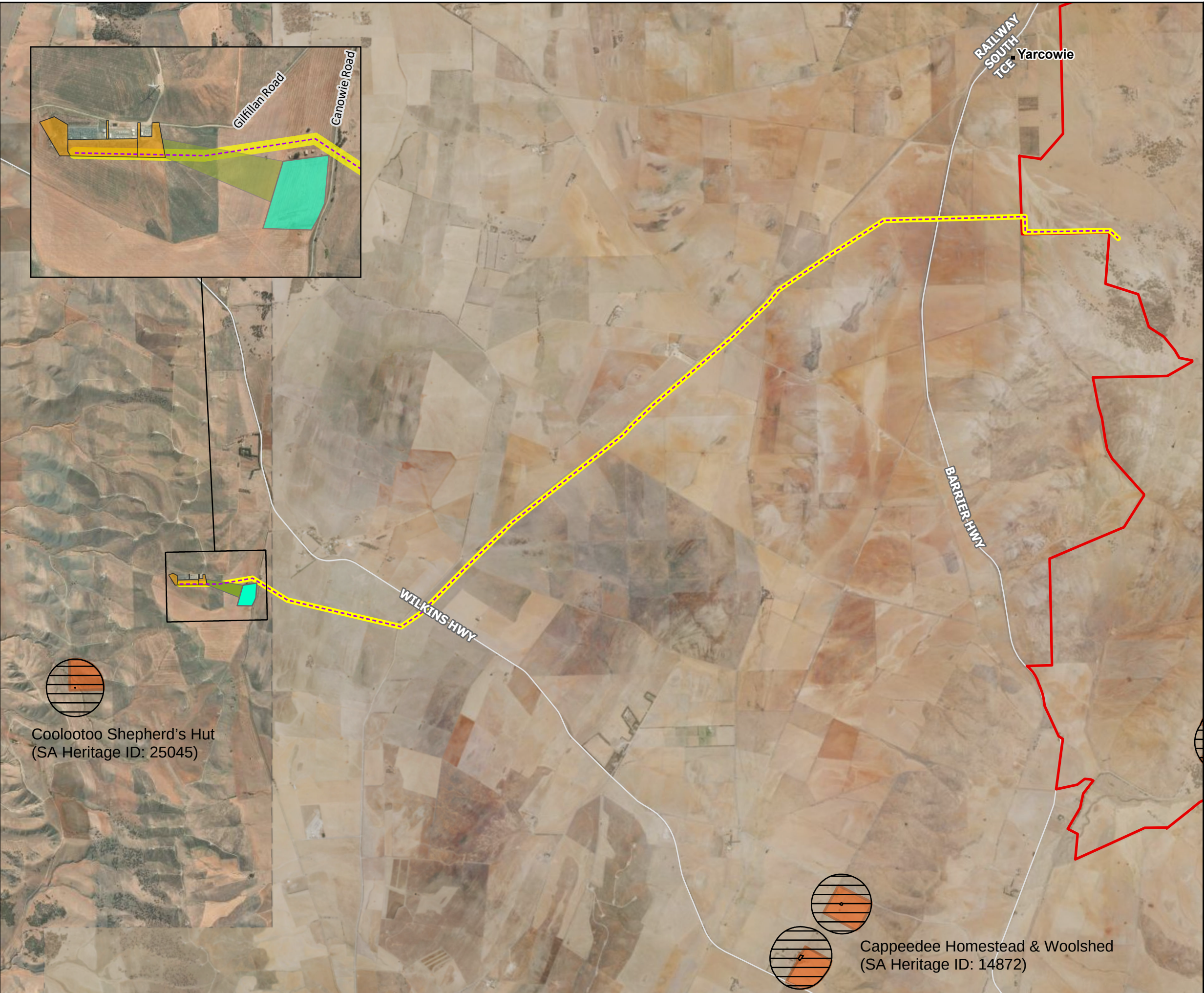
State heritage places identified in the database search are shown below in Figure 6.8.

No Local, World, National or Commonwealth heritage listed places were identified in close proximity to the Project Area.

The site visit (undertaken 11 December 2025) identified two areas that may present undocumented non-Aboriginal heritage; both along the OTL Corridor:

- partial stone wall on corner of Mitchell's Road and Sunshine Road; S330 H241300 of CT 5359/624 (refer Photo 6.1)
- relics of stone farm buildings off Mitchells Road; S362 H241300 of CT 5359/620 (refer Photo 6.2 and Photo 6.3).

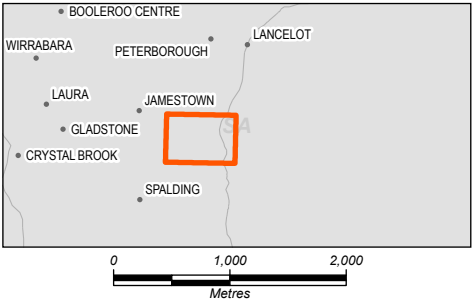
The location of these two areas is also shown in Figure 6.8.



PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

Figure 6.8
Non-Aboriginal Heritage

- Legend**
- Localities
 - State Managed Roads
 - BESS Area
 - Underground Cable Easement
 - Belalie Substation Expansion Area
 - Overhead Transmission Line
 - 70 m Transmission Line Easement
 - Wind Farm Boundary (REILA 2)
 - Heritage Adjacency Overlay
 - State Heritage Place
 - Unregistered ruins



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3

1:65,000 Date: 18/12/2025

GDA 2020
Data sources: WSP, SA Government, World Imagery Earthstar Geographics
MetroMap (Australia latest)
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Photo 6.1 Partial stone wall on corner of Mitchells Road and Sunshine Road; S330 H241300 of CT 5359/624



Photo 6.2 Relics of stone farm buildings off Mitchells Road; S362 H241300 of CT 5359/620



Photo 6.3 Relics of stone farm buildings off Mitchells Road; S362 H241300 of CT 5359/620

A summary of environmental elements related to non-Aboriginal cultural heritage is provided below in Table 6.20. **Error! Reference source not found..**

Table 6.20 Summary of environmental elements – Aboriginal cultural heritage

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Heritage Places Act 1993</i> (HP Act) <i>Planning, Development and Infrastructure Act 2016</i> (PDI Act) <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	<i>The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance</i> <i>DIN 4150-3:1999-02</i> <i>Vibration in buildings – Part 3: Effects on structures (German Standard)</i>	None.	Non-Aboriginal heritage artefacts, objects, and places of significance.

6.5.3 Potential impacts

As there are no listed non-Aboriginal heritage sites within the Project Area, and as such, there are no impacts to these places proposed.

The design of the OTL will respect an exclusion zone around the ruins off Mitchells Road to avoid all impacts; either by stringing overhead or diverting the line around the ruins and by avoiding ground disturbing works and significant vibration in the area. These measures will avoid both direct and indirect impacts to the ruins. Provided all impacts are avoided, the works will not require a permit under the HP Act. Exclusion zones will also be observed during construction, operation, and decommissioning.

The Heritage Desktop Assessments (Independent Heritage Consultants, 2026a; Independent Heritage Consultants, 2026b) recommend that in consideration of the historical land use, the soil profile and the archaeological and built heritage context for the Project Area, the Project has a low risk for accidental disturbance to undocumented non-Aboriginal heritage/archaeological features of potential significance; particularly given that that area has been subjected to continual use and maintenance.

Depending on the final construction traffic route, it is possible that heavy vehicles may need to pass heritage listed properties. In this instance, the Principal Contractor would be required to investigate potential impacts that may occur as a result of vibration generated due to construction traffic. Generally, that the risk of structural damage due to transport induced vibration is considered standard and manageable as impacts typically only extend up to 10 m from the road, though the exact extent would depend on the condition of the road and size and frequency of construction vehicles.

6.5.3.1 Impact events

The impact event relevant to non-Aboriginal heritage is:

- **NAH1:** Damage or destruction to objects or places containing non-Aboriginal heritage value.

6.5.4 *Environmental impact and significance assessment*

An environmental impact and significance assessment for the identified impact event for non-Aboriginal heritage is provided in Table 6.21.

The impact assessment detailed in the following table indicate that expected impacts are in the **Moderate** category. The magnitude of impact events has the potential to be **Moderate** but with proposed control measures it is assessed as ALARP.

Table 6.21 Environmental impact and significance assessment – NAH1: Damage or destruction to objects or places containing non-Aboriginal heritage value

Non-Aboriginal heritage: Impact ID NAH1						
Impact event	Damage or destruction to objects or places containing non-Aboriginal heritage value.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Earthworks impacting previously unidentified non-Aboriginal heritage/archaeological features of significance. Vibration generated by Project traffic or machinery.	Soil disturbances. Operation of heavy vehicles or earthworks machinery.	Non-Aboriginal heritage/archaeological features of significance.	Yes – a site visit has confirmed ruins in proximity to the proposed OTL. Furthermore, while the risk of encountering other undocumented non-Aboriginal heritage features has been assessed as low, the risk is not non-existent.	Construction Operation Decommissioning	The construction traffic route will be finalised by the Principal Contractor.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
The OTL design will avoid all direct impacts to the ruins off Mitchells Road. A 15 m construction exclusion zone will be established around ruins off Mitchells Road, to protect the ruins from accidental damage and potential impacts from vibration. A site discovery procedure will be incorporated into the CEMP, OMP and DRMP, to be implemented in the instance that a potential unregistered non-Aboriginal heritage item is discovered during works. A Vibration Management Plan will be developed as part of the CEMP for works in proximity to identified ruins. Heritage listed structures within 10 m of the preferred construction traffic route would be assessed for the risk of vibration damage and, if required, mitigation measures would be included in the TMP to support the minimisation and monitoring of potential impacts from vibration.					High certainty that control measures will be effective. In the event that additional undocumented non-Aboriginal heritage/archaeological features are identified within or in close proximity to the Project Area, additional control measures may be required.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – the Project will be designed to avoid all direct impacts to identified undocumented heritage features, however the risk still remains for accidental discoveries in proximity to the works.		Expected impact is Moderate .
Frequency	Rare – with implemented control measures, impact events would be rare.	Overall magnitude is Moderate .	
Duration	Long lasting – any accidental damage could be long lasting, but repairable.		
Extent	Localised – impacts would be limited to the Project Area and heritage places directly adjacent to the construction transport route.		
Severity	Moderate – with implementation of discovery protocols, it is expected in the event of an unexpected discovery, all works would stop prior to any significant damage occurring.		
Cumulative	Possible – if impacts were to occur, this could be cumulative to previous and potential future damage to non-Aboriginal heritage/ archaeological features in the wider region.		
Sensitivity	Moderate – known undocumented ruins exist within the OTL corridor, and the Project Area has been deemed as a low likelihood of containing previously unidentified non-Aboriginal heritage/ archaeological features.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unauthorised disturbance to non-Aboriginal heritage places.	No incidents relating to the unauthorised damage to documented or undocumented non-Aboriginal heritage/ archaeological features. No structural damage to non-Aboriginal heritage places occurs due to construction vehicles. Works to be undertaken in accordance with the HP Act.	The OHL design will avoid all direct impacts to ruins off Mitchells Road. Any design or works in proximity to identified undocumented non-Aboriginal heritage/ archaeological features would have a suitable exclusion zone established. A Vibration Management Plan will be developed prior to commencement of works in close proximity to ruins off Mitchells Road. A site discovery procedure will be incorporated into the CEMP, OMP and DRMP, to be implemented in the instance that a potential unregistered non-Aboriginal heritage/ archaeological feature discovered during construction works.

6.6 Noise

This section is primarily based on the outcomes of an Environmental Noise Assessment that has been undertaken for the Project by Resonate (Resonate, 2026). The full assessment report is provided in Appendix G.

6.6.1 Methodology

The Environmental Noise Assessment was undertaken to predict compliance of operation of the BESS component of the Project with the relevant noise goal levels under the *Environmental Protection (Commercial and Industrial Noise) Policy 2023* (Noise Policy).

Other components associated with the Project are not expected to generate significant operational noise, and hence were not included in the assessment. Furthermore, while the Project is associated with the Whyte Yarcowie Wind Farm, the BESS is not considered integral to the operation of the wind farm and is located > 14 km from the wind farm whereby cumulative noise impacts from the wind farm are unlikely. As such, the BESS was assessed as a stand-alone Project.

The Noise Policy provides goal noise levels to be complied with at sensitive receivers based on the P&D Code Zone in which the noise source and the noise receivers are located. The Noise Policy states that where compliance with the goal noise levels is achieved, the general environmental duty under Section 25 of the EP Act is satisfied in relation to noise from a noise source.

The Noise Policy provides the following goal noise levels for operation of the Project and closest receivers, which are all located within the *Rural Zone*:

- an average noise level (L_{eq}) of no more than 52 dB(A) during the day (7:00 am to 10:00 pm)
- an average noise level (L_{eq}) of no more than 45 dB(A) during the night (10:00 pm to 7:00 am).

As the BESS may operate at any given time, it must be compliant for both day- and night-time criteria.

The above goal noise levels include a 5 dB(A) reduction, which while not strictly required for applications under the HRE Act, has been applied to demonstrate consistency with applications under the PDI Act and to provide a buffer to reduce risks associated with prediction uncertainty and potential cumulative noise impacts from multiple projects.

The assessment considered a worst-case scenario approach by modelling the maximum BESS capacity and noisiest BESS model currently under consideration.

Noise from BESS facilities can attract an adjustment (penalty) for tonal noise character under the Noise Policy if a tone and/or low frequency characteristics are found to be prominent at a receiver location. A screening was undertaken and it was deemed that tonal and low frequency noise is not predicted at receiver locations, and as such, no penalty was applied.

Noise predictions were made using the CONCAWE noise propagation model in SoundPLAN noise modelling software. The CONCAWE noise model divides meteorological conditions into six separate “weather categories”, depending on wind speed, wind direction, time of day and level of cloud cover. Weather Category 1 provides the weather conditions associated with the “lowest” propagation of noise, whilst Weather Category 6 provides “worst-case” (i.e., highest noise level) conditions. Predictions of noise levels generated from the Project were made based upon Weather Category 6 for daytime noise and Weather Category 6 for nighttime noise.

6.6.2 Existing environment

The Project Area is located within a rural environment, that is not currently influenced by similar industrial noise.

The assessment considered impacts to nine noise sensitive receivers which were identified in close proximity to the Project Area. All nearby noise sensitive receivers are located to the north-east of the BESS Area and are shown in Figure 6.9.

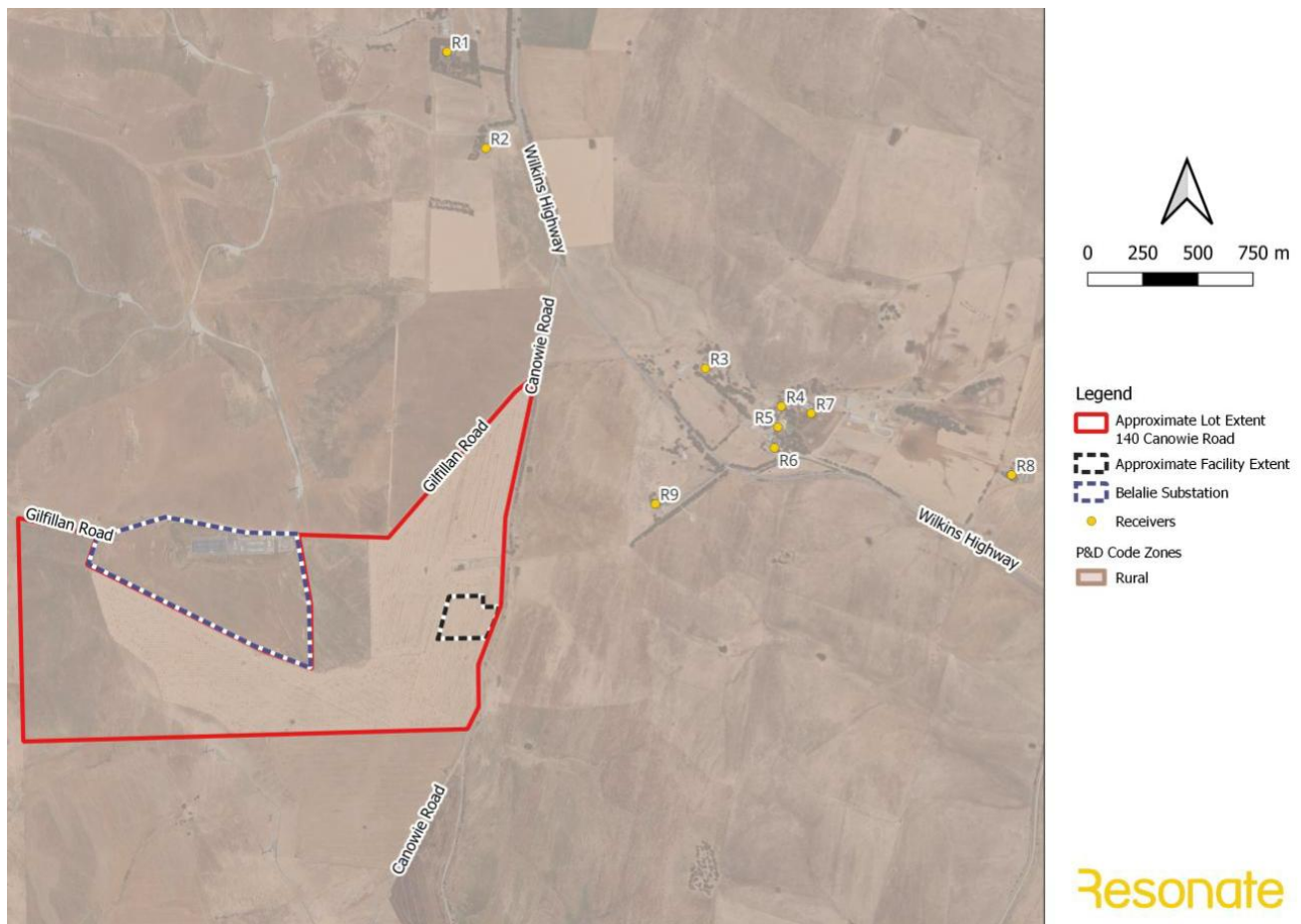


Figure 6.9 Project Area, P&D Code Zoning and noise sensitive receiver locations (Resonate, 2026)

A summary of environmental elements related to noise is provided below in Table 6.22.

Table 6.22 Summary of environmental elements – noise

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Environment Protection Act 1993 (EP Act)</i> <i>Environment Protection (Commercial & Industrial Noise) Policy 2023 (Noise Policy)</i>	<i>EPA Evaluation distances for effective air quality and noise management</i>	Interest in noise impacts of the Project components.	Ongoing wellbeing of local community residents. Fauna residing within the Project Area.

6.6.3 Potential impacts

The Environmental Noise Assessment found that under a worst-case scenario, noise generated during operation of the Project is modelled to reach between 37 dB(A) to 45 dB(A) at the identified sensitive receivers (see Table 6.23). As such, noise from operation of the Project is expected to remain within the relevant criteria and be compliant with the goal noise levels under the Noise Policy (Resonate, 2026).

Table 6.23 Predicted noise levels (Resonate, 2026)

Receiver location	Predicted noise level, L_{eq} dB(A)	Noise Policy Criteria, L_{eq} dB(A) ⁴	
		Day	Night
R01	39	52	45
R02	42		
R03	40		
R04	44		
R05	44		
R06	45		
R07	43		
R08	37		
R09	40		

Construction of the Project may also result in temporary noise impacts from vehicles, plant or machinery to nearby noise sensitive receivers during the approximate 18-month construction period.

6.6.3.1 Impact events

The impact events relevant to noise are:

- **N1:** Disruption to wellbeing of sensitive receivers due to construction noise
- **N2:** Disruption to wellbeing of sensitive receivers due to operation of the BESS.

6.6.4 Environmental impact and significance assessment

Environmental impact and significance assessments for the identified impact events for noise are provided in Table 6.24 and Table 6.25.

The impact assessments detailed in the following tables indicated that expected impacts are generally in the **Low** category. The magnitude of impact events is expected to be **Low**, and with proposed control measures is assessed as ALARP.

⁴ Include a 5 dB(A) reduction

Table 6.24 Environmental impact and significance assessment – N1: Disruption to wellbeing of sensitive receivers due to construction noise

Noise: Impact ID N1						
Impact event	Disruption to wellbeing of sensitive receivers due to construction noise.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Noise generated by construction or decommissioning activities.	Vehicles, plant and machinery generating noise emissions.	Local community/ neighbours Fauna (sensitive receivers)	Yes – noise sensitive receivers and fauna are present in vicinity of the BESS Area. Noise generating activities will occur during construction and decommissioning.	Construction Decommissioning	Final construction and decommissioning methodology yet to be determined.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Management and monitoring measures for noise and vibration during construction and decommissioning will be documented in the CEMP and DRMP, or suitable sub-plan. Measures will include procedures for complaints management and recording. Where practicable, works will be undertaken between the hours of 7.00 am to 7.00 pm Monday to Saturday. Activities undertaken outside of the hours of 7.00 am and 7.00 pm Monday to Saturday will be restricted, where practicable, to activities that are unlikely to cause impact to amenity of the area or otherwise will not be undertaken without prior approval from the Northern Areas Council or Regional Council of Goyer (depending of the location of proposed works), or EPA (in the case of any concrete batch works). Ongoing consultation will be undertaken with potentially impacted neighbours to keep them informed of key activities during construction, operation and decommissioning.					High certainty of effectiveness of control strategies, as control strategies are based on relevant EPA guidelines and standard industry practices.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – noise generating activities will occur during construction and decommissioning.	Expected impact is Low .
Frequency	Moderate – impacts are expected to occur during construction and decommissioning.	
Duration	Short term – impacts will be short terms and temporary.	
Extent	Localised – operational noise impacts (if any) would only affect noise sensitive receivers in close proximity to the BESS Area.	
Severity	Moderate – with implementation of control measures, impacts may be audible but compliant.	
Cumulative	Possible – it is possible that other construction project could occur in the area in parallel to construction/decommissioning of the Project, that may lead to cumulative noise impacts.	
Sensitivity	Moderate – noise sensitive receivers have been identified in proximity to the Project. Existing noise amenity at these locations is unlikely to be diminished significantly by existing land uses in the area.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable construction, operation, decommissioning noise impacts.	No complaints from neighbours regarding noise during construction and decommissioning. In the event complaints are raised, all reasonable measures will be taken to resolve the complaint in a timely manner.	Ongoing consultation with potentially impacted neighbours to keep them informed of key project activities during construction, operation and decommissioning. Management and monitoring measures for noise and vibration during construction and decommissioning will be documented in the CEMP and DRMP, or suitable sub-plan. Works expected to generate excessive noise will not be undertaken outside of 7.00 am and 7.00 pm Monday to Friday, unless approved by the Northern Areas Council or Regional Council of Goyer (depending on the location of proposed works), or EPA (in the case of any concrete batch works).

Table 6.25 Environmental impact and significance assessment – N2: Disruption to wellbeing of sensitive receivers due to operation of the BESS

Noise: Impact ID N2						
Impact event	Disruption to wellbeing of sensitive receivers due to operation of the BESS.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Noise generated by operation of BESS infrastructure components including BESS modules and inverters.	Project operation generating noise emissions.	Local community / neighbours (sensitive receivers).	Yes – noise sensitive receivers have been identified in proximity to the Project. The Environmental Noise Assessment (Resonate, 2026) recommended that noise generated by the Project is not likely to exceed the relevant criteria under the Noise Policy, however may still be audible at some sensitive receiver locations.	Operation	The Environmental Noise Assessment is based on a preliminary design. Parameters used in the assessment may not materialise.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Management and monitoring measures for noise during operation will be documented in the OMP. Measures will include procedures for complaints management and recording.					Control measures are based on the outcomes of the Environmental Noise Assessment (Resonate, 2026), which was based on a preliminary design of the BESS and recommended that operational noise would be compliant with the Noise Policy. Additional control measures would be required if changes were made to the final BESS design that resulted in non-compliance with the Noise Policy.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – operation of the BESS will generate some level of noise.		Expected impact is Low .
Frequency	Rare – modelled operation noise from the Project was assessed to be compliant with the relevant criteria. Hence, noise disturbances are expected to be rare.	Overall magnitude is Low .	
Duration	Short term – if operational noise impacts do occur, these could be mitigated.		
Extent	Localised – operational noise impacts (if any) would only affect noise sensitive receivers in close proximity to the BESS Area.		
Severity	Low – based on the outcomes of the Environmental Noise Assessment, operational noise is expected to be low at sensitive receiver locations.		
Cumulative	No – the BESS is not located within proximity to other renewable energy/industrial type developments whereby cumulative noise impacts would be expected. Regardless, the Environmental Noise Assessment applied a 5 dB(A) reduction of the noise criteria to allow a buffer for any expected impacts such as cumulative noise.		
Sensitivity	Moderate – noise sensitive receivers have been identified in proximity to the Project. Existing noise amenity at these locations is unlikely to be diminished significantly by existing land uses in the area.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable construction, operation or decommissioning noise impacts.	Works are undertaken in accordance with the OMP. In the event complaints are raised from neighbours regarding noise during construction, operation or decommissioning, all reasonable measures will be taken to resolve the complaint in a timely manner. Operational noise from the Project does not exceed the criteria at relevant sensitive receiver locations, as established under the Noise Policy.	A record is to be kept of ongoing consultation with potentially impacted neighbours demonstrating efforts have been made to adequately inform them of key activities during construction, operation and decommissioning. Management and monitoring measures for noise during operation are to be documented in the OMP and are to include procedures for complaints management and recording.

6.7 Roads and traffic

This section is on the outcomes of a TIA undertaken for the Project by Empirical Traffic Advisory (Empirical Traffic Advisory Pty Ltd, 2026). The TIA is provided in Appendix H.

6.7.1 Methodology

The TIA was conducted using the following high-level methodology:

- review of existing traffic and parking conditions surrounding the Project Area
- site inspection of the Project Area and surrounds, undertaken 14 November 2025
- review of traffic demands of the proposed development
- review of access arrangements for the proposed development
- assessing the expected overall transport impact of the proposed development.

6.7.2 Existing environment

Construction access for the Project will be from varied locations and access points, depending on the Project component:

- **BESS Area:** two proposed new access points off Canowie road, one at each the northern end and southern end of the site. Access points will remain in place throughout operation of the Project.
- **Belalie Substation Expansion Area:** new temporary access point off Gilfillan Road. It is anticipated, at this stage, that access will be remediated after completion of construction, and ongoing access for operation will revert to the existing Belalie Substation site access.
- **Underground Cable Easement and OTL Corridor:** various locations but will seek to utilise existing access points, where possible. Any temporary construction access points would be remediated at the completion of construction.

It is expected that the bulk of oversized vehicles transporting Project components would be travel from Port Adelaide, via Port River Expressway, Northern Connector, Northern Expressway, Horrocks Highway, Barrier Highway, Copperhouse Road, West Street, Barrier Highway then onto Wilkins Highway. This route would minimise locations where oversize vehicles would need to travel through larger townships and ungazetted routes.

From Wilkins Highway, vehicles would then need to utilise the following unsealed, local roads to access the various Project sites:

- **Canowie Road:** a two-way unsealed road with an approximate formation width of 7 to 8 m, and approximate 20 to 40 m wide road reserve (see Figure 6.10). The road is under the care and control of the Northern Areas Council and provides access to the existing farming properties located within the surrounding area. Current traffic volumes are estimated to be less than 100 vehicles per day.
- **Gilfillan Road:** a two-way unsealed road configured with an approximate formation width of 6 to 7 m, with an approximate 18 to 19 m wide road reserve (see Figure 6.11). The road is under the care and control of the Northern Areas Council and provides access to the existing farming properties located within the surrounding area. Current traffic volumes are estimated to be less than 100 vehicles per day.
- **Mitchells Road:** a two-way unsealed road configured with an approximate carriageway width of between 6 and 7 m, with an approximate 60 m wide road reserve (see Figure 6.12). The road is classified as a Category 3A or 3B unsealed road (typical formation width of 8 m and sheeted width 6 m) and is under the care and control of the Regional Council of Goyder. The road surface was observed to be of a good quality constructed formation and in good condition at the time of inspection; providing access to the existing farming properties located within the surrounding area. Current traffic volumes are estimated to be less than 100 vehicles per day.

- **Booborowie Road:** a two-way unsealed road configured with approximate carriageway width of 6 to 7 m, north of Wilkins Highway and between 10 and 11 m to the south of Wilkins Highway (see Figure 6.13). The road is located within both the Northern Areas Council and the Regional Council of Goyder, with the relevant section of the roadway generally located within the Northern Areas Council. The road surface was observed to be of a good quality constructed formation and in good condition at the time of inspection; providing access to the existing farming properties located within the surrounding area, and access to the Hallet Wind Farm Substation. Current traffic volumes are estimated to be less than 100 vehicles per day.

(Empirical Traffic Advisory Pty Ltd, 2026)



Figure 6.10 Canowie Road (Empirical Traffic Advisory Pty Ltd, 2026)



Figure 6.11 Gilfillan Road (Empirical Traffic Advisory Pty Ltd, 2026)



Figure 6.12 Mitchells Road (Empirical Traffic Advisory Pty Ltd, 2026)



Figure 6.13 Booborowie Road (Empirical Traffic Advisory Pty Ltd, 2026)

A summary of environmental elements related to roads and traffic is provided below in Table 6.26.

Table 6.26 Summary of environmental elements – roads and traffic

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Road Traffic Act 1961</i> <i>Heavy Vehicle National Law Act 2013</i>	<i>Guide to Road Design - Part 4A: Unsignalised and Signalised intersections</i> <i>Parking Facilities Part 1 and Part 2 (AS2890.1:2004 and AS2890.2:2018)</i>	Interest regarding options and suitability of access routes to the Project Area. Preference for Project to minimise impacts and disruption of roads that are used for existing farming operations (such as moving stock).	Road users – maintaining safety and efficiency of surrounding road network.

6.7.3 Potential impacts

The TIA outlined potential impacts to traffic during both the construction and operation phases of the Project. The eventual decommissioning phase will need to be investigated at the time of decommissioning as traffic conditions cannot be adequately considered given the long operational life of the Project. Traffic impact during the decommissioning phase was therefore not assessed as part of the TIA.

6.7.3.1 Construction

Across the anticipated 18-month construction period, it is expected that the Project will generate up to 364 vehicle trips per day during the peak construction period (approximately 12 months); 210 light vehicles and 154 heavy vehicles. The TIA has recommended that while this anticipated traffic increase is large in comparison to current traffic volumes on the surrounding unsealed road network of around 100 vehicles per day, the forecast daily traffic volumes fall within the typical current practice where unsealed roads can carry up to 500 vehicles per day, and as a result is not expected to impact on the safety or function of the surrounding road network. (Empirical Traffic Advisory Pty Ltd, 2026).

The Project will require the transport of oversized components and the use of vehicles up to 30 m in length. The TIA has identified that the existing road network in vicinity of the Project Area is generally gazetted to cater to the required 30 m long vehicles (Empirical Traffic Advisory Pty Ltd, 2026).

To condition of roads utilised by the Project, particularly unsealed and unformed roads once vehicles leave Barrier Highway or Wilkins Highway should be managed during construction; with maintenance undertaken, as required, to maintain the existing road conditions.

The TIA has reviewed the proposed site access and egress points and recommended that generally the locations provide appropriate site distances in accordance with relevant requirements of the Austroads *Guide to Road Design - Part 4A: Unsignalised and Signalised intersections* and *Australian Standards Parking Facilities Part 1 and Part 2* (AS2890.1:2004 and AS2890.2:2018) would be appropriate for the Project. With regards to proposed construction access for the Belalie Substation Expansion Area along Gilfillan Road, site access should be provided on the existing bend, to maximise available site access.

The TIA included an intersection site distance assessment of key intersections expected to be utilised by the Project. The assessment identified that generally most intersections proposed to be utilised by the Project achieve the required horizontal site distances, with the exception of the Wilkins Highway/Canowie Road intersection, which does not achieve the current requirements for the posted speed limit. Upgrades and/or traffic management may be required to support the use of this intersection by construction vehicles.

During normal operations, the Project is expected to be remotely operated, generating very small numbers of vehicles for ongoing operations and maintenance activities. Therefore, significant impacts to the road network are not anticipated.

6.7.3.2 Impact events

The impact event relevant to roads and traffic is:

- **T1:** Overloading of the local road network including functionality and safety of intersections.

6.7.4 Environmental impact and significance assessment

An environmental impact and significance assessment for the identified impact event for roads and traffic is provided in Table 6.27.

The impact assessment detailed in the following table indicate that expected impacts are generally in the **Moderate** category. The magnitude of the impact event has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.27 Environmental impact and significance assessment – T1: Overloading of the local road network including functionality and safety of intersections

Roads and traffic: Impact ID T1						
Impact event	Overloading of the local road network including functionality and safety of intersections					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Construction vehicles moving on and off site.	Construction vehicles.	Local Road Network	Yes – construction of the Project will result in a large (yet temporary) increase in traffic volumes and change in the nature of vehicles on the surrounding road network.	Construction	Expected traffic volumes and traffic schedule is estimated based on projects of a similar scale and nature.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Ongoing consultation with nearby landowners regarding use of local road network. Ongoing consultation with local Councils, DIT and the National Heavy Vehicle Regulator regarding potential intersection upgrades and traffic management. An agreement will be made with relevant the Council regarding the condition of local roads prior to commencement of construction which will inform the required level of standard for maintenance and condition of the road at the end of the construction works and/or during operation. A dilapidation survey of each potentially impacted road will be undertaken prior to construction and following construction/operation as part of the agreement. A TMP will be developed in consultation with DIT, Regional Council of Goyder and the Northern Areas Council to manage potential traffic and access impacts during construction. The TMP will take potential cumulative impacts of other large scale construction projects in the region into account, including (but not limited to) the nearby Goyder North Renewable Energy Facility, where construction timing for other projects is likely to overlap with the proposed scheduling for the Project. All site access points will be design in accordance with the relevant requirements of the Austroads <i>Guide to Road Design - Part 4A: Unsignalised and Signalised intersections</i> and <i>Australian Standards Parking Facilities Part 1</i> and <i>Part 2 (AS2890.1:2004 and AS2890.2:2018)</i>, and will be constructed to accommodate the largest design vehicles expected to enter and exit the site.					Moderate certainty that control measures will be effective. Expected traffic volumes and traffic schedule is estimated based on projects of a similar scale and nature. Significant changes to the expected traffic volumes or vehicle type may require additional control measures.	

Further investigation will be undertaken to determine appropriate upgrades and/or traffic management required to safely support the use of the Wilkins Highway / Canowie Road intersection by construction vehicles. Any infrastructure within the road reserve that is demolished, altered, removed or damaged during the construction of the Project will be reinstated by the Applicant (or its contractors) in consultation with the relevant asset owner and may require execution of an Infrastructure Agreement or Deed.		
Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – given the location of the Project Area and scale of the Project, high levels of traffic as well as the use of oversized vehicles will be required to utilise the surrounding road network.	Expected impact is Moderate .
Frequency	Moderate – impacts are expected to occur during construction.	
Duration	Short term – impacts will be short terms and temporary.	
Extent	Widespread – impacts may occur along the extent of the construction route road network (i.e. Port Adelaide to Belalie East) but it is expected that impacts would be concentrated within the local road network surrounding the Project Area.	
Severity	Moderate – with implementation of control measures, impacts are expected to be present but manageable such that they don't impact the safety of function of the road network.	
Cumulative	Possible – it is possible that other construction projects could occur in the area in parallel to construction/decommissioning of the Project, that may lead to cumulative traffic impacts.	
Sensitivity	Moderate – surrounding land uses, particularly agricultural activities, may be more susceptible to traffic impacts at different times of the year (e.g. harvesting).	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable disturbance to the surrounding road network as a result of traffic impacts.	No vehicle collision incidents involving vehicles entering or exiting the site. No complaints from surrounding neighbours, road users or Councils regarding road safety and/or unreasonable traffic impacts. In the event complaints are raised, all reasonable measures will be made to resolve the complaint in a timely manner. Project traffic movements do not overload local traffic network during construction and do not result in unreasonable traffic delays.	Complaints management and investigation procedures for traffic impacts during construction will be documented in the CEMP. A TMP will be developed in consultation with DIT, the Regional Council of Goyder, the Northern Areas council and nearby landowners, and submitted for approval by the Minister for Energy and Mining prior to the commencement of construction. The TMP will address the following matters (at a minimum): — Traffic volumes and distributions, and types of vehicles to be used in the construction phase of the development — Transport routes to be used for the construction phase of the development, particularly with regard to the transport of over-dimensional components, movement of the workforce to and from the site, and minimising the number of dwellings located adjacent to the preferred route — Transport asset upgrades/modifications and operational management requirements that may be necessitated by the Project, including: — Any road upgrades/modifications (temporary or permanent) to enable safe and efficient movement and turning of vehicles along the route — Any structural improvement requirements (e.g. bridge/culvert improvements) — Any operational management measures ensure safety for other transport users (e.g. temporary road closures/detours), including for transport of plant and equipment to/from the site

- Options for the potential usage of shuttle busses or promoting shared vehicle usage for the construction workforce
- Staging/timing of transport asset upgrades/modifications
- Review of livestock watering points adjacent to transport routes and detail of any agreements or modifications required to prevent access impacts for livestock.

The TMP will be adhered to for all Project-related vehicle movements during construction.

Required road upgrades, intersection widening and/or improvements of the Wilkens Highway / Canoowie Road intersection will be investigated and completed prior to the commencement of construction. Permits for works will be sought under the *Road Traffic Act 1961* or *Local Government Act 1999*, as required.

Site access points to the Project Area will be constructed to accommodate the largest design vehicles expected to enter and exit the site.

6.8 Visual amenity

This section is on the outcomes of a Landscape Character and Probable Visual Effect Assessment (LVIA) undertaken for the Project by Wax Design (Wax Design, 2026). The full LVIA is provided in Appendix H.

6.8.1 Methodology

The LVIA for the Project involved a Detailed Visual Assessment Processes developed in line with the recommendations in *Advisory Notice Planning – Draft for Consultation 21 Wind Farms* (Planning South Australia, 2002) and other relevant guidance documents. The assessment included the following:

- review the Project to define its size, scale, number of infrastructure elements, clustering and location, and consider the significance of the regional context
- review of the likely viewshed and selection of viewpoints warranting further assessment
- determining the Zone of Theoretical Visual Influence (ZTVI), being an area within which the Project is likely to be visible within the landscape. The ZTVI was defined using 10 m contour data for a 10 km radius around the Project Area and supports worst case scenario assessment as it does not incorporate the screening provided by vegetation, built form, or localised screening effects
- preparation of a Landscape Character Assessment to identify and assess the importance of landscape characteristics and the existing landscape quality
- preparation of a Visual Assessment to quantify the extent to which the Project is likely to be visible and define the degree of visual change and the associated visual impacts, including the preparation of supporting photomontages.

6.8.2 Existing environment

The landscape surrounding the Project Area is defined by agricultural land uses, the topography of the Northern Mount Lofty Ranges and the township of Whyte Yarcowie to the northwest. Visually, the Project Area is contained by ridgelines which produce a series of visual envelopes that contain the wide agricultural plain where the Project is situated. WTGs associated with the Hallett and North Brown Hill Wind Farms are visible on the higher ridgelines and introduce a distinct infrastructure character to the wider landscape setting.

The nearby township of Whyte Yarcowie is a small, isolated township located adjacent to the Barrier Highway. The township is lined by planted trees, which create a degree of visual exposure, and generally screen views from the town to the south and west; which limits the visibility of WTGs on surrounding ridgelines. The landscape beyond the boundary of township is characterised by widely spaced farmsteads and dwellings along rural roads.

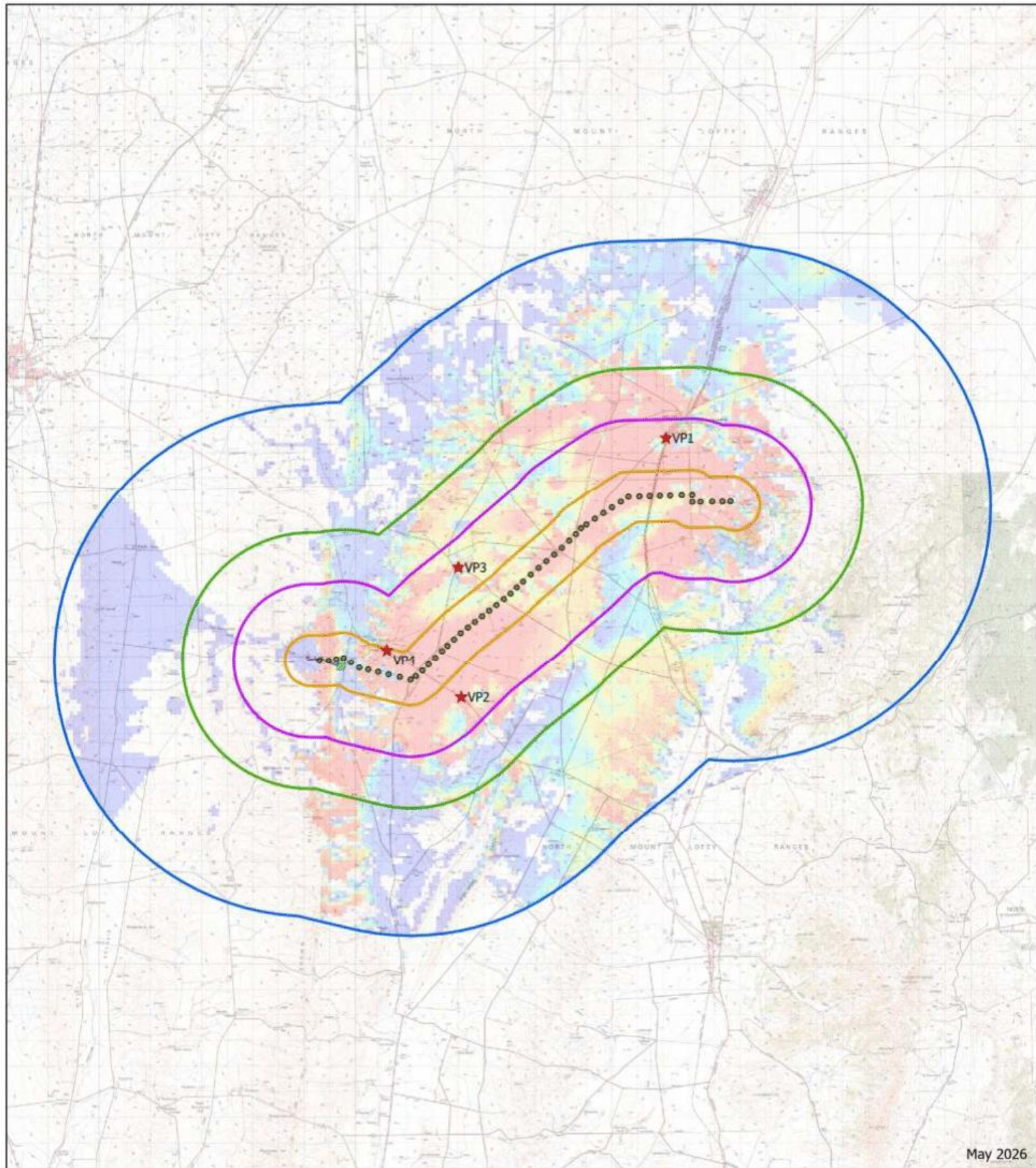
The ZTVI for the Project comprises a 10 km radius around the Project Area. Within this area, four viewpoints were selected for further assessment. These viewpoints are considered to represent the typical character of the landscape and are in locations where large portions of Project infrastructure is expected to be visible. Viewpoint identified for the purpose of the assessment are as follows:

- **Viewpoint 1 – Whyte Yarcowie, Barrier Highway (sub-regional - northeast):** located north of the Project Area. This viewpoint represents typical views from the edge of Whyte Yarcowie, along the Barrier Highway, and within the surrounding agricultural landscape. The landscape is low-lying with gentle undulations, extensively cleared for cropping and with limited belts of vegetation.
- **Viewpoint 2 – Jamestown Hallet Road (sub-regional – south):** located south of the proposed development. This viewpoint represents the low-lying agricultural landscape along the proposed OTL Corridor. The visual character is open, with expansive views northward to local ridgelines of the Brown Hill Range and other landforms associated with the North Mount Lofty Ranges.

- **Viewpoint 3 – Common Boundary Road (sub-regional – north):** located north of the proposed OTL Corridor. This viewpoint is within a rural landscape typical of the wider locality. Local undulating ridges offer elevated vantage points overlooking the lower-lying agricultural plain. The existing land cover comprises arable cropping with isolated areas of grazing on the ridges and escarpments. Farm buildings and sheds are scattered across the landscape, particularly around properties including Gap View, Rocky Glen and Restonvale, with isolated tree groups providing amenity to the rural landscape.
- **Viewpoint 4 – Old Canowie Station, Jamestown Hallet Road (sub-regional- northwest):** this viewpoint represents the landscape character to the west of the Project Area, particularly, the visual character and potential visual effect that may be experienced from Old Canowie Station and by people travelling along the main road between Jamestown and Hallett. The viewpoint is adjacent to the rural property at Old Canowie Station and is surrounded by extensive tree planting and vegetation. The landscape character is defined by the lower-lying agricultural plain between the ridgelines of the North Mount Lofty Ranges, with Brown Hill Range and Porcupine Range rising visual elements to the south and west.

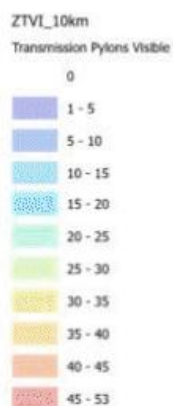
The ZTVI and location of viewpoints for the Project are shown below in Figure 6.14.

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Legend

- ★ Viewpoints Assessment
- Transmission Line Easement
- 1km buffer
- 3km buffer
- 5km buffer
- 10km buffer
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area



Whyte Yarcowie Wind Farm Transmission Line and Battery Energy Storage System

Zone of Theoretical Visual Influence

Transmission Line 275kv -Zone of Theoretical Visual Influence

ZTVI is based on 10m contour data with no vegetation or built form screening taken into consideration. Furthermore it is representative of the tip of proposed lattice towers approximately 47m in height. This is representative of worse case scenario.



A summary of environmental elements related to visual amenity is provided below in Table 6.28.

Table 6.28 Summary of environmental elements – visual amenity

Applicable legislation	Applicable standards/ guidelines	Views of affected parties	Environmental receptor
<i>Planning, Development and Infrastructure Act 2016</i> (PDI Act) Planning and Design Code (P&D Code)	<i>Advisory Notice Planning-Draft for Consultation 21 Wind Farms</i>	Interest in visual impact to sensitive receivers, including place-based sensitivity to perceived loss of landscape character.	Preservation of the landscape character of the local area.

6.8.3 Potential impacts

During the construction of the Project, temporary changes to visual amenity will occur. Construction works within the Project Area are not anticipated to significantly affect visual amenity. Any changes will be due mainly, but not limited to, the presence of construction equipment, earthworks activities, and an overall increase in the number of people and large vehicles at the site and at roadside locations. The changing visual environment and activity during construction will be temporary and as the number of individuals impacted will likely be low, impacts have not been assessed further.

The LVIA recommended that generally, visual impacts of the Project would be most prominent within the 5 km radius around the Project Area; after which impacts would significantly reduce and eventually become negligible beyond 10 km. It was recommended that the introduction of the OTL within the landscape is likely to be perceived as a series of vertical infrastructure set against the backdrop of the surrounding ranges. While the OTL towers could be visually prominent in the landscape, their spacing and design mean the visual effect is spread across the locality. At the same time, the existing rural landscape character is not likely to be replaced by the Project. The Project and the surrounding locality are likely to be perceived as part of the wider renewable energy infrastructure pattern across the mid-north region.

Photomontages showing an impression of the proposed OHL within the landscape from the four viewpoints are provided in below in Figure 6.15, Figure 6.16, Figure 6.17, and Figure 6.18.



Figure 6.15 View of the Project from Viewpoint 1: Whyte Yarcowie, Barrier Highway, showing transmission line lattice towers (Wax Design, 2026)



Figure 6.16 View of the Project from Viewpoint 2: Jamestown Hallet Road, showing transmission line lattice towers (Wax Design, 2026)



Figure 6.17 View of the Project from Viewpoint 3: Common Boundary Road, showing OTL lattice towers (Wax Design, 2026)



Figure 6.18 View of the Project from Viewpoint 4: Old Canowie Station, Jamestown Hallet Road, showing OTL lattice towers (Wax Design, 2026)

Potential visual impacts from the BESS are expected to be confined by the surrounding topography, with surrounding vegetation and ridgelines creating a defined envelope and obscure visibility. It is anticipated that the BESS would be viewed within the context of the existing infrastructure associated with the nearby North Brown Hill (Hallet) wind farm, which form prominent visual elements in the locality. Visual impacts of the BESS are expected to present only a small proportional increase in potential visual impacts.

It was assessed that impacts from the Project (predominantly the OTL) are likely to be most impactful along Mitchells Road, where the landscape character is visually open and sparsely vegetated. From this locality, it is anticipated that the OTL would have a moderate visual impact, which would reduce with distance due to screening and the presence of other renewable energy infrastructure reinforcing the locality's energy production and modified context.

6.8.3.1 Impact events

The impact event relevant to visual amenity is:

- **VA1:** Decrease in visual amenity to local residents and tourists.

6.8.4 *Environmental impact and significance assessment*

An environmental impact and significance assessment for the identified impact event for visual amenity is provided in Table 6.29.

The impact assessment detailed in the following table indicates that expected impacts were in the **Moderate** category. The magnitude of the impact event has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

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Table 6.29 Environmental impact and significance assessment – VA1: Decrease in visual amenity to local residents and tourists

Visual amenity: Impact ID VA1						
Impact event	Decrease in visual amenity to local residents and tourists.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Installation of the OTL and BESS	Visual exposure to Project infrastructure.	Local residents and tourists	Yes – based on visual exposure of the Project from the surrounding locality, the Project will alter visual amenity.	Operation	Subjectivity and variation will exist in how individuals perceive the amenity of various locations and landscape features. LVIA (Wax Design, 2026) is based on early preliminary design, however consider a worst-case scenario.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Ongoing consultation with relevant stakeholders to manage community expectations regarding visual impacts. Major Project components will be finished in low reflectivity treatment, and where possible, will be finished in neutral colours that blend with the surrounding landscape.					Moderate certainty that control measures will be effective. Control measures are based on standard industry practices.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – given the extent of the Project area, infrastructure will be visible within the landscape.		Expected impact is Moderate .
Frequency	High – impacts are expected to occur for the duration of the Project.	Overall magnitude is Moderate .	
Duration	Long lasting – impacts will persist for the duration of the Project but will be reversible upon decommissioning.		
Extent	Widespread – impacts will occur within an approximate 5 km radius around the Project Area.		
Severity	Moderate – impacts will be present, but are not expected to be significant.		
Cumulative	Yes – the Project will be viewed in cumulation with other renewable energy projects in the region.		
Sensitivity	Moderate – the Project locality has already been subjected to modification from existing renewable energy projects.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable disturbance to stakeholders.	No complaints regarding unreasonable visual impacts. In the event complaints are raised, all reasonable measures will be taken to resolve the complaint in a timely manner.	The CEMP, OMP and DRMP will include procedures for the management and recording of any complaints.

6.9 Aviation

The following section discusses the outcomes of an Aeronautical Impact Assessment (AIA) undertaken for the Project by Chiron Aviation Consultants (2024). The full AIA is provided in Appendix I.

6.9.1 Methodology

The AIA was undertaken to identify the potential impacts of the Project on aviation activity in the vicinity of the Project Area. The AIA was primarily undertaken to assess potential impacts from tall obstacles proposed under the wider Whyte Yarcowie Wind Farm (e.g. WTGs and meteorological monitoring masts) however also included consideration of potential impacts from the OTL.

The AIA included:

- preparation of an Aviation Impact Statement as per the requirements of Airservices Australia, comprising of:
 - determining the parameters for aviation operations vicinity of the Project Area through:
 - identification of all certified and military/joint aerodromes located within 30 nautical miles (55.6 km) of the Project Area
 - identification of any associated Instrument Departure and Approach Procedures (DAP)
 - identification of the extent of the Obstacle Limitation Surfaces (OLS) and Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces for the identified DAP
 - review of published air routes located over or near the Project Area
 - identification of the classification of the airspace surrounding the Project Area
 - identifying and analysis of aviation Communications, Navigation and Surveillance facilities that may be impacted by the Project
 - compiling a report for review and comment by Airservices Australia and the Department of Defence
- undertaking a Qualitative Risk Assessment to analyse aviation risks and the probability of occurrence in accordance with the QRA is ASNZS ISO 31000-2018 *Risk Management – Guidelines*, which included:
 - review of Australian Aeronautical Information Publication and CASA documentation to identify relevant physical and operational issues
 - review of topographical maps to assess local terrain and identify local airstrips and other relevant features
 - identification and consultation with relevant stakeholders
 - consideration of potential impacts in relation to aviation activities including training, recreation, low flying activities, highly trafficked Visual Flight Rules (VFR) routes and emergency services
 - consideration of the potential influence of topography and poor weather
 - consideration of the National Airports Safeguarding Framework *Guideline D Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers* in relation to the qualitative findings.

6.9.2 Existing environment

There are no certified aerodromes within 30 nm (56 km) of the Project Area. Four uncertified aerodromes were identified within 30 nm (56 km) of the Project Area; Peterborough (YPTB), Jamestown (YJST), Clare Valley (YCVV), and Orroroo (YORR). Given the location and use of the four identified uncertified aerodromes, all were considered to be a sufficient distance from the Project such that there will be no impact on their operation.

Two air routes were identified to pass overhead to the Project Area; J21 and H246. The Lowest Safe Altitude (LSALT) for these air routes is 4500 feet (ft) and 5100 ft). The Project does not propose the construction of any ‘tall structures’ as defined by the *Advisory Circular AC 139.E-01 V1.0 – Reporting of tall obstacles* and will not impact these air routes.

A private Aeroplane Landing Area (air strip) was identified in proximity to the OTL Corridor, near the intersection of Booborowie and Mitchells Road. The AIA identified that introduction of the OTL could impact the safety of this air strip.

Aerial firefighting and aerial agricultural applications operators may operate in proximity to the OTL. These aircraft are generally flown by appropriately rates pilots and in accordance with the Visual Flight Rules; whereby the pilot is required to maintain forward visibility with the ground.

Chiron Aviation Consultants (2024) undertook consultation with Airservices Australia and the Department of Defence to seek feedback on potential impacts of the Project (including the wider Whyte Yarcowie Wind Farm) on their operations. Both organisations confirmed that the Project is not expected to impact any of their operations.

Table 6.30 summarises legislation and non-legislated standards, views of affected parties and lists the key environmental receptors relevant to aviation.

Table 6.30 Summary of environmental elements – aviation

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>Civil Aviation Act 1988</i> <i>Civil Aviation Safety Regulations</i>	<i>ASNZS ISO 31000-2018 Risk Management –Guidelines</i>	None	Aviation safety Built and natural assets potentially impacted by bushfire

6.9.3 Potential impacts

The Project does not propose any tall structures that constitute a ‘tall structure’ requiring reporting under *Advisory Circular AC 139.E-01 V1.0 – Reporting of tall obstacles* (Civil Aviation Safety Authority, 2021), i.e. the Project does not propose the construction of any structures with a height of 100 m or more.

Furthermore, under normal operating conditions, the BESS will not produce any plumes that would post a risk to aviation safety.

The AIA identified that the private aeroplane landing area (air strip) on land adjoining the OTL Corridor may be impacted by the OTL. Wind Prospect are currently in negotiation with the owners of this air strip decommissioned to minimise risks to aviation safety, in accordance with the recommendation of the AIA (Chiron Aviation Consultants, 2024).

Consultation will be undertaken with the CFS and surrounding landowners regarding the OTL, to manage potential risks to aerial firefighting and aerial agricultural applications operators in the area.

6.9.3.1 Impact events

The impact event relevant to aviation is:

- **AV1:** Interference with aviation operations due to presence of the OTL.

6.9.4 Environmental impact and significance assessment

Table 6.31 details the impact and significance assessment for the identified impact event for aviation.

The impact assessment detailed in the following table indicates that expected impact is in the **Moderate** category. The magnitude of the impact event has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.31 Environmental impact and significance assessment – AV1: Interference with aviation operations due to presence of the OTL

Aviation: Impact ID AV1						
Impact event	Interference with aviation operations due to presence of the OTL.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Height and location of OTL towers/poles and lines.	Physical obstruction by OTL towers/poles and lines.	Aviation operations	Yes – aviation operations are confirmed to operate in vicinity of the Project Area (Chiron Aviation Consultants, 2024)	Construction Operation Decommissioning	No uncertainties or assumptions.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Prior to the commencement of construction, the Private Landing Area (air strip) identified on land adjoining the OTL Corridor will be decommissioned to minimise risks to aviation safety, in accordance with the recommendations of the AIA (Chiron Aviation Consultants, 2024). Ongoing consultation will be undertaken with the CFS and surrounding landowners regarding the OTL, to manage potential risks to aerial firefighting and aerial agricultural applications operators in the area.					Primary control measure depends on agreement and cooperation from the relevant air strip owner.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – AIA has identified that the Project design will not impact Aerodromes or Air Routes and poses a low risk to aviation operations. Risks to light aircrafts are low, though not non-existent.		Expected impact is Moderate .
Frequency	Rare – with implementation of control measures, the frequency of impacts is expected to be rate.	Overall magnitude is Moderate .	
Duration	Long term – in the event of aviation impacts occurring, this could be permanent and non-reversible.		
Extent	Localised – impacts would be confirmed to the Project Area.		
Severity	High – in the event of impacts occurring, severity could be high.		
Cumulative	Unlikely – cumulative impacts are unlikely, given the nature of impacts and the surrounding landscape.		
Sensitivity	Moderate – aerial firefighting and aerial agricultural applications operators may operate in the area, although infrequently.		
SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	Maintain aviation safety.	No incidents involving impacts to aircraft.	Prior to the commencement of construction, the Private Landing Area (air strip) identified on land adjoining the OTL Corridor will decommissioned. The CEMP will include procedures for ongoing consultation with the CFS and surrounding landowners regarding the status of the OTL construction.

6.10 Air quality

6.10.1 Methodology

An air quality assessment was undertaken for the Project, which considered the potential dust-related air quality impacts from the construction, operation and decommissioning of the Project. The potential air impacts were assessed using a risk-based qualitative approach.

6.10.2 Existing environment

The background air quality in the Project Area and surrounds is typical of rural Australia.

Table 6.32 summarises legislation and non-legislated standards, views of affected parties and lists the key environmental receptors relevant to air quality.

Table 6.32 Summary of environmental elements – air quality

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>Environment Protection Act 1993 (EP Act)</i> <i>Environment Protection (Air Quality) Policy 2016</i> <i>Climate Change and Greenhouse Gas Emissions Reduction Act 2007</i> <i>National Greenhouse and Energy Reporting Act 2007</i> <i>Local Nuisance and Litter Control Act 2016</i>	<i>National Environment Protection (Ambient Air Quality) Measure 2021</i>	Concern about potential dust impacts generated by increased traffic on unsealed road, as well as options for dust management.	Local community Visitors Fauna Vegetation Stock

6.10.3 Potential impacts

The main air quality impacts during construction of the Project would be associated with airborne particulate matter (PM) of varying size fractions (deposited dust, Total Suspended Particulates [TSP] PM₁₀ and PM_{2.5}):

- site preparation works; including fencing, preliminary civil works and drainage, access road and internal track construction, construction of site offices and facilities
- installation of footings and infrastructure
- removal of temporary construction facilities and rehabilitation of disturbed areas.

Equipment required for construction would include earth moving equipment, trucks and cranes. Materials required will include gravel, concrete and infrastructure components.

Dust may be generated by concrete batching works.

Odour emissions for some of the activities e.g. excavation works of potentially contaminated soil, may also occur although it is anticipated that any such occurrence would be localised and not impact sensitive receptors off-site.

Emissions (CO, NO_x, SO₂, particulate matter fractions [PM₁₀ and PM_{2.5}], volatile organic compounds (VOCs) and semi-volatile organic compounds [SVOCs including PAHs]) from heavy commercial vehicles (HCVs) and mobile plant and machinery would occur from the combustion of diesel and petrol fuel.

Impacts from the operation of mobile plant and machinery would depend on the number and power outputs of the combustion engines, the quality of the fuel and engine maintenance. Notwithstanding, these sources are considered to be minor given their intermittent nature, duration, geographical extent over which these emissions occur and the low number of sensitive receptors that may be directly impacted.

Given the nature of the Project, ongoing operational air quality impacts are not expected, and would be limited mostly to airborne dust due to vehicle movement on unsealed access tracks.

At the end of the Project lifespan, the Project will be decommissioned. The main air emission sources during decommissioning are likely to be during:

- removal of all infrastructure from the site
- remediation of the land to its original condition.

Low levels of particulate matter of varying size fractions and vehicular emissions may be generated during these works and are not expected to impact on the receiving environment.

6.10.3.1 Impact events

The impact event relevant to air quality is:

- **AQ1:** Dust generated during construction activities results in a deterioration of air quality at sensitive receptors.

Impact events relating potential impacts from dust deposition on vegetation are discussed in Section 6.1.

6.10.4 *Environmental impact and significance assessment*

Table 6.33 details the environmental impact and significance assessment for the identified impact event for air quality.

The impact assessment detailed in the following table indicates that expected impact is in the **Low** category. The magnitude of the impact event has the potential to be **Low** and with proposed control measures it is assessed as ALARP.

Table 6.33 Environmental impact and significance assessment – AQ1: Decrease in air quality at sensitive receivers due to dust emissions

Air quality: Impact ID AQ1						
Impact event	Decrease in air quality at sensitive receivers due to dust emissions.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Civil earthworks and concrete batching.	Disturbed particle matter (such as soils or sand) dispersing in atmosphere.	Local residents Native vegetation Fauna	Yes – earthworks and will be required to support construction and decommissioning. Concrete batching may be required during construction.	Construction Decommissioning	Construction staging and methodology is unknown. Assessment is based on standard practices.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
A DMP will be developed and implemented. Water sprays and wind breaks will be used, as required, to suppress dust generated by construction related activities. All disturbed areas will be stabilised as soon as is practical. Speed limits will be enforced on unsealed roads and access tracks. Vehicles transporting spoil or material to/from the Project Area will be covered immediately after loading.					High certainty the control measures will be effective, as they are based on standard industry practices.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – soil disturbance will be required to support construction.		Expected impact is Low .
Frequency	Low – dust impacts would mostly occur during earthworks during construction but can be managed through ongoing and standard dust suppression methods.	Overall magnitude is Low .	
Duration	Short – dust impacts will be temporary during construction. Any disturbed surfaces will be reseeded to prevent ongoing impacts.		
Extent	Confined – dust impacts will be confined to the disturbance and surrounds.		
Severity	Low – dust impacts would be short term and temporary. Appropriate monitoring, dust impacts can be quickly suppressed.		
Cumulative	Unlikely – given the surrounding land use, it is unlikely that significant earthworks would be undertaken in the immediate vicinity at the time of construction that would lead to cumulative dust impacts.		
Sensitivity	Moderate – sensitive receivers are known to existing in close proximity to the Project Area.		
SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable air quality impacts.	No complaints regarding unreasonable air quality impacts. In the event complaints are raised, all reasonable measures will be taken to resolve the complaint in a timely manner.	Construction and decommissioning activities will be undertaken to minimise dust generation. To maintain compliance with the EP Act, dust management will be undertaken throughout construction and decommissioning. The DMP will be developed prior to the commencement of construction. No exceedance of air quality parameters during the construction period. Site inspections of dust emissions will be undertaken regularly. Additional controls will be applied as required.

6.11 BESS hazards

A High-level BESS Hazard Assessment (BHA) was undertaken for the Project (WSP Australia Pty Ltd, 2026). The BHA outlines potential design and operational risks of the Project and recommends mitigation measures to be considered during the Project's detailed design. The full BHA is provided in Appendix K.

6.11.1 Methodology

The BHA was undertaken specifically to identify potential BESS specific hazards. The assessment outlines potential design and operational risks of the BESS and provides recommendations for risk mitigation.

The assessment was based on a preliminary layout of the BESS, that will be subject to change during the detailed design stage of the Project.

In the absence of specific information, the BHA assumed the following for the purpose of this assessment:

- The BESS will have a maximum 270 MW, 8-hour duration.
- The Battery Chemistry will be the current industry typical - LiFePO₄ (Lithium Iron Phosphate).
- The basic AC energy Power Conversion System (PCS) consists of:
 - a MV RMU, 2 isolation switches and an MV CB and protection relay
 - a single two winding transformer, MV/LV, configuration
 - a four quadrant inverter
 - the BESS will connect to a single 320 MVA transformer, via a MV reticulation system
 - the MV reticulation system will be based on radial feeders with a maximum of 25 MVA load per feeder
 - the BESS POC will be at the Belalie Substation after the ~1 km of OHL or underground cable.
- Fire fighting
 - the BESS battery container will not be fitted with active firefighting systems
 - the BESS fire strategy will be to let a container burn until it self-extinguishes
 - the BESS will be designed to possibly limit the fire spread
 - firefighting water storage is provided on site to support the prevention of fire spread as per CFS requirements.
- WSP assume BESS functionality is limited to provide:
 - FFR
 - energy arbitrage
 - System Strength Services.

6.11.2 Existing environment

The Project Area is located within a rural environment. There are currently no existing BESS in close proximity to the Project Area, however there are a number of high voltage transmission lines nearby, as well as wind farm infrastructure in the wider locality.

Table 6.34 summarises legislation and non-legislated standards, views of affected parties and lists the key environmental receptors relevant to BESS hazards.

Table 6.34 Summary of environmental elements – BESS hazards

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>National Construction Code</i> <i>AS 4428.17 Fire detection, warning, control and intercom systems - Control and indicating equipment</i> <i>AS/NZS 3000 Electrical Installations – Wiring Rules</i> <i>AS/ NZS 5139 Electrical installations – Safety of battery systems for use with power conversion equipment</i>	<i>UL9540A Test Method for Battery Energy Storage Systems</i> <i>UL1973 Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications</i> Australasian Fire and Emergency Services Authorities Council Large-scale battery energy storage system installations (Publication No. 3105) SA Ministerial Building Standard MBS 002 “Maintaining the performance of essential safety provisions” South Australian Fire Authorities Built Environment Section Policy No. 14: Above Ground Water Storage Tanks for Fire Fighting Purposes	None	Protection of infrastructure and buildings, vegetation and people both on site and on neighbouring properties from fire risk.

6.11.3 Potential impacts

Key BESS specific risks identified in the PHA are thermal runaway and fire propagation.

At this stage of the Project, it is anticipated that the design will utilise LiFePO₄ chemistry, which are industry standard and present a medium fire risk. Testing demonstrates that these cells will flame and discharge gas when set to thermal runaway. When mitigated by suitable battery module design and fire containment systems, the residual risk of BESS fire is reduced to low level.

The design should incorporate suitable battery module design and fire containment systems to mitigate thermal runaway risks e.g. cell thermal barriers, rack segregation, gas detection, and explosion venting.

Should an alternative chemistry be utilised for the final design, this should be subject to additional evaluation of runaway fire risk.

The design will incorporate a battery management system (BMS), which calculates the state of charge for the overall system, to regulate plant output. The BMS will be critical in the management of thermal runaway and the long-term safe operation of the plant. Once the BMS has been identified, the system will be subject to evaluation of the architecture and functionality, to ensure it provides the safety features discussed above as well as a level of reliability acceptable to the Project.

Current industry practice is to provide a hydrant system feed from an onsite pumping station and site water storage. The hydrant system is provided to ensure fire responders can provide water to all areas of the yard for the purpose of preventing fire spread.

The separation distances used in the preliminary layout were deemed to be typical of industry practise, although these should be compared to the UL9540A test results which will establish the minimum clearance required to prevent fire propagation between BESS containers.

The BESS will also incorporate lightning protection to mitigate the risk of lightning striking the BESS modules and generating fires.

In the event of a BESS fire, there is risk of emissions due to smoke and harmful gasses decreasing air quality at nearby sensitive receivers.

6.11.3.1 Impact events

The impact event relevant to BESS hazards is:

- **BF1:** Thermal runaway, electrical hazards or lightning causing BESS fires.
- **BF2:** Decrease in air quality at sensitive receivers due to smoke and harmful gasses resulting from BESS fires.

6.11.4 *Environmental impact and significance assessment*

An environmental impact and significance assessments for the identified impact events for BESS hazards are provided in Table 6.35 and Table 6.36.

The environmental impact and significance assessments detailed in the following tables indicates that expected impacts were generally in the **Moderate** category. The magnitude of the impact events has the potential to be **Moderate** but with proposed control measures are assessed as ALARP.

Table 6.35 Environmental impact and significance assessment – BF1: Thermal runaway, electrical hazards or lightning causing BESS fires

BESS hazards: Impact ID BF1						
Impact event	Thermal runaway, electrical hazards or lightning causing BESS fires.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	BESS Thermal Runaway or electrical hazards causing bushfire. Lightning strikes.	Spread of fire originating from faults and malfunctions in electrical equipment or lightning strikes within the Project Area.	Neighbours Site personal Emergency responders Infrastructure and buildings Vegetation	Yes – the BESS will have a risk of fire and thermal runaway (although low).	Operation	BESS model is still under consideration. Alternative BESS chemistries may have different risk profiles. External factors such as weather, vegetation restoration and regeneration, road network condition and land use may alter fire risk.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Design considerations recommended in the BHA (WSP Australia Pty Limited, 2026) will be considered in the detailed design of the BESS, including further assessment of thermal runaway risks in the event that an alternative BESS chemistry is selected. The BESS design will incorporate a BMS to regulate plant output. The BMS will be subject to evaluation of the architecture and functionality, to ensure it provides the safety features discussed above as well as a level of reliability acceptable to the Project. BESS modules will be certified to <i>UL1973</i> (or equivalent) and BESS units tested to <i>UL9540A</i> system level tests, allowing for the use of <i>UL9540A</i> test data from similar BESS modules, where any deviations in equipment are minor and do not impact thermal runaway characteristics. Fire detection systems will be installed in BESS yards and maintained in accordance with the manufacturer's specifications and <i>Ministerial Building Standard MBS 002 'Maintaining the performance of essential safety provisions'</i>.					The BESS model is still under consideration. Alternative BESS chemistries may have different risk profiles and required additional/alternative control measures.	

The Bushfire Management Plan will be developed in consideration of the AS 3745:2010 and AFAC Publication No. 2053, and to the satisfaction of the CFS before the commencement of operation. The Plan will provide clear direction on the maintenance of the various controls required to manage the fire risk.

Site equipment will be installed and maintained to the manufacturer's specifications and relevant Australian standards.

A fire safety study will be undertaken to determine the required safety clearances, radiant heat flux withstand requirement, and firefighting methodologies during detailed design.

A site induction will be provided and will outline fire related risks and providing an overview of the Emergency Management Plan and Bushfire Management Plan to new staff, visitors and contractors.

VMZs will be established around the BESS units, substation equipment, inverter stations and operations and maintenance buildings. VMZs will be maintained with a minimum buffer of 20 m between structures and existing remnant vegetation and property boundaries.

Access to the Project Area for emergency service responders will be maintained throughout operation. This may be via installation of a Manifest Box at the main entrance of the site; being a red design with white writing 'Fire Protection system' or similar, designed to be visible to emergency response personnel on approach to the site. The Manifest Box would include the following information (at a minimum): a list of emergency contact phone numbers and a site plan highlighting vehicle access, turning ability, buildings and infrastructure locations, fire water i.e., fill locations, all fire protection equipment, and any on-site hazards or storage of dangerous materials i.e., LPG, fuels or chemicals.

Access to the Manifest Box, if locked, would be readily accessible using a Lockwood 003-type padlock, in accordance with *AS 4428.17 Fire detection, warning, control and intercom systems - Control and indicating equipment*. Alternative site access arrangements may be implemented in agreement with the CFS.

Lightning protection will be installed to reduce fire risks associated with lightning strikes. Lightning protection will be designed in accordance with *AS 1768:2021 Lightning protection* and *IEC 62305 Protection Against Lightning*.

Static water supply systems will be provided within the BESS Area and will be suitably located and marked to support efficient firefighting access. The tank(s) will provide 72,000 litres capacity, unless otherwise agreed with the CFS.

Infrastructure will be serviced by a network of internal access tracks designed in consideration of the CFS requirements, which will be constructed of an all-weather surface and will allow movement of emergency service vehicles in a forward direction around the site. The access track network will be maintained to facilitate safe access for emergency service vehicles and site evacuation, in particular facilitating access and working clearance for large emergency service vehicles.

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – the BESS will have a risk of fire and thermal runaway (although low).	Expected impact is Moderate .
Frequency	Rare – with implementation of appropriate design and control measures, the frequency of impact events is expected to be rare.	
Duration	Long lasting – impacts would persist for the duration of the Project.	
Extent	Widespread – impacts could spread to a regional scale.	
Severity	Moderate – instance of occurrence could lead to death, severe injury or significant damage to infrastructure; however with implementation of appropriate design and control measures, the severity is expected to be reduced.	
Cumulative	Low – given the relatively low development in the surrounding area, risk of cumulative impact is low.	
Sensitivity	Moderate – the Project is located within the Mid-North Region, which has a elevated risk of fires. Based on consultation undertaken on the wider Whyte Yarcowie Wind Farm project, it is known that there is a general concern regarding bushfire risks within the surrounding communities.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No uncontrolled fires as a result of authorised operations.	No bushfire generation from on-site activities. The Fire Management Plan will be developed in accordance with the Country Fire Authority <i>Design Guidelines and Model Requirements – Renewable Energy Facilities 2023</i> (CFA Guidelines) and to the satisfaction of CFS before the commencement of operation	A record is to be kept of consultation with the CFS regarding the development of the Fire Management Plan, prior to the commencement of operation. The Fire Management Plan will provide clear direction on the maintenance of the various controls required to manage the fire risk. Site equipment will be operated and maintained in accordance with manufacturer's specification. All equipment inspections and maintenance will be recorded in accordance with the OMP. Records will include any corrective actions (where required). Fire detection systems and BMS installed in the BESS Area are to be inspected regularly in accordance with the OMP. A record is to be kept detailing inspections and any corrective actions (where required). VMZs will be maintained throughout operation of the Project. Regular inspections will be undertaken. All plant and heavy equipment are to carry at least a 9-litre water stored-pressure fire extinguisher with a minimum rating of 3A, or firefighting equipment as a minimum when on-site during the Fire Danger Period.

Table 6.36 Environmental impact and significance assessment – BF2: Decrease in air quality at sensitive receivers due to smoke and harmful gasses resulting from BESS fires.

BESS hazards: Impact ID BF2						
Impact event	Decrease in air quality at sensitive receivers due to smoke and harmful gasses resulting from BESS fires.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Fire in BESS modules from various sources, including Thermal Runaway, bushfires and lightning strikes.	Smoke and harmful gasses originating from the BESS modules dispersing in atmosphere.	Neighbours Site personal Emergency responders Fauna	Yes – the BESS will have a risk of fire and thermal runaway (although low), as well as bushfire.	Construction Operation Decommissioning	BESS model is still under consideration. Alternative BESS chemistries may have different risk profiles. External factors such as weather, vegetation restoration and regeneration, road network condition and land use may alter fire risk.

Control measures	Uncertainties regarding likely effectiveness of control strategies
Fire detection systems will be installed in BESS yards and maintained in accordance with the manufacturer's specifications and <i>Ministerial Building Standard MBS 002 'Maintaining the performance of essential safety provisions'</i>. The Bushfire Management Plan will be developed in consideration of the AS 3745:2010 and AFAC Publication No. 2053, and to the satisfaction of the CFS before the commencement of operation. The Plan will provide clear direction on the maintenance of the various controls required to manage the fire risk. Air quality control measures to manage risks associated with the release of smoke and harmful gasses in the event of BESS fires will be documented in the Emergency Management Plan. A site induction will be provided and will outline fire related risks and providing an overview of the Emergency Management Plan and Bushfire Management Plan to new staff, visitors and contractors. VMZs will be established around the BESS units, substation equipment, inverter stations and operations and maintenance buildings. VMZs will be maintained with a minimum buffer of 20 m between structures and existing remnant vegetation and property boundaries. Access to the Project Area for emergency service responders will be maintained throughout operation. This may be via installation of a Manifest Box at the main entrance of the site; being a red design with white writing 'Fire Protection system' or similar, designed to be visible to emergency response personnel on approach to the site. The Manifest Box would include the following information (at a minimum): a list of emergency contact phone numbers and a site plan highlighting vehicle access, turning ability, buildings and infrastructure locations, fire water i.e., fill locations, all fire protection equipment, and any on-site hazards or storage of dangerous materials i.e., LPG, fuels or chemicals. Access to the Manifest Box, if locked, would be readily accessible using a Lockwood 003-type padlock, in accordance with <i>AS 4428.17 Fire detection, warning, control and intercom systems - Control and indicating equipment</i>. Alternative site access arrangements may be implemented in agreement with the CFS. Lightning protection will be installed to reduce fire risks associated with lightning strikes. Lightning protection will be designed in accordance with <i>AS 1768:2021 Lightning protection</i> and <i>IEC 62305 Protection Against Lightning</i>. Static water supply systems will be provided within the BESS Area and will be suitably located and marked to support efficient firefighting access. The tank(s) will provide 72,000 litres capacity, unless otherwise agreed with the CFS. Infrastructure will be serviced by a network of internal access tracks designed in consideration of the CFS requirements, which will be constructed of an all-weather surface and will allow movement of emergency service vehicles in a forward direction around the site. The access track network will be maintained to facilitate safe access for emergency service vehicles and site evacuation, in particular facilitating access and working clearance for large emergency service vehicles.	The BESS model is still under consideration. Alternative BESS chemistries may have different risk profiles and required additional/alternative control measures.

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – the BESS will have a risk of fire and thermal runaway (although low) and bushfire.	Expected impact is Moderate .
Frequency	Rare – with implementation of appropriate design and control measures, the frequency of impact events is expected to be rare.	
Duration	Short term – impacts would persist for a short term only.	
Extent	Moderate – impacts may extend to receptors outside of the Project Area; but are unlikely to occur on a widespread, regional scale.	
Severity	Moderate – instance of occurrence could lead to death, severe injury or significant damage to infrastructure; however with implementation of appropriate design and control measures, the severity is expected to be reduced.	
Cumulative	Low – given the relatively low development in the surrounding area, risk of cumulative impact is low.	
Sensitivity	Moderate – the Project is located within the Mid-North Region, which has a elevated risk of fires. Based on consultation undertaken on the wider Whyte Yarcowie Wind Farm project, it is known that there is a general concern regarding bushfire risks within the surrounding communities.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No uncontrolled fires as a result of authorised operations.	No bushfire generation from on-site activities. The Fire Management Plan will be developed in accordance with the Country Fire Authority <i>Design Guidelines and Model Requirements – Renewable Energy Facilities 2023</i> (CFA Guidelines) and to the satisfaction of CFS before the commencement of operation	A record is to be kept of consultation with the CFS regarding the development of the Fire Management Plan, prior to the commencement of operation. The Fire Management Plan will provide clear direction on the maintenance of the various controls required to manage the fire risk. Site equipment will be operated and maintained in accordance with manufacturer's specification. All equipment inspections and maintenance will be recorded in accordance with the OMP. Records will include any corrective actions (where required). Fire detection systems and BMS installed in the BESS Area are to be inspected regularly in accordance with the OMP. A record is to be kept detailing inspections and any corrective actions (where required). VMZs will be maintained throughout operation of the Project. Regular inspections will be undertaken. All plant and heavy equipment are to carry at least a 9-litre water stored-pressure fire extinguisher with a minimum rating of 3A, or firefighting equipment as a minimum when on-site during the Fire Danger Period.

6.12 Public health and safety

6.12.1 Methodology

A review public health and safety risks was undertaken for the Project, which considered the potential for impacts resulting from site contamination, bushfire, noise, traffic, aviation and air quality risks to the public and third parties. The potential public health and safety risks during the construction, operation and decommissioning of the Project were assessed using a risk-based qualitative approach.

6.12.2 Existing environment

The Project Area is located within a rural environment, that is not currently influenced by similar renewable energy/industrial activities.

A summary of environmental elements related to roads and traffic is provided below in Table 6.37.

Table 6.37 Summary of environmental elements – public health and safety

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>Work Health and Safety Act 2012</i> <i>National Construction Code</i> <i>Civil Aviation Act 1988</i> <i>Civil Aviation Safety Regulations</i> <i>CASA Advisory Circular 139.E-01 v1.0 Reporting of Tall Structures</i> <i>Dangerous Substances Act 1979</i> <i>Environment Protection Act 1993 (EP Act)</i> <i>Local Nuisance and Litter Control Act 2016</i> <i>Environment Protection (Air Quality Policy) 2016</i> <i>Environment Protection (Commercial & Industrial Noise) Policy 2023 (Noise Policy)</i> <i>Environment Protection (Water Quality Policy) 2015</i> <i>Electricity Act 1996</i> <i>Fire and Emergency Services Act 2005</i>	<i>ASNZS ISO 31000-2018 Risk Management –Guidelines</i> <i>EPA Evaluation distances for effective air quality and noise management</i> <i>Guide to Road Design – Part 4A: Unsignalised and Signalised intersections</i> <i>Hazardous Industry Planning Advisory Paper 2: Fire Safety Study Guidelines</i> <i>Ministerial Building Standard MBS 008 – Designated bushfire prone areas – additional requirements</i> <i>National Environment protection Measures</i> <i>SA EPA (2013) Standard for the Production and Use of Waste Derived Fill</i> <i>Site contamination: guideline for communication and engagement</i>	As per views raised under bushfire risk, noise, traffic, aviation and air quality.	Safety of the public and third parties.

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>Heavy Vehicle National Law Act 2013</i> <i>Road Traffic Act 1961</i> <i>SA EPA (2010) Current Criteria for the Classification of Waste including Commercial and Industrial Waste (Listed) and Waste Soil</i>			

6.12.3 Potential impacts

During construction, operation, and decommissioning of the Project, public and third-party health and safety impacts may result from:

- injury or death from the improper use or improper maintenance of plant or machinery, including inadvertent electric
- fires including fire from electrical equipment as well bushfires spreading through the Project Area
- injury of death resulting from inappropriate handling of hazardous substances
- injury or death from improper traffic management
- injury of death from aviation incidents related to the OTL
- exposure due to the improper handling or management of contaminated soils
- nuisance from exposure to dust generated by construction of the Project
- nuisance from exposure to noise generated by construction or operation of the Project
- injury or death due to trips or falls.

6.12.3.1 Impact events

The impact event relevant to public health and safety is:

- **HS1:** Injury or death to a member of the public or third party due to unmitigated or improper management of Project hazards, including but not limited to trips or falls in excavated areas, or improper use of plant and equipment.

6.12.4 Environmental impact and significance assessment

Table 6.38 details the impact assessment for the identified impact event for public health and safety.

The impact assessment detailed in the table below indicates that expected impacts is generally in the **Moderate** category. The magnitude of the impact event has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.38 Environmental impact and significance assessment – HS1: public health and safety

Public health and safety: Impact ID HS1						
Impact event	Injury or death to a member of the public or third party due to unmitigated or improper management of Project hazards, including but not limited to trips or falls in excavated areas, or improper use of plant and equipment.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Project hazards (various)	Unmitigated or improperly managed hazards.	Members of the public and third parties	Yes – given the nature of the Project, hazards are expected to some degree.	Construction Operation Decommissioning	Final construction, operation and decommissioning requirements will be determined by contractors, and are currently unknown.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
The CEMP, OMP and DRMP will be developed to address the <i>Work Health and Safety Act 2012</i> and will be supported by issue-specific sub-plans including an Emergency Management Plan and Fire Management Plan. Unauthorised access to the Project Area will be controlled by the use of gates and permanent and temporary fencing, as appropriate depending on the Project stage. Additional security, including patrolling and CCTV will be utilised where appropriate. All plant and equipment will be secured to prevent unauthorised access. Appropriate directional and hazard signage will be provided around and within the Project Area, as required. All construction and operational personnel and visitors will be required to sign-in and undertake a site induction. The performance of operations and maintenance activities will be monitored through annual compliance audits supported by intermittent inspections that will consider the implementation and effectiveness of control measures for maintenance works. Routine and non-routine maintenance will be undertaken throughout the life of the Project, to ensure infrastructure runs efficiently and to minimise the risk of health and safety incidents. All maintenance activities will be supported by an appropriate Job Safety and Environmental Analysis or Safe Work Method Statement.					Moderate to high certainty that control measures will be effective.	

Environmental significance assessment		Environmental significance assessment outcome
Avoidance	No – given the nature of the Project, hazards are expected to some degree.	Expected impacts is Moderate .
Frequency	Low – based on Project location and population density, exposure to members of the public and third parties is limited.	
Duration	Long lasting – impacts may occur throughout all stages of the Project.	
Extent	Moderate – impacts will mostly be confined to the Project Area but could extend to transport routes.	
Severity	High – instance of occurrence could lead to death or severe injury	
Cumulative	Possibly – given other wind farm developments operational and proposed in the region, cumulative traffic hazards could occur but are unlikely with implementation of control measures.	
Sensitivity	Moderate – certain stakeholders including nearby residents and CFS may have heightened sensitivity to potential impacts.	

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	Maintain the health and safety of the public and other third parties.	Construction, operation and decommissioning to be undertaken in accordance with the <i>Work Health and Safety Act 2012</i>. No injury or death of a member of the public or third party resulting from the Project. Any death of a person, serious injury or illness or dangerous incident that occurs as a result of the Project is immediately reported to DEM and appropriately investigated. Any event resulting in the activation of emergency response and/or evacuation procedures of an area or the need for emergency service personnel is immediately reported to DEM and appropriately investigated. All construction and operational personnel and visitors will undertake a site induction, which includes requirements under the <i>Work Health and Safety Act 2012</i>.	The performance of operations and maintenance activities will be monitored through annual compliance audits supported by intermittent inspections that will consider the implementation and effectiveness of control measures for maintenance works. Records of site personnel and visitors are kept up to date and identify that required site inductions have been undertaken. All Project management plans, including but not limited to the CEMP, OMP and DRMP are audited annually (at minimum) for compliance, currency and effectiveness, and updated as required.

6.13 Social impacts

This section provides a high-level discussion of the potential positive and negative social impacts associated with the Project during construction and operation. This assessment has been informed by the NSW *Social Impact Assessment Guideline and Technical Supplement* (NSW SIA Guideline) (DPHI, 2025) as the current leading practice methodology for scoping and assessing impacts in Australia.

6.13.1 Methodology

This Social Impact Assessment (SIA) has been prepared based on desktop research only and no community or stakeholder engagement has been undertaken as part of this phase. This assessment has been informed by desktop review of the following sources:

- demographic and socio-economic data from the 2021 Australian Bureau of Statistics (ABS) Census of Population and Housing for communities located closest to the Project
- information from relevant State and Local Government websites
- a review of the previous SIA baseline data completed by WSP for the wider Whyte Yarcowie Wind Farm in December 2024, where relevant to the Project.

This SIA defines the social area of influence by considering communities and stakeholders most likely to experience direct and indirect socio-economic impacts from the Project. As guided by the NSW SIA Guideline (DPHI, 2025), social impacts are grouped under the following themes:

- community
- way of life
- access and connectivity
- culture
- health and wellbeing
- surroundings
- livelihoods
- decision-making and participation
- cumulative impacts.

Baseline social conditions have been established using publicly available data and the SIA undertaken for the wider Whyte Yarcowie Wind Farm (WSP Australia Pty Limited, 2024) to describe the existing socio-economic profile of the social area of influence. Potential social impacts associated with the Project have been identified using qualitative and quantitative information and consideration of how the Project may affect people and communities during construction and operation.

The significance of each social impact has been assessed by considering the **likelihood** (Table 6.39) and **magnitude** (Table 6.40) of each identified social impact.

Table 6.39 Defining likelihood levels of social impacts (DPHI, 2025)

Likelihood level	Definition
Almost certain	Definite or almost definitely expected (e.g. has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Table 6.40 Defining magnitude levels for social impacts (DPHI, 2025)

Likelihood level	Definition
Almost certain	Definite or almost definitely expected (e.g. has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Likelihood and magnitude have been considered together to determine whether an impact is assessed as **low, medium, high or very high** significance (Table 6.41).

Table 6.41 Social impact significance matrix (DPHI, 2025)

Magnitude		1 Minimal	2 Minor	3 Moderate	4 Major	5 Transformational
Likelihood level	A Almost certain	Low	Medium	High	Very high	Very high
	B Likely	Low	Medium	High	High	Very high
	C Possible	Low	Low	Medium	High	High
	D Unlikely	Negligible	Low	Low	Medium	High
	E Very unlikely	Negligible	Negligible	Low	Medium	Medium

Where potential impacts are considered to have negative consequences, or where potential opportunities exist, management or mitigation measures are proposed.

6.13.2 Existing environment

The Project's indicative regional social area of influence intersects the Regional Council of Goyder and Northern Areas Council LGAs. This regional community profile notes a combined population of 8,619 people and highlights a small, predominantly rural population, characterised by dispersed townships, high reliance on private vehicles and median weekly household incomes below the South Australian average, indicating moderate socio-economic vulnerability.

The Regional Council of Goyder is located within the Federal Division of Grey and the state electoral district of Stuart. The LGA includes nearby towns including Whyte Yarcowie, Hallett and Terowie. The 2021 ABS Census reported:

- a total population of 4,060 people, comprising of 1,078 families
- 2,361 private dwellings with an average of 2.2 people per household
- a median weekly household income of \$916, a median weekly rent of \$190 and a median monthly mortgage repayment of \$867 (below the South Australian average)
- an average of 2.2 motor vehicles per dwelling.

(Australian Bureau of Statistics, 2021a)

The Northern Areas Council is located within the Federal Division of Grey and the state electoral districts of Frome and Stuart. The LGA includes nearby towns including Canowie Belt and Belalie East. The 2021 ABS Census reported:

- a total population of 4,559 people, comprising of 1,218 families
- 2,413 private dwellings with an average of 2.2 people per household
- a median weekly household income of \$1,147, median weekly rent of \$192 and a media monthly mortgage repayment of \$806 (below the South Australian average)
- an average of 2.2 motor vehicles per dwelling.

(Australian Bureau of Statistics, 2021a)

The nearest regional centre to the Project is Jamestown; located approximately 20 km north-west of the Project. Jamestown has an array of services and facilities that cater to the regional social area of influence. This includes:

- retailers such as a Foodland, Cellarbrations bottle shop, petrol station, Mitre 10, Flooring Xtra, a hairdresser, Mortgage Choice, legal services, and a Quilting store
- community services including local library, churches, clubs, groups and associations, including sports, social, hobby and volunteer groups
- local facilities such as a local pub and cafes, Victoria Park Community Sporting Hub with a group fitness centre and public pool
- a variety of short-term accommodation including The Commercial Hotel Motel, Railway Hotel-Motel, The Park Villas and Jamestown Hotel
- emergency services including local police station and ambulance station
- medical services including pharmacy, physio and medical centre and Jamestown Hospital, which includes 24-hour accident and emergency services, aged residential care, surgery services, outpatient services, general medical care and palliative care (WSP Australia Pty Limited, 2024).

6.13.2.1 Local social area of influence

The local social area of influence encompasses the main townships of Whyte Yarcowie, Terowie, Belalie East and Hallett. The local community profile has a combined population of 413 people and a combined median age of 48 years. The 2021 ABS Census (2021b) Census notes:

- Aboriginal and Torres Strait Islander representation is higher across the local social area of influence than the South Australian average at 7.4% (primarily located in Terowie)
- 236 private dwellings with an average of 2.2 people per household. Hallett represents the highest number of dwellings at 103
- median weekly household incomes vary, with the highest average in Belalie East (\$2,049) and the lowest in Terowie (\$589). This discrepancy likely reflects the small population size of Belalie East, 62 people compared to 135 people in Terowie, also noting Belalie East holds predominantly working farms while Terowie, as the larger township, has a wider mix of employment profiles
- a combined average of 2.3 motor vehicles per dwelling.

Services across the local social area of influence are limited:

- Whyte Yarcowie offers a community-run post office (with limited opening hours), while the Whyte Yarcowie Hotel is currently closed and listed for sale
- Terowie includes a 24-hour roadhouse and motel (BP Truckstop) and some campgrounds, corner store (with Australian Post LPO), Terowie CFS, Terowie Rural School and historical Former St Michael & St John Catholic Church Terowie Railway Station and Former Imperial Hotel
- Hallett, of which the Heysen Trail goes through, includes a café, Hallett Police Station, general store, Hallett SES, motel accommodation, farm stay and some campgrounds
- no services are available in Belalie East.

The Project's local social area of influence highlights a very small, aging rural population with higher Aboriginal and Torres Strait Islander representation, limited local services and variable household incomes, indicating heightened social vulnerability.

Table 6.42 summarises legislation and non-legislated standards, views of affected parties and lists the key environmental receptors relevant to social impacts

Table 6.42 Summary of environmental elements – social impacts

Applicable legislation	Applicable non-legislated standards	Views of affected parties	Environmental receptor
<i>Hydrogen and Renewable Energy Act 2023 (HRE Act)</i>	<i>National guidelines for Community Engagement and Benefits for Electricity Transmission Projects (July 2024).</i> <i>Clean Energy Council (CEC) Community Engagement Guidelines</i>	Desire for benefits of Project should be fairly shared with the community around the Project. Interest in ways of sharing of Project benefits with the Ngadjuri people through job creation, capacity building for the organisation, educational opportunities for Ngadjuri people. Interest in local benefits and desire for use of local businesses during construction. Interest in how the Council can be involved in Community Benefit Fund to maximise benefit from programs. Interest in eligibility for sponsorship.	Wellbeing of the community including operation of the town and its services.

6.13.3 Potential impacts

The assessment has identified the following potential impacts which may emerge as a result of the Project. The positive social impacts are primarily related to livelihoods and economic benefit for local industry participation, job creation, and local spend by the construction workforce. Negative impacts are primarily related to way of life through changes to local amenity and surroundings. Table 6.43 and Table 6.44 detail the potential social risk from Project activities, the impact caused by the risk, stakeholders affected, assessment of the significance prior to any mitigation or enhancement measure being implemented, potential mitigation measures and the expected residual impact significance after mitigation measures have been applied.

Table 6.43 Potential social impacts during the construction phase of the Project

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Livelihoods	Short-term employment opportunities during construction. Construction of the Project will require a peak construction workforce of approximately 150 people for 18 months. A proportion of which would be sourced from the regional area of influence where possible.	Increased employment opportunities for regional labour force, positively contributing to local and regional economy.	People seeking employment with appropriate skills in the local area of influence.	Likely	Minor	Medium (positive)	Prioritise local and regional employment where feasible through local recruitment and contractor engagement.	Medium (positive)
Livelihoods	Procurement of local goods and services by the Project.	Increased spending at local businesses positively contributing to local economy, temporarily increasing income for local business owners during the period of construction.	Businesses within local and regional area of influence.	Likely	Minor	Medium (positive)	Encourage contractors to source goods and services locally where available.	Medium (positive)
Livelihoods	Influx of non-local workers during the Project's construction phase.	Increased demand for local short-term accommodation, positively contributing to economy.	Local accommodation providers.	Likely	Minor	Medium (positive)	Use existing accommodation facilities where possible.	Medium (positive)
		Impact on sense of safety within the community due to increased non-resident population and potential for anti-social behaviour.	Local area of influence.	Possible	Minor	Low (negative)	Implement a code of conduct for construction workers. Clearly communicate construction schedules and workforce presence to the community. Respond promptly to any complaints related to behaviour or safety.	Low (negative)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Way of life	Increased traffic and/or traffic delays due to construction movements (transportation of equipment using heavy vehicles etc)	Increased disruption on local roads, access and stock movements.	Road users and agricultural producers in the local and regional area of influence.	Possible	Minor	Low (negative)	Prepare and implement a TMP. Engage early and regularly throughout the construction phase, ensuring appropriate notification of road changes are clearly communicated and displayed. Schedule oversized or high-volume vehicle movements to minimise disruption. Ensure emergency services are regularly updated on the delivery program and upcoming road closures or traffic management measures to ensure sufficient time for network planning. Community engagement activities to keep local farmers informed of construction activities.	Low (negative)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Surroundings	Potential amenity impacts (noise, air and visual impacts) during the day over a period of 18 months including movement of vehicles, materials, vegetation clearing, excavation etc.	Reduced sense of place due to construction activities (noise, air and visual impacts).	Local area of influence.	Possible	Minor	Low (negative)	Develop a Community Engagement Strategy to engage sensitive receivers to build understanding and preparedness for potential amenity impacts, and the relevant mitigation measures, during construction. Engage early and regularly with potentially impacted stakeholders to maintain a 'no-surprise' approach, and keep informed on program status. Ensure appropriate noise mitigation measures have been identified and communicated to impacted stakeholders. Consider and communicate air quality management measures with affected stakeholders.	Low (negative)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Surroundings	Increased bushfire risk during construction activities for BESS and OTL.	Community stress due to increased risk of bushfire impacting on safety and deterioration of natural environment.	Local area of influence.	Possible	Minor	Low (negative)	Implement construction fire prevention and response measures. Restrict high-risk activities on extreme fire danger days. Engage with local CFS to identify site needs for emergency activities.	Low (negative)
Culture	Risk of previously unidentified cultural heritage sites or objects.	Impacts on cultural value and connection to country.	Local heritage and/or Aboriginal communities.	Possible	Minor	Low (negative)	Implement a site discovery procedure. Provide cultural heritage awareness training to construction personnel.	Low (negative)
Cumulative impacts	Increased traffic due to multiple projects in the area	Increased disruption to local and regional road networks due to overlapping construction traffic from multiple projects, potentially affecting access, road safety and agricultural operations.	Road users, agricultural producers and residents in the local and regional area of influence.	Possible	Minor	Low (negative)	Prepare and implement a TMP that considers cumulative traffic volumes and activities. Engage early and regularly throughout the construction phase, ensuring appropriate notification of road changes are clearly communicated and displayed to local road users. Coordinate construction scheduling with nearby projects where practicable	Low (negative)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Cumulative impacts	Short-term accommodation demand due to multiple projects in the area.	Increased demand for short-term accommodation due to overlapping construction workforces, potentially affecting availability and affordability for visitors.	Accommodation providers and visitors in the local social area of influence.	Possible	Minor	Low (negative)	Use existing commercial accommodation and workforce camps where available Coordinate accommodation planning with nearby projects where practicable Monitor accommodation availability during peak construction periods Communicate workforce accommodation arrangements to councils and the community	Low (negative)

Table 6.44 Potential social impacts during operational phase of the Project

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Way of life	Operation of the BESS would increase reliability of the electricity grid for the region	Supporting reliable delivery of electricity to communities across the region.	Local and regional social area of influence.	Possible	Minor	Low (positive)	Design and operate the BESS in accordance with applicable technical and safety standards.	Low (positive)
Way of life	Noise impacts for ongoing operation of the BESS.	Reduced sense of place due to low-level operational noise impacting local amenity.	Local social area of influence.	Possible	Minor	Low (negative)	Engage early with sensitive receivers to build an understanding of operational activities and mitigations in place. Ensure appropriate noise mitigation measures have been identified and communicated to impacted stakeholders. Monitor operational noise where required and respond to complaints in a timely manner.	Low (negative)
Livelihoods	Opportunity for community benefit sharing initiatives	Enhanced community social and economic livelihoods through benefit sharing initiatives.	Local social area of influence.	Possible	Minor	Low (positive)	Develop and implement a community benefit sharing approach aligned with community priorities where possible. Undertake engagement activities to identify benefit sharing initiatives.	High (positive)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Livelihoods	Potential risks to agricultural aviation operations from permanent infrastructure associated with the OTL.	Disruption to local farm operations and activities.	Agricultural producers in the local and regional social area of influence.	Possible	Minor	Low (negative)	Design transmission infrastructure in accordance with aviation safety requirements. Involve affected stakeholders on decisions for infrastructure locations to avoid impacts on agricultural activities.	Low (negative)
Surroundings	Permanent change to landscape (visual) due to the BESS facility and OTL.	Changes to local amenity and perceptions of landscape character (sense of place).	Local social area of influence.	Likely	Minor	Medium (negative)	Apply appropriate siting, layout and design measures to minimise visual impacts. Communicate the permanent nature of infrastructure and design intent to the community.	Medium (negative)
Surroundings	Community perception of an increased risk of bushfire due to changes to land use and operation of the BESS.	Community stress due to perceived increased risk of bushfire impacting on safety and deterioration of natural environment.	Local social area of influence.	Possible	Minor	Low (negative)	Design and operate the BESS in accordance with relevant fire safety and bushfire management standards. Provide clear information to the community on fire risk controls and emergency response arrangements. Engage local CFS to identify site needs for emergency activities.	Low (negative)

Social impact category	Social risk	Social impact	Stakeholder affected	Likelihood	Magnitude	Significance rating	Mitigation/ management measure	Residual significance rating
Cumulative impacts	Changes to landscape character due to multiple projects in the area	Cumulative changes to landscape character due to the presence of multiple renewable energy and electricity transmission infrastructure projects, which may influence community perceptions of visual amenity and sense of place over time.	Residents, landholders and road users in the local and regional area of influence.	Possible	Minor	Low (negative)	Consider cumulative landscape and visual context during detailed design and siting of infrastructure. Provide clear communication to the community regarding the operational footprint and location of permanent infrastructure. Respond to community feedback regarding visual amenity during planning.	Low (negative)

6.13.3.1 Impact events

The impact events relevant to social value are:

- **SE1:** Disruption of community and stakeholder well-being due to increase in activity and change in landscape during construction, operation and decommissioning.

6.13.4 *Environmental impact and significance assessment*

Table 6.45 details the environmental impact and significance assessment for the identified impact event for social and economic value.

The impact assessment detailed in the table below indicates that expected impacts is generally in the **Moderate** category. The magnitude of the impact event has the potential to be **Moderate**, but with proposed control measures it is assessed as ALARP.

Table 6.45 Environmental impact and significance assessment – SE1: Disruption of community and stakeholder well-being due to increase in activity and change in landscape during construction, operation and decommissioning

Social and economic value: Impact ID SE1						
Impact event	Disruption of community and stakeholder well-being due to increase in activity and change in landscape during construction, operation and decommissioning.					
Potential Impact	Source	Pathway	Receptor	Confirmation of SPR	Project Phase	SPR uncertainties and assumptions
	Project infrastructure and workforce.	Flow on effect to community and businesses.	Community Businesses	Yes – SIA has determined that stakeholder impacts are expected to some degree.	Construction Operation Decommissioning	Construction workforce numbers will be determined by contractors. Unforeseen events may change availability of services in the region or community profile.
Control measures					Uncertainties regarding likely effectiveness of control strategies	
Ongoing consultation and community engagement will be undertaken throughout planning, construction, operation and decommissioning. A construction workforce accommodation plan will be developed for the wider Whyte Yarcowie Wind Farm project (including the BESS and OHL Project) to identify the most suitable options to accommodate non-local workers within an acceptable distance of the Project (including but not limited to the option for a temporary construction camp) while also minimising any potential shortages of accommodation to tourists, visitors, and residents. It is noted that any temporary construction camp may require approval and that the siting and design of any temporary construction camp would need to have regard to the policy direction provided in the ‘Workers’ Accommodation and Settlements’ General Development Policies under the P&D Code, to ensure the facility is appropriately serviced and minimises nuisance impacts.					Moderate to high certainty regarding likely effectiveness of control strategies. While the final construction workforce numbers are unknown, and that unforeseen events may change the availability of services in the region or the community profile throughout the duration of the Project, control measures are flexible and could adapt to changes.	

Environmental significance assessment			Environmental significance assessment outcome
Avoidance	No – given the scale of the Project and assessment of likely impacts, some disruption to stakeholders is likely to occur.		Expected impact is Moderate .
Frequency	High – impacts may occur throughout all stages of the Project but would be most likely to occur during construction.	Overall magnitude is Moderate .	
Duration	Long lasting – the risk of impacts will last for the duration of the Project.		
Extent	Widespread – impacts may occur on a regional scale.		
Severity	Low – the SIA has recommended that on average, residual social and economic impacts from the Project would be low to moderate.		
Cumulative	Possible – cumulative impacts may result from other construction projects in the region.		
Sensitivity	Moderate – business and communities within the wider region have had previous exposure to similar Projects, however some potentially impacted receivers may have a heightened sensitivity to the Project due to experiences from past, unrelated Projects.		

SEO	Proposed environmental objective	Assessment criteria	Leading performance criteria
	No unacceptable disturbance to stakeholders.	No complaints received from stakeholders. In the event complaints are raised, all reasonable measures will be taken to resolve the complaint in a timely manner.	The CEMP, OMP and DRMP will include procedures for the management and recording of any complaints. A construction workforce accommodation plan will be developed prior to the commencement of construction. Monitoring of local services and infrastructure during the construction phase will be undertaken in accordance with the CEMP. Relevant Project information remains available and portals for consultation remain active throughout all stages of the Project.

6.14 Planning assessment

The P&D Code is developed under the PDI Act and aims to establish comprehensive policies for the assessment of development in South Australia.

The P&D Code structure includes Zones, Subzones, Overlays and General Development Policies; with the Zone being the principal organising layer which establishes the type of development that is envisaged within a particular location.

The P&D Code is not a statutory instrument under the HRE Act, and as such, the Project is not required to strictly comply with the planning policies applicable to the Project Area. However, EIA Criteria requires that environmental impacts should be assessed against recognised industry documents, which can include the P&D Code.

The *Environmental Impact Assessment Criteria Guidelines* (Department for Energy and Mining, 2024) identifies that setbacks outlined in the P&D Code are not prescribed under the HRE Act or associated EIA Criteria, and should be considered as a case-by-case basis based on the potential impacts of each project. The guideline sets out that setbacks for wind farms and associated transmission lines and BESS should be established and supported with justification that demonstrates that associated impacts (such as noise, shadow flicker and visual amenity) have been mitigated to ALARP.

An assessment of the Project against the P&D Code has been undertaken to assist with the identification of potential environmental receptors (including sensitive receivers) and to assist in providing justification for the selected design and mitigation measures, in addition to supporting technical studies.

Furthermore, in assessing whether to grant an AIL, the Minister/DEM will refer the EIR and SEO to DHUD as a prescribed body under Section 73 of the HRE Act, as an administrative unit of the Public Service under a Minister responsible for Administration of the PDI Act. During this referral, it is understood that DHUD will provide comment on the Project against the P&D Code for consideration in the Minister's assessment.

6.14.1 Assessment methodology

This planning assessment has been undertaken using the following methodology:

- review of the Project Area and determination of the applicable Zones, Subzones and Overlays under the P&D Code
- determining the category of development for the proposed land uses, as defined under the applicable Zones and Subzones
- review of available Project information and existing technical studies
- assessment of the proposed Project against the applicable Zones, Subzones, Overlays and General Development Policies under the P&D Code.

6.14.2 Planning and Design Code

The Project is wholly located within the Rural Zone of the P&D Code. There are no Subzones applicable across the Project Area.

The following relevant Overlays also apply to all or part of the Project Area:

- Hazards (Bushfire – General Risk) Overlay
- Hazards (Bushfire – Regional Risk) Overlay
- Hazards (Flooding – Evidence Required) Overlay
- Key Outback and Rural Routes Overlay
- Gas and Liquid Petroleum Pipelines Overlay
- Native Vegetation Overlay
- Murray Darling Basin Overlay
- Water Resources Overlay.

(PlanSA, n.d.)

The Dwelling Excision Overlay is also applicable over part of the Project Area however is not relevant to the Project, and as such, is not discussed further.

Zoning for the Project is shown below in Figure 6.19.

6.14.3 Land use definition

Under the Part 7 of the P&D Code (State Planning Commission, 2024), the Project is classified as a both a 'renewable energy facility' and 'electricity substation' in line with the following definitions.

Renewable energy facility:

Means land and/or water used to generate electricity from a renewable source such as wind, solar, tidal, hydropower, biomass and/or geothermal;

This use may also include:

- a) any associated facility for the storage and/or transmission of the generated electricity;*
- b) any building or structure used in connection with the generation of electricity.*

Electricity substation

Means:

- a) works for the conversion, transformation or control of electricity by 1 or more transformers, or by any switchgear or other equipment;*
or
- b) any equipment, building, structure or other works ancillary to or associated with works referred to in paragraph (a), other than any such works:*
 - i. that are mounted on a pole;*
or
 - ii. that are wholly enclosed in a weather-proof enclosure not exceeding 8.5m³;*
or
 - iii. that are incidental to any lawful use of the land which the works are situated.*

6.14.4 Categorisation

Renewable energy facilities and electricity substations are not assigned a categorisation under the Rural Zone and hence would be considered code assessed development under Section 105(b) of the PDI Act.

It is noted that the Rural Zone does assign a Restricted Development classification renewable energy facilities within the Significant Landscape Protection Overlay or Character Preservation District Overlay, however neither of these Overlays apply to the Project Area.



PS221341
Whyte Yarcowie Wind Farm
Transmission Line and BESS:
Associated Infrastructure Licence

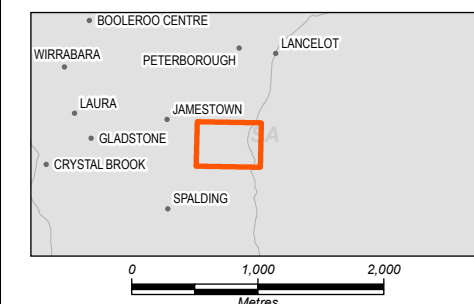
Figure 6.19
Planning and Design Code Zones

Legend

- Localities
- State Managed Roads
- BESS Area
- Underground Cable Easement
- Belalie Substation Expansion Area
- Overhead Transmission Line
- 70 m Transmission Line Easement
- Wind Farm Boundary (REILA 2)

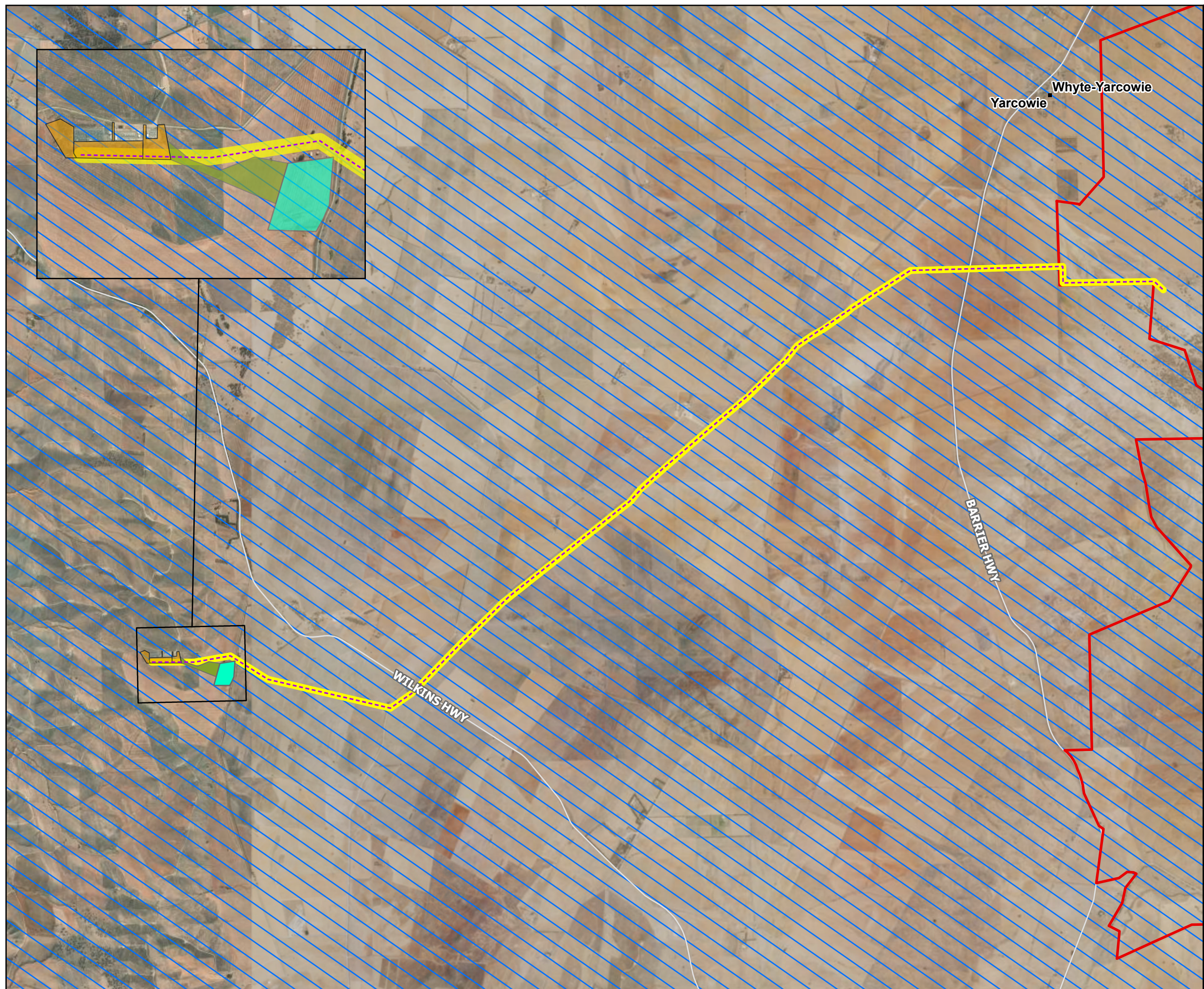
Planning and Design Code Zone

- Rural



Coordinate system: GDA2020 MGA Zone 54
Scale ratio correct when printed at A3
1:60,000 Date: 8/04/2026

Data sources: WSP, SA Government, World Imagery Earthstar Geographics
MetroMap (Australia latest)
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6.14.5 Planning and Design Code Policies

6.14.5.1 P&D Code Zoning

The Desired Outcome (DO) for development within the Rural Zone is seeks:

DO 1: A zone supporting the economic prosperity of South Australia primarily through the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources.

DO 2: A zone supporting diversification of existing businesses that promote value-adding such as industry, storage and warehousing activities, the sale and consumption of primary produce, tourist development and accommodation.

(State Planning Commission, 2022)

The Project, comprising a renewable energy facility and supporting substation expansion, directly supports DO 1 of the Rural Zone by supporting the generation of energy from renewable sources.

The Assessment Provisions of the Rural Zone applicable to this type of development provide guidance on land use and intensity within the Zone and the interaction of renewable energy facilities with primary production. An assessment of the Project against the relevant Assessment Provisions of the Rural Zone is provided in Table 6.46.

Table 6.46 Assessment of the Project against the relevant Assessment Provisions of the Rural Zone

Performance Outcome (PO) or Deemed-to-Satisfy Criteria / Designated Performance Feature (DTS/DPF)	Comment
Land Use and Intensity DTS/DPF 1.1: <i>Development comprises one or more of the following: (s) Renewable energy facility</i>	The Project comprises a renewable energy facility, which is a form of development envisaged under DTS/DPF 1.1 of the Zone.
Siting and Design PO 2.1: <i>Development is provided with suitable vehicle access</i>	Vehicle access to the Project Area is likely to be via the following unsealed local roads: — Canowie Road — Gilfillan Road — Mitchells Road — Booborowie Road. The TIA undertaken for the Project (see Appendix H) assessed the suitability of site access and transport routes for the Project, recommending that site access would be appropriate for the Project. Some widening of road junctions or traffic management may be required to accommodate an increase in turn movements/oversized vehicles at some junctions; particularly from Wilkins Highway.

Performance Outcome (PO) or Deemed-to-Satisfy Criteria / Designated Performance Feature (DTS/DPF)	Comment
Renewable Energy Facilities PO 9.1: <i>Renewable energy facilities and ancillary development minimises significant fragmentation or displacement of existing primary production</i>	The Project has sought to minimise the fragmentation of existing primary production activities through the following: — utilising the existing Belalie Substation — siting the BESS as close as practicable to the Belalie Substation — positioning the OTL Corridor adjacent to road corridors or along property boundaries, where practicable. It is expected that the final footprint for the BESS and Belalie Substation expansion will be significantly smaller than the areas investigated in this EIR and that existing agricultural land uses could continue across areas not required for Project infrastructure and operational activities.
Built Form and Character PO 10.1: <i>Large buildings are designed and sited to reduce impacts on scenic and rural vistas by:</i> <i>having substantial setbacks from boundaries and adjacent public roads</i> <i>using low-reflective materials and finishes that blend with the surrounding landscape</i> <i>being located below ridgelines.</i>	Buildings and BESS containers onsite are expected to be no greater than 6 m in height and will maintain a minimum 20 m setback from property boundaries. To minimise potential impacts to visual amenity and glare, outdoor lighting will be directed downward where practicable, and designed in accordance with <i>AS4282 Control of the obtrusive effects of outdoor lighting</i>. Where practicable, Project infrastructure such as buildings and BESS units would be painted in muted colours and/or finished using low-reflective materials. The LVIA (Wax Design, 2026) recommends that the BESS will mostly be shielded from view by the surrounding ranges. The OTL would be more visible in comparison, given that it will be crossing a large distance within a predominantly flat landscape, with limited vegetation screening. Visual impacts would be most prominent along Mitchells Road, whereby the Project was assessed to have a moderate visual impact, which would reduce with distance due to screening and the presence of other renewable energy infrastructure reinforcing the locality's energy production and modified context.
Concept Plans DTS/DPF 14.1 <i>The site of the development is wholly located outside any relevant Concept Plan boundary.</i>	The Project Area is wholly located outside of the boundary of any Concept Plan (DTS/DPF 14.1).

6.14.5.2 P&D Code Overlays

Table 6.47 assesses the Project against the DO, PO and DTS/DPF Criteria of the applicable P&D Code Overlays across the Project Area.

Table 6.47 Assessment of the Project against the relevant Assessment Provisions of the applicable P&D Code Overlays

PO OR DTS/DPF	Comment
Hazards (Bushfire – General Risk) Overlay (GR) and Hazards (Bushfire – Regional Risk) Overlay (RR)	
GR/RR PO 1.1: <i>Buildings and structures are located away from areas that pose an unacceptable bushfire risk as a result of vegetation cover and type, and terrain.</i>	The BESS and Belalie Substation expansion will be located in areas with easy access to the wider road network and away from large strands of vegetation which may pose an elevated risk of bushfires. Furthermore, 20 m VMZs (unless otherwise agreed with the CFS) will be maintained around all Project infrastructure, to further reduce these risks.
GR/RR PO 2.1: <i>Buildings and structures are designed and configured to reduce the impact of bushfire through using designs that reduce the potential for trapping burning debris against or underneath the building or structure, or between the ground and building floor level in the case of transportable buildings and buildings on stilts.</i>	The Project will require a number of buildings and structures to support construction and operation of the Project. The Fire Risk Management Plan and Fire Safety Study undertaken for the wider Whyte Yarcowie Wind Farm project (Fire Risk Consultants, 2024) advised that the likelihood of embers being generated and trapped against buildings is unlikely given that the dominant type of vegetation within the area is grassland. Regardless, building designs will seek to reduce potential impacts from bushfires by reducing the risk of trapping burning debris.
GR/RR PO 2.2: <i>Extensions to buildings, outbuildings and other ancillary structures are sited and constructed using materials to minimise the threat of fire spread to residential and tourist accommodation including boarding houses, hostels, dormitory style accommodation, student accommodation and Workers' accommodation) in the event of bushfire.</i>	A minimum separation distance of 6 m will be provided between all buildings, to reduce the threat of fire spread.
GR/RR PO 5.1: <i>Roads are designed and constructed to facilitate the safe and effective:</i> a) <i>access, operation and evacuation of fire-fighting vehicles and emergency personnel</i> b) <i>evacuation of residents, occupants and visitors.</i>	All access tracks will be designed to comply with the requirements outlined in the CFA Guidelines. Infrastructure will be serviced by a network of internal access tracks, which would be all-weather and maintained to facilitate safe access for emergency service vehicles and site evacuation.
GR/RR PO 5.3: <i>Development does not rely on fire tracks as means of evacuation or access for fire-fighting purposes unless there are no safe alternatives available.</i>	The Project will not rely on fire tracks as a means of evaluation or fire-fighting purpose.

PO OR DTS/DPF	Comment
Hazards (Flooding – Evidence Required) Overlay	
DO 1: <i>Development adopts a precautionary approach to mitigate potential impacts on people, property, infrastructure and the environment from potential flood risk through the appropriate siting and design of development.</i>	The Project design has sought to avoid the placement of infrastructure in areas susceptible to flooding. Detailed design will be further informed by the outcomes of flood modelling (refer to Impact ID SW1 documented in Table 6.12).
PO 1.1: <i>Development is sited, designed and constructed to minimise the risk of entry of potential floodwaters where the entry of flood waters is likely to result in undue damage to or compromise ongoing activities within buildings.</i>	Flood modelling undertaken for the Project (refer to Appendix F) identified a risk of ponding near the OTL corridor between Mitchells Road and Stock Route Road. The assessment advised that ponding is not anticipated to interact with the OTL under the 1% AEP flood event, though it is possible that ponding could interact with the OTL poles during rarer flood events. A detailed assessment will be undertaken to evaluate the necessity and feasibility of OTL tower/pole placement within this area, to identify required placement and design to avoid risks from flow waters.
PO 2.1: <i>Buildings and structures used either partly or wholly to contain or store hazardous materials are designed to prevent spills or leaks leaving the confines of the building.</i>	Small volumes of hazardous materials may be kept onsite during construction, operation and decommissioning. Storage areas for these materials will be designed to prevent leaks or spills via bunding or other containment control measures. Risks from hazardous materials have been addressed under Impact ID SC2; with measures to avoid and managed risks documented in Table 6.17.
Key Outback and Rural Routes Overlay	
DO 1: <i>Safe and efficient movement of vehicle and freight traffic on Key Outback and Rural Routes.</i> DO 2: <i>Provision of safe and efficient vehicular access to and from Key Outback and Rural Routes.</i>	A OTL Corridor will intersect the Key Outback and Rural Routes Overlay near Wilkins Highway and Barrier Highway. The OTL crossing at these roads will be undertake via agreement with DIT, and will observe all required clearance to maintain safety for vehicles using the roads. The TIA undertaken for the Project (see Appendix H) has identified that proposed traffic routes and access points for the Project, particularly during construction, can safely accommodate the expected traffic volumes and vehicle type, with appropriate upgrades and traffic management implemented.
PO 8.1: <i>Buildings or structures that encroach onto, above or below road reserves designed and sited to minimise impact on safe movements by all road users.</i>	Some proposed infrastructure in the south-west corner of the Project Area will be located under this Overlay, though will not encroach into the road reserve.

PO OR DTS/DPF	Comment
Gas and Liquid Petroleum Pipelines Overlay	
DO 1: <i>Management of risk to public safety, the environment and security of energy supply from the encroachment of development on strategic gas and liquid petroleum pipelines.</i>	The OTL will intersect the Gas and Liquid Petroleum Pipelines Overlay near the intersection of Booorowie Road and Wilkins Highway. This section of the Overlay relates to Epic Energy Pipe Alignment and KP (High Pressure Gas Pipeline) discussed in Section 4.2.5 and shown in Figure 4.4. The Project design will avoid all impacts to this pipeline. Consultation with Epic Energy will be undertaken regarding the proposed works, along with surveys to physically locate the pipeline; to manage risks to site workers and thirds parties, and the avoid damage to the both the pipeline and OTL infrastructure.
DTS/DPF 1.1: <i>Development satisfies one of the following:</i> a) <i>it does not comprise:</i> (i) <i>child care facility</i> (ii) <i>caravan and tourist park</i> (iii) <i>educational facility</i> (iv) <i>buildings comprising 3 or more building levels</i> (v) <i>land division creating allotments under 1ha for residential purposes (except where the existing allotment is less than 1ha)</i> (vi) <i>prison</i> (vii) <i>residential park</i> (viii) <i>retirement facility</i> (ix) <i>student accommodation</i> (x) <i>supported accommodation</i> (xi) <i>shop or shops with a gross leasable floor area of 1000m² or greater</i> (xii) <i>tourist accommodation</i> (xiii) <i>stadium</i>	The Project satisfies DTS/DPF 1.1 as it does not propose one of the listed types of development.
Native Vegetation Overlay	
DO 1: <i>Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.</i>	Native vegetation clearance for the Project is unavoidable but impacts have been minimised where possible; including amending the design to minimise clearance of vegetation that provides habitat for PBTL. All native vegetation clearance will be offset in accordance with the requirements of the NV Act via financial payment. The current offset has been calculated at 19.79 SEB points or \$14,855.68 (inc. admin fee) and may be further reduced if native vegetation clearance is further minimised under the detailed design.

PO OR DTS/DPF	Comment
PO 1.1: <i>Development avoids, or where it cannot be practically avoided, minimises the clearance of native vegetation taking into account the siting of buildings, access points, bushfire protection measures and building maintenance.</i>	The design of the Project has considered the Mitigation Hierarchy and has avoided and minimised clearance as far as practicable. The Project has been sited within land previously subjected to native vegetation clearance via previous agricultural use. As a result, no native vegetation clearance will be required to support the development of the BESS, Belalie Substation expansion, underground cable or supporting VMZs. Only small patches of native vegetation will be impacted within isolated sections of the OTL.
PO 1.2: <i>Native vegetation clearance in association with development avoids the following:</i> a) <i>significant wildlife habitat and movement corridors</i> b) <i>rare, vulnerable or endangered plants species</i> c) <i>native vegetation that is significant because it is located in an area which has been extensively cleared</i> d) <i>native vegetation that is growing in, or in association with, a wetland environment.</i>	Ecological surveys have been undertaken across the Project Area to identify significant native vegetation, habitat areas or threatened species that occur in the area. The outcomes of these surveys were then used to inform the design to avoid these areas as far as practical (refer to Section 2.2.1 and Section 6.1). In particular, the Project has been sited to avoid impacts to threatened flora species, <i>Maireana rohrlachii</i> (Rohrlach's Bluebush) and <i>Rumex dumosus</i> (Wiry Dock) that exist near some sections of the OTL Corridor. The ecological survey identified PBTL within an early iteration of the Project Area. The Project Area was subsequently amended to minimise impacts to known habitat for PBTL. Furthermore, the Project Area was assessed as unlikely to provide important habitat for any other threatened fauna species.
Murray-Darling Basin Overlay	
DO 1: <i>Sustainable water use in the Murray-Darling Basin area.</i>	As discussed in Section 6.2.3, water will be required to support the Project, particularly during construction for potential concrete batching and/or dust suppression. There is currently no reticulated water available within the Project Area. As such, water supply will be determined through a water options assessment broadly involving: — developing a list of potential options and completing a high-level go/no-go on — detailed assessments of options to be further considered/progressed, to include both technical and approval feasibility — site investigations to prove up a potential source and inform an impact assessment and any approval/licensing requirements. A key outcome of the assessment will be to determine the sustainability of expected water volume requirements on the various supply options.

PO OR DTS/DPF	Comment
PO 1.1: <i>All development, but in particular development involving:</i> a) <i>horticulture</i> b) <i>activities requiring irrigation</i> c) <i>aquaculture</i> d) <i>industry</i> e) <i>intensive animal husbandry</i> f) <i>horse keeping</i> g) <i>commercial forestry</i> <i>has a lawful, sustainable and reliable water supply that does not place undue strain on water resources in the Murray-Darling Basin.</i>	The water options assessment will seek to identify the capacity of various options to sustainably supply the anticipated water demand for the Project and to identify approval/licencing requirements. All required authorisations will be secured, prior to utilisation of the selected water source(s).
Water Resources Overlay	
DO 1: <i>Protection of the quality of surface waters considering adverse water quality impacts associated with projected reductions in rainfall and warmer air temperatures as a result of climate change.</i> DO 2: <i>Maintain the conveyance function and natural flow paths of watercourses to assist in the management of flood waters and stormwater runoff.</i>	The detailed for the Project will seek to avoid the interruption of minor drainage lines and dams that have been identified within the Project Area. The CEMP, OMP and DRMP for the Project will include management and mitigation measures minimise and control the risk of water quality impacts.
PO 1.1: <i>Watercourses and their beds, banks, wetlands and floodplains (1% AEP flood extent) are not damaged or modified and are retained in their natural state, except where modification is required for essential access or maintenance purposes.</i>	There are no major watercourses, floodplains or wetlands within or in close proximity to the Project Area. Flood modelling was undertaken for the Project (see Section 6.2) to understand the hydrology setting for the Project. The assessment considered the 1% AEP and 10% AEP flood events for the Project Area and identified several minor drainage lines across the Project Area. The detailed design of the Project will seek to locate infrastructure away from drainage lines. Where these cannot completely be avoided, appropriate drainage infrastructure (such as culverts) will be incorporated into the design to support the continuity of flow paths. Furthermore, the modelling identified a risk of ponding along the OTL Corridor between Mitchells Road and Stock Route Road. It is anticipated that the design will be able to avoid this area, though where this is not possible, OTL towers/poles will be appropriately designed for flood actions, erosion/scour, debris impact and geotechnical conditions and consider structural stability, electrical clearance, operational risks and foundation performance under flood events.

PO OR DTS/DPF	Comment
PO 1.7: <i>Watercourses, floodplains (1% AEP flood extent) and wetlands protected and enhanced by retaining and protecting existing native vegetation.</i>	The Project does not propose any clearance of native vegetation within a watercourse, floodplain or wetland.

6.14.5.3 General Development Policies

Table 6.48 assesses the Project against the DO, PO and DTS/DPF Criteria of the applicable General Development Policies for the Project.

Table 6.48 Assessment of the Project against the relevant Assessment Provisions of the General Development Policies of the P&D Code

PO OR DTS/DPF	Comment
Infrastructure and Renewable Energy Facilities	
DO 1: <i>Efficient provision of infrastructure networks and services, renewable energy facilities and ancillary development in a manner that minimises hazard, is environmentally and culturally sensitive and manages adverse visual impacts on natural and rural landscapes and residential amenity.</i>	The proposed Project is appropriately located within the Rural Zone, where renewable energy facilities are an envisaged land use and is not expected to adversely impact adjacent agricultural land uses and has been designed to minimise hazard or nuisance to adjacent land users.
PO 1.1: <i>Development is located and designed to minimise hazard or nuisance to adjacent development and land uses.</i>	As discussed throughout in Section 6 of this EIR, potential impact events related to the Project have been mitigated to ALARP and is not expected to result in unreasonable hazard or nuisance to adjacent land uses.
PO 2.1: <i>The visual impact of above-ground infrastructure networks and services (excluding high voltage transmission lines), renewable energy facilities (excluding wind farms), energy storage facilities and ancillary development is minimised from townships, scenic routes and public roads by:</i> a) <i>utilising features of the natural landscape to obscure views where practicable</i> b) <i>siting development below ridgelines where practicable</i> c) <i>avoiding visually sensitive and significant landscapes</i> d) <i>using materials and finishes with low-reflectivity and colours that complement the surroundings</i> e) <i>using existing vegetation to screen buildings</i>	Where possible, the Project has been sited to shield infrastructure from view by siting infrastructure below ridgelines. The LVIA (Wax Design, 2026) recommends that the BESS will mostly be shielded from view by the surrounding ranges. The OTL would be more visible in comparison, given that it will be crossing a large distance within a predominantly flat landscape, with limited vegetation screening. Visual impacts would be most prominent along Mitchells Road, whereby the Project was assessed to have a moderate visual impact, which would reduce with distance due to screening and the presence of other renewable energy infrastructure reinforcing the locality's energy production and modified context. To minimise potential impacts to visual amenity and glare, Project infrastructure such as buildings and BESS units would be painted in muted colours and/or finished using low-reflective materials, where practicable. Furthermore, outdoor lighting will be directed downward where practicable, and designed in accordance with <i>AS4282 Control of the obtrusive effects of outdoor lighting</i> .

PO OR DTS/DPF	Comment
f) <i>incorporating landscaping or landscaped mounding around the perimeter of a site and between adjacent allotments accommodating or zoned to primarily accommodate sensitive receivers.</i>	
PO 2.2: <i>Pumping stations, battery storage facilities, maintenance sheds and other ancillary structures incorporate vegetation buffers to reduce adverse visual impacts on adjacent land.</i>	The BESS does not currently incorporate vegetation buffers and has been assessed as unlikely to result in significant visual impacts to the surrounding locality. Canowie Road currently has low traffic volumes, and vegetation buffers have not been deemed necessary at this stage of the Project, however can be considered if impacts relating to visual amenity arise in figure.
PO 2.3: <i>Surfaces exposed by earthworks associated with the installation of storage facilities, pipework, penstock, substations and other ancillary plant are reinstated and revegetated to reduce adverse visual impacts on adjacent land.</i>	During construction, all exposed surfaces will be reinstated as soon as reasonably practical, to reduce impacts to visual amenity, stormwater runoff, and air quality. The CEMP will include measures for restoration and revegetation of disturbed areas.
PO 3.1: <i>Progressive rehabilitation (incorporating revegetation) of disturbed areas, ahead of or upon decommissioning of areas used for renewable energy facilities and transmission corridors.</i>	The DRMP for the Project will include a measure for the progressive rehabilitation of disturbed areas upon decommissioning of the Project. The vegetation plantings will be considered, where practicable.
PO 4.1: <i>Infrastructure and renewable energy facilities and ancillary development located and operated to not adversely impact maritime or air transport safety, including the operation of ports, airfields and landing strips.</i>	An AIA has been undertaken for the Project which considered the impacts of the Project on nearby aviation operations, including aerodromes and air routes (see Appendix I). The assessment identified the Project will not adversely affect the safety, operational integrity, and efficiency of air services. The AIA identified a private aeroplane landing area (air strip) on land adjoining the OTL Corridor that may be impacted by the OTL. Wind Prospect are currently in negotiation with the owners of this air strip to have this decommissioned to minimise risks to aviation safety, in accordance with the recommendation of the AIA (Chiron Aviation Consultants, 2024).
PO 4.2: <i>Facilities for energy generation, power storage and transmission are separated as far as practicable from dwellings, tourist accommodation and frequently visited public places (such as viewing platforms / lookouts) to reduce risks to public safety from fire or equipment malfunction.</i>	The Project has been sited as far as practicable from dwellings and public places. Siting has considered impacts to dwellings and other sensitive receptors, along with land access availability and the need to minimise fragmentation of agricultural land. Appropriate fire management and mitigation measures have been incorporated under Impact ID BF1 and HS1 (see Table 6.35 and Table 6.38, respectively).

PO OR DTS/DPF	Comment
PO 4.3: <i>Bushfire hazard risk is minimised for renewable energy facilities by providing appropriate access tracks, safety equipment and water tanks and establishing cleared areas around substations, battery storage and operations compounds.</i>	See Hazards (Bushfire – General/Regional Risk) Overlays under Table 6.47.
PO 5.3: <i>Battery storage facilities are co-located with substation infrastructure where practicable to minimise the development footprint and reduce environmental impacts.</i>	The BESS has been sited as close as practicable to the existing Belalie Substation. Existing conditions directly adjacent to the substation have prevented co-location of the infrastructure, including steep topography of the land (among other factors).
PO 7.1: <i>Renewable energy facilities are located as close as practicable to existing transmission infrastructure to facilitate connections and minimise environmental impacts as a result of extending transmission infrastructure.</i>	As discussed above, the BESS has been sited as close as practicable to the existing Belalie Substation, which will minimise the length required for the underground cable. The length of the OTL is dictated by the location of the wider Whyte Yarcowie Wind Farm, which has been sited to minimise environmental impacts.
PO 13.1: <i>In rural and remote locations, development that is likely to generate significant waste material during construction, including packaging waste, makes provision for a temporary on-site waste storage enclosure to minimise the incidence of wind-blown litter.</i>	Waste management during construction will be appropriately designed and enclosed to minimise the incidence of wind-blown litter.
PO 13.2: <i>Temporary facilities to support the establishment of renewable energy facilities (including borrow pits, concrete batching plants, laydown, storage, access roads and worker amenity areas) are sited and operated to minimise environmental impact.</i>	Temporary construction facilities, including construction compounds, the concrete batching plant (if required) and laydown areas will be required to support construction of the Project. The siting of these facilities will be on informed by the outcomes of site assessments, to minimise environmental impacts and nuisance caused by the Project.
Interface Between Land Uses	
DO 1: <i>Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.</i>	As identified in the assessments undertaken to support this EIR, the Project is not expected to result in unreasonable impacts to surrounding dwellings and other land uses. Impact have been mitigated to ALARP.

PO OR DTS/DPF	Comment
DTS/DPF 4.1: <i>Noise that affects sensitive receivers achieves the relevant Environment Protection (Commercial and Industrial Noise) Policy criteria.</i>	An Environmental Noise Assessment has been undertaken for the Project to review the expected compliance of the BESS with the noise criteria established in the <i>Noise Policy</i> (refer to Appendix G). The assessment recommended that predicted noise levels from operation BESS will be compliant at all identified noise sensitive receivers, with the greatest predicted noise levels expected not to exceed 45 dB(A). Other Project components are not expected to generate significant noise during operation and hence were not included in the assessment.
PO 5.1: <i>Development with the potential to emit harmful or nuisance-generating air pollution incorporates air pollution control measures to prevent harm to human health or unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) within the locality and zones primarily intended to accommodate sensitive receivers.</i>	Air quality impacts from the Project are likely to be mainly from construction; limited largely to emissions from the concrete batching plant and dust impacts from earthworks, stockpiles and vehicle movements on unsealed roads. Emissions during construction and will be managed through a DMP developed as part of the CEMP.
PO 6.1: <i>External lighting is positioned and designed to not cause unreasonable light spill impact on adjacent sensitive receivers (or lawfully approved sensitive receivers).</i>	To minimise impacts of lighting on nearby sensitive receivers, all outdoor lighting will be designed in accordance with <i>AS4282 Control of the obtrusive effects of outdoor lighting</i> .
PO 7.1: <i>Development is designed and comprised of materials and finishes that do not unreasonably cause a distraction to adjacent road users and pedestrian areas or unreasonably cause heat loading and micro-climatic impacts on adjacent buildings and land uses as a result of reflective solar glare.</i>	To minimise potential impacts to visual amenity and glare, Project infrastructure such as buildings and BESS units would be painted in muted colours and/or finished using low-reflective materials, where practicable.
Site Contamination	
DO 1: <i>Ensure land is suitable for the proposed use in circumstances where it is, or may have been, subject to site contamination.</i>	See DTS/DPF 1.1.
DTS/DPF 1.1: <i>Development satisfies (a), (b), (c) or (d):</i> b) <i>involves a change in the use of land that does not constitute a change to a more sensitive use</i>	The Project proposes a change in the use of the land to a renewable energy facility that does not constitute a change to a more sensitive use, as per Table 1 of <i>Practice Direction 14: Site Contamination Assessment 2021</i>. A desktop review of site contamination risk was undertaken for the Project Area (refer to Section 6.3) and identified that the site does not appear to present an elevated risk of site contamination. Appropriate management and mitigation measures will be implemented during construction, including classification of any surplus soil, to ensure the appropriate handling, storage and disposal of soils.

7 Conclusions and recommendations

This Environmental Impact Report (EIR) has been developed to support Whyte Yarcowie Wind Farm Pty Ltd's proposal to develop a Battery Energy Storage System (BESS), Overhead Transmission Line (OTL) and supporting connection to the Belalie Substation in the Mid North region of South Australia. The Project is proposed to support with wider Whyte Yarcowie Wind Farm (proposed under REILA 2) and is seeking an Associated Infrastructure Licence under the *Hydrogen and Renewable Energy Infrastructure Act 2023* (HRE Act).

The Project Area encompasses approximately 159.90 hectares (ha) and is situated on farmland, largely comprising cropping and sheep grazing.

The Project proposes a BESS with capacity of up to 270 megawatts (MW) and a maximum 8 hour duration (2160 MWh), an approximately 19.5 kilometre (km) long, single-circuit 275 kilovolt OTL to connect the internal wind farm substation to ElectraNet's existing Belalie Substation. The final capacity of the BESS is still to be determined, however will be a developed to meet the Office of the Technical Regulator's Fast Frequency Response requirements for the wind farm; but no more than 270 MW/2160 MWh. The OTL will be located within a 70 metre (m) wide easement and supported by transmission towers (or poles) with a maximum height of 50 m tall and spaced approximately 400 m apart. The works will also include a necessary expansion of the Belalie Substation and supporting connection works to enable the OTL to connect to the substation, along with an underground cable connecting the BESS to the substation.

Supporting infrastructure will also be developed, including (but not limited to) a BESS substation, electrical buildings, maintenance and storage buildings, water storage tank(s), underground cabling, hardstand areas, site access and parking, drainage and erosion control, site fencing and security, as well as related construction works and temporary construction compounds and facilities to support the delivery of the Project.

To support the environmental impact assessment process, a series of detailed technical studies and assessments have been undertaken in order to gain a more in depth understanding of the potential issues, impacts and corresponding mitigation measures required. These assessments covered ecology, surface water, site contamination, Aboriginal cultural heritage, non-Aboriginal heritage, noise, roads and traffic, visual amenity, aviation, air quality, BESS hazards, public health and safety, and social impacts; as well as an assessment of the Project against the relevant policies of the Planning and Design Code (P&D Code) under the *Planning, Development and Planning Act 2016*. Assessment of the potential impacts to elements of the environment was undertaken in accordance with the Environmental Impact Assessment Criteria established under the HRE Act and were used to inform the development of a Statement of Environmental Objectives (SEO) for the Project⁵.

The assessment identified the following:

- **Ecology:** The Project Area is predominantly non-native vegetation (cropping or exotic species). Only small amounts of native vegetation exist within the Project Area (approximately ~ 3.5% of coverage), consisting of mostly open grassland and small amounts of shrubland. Native vegetation was generally assessed to be in poor to moderate condition. No remnant woodlands or mallee exists within the Project Area. It is anticipated that the Project will require clearance of up to .99 ha of native vegetation clearance, which has been assessed as a Level 4 clearance under the *Native Vegetation Act 1993*. To support the Project, a native vegetation clearance application will be lodged with the Native Vegetation Council, and approval will be sought prior to the commencement of any clearance works.

An ecological assessment undertaken for the Project recommended that the Project is not likely to impact any *National Parks and Wildlife Act 1972* or *Environment Protection and Biodiversity Conservation Act 1999* listed vegetation or fauna species or Threatened Ecological Communities.

⁵ Whyte Yarcowie Wind Farm BESS and Overhead Transmission Line Statement of Environmental Objectives – PS221341-WSP-ADL-ENV-REP-002

- **Surface Water:** A Desktop Hydrology Assessment was undertaken for the Project to assess potential impacts to water resources and undertake a high-level evaluation of hydrological and flood conditions across the Project Area. The assessment identified a number of minor flow paths across the Project Area, and a risk of ponding occurring near the north-east end of the OTL Corridor under the 1% Annual Exceedance Probability flood event. No significant flood risks were identified. Outcomes of the flood modelling have been presented as flood maps and will inform the detailed design to protect Project infrastructure and minimise impacts to drainage lines and dams.
- **Aboriginal cultural heritage:** The Project Area is within the traditional lands of the Ngadjuri Peoples, and within the Ngadjuri Nation #2 Native Title Determination Area. The Project is not expected to impact any Aboriginal sites, objects or remains. Wind Prospect is currently engaging with the Ngadjuri Nation Aboriginal Corporation regarding the Project.
- **Non-Aboriginal Heritage:** There are no registered non-Aboriginal heritage places in close proximity to the Project Area, though two unregistered ruins are located within the OTL Corridor. The Project will be design and managed to avoid all direct and indirect impact to these ruins.
- **Noise Assessment:** Noise modelling has been undertaken to assess likely operational noise impacts from the BESS. The modelling determined that noise from the BESS is not likely to exceed the applicable noise criteria at nearby noise sensitive receivers. Other components of the Project Area not likely to result in significant operational noise and hence were not included in the assessment.
- **Traffic Impact Assessment:** During the 18-month construction period, the anticipated number of vehicle movements will be in the order of 364 vehicle trips per day which will be distributed across a number of roads for access to the site. Oversize vehicles will be required to support construction and will follow a transport route that has been designed to minimise locations where oversize vehicles would need to travel through larger townships and ungazetted routes. Intersections and access/egress points proposed to be utilised by the Project have been assessed as appropriate for the proposed works, although intersection upgrades or traffic management may be required at the Wilkins Highway/ Canowie Road intersection, which does not currently achieve the current turn requirements for the posted speed limit. The access points will be constructed to accommodate the largest design vehicles expected to enter and exit the site.

During normal operations, the Project is expected to be remotely operated, generating very small numbers of vehicles for ongoing operations and maintenance activities. Therefore, significant impacts to the road network are not anticipated.

- **Visual amenity:** Visual impacts from the Project are expected to be most prominent within the 5 km radius around the Project Area; after which impacts would significantly reduce and eventually become negligible beyond 10 km. The OHL within the landscape is likely to be perceived as a series of vertical infrastructure set against the backdrop of the surrounding ranges. While the suspension towers could be visually prominent in the landscape, their spacing and design mean the visual effect is spread across the locality. Impacts from the Project (predominantly the OHL) are likely to be most impactful along Mitchells Road, where the landscape character is visually open and sparsely vegetated. It is anticipated that the OHL would have a moderate visual impact, which would reduce with distance due to screening and the presence of other renewable energy infrastructure reinforcing the locality's energy production and modified context.
- **Aviation Impact Assessment:** The Project does not propose any tall structure that constitute a 'tall structure' requiring reporting under *Advisory Circular AC 139.E-01 V1.0 – Reporting of tall obstacles*. A private aeroplane landing area (air strip) on land adjoining the OTL Corridor may be impacted by the OTL. Wind Prospect are currently in negotiation with the owners of this air strip decommissioned to minimise risks to aviation safety.

- **Air quality:** During construction of the Project, dust emissions may be generated from earth works and the concrete batching plant (if required). Odour emissions for some of the activities e.g. excavation works of potentially contaminated soil, may also occur although it is anticipated that any such occurrence would be localised and not impact sensitive receptors off-site. Impacts from the operation of mobile plant and machinery would depend on the number and power outputs of the combustion engines, the quality of the fuel and engine maintenance, however these sources are considered to be minor given their intermittent nature and low number of sensitive receptors that may be impacted. Given the nature of the Project, ongoing operational air quality impacts are not expected, and would be limited mostly to airborne dust due to vehicle movement on unsealed access tracks. During decommissioning, low levels of particulate matter of varying size fractions and vehicular emissions may be generated during but are not expected to impact on the receiving environment. With implementation of appropriate mitigation measures, it is anticipated that air quality impacts can be managed such that they will not cause nuisance to nearby sensitive receivers.
- **BESS hazards:** BESS specific hazards related to the Project are associated mostly to thermal runaway and fire. To manage these risks, the Project will incorporate a suitable battery module design and fire containment system to reduce the residual risk of BESS fire to low. Mitigation and management measures (including emergency response procedures) related to these risks will be incorporated into the detailed design and implemented throughout all phases of the Project.
- **Public health and safety:** During construction, operation and decommissioning of the Project, public and third-party health and safety impacts may result from improper use or maintenance of plant or machinery (including electric shock), fires, inappropriate handling of hazardous substances, improper traffic management, aviation incidents, improper handling or management of contaminated soils, nuisance from dust or noise, and injury from trips or falls.

Risks to the public and third parties will be managed through establishment of site security measures and in accordance with the mitigation measures set out in the EIR and SEO. The Construction Environmental Management Plan (CEMP), Operational Management Plan (OMP) and Decommissioning and Rehabilitation Management Plan (DRMP) will include measures to address the requirements of the *Work Health and Safety Act 2012*.
- **Social impacts:** The area of influence for the Project is likely to comprise the communities of Whyte Yarcowie, Terowie, Belalie East and Hallet. The social area of influence is defined by communities most likely to experience direct and indirect socio-economic impact of the Project. The Project is likely to result in a combination of both positive and negative community impacts, including but not limited to economic benefits to the local economy through increased spending and employment opportunities, as well negative impacts from disruptions due to traffic, noise or air quality impacts during construction.
- **Planning Assessment:** The Project Area is situated primarily on agricultural land (cropping and sheep grazing) under the Rural Zone of the P&D Code. The Project falls under the definition of a *renewable energy facility* under the P&D Code, which is a form of development that the Desired Outcome of the Rural Zone envisages to support the economic prosperity of South Australia.

Environmental management measures will be applied to support the defined SEO and to help mitigate potential impacts of the Project upon the biophysical, cultural and social environment to as low as reasonably practicable. The detailed design of the Project will be carried out to minimise impacts and address the findings of ongoing constructability assessments. Mitigation measures have been proposed to address the residual impacts of the Project and will be documented in the CEMP, OMP and DRMP, which will be prepared in consultation with relevant regulatory authorities.

The Project represents a significant investment in South Australia's energy network and would enable South Australia to further increase the renewable energy generating capacity of the State, contributing strongly to renewable energy and climate change objectives and helping position South Australia as a net exporter of renewable energy while providing energy storage capability to maintain supply reliability and reduce spot price volatility. The Project would also provide increased local and regional employment opportunities, as well as increased regional expenditure, economic diversification, and local business support.

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