




POWER
FOR GOOD

**Volume One -
Project Summary**





We pay our respect to Elders past and present and to all Aboriginal and Torres Strait Islander peoples.

We acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of Country throughout Australia and their ongoing connections to land, sea and community.



TWIN CREEK WIND FARM AND ENERGY STORAGE PROJECT

RES AUSTRALIA PTY LTD

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Development Application: 313/V039/23

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Glossary of Terms

RES	RES Australia Pty Ltd
SPC	State Planning Commission
SCAP	State Commission Assessment Panel
DA	Development Application
CT	Certificate of Title
WTG	Wind Turbine Generator
SAPPA	South Australia Property and Planning Atlas
PD Code	Planning and Design Code
DO	Desired Outcome of PD Code
PO	Performance Outcome of PD Code
DTS/DPF	Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF) of the PD Code
EPBC	Environment Protection and Biodiversity Conservation Act 1999
AIA	Aviation Impact Assessment
HIA	Heritage Impact Assessment
TIA	Traffic Impact Assessment
ILUA	Indigenous Land Use Agreement
LVIA	Landscape Visual Impact Assessment
AHD	Australian Height Datum
CEMP	Construction Environmental Management Plan
OMP	Operational Management Plan
PBTL	Pygmy Blue-tongued Lizard

Executive Summary

RES Australia Pty Ltd (RES) has an active Development Plan Consent (422/E003/17) for the Twin Creek Wind Farm and Energy Storage Project (Project), proposed in the Mid-North of South Australia. The approved development is a 185MW wind farm comprising 51 wind turbines (3.6MW and up to 180 metre tip height) and associated 215 MW battery energy storage system.

Since obtaining the planning consent in October 2019, RES has undertaken further design development in an evolving energy market. To take advantage of the growth in wind turbine technology, RES have reviewed the approved wind farm and have optimised the Twin Creek Wind Farm and Energy Storage Project, particularly in terms of overall generating capacity, number, size and capacity of wind turbine generators.

RES has considered options available to amend the current planning consent to achieve variations to the project and has resolved that the alterations resulting from the optimisation warrant the submission of a new development application. RES has sought and obtained crown sponsorship of the project from the Department for Energy and Mining, for the development to occur as essential infrastructure pursuant to Section 131 of the *Planning, Development and Infrastructure Act, 2016*.

In summary, the features of the optimised Twin Creek Wind Farm and Energy Storage Project compared with the project previously granted planning consent are outlined in the table below.

Table 1: Project Summary - Approved and Optimised Project

	Approved Project	Optimised Project
Number of WTG	Up to 51	Up to 42
WTG individual Generating Capacity	3.6MW	Up to 7.2MW
Overall Generating Capacity	185MW	Up to 270MW
Height of WTG	180m tip height	Up to 220m tip height
Battery Energy Storage Capacity	215MW indicative storage capacity	215MW indicative storage capacity
Substation(s)	2 Substations (1 project substation within the windfarm boundary and 1 cut-in terminal substation)	2 Substations (1 project substation within the windfarm boundary and 1 cut-in terminal substation)
Point of Connection	ElectraNet 275kV powerline (Robertstown to Tungkillo) via a cut-in terminal substation	ElectraNet 275kV powerline (Robertstown to Tungkillo) via a cut-in terminal substation, east of Truro.

This document describes the Optimised Project for the purposes of the current application for planning consent.



1 Application Information

1.1 Applicant Details

Applicant details

Applicant	RES Australia Pty Ltd
Registered ABN	55 106 637 754
Registered Address	Suite 6.01 Level 6, 165 Walker Street, North Sydney, NSW 2060.
Website	www.res-group.com

Application contact details

Project Website	www.twincreek-windfarm.com
Project Email	info@twincreek-windfarm.com
Phone	1800 118 737

RES is the world's largest independent renewable energy company and is active in onshore and offshore wind, solar, energy storage, green hydrogen, transmission and distribution. As an industry innovator for over 40 years, RES has delivered more than 23GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 12GW worldwide for a large client base. Understanding the unique needs of corporate clients, RES has secured over 1.5GW of corporate power purchase agreements (PPAs) enabling access to energy at the lowest cost. RES employs over 2,500 passionate people and is active in 14 countries.

RES entered the Australian market in 2004 and now employs over 150 people across the country, with offices in Sydney, Melbourne, Brisbane and multiple regional locations. RES is engaged in all technologies: wind, solar and storage and offers development, construction, and asset management and manages a portfolio of 2.06GW of renewable assets in Australia. This includes some of the largest wind farms in the southern hemisphere: Murra Warra Wind Farm and Dulacca Wind Farm, as well as Emerald Solar Park; one of the first solar farms commissioned in Australia.

In addition to the Twin Creek Wind Farm and Energy Storage project, RES also obtained approvals to develop the Templers Battery Energy Storage (BESS) facility in the Mid - North region of South Australia (SA), and the 176MW Pallamana Solar Farm and energy storage project, to the west of Murray Bridge, South Australia.

1.2 Site Selection

RES Australia undertakes a systematic process to identify suitable wind farm sites and to assess their relative merits. This process includes identification of potential sites with suitable wind energy resources and transmission infrastructure.

A meteorological monitoring mast was established on the subject land in around 2012 by another renewable energy developer. RES Australia purchased the existing meteorological mast and full development control of the site in January 2015.

RES Australia undertook an initial feasibility study which identified the following advantages of the Twin Creek site:

- high probability of a strong wind resource;
- availability of an appropriate voltage transmission line within a suitably proximity of the site with generation capacity;
- sparse distribution of dwellings within proximity of the site;
- sparse vegetation cover within the development site;
- supportive host landholders; and
- uncomplicated transport access route.

Sophisticated and detailed wind resource modelling was commissioned for the Twin Creek development site. Concurrent with modelling of the wind resource around Twin Creek, RES Australia have undertaken economic feasibility. Economic and business considerations have a major impact on whether a wind farm project warrants investment. Wind farms need to be of a sufficient size (i.e. number of turbines) relative to the nature of the wind resource and the cost of establishing the project and connection to the national electricity grid.

Proximity to a suitable electricity transmission network is critical. It is also important to minimize the distance of transmission to maximise the efficiency of the project. As energy is transmitted, a small proportion is lost to the atmosphere as heat. Thus, the shorter the distance to grid, the lower the losses and thus the higher the wind farm efficiency.

1.3 Project Evolution

In 2017, RES sought planning consent for the Twin Creek Wind Farm and Energy Storage project (the project) by submission of a development application to the State Planning Commission (SPC) via a standard application pathway. The project was not submitted or considered as a Crown sponsored project but assessed by the State Planning Commission as the proposal extended across three Local Government Areas. Typically, the preferred application approach for large scale renewable energy projects pursuant to the *Planning, Development and Infrastructure Act 2016 (PDI Act)* is now the Crown Sponsorship pathway.

The State Planning Commission (SPC) granted Development Plan Consent to the project on 24 October 2019, as contained in Development Application 422/E003/17 and formally described on the Decision Notification Form as:

“Construction of a 185MW wind farm comprising 51 wind turbine generators (3.6 MW machines up to 180 metre maximum tip height) and associated 215MW battery storage facility, transmission line, substations, meteorological masts, operations and maintenance compound, civil works (e.g. access tracks, cabling etc) and temporary facilities (e.g. works compound, laydown areas and mobile concrete batching plant etc).”

The original Development Plan Consent remains operative.

Since obtaining the Development Plan Consent in 2019, there has been substantial evolution in wind turbine technology leading to higher efficiencies and improved outputs from lower wind speeds. To take advantage of this evolution, RES has optimised the project layout. The optimised project design proposes a reduction in turbines from 51 WTGs to 42 WTGs. The WTGs proposed in the optimised project are of up to 7.2MW name-plate capacity.

The optimised project layout as now proposed, considers the evolution in wind turbine technology, comprehensive wind modelling and the extensive environmental surveys and expert technical advice that formed part of the previous application. To consider the changes resulting from the project layout optimisation there would be a need to vary the consent to account for wind turbine generators of different size and capacity and to increase the overall name-plate capacity of the project from 185MW to 270MW.

Against this background, RES has resolved to seek a new development authorisation for the project with an optimised design (hereafter referred to as the proposed development). The infrastructure layout for the proposed development is provided in Figure 2 -Infrastructure Layout Wind Farm and Grid Route (refer to Volume 3 - Drawings, Maps and Figures) and extract below.

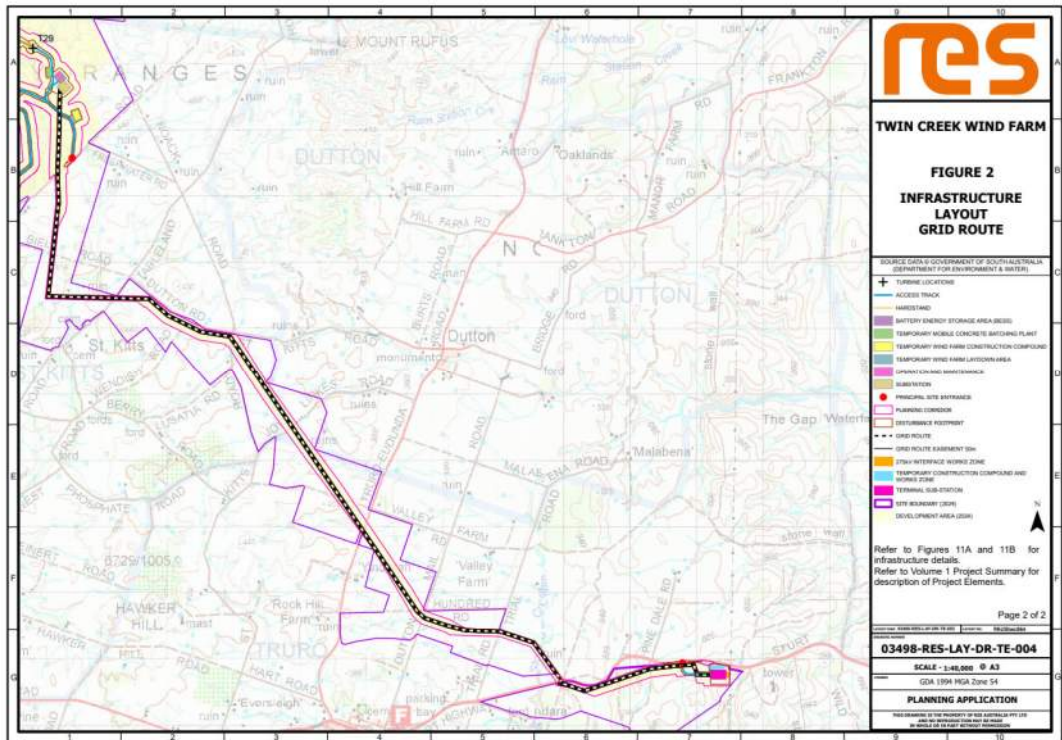
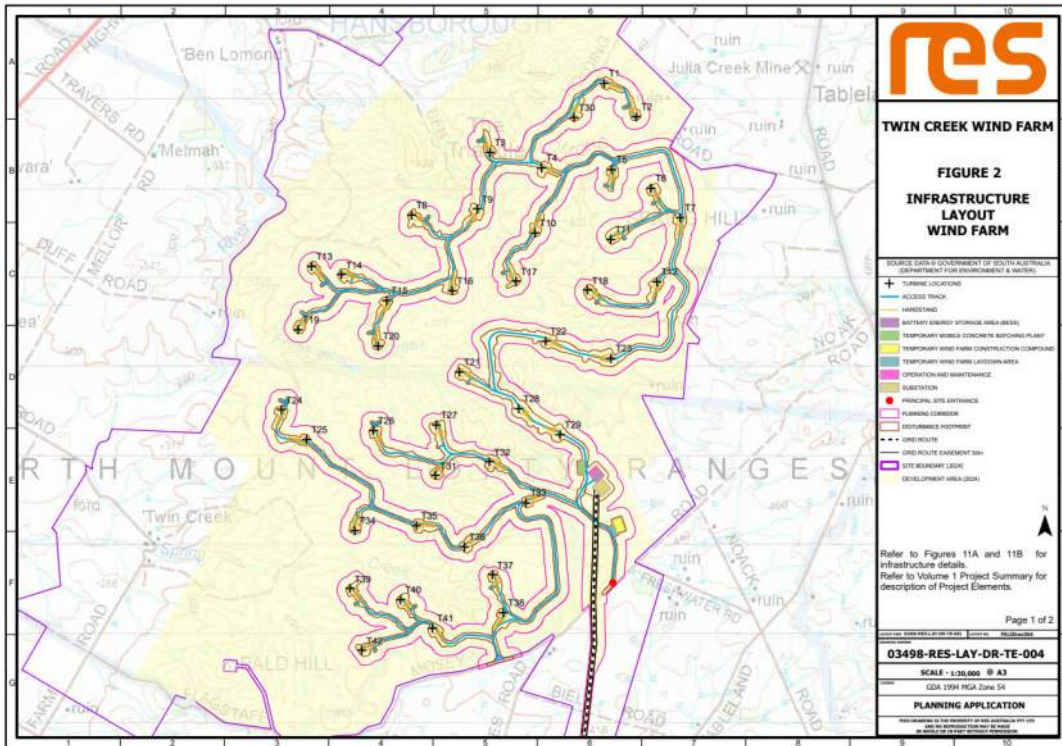


Figure 1 - RES Figure 2 -Infrastructure Layout Wind Farm and Grid Route (2 pages)

1.4 Development Application Structure

This is volume one of four volumes comprising the development application for the Twin Creek wind farm and energy storage. The application comprises:

Volume 1 - Project Summary

Volume 2 - Technical Reports

Volume 3 - Drawings, Maps and Figures

Volume 4 - Draft Construction Environmental Management Plan

Volume 1 (this report) provides information regarding the subject land and locality, the development components, the application process, the strategic context for renewable energy development, along with an outline of the investigations and findings of the technical expert reports which address a range of social, environmental and economic impact of the project.

Volume 2 comprises a range of technical assessments have been undertaken to inform the optimised project. These reports refer to and build upon the investigations undertaken as part of the original development application. All technical assessment reports are contained in Volume 2 - Technical Reports and include:

Table 2: Contents of Volume 2 - Technical Assessment Reports

Report Title	Author	Version Reference
Environmental Noise Assessment	Sonus	S4827C26 - January 2025
Shadow Flicker Assessment and Blade Glint Assessment	DNV	10461810-AUMEL-R-01-F dated 10 January 2025
EMI Assessment	DNV	10461810-AUMEL-R-0.2 Rev G dated 10 January 2025
Landscape Character and Probable Visual Effect Assessment	Wax Design and Dr Brett Grimm	241029-Twin Creek LVIA Rev H dated 7 January 2025
Aviation Impact Statement	Aviation Projects	101808-04_RES_Twin Creek_WF_AIA_v1.3_dated 7 January 2025
Native Vegetation Clearance Data Report	Umwelt	31699 -R06 dated 14 January 2025
Bird and Bat Assessment Addendum	Umwelt	31699 -R05 dated January 2025
Traffic Impact Assessment	MFY	23-0154 Rev B dated 17 January 2025
Civil, Geology and Hydrology Technical Assessment	AECOM	DocNo: Civil Geo Hydro R001 dated 13 January 2025
Heritage Impact Assessment	DASH Architects	DA193751 Issue D dated 13 January 2025
Development Assessment Report	MasterPlan	52975REP04 dated 17 January 2025

Report Title	Author	Version Reference
Socio-Economic Impact Assessment	Hudson Howells Strategic Management Consultants	Updated September 2023 version March 2024

Volume 3 comprises the plans and figures which describe the development visually, including:

Table 3: List of Figures and Drawings

Figure No.	Name	Drawing Number
Figure 1	Location Plan	03498_RES-LAY-DR-TE-002
Figure 2	Infrastructure Layout Wind Farm and Grid Route (2 pages)	03498-RES-LAY-DR-TE-004
Figure 3	Landownership Wind Farm and Grid Route (2 pages)	03498-RES-PRO-DR-TE-001
Figure 4	Landownership and Infrastructure Wind Farm and Grid Route (2 pages)	03498-RES-PRO-DR-TE-004
Figure 5	Turbine Locations	03498-RES-LAY-DR-TE-003
Figure 6	House and Turbine Locations Wind Farm and Grid Route (2 pages)	03498-RES-MAP-DR-TE-004
Figure 7	Turbine Micrositing	03498-RES-LAY-DR-TE-012
Figure 8A	Site and Context Analysis Wind Farm and Grid Route (2 pages)	03498-RES-MAP-DR-TE-010
Figure 8B	Site and Context Analysis Plan Wind Farm and Grid Route (2 pages)	03498-RES-MAP-DR-TE-014
Figure 9	Planning Zones	03498-RES-MAP-DR-TE-011
Figure 10	Design Response Wind Farm and Grid Route (2 pages)	03498-RES-MAP-DR-TE-012
Figure 11A	Construction Operations, Maintenance and Substation Areas (2 pages)	03498-RES-LAY-DR-PT-004
Figure 11B	Terminal Station Site Plan	03498-RES-LAY-DR-PT-007 Rev 1
Figure 12	Typical Operations and Maintenance Area (3 pages)	03498-RES-LAY-DR-PT-005 Rev 1
Figure 13	Typical Temporary Construction Compound	03498-RES-LAY-DR-PT-006 Rev 1
Figure 14	Typical Concrete Batching Plant	03498-RES-LAY-DR-PT-001 Rev 1
Figure 15	Typical On-Site Intermediary Collector Station Substation and Control Building	03498-RES-UTI-DR-PT-001 Rev 1
Figure 16	Proposed Battery Energy Storage Facility	03498-RES-BAT-DR-PT-001 Rev 2

Figure No.	Name	Drawing Number
Figure 17	Cable Reticulation Layout	03498-RES-CBL-DR-TE-001
Figure 18	Onsite Cable Trench Typical Sections	03498-RES-GRD-DR-PT-001 Rev 1
Figure 19	Typical Overhead Line Poles	03498-RES-UTI-DR-PT-002 Rev 1
Figure 20	Typical Overhead Line Easement and Vegetation Clearance	03498-RES-UTI-DR-PT-003 Rev 1
Figure 21	Preliminary Track Design	03498-RES-LAY-DR-PT-003 Rev 1
Figure 22	Typical Turbine Foundation	03498-RES-WTG-DR-PT-001 Rev 1
Figure 23	Typical Front and Side Elevation of a Wind Turbine	03498-RES-WTG-DR-TE-004
Figure 24	Typical Crane/Turbine Hardstand	03498-RES-LAY-DR-PT-002 Rev 2

Volume 4 is a draft Construction Environmental Management Plan (CEMP). The objective of the CEMP is to describe the potential environmental issues related to the proposed works and the measures which will be undertaken to manage or mitigate any detrimental impacts.

1.5 Location

RES proposes to develop the Twin Creek Wind Farm and Energy Storage Project (the proposed development) within the Mid - North area of South Australia. The site of the proposed development is approximately 90 kilometres north-east of Adelaide, and north-east of Kapunda.

The site of the proposed development transverses three Local Government areas. Infrastructure for the project will be developed within the Light Regional Council, Regional Council of Goyder and Mid Murray Council areas.

The proposed development is located between the townships of Kapunda, Eudunda and Truro as identified in extract of Figure 2 - RES Figure 1 - Location Plan (refer to Volume 3 - Drawings, Maps and Figures) below.

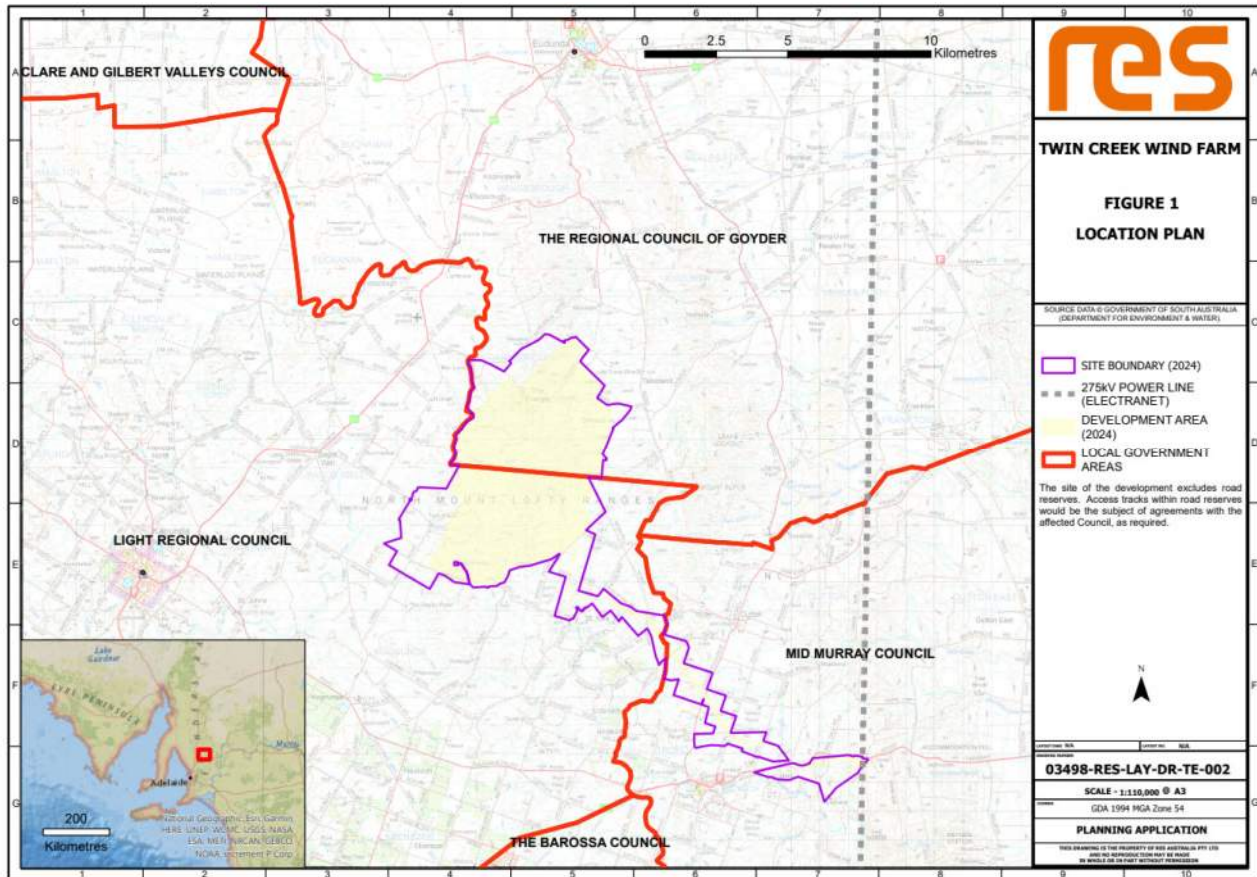


Figure 2: RES Figure 1 - Location Plan

The site of the proposed development includes the area comprising the project infrastructure, as well as the proposed 275kV transmission line. The transmission line extends approximately 15 kilometres south-east of the site and connects to the Robertstown -Tungkillo 275kV transmission line adjacent the Sturt Highway near Truro.

The project will involve the construction and operation of up to 42 wind turbine generators (WTGs). Each WTG is proposed to have a name plate capacity of up to 7.2 Megawatts (MW) and a total installed generating of up to 270MW. The proposed development includes a battery energy storage facility (BESS) with an indicative storage capacity of 215MW. Further details of the proposed development are provided in Section 2.0.

1.6 Subject Land

The site of the development has two components, namely the ‘wind farm’ (accommodating the wind turbine generators and infrastructure) and the transmission line. The ‘wind farm’ area spans approximately 9.0 kilometres in a north-south direction and approximately 8.5 kilometres in an east-west direction (excluding the transmission line). The transmission line (grid route) extends approximately 15 kilometres south-east of the wind farm site and connects to the Robertstown -Tungkillo 275kV transmission line adjacent the Sturt Highway near Truro.

The Project is proposed on freehold land, shared with the existing agricultural uses including sheep grazing and cropping. Internal access tracks and associated cables will be required to cross over and under some made and unmade roads that are within the project boundary. The proposed transmission route and associated easement will also cross over several made and unmade roads, including the Sturt Highway and land in the ownership of the Commissioner of Highways as part of the proposed Truro by-pass.

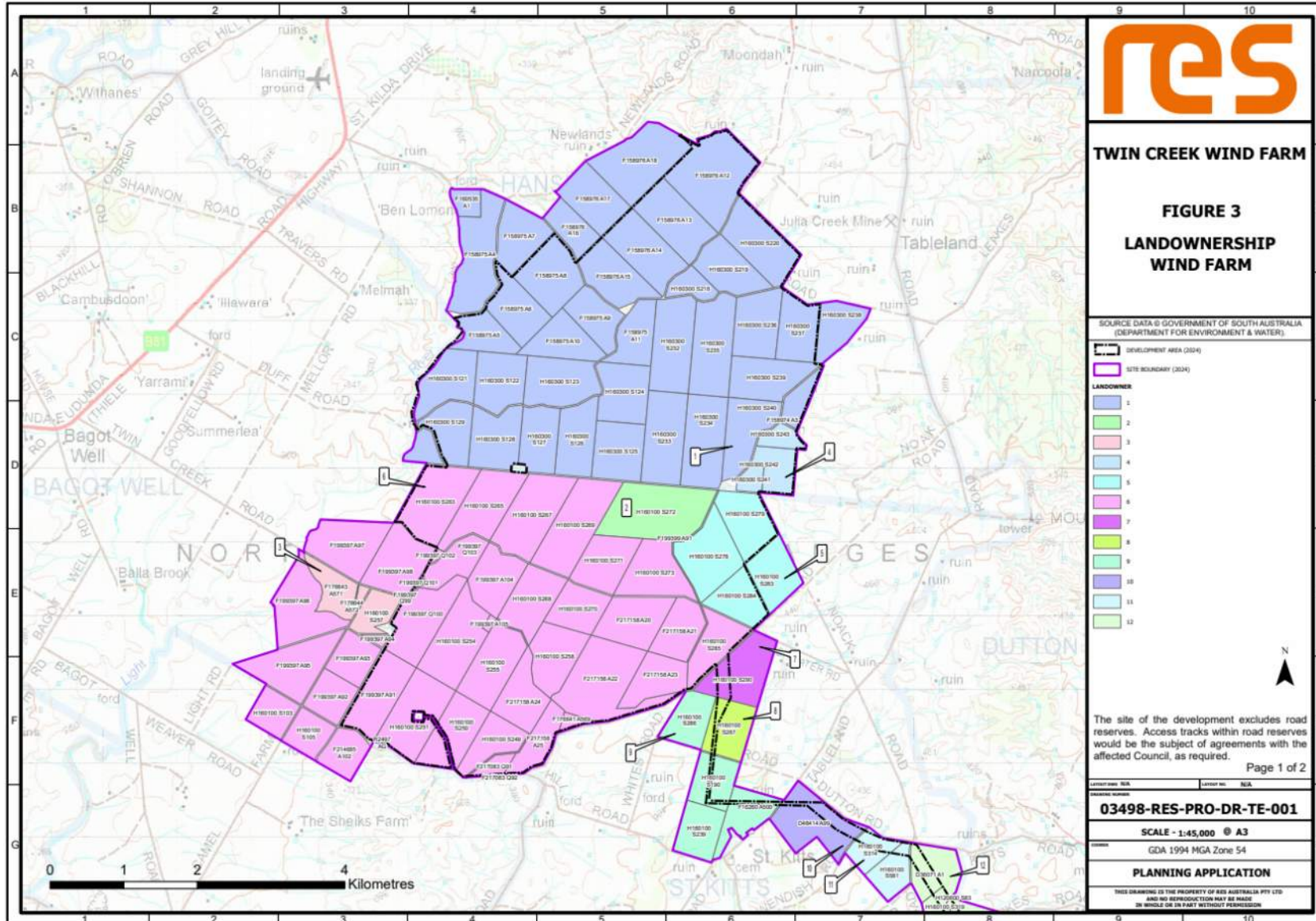
The tenure for the project is based upon Option to Lease and Option for Easement Agreements for various elements of Project infrastructure.

Varying terminology such as ‘site boundary’, ‘the project boundary’, ‘project area’, or ‘development area’ may be utilised within the application documentation to describe the development and the site of the development. Whilst the terminology may vary the development is based on the following parameters:

- The “site boundary - wind farm” incorporates all land detailed in Table 1 below. The “site boundary” is shown on the plans prepared by RES as a purple line (site boundary 2024). The site boundary - wind farm comprises the outer boundary of the land described in all Certificates of Title incorporated in the development, including allotments/sections that are not proposed to host project infrastructure but are described on the same Certificates of Title as allotments/sections that are hosting project infrastructure. The land within the site boundary includes landowner associated dwellings, vehicle access routes, driveways and ancillary structures, along with the proposed infrastructure within the ‘development area’.
- The “site boundary - grid route” incorporates land in private ownership along the transmission line (grid route) as detailed in Table 2 below. The “site boundary - grid route” is shown on the plans prepared by RES as a purple line (site boundary 2024) and includes the outer boundary of the allotment/section which comprises transmission line infrastructure, substation and property in the ownership of RES, including land proposed to be utilised for on-ground significant environmental benefit. That is, the “site boundary - grid route” as illustrated on the plans does not illustrate the entirety of the Certificate of Title boundaries.
- References to the “development area”, which is shown as light yellow shading (and/or dashed black line) on the plans prepared by RES contains the infrastructure of the project, but may not include entire allotments as contained within the “site boundary”, or allotments that are not proposed to host any project infrastructure.
- The terms Grid route and transmission corridor are utilised interchangeably. The transmission corridor incorporates a 50-metre-wide easement within the site boundary.
- Disturbance footprint, which is shown as a brown line on the plans prepared by RES illustrates the maximum area of disturbance of the development within the planning corridor. The disturbance footprint will not extend beyond the planning corridor but may be micro-sited within this corridor.

- Planning corridor, which is shown as a pink line on the plans prepared by RES is a corridor for the location of the infrastructure and micro-siting of that infrastructure. The planning corridor is designed with a base of 100 metres in all directions around the disturbance footprint (with some variations to avoid what have been identified as unbuildable areas (i.e., creeks, lower half of the ridge and the like).
- Micro-siting of wind turbines is based on a 100m radius from turbine centre point, with relevant constraints excluded.

The following tables (Table 2 - Wind farm and ancillary infrastructure land parcels and Table 3 - Grid connection infrastructure land parcels) detail the legal description of the site of the development, along with development components located on each land parcel. These properties are depicted in Figure 3 - RES Figure 3 - Landowners (refer to Volume 3 - Drawings, Maps and Figures) and extract below. Copies of Certificates of Title are contained within Attachment A.



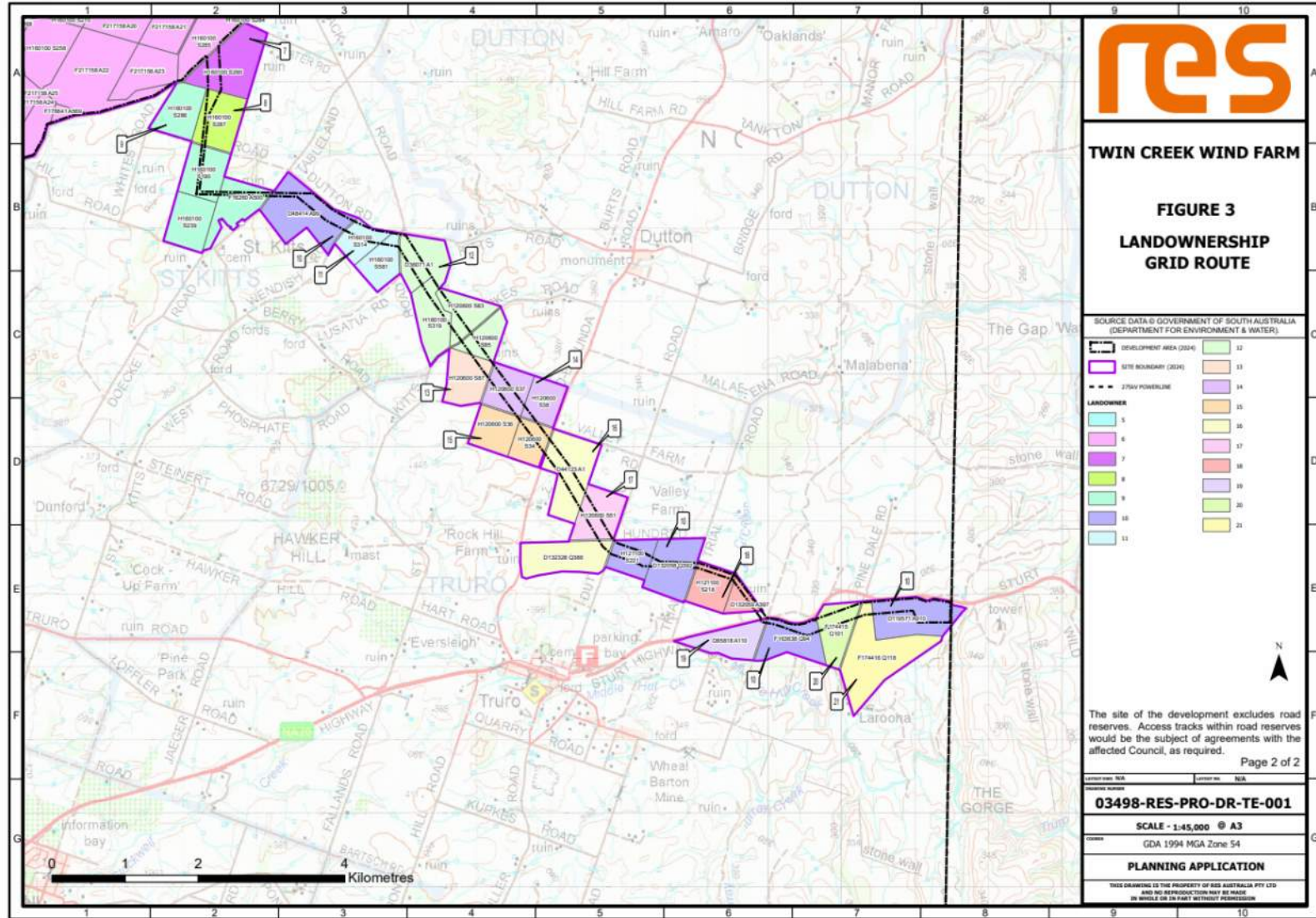


Figure 3 (2 pages) - RES Figure 3 - Landownership Wind Farm and Grid Route

Table 4: Wind farm and ancillary infrastructure land parcels

Allotment/ Section	Volume ²	Folio	Number	Infrastructure	Local Government Area
A15	Vol 5293	Fol 926	F158976	T3 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
A12	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
A13	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
A14	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
A16	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
A17	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
A18	Vol 5293	Fol 926	F158976	No Infrastructure Planned	Regional Council Of Goyder
S220	Vol 5293	Fol 927	H160300	T1, T2 Hardstand, Access Track, Planning Corridor , Cables.	Regional Council Of Goyder
S219	Vol 5293	Fol 927	H160300	T30 Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S218	Vol 5293	Fol 927	H160300	Access Track, Planning Corridor, Cables	Regional Council Of Goyder
S236	Vol 5293	Fol 928	H160300	T6 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S237	Vol 5293	Fol 928	H160300	T7 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S239	Vol 5293	Fol 928	H160300	T11, T12 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S240	Vol 5293	Fol 928	H160300	T23 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S238	Vol 5293	Fol 928	H160300	No Infrastructure Planned	Regional Council Of Goyder
S122	Vol 5293	Fol 930	H160300	T13, T14 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S127	Vol 5293	Fol 930	H160300	T15, T20 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S124	Vol 5293	Fol 930	H160300	T16 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S128	Vol 5293	Fol 930	H160300	T19 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S125	Vol 5293	Fol 930	H160300	T21 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S126	Vol 5293	Fol 930	H160300	Access Track, Planning Corridor, Cables.	Regional Council Of Goyder

² All references Certificates of Title (CT) with Volume and Folio, unless otherwise stated. CR refers to Crown Record

Allotment/ Section	Volume ²	Folio	Number	Infrastructure	Local Government Area
S123	Vol 5293	Fol 930	H160300	Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S121	Vol 5293	Fol 930	H160300	No Infrastructure Planned	Regional Council Of Goyder
S129	Vol 5293	Fol 930	H160300	No Infrastructure Planned	Regional Council Of Goyder
S232	Vol 5293	Fol 931	H160300	T4, T10 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S235	Vol 5293	Fol 931	H160300	T5 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S233	Vol 5293	Fol 931	H160300	T17, T22 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
S234	Vol 5293	Fol 931	H160300	T18 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
A3	Vol 5293	Fol 933	F158974	Access Track, Planning Corridor, Cables	Regional Council Of Goyder
A10	Vol 5293	Fol 934	F158975	T8 Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
A11	Vol 5293	Fol 934	F158975	T9 Hardstand, Access Track, Planning Corridor, Cables.	Regional Council Of Goyder
A4	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A5	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A6	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A7	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A8	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A9	Vol 5293	Fol 934	F158975	No Infrastructure Planned	Regional Council Of Goyder
A104	Vol 5390	Fol 991	F199397	Access Track, Planning Corridor, Cables	Light Regional Council
A105	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A91	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
Q99	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
Q100	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
Q101	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
Q102	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
Q103	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A92	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A93	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A94	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council

Allotment/ Section	Volume ²	Folio	Number	Infrastructure	Local Government Area
A95	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A96	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A97	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
A98	Vol 5390	Fol 991	F199397	No Infrastructure Planned	Light Regional Council
S105	Vol 5531	Fol 405	H160100	No Infrastructure Planned	Light Regional Council
S103	Vol 5531	Fol 406	H160100	No Infrastructure Planned	Light Regional Council
S271	Vol 5618	Fol 687	H160100	T31, T32 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S284	Vol 5618	Fol 688	H160100	Access Track, Construction Compound And Material Laydown Area, Planning Corridor, 275kv Line, Cables	Light Regional Council
S283	Vol 5618	Fol 688	H160100	No Infrastructure Planned	Regional Council Of Goyder
S272	Vol 5618	Fol 689	H160100	T28, T29 Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
S249	Vol 5618	Fol 690	H60100	No Infrastructure Planned	Light Regional Council
S285	Vol 5618	Fol 691	H160100	Access Track, Site Entrance, Planning Corridor, 275kv Line, Cables.	Light Regional Council
S273	Vol 5618	Fol 692	H160100	T33 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S278	Vol 5618	Fol 693	H160100	Access Track, Battery Energy Storage Facility, Concrete Batching Plant Area, Operation And Maintenance Facilitiesm 33kv/275kv Substation, Planning Corridor, 275kv Line, Cables	Light Regional Council
S255	Vol 5618	Fol 694	H160100	T39 Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
S250	Vol 5618	Fol 694	H160100	No Infrastructure Planned	Light Regional Council
S251	Vol 5618	Fol 694	H160100	No Infrastructure Planned	Light Regional Council
S254	Vol 5618	Fol 694	H160100	No Infrastructure Planned	Light Regional Council
Ag	Vol 5618	Fol 694	R2497	No Infrastructure Planned	Light Regional Council
S263	Vol 5618	Fol 695	H160100	T24 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S265	Vol 5618	Fol 696	H160100	T25 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S269	Vol 5618	Fol 697	H160100	T27 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S279	Vol 5618	Fol 698	H160100	No Infrastructure Planned	Light Regional Council
S258	Vol 5618	Fol 699	H160100	T40 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S270	Vol 5618	Fol 700	H160100	T35 Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
S267	Vol 5618	Fol 701	H160100	T26 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council

Allotment/ Section	Volume ²	Folio	Number	Infrastructure	Local Government Area
S257	Vol 5618	Fol 702	H160100	No Infrastructure Planned	Light Regional Council
S268	Vol 5618	Fol 703	H160100	T34 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
Q91	Vol 5618	Fol 704	F217083	No Infrastructure Planned	Light Regional Council
Q92	Vol 5618	Fol 704	F217083	No Infrastructure Planned	Light Regional Council
A569	Vol 5618	Fol 705	F176641	No Infrastructure Planned	Light Regional Council
A91	Vol 5618	Fol 706	F199399	Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
A102	Vol 5618	Fol 707	F214685	No Infrastructure Planned	Light Regional Council
A571	Vol 5618	Fol 708	F176643	No Infrastructure Planned	Light Regional Council
A20	Vol 5625	Fol 166	F217158	T36, S37 Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
A23	Vol 5625	Fol 166	F217158	T38 Hardstand, Access Track, Planning Corridor, Cables.	Light Regional Council
A22	Vol 5625	Fol 166	F217158	T41 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
A24	Vol 5625	Fol 166	F217158	T42 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
A21	Vol 5625	Fol 166	F217158	Access Track, Planning Corridor, Cables	Light Regional Council
A25	Vol 5625	Fol 166	F217158	No Infrastructure Planned	Light Regional Council
A572	Vol 5826	Fol 797	F176644	No Infrastructure Planned	Light Regional Council
A1	Vol 5878	Fol 290	F160535	No Infrastructure Planned	Regional Council Of Goyder
S241	Vol 5964	Fol 335	H160300	No Infrastructure Planned	Regional Council Of Goyder
S242	Vol 5964	Fol 335	H160300	Access Track, Planning Corridor, Cables	Regional Council Of Goyder
S243	Vol 5964	Fol 335	H160300	Access Track, Planning Corridor, Cables	Regional Council Of Goyder

Table5 : Grid connection infrastructure land parcels

Allotment/ Section	Volume	Folio	Number	Infrastructure	Local Government Area
S581	Vol 5146	Fol 519	H160100	275kv Overhead Line	Light Regional Council
S290	Vol 5264	Fol 963	H160100	275kv Overhead Line	Light Regional Council
S314	Vol 5274	Fol 160	H160100	275kv Overhead Line	Light Regional Council
Q94	Vol 5304	Fol 717	F163638	275kv Overhead Line	Mid Murray Council
S221	Vol 5315	Fol 264	H121100	275kv Overhead Line	Mid Murray Council
A1	Vol 5322	Fol 638	D44123	275kv Overhead Line	Mid Murray Council
Q101	Vol 5360	Fol 970	F174415	275kv Overhead Line	Mid Murray Council
S87	Vol 5460	Fol 955	H120600	275kv Overhead Line	Mid Murray Council

Allotment/ Section	Volume	Folio	Number	Infrastructure	Local Government Area
S190	Vol 5476	Fol 305	H160100	275kv Overhead Line	Light Regional Council
A500	Vol 5485	Fol 289	F16260	275kv Overhead Line	Light Regional Council
S38	Vol 5485	Fol 579	H120600	275kv Overhead Line	Mid Murray Council
S36	Vol 5485	Fol 733	H120600	275kv Overhead Line	Mid Murray Council
A99	Vol 5486	Fol 561	D48414	275kv Overhead Line	Light Regional Council
S34	Vol 5503	Fol 860	H120600	275kv Overhead Line	Mid Murray Council
S37	Vol 5517	Fol 458	H120600	275kv Overhead Line	Mid Murray Council
S286	Vol 5552	Fol 876	H160100	No Infrastructure Planned	Light Regional Council
S239	Vol 5569	Fol 233	H160100	No Infrastructure Planned	Light Regional Council
S83	Vol 5616	Fol 778	H120600	275kv Overhead Line	Mid Murray Council
S85	Vol 5616	Fol 778	H120600	275kv Overhead Line	Mid Murray Council
S319	Vol 5616	Fol 778	H160100	275kv Overhead Line	Light Regional Council
S287	Vol 5663	Fol 19	H160100	275kv Overhead Line	Light Regional Council
S51	Vol 5812	Fol 749	H120600	275kv Overhead Line	Mid Murray Council
A110	Vol 5947	Fol 941	D65818	275kv Overhead Line	Mid Murray Council
S218	Vol 5950	Fol 567	H121100	275kv Overhead Line	Mid Murray Council
A1	Vol 6124	Fol 753	D36071	275kv Overhead Line	Light Regional Council
Q118	Vol 6157	Fol 823	F174416	275kv Overhead Line	Mid Murray Council
A910	Vol 6221	Fol 131	D119571	275kv Overhead Line Terminal Substation, Access Track, Vegetative Screening, Electrical Infrastructure	Mid Murray Council
A397	Vol 6288	Fol 554	D132059	275kv Overhead Line	Mid Murray Council
Q392	Vol 6288	Fol 558	D132058	275kv Overhead Line	Mid Murray Council
Q386	Vol 6290	Fol 429	D132328	275kv Overhead Line	Mid Murray Council

Several of the properties listed in Tables 2 are not currently proposed to contain specific wind farm or energy storage infrastructure. These properties form part of the site of the development to provide the applicant with sufficient flexibility for future micro-siting of the wind turbine generators and transmission lines, as well as minor deviations of the access tracks, internal reticulation, and services.

Land access required for the proposed development has been secured through option agreements with the relevant landowners. New infrastructure associated with the proposed development will be owned by the equity owners of the proposed development which will be confirmed at the time of raising construction finance (post project design).

During the construction phase RES will engage Construction Contractors to carry out the construction responsibilities for the proposed development. Construction is planned to commence in 2027, subject to receiving the necessary approvals and investment.

1.7 Application Processes

1.7.1 Development Application Process

In accordance with Section 131(2)(c) of the *Planning, Development and Infrastructure Act 2016* (the PDI Act), RES are proposing to develop electricity infrastructure, with the electricity proposed to be generated by wind turbine generators and a battery energy storage system, to be distributed to the national grid.

In accordance with the definition of “essential infrastructure” in Section 3(1) of the *Planning, Development and Infrastructure Act, 2016* RES are providing electricity infrastructure, as identified in part (a):

essential infrastructure means—

infrastructure, equipment, structures, works and other facilities used in or in connection with -

- (i) the generation of electricity or other forms of energy; or*
- (ii) the distribution or supply of electricity, gas or other forms of energy; and ...*

In accordance with the requirements of Schedule 6 of the *Planning, Development and Infrastructure (General) Regulations 2017*, a certificate from the Office of the Technical Regulator must be obtained and accompany a development application for electricity generation exceeding 5MW that is connected to the State’s electricity system. The battery energy storage system (BESS) of the project will have the capability to meet the Office of the Technical Regulator (OTR) technical requirements by providing Fast Frequency Response (FFR). The Project has the capacity to provide (via one option or in combination):

- 740MW of real inertia is provided via a synchronous condenser; or
- 127.5MW of fast frequency response (FFR) is provided via a battery energy storage system (BESS) with a response time of <250mS; or
- 84.5MW of FFR is provided via a BESS with a response time of <150mS,

to support the South Australian network which will meet the requirements of the OTR. A Certificate of Compliance has been obtained from the Office of the Technical Regulator for the optimised Project (dated 28 June 2023 and contained in **Attachment B**).

Electricity proposed to be generated by the wind farm and stored in the BESS will be distributed to the national grid. The South Australian Department for Energy and Mining (state agency) has endorsed the proposed development for the purposes of Section 131. Refer **Attachment C** for copy of the correspondence (dated 17 October 2023) from the Department for Energy and Mining.

By definition (as contained in Part 7 - Planning and Design Code), the proposed land use is a renewable energy facility.

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.

The development application is lodged with the State Planning Commission (SPC) and processed by the State Commission Assessment Panel (SCAP). SCAP will undertake referrals and notification and subsequently prepare a report to the Minister for Planning for a decision to approve or refuse the proposed development.

1.7.2 Other Legislative Approvals

The proposed development may require a range of approvals, licences and permits under various State and Commonwealth legislation.

It is commonplace for renewable energy developments to concurrently seek approval in relation to the following pieces of legislation during the development application process.

1.7.2.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act is Commonwealth Legislation that focuses on the protection of the environment, especially matters of national environmental significance. The submission and/or determination of an EPBC referral is independent of the development application process.

A referral has previously been submitted to the Commonwealth in relation to the Pygmy Blue-Tongue Lizard as part of the approved wind farm project. A new EPBC referral will be submitted to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) for the optimised project.

1.7.2.2 Aboriginal Heritage Act 1998

The *Aboriginal Heritage Act 1998* places a duty of care on RES as proponents of the development to address the likelihood of any impact on heritage.

Approvals required pursuant to the *Aboriginal Heritage Act 1998* are independent of the development approval process.

RES and the Ngadjuri Nation Aboriginal Corporation have entered into a Cultural Heritage Management Plan (CHMP) to preserve Cultural Heritage in the Project Area. This will be updated as necessary to capture the optimised Project layout.

1.7.2.3 Native Vegetation Act 1991

Native vegetation within the project area is protected under the *Native Vegetation Act 1991* and Regulations 2017. Any proposed clearance of native vegetation in South Australia (unless exempt under the Regulations) is to be assessed against the Principles of Clearance under the Act and requires approval from the Native Vegetation Council (NVC). A net environmental benefit is generally conditional on an approval being granted.

This project is considered to comply with Division 5 of the *Native Vegetation Regulations 2017* which allows for the clearance of native vegetation in relation to specific activities as set out in Schedule 1, Parts 4, 5 or 6. This project fits within Regulation 12, Schedule 1 clauses 33 (new building) and 34 (infrastructure). Part 6, section 34 (1) (b) states;

(1) *Clearance of vegetation—*

- (a) *incidental to the construction or expansion of a building or infrastructure where the Minister has, by instrument in writing, declared that the Minister is satisfied that the clearance is in the public interest; or*
- (b) *required in connection with the provision of infrastructure or services to a building or proposed building, or to any place, provided that any development authorisation required by or under the Development Act 1993 has been obtained.*

A native vegetation clearance application was submitted concurrently with the original development application. In making a decision on the original native vegetation application in December 2017, the Native Vegetation Council noted that clearance of native vegetation for the construction of the wind farm is exempt under Regulation 5(1)(d) of the Native Vegetation Regulations, subject to meeting the Significant Environmental Benefit (SEB). The SEB was proposed to be satisfied by a combination of on ground SEB offset totalling 113.1 hectares and a financial contribution into the Native Vegetation Fund.

The Native Vegetation Council will examine a new native vegetation clearance application as part of the optimised layout, taking account the updated investigations. RES continue to be committed to the provision of on ground SEB for the project.

1.7.2.4 National Parks and Wildlife Act 1972

Native plants and animals in South Australia are protected under the *National Parks and Wildlife Act 1972*. Under this Act, it is an offence to take a native plant or protected animal without approval. Conservation significant flora and fauna species listed on Schedules 7, 8, or 9 of the *National Parks and Wildlife Act 1972* are known to or may occur within the proposed site of the development.

1.7.2.5 Landscape South Australia Act 2019

Under the *Landscape South Australia Act 2019*, landholders have a legal responsibility to manage declared pest plants and animals and prevent land and water degradation. This Act will have relevance in relation to the management of water resources and ongoing control of pest plant and animal species during construction and site remediation.

1.7.2.6 Civil Aviation

The Civil Aviation Safety Authority (CASA) regulates aviation activities in Australia. CASA has several air safety regulations, procedures and standards against which potential impacts on aviation is assessed.

The Twin Creek Wind Farm project previously assessed the impact on the Truro Flats Aeroplane Landing Area (ALA) which was within the locality of the development site. Since the original development application was determined the property which contained the Truro Flats Aeroplane Landing Area (ALA) has been sold and it is no longer in operation. An updated aviation impact assessment has been undertaken as part of the development application investigations for the optimised layout.

1.7.2.7 Defence Act 1903

There are no identified Defence Force land holdings within the locality of the proposed wind farm. The aviation assessment has investigated any implications of the proposal on defence airports or airspace.

1.7.2.8 Mining Act 1971

SA Government data indicates a Mining Exploration Licence (EL 6198) is operational in the locality of the proposed wind farm. Terramin Exploration Pty Ltd hold the exploration licence over 547 square kilometres for exploration of minerals (copper, lead, zinc, gold and rare earths). Both the approved wind farm layout and the optimised layout do not propose any wind turbine generators in the overlapping section of the exploration licence. The exploration licence area overlaps the southwestern corner of the wind farm infrastructure area and the major portion of the transmission line.

RES will maintain communication with Terramin Exploration Pty Ltd throughout the development process and, if approved, throughout the life of the proposed development to manage any interface between the proposed development and any potential future exploration activities over the proposed development area.

The site of the development also adjoins Private Mine (PM294) which is held by David and Susan Shannon Pty Ltd.

1.7.2.9 Energy Resources Act 2000

There are two pending Petroleum Exploration Licence Applications (PELA 706 and PELA 690), and one pending Geothermal Exploration Licence Application 738 coinciding with the subject land. RES will continue to liaise with the licence holder in relation to the proposed development to manage the interaction with the petroleum exploration activities.

1.7.2.10 Native Title Act 1993

The Commonwealth Native Title Act 1993 (NTA) is part of the Commonwealth's response to the High Court's decision in *Mabo v Queensland (No.2)* and adopts the common law definition of Native Title which is defined as the rights and interests that are possessed under the traditional laws and customs of Aboriginal people in lands and waters.

The site area is part of the Ngaduri Nation #2 Native Title Claim. The proposed development area is not located within an Indigenous Land Use Agreement (ILUA) area. However, the site is predominantly freehold land, which is not subject to Native Title.

1.7.2.11 Hydrogen and Renewable Energy Act 2023

Whilst this application for development authorisation will be assessed and decided under the PDI Act, the newly commenced Hydrogen and Renewable Energy Act 2023 (HRE Act) will regulate the operation of the project.

Pursuant to transitional provisions in the HRE Act, the project, if approved under the PDI Act, can be constructed pursuant to the conditions of the development authorisation. The operational and decommissioning phases of the facility would be managed under the regulatory regime of the Hydrogen and Renewable Energy Act 2023, administered by the Department for Energy and Mining, in accordance with the transitional provisions of the Act and Regulations.

2 Project Description

2.1 Description of the Project

The proposed development is to be located approximately 90 kilometres north-east of Adelaide and between the townships of Kapunda, Eudunda and Truro.

The optimised proposed development will consist of the following components:

- based on the Vestas V172-7.2MW as the candidate turbine, with an overall turbine blade tip height up to 220 metres, a hub height of up to 134m and a rotor diameter of up to 172m. The final turbine model will be subject to a competitive tender process following development authorisation;
- up to 42 Wind Turbines Generators (WTG);
- each WTG has a name plate capacity of up to 7.2MW, with a total installed generating capacity of up to 270MW;
- associated hard standing areas and access tracks;
- operations and maintenance building and compound with associated car parking;
- two electrical substations (one project substation within the windfarm boundary and one cut-in terminal substation);
- a battery energy storage facility with an indicative capacity of 215MW;
- overhead and underground electrical cable reticulation;
- overhead transmission line for approximately 15 kilometres from the on-site substation to the existing overhead Robertstown - Tungkillo transmission line east of Truro; and
- temporary construction facilities including a borrow pit and concrete batching plant facilities.

The infrastructure layout for the proposed infrastructure is illustrated in Figure 1 - RES Figure 2 - Wind Farm and Grid Route Site Layout Plan (refer to Volume 3 - Drawings, Maps and Figures).

2.2 Layout Design

The project site for the wind farm turbines spans an area of approximately 9.0 kilometres in a north- south direction and approximately 8.5 kilometres in an east-west direction (excluding the transmission line). The transmission line travels in a south easterly direction from the onsite substation to the terminal substation for a length of approximately 15 kilometres.

The wind farm is illustrated on the plans prepared by RES and contained in Volume 3 (of the development application documentation).

The properties on which it is proposed to construct the wind farm and energy storage project are privately owned and are used predominantly for sheep and cattle grazing and cropping. The development, although covering a wide area, will occupy only a small part of each property and the existing land use will be preserved. Further details on the land within the project area is provided below.

The turbine layout has been designed to provide for the optimum arrangement with the following objectives:

- maximisation of the wind farm electrical output;
- maintain spacing of turbines to minimise turbulence and airflow interactions between turbines;
- avoidance of locations, as far as reasonably practicable, which would affect the existing flora and fauna, and heritage values of the site;
- maintenance of acceptable noise levels and construction of large turbine components;
- enable accessibility in relation to delivery and construction of large turbine components; and
- achieving a wind farm scale required for project economic viability.

The wind farm layout has been informed through:

- extensive wind monitoring data and feasibility studies;
- environmental investigations;
- land suitability assessment;
- land owner requests; and
- community and stakeholder engagement processes.

Over the life of the Project there have been numerous iterations of the layout design because of these investigations and consultation.

Variations to this layout may result from:

- further public and agency consultations and submissions;
- refinements and minor variations following additional investigations during the detailed design phase, including geotechnical investigations;
- micro-siting of infrastructure within the planning corridor; or
- to address the conditions of any development authorisation granted.

2.2.1 Wind Turbine Generators

A maximum of 42 wind turbine generators (turbines or WTG) will be constructed as part of the proposal. The indicative location of the wind turbine generators is shown on Figure 5 - Proposed Turbine Locations (Volume 3) and the locations of which detailed in Table 4.

Table 6: Location of Wind Turbine Generators

Turbine ID	Easting (m)	Southing (m)	Elevation (m)
T1	323482	6205173	447.6
T2	323844	6204801	439.0
T3	322201	6204396	448.4
T4	322781	6204223	442.3
T5	323566	6204209	424.1
T6	324007	6203993	441.4
T7	324334	6203665	481.1
T8	321322	6203691	384.6
T9	322058	6203763	412.3
T10	322708	6203496	444.7
T11	323556	6203423	412.4
T12	324074	6202948	458.2
T13	320199	6203120	349.1
T14	320533	6203023	339.4
T15	321043	6202736	361.4
T16	321778	6202844	392.6
T17	322495	6202951	417.7
T18	323294	6202849	412.7
T19	320050	6202407	338.8
T20	320949	6202223	349.5
T21	321858	6201934	402.2
T22	322825	6202282	411.9
T23	323559	6202089	429.2

Turbine ID	Easting (m)	Southing (m)	Elevation (m)
T24	319861	6201508	344.6
T25	320144	6201172	338.0
T26	320893	6201273	372.0
127	321600	6201336	414.8
T28	322524	6201525	435.6
T29	322988	6201226	430.3
T30	323145	6204792	456.7
T31	321591	6200769	407.9
T32	322195	6200924	440.0
T33	322603	6200463	423.4
T34	320685	6200154	367.1
T35	321376	6200207	386.6
T36	321917	6199967	418.3
137	322228	6199655	410.6
T38	322352	6199232	407.6
T39	320630	6199500	386.5
T40	321197	6199375	391.7
T41	321557	6199056	408.4
T42	320763	6198805	408.9
MGA ZONE 54 • DATUM GDA 94			

The constructed locations of the wind turbine generators will be subject to micrositing within the Planning Corridor.

The candidate turbine model selected for this development application is the Vestas V172-7.2MW, with an overall turbine blade tip height up to 220 metres, a hub height of up to 134 metres and a rotor diameter of up to 172 metres. The selection of the final turbine model will be subject to a competitive tender process following development authorisation, and will not exceed the dimensions set out for the Optimised Project in Table 1. A schematic illustration of the proposed wind turbine is shown below in Figure 4 (RES Figure 23 - Typical Front and Side Elevation of a Wind Turbine refer Volume 3).

Each turbine will have a control system to each rotation to face the rotor into oncoming wind, and to adjust the pitch of the turbine blades. The turbines and supporting structures will be finished in a matte white, off-white colour or light grey.

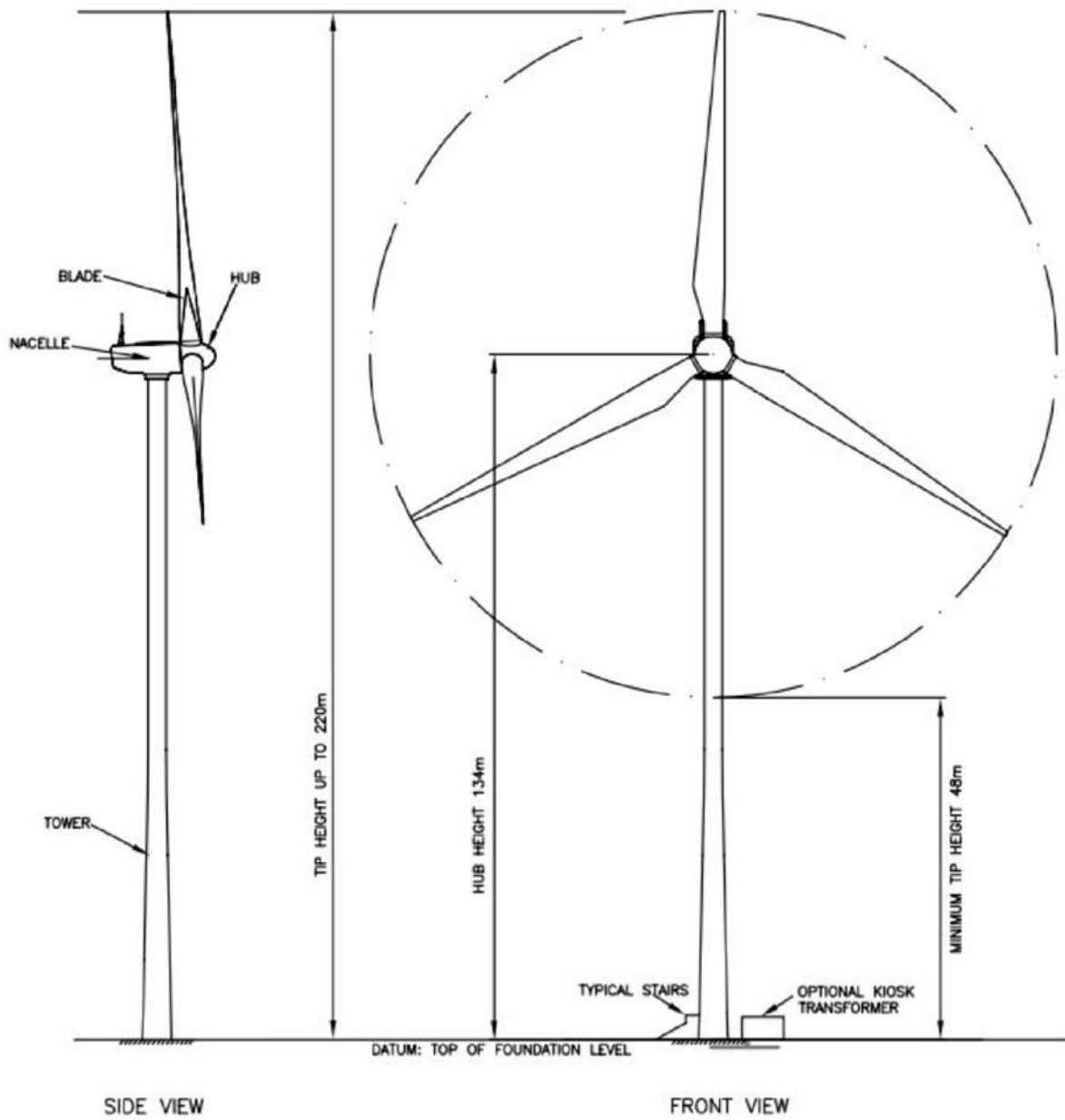


Figure 4: Extract of RES Figure 23 - Typical Front and Side Elevation of a Wind Turbine

Each of the 42 turbines will comprise several main component parts. Exact dimensions of these components are subject to detailed engineering:

- Towers: each supporting structure will be a tapered steel structure with an approximate diameter of 5.0 metres at the base and 2.5 metres at the top. A pad mounted enclosed transformer (kiosk) located at the base of each turbine with approximate dimensions of 2 m long x 2 m wide x 1.5 m high.
- Hardstand and Foundations: An average area of approximately 85 m x 45 m for foundation, laydown and crane hardstand areas - plus three 19 m x 7.5 m crane assist pads
- Hardstand areas will be required adjacent to the base of each turbine to enable the assembly and erection of the WTG components. The shape and area will vary depending on the construction approach and the site conditions at each WTG location.
- Foundations for each turbine are approximately 6m pedestal, 25 m sub-surface and 4m deep.
- Rotor and blades: each turbine will have three blades constructed of fibreglass and attached to a steel rotor and shaft. The rotor will incorporate metallic conductors to conduct lightning strikes to earth.
- Nacelle: each turbine will incorporate the 'nacelle', housing mounted at the top of each tower which encloses a gear box, generator, motors, brakes, electronic components, wiring and hydraulic and lubricating oil systems. The nacelle will also incorporate weather monitoring equipment.

2.2.2 Battery Energy Storage

The battery energy storage facility comprises up to 164 containerised energy storage units with an indicative capacity of 215 MW. The components of the facility will include UL-listed batteries, inverters and transformers, switchroom, control building, car parking and associated equipment. The typical energy storage containers (as shown in the image below) are generally 12.2 metres in length, 2.5m wide and have an overall height above ground of approximately 3.5m (including a typical finished floor level (FFL) of 0.5m above ground level).



Figure 5: Typical energy storage container

The batteries will have grid support capabilities and can be configured to respond to a variety of network requests to stabilise network services. The services provided will be subject to detailed negotiation as part of the grid connection agreement process. It is likely however that the batteries on Twin Creek will be principally utilised for energy production shifting and performance of regulatory standards.

2.2.3 Electrical Infrastructure

A series of underground and overground cables, switchgear and a substation are proposed to connect the Project with the national electricity grid. Connection to the existing 275kV Robertstown to Tungkillo transmission line will occur as a “t-connection” approximately 15 kilometres south-east of the on-site substation.

Considerable consultation with ElectraNet has been undertaken and the connection point is well suited to the network. ElectraNet have advised that do not see any constraints to connecting the wind farm to the network under reasonably foreseeable operating conditions. Alternatives were considered including connection to the Templers substation and surrounding 132kV network however these options were not suitable on account of existing grid capacity. A schematic drawing of the electrical substations for the project is shown in RES Figures 11B and 15 in Volume 3. RES Figure 17 - Cable Reticulation Layout and Figure 18 - Onsite Cable Trench Typical Sections (contained in Volume 3) illustrates the proposed cable reticulation layout and typical section.

The following outlines the main components of the electrical infrastructure:

- the output from each turbine will be directed to 33kV underground cables, which link each turbine to the proposed on-site substation located in the south-eastern portion of the wind farm development area;
- the 33kV cables will generally follow upgraded and proposed access tracks within the site and have an approximate total length of 99 kilometres;
- an on-site substation will provide a connection for the generated power to a 275kV transmission line;
- an overhead transmission line will be constructed to connect to the terminal substation which will tee-in to the existing 275kV transmission line located approximately 15 kilometres to the south-east of the on-site substation, adjacent the Sturt Highway east of Truro;
- a new terminal (tee-in) substation will provide connection of the 275kV transmission line into the Robertstown- Tungkillo 275kV transmission line and connected to the national electricity network; and
- up to 164 energy storage containers containing UL-listed batteries (or similar, depending on technology available at the time of final design).

The following is proposed:

- Local generator transformers, providing the connection between turbine and underground or 33 kV cables:
- each turbine may incorporate a generator transformer within a ‘padmount kiosk’ adjacent to the hardstand area. Depending on the turbine selected, the generator transformer may be located internal to the nacelle and painted in a matte off-white;
 - depending on the supplier, each generator transformer is likely to be approximately 3.5 metres long, by 2.5 metres wide and 2.5 metres high; and
- the transformers may be either oil-filled or dry, depending on the turbine equipment supplier. If oil-filled transformers are used, the volume of oil used for generator transformers is likely to be in the order of 2,000 litres, with appropriate measures for containment and spill protection utilised.
- Approximately 99 kilometres of underground 33kV cables, providing connections between each turbine and the substation:
 - the turbines are grouped according to location to generally provide the most direct and economical route between the turbines and the substation, and have been developed to minimise route length, according to slope and other site features/constraints;
 - generally cabling will be located alongside access tracks to minimise site disturbance; and
 - the underground trenches will also incorporate control cables for the monitoring and management of the turbines.

- Substation including switch room and control buildings of approximately 2.2 hectares. This area comprises:
 - 33kv switch room;
 - control building;
 - one permanent 275kV -33kV substation
 - bunded area for storage of hazardous materials. Oil will be stored at the site for use in the transformers and associated components. Oil will be stored in concrete bunds, with an oil spill retention basin and an oil/water separator external to the concrete transformer bunds;
 - an earthen bund embankment will surround the substation area as a secondary containment measure;
 - 2.0-metre-high chain mesh will be provided surrounding the perimeter of the substation site; and
 - low level security lighting will be installed, with additional flood lighting triggered by security sensors.
- Buildings within the construction, operations and maintenance and energy storage compound have the following general features:
 - buildings will either be slab on ground constructions with steel frames, metal or brick walls and a sheet steel roof, or demountable buildings;
 - roof water will be captured in rainwater tanks for domestic purposes;
 - a septic system will be installed to treat wastewater produced from the office building, subject to Council environmental health standards;
 - the office building will house wind farm control instrumentation, electrical and communications equipment and staff amenities;
 - the operations and maintenance building would accommodate equipment and stores, a small work area;
 - a control building will contain 275kV switchyard control equipment and batteries; and
 - a car park for all site staff, site vehicles and visitors.
- The trenching for the installation of underground cables will involve the following:
 - underground cables, comprising power and control cables will be buried in trenches of approximately 1.2- to 1.5 metres in depth and 0.28 to 0.55 metres in width
 - excavation will be depending upon ground conditions, most likely undertaken by either a mobile trenching machine, a hydraulic rock breaker, and an excavator;

- wherever practical, trenches will be backfilled immediately upon cable installation in accordance with the Construction and Environmental Management Plan, with measures adopted to slow stormwater flows and to prevent the scouring of open trench or disturbed ground prior to revegetation;
- a temporary access track will be located alongside the trenches for access during construction for trenching and cable installation vehicles;
- marker tape and posts will be placed above buried cables in accordance with the relevant standards to indicate the presence of underground cables; and
- surplus excavated material will be distributed over the surrounding area and will be revegetated. Alternatively, it may be used in track construction.

2.2.4 Construction Compound, Substation and Battery Energy Storage Facility

The construction operations and maintenance, battery storage and substation compound, includes:

- operations and maintenance area identified on the plan as a “utility zone” of approximately 0.8 hectares. This area comprises:
 - the office and staff facilities 20 metres (L) x 10 metres (W) x 7.5 metres (H);
 - operations and maintenance building 25 metres (L) x 15 metres (W) x 7.58 metres (H);
 - bunded hazardous chemical storage area; and
 - car parking and communications tower (approximately 25 metres in height).
- battery storage compound of approximately 1.1 hectares. This area comprises:
 - up to 164 energy storage containers containing UL-listed batteries, inverters, transformers, racking and associated equipment, typically 12 to 15 metres in length, 2.5 metres in height and typically 0.5 metres FFL above natural ground;
 - associated transformers;
 - switchroom;
 - control building; and
 - car parking.
- construction laydown area of approximately 2.0 hectares;
- substation including switch room and control buildings of approximately 2.2 hectares. This area comprises:
 - 33kv switch room;

- control building;
- one permanent 275kV -33kV substation with approximate dimensions of 75 metres by 85 metres; and
- bunds for fuel, oil and chemical storage.

Overall, the site of the construction operations and maintenance, battery storage and substation compound is approximately 5.0 hectares. The compound is accessed from Mosey Road via an internal access road. The substation element of the compound is setback approximately 870 metres from the nearest public road (at its closest point). All areas of the compound may be fenced with 2-metre-high security fencing. Screen vegetation planting would be undertaken around the perimeter of the compound in accordance with WAX Design recommendations contained within the Landscape Character and Probable Visual Effect Assessment report (refer Volume 2).

The permanent construction operations and maintenance, battery storage and substation compound are located on Section 278 in Certificate of Title Volume 5618 Folio 693. Plans of the indicative layout of the compound and its associated facilities are incorporated in the development application documents (Volume 3).

2.2.5 Concrete Batching Plant

A temporary concrete batching plant is to be located within a compound of approximately 1.0 hectares. This compound is to be located immediately to the west of the permanent construction operations and maintenance, battery storage and substation compound (if this material is not sourced off-site). This temporary concrete batching plant is located on the same property as the permanent construction operations and maintenance, battery storage and substation compound.

The temporary concrete batching plant, as shown indicatively on Figure 14 - Typical Concrete Batching Plant (refer Volume 3) would incorporate:

- Storage areas for coarse and fine aggregates and sand;
- Batching plant;
- Silos for cement;
- Chemical storage;
- Diesel tanks;
- Generator;
- Water storage; and
- Concrete wash out and dry wash areas.

The temporary concrete batching plant will be design and operated in accordance with the following:

- Environment Protection (Water Quality) Policy 2003;
- Stormwater Pollution Prevention, Code of Practice for the Building and Construction Industry;
- EPA Guideline for Concrete Batching (updated March 2016); and
- EPA Guideline for Bunding and Spill Management (updated May 2016).

The establishment and operation of the temporary concrete batching plant will be subject to the construction environment management plan, which include measures to address the following:

- Wastewater management (including contaminated stormwater);
- Solid waste management;
- Clean stormwater management (including diversion from contaminated stormwater and management in line with SEDMP);
- Storage of solid and liquid materials (with provision of bunding);
- Dust mitigation measures;
- Drag out;
- Noise; and
- Storage areas.

The need for on-site concrete batching plants will depend on the final selected civil contractor requirements. Any EPA licence required for the operation of the plant will be sought by the contractor. If installed the temporary concrete batching plant would be dismantled and the area rehabilitated.

2.2.6 Temporary Construction Compounds

A total of four temporary laydown and construction facilities are proposed throughout the development site, including the temporary concrete batching plant described above. One construction compound, one laydown area and the temporary concrete batching plant are within the wind farm development area and the one construction compound is adjacent the terminal substation.

The location of the temporary construction compounds is indicated on the Figure 2 - Preliminary Site Layout (Volume 3). A schematic diagram of the temporary or satellite construction compounds is provided in Figure 13 - Typical Construction Compound (Volume 3).

The temporary construction and laydown facilities are anticipated to be utilised during the 18 month to two-year construction timeframe of the development within the vicinity of 350 people being on site at the peak of the construction period. The following sites have been identified for temporary construction compounds:

- Section 278 in Certificate of Title Volume 5618 Folio 693 south east of WTG 29;
- Allotment 910 in Certificate of Title Volume 6221 Folio 131 adjacent the terminal substation.

The final number and location of these facilities would be determined as part of the final design of the wind farm, following selection of the construction contractor and establishing their requirements. The temporary construction compounds would comprise:

- several demountable buildings used for office, workshop and storage purposes, an amenities block, and portable toilet facilities will be located at the project area during construction;
- arrangements will be made for power and communications at the site office during the construction period;
- on site car parking; and
- a cleared flat area to provide for the storage of various items during construction.

The compound which is proposed to accommodate a temporary mobile concrete batching plant and will be utilised to produce the concrete required for the project. This would be accommodated within a site of approximately 1.0 hectare and comprise the mobile concrete batching plant would operate during the 18 months to 2 years' construction period.

All temporary construction facilities will be removed and the land restored and rehabilitated once construction has been completed. This will include the following:

- the removal of temporary facilities, wastes and surplus materials from the site;
- removal and restoration of any temporary construction tracks and ongoing maintenance of any land stabilisation required;

- revegetation of disturbed areas in consultation with the landowners to return the land to the condition prior to construction (in most cases this will include re-seeding and restoration for agricultural production) to prevent site erosion and sedimentation;
- the rehabilitation of areas where underground cables have been installed; and
- management of weeds in the disturbed areas.

2.2.7 275kV Terminal Substation

In addition to the substation within the wind farm planning corridor, the second substation is the terminal substation at the 275kV tee in point. This substation is located adjacent the Sturt Highway east of the township of Truro on Allotment 910 in Certificate of Title Volume 6221 Folio 131.

The substation including switch room and control buildings is approximately 2.0 hectares and comprises:

- switch room;
- control building;
- two permanent substations;
- 2.0-metre-high perimeter security fence;
- site entrance from the Sturt Highway; and
- vegetation planting would be undertaken adjacent the road reserve

A temporary construction compound of approximately 1.5 hectares would also be located on the site.

2.3 Transportation

The following provides an overview of traffic movements during construction and operational phases of the project, which is discussed in detail in the Traffic Impact Assessment (TIA) by MFY (refer Volume 2 of the application documents). The TIA has considered the construction traffic access requirements including the delivery of wind turbine components and construction materials to facilitate the development of the site. The TIA considers the route which will be adopted for the Over Size Over Mass (OSOM) vehicles which will access the site during the construction period and, in particular, the long vehicle which will deliver the turbine blades. General access vehicles, including semi-trailers, could use alternate public road routes during construction. The TIA illustrates (extract below) the proposed route for OSOM vehicles from either Port Adelaide or Port Pirie.

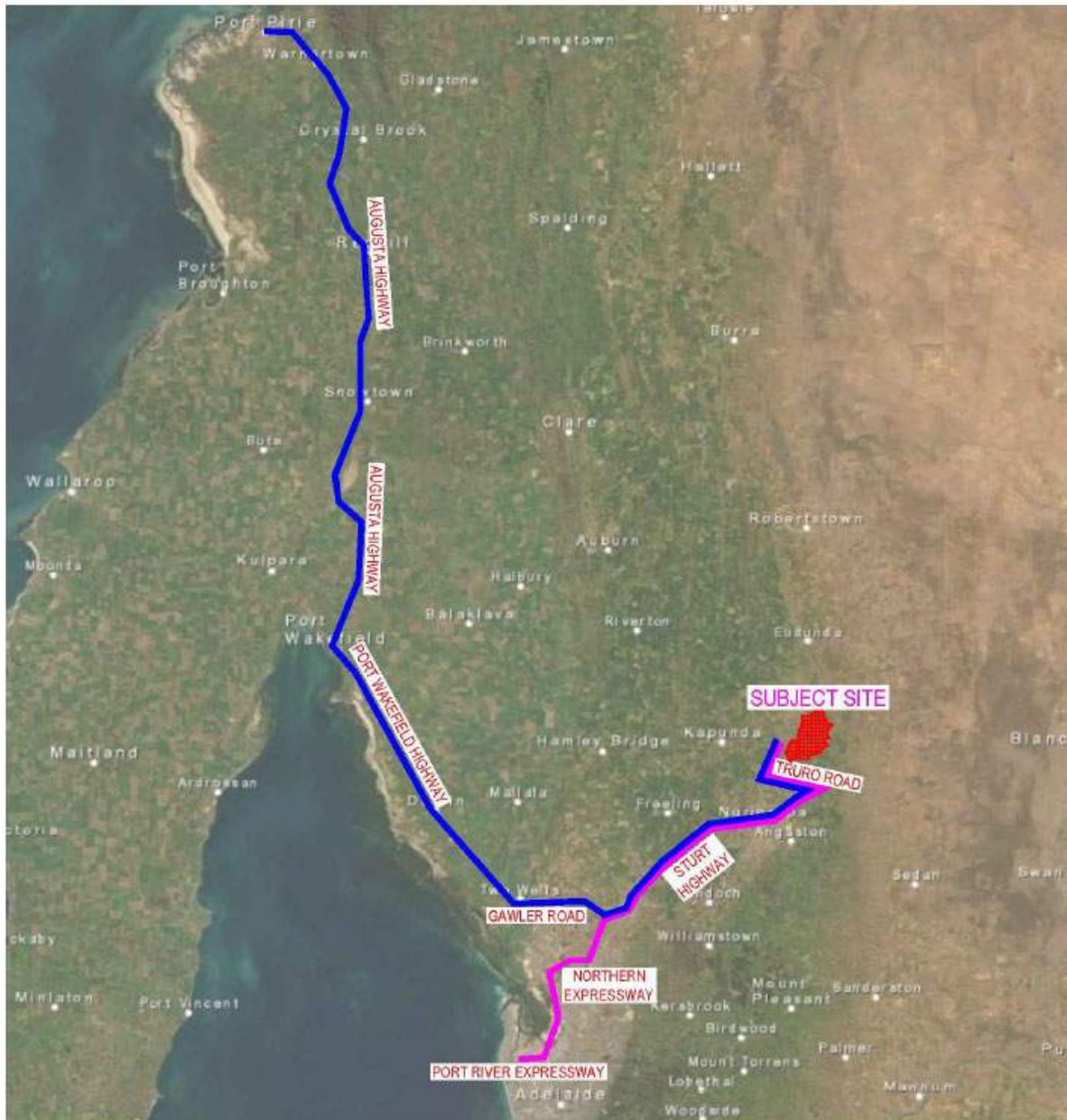


Figure 8: Proposed route option for OSOM vehicles.

Figure 6 - Extract from MFY Traffic Impact Assessment Report (Figure 8) illustrating proposed route options for OSOM vehicles.

The proposed route for delivery of OSOM component of the wind farm development during construction incorporates Sturt Highway, Truro Road, Bagot Well Road, Camel Farm Road, Flagstaff Hill Road and Mosey Road. The principal access to the wind farm component of the development is located on Mosey Road.

2.3.1 Regional Road Access for Construction Purposes

The following provides a brief description of the various components of the project and anticipated source:

- wind turbine generator components including the nacelle, blades and hubs are anticipated to be imported from overseas via the Port of Adelaide;
- depending on available suppliers, the wind turbine generator towers may be sourced from various locations around Australia;
- depending on the selection of the suitable suppliers, electrical equipment may be sourced from various locations around Australia, however it is expected that the main transformers and energy battery containers will arrive via the Port of Adelaide; and
- local quarries will be utilised for stone and concrete aggregate.

The MFY Transport Impact Assessment report provides a forecast of the total trips during the construction period, as shown in Table 5 below.

Table 7: Traffic generation rates (MFY Traffic Impact Assessment Table 1)

Material	Estimated Quantity	Vehicle Type	Rate	Two-way Trips
Concrete Materials	34,200 m ³	Semi-trailers	ten m ³ per truck	6,840
Reinforcing Steel	1,700 tonnes	Semi-trailers	ten tonnes per truck	340
Road Base	245,000 tonnes	Semi-trailers	ten tonnes per truck	49,000
Miscellaneous Equipment and Materials	Nominal	Semi-trailers	100 vehicles	200
Tower Sections	Five sections per tower	OSOM	one section per truck	470
Nacelles	Two sections per tower	OSOM	one section per truck	188
Hub	one hub per turbine	OSOM	one hub per truck	94
Blade	Three blades per turbine	OSOM	one blade per truck	282
Transformer	Two transformers	OSOM	one transformer per truck	4
Switchgear and other substation equipment	Nominal	Semi-trailers	120 vehicles	120
Employees	190	Cars/4WD	three persons per vehicle for 396 working days	50,160
Construction Equipment, Plant and Components	Nominal	Various	1,140 vehicles	1,140

The TIA includes a summary of the trips which are anticipated for the entirety of the construction phase:

- 1,038 OSOM vehicle trips;
- 57,640 general access truck trips (up to 19.0 m semi-trailers); and
- 50,160 light vehicles.

The following average daily traffic volumes are anticipated based on an 18-month construction period:

- three OSOM vehicle trips;
- 145 general access truck trips (up to 19.0 m semi-trailers); and
- 125 light vehicle trips

Accordingly, the construction of the proposed development will generate approximately 273 trips per day.

2.3.2 Local Road Upgrades

Discussions have been held with the Light Regional Council, Regional Council of Goyder and Mid Murray Council regarding proposed access and utilisation and upgrading of local roads. RES Australia proposes to enter into a Deed of Agreement with Light Regional Council and the Regional Council of Goyder in relation to local road upgrades (as required), concurrently with the assessment of the development application.

MFY identify that in general, the road network is considered adequate for the transportation of OSOM vehicles on the specified route. Further assessment is required for the widening and structural integrity of the bridge located on Bagot Well Road where it crosses St Kitts Creek to cater for OMOS vehicles. This further assessment and design would be subject to the discussion and agreement (via an infrastructure agreement) with the Light Regional Council. This assessment would form part of the detailed construction route assessment, however the assessment of the OSOM route undertaken by MFY in the TIA indicates that the roads along the route are in good condition. It has been identified that there may be some requirement for road pavement widening to accommodate turn paths and some trimming of existing vegetation.

2.3.3 On-site Access Tracks

Access tracks will be constructed to enable access to the wind turbine generators for the purposes of turbine construction and maintenance. All disturbance during construction will occur within the disturbance footprint. Operational access tracks will have a minimum width of approximately 5.5m. Those areas of land no longer required for access will be appropriately remediated to the state they existed prior to construction commencing. The location of on-site access tracks is within the planning corridor and disturbance footprint shown on Figure 2-Infrastructure Layout Wind Farm and Grid Route (Volume 3). The layout and design of the access tracks have considered the following:

- upgrades to existing tracks are proposed wherever possible;
- minimising total track length;
- landowner preferences;
- to enable the movement of OSOM vehicles;

- low to moderate grades and curvatures suitable for the required vehicles (the maximum slope for roadways is typically 15 percent);
- general location along the ridge lines within the project area to enable access to groups of turbines; and
- reducing the need for vegetation clearance.

Construction will involve clearing and the construction of paths in accordance with the proposed traffic and site conditions. The final location of tracks will be subject to the Construction and Environmental Management Plan, and developed in conjunction with members of the project team, such as ecology, and cultural heritage consultants, along with project contractors to ensure minimal impact on flora and fauna and sites of archaeological sensitivity.

2.3.4 Construction of On-Site Access Tracks

Construction of onsite access tracks will occur within the disturbance footprint of the identified planning corridor. During construction, the access tracks will:

- include clearing, grading and removal of topsoil as required, and the compaction of gravel road base;
- the provision of drainage works in accordance with the Construction Environmental Management Plan;
- excavated topsoil will be stockpiled during construction, and later used in the rehabilitation of the site. Stockpiles to be managed in accordance with the Construction Environmental Management Plan;
- access tracks to be reduced in width post construction (to a minimum width of 5.5 metres) and surrounding land restored, revegetated and/or returned to former grazing uses.

The sourcing of gravel and sand for access road construction:

- a borrow pit within the site of the development to source appropriate materials for internal tracks;
- concrete for the construction of turbine footings is likely to be sourced from onsite temporary concrete batching plants or from local contractors;
- the use of local materials via a borrow pit and local quarries will assist in minimising the transport distance;
- road base material may also be extracted from the removal of material from turbine footing locations;
- the contractor will review options for sourcing gravel for track construction and if any extraction of gravel is proposed then appropriate approvals will be sought, both from legislative approvals and approval from the landowner; and
- any material brought to the site will be assessed against the provisions of the Construction Environmental Management Plan to reduce the risk of weed introduction.

2.4 Water Provision

Water will be required for construction, including for wetting exposed soils during stockpiling to reduce the risk of erosion and dust movement. Water will be sourced by the construction contractor, which may incorporate on site bores or carting and storing water on site. Any bores required would be licensed in accordance with legislative requirements.

Water associated with the staff facilities during construction and once operational would be via rainwater storage tanks and utilise roof drainage.

An approved septic system will be installed to treat small quantities of wastewater produced from staff amenities.

2.5 Development Timing

As part of the development application, RES is seeking a period of five years in which to substantially commence the proposed development from the operative date, with substantial completion seven years from the operative date of the development authorisation. Table 6 outlines the likely timetable for construction and operation of the proposed development.

Table 8: Indicative timeframes for construction and operation of the proposed development

Phase	Duration
Pre-construction and project planning	24 months
Construction and commissioning	24 months
Operation	at least 30 years
Maintenance	Periodic as required
Decommissioning or replacement	At completion of project life - up to 24 months

Following determination of the development application and obtaining development authorisation, RES will undertake a tender process to confirm the equipment supplier and involved contractors, pre-construction arrangements and discharge of any conditions associated with the authorisation.

2.6 Staging of construction

Once development authorisation for the entire project has been obtained, it is proposed that certification of compliance with the building rules will proceed in stages.

Works which do not require building rules certification will comprise a separate stage so that construction can commence as soon as practicable subject to compliance with development authorisation conditions.

This stage will encompass such things as site mobilisation activities, establishing temporary staging areas and facilities, access road formation or widening, underground cable works and other civil works.

For works that do require certification of compliance with the building rules, it is proposed that the certification may be obtained separately for each structure and for each major stage of construction as exemplified by the following list:

- □ turbine footings including excavations
- □ turbine structures
- □ 33kV overhead line tower footings including excavations
- □ 33kV overhead line tower structures
- □ transmission line tower footings including excavations
- □ transmission line tower structures
- □ wind monitoring mast footings including excavations
- □ wind monitoring mast structures
- □ operations and maintenance compound footings including excavations
- □ operations and maintenance compound structures
- □ substation footings including excavations
- □ substation plant/structures
- □ temporary construction compound buildings, including offices and work sheds
- □ concrete batching plant footings including excavations
- □ concrete batching plant structures.

Given that the stages will be developed separately in a staggered manner, and in order to ensure that construction work can commence on site as soon as possible, it is proposed that the conditions of the development authorisation provide that:

- 1) certification of compliance with the building rules for the project can be sought and obtained for each stage separately;
- 2) conditions requiring the finalisation of layouts, specifications and plans can be satisfied in relation to each stage separately; and
- 3) construction work can commence in relation to each stage separately, provided that conditions in relation to commencement of construction of the relevant stage have been satisfied.

3 DESCRIPTION OF THE DEVELOPMENT LOCALITY

A locality for the proposed development is difficult to accurately define, not only because of the combined height of the turbine and blades, but also because of the topography and the overall area covered by the proposed development.

The wind farm is located on the tablelands that form the wide ridgeline associated with Bald Hill and Long Hill situated within the Northern Mount Lofty Ranges. Between the northernmost and southernmost turbines, there is approximately 9.0 kilometres. There is approximately 8.5 kilometres between the most eastern and western turbine as shown in Figure 5 - Proposed Turbine Locations (refer to Volume 3 - Drawings, Maps and Figures).

The transmission line extends approximately 15 kilometres from the on-site substation to the Robertstown-Tungkillo transmission line and proposed terminal substation adjacent the Sturt Highway east of Truro. Within this locality, the prominent features/elements include:

- the townships of Kapunda, Truro, Eudunda and the areas of Koonunga, St Kitts and Dutton;
- open agricultural landscape dominated by grazing and open paddocks;
- areas of native vegetation, generally along ridgelines, road verges and creek lines;
- farm buildings including dwellings and other structures;
- the former Julia Creek Barite mine located close to the eastern boundary of the site;
- infrastructure including 275kV and 11kV electricity transmission lines; and
- a range of major regional and collector roads, including:
 - Thiele Highway;
 - Sturt Highway;
 - Truro Road;
 - Belvidere Road;
 - Eudunda Road;
- a range of minor roads, including:
 - Mosey Road;
 - Bagot Well Road;
 - Camel Farm Road;
 - Flagstaff Hill Road;
 - Teagle Road;

- Weaver Road;
- Noack Road;
- Holding Road;
- Travers Road;
- Ben Lomond Road.

The closest Department of Environment, Water and Natural Resources reserves to the proposed development site are Kaiserstuhl Conservation Park (approximately 25 kilometres south) and Brookfield Conservation Park (approximately 32 kilometres east). Three existing Heritage Agreements under the *Native Vegetation Act 1991* are situated 4.0 kilometres south (Heritage Agreement No.287) and 6.0 kilometres east of the project area (Heritage Agreement 677 and 1314). These areas are outside of the site of the proposed development.

3.1 Visual Characteristics

The locality may be broadly defined around the extent to which the turbines may be visible, however this will vary from different positions and with varying degrees of clarity.

The landform of the area is defined by numerous ridgelines that run north-south through the site creating a series of parallel ridges, wide open valleys, tablelands and isolated topographic features. It is noted however, that the development site is located within a modified landscape which contains the following elements:

- open agricultural landscape dominated by grazing and open paddocks;
- scattered areas of native vegetation, generally along road verges and creek lines;
- farm buildings including dwellings and other structures;
- a range of arterial, major local roads and minor local roads;
- former mines including Benita Copper and Newlands Barite mines;
- infrastructure electricity distribution/transmission lines; and
- a range of major regional and collector and local roads.

The WAX Design Landscape and Visual Assessment report (Section 3.1) describes the locality as having five distinct landscape character areas which largely follow the four cardinal directions (north, east, south and west):

To the south of the subject land is the Northern Barossa Valley, which has a denser level of development and high quality agricultural landscape with a variety of visual interest created by the smaller lot sizes and variety of land uses (grazing, vineyards, animal husbandry). The Western

Pastoral Lands and ridgelines stretch along the western edge of the subject locality and are defined by a more open agricultural landscape with rolling ridgelines. The subject locality itself and to the north are the Central Tablelands; these are characterised by rolling landforms and valleys associated with the Northern Mount Lofty Ranges and have a typically open grass grazing land use with minimal vegetation. To the east of the subject locality is Mount Rufus and associated north/south ridgelines which transition further west into the Western Murray River Plains, the ridgeline associated with Mount Rufus forms a distinct division between the subject locality and the Murray River Plains.

The land cover associated with the locality of the development site reflects various agricultural land uses, including arable and pastoral practices, and is consistent across the locality with little variation in scale or function. The landscape surrounding the site is dominated by grazing with open paddocks defined by fenced boundaries and occasional trees to fence lines and creek lines. The land use that occurs on the open valley floor between the local ridgelines and across the tablelands associated with Bald Hill is more diverse, with areas of arable cropping and grazing.

This land cover creates a patchwork character to the landscape with changes in colour and texture as a result of the different agricultural practices. Typically, the land cover and associated vegetation are low lying with limited visual screening to the west, south and north. Areas to the east associated with the Mount Rufus ridgelines and the northern outskirts of Nuriootpa possess more extensive tree cover. Vineyards are a notable visual element creating a defined pattern to the northern outskirts of Nuriootpa, emphasising the landscape qualities of the Barossa Valley.

In addition, the WAX Design Landscape and Visual Assessment report (Sections 3.2 and 3.3) describes the land use and land cover and landform and geomorphology as follows:

The landform of the area is defined by numerous ridgelines that run north-south through the site, creating a series of parallel ridges, wide open valleys, tablelands and isolated topographic features. The progressive geological faulting and folding processes that have formed the Southern Flinders Ranges and Northern Mount Lofty Ranges dominate the area, creating numerous undulating ridges and escarpments.

The site is dominated by the prominent geomorphology of the Light Ranges and the northern extent of the Barossa Ranges that create north/south orientated ridgelines. Further south of the project site, the ridgelines decrease in height and become more fragmented, creating isolated hills and promontories, which produce an elevated, undulating landscape.

East is an expansive low lying landscape associated with the Murray Plains. This open landscape character creates distant east and southeast views from elevated locations such as Mount Rufus.

To the west are the ridges and valleys formed by the Nain Ranges, Greenock Ranges and Light Ranges, which create overlapping north/south landforms of an approximate 100-200m vertical variance to the valleys in between, which is typical of the area.

To the north, the geomorphology of the landscape increases in scale and complexity with more prominent and more widely spaced ridges and valleys, particularly in relation to the Tothill and

Scrubby Ranges and the Belalie Plain. These landforms continue in a north/south direction before transitioning into the more dramatic topography of the Southern Flinders Ranges.

In general terms, the area in which the development is proposed is one of a pleasant open rural character, comprising a variety of natural and man-made features, although highly modified by agricultural activities which has over time resulted in clearance of native vegetation.

3.2 Environmental Characteristics

The environmental qualities of the development site have been surveyed by Umwelt (formerly EBS Ecology) on numerous occasions since 2015. Since originally surveying the site in 2015, additional vegetation assessment has been undertaken, along with bird and bat monitoring during 2021 and 2022. This survey data, along with additional survey work during 2023 and 2024 informs the current optimised layout and development application.

The assessment of the vegetation undertaken by Umwelt is contained in the Native Vegetation Data Report, and the Bird and Bat Risk Assessment - Addendum, which are contained in Volume 2 - Technical Reports.

Umwelt have recorded eight vegetation associations with the site and these are shown in Table 7 below.

Table 9 - Overall vegetation associations³

Vegetation association	Description	Area (ha) in Project Area	Location
A1	<i>Lomandra</i> spp. Tussock Grassland	156.50	Wind Farm
A2	<i>Austrostipa</i> spp. Grassland	1,961.12	Wind Farm
A3	<i>Eucalyptus leucoxylon pruinosa</i> Open Woodland	48.05	Wind Farm
A4	<i>Juncus</i> spp. and <i>Cyperus</i> spp. Sedgeland	26.59	Wind Farm
B1	<i>Eucalyptus odorata</i> and <i>E. porosa</i> Open Woodland	0.13	Transmission Line Route
B2	<i>E. camaldulensis</i> Woodland	0.39	Transmission Line Route
B3	<i>E. leucoxylon pruinosa</i> Open Woodland	0.19	Transmission Line Route
C1	<i>E. leucoxylon pruinosa</i> Open Woodland	1.71	Transmission Line Route
D1	<i>Austrostipa</i> spp. Grassland	5.05	Transmission Line Route
E1	<i>E. leucoxylon pruinosa</i> Open Woodland	41.21	Transmission Line Route
E2	<i>E. odorata</i> and <i>E. porosa</i> Open Woodland	1.21	Transmission Line Route

³ Excludes cropping and planted species

Vegetation association	Description	Area (ha) in Project Area	Location
E3	<i>Lomandra effusa</i> and <i>Austrostipa</i> sp. Grassland	1.64	Transmission Line Route

The ecological assessment identified 59 native fauna species, including two amphibians, five reptile species, three mammals, forty-two birds (six exotic) and seven bats (all native) within the development site. One reptile and three bird species of national or State conservation significance were identified:

- Pygmy Blue-Tongue Lizard (*Tiliqua adelaidensis*) nationally and State Endangered;
- Diamond Firetail (*Stagonopleura guttata*) nationally and State Vulnerable;
- Rainbow Bee-Eater (*Merops ornatus*) nationally migratory; and
- Blue-Winged Parrot (*Neophema chrysostoma*) nationally and State vulnerable.

A sizeable proportion of the development site is considered a possible or likely habitat for the Pygmy Blue-Tongue Lizard (PBTL) due to the open grasslands, slopes and spider holes observed across the site. Areas considered unlikely to contain PBTLs are cropping paddocks, very steep ground, very rocky areas or areas with no evidence of spider holes. Umwelt have identified potential impacts on the PBTL from the development and recommended a range of mitigation methods, including:

- utilising cropping areas as much as possible for wind turbine generators, infrastructure areas and access tracks;
- micro-siting of infrastructure including the transmission line, where possible, around possible PBTL habitat; and
- relocation of PBTL, where possible to reduce potential impacts.

An Environment Protection and Biodiversity Conservation (EPBC) referral will be submitted for the optimised layout.

Two nationally threatened ecological communities, listed under the *Environment Protection and Biodiversity Conservation (EPBC Act) 1999*, were investigated and assessed for qualification within the project boundary. The listed ecological communities being:

- Iron-Grass (*Lomandra spp*) Natural Temperate Grassland (INTG) of South Australia; and
- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia.

No impact is expected to the Peppermint Box Woodland as a result of the optimised project layout, as the siting of infrastructure has avoided impact to Peppermint Box Woodland.

Areas surveyed during the 2023 and 2024 survey only classified the Iron-grass Natural Temperate Grassland (INTG) as condition class C. However, due to the abnormally dry spring conditions in 2023, broad leaf

herbaceous forbs were hard to detect. These areas may be classified as condition class B and INTG may be impacted based on the optimised project layout.

Four Wedge-tailed Eagle nests we recorded within a *Eucalyptus leucoxylon ssp.* woodland area situated just outside of the disturbance footprint but within the development area. Other native fauna species recorded during surveys included seven bat species.

All data from these assessments have informed the final design as now submitted for development authorisation of the optimised layout, to minimise potential impact on flora and fauna including threatened species.

4 SOCIO-ECONOMIC EFFECTS

4.1 Economic Effects

Economic modelling undertaken by Hudson Howells Strategic Management Consultants (Socio-Economic Impact Assessment contained in Volume 2 of the development application documentation) indicates that the proposed development will result in significant economic and social benefits at State, regional and local levels.

From a State perspective, the proposed development is expected to generate over \$662 million of value added in the State of South Australia (SA) over the period of construction. Once operational, the proposed development is estimated to support annually \$20.7 million of value added in SA, and support directly and indirectly in the order of 91 jobs per year. 3,178 person years of employments in South Australia would be supported during the construction period.

The proposed development is also expected to generate significant additional value adds at both regional and local levels. From a regional perspective, the modelling indicated that the proposed development will generate \$285 million of value added (contribution to Gross Regional Product) in the region (Barossa and Lower North) and an average of 1,652 person years of employment over the construction period. Once operational the proposed development is estimated to support annually \$11.2 million of value added in the region and approximately 63 jobs per year.

From a local perspective, assuming the proposed development draws labour from both the Goyder and Light Regional Council areas, the modelling indicates that the proposed development will generate:

\$85 million of value added (contribution to Gross Regional Product) in the LGA of Goyder and an average of 511 person years of employment over the construction period. Once operational the proposed development is estimated to support annually \$4.1 million of value added in the region and support directly and indirectly approximately 24 jobs per year.

\$92 million of value added (contribution to Gross Regional Product) in the LGA of Light and an average of 552 person years of employment over the construction period. Once operational the proposed development is estimated to support annually \$4.0 million of value added in the region and support directly and indirectly approximately 23 jobs per year.

4.2 Alignment with South Australian Energy Policy

The South Australian Government has identified that South Australia is in a strong position to become a global leader in clean energy production. “As Australia seeks to achieve net zero carbon emissions by 2050, energy derived from renewable sources will need to produce about 40 times the total energy generation capacity of today’s national electricity market to achieve net zero, including 1,900 gigawatts (GW) of solar and 175 GW of onshore and offshore wind capacity”.⁴ The proposed development is directly aligned with the strategic intent of the South Australian Government to support and encourage development of renewable energy projects.

Furthermore, the proposed development is aligned with the State Planning Policy relating to energy, which states:

State Planning Policy 12 - Energy

The provision of sustainable, reliable and affordable energy is essential in meeting the basic needs of communities and ensuring the long-term supply of key services across South Australia. Industries and business rely on energy for their viability while households rely on it daily to support their lives, health and comfort. The production of energy and associated infrastructure also contributes significantly to the state’s economy.

The policies which support the ongoing provision of sustainable, reliable and affordable energy, that is, the SPP 12, include:

- 12.1 Development of energy assets and infrastructure (including ancillary facilities) where the impact on surrounding land uses, regional communities and the natural and built environment can be minimised.*
- 12.2 Facilitate renewable sources of energy supply, such as solar and wind, at the local level.*
- 12.3 Provide for strategic energy infrastructure corridors to support the interconnection between South Australia and the National Electricity Market.*
- 12.4 Development in the vicinity of major energy infrastructure locations and corridors (including easements) is planned and implemented to maintain the safe and efficient delivery and function of the infrastructure.*
- 12.5 Enable industries to reduce carbon emissions by supporting energy efficient urban and building designs.*
- 12.6 Facilitate energy technologies that support a stable energy market and continued energy supply and do not adversely affect the amenity of regional communities.*

⁴ Hydrogen and Renewable Energy Act Issues Paper by Department for Energy and Mining, November 2022.

In addition to policies for renewable energy, the SASP contains SPP 5: Climate Change:

SPP 5: Climate Change

Climate change will impact all areas of our society. Our future prosperity, the liveability of our cities and towns, the health and wellbeing of our communities and the resilience of our built and natural environment all depend on how well we adapt to and mitigate the impacts of climate change.

The objective of SPP 5 is to “provide for development that is climate ready so that our economy, communities and environment will be resilient to climate change impacts” (SASP). The South Australian Government Climate Change Action Plan 2021-2025 “describes government-led actions to help to build a strong, climate smart economy, further reduce greenhouse gas emissions, and support South Australia to adapt to a changing climate. Implementation of the Action Plan will deliver the Directions for a Climate Smart South Australia that was released in December 2019 and drive further progress towards statewide goals of reducing greenhouse gas emissions by more than 50% by 2030 and achieving net zero emissions by 2050” (Climate Change Action Plan).

South Australia has achieved its Kyoto target of restricting emissions levels to less than 36.4 Mt CO₂-e through to 2012 and is now working towards the 2050 target. Continuing to provide alternative sustainable energy sources is viewed as a technique to a reduction in greenhouse gas emissions. The 2022 South Australia Climate Change Actions identify government actions “that will help to build a strong, climate ready economy, further reduce greenhouse gas emissions, and support adaptation to a changing climate”. The Clean Energy objectives of the Climate Change Actions are acceleration the renewable energy economy; and development a world-class renewable hydrogen industry. The associated actions include:

- Drive the continued development of renewable energy and energy storage;
- Fast-track construction of a new South Australia to New South Wales high capacity electricity interconnector;
- Regulation of emerging technology and services;
- Implement energy demand management and productivity programs;
- Increase renewable electricity generation in remote communities;
- Support the scale-up of renewable hydrogen production for export and domestic use.

Twin Creek Wind Farm and Energy Storage project aligns with the State Government's policy direction and will contribute to achieving a climate ready economy.

4.3 Community Benefit Program

RES Australia is committed to supporting the regional communities that host our renewable energy projects and has established various community enhancement programmes at our operating wind farms elsewhere in Australia and internationally. As the Development Application moves through the planning process we will be reaching out to Local Councils, project neighbours, community groups and businesses to discuss and design a shared benefit program that meets community needs. The programme would be established to benefit the community across the three Council areas and would run for the operating life of the Project.

Key stakeholders will be consulted in establishing the community enhancement program, including each of the three Councils and local community and sporting groups. The final structure and amount of community enhancement programmes will be finalised prior to construction and will seek to have input from a diverse range of community members.

Funding may also be sought for sponsorship of sporting clubs, community events or physical enhancement projects in the community. RES Australia is committed to supporting the community and has already provided sponsorship to the Kapunda Football Club, Kapunda Tennis Club, Kapunda Golf Club, Angaston Football Club, Kapunda Bowling Club, and the Kapunda High School Centenary Foundation Inc.

In addition to an agreed community benefit programme, Twin Creek Wind Farm will provide local economic benefit, the employment of local contractors through the establishment of a contractors' register list, and increased business opportunities as flow-on effects in nearby townships. RES will be seeking local procurement, training and employment opportunities. Employment and procurement benefits from the Project can extend through local supply chains to suppliers of fuel, vehicle servicing, catering, earth moving, construction, fencing, cleaning, equipment, tools and accommodation. Many other businesses can also benefit such as cafés, hotels, uniform suppliers and local shops.

4.4 Summary of Project Benefits

The key benefits of the construction and operation of the proposed development are summarised below:

- contribute to the achievement of the National and State objectives for the sustainable production of energy and the abatement of greenhouse gas emissions;
- additional electricity generation into the National Electricity Market to be able to satisfy forecast increased electricity demands, being enough clean energy to provide for approximately 206,000 South Australia homes each year;
- the development will assist in adding stability to local energy sector in South Australia via the inclusion of battery storage in combination with the wind farm, providing further renewable energy for the State;
- the provision of an additional, sustainable energy source to provide for an alternate energy source to fossil fuels;

- the displacement of energy from fossil fuels, offsetting carbon emissions with a value of 32.8 million per annum for the life of the project;
- the provision of management and mitigation measures to ensure the project does not compromise environmental values either during construction or operation, and does not place stress on the existing environmental values at the locality including ecological, heritage, soils or water quality;
- local economic benefit, particularly to the landowners within the project area and to the wider community. The construction phases of the project in particular will involve the employment of local contractors and increased business opportunities as flow-on effects in nearby townships;
- provision of a community enhancement programme;
- during construction the wind farm would generate an estimated an average of over 3,178 jobs per year of employment in South Australia;
- Once operational the wind farm is estimated to support annually \$20.7 million of value added in South Australia, and support directly and indirectly in the order of 91 jobs per year state-wide; and
- the proposed development can co-exist with the grazing and cropping land use activities on the subject land which can continue during the operation of the proposed development.

Further information relating to the social and economic aspects of the project is provided in the Hudson Howells Twin Creek Socio-Economic Impact Assessment report in Volume 2 of the application.

The benefits of the proposed development as outlined above are considered in the context of the potential impacts of the project. The potential impacts of the proposed optimised development are outlined in Section 5 - Project Assessment (below).

An assessment of the social, environmental, and economic impacts of the Twin Creek Wind Farm and Energy project were previously assessed during the consideration and determination of Development Application 422/E003/17 and granting of the Development Plan Consent on 24 October 2019. At that time, the project was assessed as being appropriate.

5 PROJECT ASSESSMENT

5.1 Land Use & Zoning

A range of technical assessments were undertaken as part of the preparation of the optimised development, as listed in Section 1.4 of this report and contained in Volume 2 - Technical Reports.

The site of the proposed development is located across three local government areas, including the Light Regional Council, the Regional Council of Goyder and the Mid Murray Council. Infrastructure including WTGs, BESS, on-site substation, operations and maintenance compound, temporary construction compounds (including temporary concrete batching plant) are located within the Light Regional Council and Regional Council of Goyder. The transmission line transverses from within the Light Regional Council area to the Mid Murray Council area and terminates with a terminal substation east of Truro.

The proposed development (development application 313/V039/23) is located within the Rural Zone of the Planning and Design Code (version 2023.16 dated 9 November 2023). A number of Overlays apply to various allotments (sections) (but not all land parcels) within the project area, including:

- Water Resources Overlay
- Native Vegetation Overlay
- Hazards (Flooding - Evidence Required) Overlay
- Hazards (Bushfire - Regional) Overlay
- Hazards (Bushfire - General) Overlay
- Environment and Food Production Area Overlay
- Heritage Adjacency Overlay
- Local Heritage Place Overlay
- State Heritage Place Overlay
- Dwelling Excision Overlay
- Limited Land Division Overlay
- Murray-Darling Basin Overlay
- Key Outback and Rural Routes Overlay
- Resource Extraction Protection Area Overlay.

A summary of the land parcels within the project and the relevant Zone and Overlays is contained in **Attachment D**.

Some of the Overlays will have no relevance to the proposed development, for example the Dwelling Excision and Limited Land Division Overlays, as there are no dwellings or land division proposed. Similarly,

there is no urban encroachment or land division proposed that would impact the environmental and food production area as sought by the Environment and Food Production Areas Overlay.

An assessment has been undertaken against all relevant policies of the Planning and Design Code and this is contained in the MasterPlan Development Assessment Report contained in Volume 2. Table 8 below comprises a summary of the assessment of the optimised proposed development against the relevant provisions of the Rural Zone and some applicable General Development Policies of the Code:

Table 10: Summary of Assessment Against the Planning and Design Code

PLANNING POLICY	DISCUSSION/ASSESSMENT
Rural Zone	
Table 4 - Restricted Development Classification	
Renewable energy facility within any of the following: a) Significant Landscape Protection Overlay; and b) Character Preservation Area Overlay.	The site of the proposed development is not located within the Significant Landscape Protection Overlay or the Character Preservation Area Overlay and therefore would not be a restricted form of development.
Desired Outcome	
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.	Generation of energy from renewable sources is specifically envisaged by the Desired Outcome of the Rural Zone.
Performance Outcomes	
PO 1.1 The productive value of rural land for a range of primary production activities and associated value adding, processing, warehousing and distribution is supported, protected and maintained. DTS/DPF 1.1 Development comprises one or more of the following land uses: ... (p) Renewable energy facility	Renewable energy facilities are identified as a land use which is envisaged within the Rural Zone. In addition, primary production activities would continue to occur on the subject land, satisfying the intent of this policy is satisfied.
PO 9.1 Renewable energy facilities and ancillary development minimises significant fragmentation or displacement of existing primary production.	Development of the wind farm allows the continued use of the majority of the subject land for primary production purposes. Wind turbine generators are designed and sited to allow grazing activities to continue and do not require fragmentation of land. Ancillary elements of the proposed development, such as construction compounds, substations and battery storage facilities comprise approximately 7-10 hectares of land. This equates to a very small area of the entire subject land and is considered a minor removal or extraction of land from primary production purposes for another form of envisaged land use.
General Development Policies - Infrastructure and Renewable Energy Facilities	

PLANNING POLICY	DISCUSSION/ASSESSMENT
Desired Outcome	
<p>DO1</p> <p>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.</p>	<p>Twin Creek Wind Farm provides an efficient form of renewable energy facility that does not create unreasonable hazard, environmental impact or visual impact.</p>
Performance Outcomes	
<p>PO 1.1</p> <p>Development is located and designed to minimise hazard or nuisance to adjacent development and land uses.</p>	<p>A detailed assessment of the potential hazards and nuisance has been undertaken and the potential hazards and nuisance can be satisfactorily addressed.</p>
<p>PO 4.1</p> <p>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.</p>	<p>There is no identified impact on air transport safety, airfields and landing areas.</p>
<p>PO 4.2</p> <p>Facilities for energy generating, power storage and transmission are separated 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.</p>	<p>The optimised wind farm layout comprises the following separation distances:</p> <ul style="list-style-type: none"> - a minimum setback of 2,000 metres from a non-stakeholder dwelling; - there are no known tourist accommodation facilities within the locality (that is, within 1,500 metres of the nearest wind turbine generator); <ul style="list-style-type: none"> o there are no townships, settlements or urban zones within 2,700 metres of any wind turbine generators; and o the onsite construction operations and maintenance, battery storage and substation compound is set back over 1,000 metres from the nearest public road Mosey Road (at its closest point). <p>The separation distances are considered appropriate to satisfy PO 4.2 to minimise risk to public safety from fire or equipment malfunction.</p>
<p>PO 4.3</p> <p>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.</p>	<p>The layout will provide for appropriate access tracks, fire fighting control measures (including dedicated system for BESS, fire-fighting water storage and areas cleared of vegetation) to manage bushfire hazard.</p> <p>The Statement of Commitments (Attachment E of this document) provides further details of the proposed management techniques and the Fire and Hazard Management Plans to be prepared.</p>

PLANNING POLICY	DISCUSSION/ASSESSMENT
<p>PO 5.1 Electricity infrastructure is located to minimise visual impacts through techniques including:</p> <p>(a) siting utilities and services:</p> <ol style="list-style-type: none"> i. on areas already cleared of native vegetation ii. where there is minimal interference or disturbance to existing native vegetation or biodiversity <p>(b) grouping utility buildings and structures with non-residential development, where practicable.</p>	<p>The onsite compound containing the substation, construction/maintenance compound and battery storage facilities is sited within existing paddocks and well separated from the nearest public road and non-stakeholder dwellings. The terminal substation is sited clear of areas of native vegetation and the visual impact minimised via proposed screen landscaping.</p>
<p>PO 5.3 Battery storage facilities are co-located with substation infrastructure where practicable to minimise the development footprint and reduce environmental impacts.</p>	<p>The battery storage facility is co-located with the construction compound.</p>
<p>PO 7.1 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.</p>	<p>The development incorporates an overhead transmission line for approximately 15.0 kilometres from the on-site substation to the existing overhead Robertstown - Tungkillo transmission line east of Truro.</p>
<p>PO 8.1 Visual impact of wind turbine generators on the amenity of residential and tourist development is reduced through appropriate separation.</p> <p>DTS/DPF 8.1 Wind turbine generators are:</p> <p>c) set back at least 2000m from the base of a turbine to any of the following zones:</p> <ol style="list-style-type: none"> i. Rural Settlement Zone ii. Township Zone iii. Rural Living Zone iv. Rural Neighbourhood Zone <p>with an additional 10m setback per additional metre over 150m overall turbine height (measured from the base of the turbine).</p> <p>(b) set back at least 1500m from the base of the turbine to non-associated (non-stakeholder) dwellings and tourist accommodation</p>	<p>A detailed visual assessment of the optimised layout has been undertaken by Wax Design, which considers that the visual impact of the wind turbine generators on amenity of residential and tourist development is reduced through appropriate separation.</p> <p>It is noted that DTS/DPF 8.1 is satisfied by the following separation distances:</p> <ul style="list-style-type: none"> • based on a wind turbine generator of 220.0 metres tip height, the setback distance from a Rural Settlement Zone, Township Zone, Rural Living Zone and Rural Neighbourhood Zone would be 2,700 metres. The nearest settlement zone is that of Dutton, within the Mid Murray Council area. Dutton Settlement Zone is approximately 6.0 km from the nearest wind turbine generator; • there is a minimum setback of 2,000 metres from a non-involved dwelling; • A search of currently available information does not register any tourist accommodation within 1,500 metres of the site and therefore a wind

PLANNING POLICY	DISCUSSION/ASSESSMENT
	<p>turbine generator. It is noted that the majority of the tourist accommodation within the locality is within Kapunda. There is some scattered tourist accommodation on farm properties, with the nearest one identified as being at Allendale North, in excess of 8 kilometres from the site of the wind farm.</p>
<p>PO 8.2 The visual impact of wind turbine generators on natural landscapes is managed by:</p> <ul style="list-style-type: none"> (a) designing wind turbine generators to be uniform in colour, size and shape (b) coordinating blade rotation and direction (c) mounting wind turbine generators on tubular towers as opposed to lattice towers. 	<p>All of these design parameters are satisfied in the optimised layout.</p>
<p>PO 8.3 Wind turbine generators and ancillary development minimise potential for bird and bat strike.</p>	<p>A detailed bird and bat risk assessment has been undertaken for the proposed development. Measures such as retention of high quality woodland areas, retention of trees with hollows, micro-siting of infrastructure to avoid scattered trees and woodland areas, along with a 500 metre buffer around the existing Wedge-tailed Eagle nests all contribute to minimising the potential for bird and bat strike from wind turbine generators and ancillary infrastructure.</p>
<p>PO 8.4 Wind turbine generators incorporate recognition systems or physical markers to minimise the risk to aircraft operations. DTS/DPF 8.4 No Commonwealth air safety (CASA / ASA) or Defence requirement is applicable.</p>	<p>The turbines and meteorological monitoring towers used in the TCWF must be reported to Civil Aviation Safety Authority (CASA) and the RAAF in accordance with AC 139-08(1) Reporting of Tall Structures and marked on the appropriate aeronautical charts. The risk assessment for the TCWF indicates that the overall risk to aviation is Low. A risk assessment of Low indicates that the wind farm is 'not a hazard to aircraft safety'.</p> <p>The TCWF is not a hazard to aircraft safety; and therefore, there is no need to install additional obstacle marking or obstacle lighting.</p> <p>The conclusion of the aviation assessment undertaken was that with the tallest wind turbine generator with an overall height of 706.1-metres AHD (2317 ft AMSL); the proposed Twin Creek Wind Farm does not interfere with any airspace procedures or aviation related communications, navigation or surveillance facilities for both civil or military aerodromes and airspace.</p>
<p>PO 8.5</p>	<p>Wind monitoring masts are existing and are appropriately marked for visibility.</p>

PLANNING POLICY	DISCUSSION/ASSESSMENT
Meteorological masts and guidewires are identifiable to aircraft through the use of colour bands, marker balls, high visibility sleeves or flashing strobes.	

A detailed assessment against all of the relevant planning policy has been undertaken by MasterPlan, which is contained in Volume 2 of the application documents. In conclusion, the development assessment report by MasterPlan concludes that the proposed development with the optimised layout is a suitable form of development within the Rural Zone of the Planning and Design Code.

5.2 Ecological Assessment

Umwelt (Australia) Pty Ltd (Umwelt) (formerly EBS Ecology) was engaged by RES Australia to assess the potential flora and fauna constraints for the proposed Twin Creek Wind Farm and Energy Storage facility. The following is a summary, and extracts of the investigations, findings and recommendations made by Umwelt. The Native Vegetation Data Report and Twin Creek Bird and the Bat Risk Assessment - Addendum are contained within Volume 2 - Technical Reports of the application documents.

5.2.1 Investigations Undertaken

Investigations, findings and recommendations of Umwelt have informed the design, siting and layout of infrastructure for both the approved development and the optimised layout.

Ecological investigations and surveys undertaken by Umwelt to inform the original development application, and the optimised layout are extensive, as illustrated in the table below. Furthermore, the original development application was subject to a Native Vegetation Act application (and approval) and a referral (EPBC referral) to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) pursuant to the Environment Protection and Biodiversity Conservation Act 1999. New native vegetation and EPBC referrals will be undertaken in respect of the optimised layout.

Table 11: Umwelt Surveys

Survey type	Date	Season	Description
Flora and fauna assessment	8-11 September 2015	Spring	General assessment and condition rating of vegetation, bird, bat and PBTL assessment
Targeted Lomandra assessment	8 October 2015	Spring	Assess whether Lomandra Grasslands qualified as a TEC
Bird survey	3-5 February 2016	Summer	Revisit bird count surveys established in spring 2015
Bird survey	18-20 April 2016	Autumn	Revisit bird count surveys established in spring 2015

Survey type	Date	Season	Description
Bird survey	26-28 August 2016	Winter	Revisit bird count surveys established in spring 2015 and undertake nest checks
Targeted PBTB survey and Bat survey	22 Feb - 4 March 2016	Summer/Autumn	Detailed assessment of PBTB habitat and occupation across the site. Anabat survey repeated from September 2015 survey due to poor weather conditions.
Additional PBTB survey	5, 8 and 14 April 2016	Autumn	Investigate additional routes within areas of likely habitat
Additional PBTB survey	31 Oct - 11 Nov 2016	Spring	Targeted areas and additional infrastructure
Additional PBTB survey	22 Nov - 25 Nov 2016	Spring	Targeted areas and additional infrastructure
Vegetation Assessment	23, 24, 29, 30 Nov and 1 Dec 2016	Summer	Vegetation assessment of additional turbine, substation and transmission line
Additional PBTB survey	6-9 December 2016	Summer	Targeted areas and additional infrastructure
Additional PBTB survey	9 Jan - 13 Jan 2017	Summer	Targeted areas and additional infrastructure
Vegetation Assessment	5 April 2017	Autumn	Vegetation assessment of 2 nd substation and potential shift of transmission line easement
Seasonal bird and bat surveys	29 th to the 31 st of July 2020	Winter	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	14 th to the 1 st of December 2020	Summer	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	8 th to the 10 th of February 2021	Summer	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	21 st to the 23 rd of April 2021	Autumn	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	3 rd to the 6 th of August 2021	Winter	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	25 th to the 27 th of October 2021	Spring	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Seasonal bird and bat surveys	2 nd to the 4 th of February 2022	Summer	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).

Survey type	Date	Season	Description
Seasonal bird and bat surveys	20 th to the 22 nd of April 2022	Autumn	Seasonal bird survey for implementation of a Bird and Bat Management Plan (BBMP).
Native Vegetation Assessment	30 th of October to the 1 st of November 2023	Spring	Vegetation Assessment in accordance with the <i>Native Vegetation Act 2017</i> for implementation into a Native Vegetation Council Clearance Report.
Native Vegetation Assessment	10 th to the 12 th of January 2024	Summer	Vegetation Assessment in accordance with the <i>Native Vegetation Act 2017</i> for implementation into a Native Vegetation Council Clearance Report.
Additional PBTL survey	18 - 22 March 2024	Autumn	Targeted areas and additional infrastructure
Additional PBTL survey	8 th to the 12 th of April 2024	Autumn	Targeted areas and additional infrastructure

The satisfaction of the Significant Environmental Benefit (SEB) requirements of the *Native Vegetation Act* associated with the original application incorporated both an on-ground SEB offset and financial contribution to the Native Vegetation Fund. More specifically, the on-ground SEB offset was within the land of involved landowners and incorporated a revegetation program. The proposed on-ground SEB offset continues to be part of the proposed development and is further described in the Management Plan attached to the Native Vegetation Data Report. RES continue to be committed to delivering both state and EPBC offsets as required and this has been incorporated into the Statement of Commitments.

The assessment methodology to determine the required SEB has altered since the original native vegetation assessment was undertaken and consent issued (December 2017). The Native Vegetation Data Report for the optimised layout utilises a worst-case scenario in relation to clearance and the required SEB offset. That is, calculation of areas required for clearance of vegetation for the wind turbine generators and ancillary infrastructure, along with the infrastructure associated with construction of the transmission line has been overstated and overcalculated. By way of example, the SEB calculated for the transmission line has assumed clearance of vegetation within the entire transmission line corridor, however this is not the intended construction methodology. The poles and infrastructure required for the transmission line will be micro-sited to avoid vegetation, including scattered trees and would not require complete clearance. This micro-siting also applies to the wind turbine generator hard stand areas, the access tracks and infrastructure areas (i.e. construction compounds). During the final design of the development, the infrastructure will be micro-sited to minimise native vegetation clearance. The finalised clearance and SEB will then be reviewed by the Native Vegetation Council.

5.2.2 Ecological Assessment

During the field surveys⁵ 59 native fauna species were recorded as present within the development area, including two amphibians, five reptile species, 3 mammals, 42 birds (6 exotic) and 7 bats (all native). One reptile and two bird species of national conservation significance have been identified within the development area:

- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) (PBTL) nationally endangered;
- Rainbow Bee-eater (*Merops ornatus*) nationally migratory, and
- Blue-winged Parrot (*Neophema chrysostoma*) nationally vulnerable.

The Hooded Robin, Diamond Firetail, Southern Whiteface and Blue-winged Parrot are newly listed species under the EPBC Act. During the field survey undertaken by EBS in 2023, the Diamond Firetail (*Stagonopleura guttata*) (nationally and State Vulnerable), was observed.

The work undertaken in respect of the development area also included investigating and assessing whether some of the vegetation qualified as either of two nationally threatened ecological communities, listed under the EPBC Act. The listed ecological communities being:

- Iron-Grass (*Lomandra* spp.) Natural Temperate Grassland of South Australia; and
- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia.

The habitats within the project boundary included the habitat of the nationally endangered Pygmy Blue-tongue Lizard (PBTL). The locality was also identified as potential habitat for the nationally vulnerable Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*). The Flinders Worm-lizard is endemic to South Australia but were not detected during surveys. Targeted surveys will confirm the presence or absence of this species to inform the EPBC referral submission.

Other than these two species, none of the reptile species recorded within the site boundary have a conservation rating and can be classed as common in suitable habitats.

5.2.3 Peppermint Box (*Eucalyptus odorata*)

The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia community was listed as critically endangered under the EPBC Act in 2007, due to a severe decline in distribution and an ongoing loss of integrity. The ecological community is dominated by *Eucalyptus odorata*, however other species of Eucalypt commonly co-occur. A grassy understorey is most often present, although some shrubs may exist such as *Bursaria spinosa* (Sweet Bursaria) and *Acacia pycnantha* (Golden Wattle). The majority of remnants occur between Victor Harbour and Port Augusta, encompassing the mid-north region, as well as the Adelaide region, Mount Lofty Ranges and part of Yorke Peninsula. The key threats to this community are clearing, grazing and invasion by weeds.

⁵ EBS 2015 field survey

The site of the development was assessed for any Peppermint Box that may qualify against the criteria outlined in EPBC Act Policy Statement 3.7, Nationally Threatened Species and Ecological Communities, Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia. A patch of Peppermint Box was identified within the principal wind farm development area, during the 2015 survey. It wasn't dominated by *Eucalyptus odorata*; it was a large mix of *E. odorata*, *E. porosa* and *E. gracilis*, and therefore did not qualify as the listed community. Patches of woodland dominated by Peppermint Box were observed during late spring/early summer 2016 survey, whilst surveying additional areas including the proposed transmission line.

There are six Peppermint Box Woodland sites within the proposed development area. Only one of these six sites qualifies for EPBC listing and this is adjacent to the transmission line route. An assessment against the criteria found them to be Class C which is not listed under the EPBC Act but is 'amenable to rehabilitation'. Based on the optimised proposal the final clearance impact in Peppermint Box Woodland is expected to be small (insignificant), fitting with minimum requirements under powerlines and should not (in itself) require an EPBC referral (subject to spring survey and final design).

5.2.4 Iron Grass (*Lomandra effusa*)

Iron-grass Natural Temperate Grassland of South Australia are unique to South Australia, with their main distribution on the slopes and hills of the Mount Lofty Ranges, west of the River Murray and throughout the Mid North. The community generally occurs on gentle slopes of low hills above 380 metres above sea level. Major threats to this community include clearance and fragmentation, inappropriate grazing regimes, and weed invasion.

The Iron-grass Grasslands is a grassland dominated by Iron-grasses (*Lomandra multiflora* ssp. *dura* and/or *Lomandra effusa*), with tussock-forming (clumping) grasses, low shrubs and a range of other native plants in the ground layer. Trees and tall shrubs are generally absent or very sparse (less than 10 % cover). To qualify as the EPBC listed community, patches must be at least 0.1 ha in size and meet native species diversity and density criteria.

The project area contains a total of 23 Lomandra Grassland sites. Of the 23 Lomandra Grassland sites assessed, only one potential location site qualified as an EPBC listed community, that site being the terminal substation location. During the survey in 2023, this area was classified as condition class C, due to the lack of broad leaf herbaceous forbs. However, the lack of spring species may be due to the abnormally dry spring during this time. Following identification of the Lomandra Grassland at this location, an alternative location for the terminal substation was selected within cropping land, in order to avoid impact to the area of Lomandra Grassland that qualified as an EPBC listed community.

5.2.5 Threatened Flora Species

A total of 168 flora species (92 native flora species and 76 exotic flora species) were recorded within the project boundary². There was no conservation rated flora species identified within vegetation assessments completed during the September 2015 and November 2016 surveys. Surveys were undertaken by Umwelt (2023/2024) that identified one threatened flora species within the proposed Development Area: *Maireana rohrlachii* (Rohrlach's Bluebush) State Rare.

5.2.6 Threatened Fauna Species

The habitats present within the project area were assessed for the nationally endangered Pygmy Blue-tongue Lizard (PBTL) (*Tiliqua adelaidensis*) and nationally vulnerable Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*). Other than these two species, none of the reptile species recorded within the project area have a conservation rating and can be classed as common in suitable habitats.

The Flinders Worm-lizard is a cryptic species endemic to South Australia. This species has not been opportunistically detected on site, although suitable habitat does exist within the development area. Targeted surveys will confirm the presence or absence of this species to inform the EPBC referral submission.

5.2.7 Pygmy Blue Tongue Lizards

The PBTL is the smallest member of the genus *Tiliqua*, which consists of seven terrestrial lizard species commonly known as Blue-tongues. The PBTL is a moderate sized skink which has a total length of less than 20 centimetres. PBTL use un-occupied spider burrows as refuges. The entrance holes are circular in cross section, up to 20 mm in diameter, and lack any sign of excavated soil at the entrances. The PBTL is a largely sedentary species, with most adults moving no greater than 20 m from their burrows (Milne et al. 2003⁶).

The PBTL is endemic to South Australia. Very little information exists on the past distribution of the species, with the few known localities extending from the Adelaide Plains to the North Mount Lofty Ranges (Duffy et al. 2009).

The total population size of the PBTL is unknown. Prior to 2000, the population was estimated to be around 5,000 lizards, based on 10 known populations (Milne et al. 2000). Suitable habitats are largely on private land, and historically may have been under-surveyed due to access considerations. All PBTL populations are considered important due to the restricted and fragmented distribution of the species (Duffy et al. 2012). More recently, due to the PBTL Recovery Plan efforts, university studies and proposed wind farm flora and fauna assessments, surveys for PBTLs have increased. Despite this, overall population size is hard to estimate due to natural fluctuations (due to several factors such as climatic conditions, habitat conditions, food availability and breeding opportunities).

Identification of the presence of the PBTL on the development site in early surveys resulted in extensive investigations being undertaken as part of the preparation of the original development application and its associated EPBC referral. EBS Ecology (now Umwelt) has undertaken extensive surveys (ten in total) on the potential PBTL habitat across the entire project site since 2015. Targeted PBTL surveys have been undertaken and the results of these targeted surveys informed refinements to the project design, which are

⁶ Duffy, A., Pound, L. and How, T. (2009) Draft Recovery Plan for the Pygmy Blue-tongue Lizard *Tiliqua adelaidensis*. Department for Environment and Heritage, South Australia.

Milne, T., Bull, C., and Hutchinson, M. N. (2003) Use of burrows by the endangered Pygmy Blue-tongue Lizard, *Tiliqua adelaidensis* (Scincidae). *Wildlife Research*, 30 523-528

reflected in the proposed layout of the development. The adopted design strategy for the optimised layout was informed by consultation with the Commonwealth Department of Climate Change, Energy the Environment and Water EPBC Panel Team, the SA Museum and the SA Department of Environment and Water early in the project design phase of the approved development application.

The habitat and potential presence of PBTL was assessed during the surveys (by Umwelt) and categorised as: likely, possible or unlikely as further detailed in Table 10.

Table 12 Habitat suitability definitions mapped during the assessment

Habitat Suitability	Definition
Likely	Vegetation associations in which records of PBTL occur. Records include those collected by EBS and historical records sourced from the Biological Database of South Australia (BDBSA) (Recordset number: DEWNRBDBSA231031-4).
Possible	Vegetation associations in which there are no PBTL records but are considered potentially suitable habitat.
Unlikely	Vegetation associations in which there are no PBTL records and are not considered suitable habitat

A large proportion of the project area is considered likely or possible habitat for the PBTL due to the open grasslands, slopes and spider holes observed across the site. Areas considered unlikely to contain PBTLs are cropping, very steep, very rocky or areas with no evidence of spider holes. The known attributes of suitable habitat for the PBTL have been summarised by Umwelt as follows:

Table 13: Attributes of habitat suitability for Pygmy Blue-tongue Lizard

Attributes considered suitable habitat	<ul style="list-style-type: none"> Spider burrows within native or exotic grasslands; PBTLs have also been detected in highly modified treeless grasslands. Soil of heavy sandy loam (red-brown earth). Foot slopes of hills. Sheltered areas of foot slopes.
Attributes considered unsuitable habitat	<ul style="list-style-type: none"> Areas that have been previously cropped. Areas lacking spider burrows. Areas containing dense ground cover vegetation. Steep terrain and exposed rocky ridgelines. Overly rocky areas.

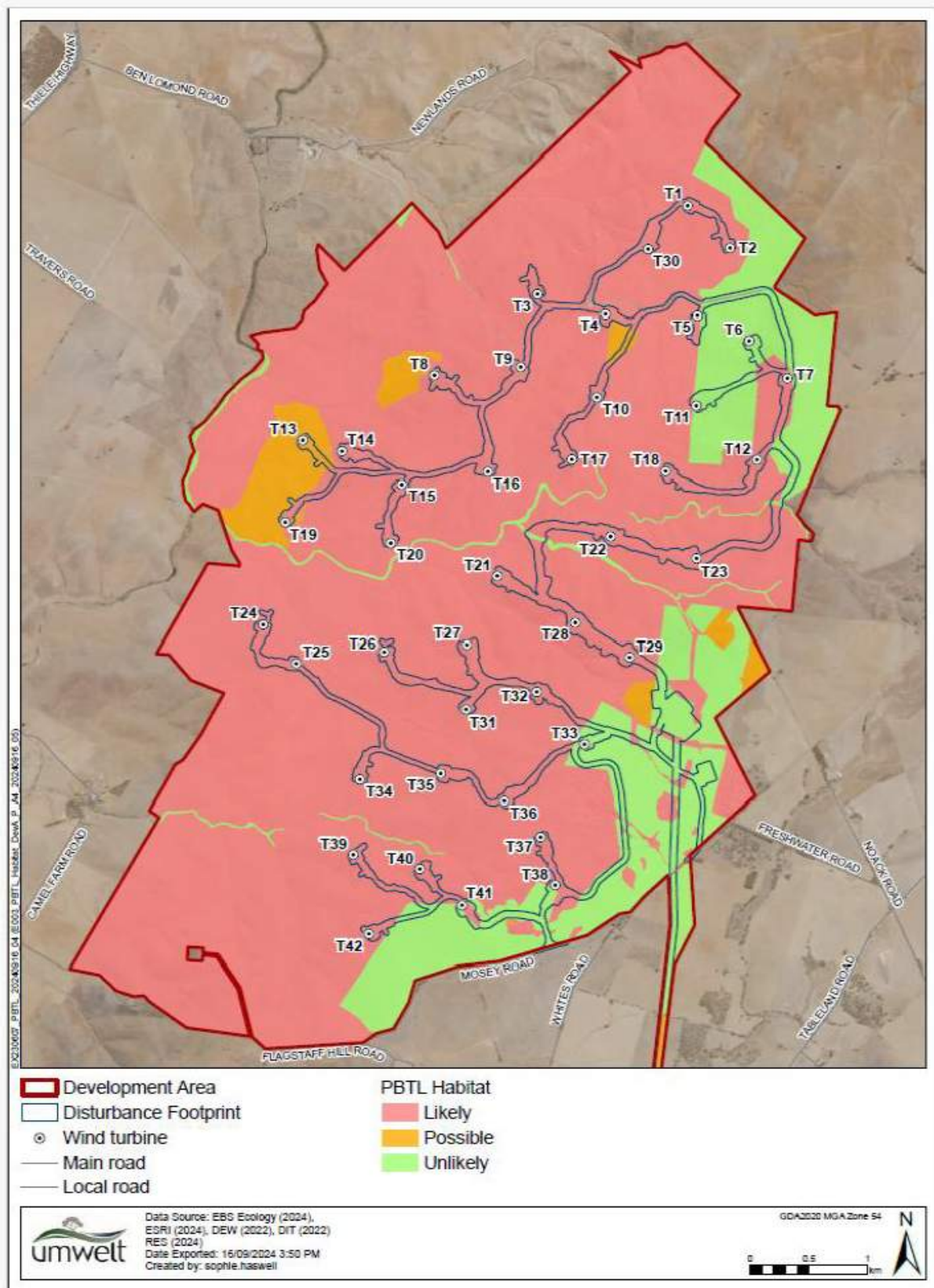


Figure 7: PBTL Habitat within the Wind Farm Development Area - Source: Umwelt

The potential impacts of a wind farm development within the project area on PBTL individuals or populations may include the following:

Short-term

- potential direct loss of individuals through habitat clearance during construction;
- sedimentation of burrows from construction run-off (soil); and
- noise and vibration disturbance during construction.

Long-term

- potential loss of habitat;
- division and isolation of populations by vehicular access tracks;
- sedimentation of burrows from run-off from access tracks; and
- potential disturbance to populations in close proximity to turbines from blade shadow flicker.

The southern portion of the site has optimal habitat for the PBTL species, with gentle sloping rolling hills with plenty of spider holes. The northern section of the infrastructure area still has PBTLs present; however, they are typically in lower densities of numbers where infrastructure is proposed. During the March and April 2024 surveys, which focused on the area of the disturbance footprint, a total of 5412 potential burrows were searched and a total of 453 PBTL were detected. Following the survey findings, changes were made to remove a proposed temporary construction compound, re-route access tracks, and further refine micro-siting of WTGs and the disturbance footprint in order to minimise impact on identified PBTL. Due to the nature of location and construction requirements for the wind farm infrastructure, the extensive areas of suitable habitat and the cryptic nature of the PBTL, some level of impact on PBTL cannot be avoided.

A range of mitigation measures are incorporated into the Statement of Commitments to minimise impacts on PBTL, including micro-siting of infrastructure, ongoing monitoring and translocation:

- micro siting of infrastructure away from areas of high population density and/or known locations of PBTL, informed by additional survey during the detailed engineering design phase of the project.
- Minimising the Disturbance Footprint as far as practicable in PBTL habitat. This may include constructing access roads to the narrowest possible width, turbine hardstands kept to the smallest possible dimensions and incorporating design elements such as routing reticulation along access roads and areas of unlikely PBTL habitat (i.e. cropping).
- Preparation and implementation of a PBTL Management Plan that considers strategies for avoiding, minimising and mitigating direct, indirect and unforeseen impacts to PBTL during construction and operation of the Project.

- Preparation and implementation of an offset strategy that provides a benefit to the overall PBTL population in the region.

The ongoing monitoring and potential offset strategy will be further developed as part of the EPBC referral process.

RES submitted an EPBC referral in relation to the Pygmy Blue Tongue Lizards (PBTL) on the basis of the approved wind farm and transmission line layout. That referral was not progressed to a final decision. A new EPBC referral will be made for the optimised layout. Detailed consideration of the impact on PBTL will occur as part of the EPBC referral process.

5.2.8 Southern Hairy-Nosed Wombats

Southern Hairy-nosed Wombats were observed in spring and winter surveys undertaken by EBS Ecology (now Umwelt) as part of the assessment for the original application. The infrastructure layout of the wind farm, as approved, avoided warrens that were identified during the surveys. The assessment undertaken as part of the optimised layout has reviewed the location of the burrows and this has informed the optimised design. Known warrens have been avoided in the optimised design.

Infrastructure associated with the wind farm, including wind turbine generators and access tracks will be micro sited to avoid impact to wombat warrens should the location of the warrens change between the time of authorisation and construction.

5.2.9 Rainbow Bee-Eater and Blue-Winged Parrot

The site contains two bird species of national conservation significance, namely:

- Rainbow Bee-eater (*Merops ornatus*) migratory; and
- Blue-Winged Parrot (*Neophema chrysostoma*) State and nationally vulnerable.

The Rainbow Bee-eater is listed as migratory under the EPBC Act and is a highly mobile species with the ability to undertake long distance movements. It is distributed across much of mainland Australia and will migrate into southern Australia during spring into summer. Umwelt did not record nesting of the Rainbow Bee-eater on the site as part of the original assessment. It was considered that given the existence of better-quality vegetation downstream on the Light River and because the Rainbow Bee-eater is a predictable seasonal visitor to the project area, it is unlikely regional populations would be impacted upon by the proposed wind farm.

The Blue-winged Parrot prefers open woodland, cropland and open country, where it feeds on the seeds of native and introduced grasses. Blue-winged Parrots are partly nomadic and may be encountered in the company of the Elegant Parrot. They feed on the seeds of native and introduced grasses as well as shrubs and herbaceous plants. Blue-winged Parrots nest in the cavities of small trees.

The Bird and Bat Risk Assessment - Addendum prepared by Umwelt (as contained in Volume 2 of the development application documentation), summarises the potential impact of the development on woodland bird species as follows (refer Section 5.3):

In general, the potential effects of a wind farm on woodland bird species are related to (1) possible loss of habitat and (2) disturbance and impacts from turbines situated close to woodlands. Direct interaction with turbine blades is assessed as Unlikely for woodland specific bird species (unless otherwise stated in Table 4.2), as the WTG height of blades is reduced. Common bird species were assessed for their potential to be impacted at the local population level by the proposed TCWF. Most of the common bird species that occur at wind farms such as Pink Galah and the Australian Magpie tend to forage and nest within wooded areas. The location of WTG 37 (40 m from woodland) may increase the risk of individual mortality. However, it has been assessed that for these common species individuals may be affected, but viability of local population not impacted. Therefore, these were assessed a low risk level.

The recommendation of the ecological assessment is that woodland areas with tree hollows are avoided during the construction of the wind farm and existing tracks are used where possible, rather than creating new tracks through pasture grass sites and cropland. This approach has been incorporated into the optimised layout and noted in the Statement of Commitments.

5.2.10 Wedge Tailed Eagle

The site of the development contains four Wedge Tailed Eagles (WTE) nests, all within the south east area of the wind farm development area. The four nests are situated within *Eucalyptus leucoxylon* open woodland. Nests 1 and 2 were situated within 100m of each other. The nests are shown on Figure 8A - Site and Context Analysis Plan Wind Farm, which is contained within Volume 3.

During early surveys, Umwelt observed three nests, with one of the three nests observed as active. In addition, a single adult was observed flying from Nest 3 and an additional pair of Wedge-tailed Eagles were flushed when entering the area whilst undertaking the bird survey in September 2015. The pair was observed flying on thermals approximately 600m from the point count area (where the nests were recorded), 300m above ground. Breeding pairs often switch between multiple nest sites within their territory from one year to the next. A recent nest search was undertaken during the targeted PBTL survey in April 2024. During this survey, an additional WTE nest was observed in close proximity to the other three nests, bringing the total of identified nests to four. Additionally, a breeding pair of Wedge-tailed Eagles were observed perched on a tree within the project area. It is likely that this pair are still utilising these nests within the Blue-gum woodland.

The Bird and Bat Risk Assessment - Addendum prepared by Umwelt (October 2024), as contained in Volume 2 of the development application documentation, discusses the implementation of exclusion buffers around known raptor nests. It states in Section 5.5:

Exclusion buffers have been considered in the planning and design processes of TWCF, in order to reduce the likelihood of impacts to birds in the area proposed for development. In South Australia, exclusion buffers around known raptor nest's locations are currently primarily aimed at reducing the disturbance to raptors during breeding season and when juveniles are near fledging. The risks of

collision for raptor species such as the Wedge-tailed Eagle and Peregrine Falcon are considered significant when assessing bird interactions with wind farms, as they conduct regular flights at heights coinciding with turbine rotor-swept areas of operating WTG.

The benefits of exclusion buffers around known nest locations of at-risk bird species are as follows:

- Buffers are generally focussed around areas of high bird activity (e.g., woodland); these are areas where raptor species may potentially nest.*
- During the construction of proposed wind farms, raptor species are more likely to be at risk of disturbance from activities conducted within close proximity to nest locations. By implementing exclusion buffers, disturbance levels to these bird species would be avoided/minimized as much as possible.*
- Raptors such as Wedge-tailed Eagles are territorial and typically return to the same area to nest each year. The placement of exclusion buffers around nest locations assists with lessening disturbance levels to this species.*
- Juvenile raptors (and juvenile birds in general) are deemed to be more susceptible to collision with WTGs. Newly fledged juveniles would need to learn how to forage on their own and are deemed more naïve and thus less likely to avoid structures such as turbines during this learning process. The implementation of exclusion buffers around known nest sites assists in decreasing the risk of juvenile raptors/birds colliding with WTGs.*

A minimum buffer of 500 metres from nests of the Wedge-tailed Eagle sites to wind turbine generators and other infrastructure was incorporated in the original approved development. The buffer from the nests is maintained as part of the optimised layout.

Furthermore, in relation to all of the bird species assessed, the Bird and Bat Risk Assessment states:

- A total of four common bird species (Australian Raven, Little Raven, Pink Galah and Australian Magpie) performed “at-risk” movements within the Development Area in the last two years. Collision for these species is likely, however, the consequence at a population was deemed insignificant. Therefore, these species have been assessed as having a low risk level (Table 4.1).*
- The level of risk was categorised as medium for nine bird species (listed in Table 4.1). The species with medium risk level assessments have a minor consequence at a species / population level. The risk assessment implies that there may be an impact on the local population of this species in the event of collision with a WTG.*
- For those bird nine bird species considered to have a medium risk level, all efforts have been made to mitigate against potential impact on these species. RES have taken into consideration the 200 m exclusion buffer around woodlands and have adopted this buffer where possible. Similarly, all efforts were made to minimise the impact to WTE nesting sites within these woodlands with consideration of a 500 m buffer around these nests in the project design.*

5.2.11 Bats

Surveys (AnaBat) were undertaken as part of the assessment for the original development application. The AnaBat surveys confirmed the presence of seven bat species within the project area:

- White-striped Free tail-bat (*Austronomus australis*)
- Gould's Wattled Bat (*Chalinolobus gouldii*)
- Chocolate Wattled Bat (*Chalinolobus morio*)
- Southern Free tail-bat (*Mormopterus* species 4 "big dick")
- Lesser Long-eared Bat (*Nyctophilus geoffroyi*)
- Large Forest Bat (*Vespadelus darlingtoni*) and
- Southern Forest Bat (*Vespadelus regulus*).

The bat species detected onsite are considered to be common throughout the region with the majority of bats recorded, being within the vicinity of habitat features such as woodlands and open water. None of the recorded bat species have a conservation rating. All bat species have been assessed as having a medium risk to be impacted by the proposed development, as assessed in the Bird and Bat Risk Assessment - Addendum prepared by Umwelt. This assessment states:

- *All bats were assessed as having a medium risk level.*
- *Despite not having flight height data for bats, the medium risk level is based on the general knowledge of bat movements and on data from the study by Maloney et al. (2019). That study recorded mortality events for 13 bat species over 2 years, with some that extended to 3 to 3.5 years. Of the 13 species recorded, seven occur at the TCWF. Bats are more at risk of rotor strike/barotrauma when traversing between patches of woodland. Similar to woodland birds, the proximity of turbines to woodlands within TCWF and the RSA are likely to be the main risk factors for strikes/barotrauma impacts.*
- *The species with medium risk level assessments have a minor consequence at a species / population level. The risk assessment implies that there may be an impact on the local population of this species in the event of collision with a WTG.*
- *For bat species considered to have a medium risk level, all efforts have been made to mitigate against potential impact on these species. RES have taken into consideration the 200 m exclusion buffer around woodlands and have adopted this buffer where possible.*

5.3 Heritage

5.3.1 Cultural Heritage

A cultural heritage desktop assessment of the site has been undertaken in 2018 and the Taa Wika database search noted 15 known Aboriginal cultural heritage places within 20 kilometres of the project site, but not within the project area boundary. Furthermore, there were no Aboriginal places of national significance

protected under the *Environment, Protection and Biodiversity Conservation Act 1999*, recorded on the Australian Heritage Database.

Although the conclusions of the desktop heritage assessment undertaken as part of the original application considered the risk of disturbing unknown Aboriginal sites is low, RES have engaged with the Ngadjuri Nation Aboriginal Corporation. RES and the Ngadjuri Nation Aboriginal Corporation have entered into an agreement to prepare a Cultural Heritage Management Plan (CHMP) to preserve Cultural Heritage in the Project Area.

RES is aware of our responsibilities to ensure compliance with the *Aboriginal Heritage Act 1988* should Aboriginal sites or objects of significance be disturbed during project works and these are further described in the Statement of Commitment and draft Construction Environmental Management Plan.

Survey of the optimised project layout are continuing with the Ngadjuri Nation Aboriginal Corporation and the Cultural Heritage Management Plan will be updated, as necessary, to capture any identified cultural heritage sites. The findings of the Cultural Heritage Management Plan and its recommendations will be considered by RES as part of the final design of the project, which may include avoidance of areas of significance or micro-siting of infrastructure, should that be required.

5.3.2 European Heritage

The subject land does not contain any places of State significance as recorded on the South Australian Heritage Register. There are several local heritage places located on properties within the locality of the site of the development and within the St Kitts area, particularly adjacent the transmission line.

A Heritage Impact Assessment (HIA) has been prepared by DASH Architects, which considers each of the properties against the relevant provisions of the Planning and Design Code, with particular reference to the heritage adjacency overlays.

The following extract from the HIA illustrates the transmission line and Local and State Heritage interests (and Overlays). An initial review of the project footprint on the SA Property and Planning Atlas (SAPPA) mapping indicated that the development avoided any properties with State and Local Heritage interests (and Overlays). However, it was discovered that the transmission line transverses land parcels that share Certificates of Titles with State and Local Heritage places.

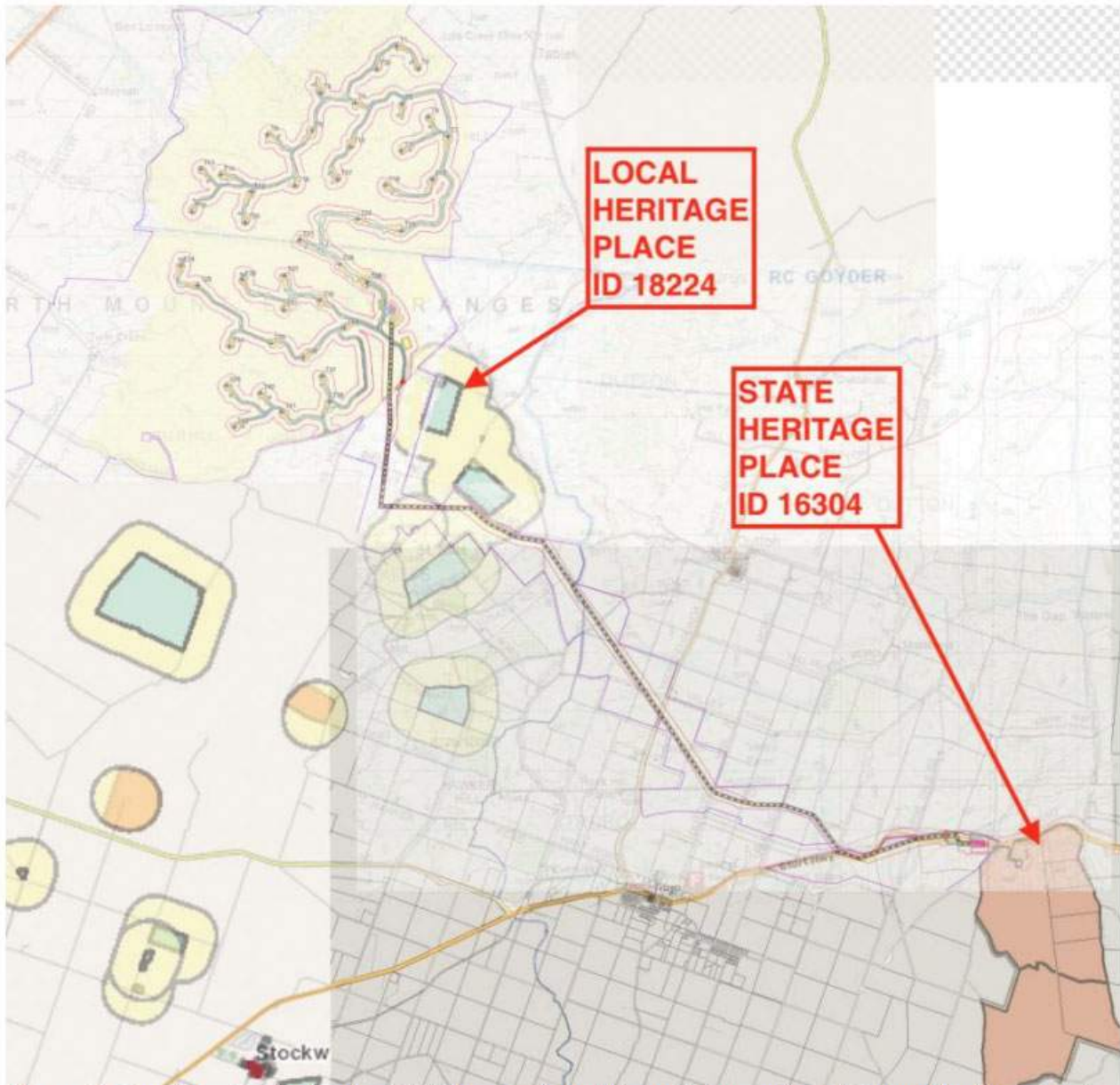


Figure 1: Overlay of project onto SPPA mapping with spatial mapping of State Heritage Overlay (orange), and Local Heritage Overlay (teal) that is avoided by the works.

Figure 8: Extract from Heritage Impact Assessment Report - State Heritage and Local Heritage Overlays

The visual impact of the transmission line on the heritage places was considered in the HIA, which determined that neither the State Heritage Places Overlay nor the Local Heritage Place Overlay was enlivened by the transmission line. The policy of the Planning and Design Code which was considered to be of particular relevance to the heritage impact assessment was the Heritage Adjacency Overlay, which includes the following Desired Outcome (DO) and Performance Outcome (PO).

DO1 Development adjacent to State and Local Heritage Places maintains the heritage and cultural values of those Places.

PO1.1 Development adjacent to a State or Local Heritage Place does not dominate, encroach on or unduly impact on the setting of the Place.

The transmission line traverses the land between the wind farm infrastructure and the terminal sub-station and passes through Heritage Adjacency Overlays associated with the following Local Heritage Places:

- ID17722: Abandoned Farm Complex
- ID18051: Former St Pauls Lutheran Church
- ID18050: Doecke's Farm
- ID 18224: Noack's Farm

The location of these places and the wind farm infrastructure are illustrated on the below extracts from the HIA.

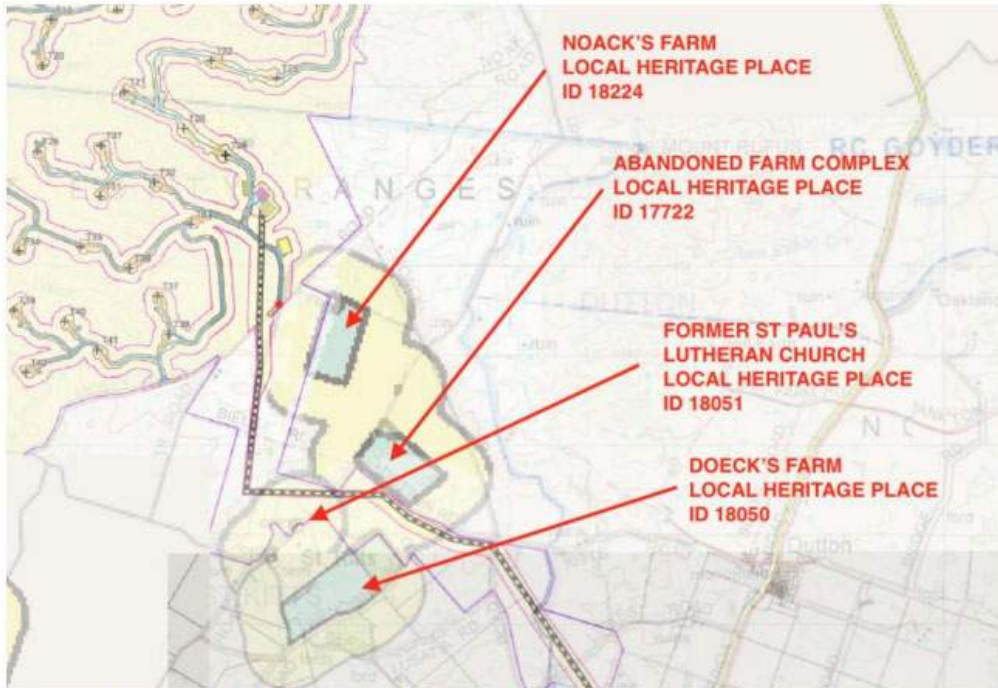


Figure 4: Local Heritage Places affecting the Heritage Adjacency Overlay.

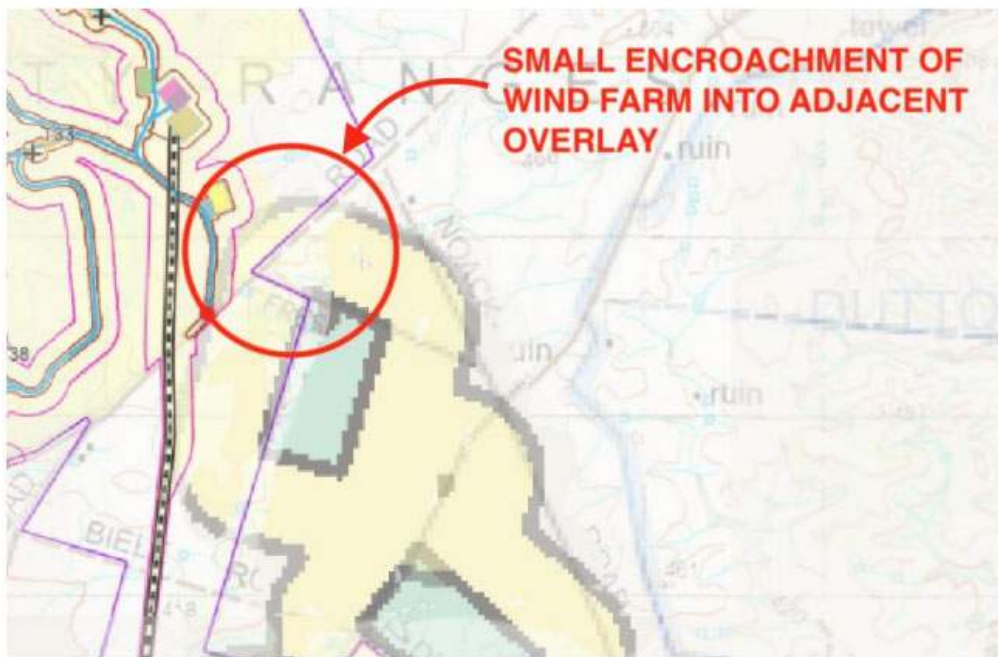


Figure 5: Small encroachment of wind farm into Heritage Adjacency Overlay of Noack's Farm (Local Heritage Place).

Figure 9: Extract from the HIA illustrating the wind farm infrastructure and Heritage Adjacency Overlay

The HIA makes the following observations in relation to the Local Heritage Places: Abandoned Farm Complex, the Former St Pauls Lutheran Church, Doecke's Farm and Noack's Farm.

ID17722: Abandoned Farm Complex:

The Local Heritage listed Abandoned Farm Complex is located to the NE corner of the intersection of Duttons and Tablelands Road.

The proposed transmission line is located to the opposite side of Dutton Road, some 300m away. The land upon which the transmission line will traverse is undulating, resulting in some sections likely being elevated higher than the land accommodating the Local Heritage place.

Being a ruin, the immediate setting of the heritage place is generally devoid of modern incursions. While the proposed transmission lines will be visible within the broader setting of the heritage place, they are not considered to dominate, encroach or unduly impact on its setting as:

- The setting of the ruin is primarily defined by its siting and the property boundaries to the intersection of Duttons and Tablelands road. The transmission lines are located outside of this curtilage*
- The infrastructure is located some 300m away from the ruins, on another site across the road*
- The heritage values of the abandoned farm complex is the manner that it displays the stages of development of the farming property, reflecting the growth of agriculture in the area. The proposed new transmission line infrastructure on the adjacent site, across the road, does not impact on these values.*

For these reasons the proposed new transmission lines within the Heritage Adjacency Overlay associated with the Abandoned Farm Complex are considered consistent with DO1 and PO1.1 of the Heritage Adjacent Overlay of the Planning and Design Code.

Former St Paul's Lutheran Church & Cemetery

The immediate environs of the church and cemetery is landscaped with substantial plantings, that will likely obscure much of the immediate views of the transmission lines from the road directly in front of the heritage place. Notwithstanding this, however, some views of the lines will remain through this landscaping, and from vantage points to the side of the heritage place.

The immediate setting of St Paul's Church is to Tablelands Road and the landscaped ground and cemetery within the immediate environs. The landscape behind forms a backdrop to the heritage place, as it does throughout St Kitts.

The proposed transmission lines will likely have minimal visual presence within the immediate setting of St Paul's Church. They will not impact on the manner by which the heritage place represents Lutheran settlement in the district and indicates the religious differences that arose in the local congregation, and the eventual unification of branches of the Lutheran Church.

Views of the transmission lines will be largely screened by existing landscaping within the church grounds, and undulating topography. Some views will remain, however they are not considered to dominate, encroach on or unduly impact on the setting of the Place.

For these reasons the proposed new transmission lines within the Heritage Adjacency Overlay associated with the Former St Paul's Lutheran Church and Cemetery are considered consistent with DO1 and PO1.1.

Doecke's Farm

The Local Heritage listed Doecke's Farm is located approximately 1.7km south of the proposed transmission line.

The topography between the site and the transmission lines is undulated, with several crests that would likely obscure all views of the proposed infrastructure from the site.

While the transmission lines are located within the Heritage Adjacency Overlay of this property, they will be some 1.7km south of the ruins and not generally visible within their setting due to the undulating landscape.

For these reasons the proposed new transmission lines within the Heritage Adjacency Overlay associated with the Doecke's Farm are considered consistent with DO1 and PO1.1.

Noack's Farm

The proposed boundary of the wind farm complex is located approximately 500m away from the Local Heritage Listed Noack's Farm.

While a very small portion of the wind farm boundary encroaches into the Heritage Adjacency Overlay of Noack's Farm, there are no WTG's located within this area

...that site fencing will likely encroach within this footprint, as well as potentially an access track. Neither of the features will be visible from the Noack's Farm complex buildings due to the undulating topography and landscaping. Even if glimpses were afforded, they would neither dominate, encroach on or unduly impact on the setting of the Place.

For these reasons the proposed wind farm within the Heritage Adjacency Overlay associated with the Noack's Farm is considered consistent with DO1 and PO1.1.

In summary, the HIA concludes that the transmission lines of the Project may be visible within some views from Local Heritage Places, such infrastructure will not dominate, encroach on or unduly impact on the setting of the heritage places, nor adversely impact on their heritage and cultural values. For these reasons the development is considered to be consistent with the relevant provisions of the Heritage Adjacency Overlay of the Planning and Design Code.

5.4 Acoustic

An environmental noise assessment of the wind farm has been prepared by Sonus and this report entitled Twin Creek Wind Farm Environmental Noise Assessment is contained in Volume 2. The assessment was undertaken against the provisions of the Planning and Design Code and the criteria of the South Australian Environment Protection Authority (EPA) Environment Protection (Commercial and Industrial Noise) Policy 2023 and Wind Farms Environmental Noise Guidelines 2021.

5.4.1 Legislation and Policy Framework

In Section 3 of the Environmental Noise Assessment report, Sonus discuss the legislative and policy framework relating to wind farm development. They note that the proposed development is within the Rural Zone of the Planning and Design Code. Further, the report discusses Performance Outcome 4.1 (PO4.1) of the Interface between Land Uses section of the Code. PO 4.1 specifically requires noise from developments to not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers). The Deemed-to-Satisfy/Designated Performance Feature (DTS/DPF) provision for PO 4.1 requires noise that affects sensitive receivers achieves the relevant Environment Protection (Noise) Policy (the Policy) criteria.

Clause 22(1) of the Policy states:

If an entity operates a wind farm, the Wind farms environmental noise guidelines 2021, prepared by the Authority, and as in force from time to time, apply.

Clause 22(1) in conjunction with Clauses 9 and 16 exclude wind farm noise from assessment under the general provisions of the Policy. Therefore, WTG noise is to be assessed in accordance with Wind farms environmental noise guidelines 2021 (the Guidelines). The noise from ancillary infrastructure has been assessed against the Policy.

5.4.2 Methodology

Section 4 of the Environmental Noise Assessment report describes the methodology of the noise assessment in detail.

Sonus prepared “A predictive noise model has been prepared for the proposed wind farm layout and locations of the ancillary equipment, which enables noise predictions to be made for each noise source including representative WTG’s, transformers and battery storage”.

The assessment has been made based on the Vestas V172 - 7.2MW WTG (with serrated blades and with a hub height of up to 134 metres). The WTGs have a cut-in wind speed of 3 m/s. The rated power wind speed is 13 m/s.

The following assessment criteria are applied by the Guidelines to landowners without a commercial agreement with the wind farm:

The predicted equivalent noise level (LAeq,10), adjusted for tonality in accordance with these guidelines, should not exceed:

- 35 dB(A) at relevant receivers in localities which are primarily intended for rural living, or
- 40 dB(A) at relevant receivers in localities in other zones, or
- the background noise (LA90,10) by more than 5 dB(A)

whichever is greater, at all relevant receivers for wind speed from cut-in to rated power of the WTG and each integer wind speed in between.

The non-associated dwelling modelled by Sonus are all located within the Rural Zone and therefore the 35dB(A) criteria is not applicable. Where the wind farm noise exhibits a tonal characteristic, a 5 dB(A) penalty is to be applied to the predicted or measured noise level.

To protect the associated landowners from unreasonable interference to their amenity, reference is made to the World Health Organisation (WHO) Guidelines for Community Noise (WHO Guidelines). The WHO guidelines provide recommendations with regard to protecting against:

- sleep disturbance within habitable rooms of residences, and;
- annoyance during the daytime for outdoor areas.

The WHO Guidelines recommend an indoor noise level of 30 dB(A) be achieved to protect against sleep disturbance. The indoor limit of 30 dB(A) equates to an outdoor noise level of 45 dB(A) with windows open for ventilation.

In relation to ancillary infrastructure, the equipment should be consistent with the relevant provisions in the current Environment Protection (Noise) Policy. The Policy provides external goal noise levels to be achieved at noise sensitive locations based on the principally promoted land uses of the Code in which the noise source and the noise receivers are located. In this instance, the Policy provides the following goal noise levels:

Residences within the Rural Zone

- an average (Leq) noise level of 52 dB(A) during the day (7:00am to 10:00pm); and
- an average (Leq) noise level of 45 dB(A) during the night (10:00pm to 7:00am);

Residences within the Rural Settlement Zone

- an average (Leq) noise level of 50 dB(A) during the day (7:00am to 10:00pm);
- an average (Leq) noise level of 43 dB(A) during the night (10:00pm to 7:00am); and
- an instantaneous maximum (Lmax) noise level of 60 dB(A) during the night (10:00pm to 7:00am)

5.4.3 Assessment & Findings

Section 5 of the Environmental Noise Assessment contains the analysis of the predicted noise levels at residences within the vicinity of the wind farm.

In relation to WTG noise, the highest predicted noise level at any house was 43 dB(A) at 122 (associated) for wind speeds between 9 m/s and 13 m/s. The highest non associated prediction is at Dwelling 9, where the noise level is predicted to be 38 dB(A) for wind speeds between 9 m/s and 13 m/s. Based upon the assessment, Sonus conclude that “*all residences achieve the criteria at all integer hub height wind speeds*”.

In relation to noise associated with ancillary infrastructure, the highest predicted noise level from ancillary equipment was 34 dB(A) at Dwelling 125, which is below the night time criteria for either the Rural Zone or the Rural Settlement Zone. The predicted noise contours for the noise criteria, “*shows that the predicted noise is lower than the criteria at all residences*”.

In conclusion (Section 6 of the Environmental Noise Assessment), Sonus state:

An environmental noise assessment has been made of the proposed Twin Creek Wind Farm. The proposed development is subject to the provisions of the South Australian Planning and Design Code (the Code) under the Planning, Development, and Infrastructure Act 2016. The assessment is based upon:

- *42 Wind Turbine Generators, with the Vestas V172-7.2MW as the candidate turbine, with an overall turbine blade tip height up to 220 metres, a hub height of up to 134m and a rotor diameter of up to 172m*
- *a battery energy storage facility with an indicative capacity of 215MW*
- *two electrical substations (one project substation within the windfarm boundary and one cut-in terminal substation*

Operational noise of the wind turbine generators has been considered against the requirements of the EPA’s Wind farms environmental noise guidelines 2021. The ancillary equipment has been assessed against the relevant provisions in the current Environment Protection (Noise) Policy. The predicted noise levels achieve the requirements at all residences, and therefore based upon the assessment, the development is located and designed to minimise hazard or nuisance to adjacent development and land uses with respect to noise.

5.4.4 Infrasound and Low Frequency Noise

Community members often express concern relating to infrasound and low frequency noise as matters which may have a potential adverse effect on health and amenity. The following is noted in relation to infrasound and low frequency noise:

- the criteria of the SA Guidelines are established to ensure that any audible wind farm noise is low enough in level such that it does not adversely impact on the health or amenity of the community;
- modern WTGs (wind turbine generators) are constructed with blades upwind of the tower resulting in noise levels well below the level of audibility at residential setback distances. International studies have confirmed that the level and character of noise from modern WTGs are not different to the noise encountered from other natural and non-natural noise sources;
- a South Australian Government study by the Environment Protection Authority into infrasound (Infrasound levels near wind farms and in other environments, January 2013) found:
 - the measured levels of infrasound from wind farms are well below the threshold of perception (that is, the level of infrasound at a residence is inaudible);
 - the measured infrasound levels around wind farms are no higher than levels measured at other locations where people live, work and sleep; and
 - the characteristics of noise produced by wind farms are not unique and are common in everyday life.
- noise sources that produce low frequency content (such as a freight train locomotive or diesel engine) have dominant noise content in the frequency range between 20 and 200 Hz. Low frequency noise is often described as a “rumble”;
- aerodynamic noise from a WTG is not dominant in the low frequency range. The main content of aerodynamic noise generated by a WTG is often in the area known generically as the mid-frequencies, being between 200 and 1000Hz; and
- compliance with the SA Guidelines will inherently provide an adequate level of protection of amenity in the surrounding area from low frequency noise impacts.

5.5 Visual

Wax Design and Dr Brett Grimm, referred to in this summary as Wax were engaged by RES Australia to assess the potential visual impact of the proposed Twin Creek Wind Farm project. A copy of the “Landscape Character and Probable Visual Effect Assessment” is contained within Volume 2 of the application documents. The following summary describes the landscape character, the visual impact of the proposed development from various viewpoints and the likely effect on the physical landscape.

Wax undertook the landscape and visual assessment of the original and approved Twin Creek Wind Farm. The discussion by Wax refers to the “approved” project and the “optimised project”. The optimised project is the development as now proposed comprising the 42 wind turbine generators with a maximum tip height of 220 metres and hub height of 134 metres.

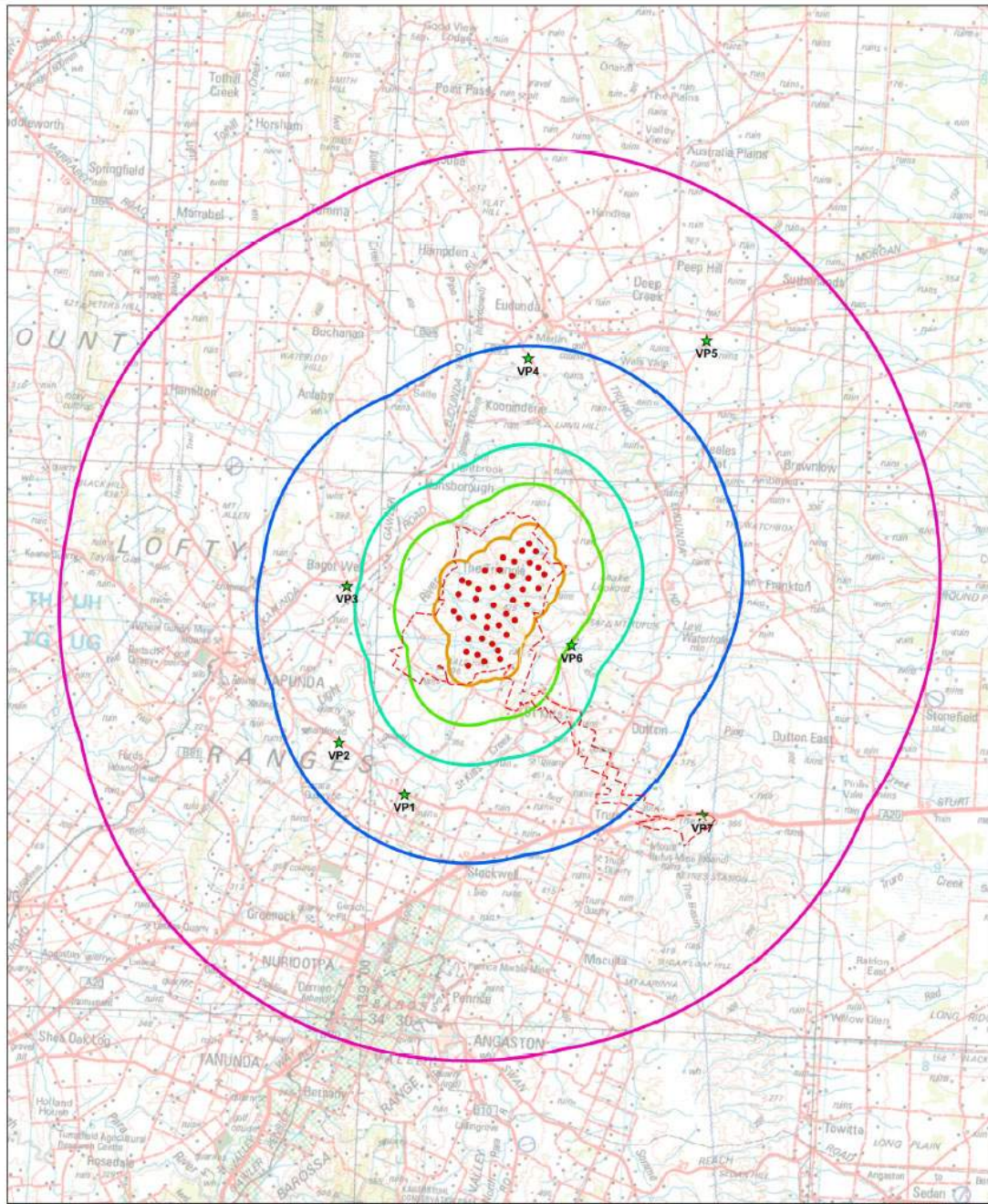
5.5.1 Methodology

The Landscape Character and Probable Visual Effect Assessment undertaken by Wax comprises of two assessments, firstly a landscape character assessment and secondly a visual impact assessment. The landscape character assessment described in the report considers the existing character of the landscape and the site locality. The potential visual impact was assessed using the Grimke matrix methodology (described in detail in the report) and involves onsite assessments, GIS modelling, consultation with relevant stakeholders and interested parties, the preparation of photomontages and a detailed visual impact assessment to illustrate the predicted visual effect of the project within the defined locality.

Wax discuss the “site locality” as the areas around the project from which the wind turbines and associated infrastructure are likely to be visible in the landscape. The report notes that a 20 kilometre site location around the project was defined for assessment purposes. The landscape character assessment and mapping within the report discusses existing character in relation to the local (0-3km), sub-regional (3-10km) and regional (>10km).

Wax also reviewed the extent of the site locality with the Zone of Theoretical Visual Influence (ZTVI) mapping, which provides a reference of the extent or the likely degree of visibility of the project in accordance to topography (excluding vegetation and built form screening). The viewpoints selected represents a typical location where the greatest probable degree of visual change that will be experienced as a result of the proposed development within the existing landscape.

Figure 9 illustrates the selected viewpoints and the local, sub-regional and regional areas around the proposed wind turbine generators.



Viewpoints

December 2024

- Legend**
- Optimised Wind Turbines Layout
 - ★ Detailed Assessment Viewpoints
 - ★ PAUStwc064_Disturbance_Footprint_20240830
 - - - Site_Boundary_20241213
 - 1km Buffer
 - 3km Buffer
 - 5km Buffer
 - 10km Buffer
 - 20km Buffer

0 2.25 4.5 9 Kilometers



Figure 10: Extract from Wax LVIA illustrating the Viewpoint Locations

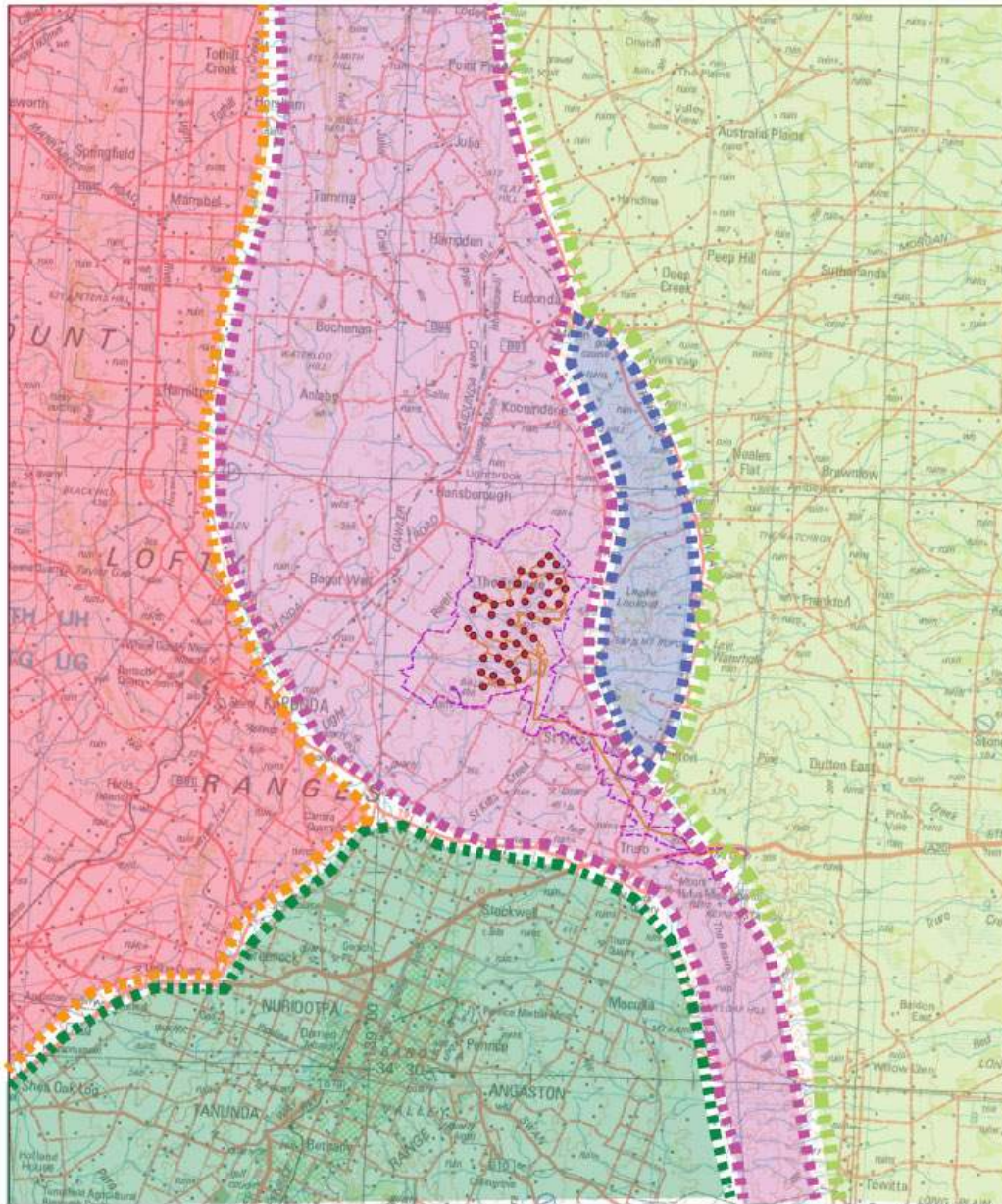
As discussed in Section 3.1 of this report, Wax describes the locality as having five distinct landscape character areas which largely follow the four cardinal directions (north, east, south and west).

To understand how and to what degree the proposed development will produce a visual effect in the existing landscape, an assessment to identify landscape character units has been undertaken by Wax. This assessment identified several landscape character areas within the site locality that contain similar landscape qualities in relation to land use, topography, vegetation, visual patterning, texture and scale.

The regional landscape context surrounding the project contains five (5) landscape character areas, which are;

- Northern Barossa Valley
- Western Pastoral Lands and Ridgelines
- Central Tablelands
- Mount Rufus Ridgeline
- Western Murray River Plains

These landscape character areas are shown in Figure 10.



Landscape Character Units

December 2024

Legend

- Optimised Wind Turbine Layout
- PAUStwc064_Disturbance_Footprint_20240830
- Site_Boundary_20241213
- Western Pastoral Lands and Ridgelines
- Northern Barrosa Valley
- Central Tablelands
- Mount Rufus Ridgeline
- Western Murray River Plain



Figure 11: Extract from Wax LVIA illustrating the Landscape Character Units

5.5.2 Assessment and Findings

WAX Design have undertaken an assessment of the Optimised Layout against the relevant policies of the Planning and Design Code (the Code) relating to visual assessment of a wind farm. In Section 7.5 of the LVIA, Wax states that the following in relation to achievement of the policies of the General Policy - Infrastructure and Renewable Energy Facilities of the Code:

... While the wind farm will create a visual change in the existing landscape character of the locality, the proposed layout for the wind farm aims to minimise impact on landscapes that have greater scenic value or natural character. Typically, wind turbines are setbacks several hundred metres from these areas.

PO 8.1 and DTS / DPF 8.1 are achieved, and the visual impact of wind turbines on the amenity of residential and tourist development is reduced through appropriate separations. In relation to the required setback, a buffer distance of 2,700 metres is required from any land zoned for Township, Rural Settlement, Rural Living, or Rural Neighbourhood based on a maximum turbine height (base to tip of the blade) of 220 m. The siting of wind turbines as currently proposed meets DTS/DPF 8.1(a)

Based on metadata associated with shapefiles provided by RES, dwellings within the 1500 m buffer are understood to be associated with the Optimised Project, thereby meeting DTS/DPF 8.1(b).

PO 8.2 is achieved as the operational rotation, design and material finish of individual turbines will be consistent to ensure that all wind turbines express a degree of uniformity in terms of colour, size, shape and movement. In addition, the wind turbines will consist of tubular towers, which is sought by DTS/DPF 8.1(c).

In relation to spacing, the turbines are located 600 to 800 metres apart. The spacing, while not regular, is consistent. The resulting positional consistency of the wind turbines responds to the undulating topography and local ridgelines that run across the site and results in a layout which responds directly to the underlying landforms.

RES will undertake the landscaping of substations, maintenance sheds and, where appropriate, other ancillary structures to mitigate the potential visual effect and satisfy PO 2.2. RES will also undertake remediation works to surfaces exposed by earthworks associated with the installation of storage facilities, access tracks, substations and other ancillary plants and revegetate to reduce adverse visual impacts on adjacent land to satisfy PO 2.3.

WAX Design (Section 11) describes the visual impact of the Twin Creek Wind Farm and Energy Storage project as follows:

The landscape assessment indicates that the Twin Creek Wind Farm (Optimised Project) will be developed in a modified rural landscape with a defined visual character. The topography of the Nain Ranges, Greenock Ranges, Light Ranges, Barossa Ranges and Mount Rufus create a visual envelope to the north, east and west of the proposed development farm. To the south, local landforms and the existing belt of vegetation associated with the Barossa Valley limit the visibility of the Project.

Throughout the regional locality around the Optimised Project, the existing land use is agricultural, with small woodland pockets of vegetation. Within this visually contained rural landscape, the proposed layout of the Optimised Project will form a compact cluster of 42 wind turbines with a maximum tip height of 220 metres.

The potential visual effect is likely to be most notable from the east and west within the local to subregional 5 kilometre locality. The proposed wind turbines situated on the ridges and elevated plateau of the Central Tablelands. The wind turbines appear in the landscape as prominent visual elements elevated on the central tablelands, with the vertical scale of the wind turbines likely to appear larger than the scale of the underlying topography. From local and sub-regional locations within five kilometres of the Optimised Project, the potential screening and visual mitigation provided by local ridgelines and vegetation belts is limited, and the majority of the wind farm is visible. The resulting visual effect produces a degree of visual change that will be consistently in the order of 45%, which is described as substantial, with the visual character of the locality being altered by the introduction of the wind turbines into the rural landscape. However, the sensitivity of the underlying landscape to change is low due to the agricultural character.

Across the sub-regional landscape, between five and ten kilometres, local ridgelines and tree belts create defined visual screens that reduce and remove the visual effects of the proposed wind turbines. The combination of topography and vegetation provides additional visual mitigation, and the degree of visual change reduces to a range of 28% to 39% and is described as moderate, increasing to substantial.

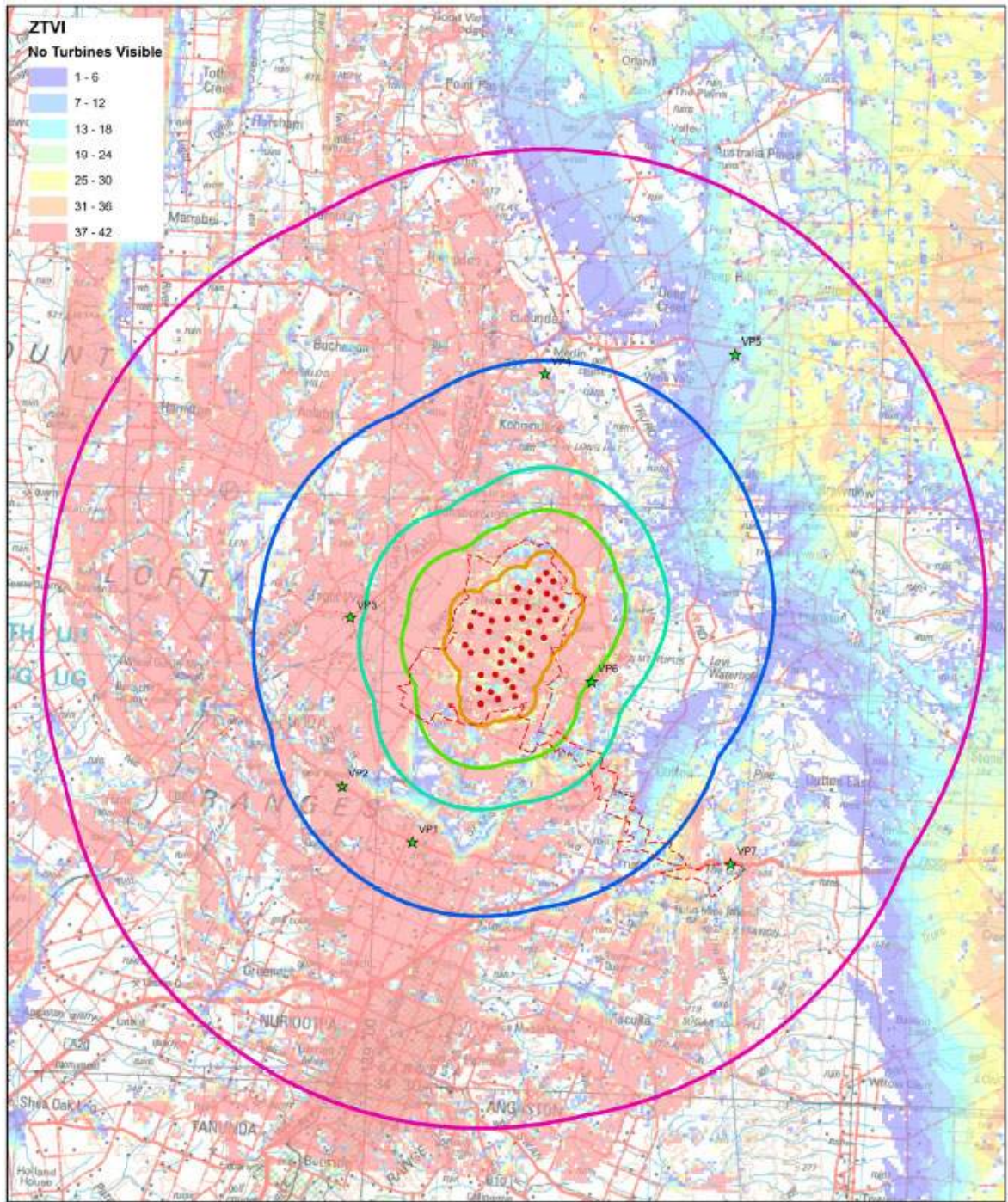
At distances of over ten kilometres within the regional locality, the degree of visual change reduces significantly to a range of 11% to 18%, particularly to the northeast and southwest and is described as slight.

The associated infrastructure, substations, and transmission lines will provide localised impacts to their immediate site localities. These visual effects will be limited to shorter distances (contained viewsheds) to the east and southeast. There will be no visual effect from the township of Truro. Transient experiences will be witnessed along local roads within the southeast of the regional landscape, with a small section of the Sturt Highway being impacted by the sub-station terminal.

The visual assessment and visual effect interpolation mapping illustrated the relationship between distance and visual effect and the significance of local ridgelines in reducing the visibility of the proposed wind farm in the wider locality. The visual effect is represented as bands of visual change radiating from the proposed wind farm. The consistency of the existing landscape character means that distance and visual absorption are the dominant variables in mitigating the visual effect.

Although the visual effect is likely to be substantial within the local to the subregional area, the containment of the effect can be attributed to the visual character of the landscape coupled with the uniformity of the agricultural character.

Figure 11, from the LVIA, shown below illustrates the extent of visual effect and its variation throughout the locality of the proposed development.



Zone of Theoretical Visual Influence_Tip of Blade (220m)

December 2024

Legend

- Optimised Wind Turbine Layout
- ★ Viewpoints Assessment
- - - Site_Boundary_20241213
- 1km Buffer
- 3km Buffer
- 5km Buffer
- 10km Buffer
- 20km Buffer

ZTVI represents 'worst case scenario' it is based on 10m contour data and does not take into account vegetation or built form screening or localised ridgelines

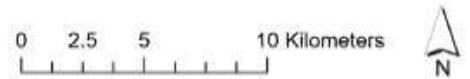


Figure 12: Extract from Wax LVIA illustrating the Zone of Theoretical Visual Influence

In summary, Wax note that the visual effects of the Optimised Project are similar to or slightly greater than those of the Approved Project. The visual effects are contained within a defined locality, and the proposed Twin Creek Wind Farm can be accommodated without significantly altering the underlying landscape character.

5.6 Traffic

A Traffic Impact Assessment (TIA) has been prepared by MFY which details the impacts of the transport related activities associated with the development, along with an of the potential safety implications such as driver distraction on the adjacent roads or impacts to existing road users. A copy of the Traffic Impact Assessment is contained with Volume 2 of the development application documents.

The TIA examines existing conditions in the locality of the site, an assessment of the likely access routes for over mass over size vehicles during the construction phase (from the port to the wind farm), an assessment of access points; and recommendations regarding measures required to enable proper access to the development site.

The greatest volume of heavy vehicle access will occur during the construction phase. Components that are transported during this construction phase include: wind turbine components; substation components; battery storage containers; and miscellaneous construction equipment and materials.

5.6.1 Existing Conditions

Thiele Highway, Sturt Highway and Truro Road are state controlled arterial road in the vicinity of the subject site. The TIA describes the existing roads as follows:

Sturt Highway has a posted speed limit of 110 km/h and an average daily traffic volume of 3,900 vehicles. The road has a dual carriageway with sealed shoulders for most of its length but widens to provide for channelised turn lanes at intersections. Sturt Highway is gazetted for use by PBS Level 3B vehicles (road trains).

Thiele Highway has a posted speed limit of 100 km/h and an average daily traffic volume of 1,400 vehicles. It has a dual carriageway with sealed shoulders. The majority of the Thiele Highway is gazetted for use by PBS Level 3A vehicles (road trains), albeit the section through Kapunda is limited to PBS Level 2A vehicles (B-doubles).

Truro Road has a speed limit of 100km/h and an annual average daily traffic volume of 1,500 vehicles which reduces to 200 vehicles to the east of Belvidere Road. The road has a dual carriageway with adjacent unsealed shoulders and is gazetted for use by PBS Level 3A vehicles between Sturt Highway and Kapunda.

Bagot Well Road, Camel Farm Road, Flagstaff Hill Road and Mosey Road provide the preferred access route to the subject site. All roads are unsealed and in relatively good condition. The default speed limit of 100km/h applies to these roads, albeit drivers may not adopt such a speed due to the unsealed nature of the road. The roads vary in width between approximately 6.0m and 8.0m. They provide local access for adjacent farming properties. Existing traffic volumes on the roads are low and would include farm machinery as well as domestic vehicles.

5.6.2 Preferred Access Route

A range of Over Size Over Mass Vehicles (OSOM) will be required to deliver the components of a wind turbine. A preferred route for delivery of major components has been undertaken with consideration of matters such as height restrictions, bridge limitations or specific requirements within townships. Based on the port of origin for the majority of the components being the Port of Adelaide, the use of Sturt Highway as a gazetted OSOM route is the preferred route (via the Port River Expressway and Northern Expressway).

The preferred access route from Sturt Highway is via Truro Road, Bagot Well Road, Camel Farm Road, Flagstaff Hill Road and Mosey Road to the site access. This route minimises the impact of heavy vehicles on local roads and the surrounding landowners, by limiting the number of journeys past existing dwellings. This preferred route is illustrated on the extract from the TIA as contained in Section 2.3 of this report (Figure 6).

The site assessment confirmed that the roads along this route are in good condition. Turn paths were prepared using the largest vehicle anticipated for delivery of the wind turbine blades, which is a twin steer semi-trailer which has a variable length trailer. Typically, the trailer would be slightly shorter than the blade which would extend over the end of the vehicle. The assessment indicates that while there will be some requirements for road widening to accommodate turn paths, the access route is able to be accommodated within existing road reserve. It would also appear that there would be minimal impact to trees (with some potential trimming required to achieve head-height clearance but no removal of large trees necessary). Furthermore, the assessment has identified that the existing bridge on Bagot Well Road will require widening/upgrading. Upgrading of road reserves and the bridge are subject to Infrastructure Agreements with Light Regional Council and the Regional Council of Goyder (as applicable).

Access to the principal wind farm site is located on Mosey Road and suitable access can be provided for all delivery vehicles.

The terminal substation is located on Sturt Highway, east of Truro. Infrastructure associated with the substation will utilise OSOM vehicles and a new access is proposed to cater for these vehicles.

5.6.3 Traffic Impact Assessment

During the construction phase of the project, which is anticipated to be in the vicinity of 18 months, the predicted average daily traffic generation of approximately 273 trips per day, based on the following daily vehicle movements:

- three OSOM vehicle trips;
- 145 general access truck trips (up to 19.0 m semi-trailers); and
- 125 light vehicle trips.

The analysis concluded that the traffic increase on the roads will be minimal, albeit measurable as the current volumes are already low. The current optimised proposal will reduce the number of wind turbine towers to 42, in lieu of the previously approved 51 WTG, which will result a reduction in the number of

total OSOM vehicles delivering the wind turbine components and raw materials relative to the current approved development.

During the operational phase of the project, the traffic generated will be limited to maintenance vehicles infrequently visiting the site.

5.6.4 Traffic Safety Assessment

MFY have undertaken an assessment whether the wind turbine generators pose a risk to the safety of drivers on the road network. Advice in relation to road safety considerations for location of infrastructure is provided in Austroads “Guide to Road Design - Part 6: Roadside Design, Safety and Barriers” (AGRD06) and “Guide to Road Design - Part 6B: Roadside Environment” (AGRD06B).

The key aspects of road safety consideration for the proposed development are:

- whether the location of the WTG tower presents a risk to drivers due to its proximity to the road; and
- whether the moving blades on the turbine represent a distraction to drivers.

Towers adjacent to publicly accessible roads will be located with at least 500 metres separation. Such a separation would ensure that the towers will be well outside the range to cause an impact to errant vehicles.

With respect to driver distraction, consideration has been given to whether the turbines will be located within the cone of vision of drivers. The cone of vision represents an area adjacent to the road which could be within a driver’s general field of vision. While AGRD06B does not stipulate that an object within the cone of vision will cause a distraction for drivers, removal of an object from the cone of vision will mitigate the risk of driver distraction.

The cone of vision relates to the angle of vision for drivers at any position along a road to the potential point of distraction which, in this instance, is considered to be the hub of the WTG rotor. The speed of vehicles is also a factor in determining the potential distraction for drivers, with the cone of vision decreasing for higher speeds. The safety factor needs to consider the potential distraction of drivers and the speed of the vehicle. Accordingly, the cone of vision has been assessed at a speed of 80km/h as the cone of vision criteria is greater (and hence compliance with this requirement will be of greater safety benefit). WTG 38 is the closest turbine to a road (Mosey Road) and the assessment indicates that the hub will be outside of the cone-of-vision. All other turbines will be further from a publicly accessible road and will satisfy the criteria.

5.6.5 Summary and Findings

The Traffic Impact Assessment report by MFY incorporates the following summary of the analysis undertaken (Section 7.0):

This report has addressed potential road safety and access requirements associated with the proposed Twin Creek Wind Farm. The traffic impact associated with the operation of the proposed

facility will be negligible and will relate to safety for users of the adjacent roads rather than any impact created by traffic associated with the proposal.

A site assessment and analysis of the proposal confirm that the locations of the turbines will satisfy the criteria for lateral and vertical clearance requirements to mitigate driver distraction on public roads.

Access to the development will be located such that sightline criteria are met and will be designed to accommodate the largest anticipated vehicle. Two access points will be provided to service separate areas of the site where connectivity is constrained by the natural terrain.

Notwithstanding the negligible impact associated with the operation of the proposal, the delivery turn path requirements for the turbines will be considerable, thus necessitating road infrastructure upgrades to service the site. These upgrades, which would be detailed in the construction traffic management plan, would appear to be accommodated within existing road reserve, although a review of the requirements having regard to the specific delivery vehicle will clarify any temporary construction works required.

The assessment has identified an OSOM route which would facilitate access between Port Adelaide or Port Pirie and the site. The transportation of turbine components will occur on these routes.

There will be a requirement to identify a road connection which can accommodate the OSOM vehicles between the access point(s) for the site and the OSOM route. The route which would be via Truro Road and Bagot Well Road, will require the bridge on Bagot Road to be upgraded to accommodate the design vehicle. A detailed assessment of the agreed access route will identify the infrastructure upgrade requirements to facilitate access to the site.

5.7 Aviation

Aviation Projects were engaged to prepare an Aviation Impact Assessment (AIA) for the optimised layout of the Twin Creek Wind Farm (TCWF).

5.7.1 Methodology

The AIA assesses the potential aviation impacts associated with the Project and provided aviation safety advice in respect of relevant requirements of air safety regulations and procedures, and incorporated consultation with relevant aviation agencies. Specifically the AIA was prepared with reference to the Civil Aviation Safety Regulations 1998, associated Manuals of Standards and other guidance material provided by CASA, the National Airports Safeguarding Framework (NASF) Guideline D: Managing the Risk to aviation safety of wind turbine installations (wind farms)/Wind Monitoring Towers, and specific requirements as advised by Airservices Australia.

The AIA report includes an Aviation Impact Statement (AIS) and a qualitative risk assessment in relation to obstacle lighting.

5.7.2 Findings of the Aviation Impact Assessment

In relation to the proposed development, the aviation impact assessment notes the following:

- the highest proposed wind turbine is WTG7 with a ground elevation of 491.1 metres Australian Height Datum (AHD) (with 5-metre buffer) and overall height of 706.1-metres AHD (2317 ft AMSL);
- The development is not located within 30 nm (56 kilometres) of any certified aerodrome;
- The nearest certified aerodromes to the Project (from the closest WTG) are:
 - Edinburgh (YPED) - 30.6 nm southwest;
 - Parafield (YPPF) - 35 nm southwest;
 - Adelaide (YPAD) - 45 nm southwest;
- There are no active verified Aeroplane Landing Areas (ALA) within 3nm of project, including the transmission line. There is one unverified ALA within 3nm of the Project;
- Gliding operations from Gawler and Stonefield Gliding aerodromes may occur in the vicinity of the Project Area and there is no impact anticipated to the normal departure and arrival procedures for gliders at those aerodromes;
- the TCWF does not impact any Obstacle Limitation Surfaces (OLS);
- the TCWF will not impact on operational airspace;
- the project will not affect any route or grid lowest safe altitude;
- The project will not penetrate any protection areas associated with aviation facilities;
- there are no Airservices Australia (AsA) communications facilities located at or within 30nm of the TCWF;
- the TCWF will not impact on the performance of any communication facilities;
- the nearest Airservices Australia (AsA) Radar installations are at Adelaide Airport, 83km to the south west of the nearest WTG. No impact to radar facilities is anticipated;
- the 'as constructed' WTG coordinates and elevations should be provided to Air Services Australia for reporting of tall structures; and
- the safety risk assessment for the TCWF concludes that the proposed WTGs will not require obstacle lighting to maintain an acceptable level of safety to aircraft.

5.7.3 Recommendations of the Aviation Impact Assessment

The Aviation Impact Assessment incorporates recommendations, including those listed below, which either form part of the development as proposed, and/or will be included in the Statement of Commitments:

Notification and reporting

1. *Details of WTGs exceeding 100 m AGL must be reported to CASA as soon as practicable after forming the intention to construct or erect the proposed object or structure, in accordance with CASR Part 139.165(1)(2).*
2. *'As constructed' details of WTG coordinates and elevation should be provided to Airservices Australia*
3. *Any obstacles above 100 m AGL (including temporary construction equipment) should be reported to Airservices Australia NOTAM office until they are incorporated in published operational documents. With respect to crane operations during the construction of the Project, a notification to the NOTAM office may include, for example, the following details:*
 - a. *The planned operational timeframe and maximum height of the crane; and*
 - b. *Either the general area within which the crane will operate and/or the planned route with timelines that crane operations will follow.*
4. *Details of the wind farm should be provided to local and regional aircraft operators prior to construction in order for them to consider the potential impact of the wind farm on their operations.*
5. *To facilitate the flight planning of aerial application operators, details of the Project, including the 'as constructed' location and height information of WTGs, WMTs and overhead transmission lines should be provided to landowners so that, when asked for hazard information on their property, the landowner may provide the aerial application pilot with all relevant information*

Lighting of WTGs

6. *Aviation Projects has assessed that installing obstacle lights on WTGs is not required to maintain an acceptable level of safety to aircraft.*

Micrositing

7. *The potential micrositing of the WTGs has been considered in the assessment with the estimate of the overall maximum height being based on the highest ground level within 100 m of the WTG positions. Providing the micrositing is within 100 m of the WTGs, it is likely to not result in a change in the maximum overall blade tip height of the Project. No further assessment is likely to be required from micrositing and the conclusions of this AIA would remain the same.*

Overhead transmission line

8. *Overhead transmission lines and/or supporting poles that are located where they could adversely affect aerial application operations should be identified in consultation with local aerial application operators and marked in accordance with Part 139 MOS 2019 Chapter 8 Division 10 section 8.110 (7) and section 8.110 (8).*

The conclusion of the aviation assessment undertaken is that with the tallest wind turbine generator with an overall height of 706.1 metres AHD (2317 ft AMSL) the proposed Twin Creek Wind Farm does not interfere with any airspace procedures or aviation related communications, navigation or surveillance facilities for both civil or military aerodromes and airspace. The assessment concluded that the Twin Creek Wind Farm is not a hazard to aircraft safety and does not interfere with any military or civil airspace procedures.

5.7.4 Aerial Agriculture Application

The AIA considers aerial agriculture application and incorporates recommendations for notification of WTG's and the transmission line to local aerial agriculture operators.

Concerns are frequently expressed by community members in the location of proposed wind farm sites, that aerial agriculture application and aerial firefighting would be adversely impacted.

As stated in the AIA, it is possible that fixed wing aerial agriculture operations would still be possible on properties within the Project site and neighbouring properties. It is anticipated that aerial agriculture would be undertaken in a manner consistent with the pattern of land uses within the locality, that is, aerial application may be utilised on the plains where cropping activities are undertaken and not frequently undertaking associated with grazing activities within the elevated rocky land. The location of wind turbine generators, which are generally on elevated land along or adjacent the ridgelines, are therefore unlikely to adversely impact on aerial application on the cropping and grazing land to the east and west. Areas further south of the wind farm site and particularly those used for more intensive agriculture and horticulture within the Barossa Council area may also periodically utilise aerial agriculture applications. It is considered that the separation distance from these land uses and the wind farm will limit any potential interference.

It is not considered that the proposed development would unreasonably interfere with low altitude aircraft movements associated with agriculture.

5.7.5 Aerial Fire Fighting

The potential impact on aerial firefighting has been in the Aviation Impact Assessment report, which concludes that fixed wing aerial firefighting operations may be conducted in the vicinity of the project. The AIA contains the following discussion in relation to aerial fire fighting:

Most aerial firefighting organisations have formal risk management programs to assess the risks associated with their operations and implement applicable treatments to ensure an acceptable level of safety can be maintained. For example, pilots require specific training and approvals, additional equipment is installed in the aircraft, and special procedures are developed.

The Australasian Fire and Emergency Services Council (AFAC) has developed a national position on wind farms, their development and operations in relation to bushfire prevention, preparedness, response and recovery, set out in the document titled Wind Farms and Bushfire Operations, version 3.0, dated 25 October 2018.

Of specific interest in this document is the section extracted verbatim from under the ‘Response’ heading, copied below:

Wind farm operators should be responsible for ensuring that the relevant emergency protocols and plans are properly executed in an emergency event. During an emergency, operators need to react quickly to ensure they can assist and intervene in accordance with their planned procedures.

The developer or operator should ensure that:

- liaison with the relevant fire and land management agencies is ongoing and effective*
- access is available to the wind farm site by emergency services response for on-ground firefighting operations*
- wind turbines are shut down immediately during emergency operations - where possible, blades should be stopped in the ‘Y’ or ‘rabbit ear’ position, as this positioning allows for the maximum airspace for aircraft to manoeuvre underneath the blades and removes one of the blades as a potential obstacle.*

Aerial personnel should assess risks posed by aerial obstacles, wake turbulence and moving blades in accordance with routine procedures.

In addition to the consideration of aerial fire fighting in the AIA, the following is noted in relation to bushfire management in South Australia:

- Twin Creek Wind Farm is in the CFS Secondary Response Zone. This means that bushfire suppression activities may be able to be supported by aerial suppression (rotary and fixed wing) based on a specific request by an Incident Controller and approved at a state level;
- there is no guarantee that aircraft for either suppression or an observation platform will be available for immediate dispatch, particularly in the Secondary Response Zone. This will be determined at the time by the CFS State Air Resource Coordinator (SARC) in consultation with the CFS Regional Office and Incident Management;
- pilots, air attack supervisors and air operation managers constantly undertake dynamic risk assessments to review and consider options and determine appropriate strategies to safely undertake suppression operations. In this context, aerial firefighting will treat turbine towers the same as any other obstacle; and
- the CFS fact sheet understanding Aerial Firefighting highlights that “...community perception is that aircraft alone put out bushfires, this is not true” and the CFS website Aerial firefighting defines aerial firefighting as “the use of aircraft and other aerial resources to assist firefighters on the ground in achieving bushfire suppression objectives”. It is important to note, that firefighting aircraft

(regardless of their size or type) do not extinguish a bushfire alone, but are deployed to provide an important support function to ground firefighting resources.

Concerns relating to impacts on aerial fire-fighting were considered in the Palmer Wind Farm judgement (*McLachlan & Ors v Mid Murray Council & Tilt Renewables Australia Pty Ltd - (2018) SAERDC 15*). Evidence presented in this matter that was accepted by the Court states:

147 We accept that, in the event of a fire near the WTGs, firefighting tactics, including aerial tactics, may be different from what they would have been in the absence of the WTGs, depending upon the nature of the fire and weather conditions.

149 Mr Ferguson said that the wind farm would not pose an unacceptable bushfire risk, and nor would it prevent aerial firefighting, although it may change routes and tactics to some extent.

150 We are satisfied that the proposed development is acceptable in relation to its impact upon firefighting capacity. Any new land use in a rural area will need to be considered in the event of a fire, and may change the approach to firefighting. The proposed wind farm will generate new considerations for the CFS and also offer new opportunities.

RES acknowledges the importance of adequate and appropriate bushfire management in the locality and there are several measures incorporated in the Statement of Commitments regarding bushfire management. It is however considered that the development of the Twin Creek Wind Farm may vary the approach to bushfire management but not significantly impact upon the capacity for aerial firefighting to occur within the region.

5.7.6 Ballooning

The proximity of the proposed wind farm development to the Barossa Valley region has previously led to comments and concerns raised with regard to the potential impact on ballooning in the region, particularly as this activity is viewed as an important tourist attraction.

There are two Barossa Valley based ballooning operators and neither have a set base (rather a customer meeting point), but will launch and land wherever the local conditions allow. It is understood that following customer pick up the operators will drive to the best launch site, typically within 12-15 nm to the launch site. Flights are usually one hour and the path will be wherever the wind takes them. It is theoretically possible some flights may be outside of the Barossa Valley and toward the Twin Creek Wind Farm or any other direction.

An obstacle noted in publications and charts needs to be considered in any flight plan. Therefore, the remedy for the risk of collision with a wind turbine is to ensure that the turbine coordinates and elevations are provided to Airservices Australia for marking on aeronautical charts, which is standard procedure.

5.8 Fire Risk and Management

5.8.1 Context

There is no recorded bushfire history for the site of the proposed development. Within the Mid North and Barossa Valley regions there have been significant bushfires over the past decade, including Pinery in November 2015, Eden Valley January 2014 and Angaston December 2014.

The area of the wind farm has undulating and rocky terrain, minimal vegetation and low overall fuel hazard levels. The bushfire environment of the wind farm site and locality was noted in the Bushfire Management Plan (prepared by SA Bushfire Solutions as part of the 2017 development application), as follows:

- the Flinders Mid North Yorke Bushfire Management Area Plan (BMAP) covers the Light Regional and Goyder Local Government areas, while the Murray Mallee BMAP covers the Mid Murray Local Government area;
- Mt Lofty Ranges is predominantly characterised by *Casuarina* and *Allocasuarina* forests and woodlands. Eucalyptus low open woodlands commonly dominate the higher rainfall areas and give way to *Allocasuarina* species in the more arid parts. The overall fuel hazards with these vegetation types can vary considerably and are expected to have higher fuel loads in the areas of remnant vegetation;
- the neighbouring lower plains (off site further to the west) are predominantly cereal cropping lands and depending on the season can have extreme near surface / elevated fuel loads and have significant bushfire potential, especially during harvesting operations;
- access and egress throughout many parts of the proposed development area is restricted because much of it is privately owned property with complex terrain. Public roads are limited and existing farm tracks are of varying standards that may not meet the Government Agencies Fire Management Working Group (GAFMWG) standards for emergency response vehicles;
- construction of the wind farm will include engineered access roads (greater than the identified GAFMWG standards) to each turbine location which will greatly improve fire crew access through the site and difficult terrain areas; and
- there is limited water infrastructure close to the proposed project area. Standpipes in nearby Eudunda and Kapunda are the principal sources of water for firefighting purposes.

5.8.2 Fire Risk During Construction

Existing land uses and human activity already pose some level of risk of generating a bushfire event during the fire danger season, however the construction phase of the project has the potential to increase bushfire risks primarily by increasing the level of activity in the region, specifically in relation to:

- the use of heavy earthmoving machinery operating in rocky environment;
- increasing the potential for vehicles to drive through dry grass;

- increasing the volume of human activity and vehicle accessing the area;
- storage and use of flammable fuels and materials; and
- the use of grinders and welding equipment.

Increased activity on grassland vegetation during construction, could potentially result in accidental ignition. Depending on the conditions and the location of such an event, a bushfire may become challenging to contain in the steep slopes and within areas of limited access, however, this will be offset by the construction of new roads that will improve emergency vehicle access and increase response times to reported incidents as well as serve as firebreaks.

The increased bushfire risk on the surrounding areas during construction and operation of the wind farm, is not considered to be more prevalent than any other development application or existing general activity (for example farming, contracting or other construction).

In each case the potential of increased risk can be managed and mitigated provided appropriate training, communication and management practices are put into place in accordance with the recommendations incorporated in the bushfire management plan of the Statement of Commitments.

5.8.3 Fire Risks During Operation

The proposed wind farm development will introduce additional elements to the region that have, in theory, the potential to increase bushfire risk, including:

- increase in the number of turbines, substations and power lines in the area (potential for mechanical and electrical failures);
- introducing infrastructure that can pose difficulties for suppression (e.g. Nacelle fires due to height and OH&S considerations of falling debris; battery energy storage systems);
- increase in crew working in the area, that is an increase in management and maintenance vehicles;
- increasing the potential for lightning conductors; and
- electronics stored with combustible oils and lubricants.

Suppression of fire in the nacelle by ground crew is impossible; the initial detection of problems that may lead to fire in the nacelle and subsequent fires on the ground is the key to minimising asset and infrastructure loss and ignition of bushfires. Installation of detection and automatic fire protection systems reduce the risks, increase the ability to contain potential problems and decrease response times to reported incidents.

Battery units are equipped with intelligent Fire Detection System composing of Temperature Sensor, Gas sensor, smoke detector, which all serve to detect potential of fire before flames erupt. The system will automatically electrically disconnect, and cease operation in the event any of these alarms are triggered.

In the unlikely event that the in-built sensors do not detect potential for fire and a fire occurs, battery containers are designed to engage a fire suppression system which will be automatically activated to attempt to put out the fire at the source and prevent it spreading to other equipment. The equipment will

also maintain adequate separation distances to further minimise the likelihood of fire propagation from source. Further, battery components are Independently Tested and Certified to UL9540A. This Quality Assurance further decreases the likelihood of fire propagation within the battery equipment.

As discussed in Section 5.7.5 above, a frequent concern expressed by the community relates to the impact of wind farm development limiting aerial firefighting bushfire suppression options. As concluded in the Aviation Impact Assessment and previously outlined, aerial firefighting may still occur within the locality.

5.8.4 Fire Management Plan

In parallel to the in-built design fire mitigation measures incorporated within the WTG and BESS infrastructure, as outlined above, a Fire and Emergency Management Plan (incorporating a Life and Fire Safety Systems Design), prepared in consultation with the SA Country Fire Service and SafeWork SA will be prepared prior to the construction of the Project.

In preparing the management plans, and in consultation with the SA Country Fire Service (CFS), reference will be made to the Victorian Country Fire Authority Guidelines - Design Guidelines and Model Requirements - Renewable Energy Facilities 2024 (CFA Guidelines), in lieu of a specific South Australian standard or guideline for assessment of fire risk for renewable energy projects.

The measures to be incorporated in the Fire and Emergency Management Plan are outlined in the Draft Construction Environmental Management Plan (CEMP) included in Volume 4 of the development application and the Statement of Commitments (Attachment E). The methodology to mitigate the threat of fire would include the following measures:

- works during the fire danger season to have appropriate permits from Local Government, (Goyder, Light Regional and Mid Murray Councils);
- identify the appropriate size and location of static water points on-site;
- install agreed static water storage tanks (as appropriate) in the form of above ground water tank constructed of concrete or steel. All static water storage should be marked on a site plan and be available to the CFS;
- manage the potential fire risk associated with electrical failure by:
 - use of fully enclosed electrical equipment on turbine structures and pad-mount transformers;
 - extensive use of underground cabling between turbines;
 - design of any overhead lines in accordance with industry standards;
 - installation of use of intelligent fire detection system composing of temperature sensor, gas sensor and smoke detector to the battery units.
- vegetation management, via the exclusion of vegetation from within and the perimeter of the substations, BESS and construction compound area;
- emergency vehicle access to incorporate:

- Access gates to be provided on boundary roads;
 - Construction of all internal roads to a minimum of 4 metres or trafficable width with a 4-metre vertical clearance;
 - all internal roads to be constructed of an all-weather material capable of accommodating a vehicle of 15 tonnes; and
 - All vehicle access points should be marked on a site plan and be available to the CFS.
- provision of appropriate emergency response training and equipment to all staff and contractors;
 - prior to commissioning the facility, operators would offer a familiarisation visit and explanation of emergency procedures to the CFS. Information in relation to the specific hazards and fire suppression requirements of the site should be provided to the CFS during this visit. In addition, a schedule for ongoing site familiarisation to account for changing personnel, site infrastructure and hazards should be developed in conjunction with the local CFS Brigade;
 - ensure all building construction is in line with CFS regulations and Minister Specifications of building in Bushfire risk areas;
 - ensure appropriate bunding in areas where there is potential for flammable fuels and oils to leak and create bushfires or other environmental risks; and
 - Consider remote shut down of wind turbine operations during high bushfire risk days, actual bushfires or reported faults.

5.9 Shadow Flicker & Glint

DNV have undertaken an assessment of the expected annual shadow flicker duration in the vicinity of the proposed Twin Creek Wind Farm. This assessment is contained in the “Shadow Flicker and Blade Glint Assessment” report, which is contained in Volume 2 of the application documents.

5.9.1 Methodology

DNV note that the Planning and Design Code (Performance Outcome 3.4 - Interface between Land Uses) seeks to ensure that *“development that incorporates moving parts, including windmills and wind farms, are located and operated to not cause unreasonable nuisance to nearby dwellings and tourist accommodation caused by shadow flicker”*. The method of assessing unreasonable nuisance with regard to shadow flicker utilised in the assessment by DNV defers to the Environment Protection and Heritage Council (EPHC) National Wind Farm Development Guidelines - Draft, July 2010 (the Guidelines). The Guidelines explain shadow flicker as follows:

The rotating blades of wind turbines can cast intermittent shadows that appear to flicker for an observer at a fixed ground position. Since wind turbines are tall structures, shadow flicker can be observed at considerable distances but usually only occurs for brief times at any given location. The most common effect of shadow flicker is annoyance. These impacts are most closely associated with the duration of shadow flicker experienced above a certain intensity.

The Guidelines recommend that the modelled theoretical shadow flicker duration should not exceed 30 hours per year, and that the actual or measured shadow flicker duration should not exceed 10 hours per year. The guideline also recommends that the shadow flicker duration at a dwelling be assessed by calculating the maximum shadow flicker occurring within 50m of the centre of a dwelling.

As discussed in the DNV assessment report, the “*impact of shadow flicker is typically only significant up to a distance of around 10 rotor diameters from a turbine...Beyond this distance limit the shadow is diffused such that the variation in light levels is not likely to be sufficient to cause annoyance*”. The Guidelines state:

Shadow flicker can theoretically extend many kilometres from a wind turbine. However, the intensity of the shadows decreases with distance. While acknowledging that different individuals have different levels of sensitivity and may be annoyed by different levels of shadow intensity, these guideline limit assessment to moderate levels of intensity (ie. well above the minimum theoretically detectable threshold) commensurate with the nature of the impact and the environment in which it is experienced.

The Guidelines therefore suggest a distance equivalent to 265 times the maximum blade chord as an appropriate limit, which corresponds to approximately 1,000 metres to 1,600 metres for modern wind turbines (which typically have a maximum blade chord length of 4 metres to 6 metres).

The candidate turbine selected for the project has a rotor diameter of 172 metres and DNV has applied a design parameter of 4.5 metres for the blade chord length. DNV has assumed that shadow flicker of a moderate level of intensity of above will occur up to a distance of approximately 10D (that is, 10 rotor diameters) from the wind farm and has applied a maximum shadow length of 1,720 metres.

DNV also discuss shadow flicker beyond the 10D distance limit and state that “*it is assumed that any shadow flicker experienced will be below a ‘moderate level of intensity’ and unlikely to cause annoyance. However, it is recognised that different people have different levels of sensitivity to shadow flicker and may therefore be affected by shadow flicker intensities below the moderate level of intensity assumed by this distance limit. To account for this possibility, and although not suggested by the Draft National Guidelines, DNV has also assessed the shadow flicker for an increased distance limit of 15 times the rotor diameter (15D), or 2580m, to include the potential for occurrences of shadow flicker below a moderate level of intensity*” (Section 4.1.2.2).

5.9.2 Assessment and Findings

In the assessment undertaken by DNV, 20 dwellings were identified as having the potential to experience shadow flicker. Of the 20 dwellings, 7 are associated dwellings and 13 were not associated. The findings of the assessment for the project illustrate that one associated dwelling (dwelling 122) is predicted to experience shadow flicker of at least a moderate level of intensity, exceeding 30 hours per year. Dwelling 122 is in the ownership of RES, is not occupied and is scheduled for demolition prior to the commencement of the project. No other dwellings are predicted to experience shadow flicker at a level of intensity that is likely to cause annoyance.

DNV have also calculated the shadow flicker for 15D (15 times the rotor diameter), or 2,580 metres, to include the potential for occurrences of shadow flicker below a moderate level of intensity. The findings indicate the possibility for shadow flicker below a moderate level of intensity to occur within 50 metres of 10 dwellings, four of which are associated dwellings.

The findings of the DNV shadow flicker assessment are stated in the Conclusions as:

“Based on the modelling conducted by DNV, one associated dwelling is predicated to experience theoretical and actual shadow flicker duration that exceed the limits recommended by the Draft National Guidelines. However, DNV understands that this dwelling is currently owned by the Customer and is planned to be demolished prior to construction of the Project. No other dwellings are predicted to experience shadow flicker at a level of intensity that is likely to cause annoyance”.

Blade glint involves the regular reflection of the sun off rotating turbine blades. Its occurrence depends on a combination of circumstances arising from the orientation of the nacelle, angle of the blade and the angle of the sun. The reflectiveness of the surface of the blades is also a determining factor. The blades of the wind turbines to be constructed at Twin Creek will comprise a non-reflective coating, which removes the potentially annoying reflective glint.

5.10 Civil, Geology and Hydrology

AECOM Australia Pty Ltd (AECOM) have prepared a Civil, Geology and Hydrology Technical Assessment of the proposed development site. A copy of this assessment is contained in Volume 2 of the application documents.

5.10.1 Natural Features

The AECOM report describes (in Section 5 of the report) the natural features of the site as follows:

- the topography of the site is hilly, with numerous incised creek valleys typically draining towards the west into the Light River. The elevation of the Light River near the site varies from about RL 270 metres to 290 metres AHD, whereas the ridge lines and hills within the project site typically have elevations in the range of about RL 400 metres to 450 metres AHD;

- the hills and ridge tops are generally rounded, but become steeper towards the valleys where creeks are incised in relatively steep sided channels. In general the terrain undulates somewhat more steeply in the southern part of the site;
- rock outcrops are visible throughout the site, ranging from rocky hill tops and ridges, to rocky creek beds. Orange clay typically overlay the rock, with the soil thickness varying up to about 3 metres in some creek beds, but reducing to close to zero on the hill tops;
- vegetation typically comprised low grass with occasional, scattered mature trees;
- numerous small farm dams, some windmills and old stone ruins were also present across the site;
- access tracks across the site appeared to have been constructed from local materials, and typically comprised a mixture of gravel and exposed clay. The main tracks/roads had been sheeted with gravel that resembled local site won crushed/sorted rock. Trafficability was general acceptable for a light 4WD vehicles in dry conditions, but the more clayey tracks were slippery when wet;
- no evidence of significant landslides was observed from either the stereo pairs of aerial photographs, or from the areas of the site observed during the walk-over, although considerable erosion and ‘wombat holes’ were observed during on-site survey;
- watercourses within the site area are predominantly fed by rainfall and are ephemeral, ceasing to flow in dry weather. The Light River flows along the western boundary of the site, entering from the north-western corner and leaving at the south-western corner. The Light River has a catchment of approximately 1,820 km². The majority of the catchment is used for dryland agriculture, with cereal and canola crops as well as livestock grazing;
- Freshwater Creek enters the site in the north-eastern area, flows in a south westerly direction through the site and contributes the Light River approximately halfway along the western boundary of the site. The catchment for Freshwater Creek is approximately 34.66 km² in size with approximately 20 km² of the catchment within the site boundary. Spring Creek originates in the south-east area of the site, flows west and contributes to the Light River just outside the south-west corner of the site. The catchment for Spring Creek is approximately 9.26 km²;
- Other watercourses within the site originate from the ridge on the eastern side of the site and flow through naturally occurring valleys before contributing to the Light River, or Freshwater Creek or Spring Creek. The watercourses throughout the site have catchment sizes ranging from 1 km² to over 30 km² for Freshwater Creek;
- it is noted that the site is located north and outside the Barossa Prescribed Water Resources Area, which covers groundwater, water courses and surface water;
- The site is located within the Adelaide Geosyncline, comprising thick sedimentary and minor igneous rocks that were formed during the late Precambrian (between about 1,100 Ma and 600 Ma). These rocks later became folded, metamorphosed, intruded and uplifted; and
- two former mines are located within the project boundaries, namely Benita Copper and Newlands Barite and a further mine, Julia Creek Barite is located close to the eastern boundary of the site.

5.10.2 Geotechnical Constraints and Opportunities

The AECOM report utilise the data collected and described above in providing advice for the design of the wind farm, the siting of access tracks, siting of the substation, operations and maintenance compound, temporary compounds and associated infrastructure.

The findings of the investigations are discussed in Section 7.0 of the report in terms of geotechnical constraints and opportunities, as summarised below.

- rock is expected to be present either at the surface or at very shallow depth at all turbine locations, which should make anchored footings a viable option for many turbines;
- if the rock is highly fractured or deeply weathered, the anchors may need to be excessively deep and/or the associated overall rock mass may have a low stiffness which would result in excessive deflections of the base of turbine. In such areas gravity footings may be required;
- the majority of footing excavations for the turbines are expected to be in rock, which will require the use of rock excavation techniques, such as hydraulic rock breakers mounted on large excavators. The use of blasting should be avoided however, as it may loosen the rock mass and lower the stiffness of the rock below the footing level;
- future geotechnical investigations will be required to assess the condition of the rock at each turbine location. Similar investigations at key points along proposed access road tracks and at the proposed substation site should also be performed;
- potential borrow pit sites that are suitable for producing aggregate for unsealed road construction are expected to be readily available throughout the project area;
- due to the higher quality demands on concrete aggregate, it is expected that off-site sources of concrete will be used;
- the ability to utilise surface water for construction is expected to be limited to the wetter months of the year;
- a number of existing bores are present throughout the project area that are currently used for stock watering or other agricultural purposes. Should the installation and development of new bores be required during construction, a South Australian Government permit (from the Department for Environment and Water) will be required for each new bore;
- the stability of turbine footings in close proximity to steep slopes must also be assessed, particularly where the rock mass is highly fractured or has unfavourably orientated defects; and
- any new excavations that expose the soil profile must be provided with protection from erosion, and mitigation measures such as silt fences may be required down gradient of active earthworks areas to avoid fouling the natural creeks.

A number of the findings of these investigations will be incorporated into the Draft Construction, Environmental Management Plan for the site.

5.11 Electromagnetic Interference (EMI)

DNV has assessed the potential electromagnetic interference (EMI) impacts associated with the development and operation of the proposed Twin Creek Wind Farm in the EMI Assessment report which is contained in Volume 2 of the development application documents.

As stated in EMI Assessment Report (Section 4), *“if not properly designed, wind farms have the potential to interfere with radiocommunications services. Two services that are most likely to be affected include television broadcast signals and fixed point-to-point microwave signals. Terrestrial broadcast signals are commonly used to transmit domestic television, while microwave links are used for line-of-sight connections for data, voice and video. The interference mechanisms are different for each of these and, hence, there are different ways to avoid interference”*.

5.11.1 Investigations and Methodology

The EMI Assessment report investigates the potential EMI impact of the Project on:

- fixed point-to-point links;
- fixed point-to-multipoint links;
- radiocommunications assets belonging to emergency services;
- meteorological radars;
- trigonometrical stations;
- Citizen’s band (CB) radio and mobile phones;
- wireless internet;
- satellite television and internet; and
- broadcast radio and television.

The investigations were undertaken with reference to the Environment Protection and Heritage Council (EPHC), “National Wind Farm Development Guidelines - Draft,” July 2010 (the Guidelines). In addition, the Planning and Design Code (Performance Outcome 8.1 - Interface between Land Uses) seeks to ensure that *“development in rural and remote areas does not unreasonably diminish or result in the loss of existing communication services due to electrical interference”*.

The EMI Assessment report provides extensive details about the methodology engaged, which included direct consultation with identified “likely affected parties”. The consultation and response from parties is contained in Table 2 of the report and quoted below.

Table 14: Summary of EMI Assessment Results

Licence or service type	Results of DNV assessment	Stakeholder feedback (to date)	Expected impact.	Potential mitigation options
Radio-communication towers	There are no towers within 2 km of proposed turbine locations		None	None required

Licence or service type	Results of DNV assessment	Stakeholder feedback (to date)	Expected impact.	Potential mitigation options
Fixed point-to-point links	<p>11 links crossing Project boundary, operated by: South Australian water Corporation (SA water) Spark infrastructure SA (No2) Pty Limited (SA Power Networks) South Australian Government Radio Network NBN Co Limited Optus Mobile Pty Limited Wan Solutions Pty Ltd (SWOOP)</p> <p>All links: Turbines are not present in any of the potential diffraction zones</p>	<p>SA Water: Interference unlikely NBN Co, Optus: No concerns raised</p>	Unlikely to cause interference	If required - reroute affected links, install additional towers, replace affected links with alternative technologies
Fixed point-to-multipoint links	<p>254 assignments within 75 km of Project boundary 16 base stations within 20 km of Project boundary, operated by: South Australian water Corporation (SA water) The Barossa Council Bureau of Meteorology Barossa Valley Golf Club Inc. Spark Infrastructure SA (No2) Pty Limited (SA Power Networks) Telstra Limited</p>	<p>SA Water, Barossa Council, Telstra, Bureau of Meteorology: No concerns raised SA Power Networks: Satisfied with DNV modelled interference zones</p>	Unlikely to cause interference	If required - reroute affected links, install additional towers, replace affected links with alternative technologies
Other licence types	<p>Point-to-area style communications: see findings for emergency services, mobile phones, radio broadcasting, and television broadcasting</p>			
Emergency services	<p>Point-to-point links: 1 South Australian Government Radio Operator link crossing boundary Point-to-area style communications: unlikely to be affected</p>	<p>South Australian Country Fire Service, St John Ambulance Australia incorporated,</p>	<p>Point-to-point links: Unlikely to cause interference Point-to-area style communications: Unlikely to cause interference</p>	<p>Point-to-point links: as for point-to-point links Point-to-area style communications: if required - increase signal</p>

Licence or service type	Results of DNV assessment	Stakeholder feedback (to date)	Expected impact.	Potential mitigation options
		Australian Federal Police: No concerns raised Other operators: No response received to date		strength from affected tower or alternative towers, install signal repeater, install additional tower
Meteorological radar	Nearest radar: 58 km from Project	Potential for material interference to Buckland Park radar	Likely to cause interference to Buckland Park radar	To be determined through consultation with the Bureau of Meteorology
Trigonometrical stations	Trigonometrical stations: 56 stations within 20 km of the Project boundary, unlikely to be affected	No concerns raised	Unlikely to cause interference	None required
Citizen's band radio	Unlikely to be affected	Consultation not considered necessary	Unlikely to cause interference	None required
Mobile phones	Unlikely to be affected in areas with good coverage, may experience interference in areas with marginal coverage	No concerns raised	Low likelihood of interference	To be determined through consultation with the relevant operators, if required
Wireless internet	Wireless broadband service providers: mobile phone networks, NBN Co NBN: available as a fixed wireless and satellite service	Wireless broadband service providers: No concerns raised NBN Co: No concerns raised regarding turbines NBN Co have requested information on any planned wind farm operated radiofrequency transmission equipment in order to assess the potential for interference	Wireless broadband services: see findings for mobile phones NBN: Unlikely to cause interference	Wireless broadband services: as for mobile phones NBN: none required

Licence or service type	Results of DNV assessment	Stakeholder feedback (to date)	Expected impact.	Potential mitigation options
Satellite television and internet	Geostationary satellites: signals from satellites providing services intended for both Australian and international audiences are unlikely to be affected. Low Earth orbit (LEO) satellites: Starlink signals are unlikely to be obstructed at any of the nearby dwellings	Consultation with operators not considered necessary	Geostationary satellites: unlikely to cause interference LEO satellites: unlikely to cause interference	Geostationary satellites: none required LEO satellites: none required
Radio broadcasting	FM signals: may experience interference in close proximity to turbines FM signals from Flow FM Kapunda transmitter: may experience interference in areas with marginal reception to the northwest of the Project AM signals: Unlikely to be affected Digital radio signals: Project is outside the intended coverage area	FM signals: Potential for interference to signals from Flow FM Kapunda transmitter AM and digital radio signals: Consultation with operators not considered necessary	FM signals: Potential for interference to signals from Flow FM Kapunda transmitter AM signals: Unlikely to cause interference Digital radio signals: None	FM signals: Flow FM have been reconsulted. If required, mitigation strategies are to be determined through further consultation. AM signals: if required - install higher-quality antenna at affected location Digital radio signals: none required
Television broadcasting	May experience interference in areas with poor or marginal reception Adelaide transmitter: 'good' coverage In the Kapunda region surrounding the site with areas to the east and northeast of the site receiving poor to no coverage. 7 dwellings in potential interference zone	Interference analysis suggests signals are likely to be affected, but no residents will be impacted. Rectification of any interference is expected to form part of the Project.	Low likelihood of interference	If required - re-align antenna at affected dwelling to existing tower, redirect antenna to alternative tower, install more directional or higher gain antenna, change location of antenna, install cable or satellite television, install relay transmitter

5.11.2 Findings and Potential Mitigation

The EMI assessment has found that the project has the potential to cause interference to digital television signals received at dwellings in the vicinity, and FM radio broadcasts to the west and northwest of the Project, Swoop wireless internet and the Bureau of Meteorology radar at Buckland Park. Potential EMI impacts on other services considered in the assessment, trigonometrical stations, CB radio, and mobile phones, are either considered to be minor or have been assessed through consultation with the service operators. The conclusions (Section 5) of the DNV EMI assessment state:

Broadcast towers and transmission paths around the Project were investigated to determine if EMI would be experienced as a result of the development and operation of the Project. The Project will involve the installation of up to 42 wind turbine generators. DNV has considered a turbine geometry that will be conservative for turbine configurations with dimensions satisfying all of the following criteria: a rotor diameter of 172 m or less and an upper tip height of 220 m or less.

The results of this assessment, including feedback obtained from relevant stakeholders, are summarised in Table 2. It is noted that the Project has the potential to cause interference to meteorological radar operations, digital television signals received at dwellings in the vicinity of the Project, and FM radio broadcasts to the northwest of the Project.

Turbines at the Project may interfere with point-to-area style services such as mobile phone signals, radio broadcasting, and terrestrial television broadcasting, particularly in areas with poor or marginal signal coverage. Dwellings within approximately 5-10 km of the Project that are currently receiving signals from the Adelaide television broadcast transmitter may experience interference to those services. Feedback received from BAI Communications suggest that impacts to signals from the Adelaide broadcast transmitter are likely, but no viewers are expected to be affected. If interference to these services is experienced, a range of options are available to rectify difficulties.

Interference to the FM radio signal broadcast by the nearby Flow FM transmission tower may be experienced near the edges of the signal coverage area to the west and northwest of the Project. However, Flow FM advised that the areas at risk of interference may also receive signals from other nearby broadcast towers. Flow FM have been contacted regarding the current turbine layout and dimensions, and have expressed further concerns about the potential for interference to signals from their FM transmitter at Kapunda. It is understood that Flow FM is undertaking further assessment into the potential for interference and is seeking advice from ACMA to establish an understanding of how any impact to the FM radio signal from the Kapunda transmitter may be mitigated.

Since it is not possible to determine the potential EMI impacts on point-to-multipoint links and emergency services without obtaining further information from the relevant operators, DNV has consulted with organisations operating services that may be affected by the Project. SA Power Networks previously raised concerns regarding their point-to-multipoint link that crosses the site. DNV have modelled an exclusion zone based on the second Fresnel zone for the link, and SA Power Networks have confirmed that the interference zone applied is sufficient. There are no turbines located within the exclusion zones set by DNV. DNV has also reviewed the point-to-multipoint link locations provided by SWOOP, who provide wireless internet services to residents in the vicinity of the Project, and has identified potential for interference to some link paths. DNV understands that the Customer is intending to engage with SWOOP to develop technical solutions aimed at minimising potential interference to those links.

Feedback received from the Bureau of Meteorology (the Bureau) indicates that there is a potential for the Project to materially impact on the operation of their Buckland Park radar and the associated weather monitoring and prediction services. DNV understands that the Customer has commenced discussions with the Bureau in relation to measures that may be deployed to minimise the potential impact on Bureau infrastructure. Discussions to date indicate that the installation of automatic weather stations and automatic rain stations if/as required would be incorporated as part of the Customer's commitment to the Project.

Potential EMI impacts on other services considered in this assessment, including trigonometrical stations, survey marks, CB radio and satellite television are not expected or are considered to be minor.

DNV discuss a range of mitigation measures that may be considered and implemented in relation to potential interference. In relation to digital television signals, DNV state in their report that “*although DTV signals are generally unlikely to be susceptible to interference from wind turbines in areas of adequate coverage, interference could be encountered in areas where coverage is marginal and antennas at dwellings may receive a reflected signal from a turbine that is of sufficient power to interfere with the signal received directly from the transmitter. Based on the coverage maps for the area around the Project, it is possible that some areas could be deemed to have marginal reception, and interference could be encountered*”. If DTV interference is experienced at nearby dwellings as a result of the Project, potential mitigation options may include realigning/tuning or relocating the user’s antenna, installing a more directional or higher gain antenna, installing cable or satellite television or installing television relay transmitter.

In relation to the potential interference with Flow FM radio signal broadcast, DNV have identified potential mitigation options, including installing high-quality antenna and/or amplifiers at affected residences, increasing the broadcast signal strength from the Kapunda transmitter or nearby Maitland or Mt Bryan transmitters, moving the Kapunda transmitter to a new location more than 4km from any turbine, or installing a signal repeater on the opposite side of the Project. RES is committed to ongoing discussions with Flow FM and identifying appropriate mitigation measures. This commitment is included in the Statement of Commitments.

Similarly, RES will undertake further discussions with the Bureau of Meteorology regarding the potential impact on the Buckland Park radar. It is however noted that DNV state the potential mitigation options to be discussed with the Bureau may include installing additional weather radars or sensing stations to provide coverage in the affected area, supplementing data from the affected radar with other sources such as satellite data or data from adjacent radars (if available), or using post-processing tools to forecast or fill gaps in coverage. Ongoing discussions with the Bureau of Meteorology in relation to the potential interference with the Buckland Park radar and mitigation options have been included in the Statement of Commitments.

5.12 Frost

The impact of wind turbines on climatic conditions within the locality of Twin Creek Wind Farm, particularly the potential to create or exacerbate frost within the Barossa Valley was a matter examined as

part of the original development application. Concerns regarding frost impacts has been raised during the community engagement on the optimised layout proposed in this development application.

Given the communities concerns, the findings relating to this matter as part of the original development application are summarised here. It is noted this issue has not been raised by industry groups (such as the Farmers Federation or the Wine Grape Council), research bodies (such as the Australian Wine Research Institute) or relevant government agencies (such as PIRSA / SARDI or the CSIRO) in relation to Twin Creek Wind Farm or windfarms in general.

To inform the State Commission Assessment Panel (SCAP) in its consideration of the original Twin Creek Wind Farm development application, the then Department for Planning, Transport and Infrastructure sought advice from the Bureau of Meteorology (BoM)⁷. The BoM undertook a general analysis of climatological data from weather stations in the Mid North Region to identify whether there were any changes in frost related data, including areas with established windfarms. The advice is preliminary in nature, investigated the physical and meteorological processes related to frost, and whether they could be affected by turbulence created by wind turbines.

As discussed in the SCAP Agenda report of October 2019 in relation to the Twin Creek Wind Farm (Development Application 422/E003/17), *“the theory proposed by some representors is that operating wind turbines disrupt the inversion layer, which results in colder air in the upper layer mixing with warmer air in the layer below (i.e. which acts as a temperature barrier). This then enables the denser colder air to mix with the surface air layer and reduce ground temperatures to cause or exacerbate frost conditions. It could also affect the efficiency of frost fans to mitigate frost impacts on vineyards. In particular, the Twin Creek wind farm could potentially pose a risk to the Barossa Wine Region”*. The SCAP Agenda report, further discussed the BoM investigations as follows:

Advice from the BoM clarified that a cold upper layer would be many 1,000’s of feet above the warm layer. Thus, it would not be influenced by wind turbines. The inversion layer applies to the surface layer of cold air that is trapped by a layer of warm air immediately above it. However, the cold surface air can be forced to mix with the warm air under the right mixing conditions - usually driven by wind turbulence - in a variable manner. This can also include turbulence from turbines. Mixing would bring the warmer air (usually drier) to the surface, which would limit the opportunity for surface air to cool and form frost.

Research into the effect of wind farms on climate is limited, with the few studies that have been published reporting varying results. Most of these studies indicate a warming / drying trend downwind of wind farms (especially at night time), which would reduce the risk of frost. The conditions that lead to frost events (and frost severity) can be highly variable due to local topography and micro-climate, which can vary within a paddock. Frost incidence is influenced by a range of variables, with climate change likely to be a driving factor, especially on soil moisture (i.e. crop stress) and cloud cover level (i.e. more clear nights).

⁷ Frost Climatology of the Mid North, South Australia by the Bureau of Meteorology, SA - October 2019.

The level of frost damage to crops is determined by:

- Landscape characteristics (including topography and surface roughness).
- Frost severity (due to climatic conditions, including air temperature, humidity, cloud cover and wind speed).
- Soil moisture levels.
- Crop types and land use.
- Crop condition (including growth stage).
- Management practices (such as the use of irrigation and frost fans).

The level of disturbance to the inversion layers depends upon the degree of stratification. The depth of the cold air layer near the ground can range from 10's of metres to 100's of metres depending on the length of time cooling takes place, the absence of mixing by winds and the level of cold air drainage (which is determined by topography). These factors would determine the height of the inversion layer boundary.

The downwind influence of turbine turbulence on micro-climate would depend upon wind speed. At low wind speeds any effect would be localised. At higher wind speeds the effect may extend for several kilometres. In regard to any effect on inversion layers, low wind speeds would likely result in limited mixing. At higher wind speeds any effect is likely to be outweighed by natural mixing. The direction of the wind would dictate the location affected by downstream effects. It should be noted that the layout of turbines within a wind farm is designed to minimise the effect of turbulence from one turbine on another (i.e. for a range of wind directions), in order to maximise generation efficiency. Thus, windfarms are designed so that the cumulative amount turbulence is dissipated across a site (i.e. rather than concentrated).

Given this variability, DPTI's Senior Specialist (Environmental) Planner suggests that any effect is not likely to be consistent over the long-term to result in any substantial regional impact on climate. The Barossa Valley wine region is considered to be located a sufficient distance away that it is unlikely to be significantly affected. In addition, the nature of the topography (and level of surface roughness) between the Barossa and the site provides a degree of variability to mitigate any effect on regional air temperatures or frost movement”.

Frost is a common feature in the Mid North district of South Australia, and the region has been described as one of the high frost risk areas of southern Australia. Since 2019, RES are unaware of peer reviewed research that examines the impact of wind turbines on frost climatology. Subsequently, it is considered the Project is unlikely to have a direct impact on frost climatology in the wider locality, particularly the Barossa Valley region.

5.13 Construction Environmental Management Plan

A Draft Construction Environmental Management Plan (CEMP) incorporate the necessary environmental controls during both construction and operation to address any potential identified risks in the assessment of the development. A draft CEMP has been prepared and is contained in Volume 4 of this application.

The draft CEMP covers the following aspects, in accordance with the findings of the investigative studies undertaken in the preparation of this application:

- construction traffic management;
- location and extent of site earthworks;
- soil and water management;
- emissions including dust and noise control;
- fuel storage and handling;
- waste storage, handling and disposal;
- fire prevention;
- coordination with property owners and effects on stock;
- weed control and site restoration;
- management of any quarrying activities (if relevant); and
- management of any mobile concrete batching plant.

A final version of the CEMP and additional management plans will be prepared during the detailed construction phase of the project.

5.14 Decommissioning or Replacement

At the end of its economic life, all equipment will either be replaced with comparable new equipment, or the wind farm will be decommissioned.

New approvals would be sought, if or as required, at the time of replacement of components.

Decommissioning would generally involve dismantling or removal of all above ground equipment and any cables or other infrastructure buried to a depth of up to 1m below ground surface, and land will be rehabilitated. Access tracks may be retained depending on the landowners' wishes. Any overhead wires no longer required will be removed.

A decommissioning plan would be prepared and submitted to the relevant planning authority for approval, if/as required, prior to decommissioning commencing. The proponent is responsible for the decommissioning of the wind farm and energy storage facility. Every associated landowner of the Twin

Creek Wind Farm has this clause in their lease. This is a legally binding obligation that will be tied to the land regardless of if the parties of the lease alter over time.

5.15 Statement of Commitments

The approved development application incorporated a “Statement of Commitments”, which relates to the overall project management and specific measures to be addressed during final design and pre-construction planning, construction, operation, and decommissioning. The Statement of Commitments has been updated for the optimised layout and forms part of this development application. As updated, the Statement of Commitments is included as **Attachment E**.

5.16 Project Assessment Summary

The findings of the expert reports conclude:

- the development will assist in adding stability to local energy sector in South Australia via the inclusion of battery storage in combination with the wind farm, providing further renewable energy for the State;
- wind farms and ancillary infrastructure is an envisaged land use within the Rural Zone of the Planning and Design Code (version 2023.16 dated 9 November 2023);
- the project is compatible with the primary agricultural land uses of the region;
- the development infrastructure will comprise approximately 7.0 percent of the project area (within the site boundary) and accordingly the predominant grazing and cropping land uses can continue;
- wind turbine generators are suitably separated from non-stakeholder dwellings by more than 2,000 metres;
- non-stakeholder dwellings are not adversely impacted by shadow flicker or blade glint;
- overall the Twin Creek Wind Farm will form a compact cluster of 42 wind turbines and the visual impact ranges from slight to substantial depending on the viewpoint of the site from the surrounding region;
- visual impact of the wind turbine generators is greatest to the east and west of the development site and deemed to be a substantial change to the rural landscape. Differing landscape character to the north and south of the development site provide greater landscape absorption;
- views of the wind farm from the towns of Kapunda, Eudunda and Nuriootpa are restricted by local topography and stands of vegetation resulting in limited or no visual effect;
- noise from the wind turbine generators has been assessed to comply with the Wind Farms Environmental Noise Guidelines 2021 at all residences;

- suitable access is available to the development site and the impacts from traffic and traffic related activities are considered acceptable (allowing for the implementation of mitigation measures and compliance with permit conditions);
- during construction of the proposed development, the townships of Kapunda, Truro, Eudunda and also the Koonunga area are likely to be most affected by additional traffic movements;
- the project will provide an improvement to the local road network within the immediate vicinity of the site of the development;
- the project will improve emergency access tracks within the development site and the immediate locality;
- the project should not adversely affect the operation of aerial response to bushfires;
- base to mobile station style communications such as television and radio broadcasting and commercial and private mobile telephone services are unlikely to be effected;
- interference to mobile station style communications may be experienced in areas of poor or marginal reception and if interference to television and radio reception is increased as a result of the project, a range of options are available to rectify difficulties;
- investigations, findings and recommendations of the flora and fauna assessment have informed the design, siting and layout of infrastructure of the development to minimise impact threatened species and ecological communities;
- the value of carbon emission savings associated with the Twin Creek Wind Farm is estimated to be \$32.8 million per annum or a net present value of \$347.5 million over a 20 year period; and
- the project will generate \$662 million of value added in the State of South Australia over the period of construction, with 3,178 person years of employment supported, or an average of over 1,589 jobs sustained per year over two years of construction.

In summary, the Twin Creek Wind Farm and Energy Storage project will be a significant development and represents an important contribution to future renewable energy generation capability in South Australia.

6 CONSULTATION & COMMUNITY ENGAGEMENT

6.1 Government Engagement

During the preparation of both the original development application and the optimised project layout described in this development application, RES gathered information from various Government Agencies, either directly or via its consultant team. There have been ongoing discussions with Planning and Land Use Service - Department for Housing and Urban Development regarding the conditions of the original planning consent, staging of the development, variations to the proposed development and extensions of time for the operative date of the consent. There have also been discussions with the Department for Energy and Mining regarding RES's ongoing commitment to the project and the submission of the crown sponsorship submission. In addition, there has been ongoing liaison with the Office of the Technical Regulator regarding the contribution of the project to the stability of the State's electricity system.

RES has met with Light Regional Council, Regional Council of Goyder and Mid Murray Council regarding the intention to submit a new development application for the optimised proposed development and to discuss the status and implications for respective infrastructure agreements with Council.

In preparing the development application for the optimised proposed development, the RES consultant team has liaised with the following organisations:

- Department for Energy and Mining;
- Planning and Land Use Services - Department for Housing and Urban Development;
- Department Infrastructure and Transport;
- Office of Technical Regulator;
- Department for Aboriginal Affairs and Reconciliation;
- ABC;
- Air Services Australia;
- Australian Conservation Foundation;
- Australian Heritage Commission;
- Birds Australia;
- Broadcast Australia;
- Civil Aviation Safety Authority;
- Conservation Council South Australia;
- Department of Environment and Heritage - Heritage Branch and Environment Division;
- Department of Defence;

- SA Water Corporation;
- SA Country Fire Service;
- Telstra;
- The Department for Administrative and Information Services (The South Australian Government Radio Network);
- ESCOSA;
- Electranet; and
- AEMO.

6.2 Community Engagement

RES recognises the importance of early and ongoing community and stakeholder participation throughout a project's lifecycle and aims to build trusting relationships between the project team, the community and broader region.

RES in Australia has a dedicated community engagement team, comprising specialists trained in best practice methodologies under the International Association of Public Participation (IAP2).

The company's approach to engagement is heavily influenced by, and consistent with, the Clean Energy Council's (CEC) Best Practice Charter for Renewable Energy Development (2018). RES is a founding signatory of this Charter. The principles underpinning community engagement adopted by RES align with the 'Community Engagement Guidelines for the Australian Wind Industry' developed by the Clean Energy Council (CEC, 2012).

RES has prepared a Community Stakeholder Engagement Plan (CSEP) which will be reviewed periodically throughout the life of the project and be updated as required to address:

- stakeholder feedback and subsequent changes to the project
- changes in the construction program
- changes to stakeholder and community needs
- changes to stakeholder and community information requirements
- lessons learned from the community engagement process over the life of the project.

6.2.1 Engagement Tools

Consultation with the community has occurred to inform them of the optimised layout and this current development application. This consultation is in addition to that undertaken as part of the original development application.

The engagement of stakeholders included a combination of:

- **Involvement:** to facilitate stakeholder involvement in the identification of issues/impacts, areas of interest/concern and strategies to address the issues raised. Furthermore, to understand community sentiment and track this over time as a risk mitigation tool.
- **Informing:** to improve knowledge and awareness of RES, its activities, the Project, and key issues/impacts as they arise.

Various methods are used to involve the different stakeholder groups based on the type of information being conveyed, level of feedback required, understanding of stakeholder needs regarding engagement, and identified stakeholder engagement preferences. The mechanisms utilised by RES to communicate with the community/stakeholders to date and moving forward include:

- meeting and briefings held with Light Regional Council, Regional Council of Goyder and Mid Murray Councils on various occasions by members of the project team;
- personal communication: meetings, emails and phone discussions with landowners, community members, broader residents and anyone who had a general interest in the project;
- mail outs/letters: to host landowners, adjacent and broader and participating landowners informed of investigations and the application process; and invitations to meetings or community open days;
- **Community Information Sessions:** community information sessions were held during September 2023 in Kapunda, Eudunda and Truro;
- **Fact sheets/flyers:** series of fact sheets/flyers regarding various topics associated with renewable energy generally and the project specifically;
- meetings and briefings with various Government Agencies by members of the project team; and
- **Advertisements:** invitation to community information sessions
- **Social media:** project milestones and information
- **Surveys:** impact assessment and benefit sharing
- **Site tours:** organised stakeholder tours of the project site
- **Website:** RES have a website which specifically relates to the project. The website <http://www.twincreek-windfarm.com/> contains information relating to the project and an enquiry system for members of the public to communicate with the project team.

The table below illustrates the engagement tools:

Table 15: RES Engagement Plan - Engagement Tools and Mechanisms

Key Stakeholder Group	Tools and mechanisms						
	Letters	Project updates/ fact sheets	Media release	Emails / website	Project briefing	One-on-one meetings	Community sessions
Local Government				○	○	○	
State Government				○	○	○	
Federal Government				.	.	○	
Traditional Owners		○	○	○	○	○	○
Host landholders	○	○		○		○	○
Neighbours (within 5km)	○	○	○	○		○	○
Community groups		○	○	○	○		○
Wider community		○	○	○			○
Local businesses		○	○	○		○	○
Local media		○	○	○			

6.2.2 Community Feedback

Community feedback during the voluntary engagement process, as well as the formal notification of the original development application resulted in both positive and negative comments regarding the project. Similarly, the community engagement undertaken for the optimised layout has received mixed sentiments.

The information sessions for the Twin Creek Wind Farm optimised layout were held at Eudunda, Kapunda and Truro, with a combined attendance of approximately fifty locals. The sessions were facilitated by RES staff and independent acoustic and visual specialists, to provide technical detail on recent changes to the project layout and to seek community feedback. The community feedback sessions were received with mixed sentiment. The community were mostly interested to understand the proposed project amendments and the impact on timing.

Concerns related mainly to potential visual and noise impact from the project, traffic during construction on local roads, impacts to biodiversity and fire risk. Particular concern was raised about potential increased frost risk and the likely impacts of frost on local vineyards.

Understanding community concern associated with the optimised development was a key objective of these information sessions. As environmental and technical studies are updated to assess the impacts of the revised layout, RES will continue to work through identified issues with interested and impacted project neighbours, and report back to the community on how we have sought to address concerns about the project.

7 CONCLUSIONS

The following provides an overview for the acceptability of the environmental and other impacts of the proposed optimised Twin Creek Wind Farm and Energy Storage project, as detailed throughout this Volume 1 summary of the development application.

The project is being developed as a commercially viable project. At a national level, the project will contribute to Australia's economic health through reduced reliance on non-renewable resources. The Twin Creek Wind Farm will provide enough clean energy to power approximately 206,000 average South Australia homes each year.

In addition to the electricity generation, the battery storage with an indicative capacity of 215 MW aligns with the South Australia Government Energy Plan to ensure that energy can be dispatched as it is needed to provide energy security.

The project will have a direct and tangible contribution to both the Australian Government and South Australia Governments renewable energy targets and will assist South Australia to provide reliable, competitive and clean power into the future.

The value of carbon emission savings associated with the proposed development is estimated to be \$32.8 million per annum over the life of the project. Emission savings will directly assist the achievement of state, national and global targets for reduced greenhouse gas emissions.

The overall site boundary has an area of approximately 5,548 hectares, with the development area comprising approximately 3,684 hectares; the majority of which is used for grazing or cropping. Of the total project area (within the site boundary), approximately 7.0 per cent of the land will be utilised for the wind farm development. Accordingly, existing land uses can largely continue without effect. Wind farm and ancillary infrastructure are envisaged land uses within the Rural Zone of the Planning and Design Code.

The project has been designed to avoid vegetated areas which provide important habitat as far as possible, and micro-siting of project elements will further assist in avoiding vegetated areas. Impacts on avifauna have been assessed and the project is not expected to cause effect to any threatened species which occur or may occur within the project area. The proposal is unlikely to diminish biodiversity values of the region and the mitigation of impacts to Pygmy Blue-Tongue Lizard will be a matter of ongoing review via the EPBC referral.

Although visual effect of the wind turbine generators and associated infrastructure is likely to be moderate to substantial within the local and subregional area, as distances increase, the degree of visual change reduces significantly and, in most areas, is described as slight. The wind farm is not expected to be detrimental to the landscape and wider amenity of the region. There are no visually sensitive or scenic areas in the region. Vegetation screen planting along roadsides and adjacent infrastructure elements such as compounds and substations will further assist minimising visual impacts.

There are no wind turbine generators proposed within 2.0 kilometres of any non-stakeholder dwelling. There is no adverse impact on any non-stakeholder dwelling from blade glint, shadow flicker or noise.

An assessment of the noise levels of the wind farm has been undertaken and the predicted noise levels achieve the requirements of the Wind Farms Environmental Noise Guidelines 2021 at all residences. Compliance with the SA Guidelines will inherently provide an adequate level of protection of amenity in the surrounding area from low frequency noise impacts.

Potential impacts have been identified on television transmission for some dwellings with areas of poor or marginal reception, and those in the down range diffraction zone of the wind farm. Mitigation measures are available for those dwellings affected. Similarly, mitigation options are available to address the potential impacts identified on Flow FM radio signal broadcast, Swoop internet services and the Bureau of Meteorology radar.

There are unlikely to be any unreasonable impacts to soil, water and air quality as a result of the proposed development, as the project has been designed according to the physical features of the project area. A range of mitigation and management measures will be incorporated into the Construction Environmental Management Plan to minimise airborne dust events, erosion, and soil discharge into watercourses.

A desktop heritage assessment of Aboriginal and non-Aboriginal heritage was undertaken for the development area. There are no items of European heritage within the boundaries of the project area. The assessment did not identify any specific locations of Aboriginal heritage within the project area, but recognised that earthworks may uncover Aboriginal Cultural remains. Although the potential for this to occur is low, engagement has been undertaken and is ongoing with the Ngadjuri Nation Aboriginal Corporation.

The construction phase of the project will result in increased traffic to and from the site including the movement of restricted access vehicles. A Traffic Management Plan will be prepared as part of the Construction Management Plan to ensure the works can be undertaken safely and with minimal disruption to local traffic. Once operational, the traffic entering the wind farm site will be negligible.

The potential for bushfire/fire risks, physical safety issues and aircraft safety have also been reviewed, and management measures proposed as necessary. Recommendations in relation to fire management and aviation marking are incorporated as part of the Draft Construction Environmental Management Plan.

The project, in its optimised form is an important renewable energy project for the state of South Australia.



Attachment A - Certificates of Title

Certificate of Title

Title Reference CT 5146/519
Status CURRENT
Easement NO
Owner Number 70929376
Address for Notices POST OFFICE BOX 79, NURIOOTPA, SA 5355
Area 57.1ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YORKVALE NOMINEES PTY. LTD. (ACN: 163 230 082)
OF 438 BAGOT WELL ROAD KOONUNGA SA 5373

Description of Land

SECTIONS 579 AND 581
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 13499127
Dealing Date 07/04/2021
Sale Price \$740,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307167	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156131000	CURRENT	Lot 579 DUTTON ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5264/963
Status	CURRENT
Easement	NO
Owner Number	05047764
Address for Notices	975 ST KITTS RD DUTTON, SA 5356
Area	101ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

MICHAEL JOHN DOERING
OF 975 ST KITTS ROAD DUTTON SA 5356

Description of Land

SECTIONS 290 AND 291
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	12509464	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD. (ACN: 005 357 522)
MORTGAGE	13668939	REGIONAL INVESTMENT CORPORATION

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307168	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156108003	CURRENT	83 FRESHWATER ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5274/160
Status CURRENT
Easement NO
Owner Number 70929376
Address for Notices POST OFFICE BOX 79, NURIOOTPA, SA 5355
Area 40.9ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YORKVALE NOMINEES PTY. LTD. (ACN: 163 230 082)
OF 438 BAGOT WELL ROAD KOONUNGA SA 5373

Description of Land

SECTIONS 314 AND 315
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 13499127
Dealing Date 07/04/2021
Sale Price \$740,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307167	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156131000	CURRENT	Lot 579 DUTTON ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/926
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area 444ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

ALLOTMENTS 12, 13, 14, 15, 16, 17 AND 18 FILED PLAN 158976
IN THE AREA NAMED HANSBOROUGH
HUNDRED OF JULIA CREEK

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

PARCELS SUBJECT TO REARRANGEMENT VIDE FILED PLAN F158976
AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5293/927
Status	CURRENT
Easement	NO
Owner Number	7107340*
Address for Notices	CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area	130.7ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

SECTIONS 218, 219 AND 220
HUNDRED OF JULIA CREEK
IN THE AREA NAMED HANSBOROUGH

Last Sale Details

Dealing Reference	TRANSFER (T) 12729612
Dealing Date	11/05/2017
Sale Price	\$9,650,000
Sale Type	MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/928
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area 248.5ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

SECTIONS 236, 237, 238, 239 AND 240
HUNDRED OF JULIA CREEK
IN THE AREA NAMED HANSBOROUGH

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/930
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area 483.6ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

SECTIONS 121, 122, 123, 124, 125, 126, 127, 128 AND 129
HUNDRED OF JULIA CREEK
IN THE AREA NAMED HANSBOROUGH

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/931
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area 272ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

SECTIONS 232, 233, 234 AND 235
HUNDRED OF JULIA CREEK
IN THE AREA NAMED HANSBOROUGH

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/933
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area 21.4ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

ALLOTMENT 3 FILED PLAN 158974
IN THE AREA NAMED HANSBOROUGH
HUNDRED OF JULIA CREEK

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5293/934
Status CURRENT
Easement NO
Owner Number 7107340*
Address for Notices CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373
Area NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

ALLOTMENTS 4, 5, 6, 7, 8, 9, 10 AND 11 FILED PLAN 158975
IN THE AREA NAMED HANSBOROUGH
HUNDRED OF JULIA CREEK

Last Sale Details

Dealing Reference TRANSFER (T) 12729612
Dealing Date 11/05/2017
Sale Price \$9,650,000
Sale Type MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867542	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801357078	CURRENT	178 BEN LOMOND ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 268/1993

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5304/717
Status CURRENT
Easement NO
Owner Number 10383359
Address for Notices 4305 STURT HWY TRURO, SA 5356
Area NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

KINGSLEY REGINALD MUNCHENBERG
OF 4305 STURT HIGHWAY TRURO SA 5356

Description of Land

ALLOTMENTS 92 AND 93 FILED PLAN 163638
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

ALLOTMENT COMPRISING PIECES 94 AND 95 FILED PLAN 163638
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Last Sale Details

Dealing Reference TRANSFER (T) 9368893
Dealing Date 27/03/2002
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	11925269	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13306573	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
712343410*	CURRENT	Lot 92 STURT HIGHWAY, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5315/264
Status CURRENT
Easement NO
Owner Number 10383359
Address for Notices 4305 STURT HWY TRURO, SA 5356
Area 26.70ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

KINGSLEY REGINALD MUNCHENBERG
OF 4305 STURT HIGHWAY TRURO SA 5356

Description of Land

SECTION 221
HUNDRED OF JELlicoe
IN THE AREA NAMED TRURO

Last Sale Details

Dealing Reference TRANSFER (T) 9368893
Dealing Date 27/03/2002
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	11925269	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13306573	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7123425000	CURRENT	Lot 221 HUNDRED ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5322/638
Status CURRENT
Easement NO
Owner Number 19419602
Address for Notices POST OFFICE BOX 183, TRURO, SA 5356
Area 61.64ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

VIRGINIA ANN SCHMIDT
OF PO BOX 183 TRURO SA 5356
4 / 6 SHARE

JARROD ANDREW SCHMIDT
OF PO BOX 183 TRURO SA 5356
1 / 6 SHARE

DANIEL MARK SCHMIDT
OF PO BOX 183 TRURO SA 5356
1 / 6 SHARE

Description of Land

ALLOTMENT 1 DEPOSITED PLAN 44123
IN THE AREA NAMED TRURO
HUNDRED OF DUTTON

Last Sale Details

Dealing Reference TRANSFER (T) 13860960
Dealing Date 22/08/2022
Sale Price \$0
Sale Type PURSUANT TO A WILL

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13119340	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124349054	CURRENT	Lot 1 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5360/970
Status	CURRENT
Easement	NO
Owner Number	0819820*
Address for Notices	TRURO 5356
Area	117.9ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

RICHARD TILBROOK MOSEY
OF TRURO SA 5356

Description of Land

ALLOTMENT 99 FILED PLAN 174415
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

ALLOTMENT COMPRISING PIECES 100, 101, 102, 103 AND 104 FILED PLAN 174415
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	6831547	NATIONAL AUSTRALIA BANK LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13619412	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7123450505	CURRENT	144 LAROONA ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

COMPARE ADDRESS FOR SERVICE OF NOTICE WITH 6831547

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5390/991
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 529.1ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

ALLOTMENTS 91, 92, 93, 94, 95, 96, 97, 98, 104 AND 105 FILED PLAN 199397
IN THE AREA NAMED BAGOT WELL
HUNDREDS OF BELVIDERE AND KAPUNDA

ALLOTMENT COMPRISING PIECES 99 AND 100 FILED PLAN 199397
IN THE AREA NAMED BAGOT WELL
HUNDREDS OF BELVIDERE AND KAPUNDA

ALLOTMENT COMPRISING PIECES 101, 102 AND 103 FILED PLAN 199397
IN THE AREA NAMED BAGOT WELL
HUNDREDS OF BELVIDERE AND KAPUNDA

PIECES 99 AND 100 FORM ONE ALLOTMENT
PIECES 101.102 AND 103 FORM ONE ALLOTMENT

Last Sale Details

Dealing Reference TRANSFER (T) 8595106
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156050008	CURRENT	Lot 91 FLAGSTAFF HILL ROAD, BAGOT WELL, SA 5373

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 125/2001

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5460/955
Status CURRENT
Easement NO
Owner Number 18423650
Address for Notices POST OFFICE BOX 18, TRURO, SA 5356
Area 37.23ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

ADAM CHARLES ANDRETZKE
OF PO BOX 18 TRURO SA 5356

Description of Land

SECTION 321
HUNDRED OF BELVIDERE
IN THE AREA NAMED TRURO

SECTION 87
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

Dealing Reference TRANSFER (T) 13231410
Dealing Date 16/10/2019
Sale Price \$0
Sale Type NO MONETARY CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156144055	CURRENT	Lot 321 ST KITTS ROAD, TRURO, SA 5356
7124231005	CURRENT	Lot 87 JOY LINKES ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 22/2012

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5476/305
Status	CURRENT
Easement	NO
Owner Number	71225856
Address for Notices	L 6, 165 WALKER ST NORTH SYDNEY, NSW 2060
Area	36.4ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)
OF L 6 165 WALKER STREET NORTH SYDNEY NSW 2060

Description of Land

SECTION 190
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference	TRANSFER (T) 13560173
Dealing Date	30/06/2021
Sale Price	\$1,490,000
Sale Type	MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156102007	CURRENT	188 WHITES ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5485/289
Status	CURRENT
Easement	NO
Owner Number	71225856
Address for Notices	L 6, 165 WALKER ST NORTH SYDNEY, NSW 2060
Area	38.0ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)
OF L 6 165 WALKER STREET NORTH SYDNEY NSW 2060

Description of Land

ALLOTMENT 500 FILED PLAN 16260
IN THE AREA NAMED ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference	TRANSFER (T) 13560173
Dealing Date	30/06/2021
Sale Price	\$1,490,000
Sale Type	MORE THAN ONE TITLE

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156102007	CURRENT	188 WHITES ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

REFER DIVISION SECTION BEFORE FURTHER TRUNCATION VIDE X22599

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5485/579
Status	CURRENT
Easement	NO
Owner Number	06842313
Address for Notices	PO BOX 6 TRURO 5356
Area	27.52ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PETER RICHARD RICE
DENISE JEANETTE RICE
OF TRURO SA 5356
AS JOINT TENANTS

Description of Land

SECTION 38
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307160	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124232008	CURRENT	Lot 38 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5485/733
Status CURRENT
Easement NO
Owner Number 05756261
Address for Notices PO BOX 6 TRURO 5356
Area 32.37ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PETER RICHARD RICE
OF PO BOX 6 TRURO SA 5356

Description of Land

SECTION 36
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	4859249	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.
MORTGAGE	6059872	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307163	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124229001	CURRENT	Lot 34 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5486/561
Status	CURRENT
Easement	NO
Owner Number	10383359
Address for Notices	4305 STURT HWY TRURO, SA 5356
Area	67.6ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

KINGSLEY REGINALD MUNCHENBERG
OF 4305 STURT HIGHWAY TRURO SA 5356

Description of Land

ALLOTMENT 99 DEPOSITED PLAN 48414
IN THE AREA NAMED ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference	TRANSFER (T) 9368893
Dealing Date	27/03/2002
Sale Price	\$0
Sale Type	CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	11925269	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13306573	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156129007	CURRENT	Lot 99 DUTTON ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5503/860
Status CURRENT
Easement YES
Owner Number 05756261
Address for Notices PO BOX 6 TRURO 5356
Area 26.71ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PETER RICHARD RICE
OF PO BOX 6 TRURO SA 5356

Description of Land

SECTION 34
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
ENCUMBRANCE	4307097	PAULA OWEN WILLIAM JOHN OWEN
MORTGAGE	4859249	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.
MORTGAGE	6059872	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307163	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124229001	CURRENT	Lot 34 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5517/458
Status CURRENT
Easement NO
Owner Number 06842313
Address for Notices PO BOX 6 TRURO 5356
Area 32.8ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

PETER RICHARD RICE
DENISE JEANETTE RICE
OF TRURO SA 5356
AS JOINT TENANTS

Description of Land

SECTION 37
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307160	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124232008	CURRENT	Lot 38 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

REAL PROPERTY ACT, 1886



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5531 Folio 405

Parent Title(s) CT 4054/572
Creating Dealing(s) CONVERTED TITLE
Title Issued 05/05/1998 **Edition** 2 **Edition Issued** 29/03/1999

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 105
HUNDRED OF BELVIDERE
IN THE AREA NAMED KOONUNGA

Easements

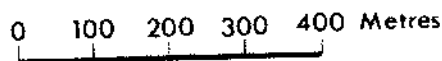
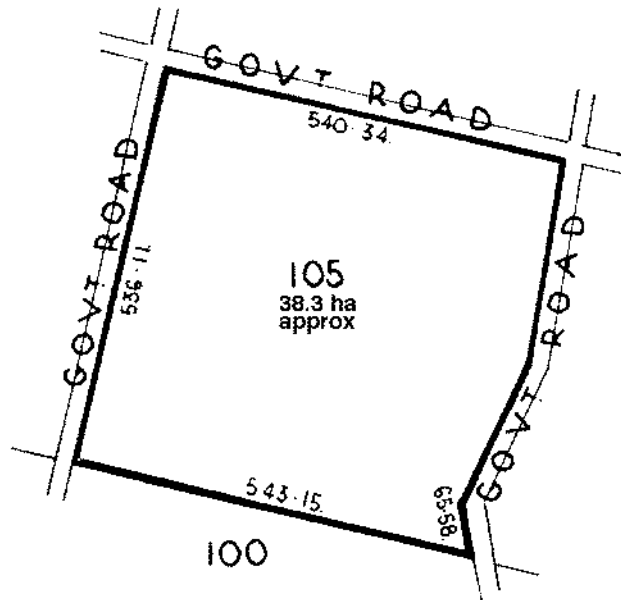
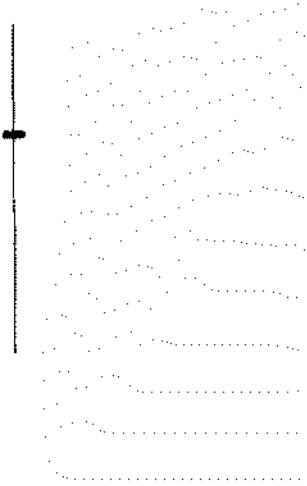
NIL

Schedule of Dealings

Dealing Number	Description
12867543	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL



Certificate of Title

Title Reference: CT 5531/405
Status: CURRENT
Parent Title(s): CT 4054/572
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 05/05/1998
Edition: 2

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867543	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
02/12/1998	30/03/1999	8595099	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595098	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595097	TRANSFER	REGISTERED	PETER BERNARD MOSEY
02/12/1998	30/03/1999	8595096	TRANSMISSION APPLICATION	REGISTERED	WILLIAM MOSEY (DECD), KATHLEEN DOROTHEA MOSEY (EXEC), PETER BERNARD MOSEY (EXEC)

REAL PROPERTY ACT, 1886



South Australia

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5531 Folio 406

Parent Title(s) CT 4054/571
Creating Dealing(s) CONVERTED TITLE
Title Issued 05/05/1998 **Edition** 2 **Edition Issued** 29/03/1999

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 103
HUNDRED OF BELVIDERE
IN THE AREA NAMED KOONUNGA

Easements

NIL

Schedule of Dealings

Dealing Number	Description
12867543	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title NIL

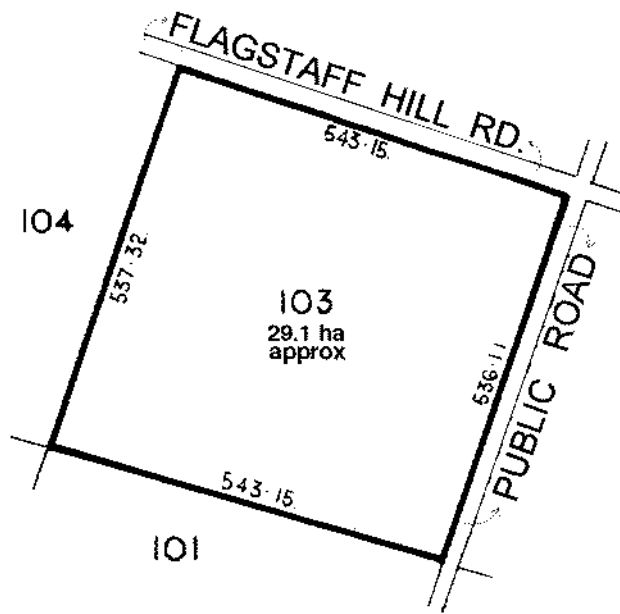
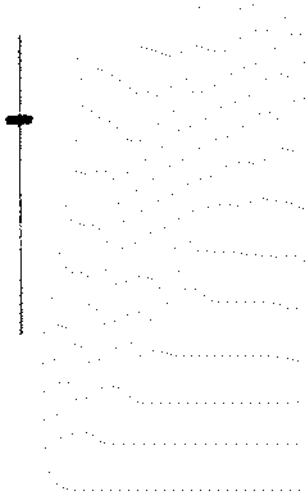
Priority Notices NIL

Notations on Plan NIL

Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 125/2001

Administrative Interests NIL



Certificate of Title

Title Reference: CT 5531/406
Status: CURRENT
Parent Title(s): CT 4054/571
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 05/05/1998
Edition: 2

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867543	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
02/12/1998	30/03/1999	8595099	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595098	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595097	TRANSFER	REGISTERED	PETER BERNARD MOSEY
02/12/1998	30/03/1999	8595096	TRANSMISSION APPLICATION	REGISTERED	WILLIAM MOSEY (DECD), KATHLEEN DOROTHEA MOSEY (EXEC), PETER BERNARD MOSEY (EXEC)



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5552 Folio 876

Parent Title(s) CT 3954/140
Creating Dealing(s) CONVERTED TITLE
Title Issued 07/07/1998 Edition 6 Edition Issued 05/07/2021

Estate Type

FEE SIMPLE

Registered Proprietor

RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)
OF L 6 165 WALKER STREET NORTH SYDNEY NSW 2060

Description of Land

SECTION 286
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Easements

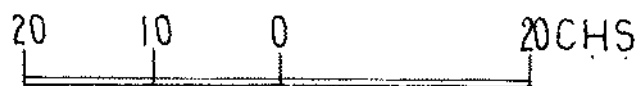
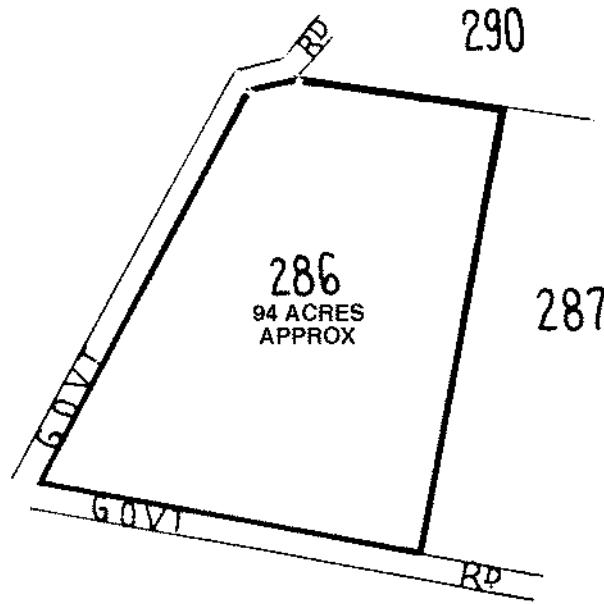
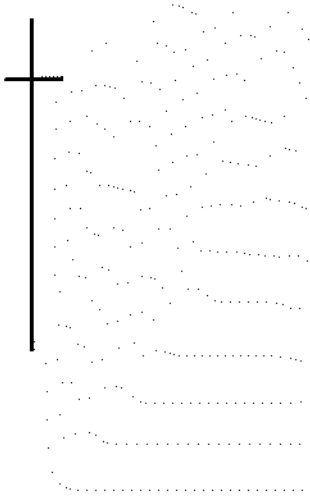
NIL

Schedule of Dealings

NIL

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL



FOR METRIC CONVERSION	
1 LINK	= 0.201168 METRES
1 CHAIN	= 100 LINKS
1 ACRE	= 0.404686 HECTARES
1 ROOD	= 1011.7 m ²
1 PERCH	= 25.29 m ²

Certificate of Title

Title Reference: CT 5552/876
Status: CURRENT
Parent Title(s): CT 3954/140
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 07/07/1998
Edition: 6

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
30/06/2021	05/07/2021	13560173	TRANSFER	REGISTERED	RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)
16/01/2020	21/01/2020	13239096	DISCHARGE OF MORTGAGE	REGISTERED	8504730 10806234
07/09/2016	22/09/2016	12596404	CHANGE OF NAME (GLOBAL ENDORSEMENT UPDATE)	REGISTERED	CREDIT UNION SA LTD. (ACN: 087 651 232) 8504730 10806234
02/10/2007	22/10/2007	10806234	MORTGAGE	REGISTERED	SATISFAC DIRECT CREDIT UNION LTD. (ACN: 054 534 717)
15/06/1998	30/07/1998	8504730	MORTGAGE	REGISTERED	SATISFAC DIRECT CREDIT UNION LTD. (ACN: 054 534 717)
15/06/1998	30/07/1998	8504729	DISCHARGE OF MORTGAGE	REGISTERED	3512544
06/09/1973	14/09/1973	3512544	MORTGAGE	REGISTERED	



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5569 Folio 233

Parent Title(s) CT 3733/119
Creating Dealing(s) CONVERTED TITLE
Title Issued 28/08/1998 **Edition** 2 **Edition Issued** 05/07/2021

Estate Type

FEE SIMPLE

Registered Proprietor

RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)
OF L 6 165 WALKER STREET NORTH SYDNEY NSW 2060

Description of Land

SECTION 239
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Easements

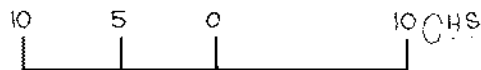
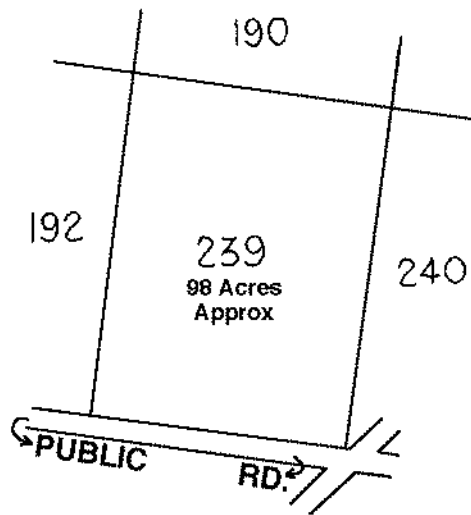
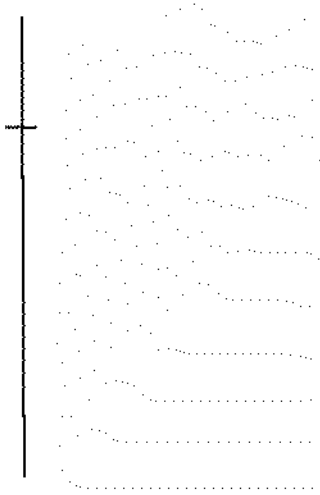
NIL

Schedule of Dealings

NIL

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL



FOR METRIC CONVERSION	
1 LINK	= 0.201168 METRES
1 CHAIN	= 100 LINKS
1 ACRE	= 0.404686 HECTARES
1 ROOD	= 1011.7 m ²
1 PERCH	= 25.29 m ²

Certificate of Title

Title Reference: CT 5569/233
Status: CURRENT
Parent Title(s): CT 3733/119
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 28/08/1998
Edition: 2

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
30/06/2021	05/07/2021	13560173	TRANSFER	REGISTERED	RES AUSTRALIA PTY. LTD. (ACN: 106 637 754)

Certificate of Title

Title Reference	CT 5616/778
Status	CURRENT
Easement	NO
Owner Number	00993882
Address for Notices	DUTTON VIA TRURO 5356
Area	153.9ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PAUL WILLIAM DOERING
OF 975 ST KITTS ROAD DUTTON SA 5356

Description of Land

SECTION 319
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

SECTIONS 83, 84, 85 AND 86
HUNDRED OF DUTTON
IN THE AREA NAMED DUTTON

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	12509463	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD. (ACN: 005 357 522)
MORTGAGE	13668940	REGIONAL INVESTMENT CORPORATION

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307165	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156130008	CURRENT	Lot 1 ST KITTS ROAD, ST KITTS, SA 5356

Valuation Number	Status	Property Location Address
7124242003	CURRENT	Lot 83 JOY LINKES ROAD, DUTTON, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/689
Status CURRENT
Easement NO
Owner Number 11402785
Address for Notices PO BOX 37 KAPUNDA 5373
Area 92.7ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

KYM WILLIAM MOSEY
OF BAGOT WELL SA 5373

Description of Land

SECTION 272
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595103
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867540	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156110509	CURRENT	Lot 272 MOSEY ROAD, BAGOT WELL, SA 5373

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5618/697
Status	CURRENT
Easement	NO
Owner Number	70451675
Address for Notices	POST OFFICE BOX 37, KAPUNDA, SA 5373
Area	77.3ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 269
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference	TRANSFER (T) 8595098
Dealing Date	06/11/1996
Sale Price	\$0
Sale Type	CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/687
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 52.2ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 271
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/688
Status CURRENT
Easement NO
Owner Number 11402777
Address for Notices PO BOX 37 KAPUNDA 5373
Area 82.2ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

KYM WILLIAM MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

RICHARD FRANCIS MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

Description of Land

SECTIONS 283 AND 284
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 8595102
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156110058	CURRENT	Lot 91 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5618/690
Status	CURRENT
Easement	NO
Owner Number	70451675
Address for Notices	POST OFFICE BOX 37, KAPUNDA, SA 5373
Area	NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTION 249
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference	TRANSFER (T) 8595098
Dealing Date	06/11/1996
Sale Price	\$0
Sale Type	CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/691
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 40.5ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTION 285
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/692
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 273
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/693
Status CURRENT
Easement NO
Owner Number 11402777
Address for Notices PO BOX 37 KAPUNDA 5373
Area 65.6ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

KYM WILLIAM MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

RICHARD FRANCIS MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

Description of Land

SECTION 278
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 8595102
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156110058	CURRENT	Lot 91 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/694
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 250.6ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTIONS 250, 251, 254 AND 255
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

CLOSED ROAD MARKED G ROAD PLAN 2497
IN THE AREA NAMED BAGOT WELL
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/695
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 72.8ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 263
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/696
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 61.5ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 265
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/698
Status CURRENT
Easement NO
Owner Number 11402777
Address for Notices PO BOX 37 KAPUNDA 5373
Area 49.4ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

KYM WILLIAM MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

RICHARD FRANCIS MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

Description of Land

SECTION 279
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 8595102
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156110058	CURRENT	Lot 91 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5618/699
Status	CURRENT
Easement	NO
Owner Number	70451675
Address for Notices	POST OFFICE BOX 37, KAPUNDA, SA 5373
Area	51.4ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTION 258
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference	TRANSFER (T) 8595098
Dealing Date	06/11/1996
Sale Price	\$0
Sale Type	CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/700
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 37.6ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTION 270
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/701
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 74.5ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

SECTION 267
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

REAL PROPERTY ACT, 1886



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5618 Folio 702

Parent Title(s) CT 3/37
Creating Dealing(s) CONVERTED TITLE
Title Issued 29/01/1999 **Edition** 3 **Edition Issued** 25/05/1999

Estate Type

FEE SIMPLE

Registered Proprietor

PETER BERNARD MOSEY
OF BAGOT WELL VIA KAPUNDA SA 5373
1 / 2 SHARE

KYM WILLIAM MOSEY
OF BAGOT WELL VIA KAPUNDA SA 5373
1 / 2 SHARE

Description of Land

SECTION 257
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Easements

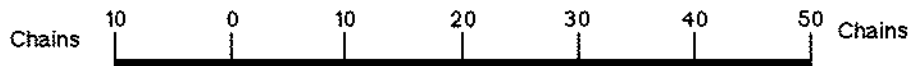
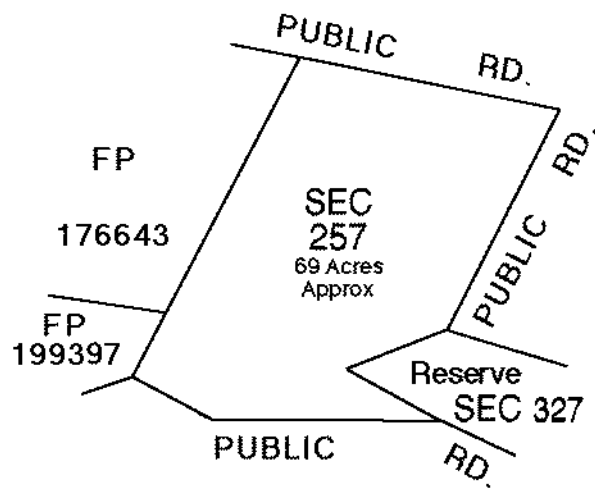
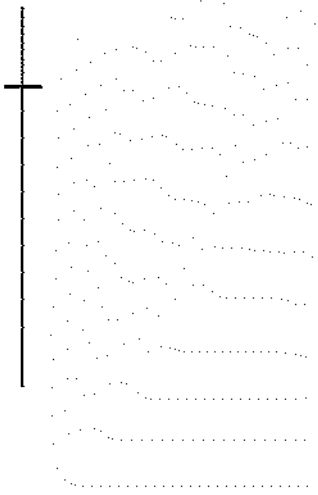
NIL

Schedule of Dealings

Dealing Number	Description
12867539	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL



FOR METRIC CONVERSION	
1 LINK	= 0.201168 METRES
1 CHAIN	= 100 LINKS
1 ACRE	= 0.404686 HECTARES
1 ROOD	= 1011.7 m ²
1 PERCH	= 25.29 m ²

Certificate of Title

Title Reference: CT 5618/702
Status: CURRENT
Parent Title(s): CT 3/37
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 29/01/1999
Edition: 3

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867539	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
22/03/1999	26/05/1999	8651834	TRANSFER	REGISTERED	PETER BERNARD MOSEY, KYM WILLIAM MOSEY
02/12/1998	30/03/1999	8595104	APPLICATION TO NOTE DEATH	REGISTERED	WILLIAM MOSEY (DECD), KATHLEEN DOROTHEA MOSEY

Certificate of Title

Title Reference CT 5618/703
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 49.0ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

SECTION 268
HUNDRED OF BELVIDERE
IN THE AREA NAMED BAGOT WELL

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/704
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 11.2ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

ALLOTMENT COMPRISING PIECES 91 AND 92 FILED PLAN 217083
IN THE AREAS NAMED KOONUNGA AND ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/705
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 6.74ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

ALLOTMENT 569 FILED PLAN 176641
IN THE AREA NAMED ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5618/706
Status CURRENT
Easement NO
Owner Number 11402777
Address for Notices PO BOX 37 KAPUNDA 5373
Area 293.6ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

KYM WILLIAM MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

RICHARD FRANCIS MOSEY
OF BAGOT WELL SA 5373
1 / 2 SHARE

Description of Land

ALLOTMENT 91 FILED PLAN 199399
IN THE AREAS NAMED BAGOT WELL AND ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference TRANSFER (T) 8595102
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

NIL

Valuation Numbers

Valuation Number	Status	Property Location Address
3156110058	CURRENT	Lot 91 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5618 Folio 707

Parent Title(s) CT 4054/573
Creating Dealing(s) CONVERTED TITLE
Title Issued 29/01/1999 **Edition** 2 **Edition Issued** 29/03/1999

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF UNIT 4 250 GLEN OSMOND ROAD FULLARTON SA 5063

Description of Land

ALLOTMENT 102 FILED PLAN 214685
IN THE AREA NAMED KOONUNGA
HUNDRED OF BELVIDERE

Easements

NIL

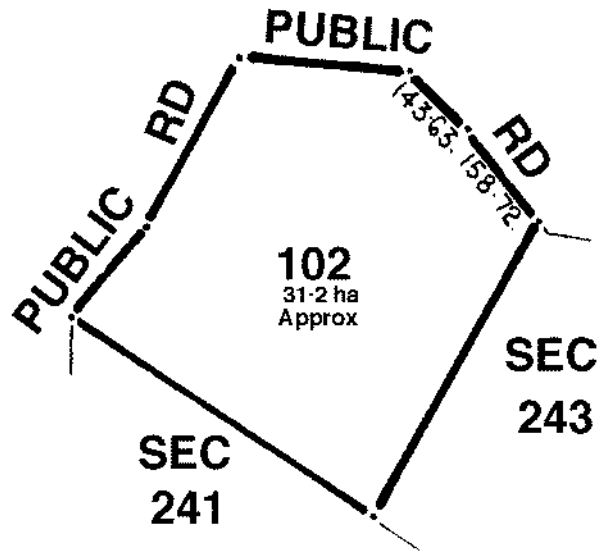
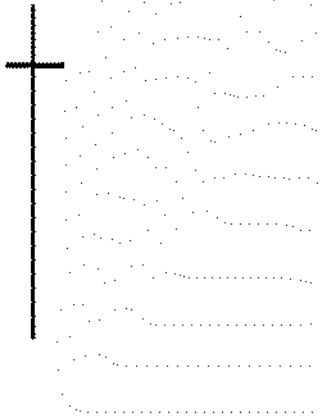
Schedule of Dealings

Dealing Number	Description
12867543	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 4054/573



NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION

Certificate of Title

Title Reference: CT 5618/707
Status: CURRENT
Parent Title(s): CT 4054/573
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 29/01/1999
Edition: 2

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867543	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
02/12/1998	30/03/1999	8595099	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595098	TRANSFER	REGISTERED	YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
02/12/1998	30/03/1999	8595097	TRANSFER	REGISTERED	PETER BERNARD MOSEY
02/12/1998	30/03/1999	8595096	TRANSMISSION APPLICATION	REGISTERED	WILLIAM MOSEY (DECD), KATHLEEN DOROTHEA MOSEY (EXEC), PETER BERNARD MOSEY (EXEC)



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5618 Folio 708

Parent Title(s) CT 4040/373
Creating Dealing(s) CONVERTED TITLE
Title Issued 29/01/1999 **Edition** 3 **Edition Issued** 25/05/1999

Estate Type

FEE SIMPLE

Registered Proprietor

PETER BERNARD MOSEY
OF BAGOT WELL VIA KAPUNDA SA 5373
1 / 2 SHARE

KYM WILLIAM MOSEY
OF BAGOT WELL VIA KAPUNDA SA 5373
1 / 2 SHARE

Description of Land

ALLOTMENT 571 FILED PLAN 176643
IN THE AREA NAMED BAGOT WELL
HUNDRED OF BELVIDERE

Easements

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED A

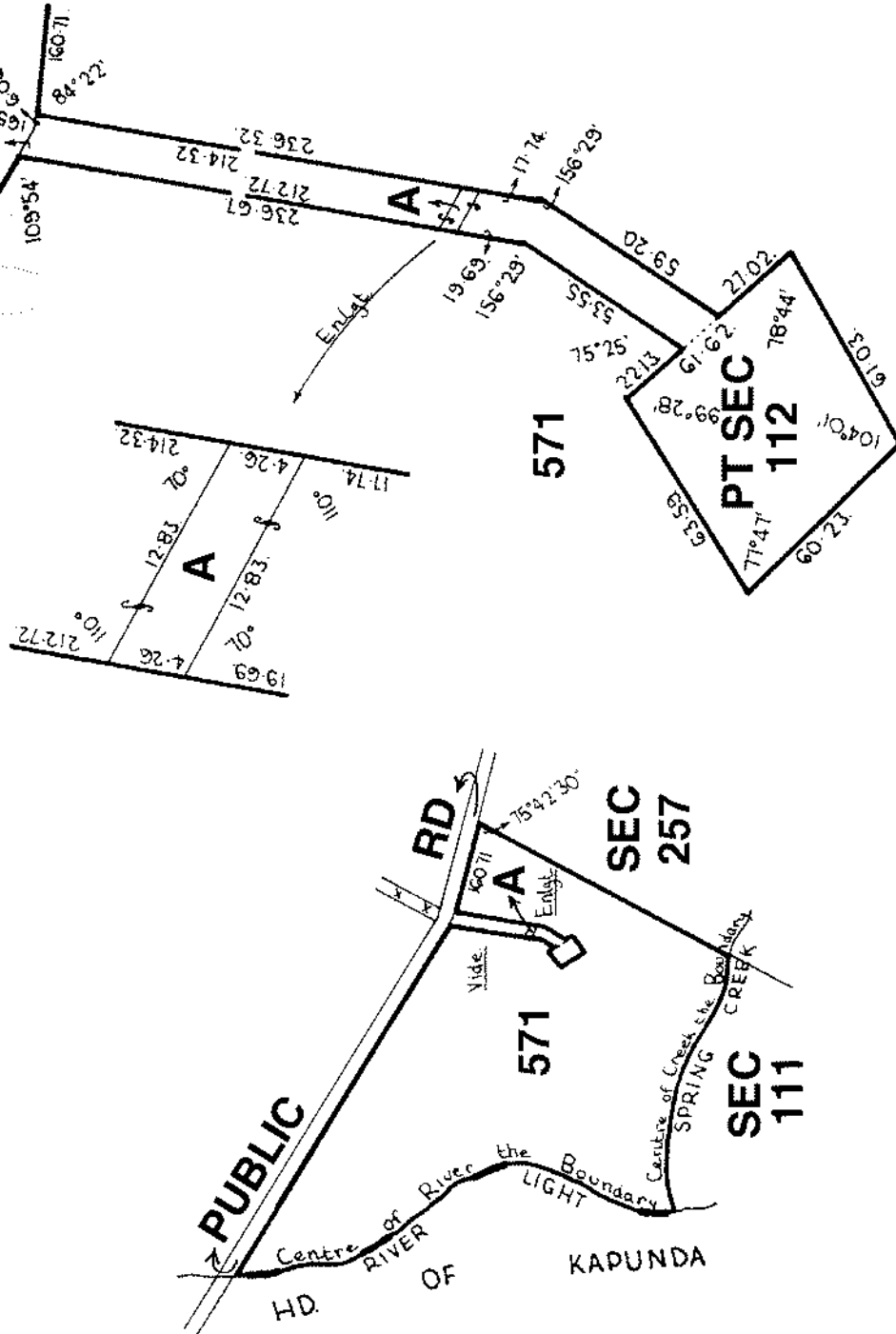
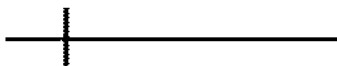
Schedule of Dealings

Dealing Number	Description
12867539	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 4040/373
SEE TITLE TEXT FOR EASEMENT DETAILS



NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION

Certificate of Title

Title Reference: CT 5618/708
Status: CURRENT
Parent Title(s): CT 4040/373
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 29/01/1999
Edition: 3

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867539	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
22/03/1999	26/05/1999	8651834	TRANSFER	REGISTERED	PETER BERNARD MOSEY, KYM WILLIAM MOSEY
02/12/1998	30/03/1999	8595104	APPLICATION TO NOTE DEATH	REGISTERED	WILLIAM MOSEY (DECD), KATHLEEN DOROTHEA MOSEY

Certificate of Title

Title Reference CT 5625/166
Status CURRENT
Easement NO
Owner Number 70451675
Address for Notices POST OFFICE BOX 37, KAPUNDA, SA 5373
Area 320ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

YARRALINKA NOMINEES PTY. LTD. (ACN: 069 863 403)
OF CARE TWIN CREEK PASTORAL CO. TWIN CREEK ROAD KAPUNDA SA 5373

Description of Land

ALLOTMENTS 20 AND 21 FILED PLAN 217158
IN THE AREA NAMED BAGOT WELL
HUNDRED OF BELVIDERE

ALLOTMENT 22 FILED PLAN 217158
IN THE AREAS NAMED BAGOT WELL AND ST KITTS
HUNDRED OF BELVIDERE

ALLOTMENTS 23 AND 24 FILED PLAN 217158
IN THE AREA NAMED BAGOT WELL
HUNDRED OF BELVIDERE

ALLOTMENT 25 FILED PLAN 217158
IN THE AREA NAMED ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

Dealing Reference TRANSFER (T) 8595098
Dealing Date 06/11/1996
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	13180610	WESTPAC BANKING CORPORATION (ACN: 007 457 141)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867543	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156056004	CURRENT	Lot 258 MOSEY ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

PARCELS SUBJECT TO REARRANGEMENT VIDE FILED PLAN F217158
AMENDMENT TO DIAGRAM VIDE 420/2001

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5663/19
Status CURRENT
Easement NO
Owner Number 05522895
Address for Notices RMD TRURO 5356
Area 41.68ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PAUL WILLIAM DOERING
MICHAEL JOHN DOERING
OF 975 ST KITTS ROAD DUTTON SA 5356
WITH NO SURVIVORSHIP

Description of Land

SECTION 287
HUNDRED OF BELVIDERE
IN THE AREA NAMED ST KITTS

Last Sale Details

Dealing Reference TRANSFER (T) 8688706
Dealing Date 17/05/1999
Sale Price \$57,500
Sale Type TRANSFER FOR FULL MONETARY CONSIDERATION

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	12048381	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.
MORTGAGE	13668942	REGIONAL INVESTMENT CORPORATION

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307162	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156105005	CURRENT	Lot 287 BIELE ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5812/749
Status CURRENT
Easement NO
Owner Number 18599656
Address for Notices POST OFFICE BOX 183, TRURO, SA 5356
Area 72.43ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

VIRGINIA ANN SCHMIDT
OF PO BOX 183 TRURO SA 5356

Description of Land

SECTIONS 32 AND 51
HUNDRED OF DUTTON
IN THE AREA NAMED TRURO

Last Sale Details

Dealing Reference TRANSFER (T) 13387601
Dealing Date 10/10/2020
Sale Price \$0
Sale Type NO MONETARY CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13119339	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7124348000	CURRENT	82 VALLEY FARM ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

REAL PROPERTY ACT, 1886



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5826 Folio 797

Parent Title(s) CT 4040/372
Creating Dealing(s) CONVERTED TITLE
Title Issued 30/11/2000 Edition 2 Edition Issued 14/09/2017

Estate Type

FEE SIMPLE

Registered Proprietor

PETER BERNARD MOSEY
OF BAGOT WELL SA 5373

Description of Land

ALLOTMENT 572 FILED PLAN 176644
IN THE AREA NAMED BAGOT WELL
HUNDRED OF BELVIDERE

Easements

SUBJECT TO FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED A

Schedule of Dealings

Dealing Number	Description
12867541	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title NIL

Priority Notices NIL

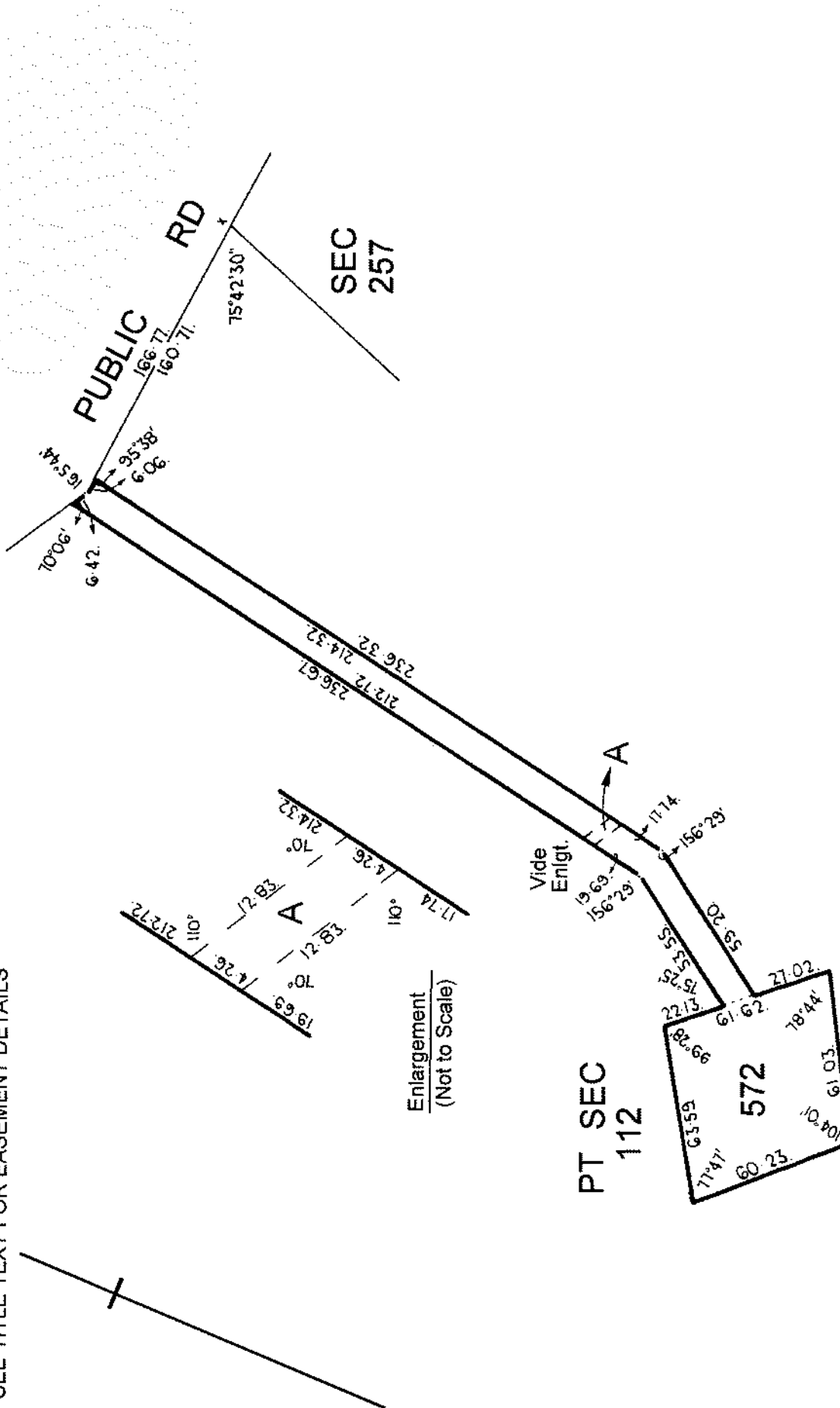
Notations on Plan NIL

Registrar-General's Notes

COMPARE ADDRESS FOR SERVICE OF NOTICE WITH 3773527

Administrative Interests NIL

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 4040/477
SEE TITLE TEXT FOR EASEMENT DETAILS



NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION

Certificate of Title

Title Reference: CT 5826/797
Status: CURRENT
Parent Title(s): CT 4040/372
Dealing(s) Creating Title: CONVERTED TITLE
Title Issued: 30/11/2000
Edition: 2

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867541	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
08/09/2017	14/09/2017	12791731	DISCHARGE OF MORTGAGE	REGISTERED	3773527
29/07/1975	07/08/1975	3773527	MORTGAGE	REGISTERED	



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 5878 Folio 290

Parent Title(s) CT 5293/929
Creating Dealing(s) TG 9364356, TG 9364357
Title Issued 22/08/2002 **Edition** 3 **Edition Issued** 28/06/2017

Estate Type

FEE SIMPLE

Registered Proprietor

R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
OF CARE R & A PROPERTY TRUST BEN LOMOND KAPUNDA SA 5373

Description of Land

ALLOTMENT 1 FILED PLAN 160535
IN THE AREA NAMED HANSBOROUGH
HUNDRED OF JULIA CREEK

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED A (TG 9364356)

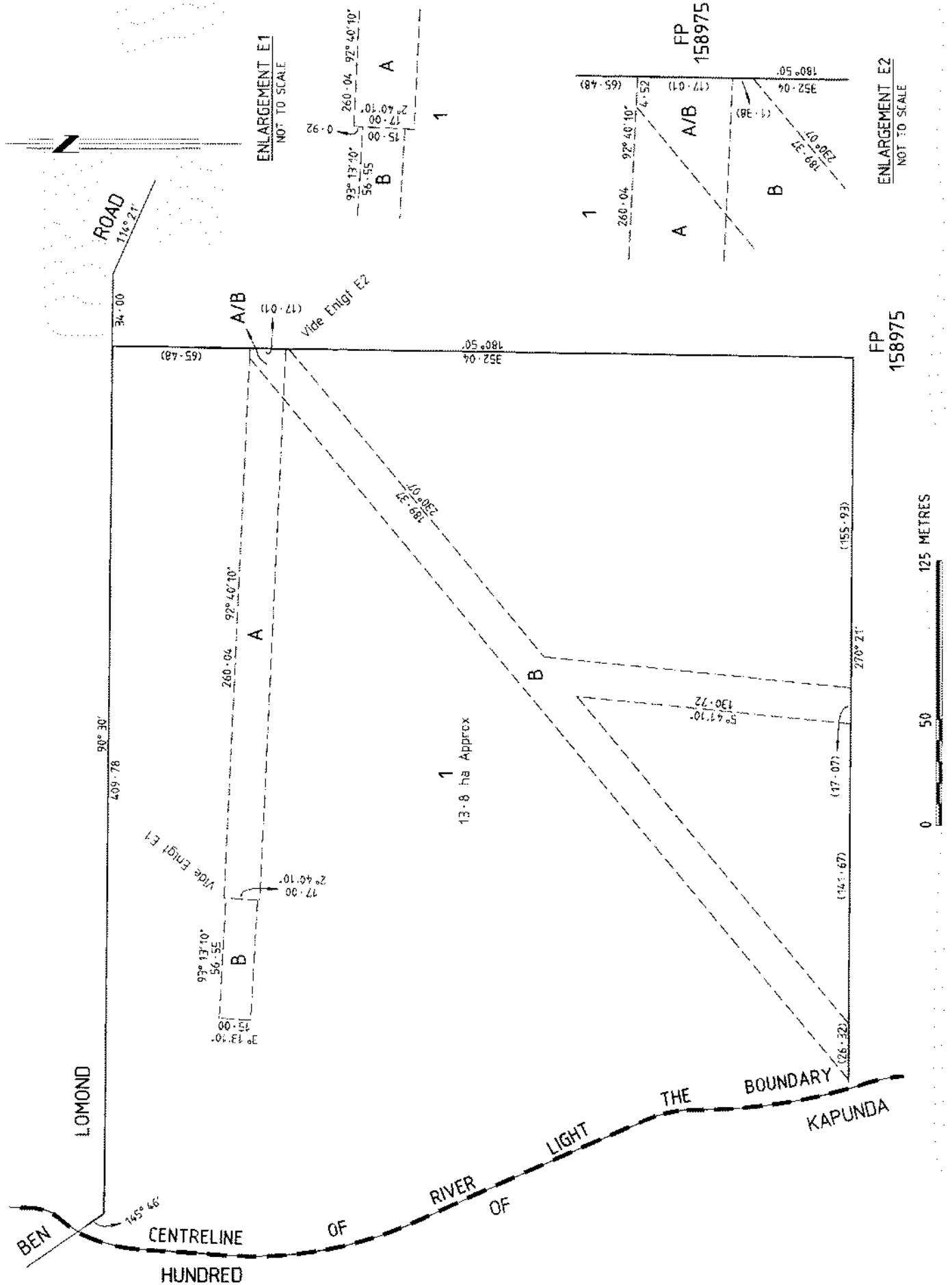
SUBJECT TO EASEMENT(S) OVER THE LAND MARKED B TO DISTRIBUTION LESSOR CORPORATION (SUBJECT TO LEASE 8890000) (TG 9364357)

Schedule of Dealings

Dealing Number	Description
12867542	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL



Certificate of Title

Title Reference: CT 5878/290
Status: CURRENT
Parent Title(s): CT 5293/929
Dealing(s) Creating Title: TG 9364356, TG 9364357
Title Issued: 22/08/2002
Edition: 3

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
29/01/2018	01/02/2018	12867542	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
17/05/2017	28/06/2017	12729612	TRANSFER	REGISTERED	R & A PROPERTY NOMINEES PTY. LTD. (ACN: 612 067 633)
17/10/2016	07/11/2016	12617229	DISCHARGE OF MORTGAGE	REGISTERED	7958938
12/07/1995	21/09/1995	7958938	MORTGAGE	REGISTERED	NATIONAL AUSTRALIA BANK LTD.

Certificate of Title

Title Reference	CT 5947/941
Status	CURRENT
Easement	NO
Owner Number	10675802
Address for Notices	30 WELLS ST BIRKENHEAD, SA 5015
Area	35.9ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

NORMAN JEFFREY CHAMINGS
OF PO BOX 380 SANDY CREEK SA 5350

Description of Land

ALLOTMENT 110 DEPOSITED PLAN 65818
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307166	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7120695005	CURRENT	4360 STURT HIGHWAY, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 5950/567
Status CURRENT
Easement NO
Owner Number 03465727
Address for Notices 16 BUNA TCE NURIOOTPA, SA 5355
Area 31.97ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

PAULINE MARGARET SCHNEIDER
OF 16 BUNA TERRACE NURIOOTPA SA 5355

Description of Land

SECTION 218
HUNDRED OF JELICOE
IN THE AREA NAMED TRURO

Last Sale Details

Dealing Reference TRANSFER (T) 12086705
Dealing Date 17/02/2014
Sale Price \$0
Sale Type CHANGE OF OWNERSHIP FOR NO MONETARY CONSIDERATION OR UNDISCLOSED CONSIDERATION

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307164	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7123428009	CURRENT	Lot 218 TRIAL ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 5964/335
Status	CURRENT
Easement	NO
Owner Number	02674287
Address for Notices	PO BOX 37 KAPUNDA 5373
Area	NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

PETER BERNARD MOSEY
OF PO BOX 37 KAPUNDA SA 5373

Description of Land

SECTIONS 241, 242 AND 243
HUNDRED OF JULIA CREEK
IN THE AREA NAMED HANSBOROUGH

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

NIL

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	12867541	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
9801375006	CURRENT	Lot 241 NOAK ROAD, HANSBOROUGH, SA 5374

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference	CT 6124/753
Status	CURRENT
Easement	NO
Owner Number	00993882
Address for Notices	DUTTON VIA TRURO 5356
Area	41.3ha (APPROXIMATE)

Estate Type

FEE SIMPLE

Registered Proprietor

PAUL WILLIAM DOERING
OF 975 ST KITTS ROAD DUTTON SA 5356

Description of Land

ALLOTMENT 1 DEPOSITED PLAN 36071
IN THE AREA NAMED ST KITTS
HUNDRED OF BELVIDERE

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	12051243	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.
MORTGAGE	13668940	REGIONAL INVESTMENT CORPORATION

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307165	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
3156130008	CURRENT	Lot 1 ST KITTS ROAD, ST KITTS, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

NIL

Certificate of Title

Title Reference CT 6157/823
Status CURRENT
Easement YES
Owner Number 12433567
Address for Notices POST OFFICE BOX 123, TRURO, SA 5356
Area NOT AVAILABLE

Estate Type

FEE SIMPLE

Registered Proprietor

MICHAEL PETER RAMM
OF 780 MANNUM ROAD CALOOTE SA 5254

Description of Land

ALLOTMENTS 105, 106, 107, 110, 113, 114, 115 AND 116 FILED PLAN 174416
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

ALLOTMENT COMPRISING PIECES 117 AND 118 FILED PLAN 174416
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Last Sale Details

Dealing Reference TRANSFER (T) 12372071
Dealing Date 30/07/2015
Sale Price \$1,300,000
Sale Type FULL VALUE / CONSIDERATION AND WHOLE OF LAND

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	12372072	BENDIGO & ADELAIDE BANK LTD. (ACN: 068 049 178)

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13307161	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Valuation Numbers

Valuation Number	Status	Property Location Address
7123450070	CURRENT	83 LAROONA ROAD, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

NIL

Administrative Interests

CONFIRMED IN SA HERITAGE REGISTER 04/03/1993

Certificate of Title

Title Reference CT 6221/131
Status CURRENT
Easement YES
Owner Number 10383359
Address for Notices 4305 STURT HWY TRURO, SA 5356
Area 56.57ha (CALCULATED)

Estate Type

FEE SIMPLE

Registered Proprietor

KINGSLEY REGINALD MUNCHENBERG
OF 4305 STURT HIGHWAY TRURO SA 5356

Description of Land

ALLOTMENT 910 DEPOSITED PLAN 119571
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Last Sale Details

There are no sales details recorded for this property

Constraints

Encumbrances

Dealing Type	Dealing Number	Beneficiary
MORTGAGE	11925269	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

Stoppers

Dealing Type	Dealing Number	Beneficiary
CAVEAT	13306573	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
REGISTRAR-GENERAL'S CAVEAT	14096741	

Valuation Numbers

Valuation Number	Status	Property Location Address
7123449512	CURRENT	Lot 910 STURT HIGHWAY, TRURO, SA 5356

Notations

Dealings Affecting Title

NIL

Notations on Plan

NIL

Registrar-General's Notes

APPROVED D132770

Administrative Interests

NIL



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 6288 Folio 554

Parent Title(s) CT 5950/564
Creating Dealing(s) RTD 14069812
Title Issued 01/08/2023 Edition 1 Edition Issued 01/08/2023

Estate Type

FEE SIMPLE

Registered Proprietor

PAULINE MARGARET SCHNEIDER
OF 16 BUNA TERRACE NURIOOTPA SA 5355

Description of Land

ALLOTMENT 397 DEPOSITED PLAN 132059
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Easements

NIL

Schedule of Dealings

Dealing Number	Description
13307164	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

Certificate of Title

Title Reference: CT 6288/554
Status: CURRENT
Parent Title(s): CT 5950/564
Dealing(s) Creating Title: RTD 14069812
Title Issued: 01/08/2023
Edition: 1

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
27/05/2020	28/05/2020	13307164	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

REAL PROPERTY ACT, 1886



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 6288 Folio 558

Parent Title(s) CT 5652/492
Creating Dealing(s) RTD 14068382
Title Issued 01/08/2023 Edition 1 Edition Issued 01/08/2023

Estate Type

FEE SIMPLE

Registered Proprietor

KINGSLEY REGINALD MUNCHENBERG
OF 4305 STURT HIGHWAY TRURO SA 5356

Description of Land

ALLOTMENT COMPRISING PIECES 391 AND 392 DEPOSITED PLAN 132058
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED A ON D132058 FOR THE TRANSMISSION OF
ELECTRICITY BY UNDERGROUND CABLE (RTC 8431974)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED B AND C ON D132058 TO DISTRIBUTION LESSOR
CORPORATION (SUBJECT TO LEASE 8890000) (TG 8608338)

Schedule of Dealings

Dealing Number	Description
11925269	MORTGAGE TO AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.
13306573	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

Certificate of Title

Title Reference: CT 6288/558
Status: CURRENT
Parent Title(s): CT 5652/492
Dealing(s) Creating Title: RTD 14068382
Title Issued: 01/08/2023
Edition: 1

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
26/05/2020	27/05/2020	13306573	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)
22/04/2013	03/05/2013	11925269	MORTGAGE	REGISTERED	AUSTRALIA & NEW ZEALAND BANKING GROUP LTD.

REAL PROPERTY ACT, 1886



The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Certificate of Title - Volume 6290 Folio 429

Parent Title(s) CT 5810/208
Creating Dealing(s) RTD 14111355
Title Issued 13/09/2023 Edition 1 Edition Issued 13/09/2023

Estate Type

FEE SIMPLE

Registered Proprietor

VIRGINIA ANN SCHMIDT
OF PO BOX 183 TRURO SA 5356
4 / 6 SHARE

JARROD ANDREW SCHMIDT
OF PO BOX 183 TRURO SA 5356
1 / 6 SHARE

DANIEL MARK SCHMIDT
OF PO BOX 183 TRURO SA 5356
1 / 6 SHARE

Description of Land

ALLOTMENT COMPRISING PIECES 386 AND 387 DEPOSITED PLAN 132328
IN THE AREA NAMED TRURO
HUNDRED OF JELlicoe

Easements

NIL

Schedule of Dealings

Dealing Number	Description
12346629	LEASE TO NBN CO. LTD. (ACN: 136 533 741) COMMENCING ON 16/06/2019 AND EXPIRING ON 15/06/2024 OF PORTION (A IN F58485)
12346630	LEASE TO NBN CO. LTD. (ACN: 136 533 741) COMMENCING ON 16/06/2024 AND EXPIRING ON 15/06/2029 OF PORTION (A IN F58485)
12346631	LEASE TO NBN CO. LTD. (ACN: 136 533 741) COMMENCING ON 16/06/2029 AND EXPIRING ON 15/06/2034 OF PORTION (A IN F58485)
12850281	LEASE TO OPTUS MOBILE PTY. LTD. (ACN: 054 365 696) COMMENCING ON 01/11/2016 AND EXPIRING ON 15/06/2034 OF PORTION (B IN F251817)
13119340	CAVEAT BY TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230)

Notations

Dealings Affecting Title NIL
Priority Notices NIL

Notations on Plan NIL

Registrar-General's Notes

APPROVED FILED PLAN FOR LEASE PURPOSES FX251817
APPROVED FILED PLAN FOR LEASE PURPOSES FX58485

Administrative Interests NIL

Certificate of Title

Title Reference: CT 6290/429
Status: CURRENT
Parent Title(s): CT 5810/208
Dealing(s) Creating Title: RTD 14111355
Title Issued: 13/09/2023
Edition: 1

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
31/05/2019	04/06/2019	13119340	CAVEAT	REGISTERED	TWIN CREEK ENERGY PTY. LTD. (ACN: 613 117 230), RAYMOND JOHN SCHMIDT
20/12/2017	10/01/2018	12850281	LEASE	REGISTERED	OPTUS MOBILE PTY. LTD. (ACN: 054 365 696)
22/06/2015	29/10/2015	12346631	LEASE	REGISTERED	NBN CO. LTD. (ACN: 136 533 741)
22/06/2015	29/10/2015	12346630	LEASE	REGISTERED	NBN CO. LTD. (ACN: 136 533 741)
22/06/2015	29/10/2015	12346629	LEASE	REGISTERED	NBN CO. LTD. (ACN: 136 533 741)



Attachment B - Office of Technical Regulator (OTR) Certification



Ref: 2023D054525

28 June 2023

George Brooks
Grid Commercial Specialist
RES Australia Pty Ltd
Suite 6.01 Level 6, 165 Walker Street
North Sydney NSW 2060
george.brooks@res-group.com

Energy and Technical
Regulation

Office of the
Technical Regulator

Level 8, 11 Waymouth Street
Adelaide SA 5000

GPO Box 320
Adelaide SA 5001

Telephone: 08 8226 5500
Facsimile: 08 8226 5866

www.sa.gov.au/otr

Dear Mr Brooks,

RE: Twin Creek Wind Farm Project

The development of the Twin Creek Wind Farm Project has been assessed by the Office of the Technical Regulator (OTR) under section 122 of the *Planning, Development and Infrastructure Act 2016*.

The *Planning, Development and Infrastructure (General) Regulations 2017* prescribe if the proposed development is for the purposes of the provision of electricity generating plant with a generating capacity of more than 5 MW that is to be connected to the State's power system – a certificate from the Technical Regulator is required, certifying that the proposed development complies with the requirements of the Technical Regulator in relation to the security and stability of the State's power system.

In making a decision on your application, our office has taken the following information into account:

- Your letter dated 17th May 2023
- Your letter dated 2nd June 2023

After assessing the information provided, I advise that approval is granted for the project on the condition that the OTR's requirements are satisfied via an option, or a combination of the options below:

- 740MW.s of real inertia is provided via a synchronous condenser, or
- 127.5MW of fast frequency response (FFR) is provided via a battery energy storage system (BESS) with a response time of <250mS, or
- 84.5MW of FFR is provided via a BESS with a response time of <150mS.

It should be noted that should the proponent subsequently decide not to construct the BESS, or synchronous condenser/s, as outlined in the Development Application (DA) and agreed to in this certificate, the proponent is advised that they must apply for a variation to the DA. Any such variation will require the proponent to obtain a new certificate from the OTR. If a certificate is not obtained, formal referral to the OTR will be required during the DA assessment process. Any formal referral may be subject to referral fees applicable at the time.

Energy and Technical Regulations



Should you have any questions regarding this matter, please do not hesitate to call Mark Burns on (08) 8429 2707.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'R J Faunt'.

Rob Faunt
TECHNICAL REGULATOR



Attachment C - Crown Sponsorship Letter



Government
of South Australia

Department for
Energy and Mining

Our Ref: 2023D071771

Ms Julie Jansen
MasterPlan SA
33 Carrington Street
ADELAIDE SA 5000

Via email: juliej@masterplan.com.au
roberta.magoba@res-group.com
toby.coates@res-group.com

Cc: mary.lavelle@sa.gov.au

Dear Ms Jansen

CROWN SPONSORSHIP FOR RES AUSTRALIA PTY LTD's TWIN CREEK WIND FARM AND ENERGY STORAGE FACILITY PROJECT

Thank you for the correspondence dated 23 August 2023 requesting Crown sponsorship under section 131 of the *Planning, Development and Infrastructure Act 2016* to assist with RES Australia's proposed Twin Creek Wind Farm and Energy Storage Facility (the project).

The project has been considered by the Department for Energy and Mining (DEM) with input from the Department for Infrastructure and Transport, the Department of Trade and Investment (Planning and Land Use Services), the Department for Environment and Water, and the Environment Protection Authority. In principle, the project is supported, recognising the possible environmental and community issues that will need to be addressed through the development assessment process.

On balance, the development of RES Australia's proposed project has the potential to benefit South Australia and can be considered essential infrastructure.

Accordingly, I, as Chief Executive of the Department for Energy and Mining (DEM), will support the development and specifically endorse a development application to assess the project, comprising 215MW battery, up to 270MW of wind generating capacity and ancillary equipment, as a development of 'essential infrastructure' under section 131(2)(c) of the *Planning, Development and Infrastructure Act 2016*.

It is the responsibility of RES Australia to prepare all documentation as required by the relevant Acts. This includes all costs in the preparation, lodgement and

Chief Executive

Address Level 12, 11 Waymouth Street, Adelaide 5000 | GPO Box 320 Adelaide SA 5001 | DX452

Tel (+61) 08 8429 3216 | Email DEM.OCE@sa.gov.au | www.energymining.sa.gov.au | ABN 83 768 683 934





Government
of South Australia

Department for
Energy and Mining

assessment of the development application and any other subsequent action in relation to this application.

A development application must be submitted to DEM's Growth and Low Carbon Division (glc@sa.gov.au) who will lodge it with the State Commission Assessment Panel (SCAP). These lodgement documents can be provided in electronic form or made available via download link. Any development fee levied by SCAP is the responsibility of RES Australia.

It is also a requirement that you contact Ms Mary Lavelle, Industry Analyst, on 08 8429 3515 or via email at mary.lavelle@sa.gov.au prior to the lodgement of the development application to ensure all relevant statutory requirements are met.

DEM makes no representations and gives no warranties in relation to the outcome of the development application or time that it takes to secure a planning outcome. It is the responsibility of RES Australia to obtain all other statutory approvals, licences, connection agreements and permits from relevant authorities; manage community expectations; and to fund the project. The Government of South Australia makes no commitment to purchase any product or service related to the project.

If the development application has not been received electronically, by mail or in person by the SCAP within 12 months from the date of this letter, my support for this Crown sponsorship under section 131(2)(c) of the *Planning, Development and Infrastructure Act 2016* will lapse.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Vince Duffy'.

Vince Duffy
A/CHIEF EXECUTIVE

17 / 10 / 2023



Attachment D - Land Parcels and Zone and Overlay Summary

Project Land Parcels and Planning and Design Code Zone and Overlays

Table 1: Wind Farm Land Parcels and Infrastructure

Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
S220	VOL 5293 FOL 927 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A15	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S232	VOL 5293 FOL 931 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S235	VOL 5293 FOL 931 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S236	VOL 5293 FOL 928 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S237	VOL 5293 FOL 928 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A10	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A11	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S239	VOL 5293 FOL 928 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S122	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			

¹ Vol and Fol refer to ‘Volume’ and ‘Folio’ in a Certificate of Title (CT)



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
S127	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S124	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S233	VOL 5293 FOL 931 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S234	VOL 5293 FOL 931 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S128	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S125	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S126	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S123	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S219	VOL 5293 FOL 927 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S240	VOL 5293 FOL 928 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S263	VOL 5618 FOL 695 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S265	VOL 5618 FOL 696 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
S267	VOL 5618 FOL 701 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S269	VOL 5618 FOL 697 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S272	VOL 5618 FOL 689 H160100	Lot 272 Mosey Road, Bagot Well	Rural	X	X	X		X	X	
S249	VOL 5618 FOL690 H60100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A104	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A105	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A91	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
Q99	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
Q100	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
Q101	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
Q102	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
Q103	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
S271	VOL 5618 FOL 687 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S273	VOL 5618 FOL 692 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S268	VOL 5618 FOL 703 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
Q91	VOL 5618 FOL 704 F217083	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
Q92	VOL 5618 FOL 704 F217083	Lot 258 Mosey Road, St Kitts	Rural	x	x	x		x	x	x
A569	VOL 5618 FOL 705 F176641	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S270	VOL 5618 FOL 700 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A20	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A23	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S255	VOL 5618 FOL 694 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S250	VOL 5618 FOL 694 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S251	VOL 5618 FOL 694 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
S254	VOL 5618 FOL 694 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S258	VOL 5618 FOL 699 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A22	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A24	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A21	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A25	VOL 5625 FOL 166 F217158	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S278	VOL 5618 FOL 693 H160100	Lot 91 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S279	VOL 5618 FOL 698 H160100	Lot 91 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S284	VOL 5618 FOL 688 H160100	Lot 91 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S285	VOL 5618 FOL 691 H160100	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
S283	VOL 5618 FOL 688 H160100	Lot 91 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A1	VOL 5878 FOL 290 F160535	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
A3	VOL 5293 FOL 934 F158974	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A4	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A5	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A6	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A7	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A8	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A9	VOL 5293 FOL 934 F158975	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A12	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A13	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A14	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A16	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
A17	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
A18	VOL 5293 FOL 926 F158976	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S121	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S129	VOL 5293 FOL 930 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S218	VOL 5293 FOL 927 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S241	VOL 5964 FOL 335 H160300	Lot 241 Noak Road, Hansborough	Rural	X	X	X	X			
S242	VOL 5964 FOL 335 H160300	Lot 241 Noak Road, Hansborough	Rural	X	X	X	X			
S243	VOL 5964 FOL 335 H160300	Lot 241 Noak Road, Hansborough	Rural	X	X	X	X			
S238	VOL 5293 FOL 928 H160300	178 Ben Lomond Road, Hansborough	Rural	X	X	X	X			
S257	VOL 5618 FOL 702 H160100	346B Twin Creek Road, Bagot Well	Rural	X	X	X		X	X	
A92	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A93	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A94	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	



Allotment - Section	Certificate Of Title ¹	Address	Zone	Overlays						
				Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency
A95	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A96	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A97	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A98	VOL 5390 FOL 991 F199397	Lot 91 Flagstaff Hill Road, Bagot Well	Rural	X	X	X		X	X	
A571	VOL 5618 FOL 708 F176643	346B Twin Creek Road, Bagot Well	Rural	X	X	X		X	X	
A572	VOL 5826 FOL 797 F176644	346A Twin Creek Road, Bagot Well	Rural		X	X		X	X	
A102	VOL 5618 FOL 707 F214685	Lot 100 Camel Farm Road, Koonunga	Rural	X	X	X		X	X	
S103	VOL 5531 FOL 406 H160100	Lot 100 Camel Farm Road, Koonunga	Rural	X	X	X		X	X	
S105	VOL 5531 FOL 405 H160100	Lot 100 Camel Farm Road, Koonunga	Rural	X	X	X		X	X	
AG	VOL 5618 FOL 694 R2497	Lot 258 Mosey Road, St Kitts	Rural	X	X	X		X	X	X
A91	VOL 5618 FOL 706 F199399	Lot 91 Mosey Road, St Kitts	Rural	X	X	X		X	X	X



Table 2: Grid Connection Land Parcels and Infrastructure

Allotment - Section	Certificate Of Title	Zone	Overlays													
			Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency	Local Heritage Place	Dwelling Excision	Limited Land Division	Murray-Darling Basin	Key Outback and Rural Routes	Resource Extraction Protection Area	State Heritage Place
S290	VOL 5264 FOL 963 H160100	Rural	X	X	X		X	X	X	18224						
S286	VOL 5552 FOL 876 H160100	Rural	X	X	X		X	X								
S287	VOL 5663 FOL 19 H160100	Rural	X	X	X		X	X	X							
S190	VOL 5476 FOL 305 H160100	Rural	X	X	X		X	X	X							
S239	VOL 5569 FOL 233 H160100	Rural	X	x	X		X	x								
A500	VOL 5485 FOL 289 F16260	Rural	X	X	X		X	X	X							
A99	VOL 5486 FOL 561 D48414	Rural	X	X	X		X	X	X							
S314	VOL 5274 FOL 160 H160100	Rural	X	X	X		X	X	X							
S581	VOL 5146 FOL 519 H160100	Rural	X	X	X		X	X	X							
A1	VOL 6124 FOL 753 D36071	Rural	X	X	X		X	X			X	X	X			
S319	VOL 5616 FOL 778 H160100	Rural	X	X	X		X				X	X	X			



Allotment - Section	Certificate Of Title	Zone	Overlays													
			Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency	Local Heritage Place	Dwelling Excision	Limited Land Division	Murray-Darling Basin	Key Outback and Rural Routes	Resource Extraction Protection Area	State Heritage Place
S83	VOL 5616 FOL 778 H120600	Rural	X	X	X		X				X	X	X			
S85	VOL 5616 FOL 778 H120600	Rural	X	X	X		X	X			X	X	X			
S87	VOL 5460 FOL 955 H120600	Rural	X	X	X		X				X	X	X			
S37	VOL 5517 FOL 458 H120600	Rural	X	X	X		X				X	X	X			
S38	VOL 5485 FOL 579 H120600	Rural	X	X	X		X				X	X	X			
S36	VOL 5485 FOL 733 H120600	Rural	X	X	X		X				X	X	X			
S34	VOL 5503 FOL 860 H120600	Rural	X	X	X		X				X	X	X			
A1	VOL 5322 FOL 638 D44123	Rural	X	X	X		X				X	X	X			
S51	VOL 5812 FOL 749 H120600	Rural	X	X	X		X				X	X	X			
Q386	VOL 6290 FOL 429 D132328	Rural	X	X	X		X				X	X	X			
S221	VOL 5315 FOL 264 H121100	Rural	X	X	X		X				X	X	X			
Q392	VOL 6288 FOL 558 D132058	Rural	X	X	X		X				X	X	X	X		



Allotment - Section	Certificate Of Title	Zone	Overlays													
			Water Resources	Native Vegetation	Hazards (Flooding – Evidence Required)	Hazards (Bushfire – Regional)	Hazards (Bushfire – General)	Environment and Food Production Area	Heritage Adjacency	Local Heritage Place	Dwelling Excision	Limited Land Division	Murray-Darling Basin	Key Outback and Rural Routes	Resource Extraction Protection Area	State Heritage Place
S218	VOL 5950 FOL 567 H121100	Rural	X	X	X		X				X	X	X			
A397	VOL 6288 FOL 554 D132059	Rural	X	X	X		X				X	X	X	X		
A110	VOL 5947 FOL 941 D65818	Rural	X	X	X		X				X	X	X	X		
Q94	VOL 5304 FOL 717 F163638	Rural	X	X	X		X				X	X	X	X		
Q95	VOL 5304 FOL 717 F163638	Rural	X	X	X		X				X	X	X	x		
Q101	VOL 5360 FOL 970 F174415	Rural	X	X	X		X				X	X	X	X		
Q118	VOL 6157 FOL 823 F174416	Rural	X	X	X		X		X		X	X	X	X	X	16304
A910	VOL 6221 FOL 131 D119571	Rural	X	X	X		X				X	X	X	X	X	

Note: Zones and Overlays as obtained from SAPPa for Planning and Design Code



Attachment E - Statement of Commitments

Attachment E - Statement of Commitments

The Statement of Commitments (Commitments) relate to overall project management and specific measures that will be taken in respect of the Project, during final design and pre-construction planning, construction, operation and decommissioning.

The Statement of Commitments will be updated as needed to address the planning authority's conditions of development authorisation (if granted). Implementation of the Commitments and the performance of the project's environmental management system will be subject to periodic reviews and corrective action if/as required. the Proponent Australia (the Proponent) will work with all stakeholders during compliance reviews.

8.1 General and Administrative Commitments

Issue	Commitment	Timing
Scope of development	The Proponent will carry out the development in accordance with the information contained within development application and in compliance with the conditions of development authorisation.	Ongoing
Minimising harm to the environment	The Proponent will implement all practicable measures to prevent and minimise any harm to the environment that may result from the construction, commissioning, operation, maintenance and decommissioning of the development.	Ongoing
Statutory requirements	The Proponent will ensure compliance with all relevant environmental requirements and ensure that all necessary approvals, licences and permits are obtained and are kept up to date as required throughout the life of the development. Copies of these documents will be maintained at the Site Office and Environmental Management Plans (EMP's) will include measures to ensure compliance.	Ongoing
Decommissioning	A draft decommissioning and rehabilitation plan would be prepared and submitted to the relevant authority for approval (if/as required) prior to commissioning of the wind farm. This plan would outline anticipated decommissioning processes required for the removal of installed infrastructure.	Prior to commissioning
	At the end of its economic life, all equipment will either be replaced with comparable new equipment, or the wind farm will be decommissioned. Replacement may be subject to new approvals.	Prior to decommissioning
	A final decommissioning and rehabilitation plan will be prepared and submitted to the relevant authority for approval prior to the	Prior to decommissioning

Issue	Commitment	Timing
	decommissioning works commencing. This plan will include relevant technical reports required to inform the methodology for decommissioning to minimise environmental harm and impact on the amenity of the community within the locality or as may be affected.	
	Decommissioning would involve dismantling or removal of all above-surface equipment, and site rehabilitation. Sub-surface infrastructure 1metre or more below the ground surface would be retained, as acceptable to the landowner. Access tracks may be retained depending on the land owners' wishes. Any overhead wires no longer required will be removed.	During decommission

8.2 Community Consultation

Issue	Commitment	Timing
Community Stakeholder Engagement Plan (CSEP)	The CSEP will be reviewed periodically as required to address: <ul style="list-style-type: none"> - stakeholder feedback and subsequent changes to the project - changes in the construction program - changes to stakeholder and community needs - lessons learned from the community engagement process where relevant. 	Throughout the Construction Period
Notice of construction activities	The Proponent will ensure that the local community and businesses are advised of construction activities that could cause disruption prior to those activities occurring. Communication methods will be detailed within the Community Stakeholder Engagement Plan and if appropriate within the final Construction Environmental Management Plan (CEMP). Information will include: <ul style="list-style-type: none"> - details of traffic disruptions and controls; - construction of temporary detours; and - work approved to be undertaken outside standard construction hours, particularly noisy works. 	Prior to disruptive works.
Periodic project updates	The following will be updated to local media providers and/or social media: <ul style="list-style-type: none"> - periodic updates of work progress, consultation activities, and planned work schedules when significant changes in noise or traffic impacts are expected. 	As required during the construction phase

Issue	Commitment	Timing
Periodic project updates on project website	<p>The Proponent will maintain a project website until construction ends. The website will contain:</p> <ul style="list-style-type: none"> - periodic updates of work progress, consultation activities, and planned work schedules when significant changes in noise or traffic impacts are expected. The website will indicate the date of the latest update and expected frequency of updates; - a description of the relevant approval authorities and their areas of responsibility; - project reports and plans that are publicly available for download; - contact names and phone numbers of relevant communications staff; and - a 24 hour toll-free complaints contact telephone number. 	Ongoing until construction is complete
Construction noise communication requirements	<p>Prior to the commencement of construction, neighbours to the development site will be informed of the construction works, the nature and duration of components of the construction phase, the potential impacts and contact details for registering complaints or enquires. the Proponent (and its construction contractor) will provide noise and vibration information as part of the ongoing community consultation to ensure adequate community awareness and notice of expected construction noise. Consultation will include:</p> <ul style="list-style-type: none"> - regular community information newsletters providing details of the construction plan and duration; - a site notice board in a community location(s) providing copies of the newsletters, updated construction programme details, contact details of the project team members, and an ability to register for email updates of the newsletter; - a feedback mechanism for the community to submit questions to the construction team and for the construction team to respond; - regular updates on the construction activities to local authorities to assist in complaint management if necessary; and - contact details of the project manager and/or site 'environmental representative'. 	Prior to construction commencing and as required
Complaints management	<ul style="list-style-type: none"> - Prior to construction commencing, the Proponent will ensure the following is available: a postal and email address to which written complaints can be sent; and 	Prior to construction commencing and ongoing

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - a 24-hour telephone contact line. <p>The Proponent will keep record of a Complaints Register for a period of at least four years after the complaint was made. This will include:</p> <ul style="list-style-type: none"> - the date and time of the complaint; - whether the complaint was via mail, email, telephone or in person; - any personal details provided (if any) or a note if no details were provided; - the nature of the complaint; - any action(s) taken by the Proponent in relation to the complaint, including follow-up; and - if no action was taken in relation to the complaint, the reason(s) why. <p>The Complaints Register will be made available for inspection upon request of the planning authority or other relevant government agency.</p>	
Additional consultation requirements communications	The Proponent will undertake additional consultation for the communication aspects of the project, as recommended by DNV in its EMI Assessment Report (such as Flow FM, Swoop, the Bureau of Meteorology) and the Aviation Impact Assessment report by Aviation Projects (such as AirServices Australia, CASA, and local aerial agriculture operators (Aerotech), .	Prior to construction commencing

8.3 Design and Miscellaneous Measures

Issue	Commitment	Timing
Project layout	The Twin Creek Wind Farm and Energy Storage project is based upon the layout shown in the application documents and incorporates up to 42 wind turbine generators. The candidate turbine selected for all investigations is the Vestas 172-7.2MW. The actual turbine model and number to be installed may vary slightly dependant on the final design conditions. Micro-siting of individual turbine locations up to 100 metres is proposed, however any micro-siting changes will be consistent with the development authorisation, otherwise a variation will be sought. Adjustment will consider relevant sensitivities of the location.	Prior to construction commencing
	The Proponent will require the design of facilities and services buildings to incorporate the collection of roof water.	Prior to construction commencing
	Wastewater systems would be designed in accordance with Council requirements. Approvals will be obtained prior to installation.	Prior to construction commencing
	the Proponent will confirm design and siting of temporary construction site offices as part of the final design and prior to construction commencing.	Prior to construction commencing
	If the project contractor seeks to utilise the approval for the temporary concrete batching plant on site, the contractor will be required to obtain any further licenses required.	Prior to construction commencing
	Permanent tracks will be located to achieve suitable grades on stable slopes and will be designed so that they will not exacerbate erosion. Location will be chosen to minimise visual impact from the surrounding countryside as far as possible. Earth batters on any tracks that are benched into slopes will be revegetated to prevent erosion and to reduce visibility of the constructed tracks.	Prior to construction commencing
Aboriginal Heritage	The Proponent will complete a site discovery procedure and Cultural Heritage Management Plan with the Ngadjuri Nation Aboriginal Corporation.	Prior to construction commencing
	The Proponent will undertake construction in accordance with the South Australian Aboriginal Heritage Act (1988),and the processes agreed to under the CHMP	During construction
	The Proponent will ensure staff undertaking construction are appropriately inducted to be	Prior to construction

Issue	Commitment	Timing
	aware of the risks and have idea of how to identify Aboriginal cultural materials. An appropriate stop work procedure will be included in the CHMP.	commencing and during construction
Visual impact measures	<p>Measures to mitigate the visual impact of the project will include:</p> <ul style="list-style-type: none"> - turbines to be a matte off-white/light greycolour - STG blades to be a three-bladed design with non-reflective finish; - underground cabling will be used throughout the wind farm wherever practical; - areas of existing native vegetation will be preserved as far as practicable; - earthworks will be restored as soon as practical following the completion of construction; - cable trenches will be backfilled as soon as practical; and - access roads will be selected according to the pattern of existing tracks within the project area and to reduce visual impact. 	During construction
	Visual screen planting will be located between the terminal substation and Sturt Highway. Additional screen planting will be undertaken subject to land owner and neighbour's requests. A landscape management plan will be prepared to manage the establishment and maintenance of newly established landscape areas.	During construction
Shadow Flicker	- Dwelling 122 (owned by the Proponent) will be demolished, or, if not demolished, will remain unoccupied for the life of the Project.	Ongoing
Aviation safety	Final details of the height and location of each wind turbine generator will be provided to CASA, Department of Defence, AirServices Australia, the Aerial Agricultural Association of Australia, local aerial agricultural operators, CFS/aerial firefighting operators, and operators of Gawler and Stonefield ALA's.	Before erection of the wind turbine generators
	The Proponent will maintain appropriate visibility marking, preferably using high visibility balls on the guy wires on wind monitoring/meteorological towers	Ongoing
	Overhead transmission lines and/or supporting poles associated with the Project that are located where they could adversely affect aerial application operations will be identified in consultation with local aerial agriculture	Before erection of the overhead transmission line

Issue	Commitment	Timing
	operators and marked in accordance with Part 139 Manual of Standards (MOS) Chapter 8 Division 10 section 8.110 (7) and section 8.110 (8) where applicable.	

8.4 Flora and Fauna Mitigation Measures

Issue	Commitment	Timing
Project layout	the Proponent will submit a EPBC referral for the project in relation to PBTl	Prior to construction commencing
	the Proponent will submit and obtain approval for the clearance of native vegetation as required by the Native Vegetation Act 1991.	Prior to construction commencing
	the Proponent currently intends to provide on-ground SEB offset areas at 188 Whites Road, St Kitts: <ul style="list-style-type: none"> - Section 190 H160100 Certificate of Title Volume 5476 Folio 305 - Allotment 500 F16260 Certificate of Title 5485 Folio 289 - Section 239 H160100 Certificate of Title Volume 5569 Folio 233 	
	The Vegetation Management Plan for the SEB offset areas will be finalised and submitted for approval by the Native Vegetation Council.	Prior to construction commencing
	the Proponent will micro -site wind turbine generators and other infrastructure and access tracks within the surveyed disturbance footprint (of the planning corridor) to avoid or minimise the impact on high value native vegetation	
	A range of mitigation measures are incorporated to minimise impacts on PBTl, including micro-siting of infrastructure, ongoing monitoring and translocation:	Prior to construction commencing

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - micro siting of infrastructure away from areas of high population density and/or known locations of PBTL, informed by additional survey during the detailed engineering design phase of the project. - Minimising the Disturbance Footprint as far as practicable in PBTL habitat. This may include constructing access roads to the narrowest possible width, turbine hardstands kept to the smallest possible dimensions and incorporating design elements such as routing reticulation along access roads and areas of unlikely PBTL habitat (i.e. cropping). - Preparation and implementation of a PBTL Management Plan that considers strategies for avoiding, minimising and mitigating direct, indirect and unforeseen impacts to PBTL during construction and operation of the Project. - Preparation and implementation of an offset strategy that provides a benefit to the overall PBTL population in the region. <p>The ongoing monitoring and potential offset strategy will be further developed as part of the EPBC referral process.</p>	
Management Plans	the Proponent will develop a Weed Management Plan/Rehabilitation Plan. Management of declared and environmental weeds may be part of the SEB options.	Prior to construction
	<p>the Proponent will develop a final Construction Environmental Management Plan (CEMP) which incorporates best practice environmental management measures including:</p> <ul style="list-style-type: none"> - vehicles and equipment should be cleaned to ensure they are free of plant material and soil, to reduce the dispersal of exotic flora species into, out of, and within the project area 	Prior to construction

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - Control of declared and environmental weeds found within the site - Minimise the construction footprint e.g. along access roads, in turn-around areas and around turbine pads - Exclude vehicles from areas of PBTL occurrence and habitat areas; that is, no off-track movement of vehicles for parking, material storage within these identified areas - Staff training to ensure they are aware of the threatened flora and fauna species and ecological communities present and potentially present; and the potential and actual impacts of construction, operation and maintenance of the proposed wind farm on flora and fauna species and habitats. 	
	the Proponent will provide a copy of Environmental Management Plans to NVC for review and comment	Prior to construction

8.5 Fire Mitigation Measures

Issue	Commitment	Timing
Fire Risk Management: Design Components	<p>The potential fire risk associated with electrical failure will be managed by the following measures:</p> <ul style="list-style-type: none"> - use of fully enclosed electrical equipment on turbine structures and pad-mount transformers; - extensive use of underground cabling between turbines; - design of any overhead lines in accordance with industry standards; - exclusion of vegetation from within the substation enclosure; and - use of fire detection system appropriate for various infrastructure, which may 	During project design

Issue	Commitment	Timing
	incorporate one or all of the following: temperature sensor, gas sensor, smoke detector, circuit breakers and fuses to trigger alarms and cease operation.	
Project Design	In consultation with the CFS, the Proponent will prepare Fire Management Plans with reference to the Victorian Country Fire Authority Guidelines - Design Guidelines and Model Requirements - Renewable Energy Facilities 2022 (CFS Guidelines),	During final design
	In consultation with the CFS, the Proponent will identify the appropriate size and location of static water points onsite	During final design
	the Proponent will install agreed static water storage tanks (as appropriate) in the form of above ground water tank constructed of concrete or steel.	During construction
Fire Management Plan	<p>In consultation with the CFS, the Proponent will prepare a Fire Management Plan that will utilise the Victorian Country Fire Authority - Design Guidelines and Model Requirements - Renewable Energy Facilities (Version 4 August 2024) as a guideline and address the following during construction:</p> <ul style="list-style-type: none"> - Activities to be undertaken during the Fire Danger Season are appropriate under the Fire and Emergency Services Act 2005 and Fire and Emergency Services Regulations 2021 - Division 5 - Fire Prevention of the regulations. - Staff, contractors and site visitors to be informed of fire response procedures that follow identified legislative requirements, policies and procedures - Works during the fire danger season to have appropriate permits from Local Government, (Goyder, Light Regional and Mid Murray Councils). 	Prior to construction

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - Construction and operational works follow appropriate Work Health and Safety requirements. - Principal Contractor to ensure there is a bushfire survival plan for personnel at the site. - Facilitate a high standard of communication with landowners, relevant stakeholders and the community regarding daily activities through community liaison groups or similar. - Primary contact person for the community to contact with concerns, questions or issues to be established. - Ensure all contractors: <ul style="list-style-type: none"> - Are appropriately briefed and understand their legal obligations in relation to managing bushfire risks. - Have appropriate procedures, safe work practices, contingency plans, MSDS for operation of all equipment, chemicals, flammable materials that may contribute to bushfires. - Have appropriate “initial” suppression equipment available on site i.e. fire extinguishers or firefighting equipment in vehicles. - Carry emergency communications equipment. - Vehicles should keep to the tracks whenever possible. - Restrict low clearance vehicles with catalytic converters from entering the site on high fire danger days. - Restrict smoking to prescribed areas. - Consider a policy of “no work” or “essential work only” on declared Catastrophic Fire Danger Days. - Provide appropriate bushfire training for contractors and staff. - Ensure all building construction is in line with the Minister’s Specifications of building in Bushfire risk areas (if/as required). 	

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - Ensure appropriate bunding in areas where there is potential for flammable fuels and oils to leak and create bushfires or other environmental risks. - Ensure all access roads and tracks are identified and meet Government Agencies Fire Management Working Group (GAFMWG) standards for emergency vehicle access (SA Government 2015). - Consider appropriate signs (as per GAFMWG standards) to assist emergency response crews to determine track names, location and turbines etc. - Establish emergency assembly areas. - Ensure all environmental risks of construction have been considered and approved by relevant authority. - Consider security fencing as necessary around turbines and substations to prevent public access. - Provide adequate access tracks to assist CFS in responding to and managing fires on site. - Ensure adequate access to water for CFS, and/or for sprinklers, and the provision of onsite static water supplies. - Consider early fire/smoke detection systems, in built fire protection systems, remote alarming and notification systems in turbines to report potential bushfire risks from any mechanical or electrical failures. 	
	<p>Ensure that the Fire Management Plan incorporates the following for the operation phase of the project:</p> <ul style="list-style-type: none"> - Invite local brigades on regular site familiarisation tours. - Communicate to community the bushfire risk mitigation works undertaken. - Provide site plans to CFS marking assets, access points, tracks, firebreaks, hazards and water points once facility is constructed. 	<p>Prior to commission and ongoing</p>

Issue	Commitment	Timing
	<ul style="list-style-type: none"> - Undertake regular inspections and maintain records of all turbines, BESS, substations, and power lines (including easements). - Ensure suitable firefighting equipment is available onsite or readily accessible - Ensure staff and contractors are trained in firefighting equipment and have appropriate personal protective clothing. - Ensure the maintenance of fuel load management zones (A and B zones). - Consider remote shut down possibilities of turbine operations during high bushfire risk days, actual bushfires or reported faults. - Consider lightning conductors to dissipate electricity to ground and reduce turbine damage and bushfire risk. - Ensure all access roads and tracks are maintained to meet GAFMWG standards for emergency vehicle access. 	

8.6 Acoustics

Issue	Commitment	Timing
Scope of development	Locations of the wind turbine generators as specified in Appendix B of the acoustic report ('Twin Creek Wind Farm and Energy Storage Facility: Environmental Noise Assessment', January 2025, Document ref.: S4827C26, prepared by Sonus Pty Ltd). Positioning tolerance must not exceed 100m from the nominal location for each of the turbines.	Pre-construction
	A final pre-construction noise assessment will be submitted to the Environment Protection Authority (EPA) which confirms compliance with the applicable operational criteria based on the final wind turbine generator selection, layout and warranted sound power levels.	Pre-construction
Acoustic characteristics	Noise levels at the noise sensitive receivers (non-associated residences) in the vicinity of the Wind	Ongoing

Issue	Commitment	Timing
	<p>Farm development must meet the requirements of the EPA’s Wind Farms Environmental Noise Guidelines (2021). The predicted equivalent noise level (LAeq,10), adjusted for tonality in accordance with these guidelines, should not exceed:</p> <ul style="list-style-type: none"> - Non-associated Residences - 40 dB(A) at relevant receivers, or - the background noise (LA90,10) by more than 5 dB(A) - Associated Residences - 45 dB(A) at relevant receivers, or - the background noise (LA90,10) by more than 5 dB(A) <p>whichever is greater, at all relevant receivers for wind speed from cut-in to rated power of the WTG and each integer wind speed in between.</p>	
Post Construction monitoring	Post construction monitoring will be undertaken if/as required by conditions of development authorisation.	Post construction and prior to commissioning
	<p>If post-construction noise monitoring results reveal non-compliance with the specified noise criteria, the Proponent will arrange for the noise monitoring of other relevant noise sensitive receivers. The measures to assure compliance with the specified noise criteria must be undertaken by the Proponent for all of the localities where non-compliance with the noise criteria is revealed. Agreement with the land owners of the noise affected premises can be considered as an option in accordance with the EPA Wind Farms Environmental Noise Guidelines (2021).</p>	

8.7 Traffic Management

Issue	Commitment	Timing
Infrastructure Deed	the Proponent will enter into an Infrastructure Deed with the Light Regional Council, Regional Council of Goyder and Mid Murray Council (if/as required) in relation to upgrades of local roads proposed to be utilised during construction of the project	Prior to construction
Traffic Management Plan	<ul style="list-style-type: none"> - The Proponent will prepare a Traffic Management Plan once development authorisation is obtained. This Traffic Management Plan would incorporate: detailed design of the access to the terminal substation from Sturt Highway in consultation with the Commissioner of Highways - Pre construction assessments of road pavements and infrastructure (such as structural assessment of the bridge on Bagot Well Road where it crosses St Kitt's Creek) along access route to assess the required upgrading or likely rehabilitation. - Undertake further consultation with stakeholders and community - Details of noise and dust mitigation. 	Prior to construction
Decommissioning	<ul style="list-style-type: none"> - the Proponent will prepare a Traffic Management Plan for the decommissioning of the development 	Post economic life of the development

8.8 Communications and Television

Issue	Commitment	Timing
Telecommunication mitigation measures	Prior to construction, the Proponent will ensure that the final turbine layout is assessed in terms of its potential impact on fixed path radio links in the locality to ensure services are not materially disrupted or degraded. Where necessary, the	Before construction commences

Issue	Commitment	Timing
	relevant communication service operator will be contacted to confirm operational details.	
Television Reception	<p>the Proponent to rectify television reception of dwellings materially affected by the project via one of the following options:</p> <ul style="list-style-type: none"> - Realigning the householder’s television antenna more directly towards their existing transmitter. - Tuning the householder’s antenna into alternative sources of the same television signal or a substitute signal. - Installing a more directional and/or higher gain antenna at the affected house. - Relocating the antenna to a less affected position. - Installing cable or satellite television at the affected house. 	Post construction
Flow FM	The Proponent will continue to liaise with Flow FM to assess the potential for interference with signals from Flow FM Kapunda transmitter, particularly in areas with marginal reception to the northwest of the Project. If required, the Proponent will liaise with Flow FM regarding options for moving the Kapunda transmitter to a new location more than 4km from any turbine, or installing a signal repeater on the opposite side of the project, or other appropriate mitigation measures	During final design and prior to construction
Swoop	The Proponent will continue to liaise with Swoop regarding technical solutions aimed at minimising potential interference wireless internet links.	During final design and prior to construction
Bureau of Meteorology	The Proponent will continue to liaise with the Bureau of Meteorology (BoM) in relation to the potential interference with the Buckland Park radar. the Proponent will resolve the potential mitigation options with the Bureau, which may include installing additional weather radars or sensing stations to provide coverage in the affected area, supplementing data from the	During final design and prior to construction

Issue	Commitment	Timing
	affected radar with other sources such as satellite data or data from adjacent radars (if available), or using post-processing tools to forecast or fill gaps in coverage.	

8.9 Socio-Economic

Issue	Commitment	Timing
Employment	The Proponent will compile a business register for local and regional businesses to register interest in providing a range of goods and services. Local companies and businesses with the requisite skills and experience will be employed on the project, wherever possible.	Prior to construction
Workforce accommodation	The Proponent will consult with Local Government within the region to develop a strategy to accommodate workers required for the construction phase of the project.	Prior to construction
Community Benefit Program	In consultation with Light Regional Council, Regional Council of Goyder and Mid Murray Council, enter into a community benefit scheme/ establish a community enhancement program to benefit the community across the three Council areas. The form of the scheme and its operation would be determined with the Councils and may include annual contributions or contribution(s) to a specific project to benefit the community.	Commence in the first financial year post commissioning of the wind farm and ongoing annually for the life of the project (if an annual grant or contribution scheme).
Aboriginal participation plan	Liaise with the Ngadjuri Nation Aboriginal Corporation regarding a Participation Plan to provide opportunities to first nations people during the construction and operational phase of the project.	During design and commissioning of the wind farm