POWER FOR GOOD

Volume Four –

Draft Construction Environmental Management Plan

DRAFT CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Twin Creek Wind Farm & Energy Storage Project

RES AUSTRALIA PTY LTD

Prepared by MasterPlan SA Pty Ltd

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Final 16 January 2025	Julie Jansen, MasterPlan	

Contents

1 Project Description

This Construction Environmental Management Plan (CEMP) applies to the development of a renewable energy facility, known as the Twin Creek Wind Farm and Energy Storage Project (TCWF or the Project), within the Mid North area of South Australia by RES Australia Pty Ltd (RES Australia).

The site of the wind farm and battery energy storage facility is approximately 90 kilometres northeast of Adelaide and northeast of Kapunda. The site comprises approximately 5,548 hectares with a development area of approximately 3,684 hectares of farm land which is used predominately for sheep grazing and cereal cropping.

The Project consists 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 134 metres and a rotor diameter of up to 172 metres. 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 the wind farm having a total installed name plate capacity of up to 270MW;
- associated hard standing areas and access roads;
- operations and maintenance building and compound with associated car parking;
- two electrical substations (one project substation south-east of WTG 29 and one cut-in terminal substation east of Truro);
- 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;
- temporary construction facilities including a borrow pit and concrete batching plant facilities.
- a disturbance footprint comprising the infrastructure of the development of approximately 380 hectares.

2 Subject Land

2.1 Legal Description

The site of the development is described below, with reference to land included in the development.

The "site of the development" incorporates all land within the project, including land in private ownership along the transmission route as detailed in Table 1 and 2 below. The "site boundary" is shown on the plans prepared by RES as a purple line (site boundary 2024).

Table 1: Wind farm and ancillary infrastructure land parcels

Allotment/ Section	Volume[1]	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

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

Allotment/ Section	Volume[1]	Folio	Number	Infrastructure	Local Government Area
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
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

Allotment/ Section	Volume[1]	Folio	Number	Infrastructure	Local Government Area
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
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

Allotment/ Section	Volume[1]	Folio	Number	Infrastructure	Local Government Area
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

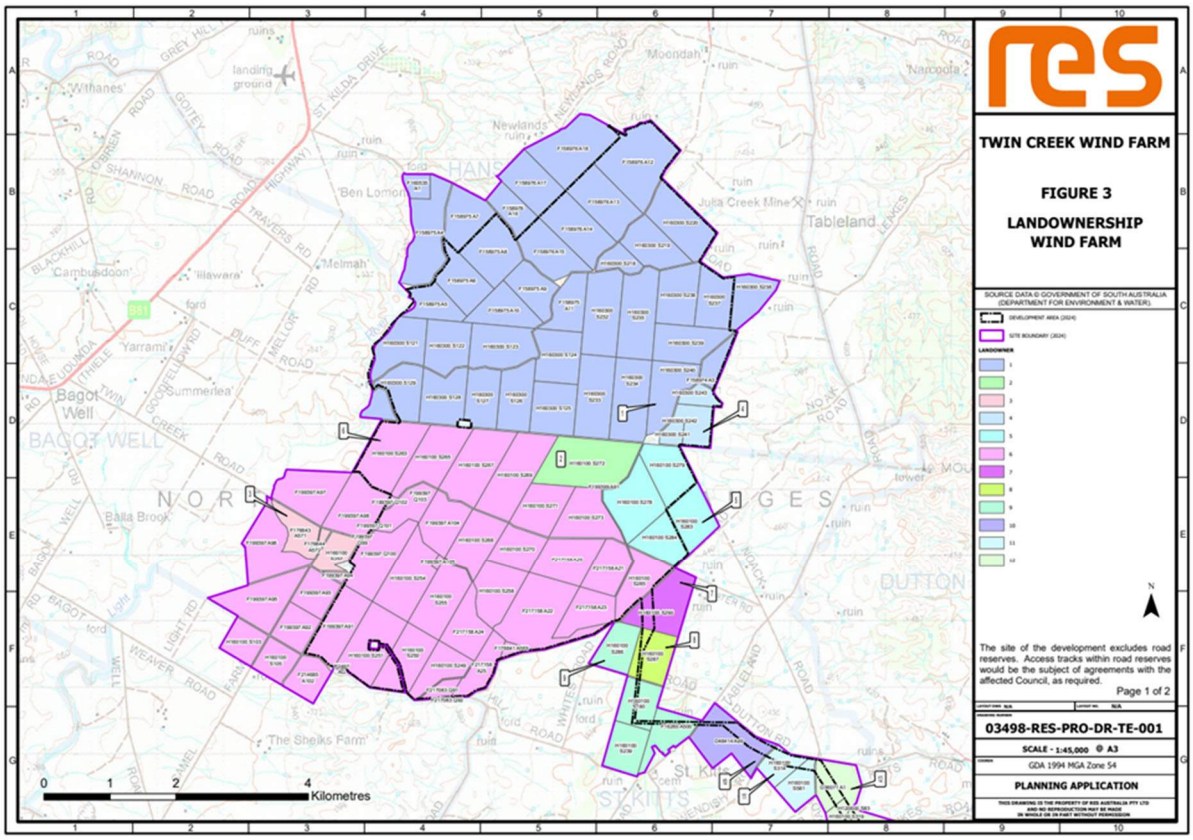
Allotment/ Section	Volume[1]	Folio	Number	Infrastructure	Local Government Area
S265	Vol 5618	Fol 696	H160100	T25 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S269	Vol 5618	Fol 697	H160100	T27 Hardstand, Access Track, Planning Corridor, Cables	Light Regional Council
S279	Vol 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
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

Allotment/ Section	Volume[1]	Folio	Number	Infrastructure	Local Government Area
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

Table 2: 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
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

Allotment/ Section	Volume	Folio	Number	Infrastructure	Local Government Area
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



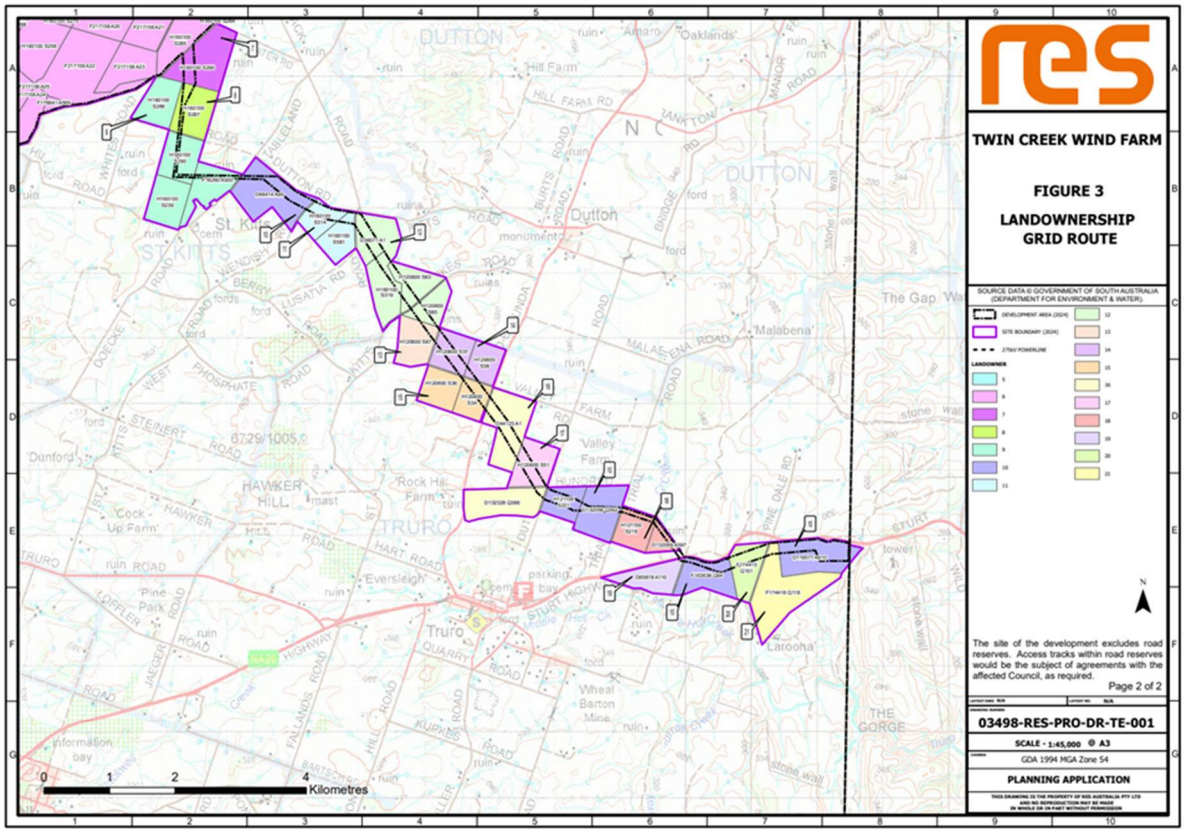


Figure 1 (2 pages) – RES Figure 3 – Landownership Wind Farm and Grid Route

2.2 Project Region

The development is located between the townships of Kapunda, Eudunda and Truro as shown on Figure 2 below.

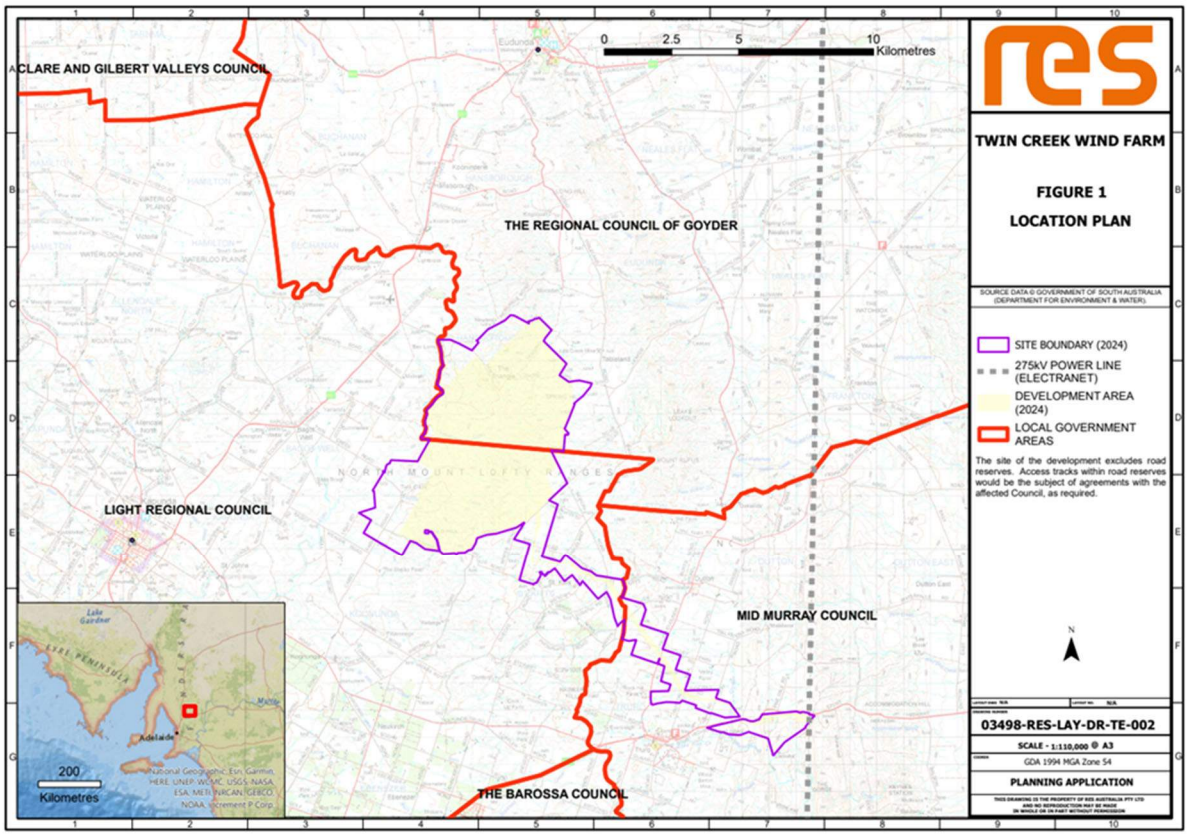


Figure 2- RES Figure 1 - Location Plan

The site is located on the tablelands that form the wide ridgeline associated with Bald Hill and Long Hill situated within the Northern Mount Lofty Ranges.

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 a series of undulating ridges and escarpments.

Surrounding the site of the proposed development, the landscape 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 in 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.

2.3 Climate

Climate is described as a "Mediterranean" with peaks of growth in autumn and spring and moderate growth in winter. The nearest weather station for the site is Kapunda, South Australia (approximately 5 km south-west of the project area), with records from 1865 to 2017 for the mean maximum temperature and 1861 to 2017 for the mean rainfall (Figure 3) (BOM 2017).

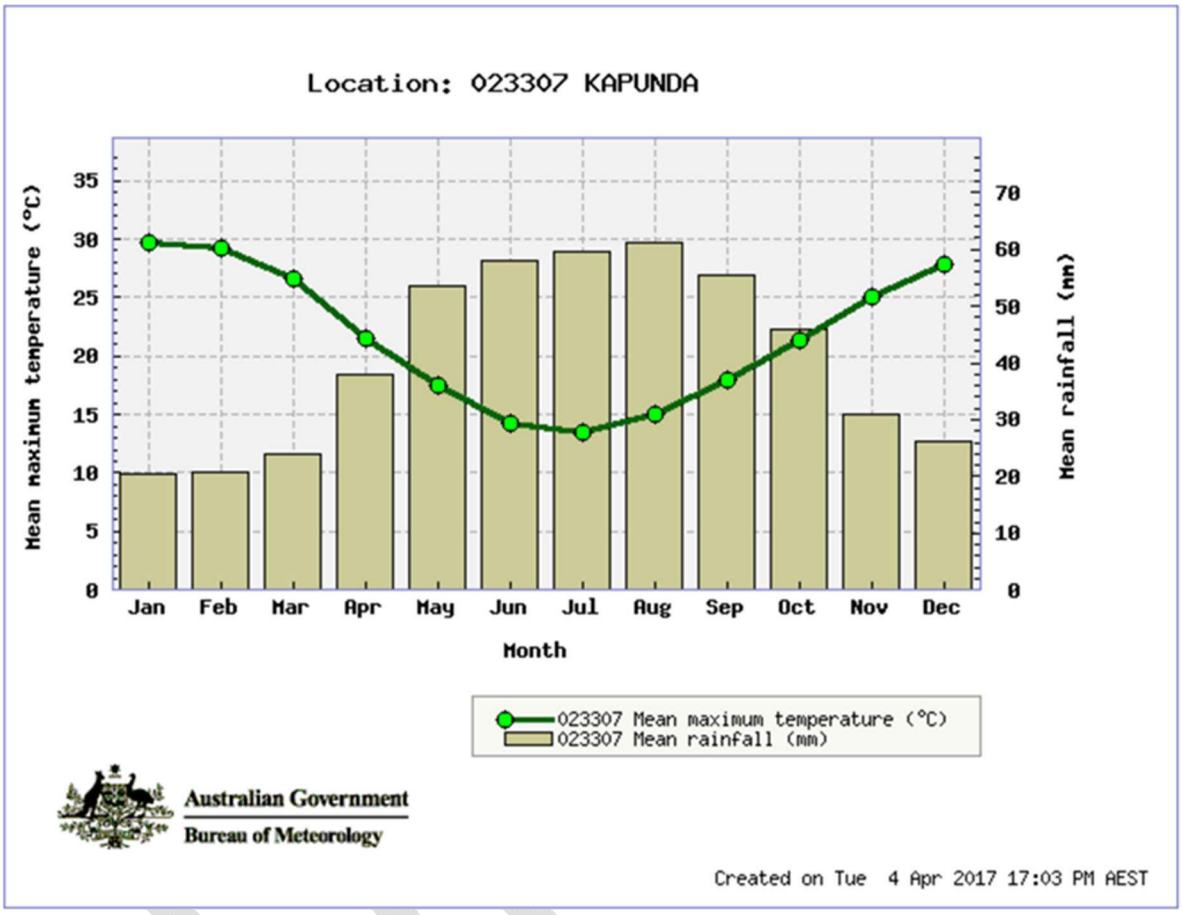


Figure 3: Average monthly rainfall and temperature data for Kapunda Weather Station.

The Bureau of Meteorology statistics for 2023 mean rainfall and temperatures for the Kapunda Weather Station are shown in Table 3 below.

Table 3 2023 Rainfall and Temperatures

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years		Plot	Map
Temperature																	
Mean maximum temperature (°C)	29.7	29.3	26.6	21.5	17.5	14.2	13.5	15.0	17.9	21.3	25.1	27.9	21.6	78	1885 1965		
Mean minimum temperature (°C)	14.5	14.6	12.7	10.1	7.9	6.2	5.3	5.8	6.9	8.8	11.2	13.2	9.8	79	1885 1965		
Rainfall																	
Mean rainfall (mm)	20.2	20.6	23.6	37.5	53.6	57.7	59.1	61.6	54.7	46.0	31.8	26.0	492.4	163	1861 2024		
Decile 5 (median) rainfall (mm)	15.4	11.9	16.4	30.2	45.0	55.1	58.0	60.8	50.4	43.2	27.0	19.2	492.6	141	1861 2024		
Mean number of days of rain ≥ 1 mm	2.6	2.3	2.9	4.7	6.9	8.2	9.1	9.3	7.5	6.1	4.2	3.4	67.2	137	1866 2024		

3 Construction Environmental Management Plan

3.1 Object of the Construction Environmental Management Plan

The objective of the CEMP is to describe the potential environmental issues related to the works and the measures which will be undertaken to manage or mitigate any detrimental impacts. The key environmental issues associated with construction of the wind farm are:

- Air quality;
- Cultural heritage;
- Erosion and sedimentation;
- Hazardous substances;
- Noise;
- Traffic;
- Flora and fauna
- Weeds and pest management; and
- Fire prevention.
- Incident management. This CEMP provides guidance in relation to:
    - minimising environmental impacts during site works;
    - identification and implementation of measures to minimise potential impacts to offsite receptors during construction; and
    - establishing and implementing practices to inform site workers regarding potential environmental impacts and agreed procedures to mitigate impacts.

3.2 Environmental Management Structure and Responsibility

The implementation of this CEMP is the responsibility of the chosen construction contractor. The construction contractor may at times delegate responsibility for individual items to its sub-contractors; however, retains overall responsibility for implementation of this CEMP and any changes should the understanding of site conditions change.

The commitment of the construction contractor toward environmental protection and management will be demonstrated by:

- the finalisation of the CEMP prior to construction
- The final CEMP to be prepared in accordance with the South Australia Environmental Protection Agency (SA EPA) guideline (Ref: EPA 1095/24 Construction environmental management plan – updated April 2024)

- authorisation of the CEMP by the Project Manager prior to construction;
- the communication of the CEMP's intent to the workforce through induction, display on notice boards and at Project meetings;
- the provision of resources to implement and maintain the CEMP; and
- the establishment of measurable objectives and regular reviews to ensure the suitability and effectiveness of the policy to operations.

3.3 Environmental Aspects

The potential environmental impacts along with mitigation strategies to minimise potential impacts are outlined below.

In assessing the potential off site environmental impacts, the following should be noted:

- The site of the wind farm and battery energy storage facility comprises farm land which is used predominately for sheep grazing and cereal cropping.
- The nearest dwelling is that located on the site of the development
- The nearest non-stakeholder dwelling is more than 2 kilometres from the nearest wind turbine generator (WTG)
- The nearest construction compound, including the temporary concrete batching plant, is approximately 1.5 km from the nearest non-stakeholder dwelling
- The site contains some natural drainage channels, some of which will need to be transversed for construction and access purposes
- Construction will occur over an estimated 18 month to 2 year period. It is estimated that there will be 1,038 over dimensional and over mass trips; 57,640 general access truck trips; and 50,160 light vehicle trips.
- There are 4 Wedge-tailed Eagle nests within the site and a buffer of 500 metres is specified around these nests.
- The site of the development contains the habitat of the nationally endangered Pygmy Blue-Tongue Lizard and development infrastructure is to be micro-sited to protect this species.
- The site of the development contains two nationally threatened ecological communities, being Iron-grass (Lomandra spp). Natural Temperate Grassland of South Australia and Peppermint Box (Eucalyptus odorata) Grassy Woodland. The development infrastructure is to be located outside of high quality vegetation and/or micro-sited to protect these species (wherever possible).

The following provides the mechanism for the management of the environment during construction, having specific regard to:

- Protection of native fauna;

- Protection of native flora;
- Pest plants;
- Pest animals;
- Fire prevention and emergency response on site;
- Bushfire;
- Erosion and sediment;
- Water resources
- Aboriginal Cultural Heritage;
- Hazardous substances and spill prevention;
- Noise; and
- Dust generation.

3.3.1 Air Quality

Air Quality	
Objective	Avoid and/or minimise air quality impacts during construction.
Legislation/Policy	*Environment Protection Act 1993* *Environment Protection Regulations 2023* *Environment Protection (Air Quality) Policy 2016* EPA Guideline for Concrete Batching (updated March 2016) *Planning and Design Code (pursuant to the Planning, Development and Infrastructure Act 2016).*
Potential Impacts	Dust during construction from: establishment of access tracks excavation of turbine pads and footings construction of turbines, buildings, fences storage of materials construction compound(s). Dust from vehicle movement. Dust from temporary batching plant. Exhaust fumes from construction vehicles.
Mitigation	Identify dust sensitive locations (residential dwellings etc) prior to construction activities occurring Ensure dust generating activities are limited if conditions are not favourable (ie. strong winds that would release dust off site). Dust controls would include the use of suppressants including water spraying as required. Water spraying would extend to access tracks, stockpiles and the sites being excavated for the construction.

Air Quality	
	Limit bare earth exposure to that essential to the efficient and effective construction. Use vegetation cover, mulch covers or other suitable methods . Rehabilitate or allow natural regeneration of bare areas as soon as the area is no longer needed for construction. Cover all loose loads for transport to and from the site Maintain sealed public roads free of trafficked soil materials. Restrict vehicle travelling speed (<40km/h) on unsealed access tracks, where possible All vehicles and equipment operated on the site will comply with regulatory emission standards. Minimise machinery idling times, as appropriate.

3.3.2 Cultural Heritage

There are no items of European heritage significance on the subject land.

Cultural Heritage	
Objective	Mitigate the risk of damage or disturbance of an unknown Aboriginal site or object of significance.
Legislation/Policy	*Native Title (South Australia) Act 1994* *Aboriginal Heritage Act 1988* *Heritage Act 1993* *Heritage Places Act 1993*
Potential Impacts	Damage to currently unknown Aboriginal sites, artefacts or archaeological features. There are currently no active native title claims or determinations or Indigenous Land Use Agreements (ILUA) for the project area.
Mitigation & Site Discovery Procedure	Prior to construction review and incorporate the relevant recommendations of the Cultural Heritage Management Plan prepared with the First ations people into the final CEMP. During the construction of the project, caution should be taken for all sub-surface disturbances including but not limited to roads, land clearing, construction and underground services. Appropriate induction and awareness training will be given to all construction personnel in regard to Aboriginal Cultural Heritage. Should any archaeological occurrences be located during work on the site, the Construction Contractor must take appropriate action in accordance with the Aboriginal Heritage Act 1988. This will involve implementation of the following procedures (an/or those agreed with the Ngadjuri Nation Aboriginal Corporation as part of the Cultural Heritage Management Plan (CHMP)) should a potential Aboriginal site or object be identified on the site during construction (or ongoing operation):

Cultural Heritage	

Potential Aboriginal Cultural Heritage Identified During Construction		
A potential Aboriginal site has been identified by the work crew.	Cease all work within 50 metres of the discovery. Do not remove or touch anything from the area. Inform the site works manager. Identify whether any soil has been removed from the location and if possible have it returned.	
Site works manager to:	Photograph, with scale (pen, tape measure etc.) the discovered items and the immediate area. Record the location with GPS if possible. Secure and weatherproof the site from further disturbance. Identify any immediate threats to the site (e.g., construction activities, vandalism, water level). Consult with a specialist to determine the nature of the discovery and if there is bone whether it is human or not.	
If material discovered is not an Aboriginal site or object of significance	Work can continue at location.	
If Material Discovered is an Aboriginal Site, Object of Significance or Human Remains.		
If bone is identified as human, immediately contact SA Police Tel 13 14 44. The area will be under the control of the SAPOL until further notice.	For other cultural material the archaeologist will manage the process and consult with the Traditional Owners (Ngadjuri Nation Aboriginal Corporation). The Proponent should be involved in the consultation as well.	
	Object can be avoided during works.	Work can continue at location with measures implemented to avoid damage to the site or objects.
	Object *cannot* be avoided during works.	Refer to the DPS-AAR Aboriginal Heritage Fact Sheet: Discovery of Aboriginal Sites and Objects.

3.3.3 Water Quality, Erosion and Sedimentation

Water Quality, Erosion and Sedimentation	
Objective	Protect water quality and impacts on water resources, minimise erosion and prevent sediment laden stormwater from leaving the site and protect water quality.
Legislation/Policy	*Environment Protection Act 1993* *Environment Protection Regulations 2023* *Environment Protection (Water Quality) Policy 2015* *Stormwater Pollution Prevention, Code of Practice for the Building and Construction Industry* *EPA Guideline for Concrete Batching (updated March 2016)* *Landscape South Australia Act 2019* *Landscape Board: Water Affecting Activity Control Policy* *Landscape Board: Land Management Control Policy* *Planning and Design Code (pursuant to the Planning, Development and Infrastructure Act 2016).*
Potential Impacts	Soil erosion can create scarring of the landscape, contaminate watercourses, lead to loss of vegetation and damage infrastructure. Impact on water resources, including activities affecting water quality, erosion and sedimentation. Contamination of surface water, including stormwater systems and public nuisance due to soil and materials on public roads
Mitigation	Minimise the loss of vegetation. Utilise existing driveways/access tracks on site for movement of vehicles. Establish new driveways/access tracks with appropriate all weather surface treatment for utilisation during construction. Grade to minimise earthworks and be consistent with the existing prevailing grade and landforms and to fall to existing drainage lines, to minimise changes to existing flow paths. Implement surface drainage measure to control runoff generated within the site. Existing flow paths and sheet flow conditions will be maintained to the extent practicable, with construction of diversion drains, channels and table drains to be minimised, to: • minimise soil erosion potential; and • minimise changes to flow regimes in receiving watercourses. Implement sediment controls, such as rock rip rap where appropriate to armour earthwork batters and site drainage as needed for scour protection and to achieve stable waterways where flow concentration cannot be avoided. Implement sediment fencing, hay bales filters, diversion swales and sediment basins, to minimise risk of sediment from earthworks exiting the site. Ensure sediment control measures are maintained regularly to ensure effective operation at all times. Stabilise cleared/constructed areas with suitable pasture grasses (or similar) at the earliest opportunity upon finalisation of the construction.

Water Quality, Erosion and Sedimentation	
	Intercept and redirect runoff on the site to protect exposed areas. Water will not be discharged from excavations unless water quality criteria are satisfied Prior to leaving site, any vehicles driving on the public road should have tyres, wheel arches and tailgates brushed down of dirt or mud. Prepare a Soil Erosion and Drainage Management Plan (SEDMP) prior to construction with recommendations incorporated into final CEMP. Onsite substations shall incorporate bunded oil-contaminated areas and treatment devices to remove oil/grease, hydrocarbons and sediment from runoff prior to discharge to downstream drainage system. During operation ensure hydrocarbons from onsite substation are not discharged to stormwater system by separating clean and oil-contaminated runoff. Bund the BESS fire suppression system to contain fire water to prevent lithium entering the environment. All wastewater generated by the project during operations will be collected and transported offsite for disposal at a licensed facility; including firewater and any hydrocarbons captured at the substation site, to avoid potential discharge to receiving watercourses.

3.3.4 Hazardous Substances

Hazardous Substances	
Objective	Avoid and/or minimise impacts associated with the release of hazardous substances or materials.
Legislation/Policy	*Environment Protection Act 1993* *Environment Protection Regulations 2023* *EPA Guidelines for Bunding and Spill Management (updated May 2016)* *EPA Guideline for Concrete Batching (updated March 2016)* *Australian Code for the Transport of Dangerous Goods by Road and Rail 7th Ed, AS1940 and AS3833.* *Safety Data Sheets (SDS) information specific to the substance being handled and stored.* *AS 1940-2017: The Storage and Handling of Flammable and Combustible Liquids.* *South Australian Dangerous Substances Act 1979.* *South Australian Dangerous Substances (General) Regulation 2017.*
Potential Impacts	Contamination of the environment with hazardous substances and/or materials.
Mitigation	All hazardous materials and hydrocarbons (HHS) will be appropriately transported and stored during construction in accordance with relevant guidelines and regulations, to avoid release or impact to the environment. These guidelines primarily include the Australian Code for the Transport of Dangerous Goods by Road and Rail 7th Ed, AS1940 and AS3833.

Hazardous Substances	
	Adequately supplied spill kits will be kept within the vicinity of the worksite where such hazardous materials are used and stored. Appropriate persons should be contacted as soon as practicable following detection of any release or non-conformance. HHS storage areas are clearly labelled, as they will be temporary. Site inductions will clearly inform contractors and visitors of HHS storage areas. The storage, usage and handling of HHS will be managed stored according to AS 1940 and AS 3833. Minor Storage quantities as per AS 1940 on open land will adhere to the following: • Liquid will be kept at least 1 metre from any boundary, workshop, dwelling or protected place, body of water, watercourse or environmentally sensitive area • The ground around the store will be kept clear of combustible vegetation or refuse for a distance of at least 3 metres • Any potential flow of spillage will be prevented from reaching a protected place, watercourse or property boundary by such means as the use of natural ground slope, or the provision of a diversion channel, kerb or bund. Safety Data Sheets (SDS) will be required for all hazardous chemicals kept on site. Procedures for mitigating specific impacts from materials will be governed by the appropriate SDS. A loss of containment of HHS will initially be controlled by bunding. Bunding and compound requirements are defined in section 5.8 of AS 1940. Bunding capacity will be the size of the largest storage vessel plus any fire water over a 20-minute period. Employees handling, transporting or utilising hazardous materials will be trained in emergency response procedures for spill events.

3.3.5 Noise

Noise	
Objective	Avoid and/or minimise noise and vibration emissions during construction works.
Legislation/Policy	*Environmental Protection Act 1993* *Environment Protection Regulations 2023* *Environment Protection (Commercial and Industrial Noise) Policy 2023* *EPA Wind Farms Environmental Noise Guidelines 2021.* *AS2436 – 1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites* *Planning and Design Code (pursuant to the Planning, Development and Infrastructure Act 2016).*

Noise	
Potential Impacts	Noise pollution leading to loss of amenity for adjoining residents/sensitive receivers. Vibration from movement of large machinery and compaction creating nuisance to adjoining residents
Mitigation	Identify the sensitive noise receptors and plan site establishment in a manner that maximises noise attenuation. Construction activities to be undertaken must be compliant with requirements of Environment Protection (Commercial and Industrial Noise) Policy 2023 The adoption of "all reasonable and practicable" noise mitigation measures , which may include the following: • Only operating construction plant and associated activities such as batching after 7am or before 7pm; • construction of temporary acoustic barriers for activity in close proximity to non associated stakeholder residences (often not applicable to a wind farm site due to the distances involved between the construction activity and the residences); • proprietary enclosures around machines; • exhaust silencers; • the fitting of broadband reversing signals to vehicles which do not leave the site; and • administrative measures such as inspections, scheduling and providing training to establish a noise minimisation culture for the works. Plan the site establishment and traffic routes to minimise reversing alarms on plant and equipment. Provide an induction for all project team members for noise and vibration management prior to the commencement of works. Ensure all equipment is well maintained and in good working order. Hours of work generally between 7am to 7pmMonday to Saturday. Having regard to the location of the subject site in a sparsely populated regional area, with most areas of the site well separated from sensitive receivers, and having regard to the scale of the proposed facility, construction activities may occur seven days a week and outside of 7am to 7pm. To ensure that the construction activities do not have adverse impacts on sensitive receivers, acoustic assessment of construction activities proposed will be undertaken to determine the specific activities and areas of the site where construction activities need to be limited to the hours of 7.00am to 7.00pm Monday to Saturday. If generators or such noisy machinery is utilised, locate this equipment as far as practical from the nearest residential premises not located on the site. Plant and equipment not in use to be shut down. Maintain complaints register and respond to any complaints received. The site should be planned to minimise the need for reversing of vehicles. All mechanical plant is to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices,

Noise	
	should be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair. Special assessment of vibration risks may be needed, such as for pile-driving or works structurally connected to sensitive premises. All equipment to be operated in appropriate and efficient manner. Simultaneous operations of noisy plant operating adjacent to sensitive receivers will be avoided. Where noise exceeds accepted levels and cannot be avoided, consideration will be given to applying respite periods for nearby residences. Any essential work during the night time period will be inaudible at dwellings. Inaudibility is defined as not exceeding 30dB(a) outside any dwelling. This may be exceeded in the event of an emergency situation, for example where turbine erection has started to continue works to ensure that the turbine is safe.

3.3.6 Traffic

Traffic	
Objective	Avoid and/or minimise impacts associated with construction traffic moving to and from the site on nearby sensitive receptors including residential dwellings, the townships of Kapunda, Eudunda, Dutton and Truro, and/or flora and fauna.
Legislation/Policy	*Road Traffic Act 1961* *Road Traffic (Road Rules - Ancillary and Miscellaneous Provisions) Regulations 1999*
Potential Impacts	Disturbance to nearby sensitive receptors including residential dwellings and/or wildlife along the construction haul route to and from site. Possible property damage through vibration impacts along over mass and over size route to and from construction site. Accelerated deterioration of local road network. Increased potential for wildlife vehicle strike on haul roads to and from site.
Mitigation	Utilise major local sealed roads for transportation of vehicles to and from the site. Minimise movement of construction vehicles to and from the site outside of the hours of 7am to 7pm. Traffic movements to occur in accordance with conditions laid out in the Traffic Impact Assessment prepared by MFY and subsequent Traffic Management Plan Concurrent with the finalisation of the CEMP, a Traffic Management Plan be prepared to finalise the route for Over Size and Over Mass vehicles, with a view of minimising impact on townships, nearby sensitive receivers and unsealed local roads. Traffic movements to occur in accordance with conditions laid out in the Traffic Management Plan.

3.3.7 Flora and Fauna

Flora and Fauna	
Objective	Avoid clearance of native vegetation and adverse impact on fauna
Legislation/Policy	*Native Vegetation Act 1991* *Native Vegetation Regulations 2017* *Environment Protection and Biodiversity Conservation Act 1999* *Landscape South Australia Act 2019* *National Parks and Wildlife Act 1972* *AS4970-2009 Protection of trees on development sites.* *Planning and Design Code (pursuant to the Planning, Development and Infrastructure Act 2016).*
Potential Impacts	Destruction of flora and fauna
Mitigation	Limit vegetation clearing to that required for construction and safety and where possible, retain established trees and native shrub under storeys. No impact (removal or disturbance) to native vegetation outside of approved clearance boundaries (as contained in the Native Vegetation Clearance Data Report). All vegetation clearing or disturbance is approved and undertaken in compliance with permits and/ or site management plans. Significant Environmental Benefit (SEB) undertaken in accordance with the approval of the Native Vegetation Council and associated management plans. Any payment into the native vegetation fund is done so in accordance with the relevant assessment methodology and associated standards. Provide an induction for all project team members for identification and management of protected flora and fauna prior to the commencement of works, particularly Pygmy-blue Tongue Lizards, Iron-grass (Lomandra spp) and Peppermint Box (Eucalyptus odorata). Accurately and clearly mark out the edge of clearing and trees/vegetation to be retained including hollow trees, significant species, riparian zones. Identify, retain and protect old or mature trees (alive or dead) which are in close proximity to the corridor by marking out/fencing. Clearly identify buffer areas around protected species, including existing wedge tailed eagle nests and areas of high quality vegetation Fence or mark buffer areas around protected species prior to the commencement of works. Controls in place to minimise disturbance to flora and fauna are maintained and effective. Disturbed/ exposed areas are stabilised and revegetated progressively. Cease work immediately if any previously unknown threatened flora species are encountered Vegetation clearing methods shall be conducted in a manner that encourages natural regeneration of rootstock, minimises land disturbance and maintains soil stability and line clearance. Avoid the removal of trees with hollows (alive or dead.) Where removal cannot be avoided, maintain the tree intact (as far as possible) and place it on the ground in adjoining vegetation.

Flora and Fauna	
	Vegetation clearing methods shall be conducted in a manner that encourages natural regeneration of rootstock, minimises land disturbance and maintains soil stability and line clearance. Manage declared pest plants and animals.

3.3.8 Weeds and Pest Management

Weeds & Pest Plants	
Objective	Avoid the introduction of new weeds (previously not known to occur in the area). Avoid the spread of declared and environmental weeds. Prevent an increase in pest animal species.
Legislation/Policy	*Native Vegetation Act 1991* *Native Vegetation Regulations 2017* *Environment Protection and Biodiversity Conservation Act 1999* *Landscape South Australia Act 2019* *National Parks and Wildlife Act 1972*
Potential Impacts	Potential introduction and/or spread of weeds and pest plants
Target	No increase in weed or pest animal occurrence within or adjacent the Project Area.
Mitigation	Any controlled weeds and pest plants within the existing pasture to be removed or destroyed prior to construction commencing. Should any controlled weeds or pest plants be identified, prevent their transmission by vehicles by cleaning vehicles before exiting the site. Any incoming or outgoing material will be checked for pest or weed species prior to being transported to and from the subject site. Locate equipment and materials storage areas in locations devoid of native vegetation. Ensure construction compounds are kept neat and tidy at all times. Ensure waste bins are emptied regularly, and covered where evidence of vermin exists. Replacement/rehabilitation of disturbed pasture immediately following construction works. Weed management practices and hygiene procedures will be undertaken in accordance with a Weed/Pathogen Management Plan to ensure that weed species are not introduced to the site or further spread within or off-site.

3.3.9 Fire Prevention and Protection

Fire Prevention and Protection	
Objective	To reduce the risk of fire and prevent damage in the event of a bushfire. To prevent or inhibit the outbreak of fire on the land; and • to prevent or inhibit the spread of fire through the land; and • to protect property on the land from fire; and • to minimise the threat to human life from a fire on the land.
Legislation/Policy	*Bushfire Emergency Services Act, 2005* *Planning and Design Code (pursuant to the Planning, Development and Infrastructure Act 2016).* *Victorian Country Fire Authority - Design Guidelines and Model Requirements - Renewable Energy Facilities 2024.*
Potential Impacts	Damage to equipment and danger to life.
Mitigation	Appropriate persons should be contacted as soon as practicable following detection of a fire, as detailed in the Emergency Management Plan prepared in coordination with the CFS and Incident Management Plan. Vegetation management during the Fire Danger Season (FDS): • generally maintain grass (ground cover) to no more than 10 centimetres in height and leaf litter no more than 10-millimetres-deep for a distance of ten (10) metres around buildings and viewing platforms; • a fuel reduced area of five (5.0) metres width should be maintained around the perimeter of electricity compounds and substation type facilities; • there should be no long grass or deep leaf litter in areas where plant and heavy equipment will be working; and • all plant and mobile equipment should carry at least one (1) 9 Litre Water Stored Pressure fire extinguisher with a minimum rating of 3A. Fire risk is minimised through site selection, equipment design and maintenance measures. Adequate access to and within the site will be designed to assist CFS in responding and managing fires on site. In the event of a fire, provision of water supply should be available and easily identifiable by emergency response personnel to avoid hindering fire suppression efforts. All water supply locations should be marked on a site plan and be available to the CFS. Emergency vehicle access to incorporate: • Access gates to be provided on boundary roads; • Construction of all internal roads to a minimum of 4 metres of 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. Fire breaks to be established and maintained as follows: • 10 metre fire break around control rooms, electricity compounds and substations;

Fire Prevention and Protection	
	• 10 metre fire break that extends from the edge of the BESS infrastructure and be non-combustible, constructed of concrete, mineral earth or non-combustible mulch such as crushed rock; • the area between the fire break and the perimeter fence and any vegetation screen will be maintained grass to a maximum, of 100 millimetre length during the fire danger period. The BESS, inverters, substation and operations and maintenance areas are all provided with non-combustible surfaces along with Asset Protection Zones around them that also assist with reducing fire spread. Vehicle movement within the site shall have a maximum speed of 40km/h. An Emergency Management Plan will be prepared concurrent with the final CEMP and will include: • a bushfire management plan that is established prior to commencement of construction; • exact locations of the dedicated water tank at site ; • Standard Operating Procedures (SOP's) established for management of fire risk; • the emergency contact number (readily available online and is always attended by trained staff); • key emergency contacts list and emergency contact protocols are available to the CFS, allowing for clear and timely communications to and from the CFS; • site mapping with locations of water supply, access information, routes, gates and locks; • implementing and testing bushfire response plans; • providing appropriate emergency response training and equipment to all staff and contractors; and • during the construction phase, the developer should provide periodical updates to the CFS as the project is progressively built. Communication and induction of local CFS prior to and during construction. Prior to commissioning the facility, operators should 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. Appropriate persons should be contacted as soon as practicable following detection of a fire, as detailed in the Incident Management Plan.

3.3.10 Incident Management

Incident Management	
Objective	To ensure that there is a procedure for managing and reporting incidents should they occur.
Legislation/Policy	*Work Health and Safety Regulations, 2012* *Work Health and Safety Act, 2012*
Potential Impacts	Reoccurrence of incidents if not managed effectively.
Mitigation	The general procedure to identify and address incidents if they occur is: • Identify incident or non-conformance, • Immediately rectify if safe to do so, • Inform appropriate persons, including internal and external stakeholders, • Complete incident register and determine appropriate corrective actions, • Implement corrective actions.

4 CEMP Implementation

4.1 Structure and Responsibilities

Whilst environmental management is the responsibility of everyone on the Project, various team members have specific roles in relation to environmental management. This section outlines the roles and responsibilities for key environmental personnel.

4.1.1 Responsibilities

Project Manager (PM)

The PM has the following particular responsibilities under this CEMP:

- Communicating clear expectation in relation to environmental behaviour and performance to the Project team.
- Ensuring that the requirements of this CEMP are fully implemented.
- Reviewing environmental management reports and plans prepared by the Environment Manager.
- Overall coordination and responsibility for dealing with issues and concerns & ensuring a record of all environment-related complaints is maintained.
- Ensuring that all Site Supervisors are familiar with the CEMP and their responsibilities contained within the plan.
- Delegating authority to act in the event of an emergency and to allocate the required resources.

Environment Manager

The Environment Manager has the following responsibilities under this CEMP:

- Assisting with the development, implementation and monitoring of the CEMP.
- Liaison with relevant agencies and authorities.
- Co-ordination of specialists as required.
- Arranging necessary training of personnel in respect of Project environmental matters.
- Reviewing as required construction plans and method statements to check that adequate environmental management measures are incorporated into the planning of particular construction processes.
- Establishing and maintaining this CEMP in accordance with the requirements of the contract and such that it complies with all applicable environmental regulations.
- Ensuring reports are prepared and submitted to relevant authorities and Project personnel as required.
- Reporting on environmental performance to identified objectives and targets.

Site Supervisors

The Site Supervisor have the following responsibilities under this CEMP:

- ensure through the continual daily surveillance of the Project works that subcontractors and all personnel onsite comply with the requirements of the CEMP, plans and environmental procedures
- have regard to weather conditions when programming daily works activities (e.g. vegetation removal, excavation works etc);
- report environmental incidents (actual/potential) to the Project Manager, and Environment Manager and assist in resolution;
- participate in any internal or external environmental inspections and audits if requested; and
- carry out maintenance on environmental controls as required.

Site Engineers

Site Engineers have the following responsibilities under this CEMP:

- preparation of work type/area specific procedures, Safe Work Method Statements, Vegetation Impact Permits and other relevant documentation in close liaison with the Environment Manager;
- ensuring that Supervisors and sub-contractors are aware of the environmental procedures and the need to effectively implement the procedures;

- supervision of workforce and sub-contractors with respect to environmental compliance;
- monitoring and maintaining the works in conformance with the environmental procedures; and
- managing environmental incidents.

Other personnel including Sub-consultants and Subcontractors

Other personnel including sub-consultants and subcontractors have the following responsibilities under this CEMP:

- compliance with site induction requirements for all aspects of environmental management;
- compliance to the CEMP and all plans and procedures as they apply to their operations on the site;
- reporting all environmental incidents to the Supervisor or Site/Project Engineer immediately;
- following instructions issued by the Project team and supervisory personnel as they relate to environmental management and incidents.

4.2 Training, Awareness and Competence

Four (4) main forms of training will be provided on site:

- site induction, including roles and responsibilities sheets - introduction to the Project and assigned tasks regarding the CEMP;
- environmental awareness training – environmental awareness training will be tailored to the actual site and job description to allow personnel to complete assigned tasks regarding the CEMP;
- bushfire management training; and
- "toolbox" training.

Records of induction and training will be kept on a database including the topic of the training carried out, dates, names and trainer details. Inductees will be required to sign-off that they have been informed of the environmental issues and that they understand their responsibilities. The Site Environmental Manager will review the program and monitor its implementation.

4.2.1 Environmental Inductions

Adequate training and instruction will be provided to all personnel to allow them to perform their duties whilst ensuring the environmental impacts associated with the Project are minimal.

The Project Manager will ensure all Twin Creek Wind Farm (TCWF) and subcontractor personnel attend an induction, prior to commencement of work.

There will be two (2) levels of induction. Level one will be for visitors, irregular delivery drivers and others who will remain in the company of a fully inducted TCWF employee. The level two induction will be required for all permanent employees and subcontractors working on the site. The level two induction will include but will not be limited to the following topics:

- the CEMP (purpose, objectives and key issues);
- legal requirements including applicable legislation, conditions of environmental licences, permits and approvals, due diligence, general environmental duty, and duty to notify and potential consequences of infringements;
- TCWF environment policies;
- environmental management strategies and controls for areas such as erosion and sediment control, water discharge, waterway protection, clearing, fauna rescue, noise, refuelling and waste disposal;
- bushfire management plan;
- Cultural heritage management plan (CHMP);
- promoting awareness of significant environmental issues and personnel responsibilities (such as environmentally sensitive areas, limits of construction, identification of exclusion zones, cultural heritage issues etc);
- reporting of environmental incidents - which will include the type of events to be reported, how an event is reported and to whom the event is reported;
- emergency procedures - which will cover the procedure for an emergency and for evacuation of the site in the event of a catastrophic situation arising;
- contingency plans - e.g. for 'hydrocarbon/chemical spills' and the 'discovery of previously unidentified aboriginal heritage sites'. Questions pertaining to environment and heritage will be included in the site induction questionnaire to validate employees' understanding of the induction content.

4.2.2 Environmental Awareness Training

Staff and sub-contractors working on site will be provided with environmental training to achieve a level of awareness and competence appropriate to their assigned activities.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. This training will generally be prepared and delivered by the Site Environmental Manager. TCWF environmental staff and Project environmental specialists may also deliver specific environmental training.

4.2.3 Toolbox Training

A set of toolbox topics will be devised as training a tool for presentation at toolbox meetings to raise awareness of environmental aspects and issues associated with construction projects. Each topic consists of a five-minute information poster / presentation, and discussion session.

Toolbox training will help to ensure that relevant information is communicated to the workforce and that feedback can be provided on issues of interest or concern. Toolbox training will generally be prepared and delivered by the Site Environmental and Quality Manager, Project Engineers or Site Supervisor.

Topics covered include erosion and sediment control, dust, waste management, hydrocarbons, flora/fauna, and any other Project-specific issues such as the efficient use of plant and materials; noise and vibration minimisation; protecting waterways and riparian zones; wastewater control; work methods; management of contaminated soil; and general site issues.

4.2.4 Hours of Work

The following hours of work will seek to comply with those in the South Australian EPA Guidelines for Noise from Industry in Regional SA:

- Monday to Saturday 7:00am to 7:00pm
- Sunday – nil.

However, having regard to the location of the subject site in a sparsely populated regional area, with most areas of the site well separated from sensitive receivers, and having regard to the scale of the proposed facility, construction activities may occur seven days a week outside of 7am to 7pm. To ensure that the construction activities do not have adverse impacts on sensitive receivers, acoustic assessment of construction activities proposed will be undertaken to determine the specific activities and areas of the site where construction activities need to be limited to the hours of 7.00am to 7.00pm Monday to Saturday.

5 Checking and Corrective Action

A systematic monitoring and measuring process involving inspection and testing fulfils a threefold purpose to:

- ensure conformity to contractual requirements;
- ensure environmental performance complies with legislative requirements and in accordance with Project requirements; and
- provide an ongoing risk management process and early warnings of hazards.

Environmental monitoring and reporting process on this Project shall include:

- monitoring;
- inspections;
- auditing; and
- reporting.

Project team personnel including the Environment Manager, Site/Project Engineers,and Site Supervisors/are responsible for undertaking daily monitoring of the Project as well as being involved in formal environmental inspections.

The Environment Manager shall review all sustainability and environmental monitoring results, non-compliance and corrective and preventative actions as they are produced /occur.

Any results outside of relevant limits/targets shall be reported immediately to the Project Manager, who shall take appropriate action and advise appropriate personnel and authorities.

5.1 Internal Inspections/Monitoring

Environmental monitoring programs for water quality, noise, site discharges, as well as matters relating to flora and fauna and heritage, are addressed in the sub plans. Additional monitoring may also be required under specific work packages. Each environmental monitoring program includes details on the proposed timing, frequency, locations and responsibility of monitoring and actioning systems so that environmental monitoring information is used to resolve identified problems effectively and quickly. This includes measures for prompt use of monitoring information by Project staff and identification of Project environmental exceedance levels and proposed corrective action and timing to address exceedances.

Further, an Environmental Inspection Checklist will be completed by the Environmental Manager for documenting weekly site inspections for the purpose of verifying compliance with the CEMP, licences, permits and approvals.

Where inspection by the Site Environmental Manager or delegate determines that measures are not effective the Project will implement corrective and preventative measures.

5.2 Control of Measuring and Testing Equipment

All inspection, measuring and testing equipment (including newly acquired test equipment) used for inspection and acceptance purposes shall be controlled, calibrated and maintained, as per the relevant manufacturer's specifications. This also includes such equipment used by sub-contractors.

Measuring equipment for inspection and product conformance purposes shall be calibrated at prescribed intervals against certified equipment having a known relationship to nationally recognised standards. Any equipment identified as having doubtful accuracy or precision shall be removed from use and calibrated. Where any inspection, measuring and test equipment is found to be out of calibration, the validity of the previous inspection results shall be assessed and documented.

5.3 Reporting

The Environment Manager is responsible for reporting on the environmental performance of the Project. All formal reports shall be approved by the Project Manager prior to distribution.

5.3.1 Weekly Environmental Reports

The Environment Manager shall record environmental inspections on the Environmental Inspection Checklist and report any environmental observations, trends, observations, improvements, requests, corrections and upcoming events and activities verbally through the weekly Construction Meeting.

5.3.2 Monthly Environmental Reports

A written environment report each month shall be compiled by the Environment Manager and included in the Project monthly reporting containing information such as:

- a status of environmental activities such as monitoring and surveillance of controls, inspections, testing and incidents associated with the work during the preceding month;
- environmental good news stories;
- complaints, infringements and penalties incurred;
- all environmental incidents;
- status of environment implementation and document preparation/approval;
- status of all non-conformances, detailing preventative actions taken to prevent reoccurrence of those incidents/non-conformances; and
- the results of environment reviews and audits (internal and external) undertaken during the preceding month.

5.4 Auditing

5.4.1 Internal Audits and Inspections

Internal audits will be completed within the first three months of start-up and thereafter every six (6) months (as a minimum). An audit report register shall be maintained. Internal environmental audits shall include:

- internal audits to ensure implementation of the Project environmental processes; and
- regular surveillance during the construction phase and ensure independent three-monthly audits.

Results of the audit shall be documented and brought to the attention of the personnel having responsibility for the area audited and reported to the Project Manager within 5 working days of finalisation of the audit. For any observations or non-compliances found, corrective actions shall be recorded in the Environmental Inspection Checklist and addressed in a timely manner.

5.4.2 External Audits and Inspections

External (independent) audits will be undertaken three months from the commencement of construction and then at twelve monthly intervals. All external audits will be undertaken in accordance with ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing.

Results from external audits are to be reviewed by the Project Manager and any necessary corrective actions assigned to ensure appropriate and timely closeout.

5.5 Incident and Non-Conformity

An incident can be defined as an unwanted event which has an adverse effect on the environment. A non-conformance can be defined as a failure to undertake a task in the required manner. This may not lead to an incident, and if this is the case may be considered a near miss.

The manner in which tasks are required be completed is detailed in various Project plans, legislation, Project quality systems, etc.

The incident register must be completed by parties involved in the incident or non-conformance within 24 hours, once immediate required mitigation actions are completed.

This process must include an investigation or review of the incident to identify any further appropriate corrective actions required. Completed incident report forms must be signed by those documenting the report as well as by the Construction or Operations Manager.

5.6 Implement Corrective Actions

Corrective actions identified in the incident investigation and review should be implemented as soon as practicable, undertaken or overseen by the responsible party as listed in the Incident Register.

5.7 Complaints

Complaints from any source (e.g. public, government authorities) relating to the environment will be registered using a Complaint Report and the complaint investigated by the Environmental Manager in consultation with the Project Manager and actions will be taken to enable satisfactory closeout.

An environmental complaints register will be established and maintained by the Environmental Manager who will receive, log, track and respond to complaints within 24 hours. In the case of an emergency, potential pollution/environmental incident or non-compliance, the complaint will be responded to immediately.

The following details will be recorded in the register:

- date and time;
- type of communication (telephone, letter, meeting etc);
- name, address, contact number of complainant;
- nature of complaint;
- details;
- action taken in response including who the complaint was referred to (if not
- resolved immediately); and
- details of any monitoring undertaken to confirm that the complaint has been satisfactorily resolved.

5.8 Emergency Preparedness and Response

Appropriate persons should be contacted as soon as practicable following detection of an incident. This includes but is not limited to those listed in the below table.

Table 2 – Emergency Contact Details

Contact	Phone Number
Twin Creek Wind Farm Supervisor	To be determined
Police	131 444 / 000
CFS	000
Ambulance	000
Light Regional Council	08 8525 3200
Regional Council of Goyder	08 8892 0100
Mid Murray Council	08 8569 0100
Environmental Protection Agency	08 8204 2004
Wildlife SA	TBC

5.9 Document of Records

Project records, including pertinent subcontractor Project records, shall be maintained to provide evidence of the effective operation of the environmental management system. Such records shall include, but are not limited to:

- correspondence to/from interested parties;
- permits, licences and approvals;
- induction register and induction training records;

- environmental incidents, non-conformances and complaints;
- inspection reports, checklists, diary entries;
- monitoring results;
- cultural heritage activities;
- waste measurement and tracking records;
- internal and external inspections and audits; and
- any other record identified within the CEMP.

6 Review and Continuous Improvement

This CEMP shall be reviewed each six (6) months or in response to a major environmental incident by the Environment Manager with assistance from the Project team. It shall be updated accordingly, and any changes to it shall be communicated to the Project team and maintained in a document control register. If any of these changes are to impact the construction staff, they shall be informed of the relevant changes during a Toolbox Talk.