

EIS Volume 3 Appendix Q

Draft Operations Environmental Management Plan



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1. Introduction

This Draft Operations Environmental Management Plan (OEMP) has been prepared to accompany the Environment Impact Statement (EIS) for the South Australian (SA) portion of Project EnergyConnect (the Project), a proposed high voltage electricity transmission connector between Robertstown in SA and Wagga Wagga in New South Wales (NSW) with an added connection from Buronga in NSW to Red Cliffs in north-west Victoria. The South Australian section of Project EnergyConnect is referred to as 'the Project' for the purposes of the South Australian assessments and approvals processes.

ElectraNet is the owner and operator of the transmission network in SA, and responsible party for delivering and operating the SA portion of the Project.

1.1. Purpose of the Draft OEMP

The purpose of the Draft OEMP is to describe the overarching principals to be implemented to avoid and / or minimise any impacts to environmental values during operation of the Project.

The Draft OEMP is structured around the environmental aspects identified for the Project as detailed throughout the EIS. It describes potential mitigation, controls and management strategies that should be implemented during Project operation to minimise and or avoid impacts to environmental values.

Final detailed OEMP documentation will be developed by ElectraNet prior to commissioning of the Project. This final documentation will be aligned with ElectraNet's existing systems, plans and procedures as required to operate in the National Electricity Market and would consist of a number of documents and plans that will capture the commitments contained in this Draft OEMP and be fully integrated within ElectraNet's Health Safety and Environment Management System.

2. Project Description

2.1. Key Project Details

The proposed Project involves the construction and operation of the South Australian portion (Robertstown to SA / NSW border) of Project EnergyConnect (Figure 1) which comprises:

- approximately 10 km of 275 kV transmission line supported by steel towers from the existing Robertstown substation to a proposed new substation located towards the western extent of the transmission line at Bunday, near Robertstown
- approximately 195 km of 330 kV transmission line supported by steel towers from the new Bunday substation to the SA / NSW border
- associated telecommunications infrastructure
- associated access tracks
- associated temporary facilities (i.e. temporary construction compounds, site offices, laydown areas and mobile construction camps).

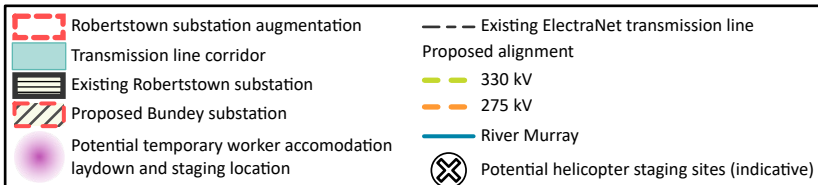
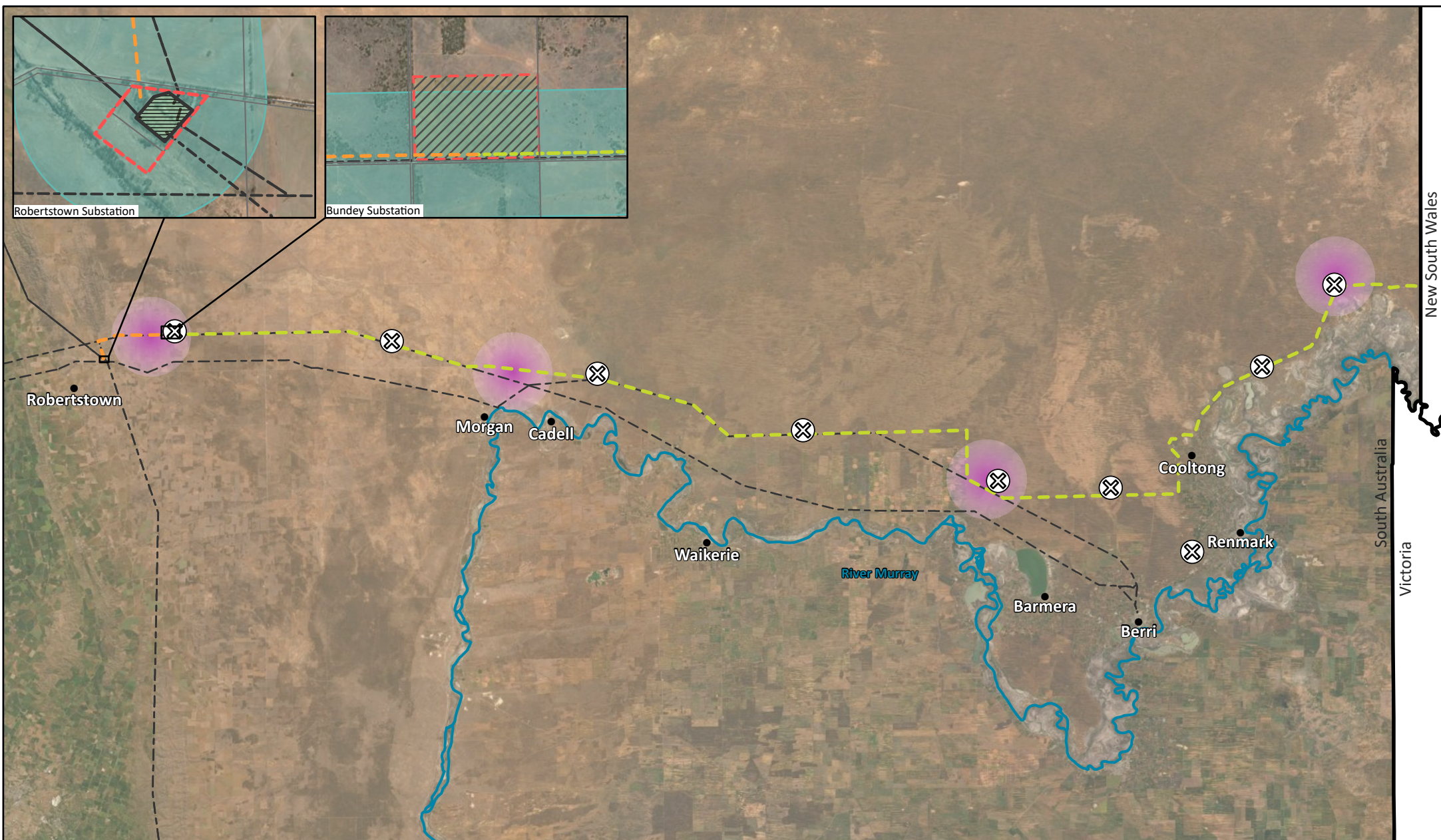
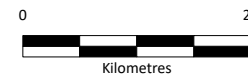


Figure 1
Project location and components



ElectraNet

energy connect

JBS&G

2.2. Project Location

The Project will traverse approximately 205 km between Robertstown in the Mid North and the SA NSW border, via the Riverland area. The proposed alignment is shown in Figure 1. The final alignment and easement of the transmission line will be confirmed during detailed design.

The environment of the transmission line is described in the EIS. The key aspects of the environment relevant to this Draft OEMP are:

- Climate, topography, soils, surface water and ground water (refer Chapter 10 Physical Environment)
- Flora, fauna and weed and pest management (refer Chapter 11 Flora and Fauna)
- Air quality and greenhouse gas emissions (refer Chapter 14 Air Quality)
- Noise and vibration (refer Chapter 15 Noise and Vibration)
- Traffic (refer Chapter 16 Traffic and Transport)
- Land use and tenure (refer Chapter 9 Land Use and Tenure)
- Visual amenity (refer Chapter 13 Visual Amenity)
- Social-economic environment (refer Chapter 17 Socio-Economic Environment).

2.3. Key Operation Activities and Timing

The maintenance program would typically involve one detailed ground inspection every three years for signs of unusual wear, structural integrity and corrosion or damage.

Key activities undertaken during detailed ground inspections consist of:

- access track maintenance predominantly for light 4WD vehicle movements
- vegetation trimming to ensure that mandatory minimum clearance between vegetation and transmission lines are maintained in accordance with the *Electricity (Principles of Vegetation Clearance) Regulations 2010*.
- bird nest removal (where required) in accordance with permits obtained under the *National Parks and Wildlife Act 1972 (SA)*.

Helicopter-based inspections and maintenance would be undertaken annually. Such inspections may be undertaken via ground if weather conditions or work required are not suitable for aerial services.

It is planned to design the line to span across mature vegetation with minimal clearance required where feasible, however clearance or lopping of trees under the conductors may be required in some areas.

Transmission lines within a designated bushfire or high bushfire rated area are inspected and cleared where required every year, while lines in all other areas are inspected and cleared every three years.

Insulators would typically be replaced every 25 years.

Although minimal intervention is anticipated, line or tower faults / failures can result in the need to reintroduce heavy equipment, work crews, excavation, and materials transport to affected areas.

Routine operation activities at the Bunday substation would include:

- oil sampling and testing, including stormwater / oil water separators
- testing of major plant, control and protection systems
- visual inspections.

3. Implementation

3.1. Roles and Responsibilities

The roles and responsibilities of key personnel during the operation of the Project are outlined below in Table 1. Throughout detailed planning and operation phases, names will be allocated to the roles prescribed in the OEMP.

Table 1: Roles and responsibilities during Project operation

Role	Responsibility
Network Operations	- Power system security - Switching and Asset Access - Planned outage management - Emergency response
Asset Engineering and Maintenance Delivery	- Lines and substation maintenance and contract management - Refurbishment planning and implementation - Pre-bushfire season inspections - Vegetation management
Safety and Sustainability Business Partners	- Provide strategy, general and technical health, safety and environmental advice to the ElectraNet teams - Liaise with all appropriate stakeholders on HPI incident investigations - Liaise and provide procedural advice to contractors - Attend and participate in project or works leadership meetings as and if required - Complete contractor performance quarterly reporting, liaising with the Team Leader - Field.
ElectraNet Land Services - Landholder Relations Advisor	- Manage landowner relationships, property access notifications and special requirements - Maintain ElectraNet Connect land access database - Escalate any issues not resolved on site to the ElectraNet Project/Programme Managers and the Land Manager.
ElectraNet Land Services – Environment Advisor and Cultural Heritage Advisor	- Assessment and / or advice on vegetation clearance in accordance with Native Vegetation Act and Electricity (Principles of Vegetation Clearance) Regulations - Technical advice on environmental management, protection, incident management and reporting - Assessment and / or advice on cultural heritage management
ElectraNet Team Leader Field	- Liaise with all appropriate stakeholders on HSE systems and HSE pre-qualification audits - Address and resolve with any escalated items as notified by the HSE Advisors with the ElectraNet Project/Programme Managers - Review and approve HS & E Advisor project and works reports - Hold to account the contractor's adherence to the requirements of the ElectraNet Safety and Sustainability Standards - Manage all non HPI contractor incidents and near misses in conjunction with the ElectraNet teams
Health Safety and Environmental Advisors	- Review contractor health safety and environmental documentation in accordance with business procedures and provide written feedback to the contractor via the ElectraNet Project / Programme Manager - Hold to account contractor's adherence to the requirements of the ElectraNet Safety and Sustainability Standards - Attend site work fronts, independently observe activities and conduct HSE systems audits and inspections - Escalate any issues not resolved on site to the ElectraNet Project / Programme Managers and ElectraNet Team Leader – Field.

Role	Responsibility
	- Participate in ICAM investigations alongside the Contractor's representatives as required - Provide formal reports to the ElectraNet Team Leader- Field for ElectraNet promulgation - Attend and participate in project and works team meetings as and if required.

3.2. Training and Induction

3.2.1. Training and competencies

ElectraNet has an established Transmission Asset Access Manual (TAAM) with associated training program for all staff and contractors seeking to work on or access any ElectraNet asset, including property and easements. ElectraNet and its contractors will implement, monitor and review this process that controls and governs all aspects of the management of training and competency in accordance with all laws and good industry practice.

The process applies to all contractors and sub-contractors engaged to work on the Project are qualified, trained, certified, adequately experienced and appropriately licenced to undertake all tasks for their individual roles. The process will address as a minimum:

- the operation of vehicles and mobile plant
- the operation of equipment and plant
- all activities that require Australian High-Risk Licences
- all specialist certification (e.g. working at heights, rescue activities, work in confined spaces or any other applicable activity)
- land access and cultural heritage requirements.

Job-specific training relevant to roles will also be undertaken and records maintained of induction and attendees.

3.2.2. Site specific inductions

ElectraNet and its contractors will develop, implement, monitor and review a documented process that controls and governs all aspects of the management of inductions in accordance with all Laws and Good Industry Practice.

The process will address, as a minimum, the following requirements:

- a detailed site-specific induction program
- approval requirements for the induction content
- provisions for ongoing review to ensure effectiveness
- a register of inductees including name, date, company and role.

3.3. Emergency Preparedness and Response

ElectraNet's Emergency Response Procedure (ERP) provides the overarching framework for emergency response during operation.

Documentation specific to the Project operational activities will be prepared prior to commencement of operation.

As part of Project operations, emergency response management documentation will detail as a minimum:

- appropriate procedures to follow should an emergency occur during Project operation, such as fire, lightning strikes, electromagnetic interference, chemical spill, explosion, flooding, wildlife injury, damage to existing infrastructure and personnel injury.
- incident and corrective action records; which detail the procedures to record, document and follow up on environmental incidents and key personnel that should be involved.
- bushfire and fire prevention, including the development and implementation of a fire hazard management plan in consultation with the Country Fire Service (CFS) and other relevant stakeholders.

3.4. Monitoring

Environmental monitoring results (e.g. weeds and pests and other key audit / inspection outcomes) will be reported on a regular (to be determined by the contractor) basis to ElectraNet

. For any monitoring / sampling activity, the following information will be kept as a minimum:

- date(s) and times of monitoring / samples to be collected
- the point location where monitoring / samples were taken
- the name of the person conducting monitoring /sampling.

3.5. Reporting and Compliance

Contractors will report all Safety and Sustainability Events (including any notice received from a government agency) to ElectraNet (or their representative) within one hour of the incident occurring, or if not reasonably practicable, as soon as possible. The relevant notification entry will be made into the ElectraNet Incident Management System (IMS) within 24 hours.

Contractors or ElectraNet auditors will also report on (frequency to be determined and in accordance with regulatory requirements):

- results of inspections and formal environmental audits
- any monitoring undertaken in accordance with licences, approvals or consent
- report of compliance with the OEMP
- summary of complaints received during the Project operation.

Non-compliances will be reported to ElectraNet (or their representative) and appropriate corrective actions undertaken in line with ElectraNet's HSEMS.

ElectraNet will report to relevant government agencies as required by approval conditions and legislation.

3.6. Review of the OEMP

Operational environmental management documentation will be revised and updated periodically to ensure that it reflects current best practice environmental management.

Review will include a process of adaptive management, whereby the effectiveness and performance of current controls and mitigation measures are assessed and improved to ensure robust environmental performance. The review process will examine at a minimum:

- the implemented mitigation and environmental management controls

- incident reporting and procedures for preventative actions
- complaints handling procedures
- emergency response procedures for environmental incidents.

3.7. ElectraNet Health, Safety and Environment Management System

Operations will be undertaken in accordance with ElectraNet's Health, Safety and Environment Management System.

ElectraNet's HSE policies and principles are implemented through the Health, Safety and Environment Management System (HSEMS) which is described in the HSE Management System Framework. The framework document defines the structure for management of HSE across ElectraNet, and the elements and expectations by which the health and safety of workers, the public, and the environment in which they work and live, are protected during conduct of ElectraNet operations.

ElectraNet's HSEMS framework identifies ElectraNet's Safety and Sustainability Standards (S&S Standards) for contractors undertaking construction works and providing asset maintenance services as part of a sustainable procurement approach. The S&S Standards are an integral part of the ElectraNet HSEMS and outline the minimum safety and sustainability requirements for ElectraNet contractors and subcontractors. The S&S Standards set out the actions which must be undertaken by ElectraNet (e.g. provision of information on land access agreements, site contamination, significant flora and fauna) and the Contractor (e.g. undertaking site inspections, risk assessments) in the preparation of the OEMP.

Other actions covering requirements for matters such as event notification, reporting and training and site induction, inspections and audit schedules, vegetation protection and rehabilitation and cultural heritage site management are also set out in the S&S Standards.

4. Environmental Management

This section outlines environmental objectives and mitigation and management controls for Project operational activities. These have been developed based on the impacts and management measures identified and assessed in the EIS.

Management strategies for potential identified impacts can be found in the following sections:

- Soil erosion and drainage management (Section 4.1)
- Flora and fauna (Section 4.2)
- Weed and pest management (Section 4.3)
- Air quality (Section 4.4)
- Noise and vibration (Section 4.5)
- Local community (Section 4.6)

Key legislative considerations and measures to be implemented in order to avoid and / or minimise environmental impacts are highlighted for each matter. The mitigation and management controls represent the minimum requirements that should be adopted.

In addition, specific management plans have been prepared for the following matters and are appended as drafts in the EIS:

- Cultural heritage management (EIS Appendix R)
- Fire hazard management (EIS Appendix S)
- Waste management and minimisation (EIS Appendix T).

The fire hazard management plan includes a risk management plan with consideration of minimising maintenance works during fire danger season. This will also be reflected in associated operational management system documentation.

Environmental management of construction activities is addressed in the Draft Construction Environmental Management Plan at Appendix P of the EIS.

4.1. Soil Erosion and Drainage Management

Mitigation and control measures to address potential soil erosion and drainage management are outlined below in Table 2.

Table 2: Soil disturbance and drainage management

Aspect	Detail
Environmental objectives	Minimise soil disturbance and erosion
Legislation and other guidance	• <i>Landscape South Australia Act 2019</i> • <i>Environment Protection Act 1993</i> • <i>Environment Protection (Water Quality) Policy 2015 (Water Quality EPP)</i> • <i>The Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ (2000) and revision ANZG (2018))</i> • <i>The National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (NEPM)</i> • Australian Standard AS 1940 The storage and handling of flammable combustible liquids • SA EPA Guidelines including: - Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry (1999) - EPA 080/16 Bunding and spill management - EPA 517/16 Stormwater management for wash bays - EPA 1093/18 Environmental management of dewatering during construction activities
Potential environmental impacts	• Soil erosion or sedimentation of surface water • Alteration of drainage patterns • Soil or water contamination
Mitigation and control measures	• Restrict the area and duration of any soil disturbance to the minimum necessary. • If significant earthworks are required during operations, implement the measures outlined in the Construction Environmental Management Plan. • Monitor the easement and access tracks for evidence of erosion or sedimentation and undertake remediation where required. • Install or maintain sediment and erosion controls (e.g. berms, drainage controls, sediment fencing) where necessary. • Undertake monitoring to ensure that sediment and erosion control measures are effective and undertake remediation if required. • Limit vehicle movements to defined tracks and work areas • Maintain equipment to prevent spills or leaks. • Implement spill and emergency response procedures including containment, reporting and clean up. • Undertake hydrocarbon and chemical storage in accordance with Australian Standards and EPA bunding guidelines. • Undertake infield refuelling (if required) in designated areas with appropriate bunding and spill kits in place. • Avoid refuelling activities in close proximity to surface water features.

4.2. Flora and Fauna

Mitigation and management controls for potential environmental impacts from operation on flora and fauna are described in Table 3.

Table 3: Flora and fauna mitigation and management controls

Element	Detail
Environmental objectives	Minimise adverse impacts to flora
Legislation and other guidance	• <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> • <i>Electricity Act 1996</i> • <i>Electricity Principles of Vegetation Clearance) Regulations 2010</i> • <i>National Parks and Wildlife Act 1972</i> • <i>Native Vegetation Act 1991</i> • <i>Native Vegetation Regulations 2017</i> • <i>Landscape South Australia Act 2019</i>
Potential environmental impacts	• Impacts to fauna and flora habitat and threatened ecological species from vegetation clearance. • Indirect impacts to fauna (e.g. habitat degradation, edge effects, loss of diversity, soil, dust, water quality, erosion,). • Disturbance to fauna (e.g. lighting, noise, vehicle collisions, entrapment, bird strike). • Increased predation and introduction or spread of weeds • Uncontrolled fire.
Mitigation and control measures	• Maintain the line to span across mature vegetation (with minimal clearance required) where feasible. • Restrict vehicle movements to defined tracks and work areas. • Restrict unauthorized public access to access tracks • Restrict vegetation disturbance, clearance or trimming to approved areas (as per NVC approval). • Install locked gates where required and appropriate signage once construction is completed. • Implement and maintain fire tracks and fire breaks in accordance with fire management plan. • Undertake weed maintenance to ensure fuel load at the base of the towers is minimised. • Ensure that all equipment is fitted with appropriate firefighting equipment. • Maintain awareness of local seasonal restrictions, particularly regarding hot works during fire ban season. • Restrict high risk fire activities during fire ban periods. • Maintain clearance distances between vegetation and transmission lines in accordance with the Electricity (Principles of Vegetation Clearance) Regulations.

4.3. Weed and Pest Management

Mitigation and management controls for potential environmental impacts from operation related to weeds and pests are described in Table 4.

Table 4: Weed and pest mitigation and management controls

Element	Detail
Environmental objectives	Prevent the introduction, spread and prevalence of weed and pest species
Legislation and other guidance	• <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> • <i>Native Vegetation Act 1991</i>

Element	Detail
	• <i>Native Vegetation Regulations 2017</i> • <i>Landscape South Australia Act 2019</i>
Potential environmental impacts	• Spread of existing weeds through Project operation activities or increased public access • Establishment of new weeds • Increase in feral animals or increase in predation.
Mitigation and control measures	• Maintain property / landholder database with details of special access requirements including weeds, biosecurity, washdown etc. • Restrict vehicle movements to defined tracks and work areas. • Restrict unauthorised public access to easement where possible. • Install locked gates on easement where required and appropriate signage once construction is completed. • Control weeds within ElectraNet owned land in accordance with the Landscape South Australia Act. • Conduct post construction weed survey and control program (if necessary) with particular focus on any weed infestations identified in pre-construction surveys. • Appropriately dispose of any declared weeds cleared as part of the Project (with any necessary notification/permits under the Landscape South Australia Act in place for moving/relocating vegetation containing declared plants). • Undertake pest animal control on ElectraNet owned land if ground disturbance encourages pest animal (e.g. rabbit) activity. • Maintain easement fire tracks and fire breaks, if required, in accordance with fire management plan. • Undertake weed maintenance to ensure fuel load at the base of the towers is minimised. • Implement weed hygiene procedures such as vehicle wash-downs and inspections where appropriate. • Actively monitor post-construction and rehabilitated areas for weed species (particularly after periods of high rainfall) and undertake adaptive weed management, monitoring and control where required if weeds are detected. • Provide awareness training and site-specific training (if applicable) for all workers on site on weed and pest identification and key weed threats (e.g. Buffel Grass). • Undertake targeted management of key threat species (e.g. weeds of national significance or declared weeds including the declared / alert weed Buffel Grass) in consultation with Landscape Management Board staff where required. • Implement fruit fly management protocols in accordance with PIRSA requirements.

4.4. Air Quality

Mitigation and management controls for potential environmental impacts from dust emissions impacting air quality are described in Table 5.

Table 5: Air quality mitigation and management controls

Aspect	Detail
Environmental objectives	Minimise impacts to air quality during operation
Legislation and other guidance	• <i>Environment Protection Act 1993</i> • <i>Environment Protection (Air Quality) Policy 2016</i> • <i>National Environment Protection (Ambient Air Quality) Measure (Ambient Air Quality NEPM) (2016) (Cth)</i>
Potential environmental impacts	• Increased dust generation impacting sensitive receptors
Mitigation and control measures	• Use emissions control equipment on fixed and mobile plant and equipment. • Implement maximum speed limits on access roads and work areas.

Aspect	Detail
	- Implement dust suppression measures if required (e.g. maintenance operations with high traffic volumes near receptors). - Monitor rehabilitation of disturbed areas to ensure success and remediate where required. - Turn off vehicles/plant and machinery when not in use. - Register any complaints in ElectraNet's IMS and implement any necessary corrective action program. - Undertake and ongoing community / landholder engagement process.

4.5. Noise and Vibration

Mitigation and management controls for potential environmental impacts from dust emissions impacting air quality are described in Table 6.

Table 6 Noise and vibration mitigation and management controls

Aspect	Detail
Environmental objectives	Minimise noise and vibration during construction
Legislation and other guidance	<i>Environment Protection Act 1993</i> <i>Environment Protection (Noise) Policy 2007</i>
Potential environmental impacts	- Increase in noise and vibration causing nuisance to residences - Increase in noise and vibration impacting fauna
Mitigation and control measures	- Restrict maintenance activities to standard working hours where feasible. - Maintain minimum distance of the helicopters from the ground surface to at least 50 m, where practical. - Register any complaints in ElectraNet's IMS and implement any necessary corrective action program. - Community consultation process, particularly with landholders.

4.6. Local Community

Table 11 describes the mitigation and management controls that will be implemented to minimise impacts to the local community that are not already covered in Sections 4.1 to 4.5.

Table 7: Local community impacts mitigation and management controls

Element	Detail
Environmental objectives	Minimise impacts from operation activities of the Project to landowners, local community and third-party users.
Legislation and other guidance	<i>Electricity Act 1996</i> <i>Environment Protection Act 1993</i> <i>Native Vegetation Act 1991</i> <i>Landscape South Australia Act 2019</i>
Potential environmental impacts	- Disruption to usual landholder operations - Loss of access or damage to property access tracks - Injury to local community / third-party land users.
Mitigation and control measures	- Undertake ongoing consultation with directly affected landowners. - Undertake measures to mitigate deterioration of access tracks (for example, but not limited to, identifying alternative routes, upgrading access tracks prior to Project use, repairing access tracks during and after Project use, managing driver behaviour of Project contractors).

Element	Detail
	• ElectraNet employees, contractors and visitors at ElectraNet workplaces and any other locations where activities are undertaken by ElectraNet representatives or on behalf of ElectraNet are subject to the ElectraNet Health, Safety, Environment & Sustainability Policy. An aim of this internal policy is to 'protect and respect the natural and cultural environment in the communities in which [ElectraNet operates]' (ElectraNet 2019b). • Register any complaints in ElectraNet's IMS. • Restrict unauthorised public access to access tracks. • Provide access to properties for emergency vehicles at all times. • Maintain access to properties or consult alternative arrangements with landholders.