

INTERNAL



# Construction Environmental Management Plan

## EnergyConnect (Victoria)

45860-HSE-PL-G-1001

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Revision History	
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Key Document Stakeholders
To be communicated with during reviews and revisions of this document

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## Abbreviations

Acronym	Definition
ACHRIS	Aboriginal Cultural Heritage Register and Information System
ANZECC	Australian and New Zealand Environment and Conservation Council
AS/NZ	Australian Standard / New Zealand Standard
CEMP	Construction Environmental Management Plan
CHMP	Cultural Heritage Management Plan
COPC	Chemicals of Potential Concern
CSEP	Community and Stakeholder Engagement Plan
EAO	Environmental Audit Overlay
EES	Environmental Effects Statement
EPA	Environment Protection Authority Victoria
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESCP	Erosion and Sediment Control Plan
ESO1	Environmental Significance Overlay
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
GIS	Geographical Information Systems
HO168	Heritage Overlay
HSSE	Health, Safety, Security and Environment
HSSE Manual	Health, Safety, Security and Environment Management Manual
IMS	Integrated Management System
LALC	Local Aboriginal Land Council
LSIO	Land Subject to Inundation Overlay
MAE	Major Accident Event
MAP	Major Accident Prevention
MNES	Matters of National Environmental Significance
NATA	National Association of Testing Authorities
NCR	Non-conformance Report
NEM	National Electricity Market
NSW	New South Wales
PCRZ	Public Conservation and Resource Zone
PESCP	Progressive Erosion and Sediment Control Plan
Project, the	EnergyConnect (Victoria)
SA	South Australia
SAP	Sensitive Area Plan
SecureEnergy	Elecnor and Clough Projects Australia Pty Ltd have formed the SecureEnergy Joint Venture (SecureEnergy). SecureEnergy is the contractor who will be carrying out the project on behalf of TransGrid.
SEPP	State Environment Protection Policy
SUZ5	Special Use Zone – Schedule 5
TBD	To be determined
TEC	Threatened Ecological Communities

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Acronym	Definition
Vic	Victoria
VLCIA	<i>Visual and landscape character impact assessment</i> (November 2020)
WMS	Work Method Statement

## 1 Introduction

### 1.1 Context

TransGrid and ElectraNet will deliver a high voltage electricity interconnector between the power grids of South Australia (SA) and New South Wales (NSW), with an added connection to Victoria, known collectively as EnergyConnect. EnergyConnect will reduce the cost of providing secure and reliable electricity transmission between NSW, SA and north-west Victoria in the near term and facilitate the transition of the energy sector across the National Electricity Market to low emission energy sources.

TransGrid is responsible for the portions of EnergyConnect within NSW and Victoria which includes connection at the NSW/SA border to Buronga and Wagga Wagga, and connection within Victoria at Red Cliffs.

Elecnor and Clough have formed SecureEnergy for the purpose of the design and construction of EnergyConnect.

### 1.2 Background

On 29 August 2019 the NSW Minister for Planning declared EnergyConnect critical State significant infrastructure (CSSI) under the *Environmental Planning and Assessment Act 1979* (EP&A Act) on the basis that it is critical to the State for environmental, economic or social reasons. Within NSW, EnergyConnect is therefore subject to assessment under Part 5, Division 5.2 of the EP&A Act.

For the works within NSW, TransGrid are in the process of developing two Environmental Impact Statements (EISs) for:

- EIS-1, EnergyConnect – SA/NSW border to Buronga and Buronga to the NSW/Victorian border;
- EIS-2, EnergyConnect – Buronga to Wagga Wagga.

The portion within Victoria is subject to assessment under Part 4 of the *Victorian Planning and Environment Act 1987*.

This Construction Environmental Management Plan (CEMP) has been prepared for EnergyConnect (Victoria) (the project) and will be updated to include specific requirements arising from the Victorian Planning Permit.

### 1.3 Purpose

This CEMP has been prepared to support the application process for the project works and to address clause 3.3 of the Employers Requirements (Environment, Property and Stakeholder Requirements). It has also been prepared in accordance with the *AS/NZS ISO 14001 Environmental Management Systems*.

The purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction of the project. This plan defines the environmental management principles, processes, procedures, systems, tools, and templates implemented for use throughout the duration of the project. In particular, this CEMP:

- describes the project and activities to be undertaken;
- describes the environmental management system and documents that will be implemented;
- states the objectives and targets for the project;
- provides mitigation measures that can be applied to minimise environmental impacts;
- describes the roles and responsibilities of personnel in relation to environmental management;
- outlines a monitoring regime during construction; and
- supports the project team in completing the requirements of the project.

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Construction personnel will be required to undertake works in accordance with this CEMP and the mitigation measures identified in any relevant site-specific documents.

## **1.4 Distribution**

SecureEnergy's Environmental Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents. During construction, environmental documents will be stored electronically at the site office and will be available upon request to SecureEnergy's Environmental Manager.

This CEMP will be available to all personnel and sub-contractors via hard copy (if requested) or through the project document control system. Documents which are required to be made public will also be placed on the project website which is located at <https://www.projectenergyconnect.com.au>.

Registered copies will be distributed to the following:

- Project Director;
- Deputy Project Director;
- Construction Manager;
- Project HSSE Manager
- Environmental Manager;
- TransGrid's Representative; and
- TransGrid's Environmental Representative.

## **1.5 Revision**

### **1.5.1 Continuous improvement**

Continuous improvement of this CEMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- identify areas of opportunity for improvement of environmental management and performance;
- determine the cause or causes of non-conformances and deficiencies;
- develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- verify the effectiveness of the corrective and preventative actions;
- document any changes in procedures resulting from process improvement; and
- make comparisons with objectives and targets.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the Environmental Manager to coordinate preparation of the revised documents.

### **1.5.2 Updating the CEMP**

A document review process ensures that environmental documentation including this CEMP is updated as appropriate for the specific works that are occurring on-site.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the Environmental Manager (or their delegate) to prepare the revised documents.

The revised document will then be issued to the Project Director. Amendments to this CEMP shall be approved by the Project Director and reviewed by TransGrid prior to re-issue. Where required, the revised CEMP will be issued to the approval authority for approval of the revised plan.

## 2 Project description

### 2.1 Overview of EnergyConnect

TransGrid and ElectraNet are currently seeking approval for the proposed construction and operation of a new electrical interconnector and network support option between NSW and SA, with an additional connection to Red Cliffs in north-west Victoria. Collectively, the proposed interconnector is known as EnergyConnect.

The interconnector is aimed at reducing the cost of providing secure and reliable electricity transmission between NSW and SA in the near term, while facilitating the transition of the energy sector across the National Electricity Market (NEM) to low emission energy sources.

The preferred option involves constructing a new high voltage electricity interconnector, approximately 900km long, between the power grids of SA (starting at Robertstown) and NSW (finishing in Wagga Wagga). EnergyConnect comprises several sections (as shown on Figure 2.1), being:

- Victorian section, which extends from the NSW/Victoria border to Red Cliffs (the subject area of this CEMP);
- NSW sections including:
  - Western section which extends from:
    - the SA/NSW border (near Chowilla in SA) to Buronga;
    - Buronga to the NSW/Victoria border at Monak (near Red Cliffs in Victoria);
  - Eastern section, which extends from Buronga to Wagga Wagga;
- SA section, which extends from Robertstown to the SA/NSW border.



Figure 2.1 - Overview of EnergyConnect (WSP)

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## **2.2 EnergyConnect (Victoria)**

The proposed works within Victoria traverse only a small section of the overall project and extend from the NSW / Victoria border (the Murray River) to Red Cliffs substation, a distance of approximately 1.3 kilometres (Figure 2.2).

The works involve the upgrade of an existing 220kV transmission line and will occur both within and along the eastern side of an existing transmission line (Line 0X1).

The proposed works would be undertaken within Kings Billabong Park, at Red Cliffs, within the Mildura Local Government Area. Kings Billabong Park is a reserve managed by Parks Victoria, which is assigned under Schedule Three of the *National Parks Act 1975*.

### **2.2.1 General features**

The works would involve the construction of six transmission poles in four locations, and installation of the transmission lines from the Murray River to the Red Cliffs substation. The transmission lines will enter Victoria across the Murray River which is being constructed under the EnergyConnect NSW approvals. The type of structure used will be both suspension poles (monopoles) and strain poles.

The key works to be undertaken as part of the project include, but are not limited to:

- civil and electrical works for the transmission lines and pole construction including:
  - constructing access tracks;
  - earthworks and establishment of construction pads for the four transmission poles;
  - construction of footings and foundation works for the new transmission poles;
  - erection of the new transmission poles;
  - stringing of the conductors and overhead earth wires;
  - installation of earthing conductor;
- decommissioning and removal of the existing transmission line;
- pre-commissioning and commissioning work for the new infrastructure.

Connection to the existing Red Cliffs substation will be undertaken as separate scope of works and under a separate CEMP by AusNet.

## **2.3 Construction hours**

Construction would generally be carried out seven days per week between 7:00 am and 7:00 pm.

Some out of hours works may also be required for works such as commissioning of the transmission line, delivery of equipment or materials, and emergency works (for example).





Figure 2.2 - EnergyConnect (Victoria) (WSP 2020)

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### 3 Planning

#### 3.1 Legal and other requirements

A summary of legal requirements is provided within Table 3.1. This register will be maintained by SecureEnergy throughout the project and updated as required. Any changes made to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training or other methods detailed in Section 6.

Some licences or permits may be held by subcontractors or parties engaged by SecureEnergy and have not been specifically listed within the summary. Examples include:

- licences for transporting certain waste types;
- an asbestos removal licence (Class A or Class B licence);
- drivers of dangerous goods vehicles to hold a dangerous goods licence; or
- licensed ecologists for threatened species handling.

**Table 3.1 - Approvals, licences and permits summary**

Legislation	Requirement	Details	Responsibility
<b>Commonwealth Legislation</b>			
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Proposed action (Section 28)	A referral under the (Commonwealth) <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) is not expected to be required for the Project Area.	TransGrid
<b>Victorian Legislation</b>			
<i>Planning and Environment Act 1987</i>	Permit for development work as required by the relevant Planning Scheme	Permits are currently being obtained by TransGrid for utility installation and native vegetation removal. No relevant project works will commence until the permits where required are obtained.	TransGrid
	Permit for works and native vegetation removal	Where SecureEnergy's Victorian facilities are located in areas outside the project corridor a permit for works and a permit for native vegetation removal may be required. SecureEnergy will obtain these permits as necessary.	SecureEnergy
<i>Environmental Effects Act 1978</i>	Permit for development work	Should the project have the potential to result in significant environmental effects it may further be referred to the Minister for Planning under the <i>Environmental Effects Act 1978</i> . This would then require the preparation, exhibition and assessment of an Environmental Effects Statement (EES). EES referral is not recommended based on the self-assessment which has occurred.	TransGrid
<i>Environment Protection Amendment Act 2018</i>	Protection of the environment	The aims of this act are to enhance the protection of Victoria's environment and human health through a risk-based environment protection framework that includes: <ul style="list-style-type: none"> <li>• a preventative approach through a general environmental duty;</li> <li>• a tiered system of EPA permissions to support risk based and proportionate regulatory oversight;</li> <li>• significant reforms to contaminated land and waste management;</li> <li>• increased maximum penalties;</li> </ul>	TransGrid / SecureEnergy



Legislation	Requirement	Details	Responsibility
		<ul style="list-style-type: none"> <li>requirements for more environmental information to be publicly available;</li> <li>modernising and strengthening EPA's compliance and enforcement powers.</li> </ul>	
<i>Flora and Fauna Guarantee Act 1988</i>	Requires permits for activities that could harm threatened plants	<p>Key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.</p> <p>The Act's objectives aim to conserve all of Victoria's native plants and animals. The Act establishes a range of mechanisms to achieve this objective, including:</p> <ul style="list-style-type: none"> <li>listing threatened species, communities and threats to native species;</li> <li>requiring an overarching strategy for Victoria's biodiversity;</li> <li>enabling the declaration of habitat critical to the survival of native plants and animals;</li> <li>placing a duty on public authorities to have regard to the objectives of the Act in their operations;</li> <li>requiring permits for activities that could harm threatened plants and fish and communities.</li> </ul> <p>Over 700 species and communities and 42 threats are listed under the Act.</p>	TransGrid / SecureEnergy
<i>Native Vegetation Regulations 2017</i>	Application requirements for an application to remove native vegetation based on the assessment pathway.	<p>The aims of the regulations are to protect Victoria's sensitive native vegetation, by:</p> <ul style="list-style-type: none"> <li>accounting for the environmental value of large scattered trees, endangered vegetation types and sensitive wetlands and coastal areas in decision making.</li> <li>making the system fairer, by allowing some site-based information to supplement mapped information, and ensuring the information used in the regulations better reflects the vegetation on the ground.</li> <li>improving monitoring and reporting on the implementation of native vegetation removal and offsets.</li> </ul>	TransGrid / SecureEnergy
<i>Aboriginal Heritage Act 2006</i>	Impacts to Aboriginal cultural heritage	A cultural heritage permit and approved cultural heritage management plan would be required if impacts occur to Aboriginal cultural heritage.	TransGrid / SecureEnergy
<i>Aboriginal Heritage Regulations 2018</i>	Impacts to Aboriginal cultural heritage	<p>The Regulation gives effect to the <i>Aboriginal Heritage Act 2006</i>. Standards and circumstances for Cultural Heritage Management Plans (CHMP) are detailed, along with fees and charges.</p> <p>The Regulations define high impact activities and areas of cultural heritage sensitivity. Where an area of high impact activity occurs within an area of cultural heritage sensitivity, a mandatory CHMP is required:</p> <ul style="list-style-type: none"> <li>High impact activity <ul style="list-style-type: none"> <li>r 46 (1b) (xxvii) (A) - the works are a linear project that is the construction of an overhead power line with a length exceeding one kilometre or for which more than 10 power poles are erected;</li> </ul> </li> <li>Areas of cultural heritage sensitivity <ul style="list-style-type: none"> <li>r 32 - Parks and Nature Conservation Reserves;</li> <li>r 25 - Registered cultural heritage places;</li> <li>r 26 - Named waterway &amp; water bodies.</li> </ul> </li> </ul>	SecureEnergy

Legislation	Requirement	Details	Responsibility
<i>Heritage Act 2017</i>	Section 93 Permit to impact a registered place or object Section 124 consent to impact a site on the Heritage Inventory or an archaeological site which is not on the registry	The <i>Heritage Act 2017</i> serves to protect all places and objects of historic cultural heritage relating to the non-Aboriginal settlement of Victoria. There are two categories of listing provided for under the <i>Heritage Act 2017</i> ; the Victorian Heritage Register and the Heritage Inventory. Section 87 of the <i>Heritage Act 2017</i> states that it is an offence to knowingly or recklessly remove, relocate or demolish, damage or despoil, develop or alter, or excavate, all or any part of a registered place or a registered object in the absence of a permit. Section 123 of the Act states that it is an offence to deface, damage or otherwise interfere with, or carry out an act, likely to endanger a site recorded in the Heritage Inventory, or an archaeological site which is not recorded in the Heritage Inventory. Under section 124 of the Act a consent is required from the Executive Director, Heritage Victoria to excavate, uncover, damage or disturb a site recorded on the Heritage Inventory.	TransGrid / SecureEnergy
<i>National Parks Act 1975</i>	Agreements with electricity company. (Section 27A)	The project alignment is located within Kings Billabong Park which is managed by Parks Victoria under the <i>National Parks Act 1975</i> . TransGrid will seek amendment of the existing agreement for the use of land within Kings Billabong Park to the extent required by the project.	TransGrid
<i>Water Act 1989</i>	Waterways Permit Licence to construct works (section 67)	Works and activities in, under, on or over the bed and banks of Designated Waterways in Victoria require a Works on Waterways Permit from the relevant Catchment Management Authority. The project may require a permit under section 67 – works on a waterway, such as diversion drains, stream crossings, etc. A permit application must be referred to the relevant floodplain management authority to construct or carry out works within or in proximity of designated waterways and within flood overlays.	SecureEnergy
	Licence to “take and use water” (Section 51) Application for water shares (section 33L) Application for water-use registrations (section 64AR)	Victoria’s state-owned water sector is made up of 19 water corporations constituted under the <i>Water Act 1989</i> . The project area is subject to the management of Lower Murray Water. A person wishing to access groundwater or extract water from a waterway is required to obtain a licence under the <i>Water Act 1989</i> to construct the works including a bore. In addition, any disturbance to the bed or bank of a Designated Waterway will require a Works on Waterways Permit. To use water from a groundwater bore for irrigation or other commercial purposes, a ‘take and use’ licence must be obtained. Should insufficient allocation exist within the water source the ‘take and use’ licence would need to be obtained by water trading. To use water from a regulated water source such as the Murray River water shares must be obtained, and the water use registered for purposes other than irrigation. Further consultation will be undertaken with Lower Murray Water in relation to water supply for construction and domestic water use during the project. Given the extensive piped water network in and around Red Cliffs and Mildura it is expected that water would be drawn from this network with approval of Lower Murray Water.	SecureEnergy
<i>Road Management Act 2004</i>	Modification, obstructing or interfering with a road (Division 1)	Written consent is required from the relevant road authority prior to modifying, obstructing or interfering with a public road.	SecureEnergy

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SecureEnergy will obtain licences, permits and approvals as required for the works and maintain them as required throughout delivery of the project. Copies of licences, approvals and permits shall be held on site with files available for audit and inspection purposes.

### 3.2 Planning Permit conditions

The conditions relevant from the Victorian Planning Permit relevant to the preparation and implementation of this CEMP will be detailed in Table 3.2 following project determination.

**Table 3.2 - Conditions relevant to the CEMP**

Condition	Requirement	Where addressed
	To be updated with final conditions following determination	

### 3.3 Environmental management measures

Environmental safeguards and management measures will be included as part of the permit application based on the environmental impacts and necessary environmental mitigations.

The measures from the planning permit application which are relevant to the implementation of the CEMP are included within Table 3.3.

**Table 3.3 - Environmental management measures relevant to the CEMP**

Impact	Ref #	Environmental management measures	Where addressed
Water quality	Section 7 of Hydrology and Flooding Impact Assessment	A Construction Environmental Management Plan (CEMP) and associated Soil and Water Management Sub-plan (SWMP) will be developed. This SWMP would have the purpose of minimising and managing impacts on the soils and water environments during construction phase.	This document  Appendix A.3 – Soil and Water Quality Management Sub-plan

### 3.4 Standards and guidelines

The following Australian Standards relating to environmental management applying to the project include:

- ISO 14001 *Environmental Management Systems – Requirements with Guidance for Use*;
- AS 1940 *The Storage and Handling of Flammable & Combustible Liquids*;
- AS 2436 *Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites*;
- AS3833 *The Storage and Handling of Mixed Classes of Dangerous Goods, in Packages and Intermediate Bulk Containers*;
- BS 7385-2 *Evaluation and Measurement for Vibration in Buildings. Guide to Damage Levels from Groundborne Vibration*; and
- ANZECC 1992 *Australian Water Quality Guidelines for Fresh and Marine Waters*.

Compliance standards, policies and guidelines relevant to the project are detailed in the respective sub-plans. The requirements of these standards have been taken into account in the preparation of the CEMP and will be considered by SecureEnergy during the preparation of the Work Packs and Work Method Statements.

## 4 Environmental management system

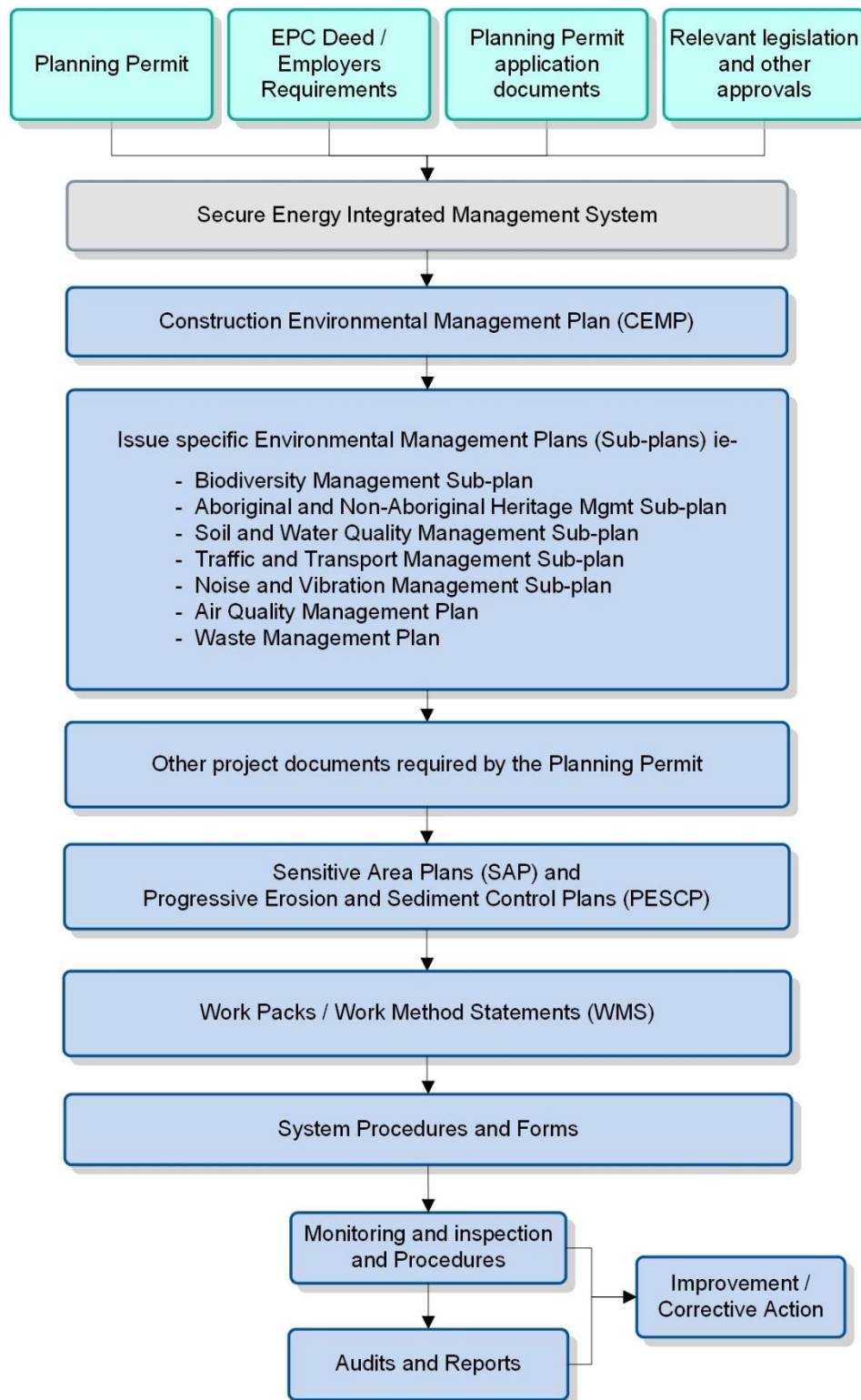
The SecureEnergy Business Management System includes the Environmental Management System. It has been designed to comply with the requirements of *ISO 14001 Environmental management systems*.

The Health, Safety, Security and Environment Management Manual (HSSE Manual) describes the Environmental Management System for SecureEnergy. Table 4.1 summarises the Environmental Management System components.

**Table 4.1 - Environmental Management System components**

Management System Component	Description
HSSE Policy & HSSE Management Expectations	The policy sets the overall guidelines and direction to HSSE and represents the commitment of management to the achievement of its aims. The <i>HSSE Management Expectation</i> clearly defines minimum expectations to ensure that all SecureEnergy personnel and subcontractors understand their obligations and accountabilities to contribute to SecureEnergy HSSE culture.
HSSE Operating Standards	The HSSE Operating Standards set out the minimum mandatory performance requirements. Environmental minimum mandatory performance requirements are set out in the following HSSE related Operating Standards: <ul style="list-style-type: none"> <li>• Environment Management Operating Standard;</li> <li>• Major Accident Event Hazard Management Operating Standard.</li> </ul>
HSSE Management Manual	Provides a framework for the HSSE component of the BMS, an overview of the key elements and reference documents.
HSSE Procedures, documents and registers (tools)	Procedures or work practices which provide the detailed steps to be taken to identify risks, work safely, protect the environment, investigate incidents and implement continuous improvement.
HSSE Management Plans – this CEMP and relevant sub-plans	Project specific plans prepared to identify and manage project HSSE risks and achieve the Operating Standards performance requirements.
Project/Site Specific Procedures, Work Instructions	Project and activity specific procedures, risk assessments and work methods to mitigate HSSE hazards. These are prepared by project personnel.

The structure of the environmental management system for the project is shown in Figure 4.1.



**Figure 4.1 - Environmental Management System**

#### 4.1 Environment Policy

SecureEnergy believes that respect for the project location, its surroundings and the communities in which it operates is essential for project success, as well as compliance with all environmental requirements.

SecureEnergy's Policy for Environment, Sustainability and Community will be implemented on EnergyConnect. The policy is provided in Appendix B.

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Policies will be clearly displayed at SecureEnergy main site office facilities and regularly communicated to staff, employees and subcontractors during inductions and toolbox training events.

## 4.2 Objectives and Targets

As a means of assessing environmental performance, environmental objectives and targets have been established. These objectives and targets have been developed in consideration of requirements in statutory approvals, contractual requirements, legislative requirements, HSSE project performance requirements and significant environmental aspects and impacts. They assist in determining whether the commitments of the Environmental Policy are being achieved. Environmental objectives for the project are provided below in Table 4.2.

**Table 4.2 - Environmental objectives and targets**

Result Area	Objective	Target
Compliance	Compliance with Statutory Approvals and Conditions of Approval	Full compliance with statutory approvals. No regulatory infringements (PINs or prosecutions). No formal regulatory warning.
	Implementation of the CEMP and sub-plans	Address non-conformances and corrective actions within specific timeframes.
Incident management and response	Ensure timely communication of incidents Minimise the risk of an incident by identifying risks and developing actions to minimise those risks	Report incidents in accordance with this management plan. Review risks in accordance with the Clough IMS.
Engage with stakeholders and the broader community, minimise complaints and respond to any complaints within a suitable timeframe	Disseminate regular project updates and other information to keep the community informed of the project. Record and respond to complaints within a timely manner.	Review complaints register and timeliness of response.
Biodiversity impacts	Minimise environmental impacts during the design process and implementing effective construction practices which avoid or minimise biodiversity impacts.	No unapproved clearing. No parking outside the impact footprint in vegetated areas. No erosion and sediment controls located outside the impact footprint.
Water	Maximise reuse of water resources	Maximise reuse of treated water during construction where available for use.
Waste	Maximise resource efficiency and reduce waste generation	Optimise resource use and forecast waste disposal offsite.
Training and improvement	Provide adequate training to ensure construction activities are undertaken safely and with minimal risk to the environment. Continuously improve environmental performance	Develop and maintain a program of ongoing environmental training. Capture lessons learnt from environmental incidents to minimise repeat issues. Daily prestart meetings and weekly toolbox meetings. Encourage and reward innovation and effort throughout the workforce.
Inspections and audits	Completion of weekly inspections and internal audits	100% completion of scheduled weekly inspection and audits 100% closeout of SecureEnergy inspections and audit findings within defined timeframes

### 4.3 Construction Environmental Management Plan

The CEMP is the overarching management tool in relation to environmental performance during project delivery. The CEMP describes the construction environmental management framework for the project and the system for minimising and managing environmental risks.

The CEMP and relevant management plans will be revised in consideration of the Planning Permit and the environmental management measures presented in the Planning Permit application.

The CEMP details the management plans which have been, or will be, prepared to address specific environmental aspects of the project, and outlines the environmental management practices that are to be followed during construction. It provides the overall framework for the system to ensure environmental impacts are minimised and legislative and other requirements are fulfilled.

#### 4.3.1 Environmental management sub-plans

A number of environmental management sub-plans have been prepared to support the CEMP and are provided in Appendix A. The sub-plans document the aspects and management measures for each key environmental aspect.

Some of these plans are sub-plans of this CEMP, whilst others required by the Planning Permit are separate documents.

The CEMP has currently been drafted to incorporate all environmental aspects within Appendix A. In the event that stand-alone plans are required to be prepared by the Planning Permit (for example a Traffic Management Plan), then having the Traffic Management Plan as a stand-alone document will prevail and the next revision of the CEMP will reflect this structure.

A list of plans, and their approval requirements, are provided in Table 4.3.

**Table 4.3 - Environmental management sub-plans**

Document name	Document location
Construction Environmental Management Plan	CEMP
Biodiversity Management Sub-plan	Appendix A1 BMP
Aboriginal and non-Aboriginal Heritage Management Sub-plan	Appendix A2 HMP
Soil and Water Quality Management Sub-plan	Appendix A3 SWMP
Traffic and Transport Management Sub-plan	Appendix A4 TTMP
Noise and Vibration Management Sub-plan	Appendix A5 NVMP
Air Quality Management Sub-plan	Appendix A6 AQMP
Waste and Resource Management Sub-plan	Appendix A7 WRMP
Bushfire Management Sub-plan	Appendix A8 BFMP
Landscape and Visual Impact Management Sub-plan	Appendix A9 LVIMP

#### 4.3.2 Other approval documents

A number of other documents are required by the Planning Permit. These will be determined upon issue of the Planning Permit, though may include:

- Cultural Heritage Management Plan;
- Offset Management Plan; and
- Construction Management Plan.

#### **4.4 Work Packs and Work Method Statements**

Work Packs describe construction implementation in detail. The preparation of Work Packs involves a comprehensive review of the requirements of many aspects of project delivery, including design, construction, environment and safety. Work Packs provide specific instruction on how to construct and undertake certain elements of the project. As required, Work Packs will incorporate procedures relevant to site-specific activities, to reduce risk and ensure ongoing environmental compliance. These measures are based on relevant measures in the CEMP and sub-plans.

Work Method Statements (WMSs) are developed as part of the preparation of every Work Pack. WMSs set out the construction methodology for a particular activity or set of activities, specific to the project and incorporate work-specific environmental hazard assessments. The Work Method Statements will ensure the location or environment present conditions are identified and will manage residual risks (e.g. potential disturbance to threatened species habitat).

Work Packs and WMSs will be prepared progressively in the lead up to and throughout construction in consultation with relevant members from the project team, including the Environmental Manager.

All construction personnel and sub-contractors undertaking tasks governed by the Work Packs and WMSs must participate in training and acknowledge that they have read and understood their obligations prior to commencing work.

Regular monitoring, inspections and auditing against compliance with the Work Packs and WMSs will be undertaken by project management, quality, and environmental personnel to ensure that controls are being followed and that non-conformances are identified.

#### **4.5 Sensitive Area Plans**

To aid in the identification and appropriate management of the environmental features associated with the project, a set of Sensitive Area Plans (SAPs) will be prepared. The SAPs identify environmental constraints and 'no go' zones, and will be included in the project Work Packs to help identify key risk areas, and promote ongoing communication to construction personnel.

Sensitive area plans include information pertaining to, but not limited to:

- construction impact zones;
- flora features, including threatened species and endangered ecological communities;
- Aboriginal and non-Aboriginal heritage sites;
- watercourses;
- known fauna habitat to be protected (ie hollow bearing trees);
- areas of vegetation to be retained;
- clearing limit boundary; and
- any designated no-go zones.

#### **4.6 Progressive Erosion and Sediment Control Plans**

Progressive Erosion and Sediment Control Plans (PESCPs) are to be developed and will show the site layout and approximate location of erosion and sediment control structures on site.

Environmental staff will typically develop the PESCPs in consultation with Project Engineers, Superintendents and Foremen. This will ensure that erosion and sediment control management is incorporated into the planning stage of construction activities and is coordinated in its approach.

The Environmental Manager will approve PESCPs in the first instance. Minor changes thereafter will be approved by environment staff in consultation with the Environmental Manager, as required.

PESCPs are designed for use as a practical guide and may be produced in conjunction with Work Packs or WMSs.

## 4.7 Procedures, forms and other documents

The project environmental management system procedures, forms and other documents provide instructions and records related to both environmental and non-environmental activities throughout the project.

Project specific procedures will be developed in accordance with the requirements for the project. These may include an emergency spill response procedure, unexpected heritage find procedure and unexpected contamination find procedure which would be developed prior to construction. Where applicable, existing procedures and work instructions will be applied or amended for use on the project.

## 4.8 Document control and records

All project documents are to be numbered, approved, revised, transmitted, and stored in accordance with the project's Project Document Control Plan.

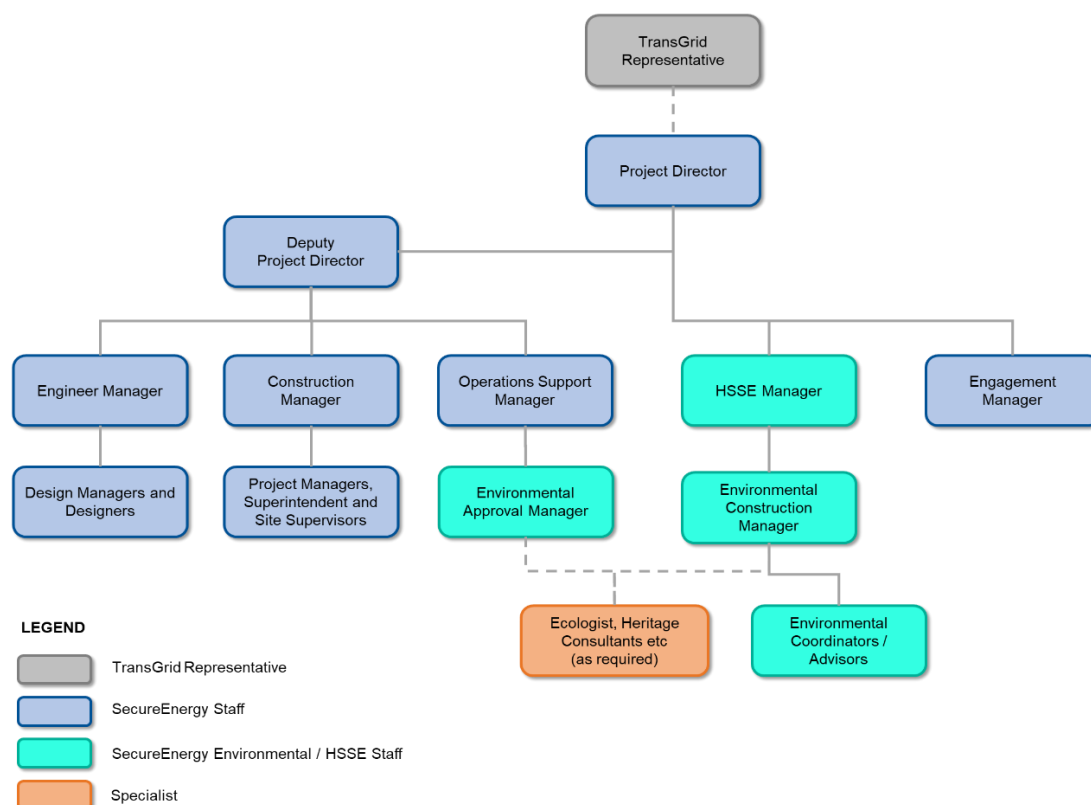
Records will be developed and maintained by SecureEnergy including:

- training records;
- incident reports;
- audit and inspection forms;
- monitoring results; and
- volume of waste to landfill, waste recycled, and waste disposed of offsite.

## 4.9 Roles and responsibilities

### 4.9.1 Organisational structure

SecureEnergy's organisation structure is described in Figure 4.2.



**Figure 4.2 - Key roles within the organisation structure**

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The SecureEnergy Project Director, in consultation with functional managers, will ensure that appropriate resources are available to effectively manage the implementation of the CEMP during delivery of the project.

All SecureEnergy staff, subcontractors and visitors are required to operate in accordance with this CEMP and related environmental management plans during construction.

The project environmental management structure incorporates the following site personnel:

- Environmental Manager responsible for overall management of the CEMP and environmental management plans; and
- Environmental Co-ordinators to assist in implementing and monitoring measures in the CEMP and environmental management plans.

#### 4.9.2 Roles and responsibilities

Further detail regarding the roles and responsibilities is provided within Table 4.3.

**Table 4.4 - Environmental roles and responsibilities**

Role	Responsibilities
<b>Project Director</b>	<ul style="list-style-type: none"> <li>• Overall delivery of the project program</li> <li>• Manage all key aspects of project performance, including environmental performance</li> <li>• Undertake actions in accordance with the project's due diligence framework</li> <li>• Define and refine project management philosophies, capabilities, processes and tools</li> <li>• Ensure project practices and on-site activities are conducted in accordance with project policies and procedures</li> <li>• Ensuring personnel delegated responsibility for environmental management are adequately trained and competent to implement the requirements of the CEMP</li> <li>• Direct activities to ensure resource needs are accurately forecasted and linked to the project, including the identification of skill and behaviour requirements</li> <li>• Ensuring personnel delegated responsibility for environmental management are adequately trained and competent to implement the requirements of the CEMP</li> <li>• Making available resources to enable execution of project environmental management activities</li> <li>• Making available resources to enable execution of project emergency response systems</li> <li>• Drive the creation of systems, practices and behaviours that promote the identification and appropriate management of potential risks and opportunities</li> <li>• Lead negotiations with TransGrid to achieve an agreed resolution of complaints and non-conformance reports (NCR)</li> <li>• Ensure all management plans – including the HSMP, QMP and CEMP – are fully developed and implemented</li> <li>• Attending and participating in environmental meetings as appropriate</li> </ul>
<b>Deputy Project Director</b>	<p>The environmental responsibilities of the Deputy Project Director include:</p> <ul style="list-style-type: none"> <li>• support the overall delivery of the project program;</li> <li>• manage key aspects of project performance, including environmental performance;</li> <li>• undertake actions in accordance with the project's due diligence framework;</li> <li>• enforce the project management philosophies, capabilities, processes and tools;</li> <li>• ensure project practices and on-site activities are conducted in accordance with project policies and procedures;</li> <li>• ensuring personnel delegated responsibility for environmental management are adequately trained and competent to implement the requirements of the CEMP;</li> <li>• direct activities to ensure resource needs are accurately forecasted and linked to the project, including the identification of skill and behaviour requirements;</li> <li>• ensuring available resources to enable execution of project environmental management activities;</li> <li>• ensuring resources are specified to eliminate or minimise environmental hazards;</li> <li>• making available resources to enable execution of project emergency response systems;</li> </ul>

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Role	Responsibilities
	<ul style="list-style-type: none"> <li>participating in incident investigations and review all incident reports as appropriate;</li> <li>support negotiations with TransGrid to achieve an agreed resolution of complaints and non-conformance reports (NCR);</li> <li>ensure all management plans are fully developed and implemented; and</li> <li>attending and participating in environmental meetings as appropriate.</li> </ul>
<b>Construction Manager</b>	<ul style="list-style-type: none"> <li>Delivery of the construction aspects of the project</li> <li>Ensuring resources are specified to eliminate or minimise environmental hazards</li> <li>Ensuring subcontractors conduct their environmental responsibilities as required in the Contract</li> <li>Participating in incident investigations and review all incident reports</li> <li>Arranging for and participating in HAZID workshops</li> <li>Participating in workplace inspections</li> <li>Reviewing audit findings and close out reports</li> <li>Reviewing overall project environmental performance</li> <li>Attending and participating in environmental meetings as appropriate</li> <li>Participating in Target Zero commitment workshop</li> <li>Reviewing work planning requirements</li> <li>Remaining abreast of all relevant environmental laws, permits and standards</li> <li>Providing construction and field management and supervisors with environmental information current to their requirements</li> <li>Ensuring environmental standards developed for each activity meet with SecureEnergy requirements</li> <li>Scheduling and coordinating site-based environmental activities</li> <li>Interfacing with client environmental personnel during their site visits</li> <li>Conducting periodic drills and reviews of emergency response systems and procedures</li> <li>Providing project line management with feedback on environmental performance</li> </ul>
<b>Health, Safety, Security &amp; Environment Manager</b>	<ul style="list-style-type: none"> <li>Delivering the HSSE aspects of the project in accordance with contract and legislative requirements.</li> <li>Communication of HSSE requirements to the Project Management and HSSE Teams.</li> <li>Review HSSE standards and plans developed for each project to ensure that legislative requirements are met</li> <li>Review overall HSSE performance and report to the project Management and Corporate HSSE Manager</li> <li>Interface with major subcontractors and TransGrid management, regulatory and with HSSE personnel as required regarding HSSE matters</li> <li>Coordinate third party certification audits</li> <li>Specify resources to enable execution of HSSE activities on site</li> <li>Specify resources to enable execution of emergency response systems on site</li> <li>Arrange for and participate in HAZID workshops</li> <li>Provide HSSE Advisors, project line management and subcontractor with feedback on HSSE performance</li> <li>Participate in the Target Zero commitment workshop</li> <li>Implement and coordinate Target Zero activities and strategies</li> <li>Receive and circulate relevant HSSE information</li> <li>Coordinate and participate in scheduled HSSE audits and reviews</li> <li>Statistical analysis and incident trend reviews</li> <li>Develop training and induction schedules and content</li> <li>Attend and participate in HSSE meetings as required</li> <li>Coordinate and participate in workplace inspections</li> <li>Record, monitor and follow up close out of action items in InControl.</li> </ul>
<b>Environmental Approvals Manager</b>	<ul style="list-style-type: none"> <li>Ensuring environmental approvals are obtained and in place prior to commencement of the relevant works</li> <li>Preparation of the CEMP and sub-plans</li> </ul>

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Role	Responsibilities
	<ul style="list-style-type: none"> <li>Obtain and ensure compliance with environmental approvals, licences and permits as required and liaise with statutory bodies</li> <li>Interfacing with TransGrid and agencies pre and post construction approval.</li> <li>Participating in HAZID workshops and audits</li> </ul>
<b>Environmental Manager</b>	<ul style="list-style-type: none"> <li>Implementation and delivery of the environmental requirements of the project</li> <li>Communication of environmental requirements to the Project Management and Environmental Teams</li> <li>Ensuring implementation of the CEMP and SecureEnergy management plans</li> <li>Review, and where required, revise environmental management documents</li> <li>Specifying resources to enable execution of environmental activities on site</li> <li>Specifying resources to enable execution of emergency response systems on site</li> <li>Arranging for and participating in HAZID workshops</li> <li>Providing environmental coordinators, project line management, and SecureEnergy with feedback on environmental performance</li> <li>Participating in the Target Zero commitment workshop</li> <li>Receiving and circulating relevant environmental information</li> <li>Coordinating and participating in scheduled environmental audits and reviews</li> <li>Performing statistical analysis and environmental incident trend reviews</li> <li>Developing training and induction content</li> <li>Attending and participating in environmental meetings as required</li> <li>Coordinating and participating in workplace inspections</li> <li>Recording, monitoring and following up close out of action items in InControl</li> <li>Taking responsibility for the overall environmental performance of the site</li> <li>Providing leadership in the implementation of all environmental initiatives</li> <li>Specifying and making available resources to enable execution of environmental activities.</li> </ul>
<b>Environmental Coordinators</b>	<ul style="list-style-type: none"> <li>Communication of environmental requirements to project personnel including Superintendents and Supervisors</li> <li>Being accountable for ongoing development and implementation of project environmental activities and practices</li> <li>Conducting workplace inspections</li> <li>Recording, monitoring and following up close out of action items</li> <li>Ensuring corrective actions are implemented</li> <li>Participating in Target Zero workshops</li> <li>Complying with statutory requirements, including duty of care</li> <li>Liaising with supervisors on relevant environmental issues</li> <li>Attending and participating in environmental meetings</li> <li>Reporting and investigating all environment incidents in the area of control</li> <li>Reviewing and closing out environmental incident reports</li> <li>Providing support and direction to all supervisors through positive discussions on environmental initiatives</li> <li>Conducting weekly workplace inspections</li> <li>Supporting employees to perform their work in an environmentally conscious manner</li> <li>Reporting all incidents and hazards to management</li> <li>Monitoring the use and maintenance of spill kits at all work sites</li> <li>Ensuring work group employees participate in relevant environmental activities</li> </ul>
<b>Supervisors</b>	<ul style="list-style-type: none"> <li>Planning for, and incorporating environmental management into all work plans and activities</li> <li>Ensuring that instructions are issued and adequate information provided to field-based employees which relate to environmental risks on site</li> <li>Participating in HAZID workshops and audits</li> <li>Motivating employees to report all environmental incidents</li> <li>Participating in Target Zero workshops</li> <li>Conducting inspections of their work area per the Audit and Inspection Schedule</li> </ul>

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Role	Responsibilities
	<ul style="list-style-type: none"> <li>• Planning for and incorporating environmental management into all work plans and activities</li> <li>• Opening and maintaining external communication during emergencies</li> <li>• Maintaining a log of communications sent and received during an emergency</li> <li>• Reporting all incidents and hazards to management</li> <li>• Complying with statutory requirements, including duty of care</li> <li>• Reporting hazardous conditions</li> <li>• Participating in any relevant environmental training</li> <li>• Providing suggestions to improve environmental management on the project</li> <li>• Reporting any near miss or environmental incidents</li> <li>• Participating in site environmental meetings as required</li> </ul>
<b>All personnel, including subcontractors</b>	<ul style="list-style-type: none"> <li>• Undertaking works in accordance with the IMS and management plans</li> <li>• Participating in any relevant environmental training</li> <li>• Reporting any near miss or environmental incidents to their Supervisors</li> <li>• Providing suggestions to improve environmental management on the project.</li> </ul>

#### 4.9.3 Other environmental resources

Specialist consultants and subcontractors will be engaged for environmental support roles, as required, such as (to be updated in subsequent versions):

- ecologists for critical activities, such as vegetation clearing and pre-clearance surveys;
- noise and vibration specialists for noise modelling, establishment and maintenance of monitoring equipment, and ongoing advice throughout construction;
- heritage consultants for review of the Aboriginal and non-Aboriginal heritage management sub-plans and archaeological salvage and reporting where required;
- other resources as required during the course of the project.

#### 4.9.4 Subcontractors and suppliers

All subcontractors will work under this CEMP, sub-plans and relevant procedures. Subcontractors are required to carry out their work in accordance with contract instructions and in an environmentally sound manner.

Subcontractors will not normally be required to prepare and implement a separate Environmental Management Plan in addition to this CEMP, except where the risk of environmental harm from the subcontractor's activities is assessed as significant or the subcontractor has control of a specific project area.

All subcontractor personnel are required to attend a project induction, which includes an environment and sustainability component and task-specific training (if relevant) before they commence any work on site. The Environmental Manager, or delegate, will confirm and implement requirements for effective subcontractor control based on known project risks and demonstrated subcontractor performance, or the contrary.

All suppliers will be required to comply with any relevant requirements of this CEMP and associated sub-plans, including sustainability requirements.

The Environmental Manager will confirm and implement actions to ensure suppliers and subcontractors are aware of the requirements within the CEMP and Sustainability Plan that are relevant. This will occur during the procurement phase including final subcontractor and supplier assessment and selection and then carried through into the construction phase.

## 5 Environmental risk management

### 5.1 Risk and hazard management

A risk management approach will be used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance.

Risk identification, assessment and management is part of the Clough Integrated Management System (IMS) and will be undertaken in accordance with procedure *CORP-HSE-PR-G-0072 HSSE, Risk Management Procedure*. The procedure is consistent with *AS/NZS ISO 31000:2009 Australian Standard Risk Management*.

Over the life of the project, risks will be identified, assessed and controlled through the use of a number of different risk management tools, primarily risk assessments.

The objectives of undertaking risk assessments are to:

- identify activities, events or outcomes that have the potential to adversely affect the local environment and/or human health/property;
- assess risks and prioritised them using a consistent process aligned to Clough risk management principles;
- determine appropriate control measures;
- assess whether risk issues can be managed by the implementation of environmental management measures; and
- qualitatively evaluate residual risk with implementation of the protection measures.

Following identification and assessment the resultant control measures will be communicated, implemented and monitored to confirm their effectiveness. Work Method Statement or Work Packs will be developed to provide specific instructions on how to conduct components of the construction. These will include the relevant environmental controls to be implemented which are identified through the risk assessment process.

Sensitive area plans will be used in conjunction with Work Method Statement or Work Packs to help identify key risk areas and to promote ongoing communication to construction personnel during the project.

A summary of the Clough risk management processes, their purpose, the methodologies used and the stage in the project lifecycle to which they apply is provided in Table 5.1 and diagrammatically in Figure 5.1.

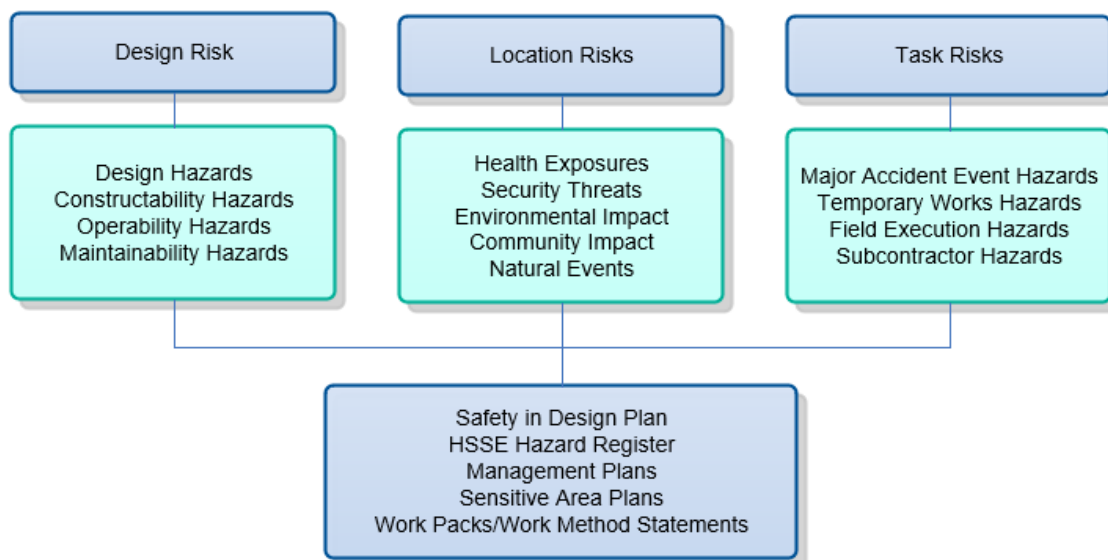
**Table 5.1 - Project HSSE Risk Assessment Processes**

Risk Assessment Process	Description	Methodology	Application						Reference Procedures	
			Corporate	Business Division	New Opportunity	Project Planning	Project Execution	Project Close-out		
Technical HSSE Assessments										
Design risks	Identify, assess and document inherent design risks	HAZID, HAZOP, FMEA							Safety in Design Procedure	CORP-ENG-PR-G-0016
Design reviews - construction, operation, maintenance	Identify, assess and mitigation of HSSE hazards introduced by the design when facility being	HAZID, HAZOP							Safety in Design Procedure	CORP-ENG-PR-G-0016

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Risk Assessment Process	Description	Methodology	Application						Reference Procedures	
			Corporate	Business Division	New Opportunity	Project Planning	Project Execution	Project Close-out		
	constructed, operated or maintained									
Fire & Explosion analysis	Identify, assess and control potential sources of fire & explosion, and consequence mitigation through design	Fire and Explosion Study							Safety in Design Procedure	CORP-ENG-PR-G-0016
<b>Threat Specific HSSE Hazard Assessment (where applicable to Project)</b>										
Environmental / Social Impact Assessment	Identify, assess and mitigate environment and community impacts	EIA, HAZID, Social Impact Study							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Natural Disasters Assessment (Emergency Events)	Identify, assess and mitigate potential natural disaster events which may affect the site (e.g. cyclone, wild fire, tsunami)	HAZID							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
<b>Task Based HSSE Hazard Assessment</b>										
Project HSSE Assessment	Identify, assess and control potential HSSE impacts specific to the Project & Site	HAZID							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Construction Package HSSE Assessment	Identify, assess and control potential HSSE impacts specific to the Construction package	HAZID							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Subcontractor HSSE Assessment	Assess the HSSE capability of subcontractors to inform management strategy Identify, assess and control potential HSSE impacts of contract scope	PRE-QUAL / HAZID							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Work Team Task Assessment	Work teams identify, assess and control HSSE hazards of planned work	JHA							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Personal Task Assessment	Individuals identify, assess and control HSSE hazards of planned task	TAKE 5							HSSE Risk Management Procedure	CORP-HSE-PR-G-0072

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**Figure 5.1 - HSSE Risk Management Framework**

## 5.2 Environmental risk register

Environmental aspects and impacts will be continually identified, assessed and controlled throughout the project and included within the environmental risk register. The environmental risk register will form a part of the consolidated risk register managed and reported in accordance with the Risk Management Plan.

The ongoing determination of environmental aspects and impacts will be achieved through the risk management processes outlined above, which results in the maintenance of a list of environmental risks (aspects and impacts), corresponding risk mitigation strategy and risk ranking for each risk. Each environmental risk is categorised, based on the following:

- the environmental aspect;
- type of potential impact (or consequence); and
- likelihood of occurrence.

SecureEnergy will maintain the project risk register to address risks specific to the scope. Risks will be required to be reviewed on a regular basis and will also be reviewed in response to incidents, changes in legal requirements, change in project scope, findings of inspections and audits and management reviews.

## 5.3 Management of change

Any change or event that affects scope and may have an environmental impact or environmental compliance impact, as well as a safety, cost or schedule impact on any part of the scope of works requires management. Project changes will be formally managed through a Management of Change process.

Hazards and risks associated with temporary and permanent change relating to design, standards, regulation, work methods, procedures, facilities, material and equipment and the project organisation and its personnel will be identified and assessed by personnel competent in risk management and the Management of Change processes.

All significant changes shall be documented and tracked, and ensure that all affected personnel are kept informed of the implications and progress of the change. The implication of change shall be assessed by reviewing the original Risk Assessment. SecureEnergy will revise risk registers and implement any actions to mitigate the risk resulting from the change. SecureEnergy will disseminate this information to its workforce.

## 6 Training and awareness

Environmental training and awareness is an important means to positively influence the attitude of workers engaged in the project whilst ensuring they are aware of their obligation and the requirements of this CEMP. Internal and on-the-job training will be provided by SecureEnergy on a regular basis for all employees and subcontractors.

To ensure that this CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The Environmental Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

Training and awareness will include:

- Target Zero leadership and behaviour programs;
- site inductions;
- toolbox talks;
- daily pre-start meetings;
- specific WMS briefings; and
- specialist training e.g. erosion and sediment control, heritage and spill response.

### 6.1 Site induction

All personnel (including sub-contractors) will be required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is done to ensure all personnel involved in the project are aware of the requirements of the CEMP and to ensure the implementation of environmental management measures. The SecureEnergy Environmental Manager (or delegate) will prepare the environmental component of the site induction.

The environmental component will include an overview of the following elements:

- relevant details of the CEMP;
- relevant conditions of environmental licences, permits and approvals;
- key environmental issues, i.e. protection of heritage sites and threatened species;
- information relating to the location of environmental constraints;
- relevant environmental management requirements and responsibilities;
- key management measures for the control of environmental issues;
- notification and response requirements in the event of unexpected finds (i.e. for heritage, contaminated land or threatened species);
- regulatory penalties and consequences of non-compliance;
- incident response and reporting; and
- emergency response and evacuation (fire and flooding).

Amendments to the induction will be made at any time as a result of work modifications or amendments to this CEMP or related documentation.

## **6.2 Toolbox talks and environmental awareness**

Toolbox talks, environmental awareness training and construction methodology briefings will be delivered by SecureEnergy as necessary to achieve a suitable level of workforce awareness and competence appropriate to the activities. Toolbox talks will generally occur weekly as described in Table 4.2

Toolbox talks will be tailored to specific environmental issues relevant to upcoming works or previous incidents and will include general and specific discussion of the key environmental aspects of the project.

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.

## **6.3 Daily pre-start meetings**

Daily pre-starts will be conducted by the SecureEnergy Supervisors prior to the start of work each day to inform workers of key safety, environmental and activity coordination considerations and other information that may be relevant in the performance of the day's work.



## 7 Communication and complaints management

### 7.1 Communication

A Community and Stakeholder Engagement Plan (CSEP) has been prepared for the project.

The CSEP identifies the community engagement objectives, the people and organisations that will be consulted with, the delivery framework and potential issues the project needs to manage during project delivery.

It also provides information on the communication tools and protocols which will support implementation, and descriptions of how community stakeholders will be kept informed of, and consulted about, the project throughout the delivery phase.

In particular, the CSEP details the following elements:

- identification of community and key external stakeholders;
- procedures and mechanisms for providing information to the community and key stakeholders;
- opportunities and provision for the community to attend the construction site for visits, taking into consideration health and safety requirements;
- the formation of issue or location-based community forums;
- procedures and mechanisms for how the project will receive and respond to community feedback, enquiries and complaints; and
- explanation of how disputes will be resolved.

Communication tools which will be used by the project to inform stakeholders and the community will include:

- notifications of construction activities;
- notification of out of hours works (as required);
- written correspondence (letters / emails);
- advertisements (as required);
- newsletters;
- meetings;
- the project website which is located at <https://www.projectenergyconnect.com.au>;
- enquiries and complaints line (24 hour) on 1800 560 577.

### 7.2 Complaints management

A complaints management system including the complaints register will be maintained in accordance with the CSEP. The complaints system has been developed to be consistent with *AS4269: Complaints Handling* and includes a complaint register which will record information on all complaints received about the project during construction.

The complaints management system will include a process to manage complaints including receiving, recording, tracking and responding to complaints within a defined timeframe. If a complaint cannot be responded to immediately a follow up phone call or verbal response will be made to the complainant in accordance with the timeframes detailed within the CSEP.

## 8 Incidents and emergencies

### 8.1 Emergency preparedness and emergency response

Emergency management and planning will be undertaken in accordance with the Clough IMS and relevant procedures. In accordance with the IMS a three-tiered approach will be adopted for major incidents:

- Level 1 – on site emergencies, the *Project Specific Emergency Preparedness and Response Plan* will be adopted;
- Level 2 – emergency situations where response exceeds the capacity of site resources incidents will be coordinated by the Incident Coordination Team in accordance with *Major Incident Coordination Plan*, CORP-HSE-PL-G-0002; and
- Level 3 – an emergency situation where the incident has the potential to, or has impacted, the business in terms of, reputation, and commercial liability. Incidents will be supported by the Major Incident Management Team in accordance with Major Incident Management Plan, CORP-HSE-PL-G- 0001.

### 8.2 Environmental incidents

In the event of an environmental incident, the *HSSE Incident Notification, Investigation and Review Procedure*, CORP-HSE-PR-G-0066 will be implemented. The procedure applies to

- incidents causing harm to people, the environment and the community;
- incidents resulting in breaches to HSSE permits, consents and legal obligations; and
- near misses including High Potential Incidents and / or hazards.

Environmental incidents may include the following events caused by the works:

- chemical spills and leaks (including hydrocarbons);
- unauthorised discharge of contaminated waters to the environment;
- clearing or damage to vegetation outside of the designated clearing areas;
- unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat;
- unauthorised death or injury of native fauna;
- unauthorised impact to heritage items, artefacts or sites;
- any potential breach of legislation; and
- unauthorised dumping of waste.

All efforts will be undertaken to avoid and reduce impacts of incidents. A decision may need to be made by the supervisor and/or manager to suspend work. A supervisor/manager may request additional staff be deployed to the site to provide additional capacity or capability to manage the incident.

### 8.3 Incident reporting

All environmental incidents that occur on the project, including near miss incidents, regardless of how minor, must be reported to a supervisor by personnel involved or witnesses to the incident as soon as practicable after the incident occurs. All incidents and near misses will be reported to SecureEnergy Project Director and HSSE Manager within one hour and recorded. The site HSSE Manager or Environmental Manager (depending on the nature of incident) will be notified as soon as possible of any significant incident, or by the end of the shift for all other incidents.

Formal, documented reporting of incidents and injuries will be completed using the Incident Injury Report Form (CORP-HSE-FO-G-0035) and directly in InControl, and will be submitted to TransGrid in accordance with the requirements of the *Employers Requirements 3.0.03 Environment Property and Stakeholder Requirements*, Section 3.7.

### **8.3.1 Incident reporting in accordance with the *Environment Protection Act 2017***

New environmental protection laws will be introduced in Victoria in July 2021. For the purpose of this CEMP (and to align with the timing of the project works pending determination), SecureEnergy have adopted the new pollution incident reporting requirements which are to be introduced with these laws.

SecureEnergy will notify TransGrid as soon as practicable (and preferably immediately) after becoming aware of pollution incidents on or around the site.

Following initial verbal notification to TransGrid, SecureEnergy will notify EPA Victoria of pollution incidents on or around the site as soon as practicable, via the EPA pollution hotline (telephone 1300 372 842). The circumstances where this will take place include a pollution incident that causes or threatens “material harm”. This includes:

- if there is an adverse effect on human health or the environment, or there is an adverse effect on an area of high conservation value or of special significance; and
- if the cleanup or management of the pollution would cost \$10,000 or more.

### **8.3.2 InControl Data Entry**

All incident notifications and investigations shall be entered into the incident management system (InControl). This system shall also act as the Incident Register and allows the project to monitor and analyse incident trends. <http://inx.australia.corp.clough.com/InControl/Default.aspx>

## **8.4 Incident reporting in accordance with the Planning Permit**

To be updated with relevant Planning Permit conditions as required.

## **8.5 Other reporting and notification requirements**

To be updated with relevant legislative requirements.

## 9 Inspections, monitoring and auditing

### 9.1 Environmental inspections

Implementation of a regular program of inspections is an essential part of the success of work activities. The effectiveness of environmental protection measures described in this CEMP and sub plans will be inspected and assessed on a weekly basis. A weekly checklist for environmental inspections will be developed, with the purpose of the checklist to:

- provide a surveillance tool to ensure that safeguards are being implemented;
- identify where problems might be occurring;
- identify where sound environmental practices are not being implemented; and
- facilitate the identification and early resolution of problems.

Deficiencies and required actions will be analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed. Any non-conformances identified through the checklist process will be highlighted and an environmental inspection report (minor issues) or an environmental incident report completed.

SecureEnergy environmental staff and TransGrid environment staff will jointly undertake regular inspections of works sites, and in particular critical activities throughout construction of the project. Inspections would typically occur on a fortnightly basis depending on the complexity and anticipated risks associated with the stage of construction.

The current proposed inspection schedule is provided in Table 9.1.

**Table 9.1 - Inspection schedule**

Activity	Frequency	Location	Responsibility	Record
Daily work inspections	Daily	Immediate work area an equipment in work area	Supervisors	None – daily observation only
Pre-start equipment inspections	Daily	The equipment / machinery being used	Equipment / machinery operators	Pre-start checklist
Environmental site Inspection	Weekly	Site wide	SecureEnergy Environmental Manager or nominated representative	Site inspection checklist
Joint environmental site inspection	Fortnightly. This may also form the weekly inspection.	Site wide	TransGrid, SecureEnergy Environmental Manager or nominated representative	TransGrid inspection report
Rainfall inspection (assessed when there is a greater than 80% potential for 10mm or greater rainfall)	Within 3 hrs of the start of a rainfall event during work hours* Within 24 hours of the start of a rainfall event (or on the following working day*)	Site wide	SecureEnergy Environmental Manager or nominated representative	Site Inspection checklist

\* the events are to cause runoff to occur (i.e. when rainfall exceeds 10mm in a 24-hour period)

### 9.2 Monitoring

Monitoring will be undertaken to validate the impacts predicted for the project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements.

The timing, frequency, methodology, locations and responsibilities for the proposed monitoring is summarised in Table 9.2. The monitoring programs range from those involving formal sample collection, analysis and measurement, to those involving a more qualitative assessment.

**Table 9.2 - Environmental monitoring summary**

Activity	Management Plan	Frequency	Responsibility	Timing
To be updated upon receipt of the Vic Planning Permit information				

Irrespective of the type of monitoring conducted, the results will be used to identify potential or actual problems arising from construction processes. Where monitoring results are outside of the expected range, the following process will be implemented:

- the results will be analysed by the SecureEnergy Environmental Manager or Environmental Coordinator with the view of determining possible causes for the exceedance including a review of the potential construction activities impacting that site of the exceedance;
- a site inspection will be undertaken (where appropriate to assess potential cause); and
- where the exceedance relates to construction impacts, the mitigation measures will be reviewed.

### 9.3 Auditing

The purpose of auditing is to assess compliance with the CEMP, the Planning Permit and any relevant legal and other requirements (e.g. licences, permits, regulations, contract documentation) and to form a part of continuous improvement described in Section 1.5.1.

Audit findings will be recorded for action and close out. The action records will include details on the source of the action (e.g. audit, inspection or other), the action required, target close out date, actual close out date and the person responsible for the action item.

Whenever practicable, personnel conducting an audit will address identified deficiencies during the course of the inspection. In all other cases, the Supervisor is responsible for ensuring action and a date for completion is assigned to each outstanding action. The Environmental Manager will monitor the progress of rectification of any outstanding corrective actions.

### 9.4 Compliance management

Compliance with the approvals, licences and permits is a key objective of SecureEnergy and critical to the long-term success of Elecnor and Clough. Throughout the project, SecureEnergy will aim to clearly document our environmental requirements so that they can be easily communicated to site crews. This would be complemented by allocation of suitable skilled and experienced staff, supervisors, subcontractors and work crews trained in the application of controls and importance of environmental compliance. To ensure our obligations are met, inspections, auditing, checking and reporting will be undertaken regularly during construction.

SecureEnergy will ensure compliance with the Planning Permit conditions and other approvals, licences and permits through the implementation of the following:

- development of the CEMP and sub-plans clearly aligned with the Planning Permit conditions;
- transferring environmental obligations clearly within procedures, work method statements so that these obligations are clearly understood by work crews;
- ensure all staff, employees and subcontractors working on the site participate in a site induction which will clearly identify key environmental constraints and obligations;

- undertaking general prestart briefings and toolbox training of the specific work methods prior to works commencing;
- flagging off and clearly sign posting no go zones;
- undertaking pre-clearing inspections to identify fauna and habitat and to inform clearing process in advance of the activity;
- undertaking monitoring aligned with the requirements of the Planning Permit conditions;
- undertaking regular environmental inspection of site works;
- undertaking regular audits of construction activities and environmental compliance; and
- reporting of compliance in accordance with the Employer's Requirements.

## 10 Reporting

### 10.1 Reporting non-compliance

Where detected, any non-compliance or environmental impact exceeding specified limits are investigated by the Environmental Manager to determine the extent of the possible non-compliance. The non-compliance is corrected as soon as possible with necessary action taken to prevent recurrence.

Non-compliance with any of Approvals will be reported in the monthly environment report.

Non-compliance resulting in an incident will be managed in accordance with Section 8 of this CEMP and reported to TransGrid in accordance with the *Employers Requirements 3.0.03 Environment Property and Stakeholder Requirements*, Section 3.7.

### 10.2 Other reporting

SecureEnergy are required to prepare and submit various reports to TransGrid and to undertake reporting required under the Infrastructure Approval. A summary of these reports is provided in. This table will be updated as required by SecureEnergy following award of the project.

**Table 10.1 - Other reporting requirements**

No	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly environmental report	For incorporation in project Monthly Reports	Monthly	SecureEnergy Environmental Manager	TransGrid

### 10.3 Non-conformance, corrective and preventative action

A non-conformance is the failure to comply with the requirements of this CEMP and supporting documentation. Where a non-conformance has been identified, a correction action/preventative action will be developed and implemented to minimise the potential for recurrence. In the event of a non-conformance the following will occur:

- the nature of the event will be investigated by the Environmental Manager;
- the effectiveness or need for new/additional controls will be reviewed;
- an appropriate preventative and corrective action will be implemented;
- strategies will be identified to prevent reoccurrence;
- environmental documentation will be reviewed and revised; and
- the activities may be stopped, if necessary.

Corrective actions may be generated from a number of sources, including but not limited to incidents, audits, inspections and management reviews. Corrective actions will be systematically managed in accordance with the Clough IMS to ensure issues raised are recorded and closed out in a timely manner.

## 11 Documentation

### 11.1 Records

The SecureEnergy Environmental Manager is responsible for maintaining all environmental management documents. Further to Section 4.8, the following records are those that will be generated through delivery of the project:

- monitoring and inspection records;
- correspondence with public authorities;
- induction and training records;
- site specific records such as those prepared for dewatering and water management, out of hours works, clearing records, unexpected finds etc;
- waste classification records, waste disposal and recycling records for transporting and disposing of waste will be undertaken in accordance with EPA (Vic) publications 1827.1: *Waste classification and assessment protocol* and 1828.1: *Waste disposal categories – characteristics and thresholds*;
- plans, strategies and reports, and revisions thereof, to ensure compliance with the Infrastructure Approval;
- reports on environmental incidents, environmental non-conformances, and corrective actions;
- compliance reports, monthly reports and annual reports;
- audit reports.

All environmental management documents are subject to ongoing review and continual improvement.

### 11.2 Document and data control

The SecureEnergy Environmental Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During construction, environmental documents will be stored at the main site office and can be accessed on request to the SecureEnergy Environmental Manager.

The Project Document Control Plan will be used to control the flow of documents and data within the SecureEnergy teams and between the SecureEnergy and the TransGrid, stakeholders and sub-contractors.

Documents and data that are to be issued and liable to change will be controlled to ensure that they are approved before issue and that the current issue or revision is known to and available to those requiring them. Controlled documents and data will be uniquely identified and will bear a defined revision number recorded on each page of the document.

After a number of changes have been made to a document it will be withdrawn and reissued as a new revision. Data will be issued on a revision basis only. Obsolete documents and data may be kept for contractual or other reasons but will be clearly marked 'superseded'.



## Appendix A – Environmental Management Sub-Plans

## A.1 Biodiversity Management Sub-Plan

### A.1.1 Biodiversity aspects

A Preliminary Ecological Constraints Assessment was completed by Jacobs in 2019. Further to this, a draft *Flora and Fauna Impact Assessment – Progress Report* (F&F Assessment) was prepared by WSP in November 2020. This document remains in preparation with initial findings and findings determined by Jacobs included in this plan.

#### Conservation Parks

The alignment along the Red Cliffs spur between the NSW / Victorian border and the Red Cliffs substation runs south to south west along an existing transmission line corridor within the Kings Billabong Wildlife Reserve. The park is accessible to the public and has numerous existing tracks and existing impacts as a result of recreational activities, weed incursion and rabbits.

Kings Billabong Wildlife Reserve is considered as one of the highest-value conservation reserves in the Sunraysia area, providing habitat for a diverse range of fauna and flora including threatened species.

#### Flora

Nineteen flora species of conservation significance were recorded, with an additional 23 significant flora species considered to have a moderate or high likelihood of occurring within the study area post-survey. These species are listed within Table 3.6 of the F&F Assessment.

Three *Flora and Fauna Guarantee Act 1988* (FFG) listed flora species were recorded within the study area.

Sixteen flora species listed on the *Victorian advisory list of rare and threatened flora* (DEPI 2014) were recorded within the study area.

The numbers of each species likely to be impacted are provided in Table A.1.1.

Six additional FFG Act listed species are considered moderately to highly likely to occur but were not detected during field survey. If present, these species would be in low numbers to have not been detected during the survey, particularly within the impact area which was surveyed extensively. It is therefore unlikely that there would be significant impacts to the populations of these species from the proposal.

**Table A.1.1 - FFG listed flora and Advisory list flora species recorded in study area (WSP)**

Scientific Name	Common Name	WSP photographs	FFG Act	Victorian advisory list	Approx. count in study area	Approx. count in area to be fully cleared	Approx. count in area to be cleared above 2 m
<i>Atriplex limbata</i>	Spreading Saltbush		Listed	Vulnerable	551	331	45
<i>Atriplex rhagodioides</i>	Silver Saltbush		Listed	Vulnerable	1	0	1

Scientific Name	Common Name	WSP photographs	FFG Act	Victorian advisory list	Approx. count in study area	Approx. count in area to be fully cleared	Approx. count in area to be cleared above 2 m
<i>Eremophila maculata</i> subsp. <i>maculata</i>	Spotted Emu-bush		Listed	Rare	1	0	0
<i>Asperula gemella</i>	Twin-leaf Bedstraw		-	Rare	1	1	0
<i>Calotis cuneifolia</i>	Blue Burr-daisy		-	Rare	84	1	0
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch		-	Poorly known	7	0	0
<i>Dianella porracea</i>	Riverine Flax-lily		-	Vulnerable	31	3	9
<i>Eragrostis lacunaria</i>	Purple Love-grass		-	Vulnerable	7	0	1
<i>Eragrostis setifolia</i>	Bristly Love-grass	TBA	-	Vulnerable	7	0	2
<i>Eremophila divaricata</i> subsp. <i>divaricata</i>	Spreading Emu-bush		-	Rare	317	23	32
<i>Lepidium pseudohyssopifolium</i>	Native Peppercross		-	Poorly known	292	292	16
<i>Malacocera tricornis</i>	Goat Head		-	Rare	50	50	0

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Scientific Name	Common Name	WSP photographs	FFG Act	Victorian advisory list	Approx. count in study area	Approx. count in area to be fully cleared	Approx. count in area to be cleared above 2 m
<i>Minuria cunninghamii</i>	Bush Minuria		-	Rare	1	1	0
<i>Minuria integerrima</i>	Smooth Minuria		-	Rare	8	8	1
<i>Roepera angustifolia</i>	Scrambling Twinleaf		-	Rare	5	5	3
<i>Roepera similis</i>	White Twinleaf		-	Rare	401	401	0
<i>Sarcozona praecox</i>	Sarcozona		-	Rare	133,081*	133,081*	11,477*
<i>Swainsona microphylla</i>	Small-leaf Swainson-pea		-	Rare	15	15	5
<i>Tetragonia moorei</i>	Annual Spinach		-	Poorly known	1309	1309	115

\* Estimated based on average number counted in four 10 x 10 m quadrats and extrapolated across the area of the EVC, and area of Riverine Chenopod Woodland EVC to be impacted in each impact category.

## Fauna

Fauna surveys were undertaken across September and October 2020. Based on habitat assessments, database searches, and the results of surveys, 37 significant fauna species are considered to have a moderate or higher likelihood of occurrence in the study area.

This included three species which were recorded during the surveys being: Lace Monitor, Brown Treecreeper, and Yellow-faced Whip Snake.

## ***MNES threatened species***

### ***Regent Parrot***

Regent Parrot is listed as vulnerable under the EPBC Act, is listed under the FFG Act, and is vulnerable on the Advisory list of threatened fauna.

The WSP F&F Assessment determined that the study area is likely to provide suitable habitat and that there was a recent public observation of the species within Kings Billabong Wildlife Reserve (early 2020, Ebird).

Surveys targeted the large hollow-bearing trees along the Murray River where the species is considered most likely to breed, as well as potential foraging habitat in the woodland. The species was not recorded during targeted surveys, and the habitat in the study area was considered unlikely to be frequently utilised or currently used for breeding.

### ***Corben's Long-Eared Bat***

Corben's Long-eared Bat is listed as vulnerable under the EPBC Act, is listed under the FFG Act and is endangered on the Advisory list of threatened fauna. There are no previous records of this species within a 10-kilometre radius in the Victorian Biodiversity Atlas however the species was recorded on the other side of the Murray River for surveys for the NSW Western Section EnergyConnect project.

Assessment in progress.

### ***Fork-Tailed Swift Long-Eared Bat***

Fork-tailed Swift is listed as migratory under the EPBC Act.

The F&F Assessment reported a recent public observation of this species at Kings Billabong Wetlands (December 2019, Ebird). The F&F Assessment determined that the study area provides potential foraging habitat only and as such, the habitat in the study area is unlikely to be of high significance to the species.

### ***Sharp-Tailed Sandpiper***

Sharp-tailed Sandpiper is listed as migratory under the EPBC Act.

There are nearby past observations of this species at Lake Hawthorn and Lake Ranfurly at Mildura (Ebird). The species usually requires mudflat wetland habitat which is not present at the study area but there is the potential for it to occur in the saltmarsh area should it be inundated. Impact of this intermittent potential habitat is largely being avoided by the project.

## ***FFG listed species***

### ***Flora***

Three FFG listed flora species were recorded within the study area being: Spreading Saltbush, Silver Saltbush and Spotted Emu-bush. Six additional FFG Act listed species are considered moderately to highly likely to occur but were not detected during field survey.

### ***Fauna***

This assessment is currently being finalised.

### ***Vegetation***

This assessment is currently being finalised.

## Significant Trees

Approximately 39 large trees and 145 habitat trees (ten only with nests) were identified within the impact area (this includes within 15-20 metres of the impact area). The location of the significant trees is identified within Figure 3-10 of the F&F Assessment.

The F&F Assessment reported no Scattered Trees are present in the study area however 18 large trees in patches are located within the impact footprint and are proposed to be impacted through clearance for construction or cutting to 2 metres for the transmission line corridor. A total of 50 habitat trees (mostly hollow-bearing trees) are also proposed to be removed/impacted, 15 of which are also large as per the Ecological Vegetation Class benchmark. This amounts to a total of approximately 131 hollows, most of which are small or medium sized.

The F&F Assessment also reported all of the significant trees within the impact footprint are Black Boxes or stags (dead trees); none are living River Red Gums. However, we note that there are three large River Red Gums along the Murray River which occur just across the NSW/Victoria boundary, but on the Victorian side of the river.

## Wetlands




No Ramsar wetlands occur within the Victorian section of the project. Hattah-Kulkyne Lakes is the closest Ramsar wetland at around 50 kilometres to the SE of the project.


However, parts of Kings Billabong Park have high river health and biodiversity values (VEAC 2007) with the wetlands in the park listed on the Directory of Important Wetlands (Environment Australia 2001). Part of this nationally important wetland occurs nearby the proposal study area, with one part of the wetland complex approximately 50 metres from the study area boundary (not including the access track into the site which passes close to it) and approximately 100 metres from the existing transmission line.

## Weeds

The F&F Assessment identified four listed weeds under the *Catchment and Land Protection Act 1994* (CaLP Act), with three also listed as Weeds of National Significance. These weeds are listed in Table A.1.2.

**Table A.1.2 - Significant weeds**

Scientific name	Common name	Image	CALP Act status	Weed of National Significance	Presence across study area
<i>Asparagus asparagoides</i>	Bridal Creeper		Restricted	Yes	Only 2 records at the southern end of the study area
<i>Juncus acutus subsp. acutus</i>	Spiny Rush		Restricted	No	Small patch around the base of southern most tower.
<i>Lycium ferocissimum</i>	African Box-thorn		Regionally Controlled	Yes	Four records within Riverine Chenopod Shrubland EVC toward the southern part of the study area.

Scientific name	Common name	Image	CALP Act status	Weed of National Significance	Presence across study area
<i>Opuntia spp.</i>	Prickly Pear		Restricted or controlled depending on species, more than one species recorded including <i>Opuntia robusta</i> (Regionally controlled)	Yes	Scattered throughout Riverine Chenopod Woodland EVC, currently small infestations only
Additional weeds to be added to table					

### A.1.2 Biodiversity management measures

Specific measures and requirements relevant to the management of biodiversity are outlined in Table A.1.



Table A.1 - Biodiversity management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
B1	Training will be provided to all project personnel, including relevant sub-contractors on the biodiversity requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
B2	Sensitive area plans will be developed and implemented to assist with the identification and communication of the project environmentally sensitive areas.	Construction	Environmental Manager / Environmental Coordinator	Good practice
B3	A project ecologist will be appointed prior to the commencement of construction.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
B4	An arborist will be engaged to survey the vegetation / trees which require removal under the transmission lines. Any trimming of this vegetation will be based on detailed design and the arborist's survey.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Employer's Requirements
<b>Clearing</b>				
B5	A Clearing Procedure will be developed for the project, incorporating a clearing permit process.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
B6	Clearing limits/exclusion zones will be established prior to clearing commencing and will include the installation of flagging and/or signage to identify no-go zones and sensitive areas. Any threatened flora present within the easement will also be identified. Delineation will be installed consistently through the project to delineate sensitive areas and to reduce the risk of error or misinterpretation of boundaries.	Pre-construction and construction	Supervisor / Construction Manager / Environmental Manager	Good practice
B7	Habitat trees within areas to be cleared will be marked during the pre-clearing inspection by the Ecologist. GPS coordinates for all habitat trees identified will be recorded during the pre-clearing survey.	Pre-construction and construction	Ecologist	Good practice
B8	The project ecologist will be present during all removal of habitat trees or features to capture and relocate any encountered fauna.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
B9	Non-habitat vegetation will be removed first. Identified habitat (e.g. hollow-bearing trees) will be left for at least 24 hours after removing non-habitat vegetation to allow fauna to escape.	Pre-construction and construction	Supervisor / Construction Manager / Environmental Manager	Good practice
B10	Specialised plant (such as excavators with shears or elevated work platforms) will be used for the clearing of vegetation at height, where understorey needs to be maintained.	Pre-construction and construction	Supervisor / Construction Manager / Environmental Manager	Good practice
B11	A Fauna Handling Procedure will be developed for the project. The following will occur to protect fauna that may enter the project:	Pre-construction and construction	Environmental Manager / Environmental Coordinator / Supervisor	Good practice

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
	<ul style="list-style-type: none"> <li>fauna which enter the site, that are uninjured and able to freely leave, will be left to leave of their own accord;</li> <li>fauna observed on the work site which are injured or trapped (i.e. require relocation) will be relocated. Handling of injured fauna will be carried out (where possible) by licensed fauna handlers such as the ecologist;</li> <li>injured fauna will be captured and transported to the local veterinarian and / or wildlife care group.</li> </ul>			
B12	In the event that threatened species or endangered ecological communities are unexpectedly identified during construction the Unexpected Threatened Species Procedure will be followed.	Pre-construction and construction	Supervisor / Construction Manager / Environmental Manager	Good practice

## A.2 Aboriginal and Non-Aboriginal Heritage Management Sub-Plans

### A.2.1 Heritage aspects

#### Aboriginal Heritage

A preliminary search of Aboriginal objects, sites and places registered on the Aboriginal Cultural Heritage Register and Information System (ACHRIS) within the Victorian section of the study area was undertaken on 24 April 2019 by Jacobs. The search was based within Red Cliffs and its vicinity.

An Aboriginal Cultural Heritage Assessment is currently being prepared by Ochre Imprints. The findings of this assessment will be included within the Cultural Heritage Management Plan which is being separately prepared. The Registered Aboriginal Party for the project are the First People of the Millewa-Mallee Aboriginal Corporation.

#### Historic Heritage

As part of the assessment of the project works, the *Historical Cultural Heritage Due Diligence – Report to NSW Electricity Operations Pty Ltd* (Heritage Assessment) was prepared by Ochre Imprints in August 2020.

Evidence from the land use history and historical site review found that one site is present within the study area that is currently listed on the Mildura Planning Scheme Heritage Overlay. This site, HO168, as mapped on the Heritage Overlay, extends over a parcel of land (SPI 1\TP12019) located at the southern end of the study area.

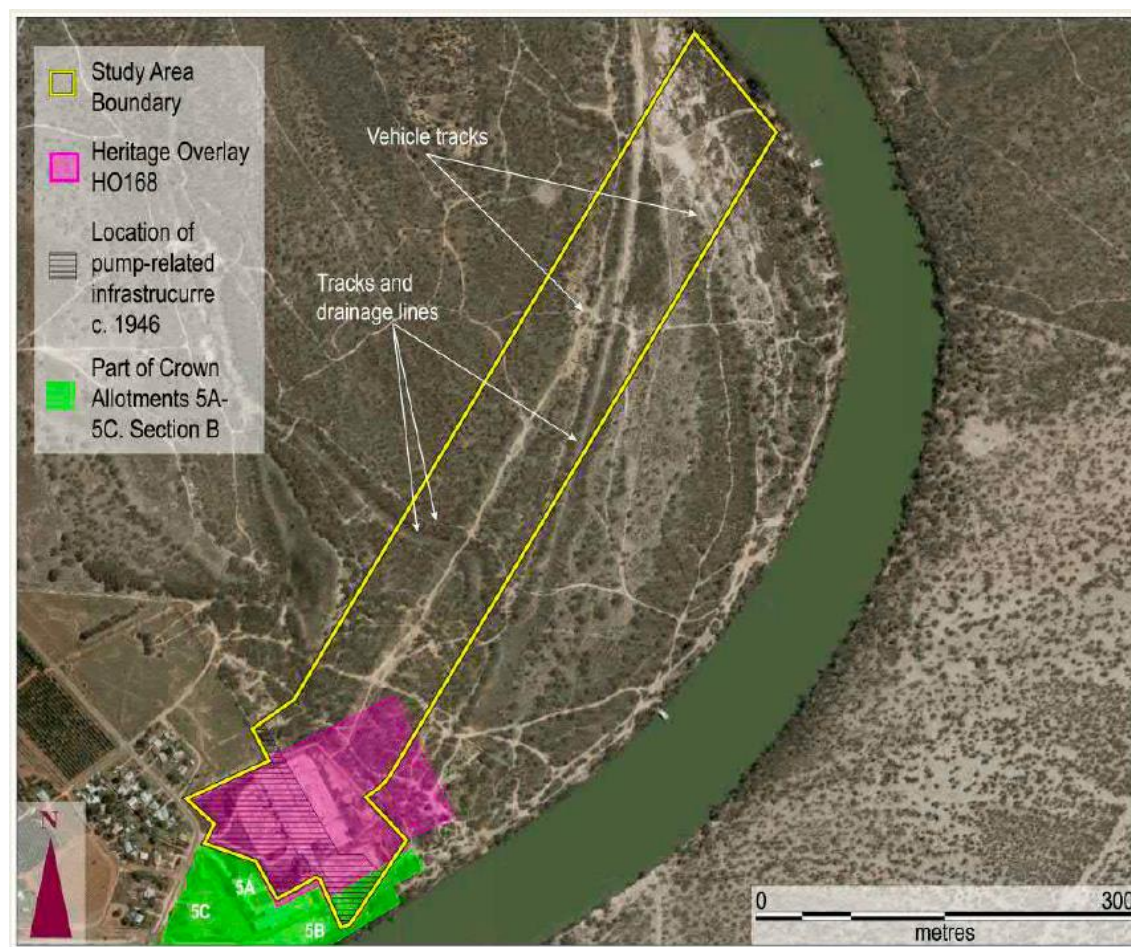


Figure A.2.1 – Location of HO168 and pumping plant infrastructure in 1946 (Ochre Imprints)

One historical glass artefact scatter was identified on a vehicle track in the central portion of the activity area. The scatter contained neck and base fragments which appeared to have come from small to medium sized glass bottles. Fragments of coloured and clear glass were identified and ranged in size from small (20mm) to medium (70mm). A metal object was identified adjacent the western boundary of the terminal station, and is likely associated with the c. 1922 Red Cliffs Main Pumping Station.

The Heritage Assessment does note the Heritage Overlay has been incorrectly mapped, which has been confirmed with council. A permit would not be required to work within this overlay, however an unexpected finds protocol should be incorporated into the CEMP for impact to any un-recorded heritage.

### **A.2.2 Heritage management measures**

The environmental management measures relevant to this aspect are listed Table A.2 below.

Table A.2 - Aboriginal and non-Aboriginal management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
H1	Training will be provided to all project personnel, including relevant sub-contractors on Aboriginal and non-Aboriginal heritage requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
H2	Sensitive area plans will identify the location of Aboriginal and Non-Aboriginal sites.	Construction	Community Manager / Environmental Manager	Good practice
H3	For areas avoided by construction, exclusion zones would be put implemented to ensure archaeological deposits are not incidentally damaged. These would be fenced with parawebbing or some other similar fencing that would exclude entry by people or plant to avoid incidental impacts on the site.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
<b>Aboriginal Heritage</b>				
H4	Construction of the development will be carried out in accordance with the requirements of the Cultural Heritage Management Plan (separate document which is being prepared). This plan should be referred to for the management of any Aboriginal heritage matters.	Construction	TransGrid / Environmental Manager / Environmental Coordinator	Baseline conditions and legislation
<b>Historic Heritage</b>				
H5	Works which impact on the HO168 overlay will be limited to the designated impact area.	Pre-construction and construction	Supervisor / Construction Manager / Environmental Manager	Historical Cultural Heritage Due Diligence
<b>Unexpected finds</b>				
H6	If at any time during construction unidentified heritage items, materials, features and/or deposits are found, the Unexpected Heritage Items Finds Procedure will be implemented.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Historical Cultural Heritage Due Diligence

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## A.3 Soil and Water Quality Management Sub-Plan

### A.3.1 Soil and water quality aspects

WSP undertook a *Hydrology and Flooding Assessment* in November 2020. The following aspects of the project were reported within the assessment.

The project is located adjacent to the Murray River (refer Figure A.3.1), which is Australia's longest river at about 2,500 kilometres long. It has its headwaters in the Australia Alps and runs west to South Australia. The Murray River runs along the border of the Lower Darling and Lower Murray catchments, however is located in NSW.

The Lower Murray River systems have been modified with a weir system that is highly regulated, making it difficult to return flow to pre-development conditions. Threats to the river system, including flow regulation, over extraction of water, and the construction of structures are leading to a decline in the health of the system.

The project is located within at the southern reach of Kings Billabong Park, which contains important wetlands including Ducksfoot Lagoon and Baggs Lagoon. The Kings Billabong is listed on the Australian Government Directory of Important Wetlands which means it is considered a nationally significant wetland.

#### Climate and rainfall

The closest weather station at Mildura (Irymple, station number: 076015) records an average annual rainfall of 271 millimetres (1908-2020). Rainfall is typically fairly evenly spread across the year, with higher rainfall values in Winter and Spring

The region is semi-arid with hot summers and cool winters. The average temperature range is 16-33°C in Summer and 16-4°C in Winter.

#### Flooding

The project is located within area subject to inundation as identified by the Mildura Planning Scheme and the DELWP online mapping tool. These documents indicate the project to be located within a floodway.

A preliminary flood risk assessment was completed by Beca to understand the existing flood risk in the project area at the Murray River. Based on the risk assessment, the project is located within the floodplain of the Murray River.

#### Groundwater

WSP reported that depth to the water table at the site is inferred to be five to ten metres below ground level (mBGL). No registered groundwater bores are identified within 1000 metres of the site boundary, with the closest bores located 1050 metres away to the west of the site and listed for observation/investigation purposes

#### Geology

The proposal study area lies within geological deposits of:

- Alluvium (Qa1): Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits within the northern portion of the site
- Woorinen Formation (Qxw): Dune deposits, unconsolidated; mainly red-brown siliceous silty sand, red calcareous silty clay, and sand clay within the southern portion of the site.

#### Acid sulfate soils

Acid sulfate soil is identified within the site however has an extremely low probability of occurrence.



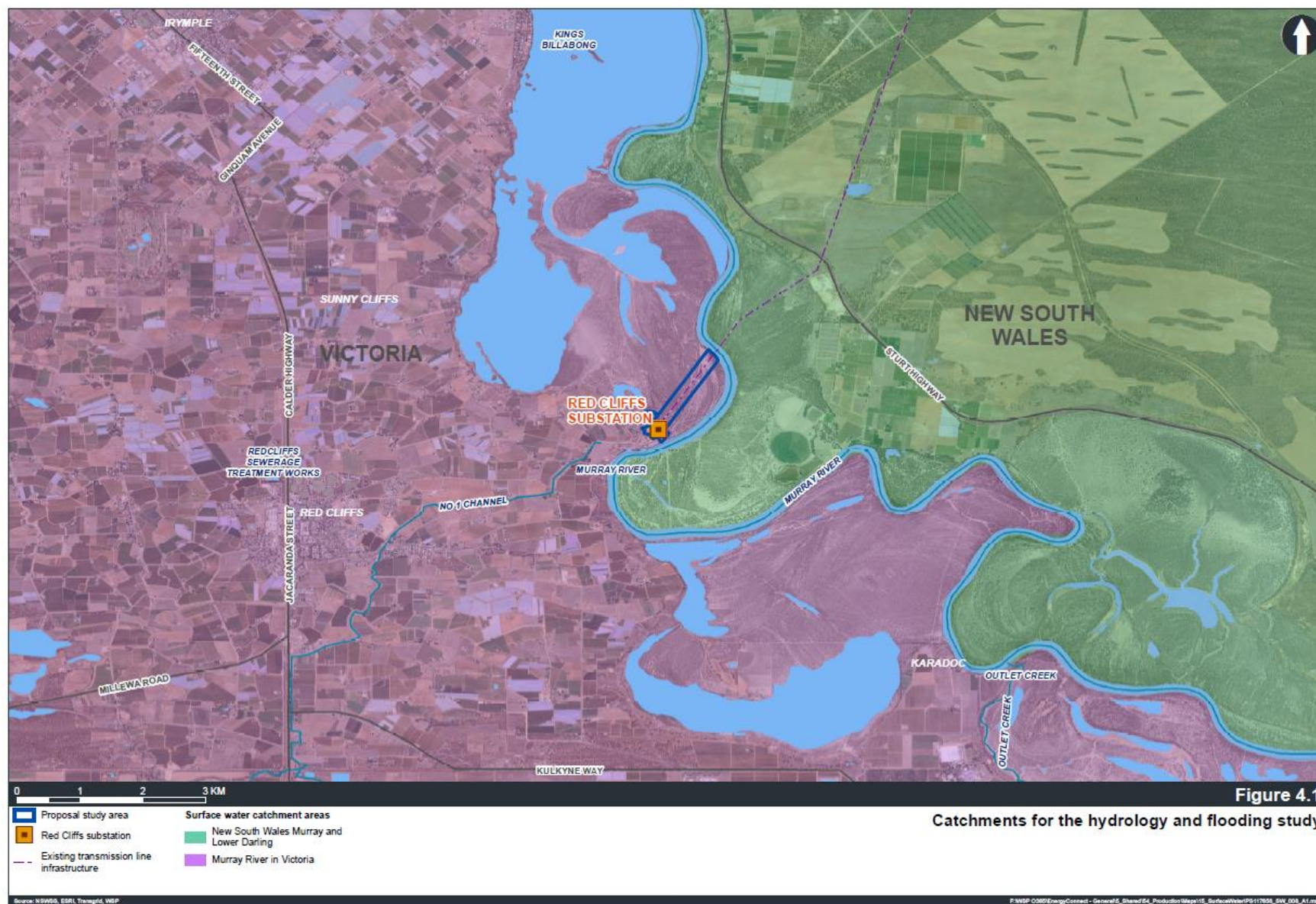


Figure A.3.1 – Surface water catchment areas

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## Contamination

The site is currently zoned as Public conservation and resource zone (PCRZ) and Special Use Zone – Schedule 5 (SUZ5) with Environmental Significance Overlay (ESO1), Land Subject to Inundation Overlay (LSIO), Environmental Audit Overlay (EAO) (existing substations) and Heritage Overlay (HO168) (existing substations).

WSP undertook a preliminary site investigation (PSI) of a 200 metre wide corridor that extends for about 1.3 kilometres and extends from the Red Cliffs substation, to the north east where it meets the Victorian/NSW border near the Murray River.

A search of the EPA Priority Sites Register was conducted (September 2020 by Lotsearch) and indicated no EPA priority sites exist on site or in the vicinity of the site.

Potentially nearby contaminating activities were identified at the following locations:

- Red Cliffs Main Pumping Station immediate south of the site;
- agricultural land (further southwest of the site);
- bushland (onsite and surrounding land); and
- substation (adjacent to proposed work area which would only be outside substation fence line).

The potential key contaminants have been identified in the following locations as indicated in Table A.3.1.

**Table A.3.1 – Locations and associated COPC**

Locations	Historical and current site activity	COPC
Red Cliff Main Pumping Station (Immediate to the south of the site)	<ul style="list-style-type: none"> <li>• Importation of fill for the use as building material during construction</li> <li>• Associated chemicals used during operation</li> </ul>	<ul style="list-style-type: none"> <li>• Asbestos containing material (ACM)</li> <li>• Polychlorinated biphenyl (PCB)</li> <li>• Metals</li> <li>• Coal fragments</li> </ul>
Agricultural land (further southwest of the site)	<ul style="list-style-type: none"> <li>• Potential application of pesticides and herbicides</li> </ul>	<ul style="list-style-type: none"> <li>• Pesticides and herbicides (OCPs and OPPs)</li> <li>• Metals and metalloids</li> </ul>
Bushland (onsite and surrounding land)	<ul style="list-style-type: none"> <li>• Camping activities</li> <li>• Bushfire</li> <li>• Miscellaneous waste dumping (building rubble etc)</li> </ul>	<ul style="list-style-type: none"> <li>• Petroleum hydrocarbons (TPH)</li> <li>• Benzene, toluene, ethylbenzene and xylene (BTEX)</li> <li>• Polycyclic aromatic hydrocarbons (PAHs)</li> <li>• Per and poly-fluoroalkyl substances (PFAS)</li> <li>• ACM</li> </ul>
Substation (onsite)	<ul style="list-style-type: none"> <li>• Importation of fill for use as building material during construction</li> <li>• Associated chemicals used during operations</li> <li>• Site maintenance (weed management)</li> </ul>	<ul style="list-style-type: none"> <li>• ACM</li> <li>• PCB</li> <li>• PAHs</li> <li>• Metals</li> <li>• Herbicides</li> </ul>

Based on a review of the available current and site history data, WSP concluded that:

- the potential importation of contaminated fill material (of unknown origin) may have been used mainly at the southwest portion (substation infrastructure);
- the potential for lateral migration of dissolved phase impacts within the groundwater is unknown;



- an intrusive soil assessment should be undertaken prior to the planned construction works, so that any potential human health and/or environmental risk can be assessed and managed; and
- soil testing should be undertaken for waste classification purposes in the event that soils are excavated during the planned construction works that require offsite disposal.

### A.3.2 Water quality objectives

#### Murray-Darling Basin Plan

The *Murray–Darling Basin Plan* (Basin Plan 2012) aims to provide a coordinated approach to water use across the Murray–Darling Basin's four states and the Australian Capital Territory.

The Basin Plan 2012 sets water quality targets and objectives to protect water quality in the Basin's rivers for people and livestock as well as for wetlands and floodplains. Schedule 11 of the Basin Plan 2012 outlines water quality zones and provides water quality targets which are used to assess water quality at inland monitoring stations. These replace the previous default trigger values for slightly disturbed ecosystems listed in the National Water Quality Management Strategy and are reproduced in the water resource plans for each subcatchment.

The Basin Plan 2012 and water resource plans provide values for Ramsar declared wetlands and 'Other water dependent ecosystems'. Table A.3.2 shows the targets for 'Other water dependent ecosystems'.

**Table A.3.2 - Water quality targets under the Basin Plan 2012 for 'Other water dependent ecosystems'**

Water Quality Zone	Turbidity (NTU) (Annual median)	pH	Total Nitrogen (ug/L)	Total Phosphorous (ug/L)	Dissolved oxygen (mg/L or % saturation) (Annual median)	Pesticides, Heavy metals and other toxic contaminants <sup>1</sup>
Lower Central Murray (cMI)	35	6.5 - 8	700	80	>8mg/L or 90-110%	The protection of 95% of species

(1) Refer to values in Table 3.4.1 of the ANZECC Guidelines (must not be exceeded)

#### Water Resource Plans

The Basin Plan 2012 requires the preparation of Water Resource Plans (WRP). The project is governed by the Victorian Murray Water Resource Plan. The Victorian Murray Water Resource Plan includes water quality objectives and targets for the relevant target application zones.

The Basin Plan 2012 and water resource plans provide values for Ramsar declared wetlands and 'Other water dependent ecosystems'. Table A.3.3 shows the targets for 'Other water dependent ecosystems'.

**Table A.3.3 - Water quality targets under the Victorian Murray Water Resource Plan – Murray and Western Plains (Slightly to moderately modified)**

WRP area	Turbidity (NTU)	pH	Total Nitrogen (ug/L)	Total Phosphorous (ug/L)	Dissolved oxygen (% saturation)		Toxicants (% protection)
Lowlands of Campaspe, Loddon, Avoca, Wimmera and Mallee basins	75 <sup>th</sup> percentile	25 <sup>th</sup> - 75 <sup>th</sup> percentile	75 <sup>th</sup> percentile	75 <sup>th</sup> percentile	25 <sup>th</sup> percentile	Maximum	95% level of protection <sup>1</sup>
	≤40	6.8-7.8	≤900	≤50	≥65	130	

1) Refer to values in table 3.4.1 of the ANZECC Guidelines (must not be exceeded)

Table A.3.4 shows the applicable Victorian end of valley salinity targets.

**Table A.3.4 - Salinity (electrical conductivity) End-of-Valley targets under the Victorian Murray Water Resource Plan**

End of Valley Basin	Mean salt load per year (T/yr)	End of Valley targets (absolute value)	
		Median (50%ile)	Peak
River Murray at Lock 6 (Gauging Site 426200)	+15 EEC <sup>12</sup>	-	412

<sup>1</sup> Equivalent Electrical Conductivity – refer to Basin Salinity Management Strategy Operational Protocols Version 2.0, Murray-Darling Basin Commission, Figure 4, pg. 100.

### State Environment Protection Policy (Waters)

The *State Environment Protection Policy (Waters)* (SEPP (Waters)) sets the framework for the protection of the uses and values of Victoria's surface water environments.

Table 1 of Schedule 3 of SEPP (Waters) sets out the water quality objectives for key environmental indicators. The values for the objectives and indicators are shown in Table A.3.5.

**Table A.3.5 - Environmental quality indicators and objectives for Murray and Western Plains – Lowlands of Campaspe, Loddon, Avoca, Wimmera and Mallee basins**

Environmental Quality Indicators	Environmental Quality Objectives
Total Phosphorous (ug/L) 75 <sup>th</sup> percentile	≤50
Total Nitrogen (ug/L) 75 <sup>th</sup> percentile	≤900
Dissolved oxygen (percent saturation) <ul style="list-style-type: none"> <li>25<sup>th</sup> percentile</li> <li>Maximum</li> </ul>	≥65 130
Turbidity (NTU) 75 <sup>th</sup> percentile	≤40
Electrical conductivity (uS/cm@25°C) 75 <sup>th</sup> percentile	≤2000
pH (pH unit) <ul style="list-style-type: none"> <li>25<sup>th</sup> percentile</li> <li>75<sup>th</sup> percentile</li> </ul>	≤6.8 ≤7.8
Toxicants Water (% protection)	95
Toxicants Sediment	Low

### Summary of existing water quality

WSP reviewed reports which assessed the water quality values of the Murray River (refer Section 4 of the *Hydrology and Flooding Assessment*).

Overall, it was found that the waterway (Murray River) near the project often achieves the water quality targets identified for the project which are listed in Table 2 above (ie Table A.3.3 - of the *Hydrology and Flooding Assessment*).

### A.3.3 Soil and water quality management measures

The environmental management measures relevant to this aspect are listed in Table A.3 below.

Table A.3 - Soil and water quality management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
SW1	Training will be provided to all project personnel, including relevant sub-contractors on soil and water quality requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
SW2	Install a sealed receptacle on site to allow for residues from concrete chutes. Concrete may be discharged into prepared excavations/formwork or designated waste receptacles only.	Construction	Environmental Coordinator / Supervisor	FL03 Hydrology and Flooding Impact Assessment
<b>Erosion and sediment control</b>				
SW3	Erosion and sediment control practices and / or measures will be undertaken in accordance with the relevant requirements of: <ul style="list-style-type: none"> <li>Environmental guidelines for major construction sites, EPA, 1996;</li> <li>Construction Techniques for Sediment Pollution Control, EPA, 1991</li> </ul>	Construction	Supervisor / Construction Manager / Environmental Manager	FL02 Hydrology and Flooding Impact Assessment
SW4	An initial Erosion and Sediment Control Plan will be prepared, with Progressive Erosion and Sediment Control Plans developed as the site changes.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
SW5	Controls will be installed early to assist with sediment control. Controls will include the following: <ul style="list-style-type: none"> <li>construction access routes will be stabilised if damage is anticipated;</li> <li>disturbed areas that are available for stabilisation (revegetation) must be stabilised to prevent erosion. Measures should be put in place to achieve 60% ground cover (or equivalent) for final stabilisation works;</li> <li>excess spoil will be stockpiled and stabilised to minimise erosion (such as covering or compacting);</li> <li>stockpiles are to be located clear of drainage areas or steep areas where possible. The stockpiles will be located in a position so that they do not encroach upon the Murray River, a footpath, nature strip or road;</li> <li>waste spoil which is required to be removed from site will be classified and disposed of in accordance with VIC EPA requirements &amp; TransGrid's Waste Management Procedure / Spoil Management Work Instruction;</li> <li>sediment filters or management structures should be used where there is a risk of sediment entering drainage structures / waterways or migrating off site;</li> <li>controls will be maintained;</li> <li>vehicle access / egress will be managed to minimise tracking of material onto paved surfaces / roads, particularly during or following wet weather events;</li> </ul>	Construction	Supervisor / Construction Manager / Environmental Manager	FL03 Hydrology and Flooding Impact Assessment

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ID	Measurement / Requirement	When to implement	Responsibility	Source document
	<ul style="list-style-type: none"> <li>all disturbed areas where works are complete will be progressively stabilised.</li> </ul>			
SW6	Areas of disturbance during construction will be minimised, including disturbance to riparian areas and waterways.	Construction	Supervisor / Project Engineer / Environmental Coordinator	Good Practice
SW7	Clean and dirty water runoff will be adequately separated to avoid mixing where possible through the use of diversions, clean water drains, and the early installation of permanent drainage infrastructure.	Construction	Supervisor / Project Engineer / Environmental Coordinator	Good Practice
SW8	Site obtained mulch will be utilised as a means of erosion and sediment control.	Construction	Supervisor / Environmental Coordinator	Good Practice
<b>Acid sulfate soils / contaminated soils</b>				
SW9	Where possible, saline, acid sulfate or contaminated soils should be avoided and where not possible would be dealt with in line with the relevant guidelines and contaminated land procedures.	Pre-construction and construction	Construction Manager / Environmental Manager	FL03 Hydrology and Flooding Impact Assessment
SW10	An intrusive soil assessment should be undertaken prior to the planned construction works, so that any potential human health and/or environmental risk can be assessed and managed accordingly.	Pre-construction	TBD	Phase 1 Preliminary Site Investigation
SW11	Soil testing should be undertaken for waste classification purposes in the event that soils are excavated during the planned construction works that require offsite disposal.	Pre-construction and construction	Construction Manager / Environmental Manager	Phase 1 Preliminary Site Investigation
SW12	Excavated soil/material from the Environmental Audit Overlay area that is confirmed to be contaminated is not to be spread to surrounding areas.	Construction	Construction Manager / Environmental Manager	Good Practice
<b>Flooding</b>				
SW13	A flood emergency management procedure would be prepared for the construction works of transmission line structures located within flood prone land. The procedure would complement the existing Mildura Local Flood Plan arrangements and would provide a series of activities that need to take place should a flood event occur. These activities would focus on the flood emergency and then during the recovery period to assist with starting work again as soon as possible after the flood event. The procedure would be in place before construction in these areas commences.	Pre-construction and construction	Environmental Manager / Safety Manager	FL03 Hydrology and Flooding Impact Assessment
<b>Spill response</b>				
SW14	Emergency spill response protocols will be implemented in the event of a spill.	Construction	Supervisor / Construction Manager / Environmental Manager	Good Practice

ID	Measurement / Requirement	When to implement	Responsibility	Source document
SW15	Fuel and chemical storage areas will be bunded.	Construction	Supervisor / Project Engineer / Environmental Coordinator	Good Practice
SW16	Any refuelling by hand will occur in a location that minimises the potential for soil and water contamination if spillage occurs, (e.g. on an impervious surface, ute trays, inside a container etc).	Pre-construction and construction	Supervisor / Project Engineer / Environmental Coordinator	Good Practice
<b>Unexpected finds</b>				
SW17	If potentially contaminated material or soils is encountered, the Unexpected Discovery of Contaminated Land Procedure will be followed. Works in the vicinity will be stopped or modified and will not recommence until the material has been analysed and management measures developed to address disposal of contaminated waste, soil vapour risk and potentially impacted groundwater.	Construction	Supervisor / Construction Manager / Environmental Manager	Good Practice
<b>Monitoring</b>				
SW18	Monitoring weather conditions and preparing for periods of heavy rainfall.	Construction	Supervisor / Project Engineer / Environmental Coordinator	Good Practice
SW19	Monitoring of receiving waters where required during periods of discharge.	Construction	Environmental Coordinator	Good Practice

## **A.4 Traffic and Transport Management Sub-Plan**

### **A.4.1 Traffic and transport management measures**

The environmental management measures relevant to this aspect are listed in Table A.4 below.

Table A.4 - Traffic and transport management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
TT1	Training will be provided to all project personnel, including relevant sub-contractors on traffic and transport requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
TT2	A Traffic Management Plan will be prepared and will identify the construction traffic management measures to be implemented on public roads during construction of the transmission line.	Construction	Environmental Manager / Environmental Coordinator	Good practice
TT3	Liaising with the relevant road authorities and councils regarding traffic impacts and management in accordance with SecureEnergy's Community and Stakeholder Relations Management Plan.	Pre-construction and construction	Construction Manager / Project Engineer	Good practice
TT4	Keeping the community informed of traffic impacts and traffic changes in accordance with SecureEnergy's Community and Stakeholder Engagement Plan.	Pre-construction and construction	Community Manager	Good practice

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## A.5 Noise and Vibration Management Sub-Plan

### A.5.1 Noise and vibration aspects

The project area is located in the Kings Billabong Park, Red Cliffs which is within the Mildura Local Government Area. There is a small rural subdivision to the west of the site with limited residential dwellings located within 200 metres of the project area. Noise and Vibration sensitive receivers associated with the project are shown in Figure A.5.1.



**Figure A.5.1 Noise sensitive receivers**

Existing noise conditions in the majority of the project area are expected to be influenced by environmental noise (e.g. wildlife calls, wind-blown vegetation), operation and maintenance activities associated with the existing substation, agricultural machinery and vehicles travelling on the surrounding road network (namely Woomera Avenue and Lee Street).

### A.5.2 Noise and vibration management measures

The environmental management measures relevant to this aspect are listed in Table A.5 below.



Table A.5 - Noise and vibration management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
NV1	Training will be provided to all project personnel, including relevant sub-contractors on noise and vibration requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
NV2	Undertaking preconditions surveys of existing structures and buildings etc where there is a risk of damage from vibration during construction.	Pre-construction	Construction Manager / Project Engineer	Good practice
NV3	Undertaking works during approved working hours.	Construction	Supervisor / Construction Manager / Environmental Manager	Good practice
NV4	Developing and implementing an Out of Hours Works Protocol for works unable to be undertaken during standard working hours.	Pre-construction and construction	Environmental Manager / Supervisor / Construction Manager	Good practice
NV5	Regularly updating the community and sensitive receivers on the progress of works, expected noise and vibration impacts and out of hours works in accordance with SecureEnergy's Community and Stakeholder Relations Management Plan.	Pre-construction and construction	Community Manager	Good practice
NV6	Managing complaints in line with SecureEnergy's Community and Stakeholder Relations Management Plan.	Construction	Community Manager	Good practice
NV7	Timetabling noise generating works around sensitive periods in the vicinity of potentially affected community, religious, educational institutions, theatres, laboratories, operating theatres and the like or making alternative arrangements with them.	Construction	Supervisor / Construction Manager / Community Manager	Good practice
NV8	Monitoring noise and vibration impacts (as required) and management measure effectiveness throughout construction.	Construction	Environmental Coordinator	Good practice

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## **A.6 Air Quality Management Sub-Plan**

### **A.6.1 Air quality aspects**

Ambient air quality within the project area would be characteristic of a rural area and is affected by a number of factors including topography, prevailing meteorological conditions and local and regional sources of potential air pollution.

Existing sources of air pollution within the local setting are limited, consisting primarily of dust and vehicle/machinery exhaust emissions associated with public access use in Kings Billabong Park and transport along roads in the area.

The site is located approximately five kilometres away from Red Cliffs, a town with a population of approximately 5000 people. The closest residential receiver is approximately 170 metres to the west.

### **A.6.2 Air quality management measures**

The environmental management measures relevant to this aspect are listed in Table A.6 below.

Table A.6 - Air quality management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
AQ1	Training will be provided to all project personnel, including relevant sub-contractors on air quality control practices and the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
AQ2	Control measures including water carts, sprinklers, sprays or dust screens will be utilised where applicable to manage dust emissions. The frequency of use will be modified to accommodate prevailing conditions.	Construction	Supervisor / Construction Manager / Environmental Manager	Good practice
AQ3	Using water carts or other similar devices where practicable to control dust in areas in close proximity to sensitive receivers.	Construction	Supervisor / Construction Manager / Environmental Manager	Good practice
AQ4	Disturbed areas will be progressively rehabilitated once available.	Construction	Supervisor / Construction Manager / Environmental Manager	Good practice
AQ5	Waste will be segregated and collected on a regular basis to ensure odours associated with waste are minimised.	Construction	Supervisor / Construction Manager / Environmental Manager	Good practice
AQ6	There will be no burning off of waste.	Construction	Supervisor / Construction Manager	Good practice
AQ7	Ensuring plant and equipment is adequately maintained in accordance with the manufacturer's requirements. Any plant, equipment or machinery will be immediately switched off should there be visible signs of smoke emissions emitting from equipment/machinery.	Construction	Supervisor / Construction Manager	Good practice
AQ8	Monitoring air quality impacts and management measure effectiveness throughout construction (as required).	Construction	Environmental Coordinator	Good practice

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## **A.7 Waste and Resource Management Sub-Plan**

### **A.7.1 Waste management measures**

The environmental management measures relevant to this aspect are listed in Table A.7 below.

Table A.7 - Waste and resource management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
WR1	Training will be provided to all project personnel, including relevant sub-contractors on waste minimisation from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
WR2	Regular visual inspections will be conducted to ensure that work sites are kept tidy and to identify opportunities for reuse and recycling.	Construction	Environmental Manager / Environmental Coordinator	Good practice
WR3	Waste will be managed and disposed of in accordance with the relevant legislative requirements. Wastes that are unable to be reused or recycled will be disposed of at a licensed waste management facility, or premises lawfully permitted to accept the materials.	Construction	Supervisor / Construction Manager / Environmental Coordinator	Good practice
WR4	A waste register will be maintained, detailing types of waste collected, amounts, date/time and details of disposal.	Construction	Environmental Coordinator	Good practice

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## A.8 Bushfire Management Sub-Plan

### A.8.1 Bushfire aspects

A *BushFire Management Strategy* was prepared by Australian Bushfire Protection Planners Pty Ltd in November 2020.

The *Bushfire Management Strategy* included a bushfire hazard landscape assessment in Section 4. The findings of the assessment are reported below.

#### Land use and landscape

The Kings Billabong Park dominates the landscape in the north west and for a small portion of land to the east. These vegetation communities were found to provide a bushfire hazard.

The land is generally level with no notable slope aspects.

#### Bushfire history

The Victoria Department of Environment, Land, Water & Planning Spatial Datamart (October 2020) identified that the last bushfire to impact the vegetation immediately to the west of the project was in 2001, with fires occurring further west in Kings Billabong Park in 2004 and 2018.

#### Refuge options

A safe refuge is available within the Woomera Avenue road reserve on the southern side, opposite the Red Cliffs substation (Terminal Station) compound to the south-western side of the study area.

#### Hazards

Hazards include the:

- Park/Conservation Reserve zone - due to the vegetated nature of this area;
- existing 220 kV transmission line – this is a hazard as it has the ability to cause a fire if there is an incident with the infrastructure;
- Red Cliffs substation – high voltage infrastructure which has potential to cause fire hazard if there was an incident at the site.

### A.8.2 Bushfire management measures

The environmental management measures relevant to this aspect are listed in **Error! Reference source not found.** below.

Table A.8 - Bushfire management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
BF1	Training will be provided to all project personnel, including relevant sub-contractors on the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
BF2	A Fire Safety Management Plan would be developed for the proposal, including aspects from TransGrid Fire Risk Assessment and Control Measures (FRACM) requirements. The purpose of the plan would be to ensure the safety and protection of all personnel, infrastructure, plant and equipment from the direct effects of fire resulting from proposal activities and/or from any threat of bushfire which might occur.	Construction	Safety Manager / Environmental Manager	Bushfire Management Strategy Section 5.2.3
BF3	Work practices within the control of SecureEnergy, would be controlled by the application of the Fire Safety Work Instruction and the TransGrid FRACM. Bushfire Threats would be managed by the implementation of an Emergency Response Plan with preparation and prevention measures detailed in the Fire Safety Management plan.	Construction	Safety Manager	Bushfire Management Strategy Section 5.2.3
BF4	A Permit to Work system would be adopted during construction and commissioning phases. A Permit to Work would be required for high risk activities which have the potential to create fire, such as hot works.	Construction	Safety Manager	Bushfire Management Strategy Section 5.2.3
BF5	All hot works would be completed in accordance with the Welding and Cutting, Spray Painting and Abrasive Blasting Work Instruction and be in compliance with TransGrid Hot Work and Fire Risk Work protocols (FRACM).	Construction	Safety Manager	Bushfire Management Strategy Section 5.2.3

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## A.9 Landscape and Visual Impact Management Sub-Plan

### A.9.1 Landscape Character

A *Visual and landscape character impact assessment* (VLCIA) was prepared by IRIS Visual Planning + Design in November 2020.

The landscape character of the project is strongly associated with the Murray River floodplain and Kings Billabong Park which is considered to contain '*visually significant*' landscape and geological features (Parks Victoria, 2018, cl.6.3).

To the north and south of the project, the landscape is characterised by large-scale power infrastructure. This includes Red Cliffs substation and the 220 kilovolt transmission lines. The presence of transmission lines was found to strongly influence the character of this area.

The VLCIA determined that the project includes areas of local and regional landscape sensitivity, however, there would be relatively low magnitude of change on the landscape during construction and operation of the project. This is due to several factors including the relatively small area of direct impact on vegetation, the flat landscape along the transmission line corridor requiring minimal landform changes, the presence of existing transmission line infrastructure within this area, and the conservation and recreational uses that would continue.

### A.9.2 Visual Character

The visual catchment of the proposal is mostly determined primarily by landform and vegetation cover. However, due to the height of the structures, the visibility of the upper portion of the structures extends across a broad area surrounding the transmission line corridor.

Generally, there is the potential for a high level of visibility of the project from areas along the river, and with less visibility to the east and west, where the landform changes.

The following receptors were identified as likely to have an elevated visual sensitivity:

- Red Cliffs Scenic Reserve;
- Kings Billabong Park; and
- Murray River.

The visual impact assessment completed in the VLCIA determined that, considering the length and scale of this project, there were relatively few visual impacts. Those visual impacts which were identified mostly have a low to negligible visual impact.

### A.9.3 Landscape and visual impact management measures

The environmental management measures relevant to this aspect are listed in **Error! Reference source not found.** below.



Table A.9 - Landscape and visual impact management measures

ID	Measurement / Requirement	When to implement	Responsibility	Source document
<b>General</b>				
LV1	Training will be provided to all project personnel, including relevant sub-contractors on the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction and construction	Environmental Manager / Environmental Coordinator	Good practice
LV2	Where available, opportunities for the retention and protection of existing trees within the disturbance area will be identified during detailed construction planning.	Detailed design	Design Manager / Construction Manager	Visual and landscape character impact assessment LV1
LV3	Existing access tracks will be used where possible to minimise vegetation removal, changes to landform, and visual impacts.	Detailed design	Supervisor / Construction Manager	Visual and landscape character impact assessment LV2
LV4	Proposed permanent engineering batters and water management measures will be designed to integrate with the existing landforms and natural features.	Detailed design	Design Manager / Construction Manager / Supervisor	Visual and landscape character impact assessment LV3

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## Appendix B – Policy for Environment, Sustainability and Community

## Policy for Environment, Sustainability & Community

Clough strives to deliver environmentally sustainable outcomes for energy, materials and water, during all stages of its operations. Clough values sustainable development and believes respect for the environment and the community in which it operates is fundamental to business success.

Clough ensures human, financial and technological resources are provided for the active management and maintenance of the Clough Management System, aligned with the requirements of AS/NZS ISO 14001:2004 to drive continual improvement.

At Clough employees and contractors show their commitment to minimising environment and social impacts and promoting sustainable development by:

- Sharing a belief in a culture of zero harm where harm to people or the environment is unacceptable;
- Stopping work where an activity could harm the environment or community;
- Planning and performing activities to achieve zero harm outcomes; and
- Understanding their roles, responsibilities and behaviours expected of them.

Clough engages with clients, partners, stakeholders and communities to understand key environmental aspects, potential impacts and support the development of sustainable solutions.

### PRINCIPLES:

Wherever Clough operates the following principles apply to promote sustainable development, in all its operating environments:

- **Personal Responsibility** – Individuals take personal responsibility to comply with relevant laws and regulations and apply responsible standards as detailed in the Clough Management System where laws do not exist.
- **Social Responsibility** – Clough respects the traditional rights of indigenous peoples and values cultural heritage in the areas we work.
- **Accountability** – Clough holds all levels in our organisation accountable for compliance with regular monitoring, reviewing and reporting on our progress against our targets that promote efficient use of resources.
- **Risk Management** – Clough identifies, assesses and manages risks to the environment and our host communities.
- **Learning Culture** – Clough maintains regular, transparent and effective communication with all employees, stakeholders and communities affected by its activities and improves the livelihoods of the communities in which we operate through local employment and training opportunities.
- **One Consistent Approach** - Design and construct to efficiently use energy and raw materials, minimise waste, reduce and prevent pollution.

The Chief Executive Officer of Clough Limited is accountable to the Board of Directors for ensuring that this Policy is implemented throughout Clough's operation

Clough undertakes to communicate this policy to all persons working for or on its behalf and to the public as required. The policy will be reviewed every three years to maintain relevance to Clough business activities.



**Peter Bennett**  
Chief Executive Officer & Managing Director  
Clough Limited  
November 2018

All personal information obtained by Clough during the implementation of this policy will be controlled in accordance with the Clough Policy for Privacy and the Privacy Amendment (Private Sector) Act 2000.

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