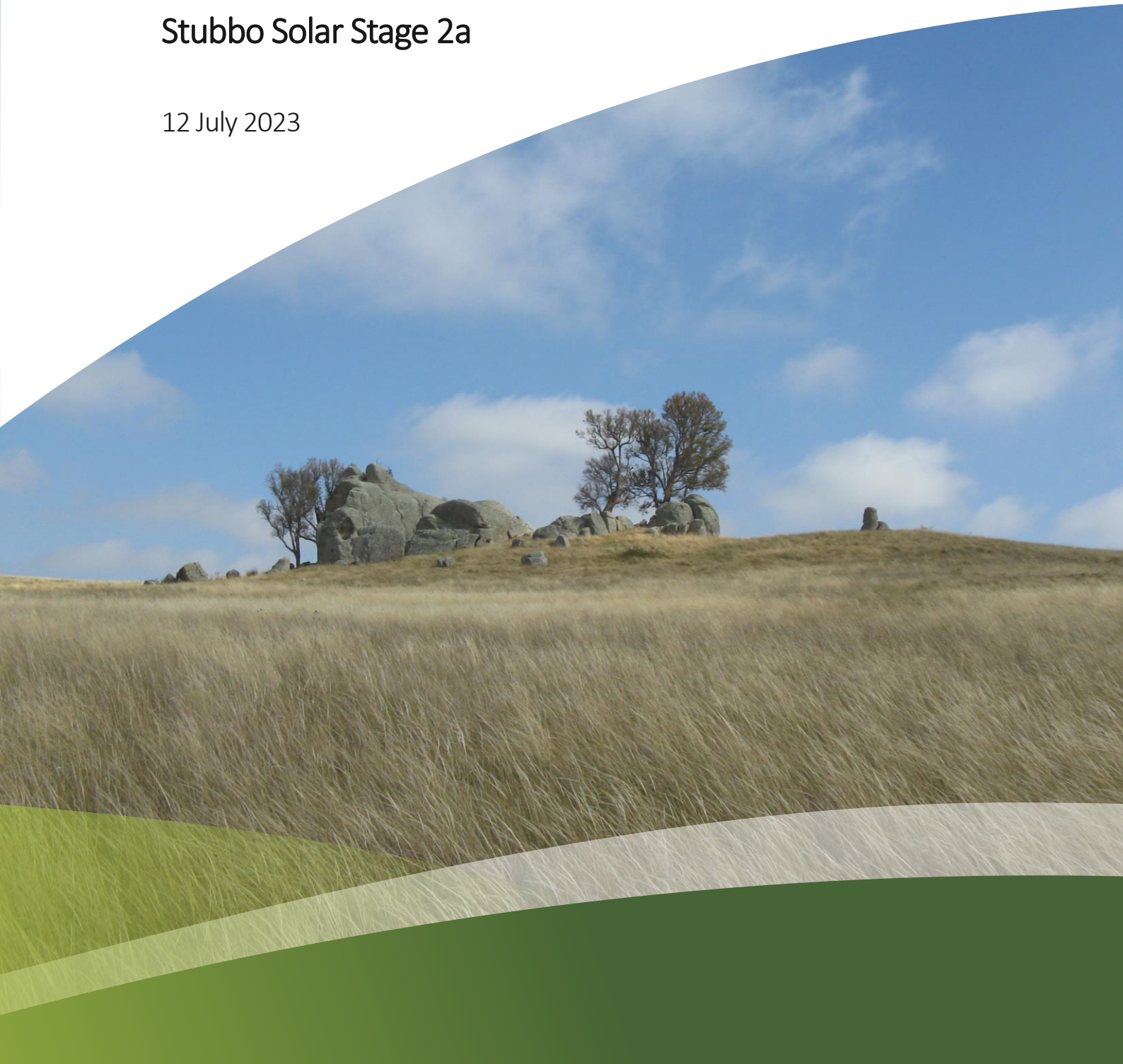
Construction Environmental Management Plan

Stubbo Solar Stage 2a

12 July 2023



Construction Environmental Management Plan
Stubbo Solar

AE1229

July 2023

Version V9			
Issued to			
Michael Yeo, Project Manager – Construction, Stubbo Solar, ACEN Australia Promit Roy, Design & Commissioning Engineer, PCL Constructors Pacific Rim Pty Ltd			
Prepared by		Reviewed by	Approved by
Ian Finlay, Principal Environmental Scientist, Accent Environmental		Michael Cramer, Director, Accent Environmental	 Michael Cramer, Director, Accent Environmental
Previous versions			
Version:	V1	28 February 2023	Draft to PCL and ACEN
	V2	08 March 2023	Draft to PCL and ACEN
	V3	21 March 2023	Draft to PCL and ACEN
	V4	3 April 2023	Draft to DPE
	V5	16 May 2023	Draft to DPE
	V6	16 June 2023	Draft to ACEN
	V7	21 June 2023	Draft to DPE
	V8	8 July 2023	Draft to DPE

www.accentenvironmental.com.au info@accentenvironmental.com.au

Contents

Tables

Figures

Abbreviations

Accent	Accent Environmental Pty Ltd
ACEN	ACEN Australia
ACHMP	Aboriginal Cultural Heritage Management Plan
AES	Accommodation and Employment Strategy
BEMOP	Bushfire Emergency Management and Operations Plan
BESS	battery energy storage system
BMP	biodiversity management plan
BOM	Bureau of Meteorology
BoP	balance of plant
CEMP	construction environmental management plan
CEP	community engagement plan
CoC	condition of consent
DAWE	Department of Agriculture, Water and the Environment (now DCCEEW)
DC	development consent
DCCEEW	Department of Climate Change, Energy, the Environment and Water (formerly DAWE)
DECC	Department of Environment and Climate Change
DGs	dangerous goods
DPE	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment (now and formerly DPE)
EIS	environmental impact statement
EMP	environmental management plan
EMS	environment management strategy
EPA	Environment Protection Authority
EPC	engineering, procurement and construction
EP	emergency plan
ESCP	erosion and sediment control plan
FSS	fire safety study
HHS	hydrocarbon and hazardous substances
HMP	heritage management plan
HSE	health, safety and environment
ICNG	Interim Construction Noise Guideline
km	kilometre

kV	kilovolt
LGA	local government area
MW	megawatt
MWRC	Mid-Western Regional Council
NML	noise management level
NSRs	noise sensitive receivers
NSW	New South Wales
NSW RFS	NSW Rural Fire Service
O&M	operation and maintenance
PCL	Pacific Construction Rim Pty Ltd
POEO Act	*Protection of the Environment Operations Act 1997*
PV	Photovoltaic
Ramboll	Ramboll Australia Pty Ltd
RAP	registered aboriginal party
RtS	response to submissions
SMC	safety management centre
SSD	state significant development
SWMP	soil and water management plan
SWMS	safe work method statement
SEPP	state environmental planning policy
TfNSW	Transport for New South Wales
TMP	traffic management plan
WMP	waste management plan

1 Introduction

The Stubbo Solar project (the Project) is a 400 megawatt (MW) alternating current development with an allowance for future battery storage of up to 200 MW/2 hour. The project is located between Blue Springs Road and Barneys Reef Road, approximately 10 km North of Gulgong and 85 km east of Dubbo in New South Wales (NSW) (Figure 1.1).

ACEN Australia (ACEN) is the project owner and has engaged PCL Construction Pacific Rim Pty Ltd (PCL) as the engineering, procurement and construction (EPC) contractor to manage the works for the 400 MW AC solar project, solar project substation and ancillary operational facilities.

ACEN has also engaged Transgrid to connect the Project to the transmission network used by Transgrid to provide transmission services, which includes certain works that need to be completed by Transgrid to enable Transgrid to connect the Project to the transmission network.

A commitment was made by ACEN in the environmental impact statement (EIS) for the project to prepare a Construction Environmental Management Plan (CEMP). As the project is a state significant development (SSD), Department of Planning, Industry and Environment (DPIE) issued a Development Consent (DC) (Application Number: SSD-10452) to UPC\AC Renewables Australia on 29 June 2021 for the construction and operation of the solar farm. Relevant conditions of the DC are addressed by this CEMP and its subplans in addition to commitments made in the EIS (Ramboll 2020), response to submissions (RtS) report (Ramboll 2021a) and the Amendment report (Ramboll 2021b).

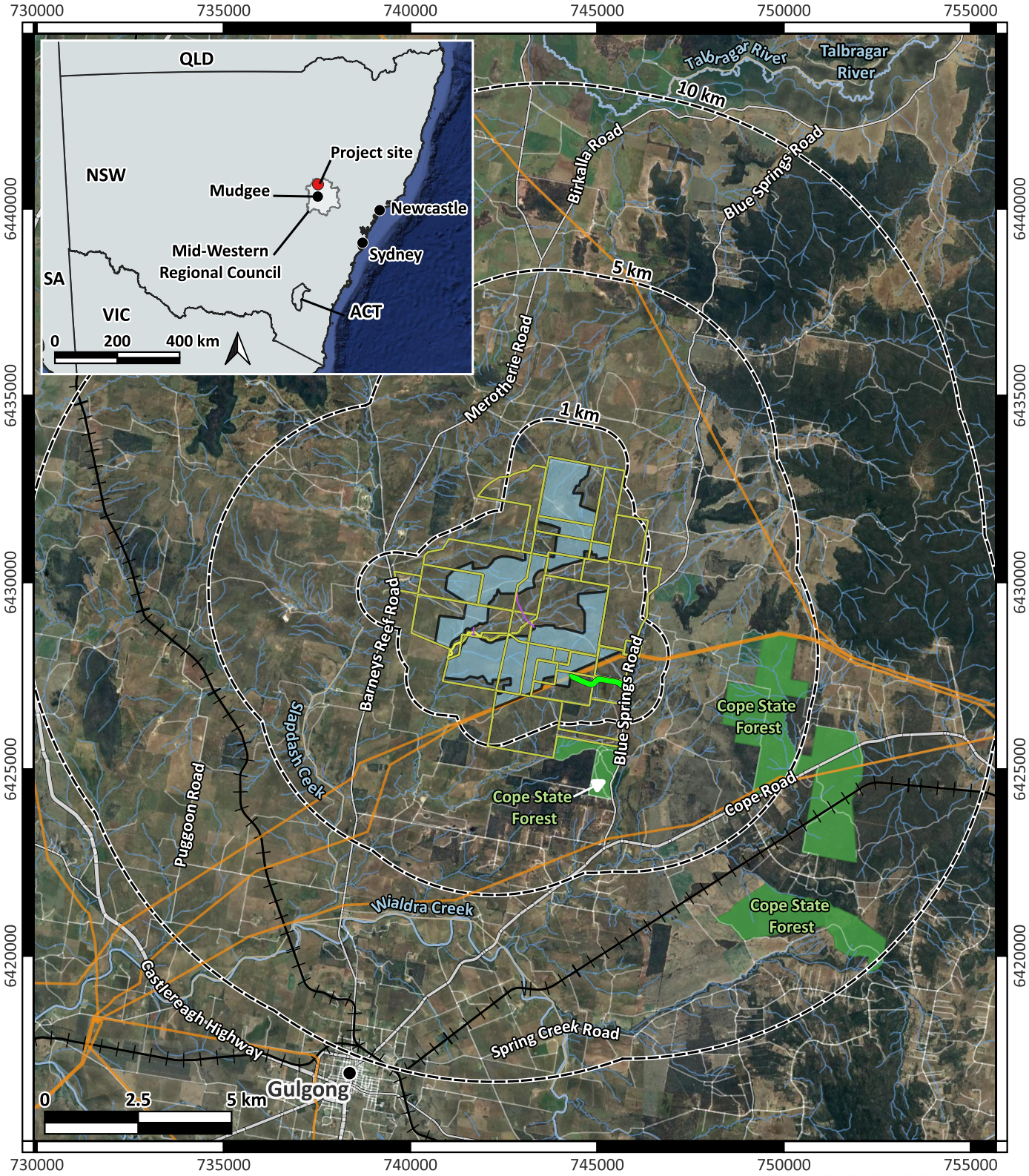
On 29 June 2021, the Executive Director, Energy, Resources and Industry Assessments granted consent to the development application for the Stubbo Solar Farm subject to conditions, under delegation from the Minister for Planning and Public Spaces and section 4.38 of the Environmental Planning and Assessment Act 1979 (the Act).

In a letter dated 24 August 2022, the Secretary approved the Applicant's proposal to develop the project in two stages, comprising:

- Stage 1: Road upgrades including construction of the main site access; and
- Stage 2: Construction of the solar farm.

In a subsequent letter dated 10 May 2023, the Secretary approved the Applicant's request dated 8 May 2023 seeking the Planning Secretary's approval to revise the staging of the Stubbo Solar Project under Condition 3 of Schedule 4 of SSD-10452, and to develop the project in four stages comprising:

- Stage 1: Road upgrades (Blue Springs Road) and construction of the main site access.
- Stage 2: Solar project construction and operation including:
  - Stage 2a: Construction and commissioning of the solar facilities including solar array, substation and all ancillary infrastructure, including the switchyard and transmission line connection to be constructed by Transgrid.



- Access road, project Stage 1
- Existing transmission line
- Road
- Main watercourse
- Watercourse - tributary
- Project lot boundary
- Solar array extent
- Proposed access corridor
- State Forest
- Radius (1, 5, and 10 km) from project site

N

Accent 1129 Stubbo Solar project

Figure 1.1. Site locality

Created 24/03/2022

CRS: GDA 20 MGA 55

Scale: 1:150,000 at A4

Page size: A4

Base map: Google Satellite [Mar 2023]
Additional data: NSW RoadSegment, NSW Hydroline, NSW_Six_Mid_Western_Cadastral_data, NSW ElectricityTransmissionLine

ACCENT ENVIRONMENTAL

  - Stage 2b: Operation of the Stubbo Solar Project.
- Stage 3: Construction, commissioning and operation of the Battery Energy Storage System (BESS), including substation and switchyard expansion (within the development footprint).
- Stage 4: Decommissioning of the Stubbo Solar Project at end of life.

PCL has engaged Accent Environmental Pty Ltd (Accent) to prepare this CEMP for Stage 2a of Stubbo Solar, as approved by the Planning Secretary in the letter dated 10 May 2023.

1.1 Purpose and scope of this document

Environmental management plans (EMPs) describe how project-related actions might impact on various aspects of the environment (biophysical, social, economic) and set out clear commitments from the person or entity undertaking the action regarding impact avoidance, minimisation and management. EMPs also consider the impacts of other projects that may be occurring at the same time (i.e. cumulative impacts).

This CEMP sets out the framework for environmental management to enable PCL to meet their environmental obligations and, along with their contractors, to implement environmental management best practices to identify, manage and mitigate environmental impacts during the construction of the Stubbo Solar project. Transgrid will also follow the general framework set out in this CEMP to meet the environmental obligations, and those of their contractors. The relationship between this CEMP and the environmental management plans and subplans required for the construction and operation of the project are shown diagrammatically in Figure 1.2.

The CEMP covers the construction works to be undertaken by PCL and Transgrid as described in Section 3.1 (i.e. Stage 2a). It excludes construction works that were undertaken in relation to the External Road Upgrades which are associated with Stage 1 and are not the responsibility of PCL or Transgrid.

1.2 Project overview

The Stubbo Solar project will generate energy through the conversion of solar radiation to electricity via photovoltaic (PV) modules (solar panels). The solar panels will generate direct current electricity that will be inverted to AC electricity via the use of power conversion units. The electricity output from the project will then be supplied to an existing 330 kilovolt (kV) transmission line (Line 79) operated by Transgrid.

1.3 Project objectives

ACEN has established a number of objectives for the project which take into account factors such as contribution to community, the environment and safety. These objectives include the following of particular relevance to this CEMP and the environmental management plans that sit below it:

- zero injuries or environmental harm during construction and operation of the works
- design for the safety of people, livestock, fauna and flora, and the environment throughout the life of the solar farm in accordance with good industry practices

- mutually beneficial relationships with host communities, First Nations and other stakeholders are in place throughout the life of the project
- host communities and First Nations are provided with opportunities to actively participate in and benefit from the project through employment, training, social procurement and investment
- minimise adverse social and environmental impacts on the local community and environment
- allow for future grazing, by sheep, within the Solar Farm (post construction phase)
- contribute to Australia's transition to a clean energy future.

In accordance with CoC 1 (Schedule 2) of the DC, in meeting the specific environmental performance criteria established under the DC, PCL and Transgrid will implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development (as relevant).

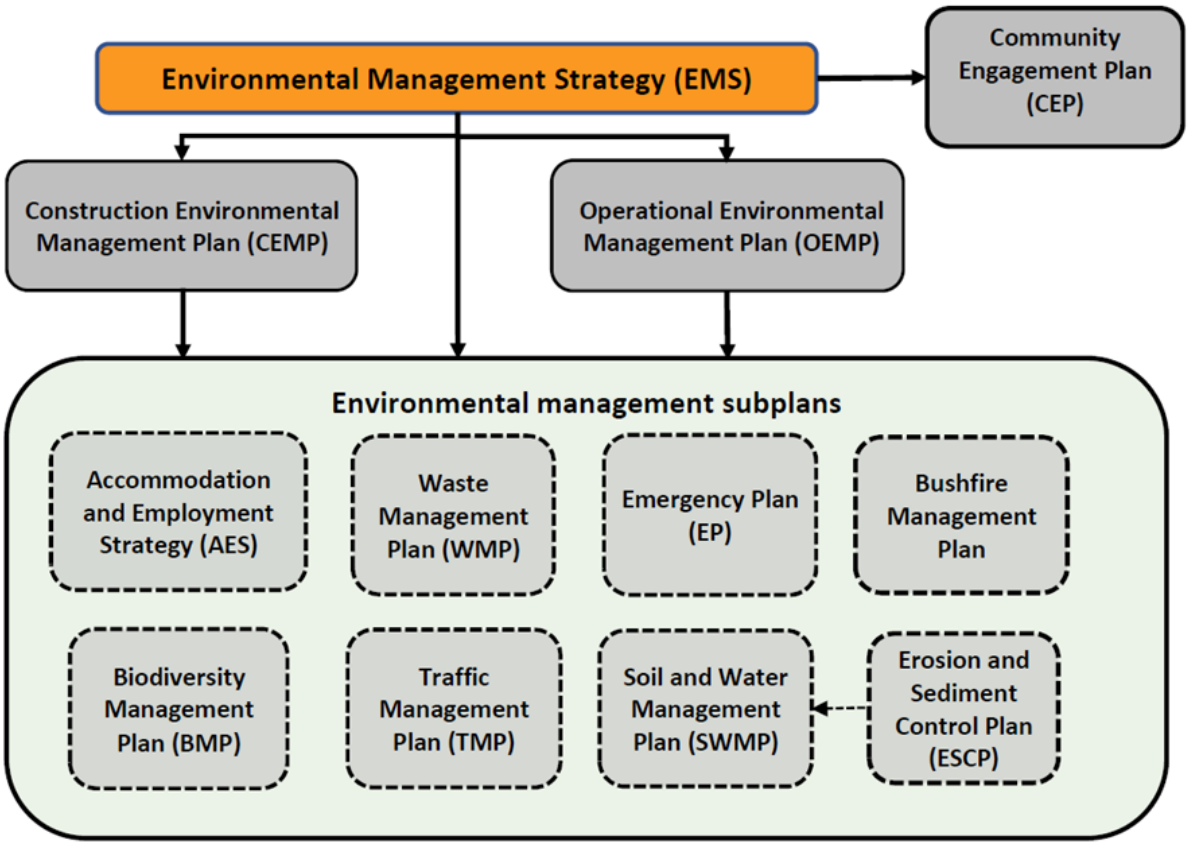


Figure 1.2 Schematic of environmental management documentation

1.4 Strategic framework for environmental management

This CEMP is the key document outlining the requirements for environmental management during construction. As shown in Figure 1.2, the CEMP falls under the Environmental Management Strategy (EMS) for the project. The EMS is an overarching document that

provides a framework for managing project-related environmental risks (during both construction and operation) by:

- clearly setting out ACEN's, PCL's and Transgrid's environmental management obligations and the means by which they will be managed, implemented, monitored and reviewed
- systematically tracking and documenting compliance with the DC CoCs, EIS commitments, RtS report commitments, external regulatory requirements and internal policy obligations
- effectively communicating with external and internal stakeholders, including ACEN, regulators, the community, subcontractors and company personnel to achieve a high level of environmental management and ongoing, continuous improvement.

Note that in the context of this CEMP, EMS refers to the environmental management strategy rather than the more conventional Environmental Management System.

1.5 Structure of CEMP

The CEMP is structured as follows:

- Section 1 – Introduction
- Section 2 – Statutory requirements
- Section 3 – Project description
- Section 4 – Organisational structure, roles and responsibilities
- Section 5 – Environmental management framework
- Section 6 – Inspections, monitoring and auditing
- Section 7 – Environmental context
- Section 8 – Management measures
- Section 9 – Monitoring summary.

Relevant CoCs and other commitments are tabulated in Appendix B

The following subplans are referenced within this CEMP but are stand-alone documents and not appended:

- Traffic Management Plan (TMP)
- Biodiversity Management Plan (BMP)
- Heritage Management Plan (HMP)
- Soil and Water Management Plan (SWMP), with an appended Erosion and Sediment Control Plan (ESCP)
- Fire Safety Study (FSS) (prior to Stage 3 construction of BESS)
- Emergency Plan (EP)
- Bushfire Management Plan (in the form of a Bushfire Emergency Management & Operations Plan – BEMOP)
- Accommodation and Employment Strategy (AES)

- Waste Management Plan (WMP).

A Community Engagement Plan (CEP) (consistent with the 'Community and Stakeholder Engagement Plan' required under commitment CU1 of the EIS) has been prepared as a separate supporting document.

The Environmental Monitoring Plan (Table 9.1 in Section 9) summarises the monitoring measures set out within this CEMP and within the supporting subplans. This table has been compiled to consolidate construction monitoring requirements in a single location. However, the subplans listed above are the primary source of monitoring requirements relating to the aspects they cover and should be directly consulted if they have been more recently updated than this CEMP.

1.6 Consultation with DPE in relation to this CEMP

This CEMP has been reviewed by the DPE Energy Assessments team. Appendix E tabulates the feedback received from DPE and the responses of ACEN.

1.7 Distribution of CEMP

The CEMP will be submitted to DPE for information and made available to ACEN, PCL, Transgrid and subcontractors. A paper copy and electronic copy will be available in the site office.

2 Statutory requirements

The DC (attached as Appendix A to the EMS) sets out the Conditions of Consent (CoCs) under which the project must be completed. In accordance with CoC 2 (Schedule 2) of the DC, the Applicant will carry out the development:

- generally in accordance with the EIS; and
- in accordance with the conditions of this consent.

In accordance with CoC 3 (Schedule 2), if there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.

2.1 Conditions of consent

The CoCs from Schedule 2, Schedule 3 and Schedule 4 of the DC that are related to construction are listed in Appendix A. A cross-reference is provided to the documentation in which they are addressed.

2.2 Commitments in EIS and associated documentation

The EIS was prepared by Ramboll (2020). The commitments in the EIS include the relevant management and mitigation measures set out in Table 20-1 of the main EIS report and Section 7 of the Amendment Report (Ramboll 2021b).

The commitments in the EIS and the Amendment report that are related to construction are listed in Appendix B. Construction-related commitments in the RtS report (Ramboll 2021a) are listed in Appendix C. In addition, there are a number of post-approval documents comprising correspondence between ACEN (then UPC Renewables Australia), DPE and Council that have bearing on the approvals and management of the project. These documents included the staging request letter and DPE acceptance (see Section 1).

2.3 Legislation and planning documents

Legislation and planning documents relevant to the Stubbo Solar project are referenced where appropriate throughout the EMS and in the supporting management plans. The legislation and planning documents are also presented as a consolidated list in Appendix E of the EMS.

PCL and Transgrid will maintain a register of relevant environmental laws, both state and federal, and ensure that the register is kept up to date.

2.4 Guidelines and standards

The main guidelines and standards relevant to the environmental management of the Stubbo Solar project are listed in Appendix D.

3 Project description

3.1 Project Works

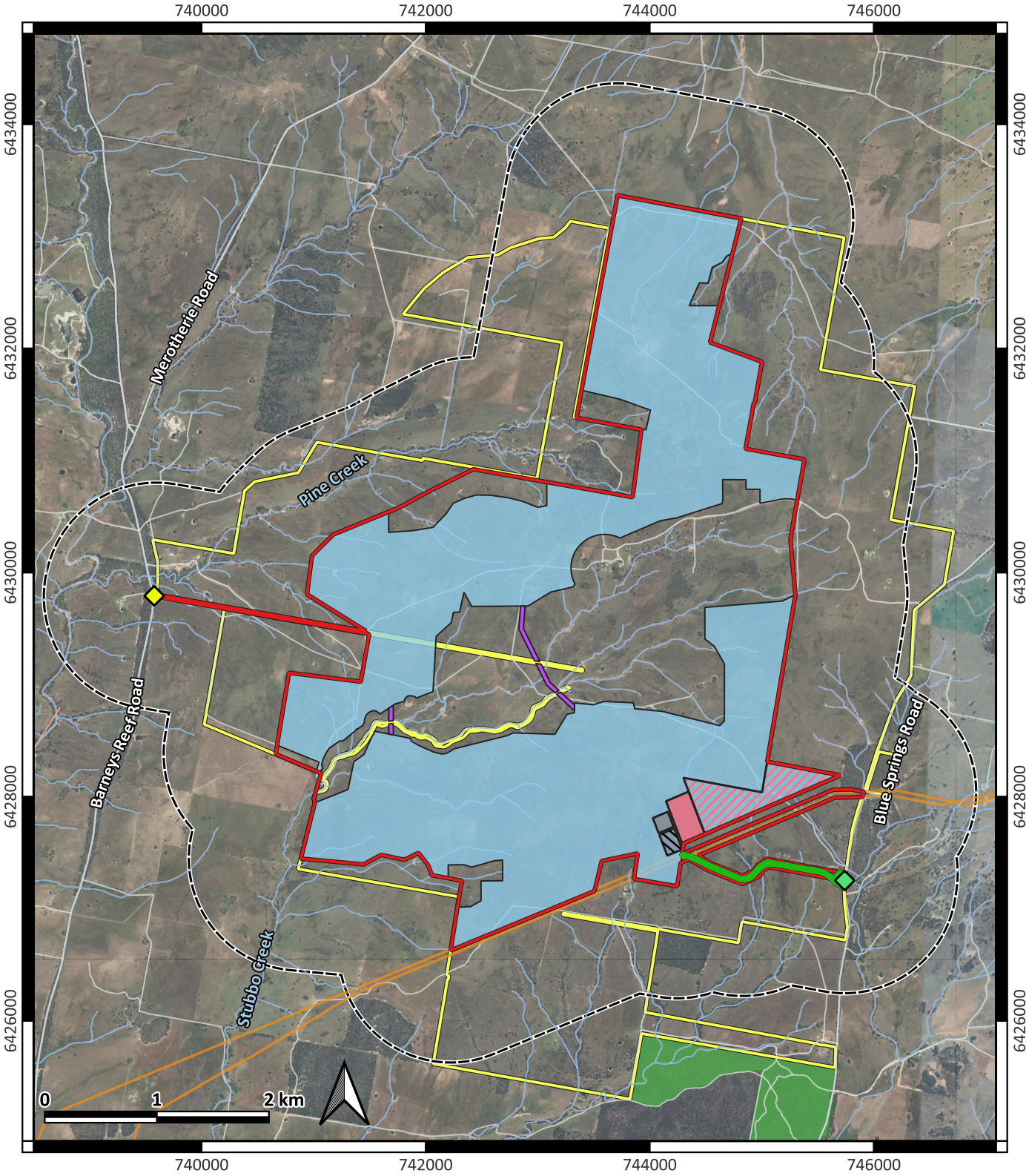
3.1.1 Stage 2a works

Key activities for Stage 2a include:

- site compound
- fencing works, including security fencing
- access roads including drainage and rehabilitation
- solar arrays that include:
  - general site wide cut to fill earthworks
  - piling installation
  - tracker installation
  - above ground and below ground cable installation and termination
  - module installation
- substation, switchyard and control buildings works that includes:
  - earthworks
  - structures and Footings
  - gantries and HV switchgear
  - transformer installation and connection (Substation only)
  - control building installations (both Substation and Switchyard)
- operations & maintenance building, including warehouse facility
- cold Commissioning works
- hot commissioning works including hold point testing for compliance to AEMO requirements
- site wide rehabilitation
- all other associated infrastructure.

3.1.2 PCL works

The Works to be managed by PCL will convert energy from solar radiation into electrical energy to be fed into the electricity grid. The site configuration is shown in Figure 3.1. A series of PV Modules mounted on a horizontal single-axis tracking (Tracker) structure will convert solar radiation into direct current electrical energy which will be fed into power conversion units (PCUs). Using inverters and step-up transformers, the PCUs will convert the direct current electrical energy into AC electrical energy at an optimised reticulation voltage, envisaged by ACEN to be a Medium Voltage such as 33 kV.



- Site access point
- Emergency access point
- Access road, project Stage 1
- Existing transmission line
- Road
- Main watercourse
- Watercourse, tributary
- Project site
- Project lot boundary
- Substation
- BESS
- Switchyard (Transgrid)
- Laydown area
- Solar array extent
- Proposed access corridor
- State Forest
- 1 km radius from project site

AE1229 Stubbo Solar project
Figure 3.1 Site configuration

ACCENT ENVIRONMENTAL

Created 12/07/2023
CRS: GDA 20 MGA 55
Scale: 1:50,000 at A4
Page size: A4

Base map: Google Satellite [Jul 2023]
Additional data: NSW RoadSegment, NSW Hydroline, NSW_Six_Mid_Western_Cadastral_data, NSW ElectricityTransmissionLine

The high voltage (HV) Works will step up the voltage to 330 kV and connect the Solar Farm to the Connection Assets (supply to the existing 330 kV transmission line – Line 79 – operated by TransGrid which traverses the project area).

PCL's design and all activities (on Site or otherwise) will be undertaken in such a manner as to not hinder, cause conflict, or create additional work for the future development.

External road upgrade works will be required in support of the project. These External Road Upgrades will comprise an upgrade of the main site access road (Blue Springs Road) and construction of the main site access. The External Road Upgrades will be completed by others and are not the responsibility of PCL or Transgrid or covered in this plan.

PCL's works are to be designed to minimise the land required to achieve the rated electrical output as defined in the Development Consent.

3.1.3 Transgrid works

ACEN has engaged Transgrid to connect the Project to the transmission network used by Transgrid to provide transmission services, which includes certain works that need to be completed by Transgrid to enable Transgrid to connect the Project to its transmission network.

3.2 Project schedule

The proposed construction schedule for Stage 2a is summarised in Table 3.1. Construction will be undertaken in three overlapping sections:

- Section 1 comprises construction of the Connection Assets including substation by Transgrid and switchyard construction by PCL
- Section 2 comprises the construction of the first area of solar arrays (southern section) by PCL
- Section 3 comprises the construction of the second area of solar arrays (northern section) by PCL.

Construction will be followed by validation testing and a project closeout period.

Table 3.1 Construction schedule for Stage 2a

Activity	Start	Finish
Section 1		
Switchyard Construction – Notice to Proceed	21-Oct-22	21-Oct-22
Substation Construction	24-May-23	7-May-24
Section 2 (Generating System #1)		
Material Procurement	22-Dec-22	26-Feb-24
Civil Works	15-May-23	27-Sep-24
Solar Array Construction	4-Jul-23	27-Sep-24

Activity	Start	Finish
Section 3 (Generating System #2)		
Material Procurement	22-Dec-22	22-Apr-24
Civil Works	15-May-23	07-Nov-24
Solar Array Construction	11-Jul-23	07-Nov-24
R2 Validation Testing		
Section 2 Generating System #1	26-Jun-24	06-Jan-25
Section 3 Generating System #2	26-Jun-24	19-Mar-25
Practical Completion		
Practical Completion - All Sections	-	06-May-25

3.3 Hours of operation

In accordance with CoC 16 (Schedule 3) of the DC, unless ACEN and the applicable authority agree otherwise, PCL and Transgrid will comply with the hours outlined in Table 3.2.

As per CoC 16, the following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Planning Secretary:

- the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- emergency work to avoid the loss of life, property and/or material harm to the environment.

Table 3.2 Hours of operation

Day	Normal working hours
Monday to Friday	7:00 am - 6:00 pm
Saturday	8:00 am - 1:00 pm
Sundays	at no time on Sundays
NSW public holidays	at no time on NSW public holidays

4 Organisational structure, roles and responsibilities

4.1 Key stakeholders

The stakeholders in the Stubbo Solar project include regulators, project stakeholders and community stakeholders. Table 4.1 lists the key stakeholders.

Table 4.1 Key stakeholders

Regulators	Project stakeholders	Community stakeholders
• DPE • Mid-Western Regional Council • NSW Rural Fire Service (NSW RFS) • Department of Climate Change, Energy, the Environment and Water (DCCEEW) (Commonwealth) • Transport for NSW (TfNSW) • SafeWork NSW • Forestry Corporation of NSW • EPA • Essential Energy	• ACEN • PCL • Transgrid • Balance of Plant (BoP) Civil Contractor • BoP Mechanical Contractor • BoP Electrical Contractor • Operations and Maintenance (O&M) Contractor • Specialist subcontractors • Specialist consultants • Transport and logistics companies • Project financiers/ investors • Robson Civil (access road construction contractor) • Mid-Western Regional Council (Blue Springs Road upgrade contractor)	• Leaseholders • Non-host farms • Other neighbours • Local business owners • Local employers • Local suppliers • Local employees • Local accommodation providers • Registered Aboriginal Parties (RAPs)

4.2 Project organisational structure

Knowledge of the organisational structure of the project is important when it comes to understanding the roles and responsibilities of the various project stakeholders.

Figure 4.1 is a schematic showing the organisational relationship between ACEN as project proponent, PCL as EPC contractor, PCL's balance-of-plant (BoP) subcontractors, and Transgrid as the contractor for the connection to the transmission network. The lead project managers from ACEN, PCL and Transgrid will hold monthly coordination meetings to discuss project progress and any issues.

The figure also shows the contractors for the Stage 1 road construction works. The access road up to the project site boundary was directly managed by ACEN.

Figures 4.2 to 4.4 show the organisational structure of the ACEN Australia, PCL and Transgrid management teams, respectively.

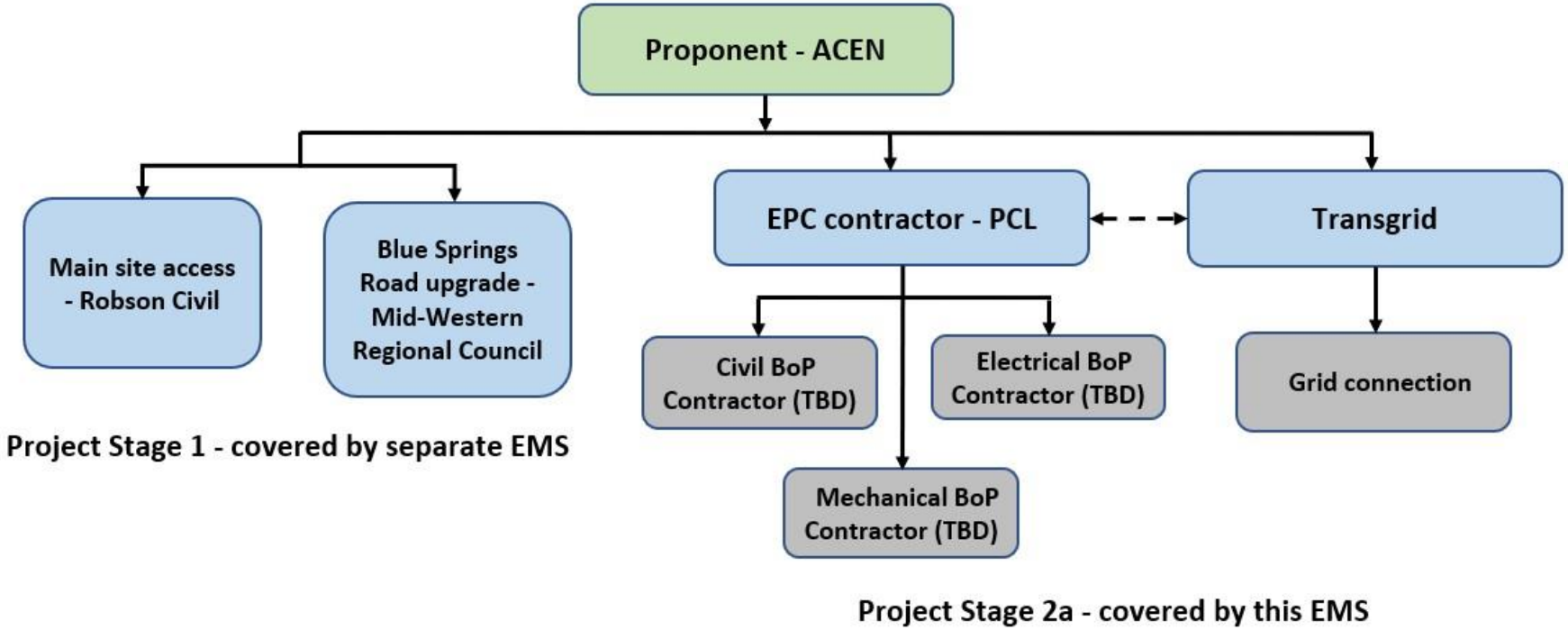


Figure 4.1 Project organisational structure

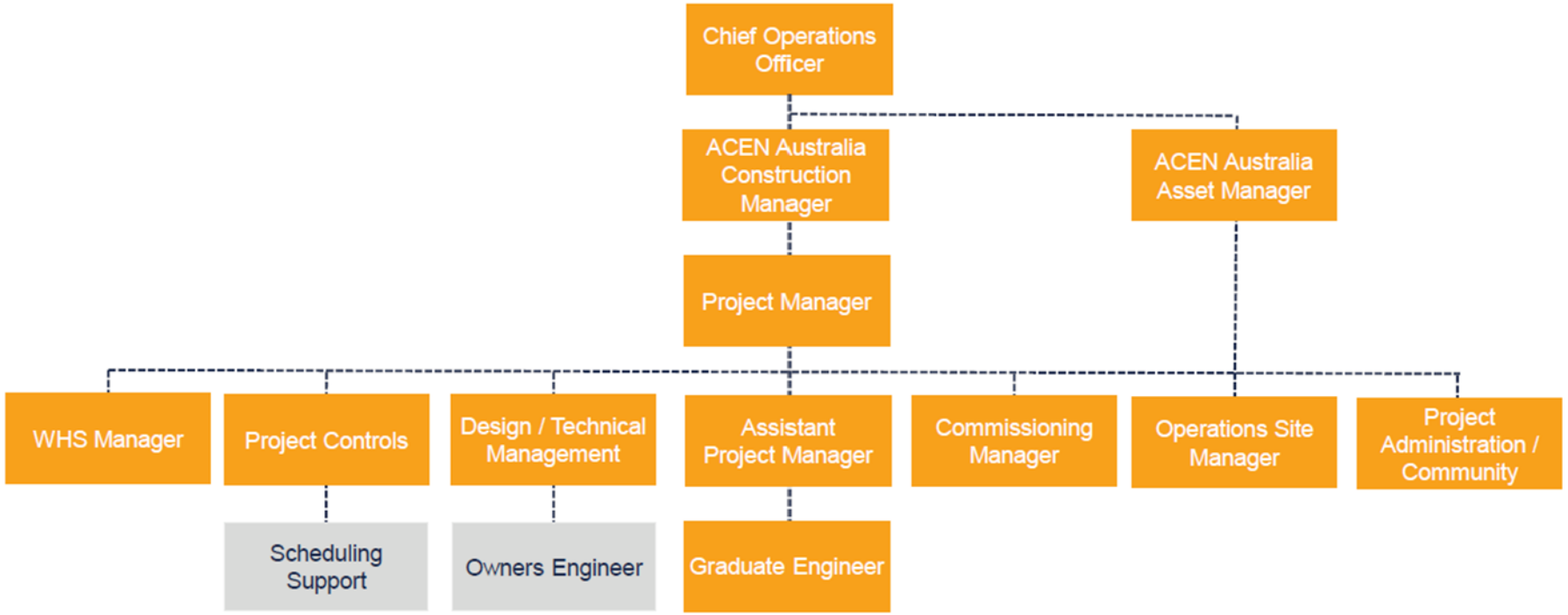


Figure 4.2 ACEN Australia project team organisation chart

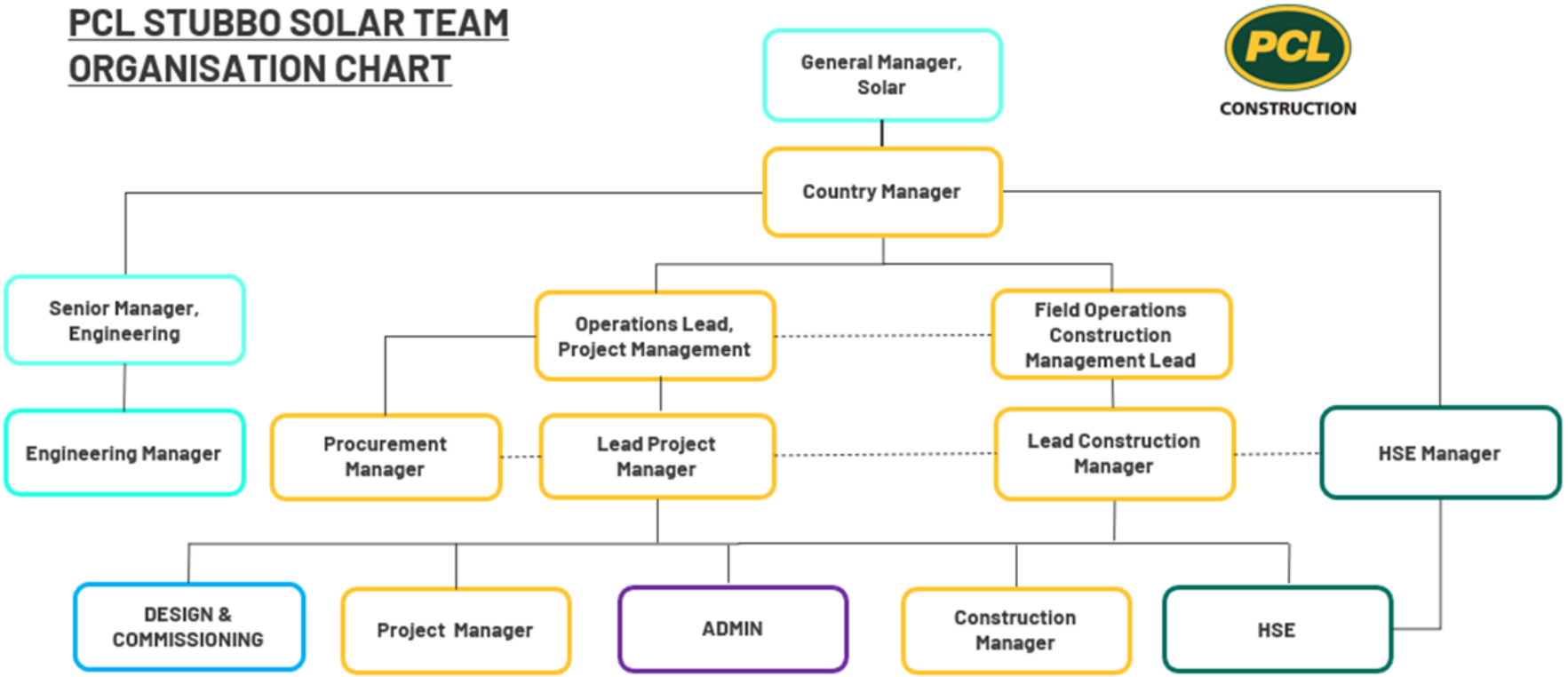


Figure 4.3 PCL Stubbo Solar Team Organisation Chart

Transgrid Project Team

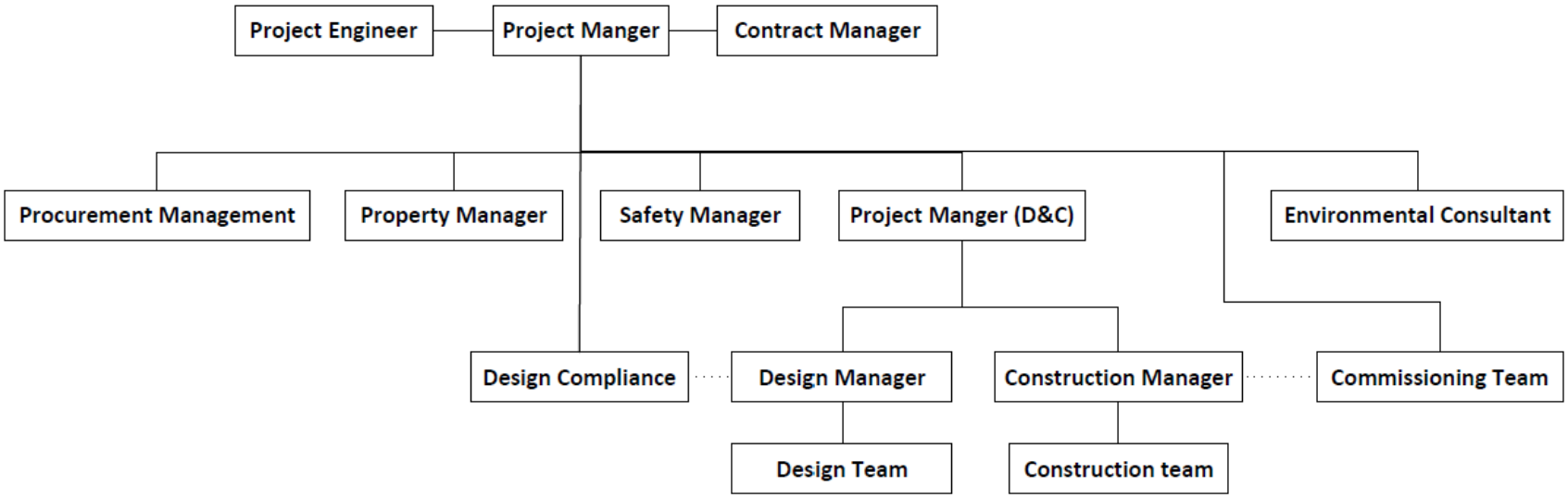


Figure 4.4 Transgrid project team organisation chart

4.2.1 Applicant

ACEN, formerly known as UPC\AC Renewables Pty Ltd is the Stubbo Solar project Applicant and the owner of the project. Both PCL and Transgrid work under ACEN as separate entities. All communication occurs via ACEN.

4.2.2 EPC Contractor

ACEN has engaged PCL Constructors Pacific Rim Pty Ltd (PCL) as the EPC contractor to undertake the Works described in Section 3.1.2.

As the EPC contractor for the solar farm, PCL will design, procure, construct and commission the Stubbo Solar project for ACEN.

4.2.3 BoP Contractors

PCL will engage civil, electrical and mechanical BoP contractors to assist with the delivery of the Works.

4.2.4 Substation construction contractor

ACEN has engaged Transgrid to connect the Project to the transmission network as described in Section 3.1.3.

4.3 Roles and responsibilities

The roles that have been assigned to the project are briefly described below.

4.3.1 The ACEN management team

Project Manager

The ACEN Project Manager is to ensure that the works that are the subject of this plan are undertaken according to the CoCs of Development Consent SSD 10452 and commitments outlined in the EIS. The ACEN Project Manager is accountable to ACEN senior management.

The ACEN Project Manager is also responsible for engaging PCL and Transgrid to undertake the works. In addition, the ACEN Project Manager will provide safety and environmental advice to the project team and engage with the regulators and the community.

Assistant Project Manager

The Assistant Project Manager provides support to the Project Manager in ensuring the conditions of the Development Consent (SSD 10452) and the commitments under the EIS followed, and that all other project commitments with the relevant stakeholders are adhered to by the Project, including all contractual commitments with the EPC Contractor.

The Assistant Project Manager is accountable to ACEN Project Manager.

Health & Safety Advisor

The Health & Safety Advisor provides assistance and support to the ACEN Project team and, the EPC Contractor and its subcontractors to fulfil their contractual and legislative obligations with regards to Health and Safety.

The Health & Safety Advisor is accountable to the Project Manager.

4.3.2 PCL management team

The key roles to be filled by PCL as EPC contractor include a project manager, a health safety and environment (HSE) manager, a lead construction manager and a construction manager. Their roles are described below.

Lead Project Manager

The PCL Lead Project Manager is responsible for the preparation of preconstruction constructability assessment, budget control, contract administration, planning subcontractor work, tendering and award, subcontract issuance, subcontractor liaison, change management, safety management, complaint management procedure and district and owner reporting. The PCL Lead Project Manager will also be responsible for direct communication with the PCL project team and will engage with the community regarding the PCL site.

Lead Construction Manager

The PCL Lead Construction Manager has the responsibility to plan, coordinate and supervise all on-site functions to ensure that the project is constructed in accordance with design and quality expectations, within the stipulated budget and schedule. Develop and execute quality control plans, inspect work for conformity to specifications and arrange for correction of defects/ deficiencies. The Lead Construction Manager will also manage site communication between the construction team and project managers. Lead construction manager is also responsible for contractor management and communicating directly with the Project Ecologist and reporting.

Health, Safety and Environment Manager

The PCL Health, Safety and Environment (HSE) Manager reports to the Country Manager and works directly with Lead Construction Manager and HSE team on site. The HSE Manager is based on site and is responsible for direct supervision of the on site HSE Coordinator as well as for conducting project audits and inspections. The HSE Manager is also responsible for:

- ensuring the safety and environmental training of all construction staff on PCL's site (in consultation with subcontractor HSE representatives) and ACEN HSE representatives
- managing all field aspects of the project's budget, schedule, safety and general performance
- providing proactive leadership in:
  - health, safety and environment, including construction procedures and safe work, and job safety analysis
  - and project planning and execution
- incident investigation and management.

- managing the Project Ecologist
- tracking and reporting all environmental and safety incidents.

Construction Manager

The PCL Construction Manager is accountable to and draws authority from the Lead Construction Manager. The Construction Manager is responsible for building excellent relationships with peers, supervisors, direct reports, clients, trade contractors, and consultants.

Design and Commissioning Manager

The PCL Design and Commissioning Manager is responsible for managing the safe energisation of plant.

4.3.3 PCL BoP subcontractors

Each of PCL's BoP subcontractors will have their own HSE management with an obligation to plan, organize and implement training for their workers. The PCL HSE manager will liaise with subcontractor HSE representatives to assist in achieving outcomes.

4.3.4 Project Ecologist

A suitably qualified and accredited Project Ecologist will be subcontracted to the project. The Project Ecologist will report to the Lead Construction Manager and will be responsible for undertaking pre-clearing surveys, supervising clearing and native tree removal, fauna handling and salvage/care, implementing biodiversity management protocols and contributing to site induction materials and biodiversity awareness among project personnel. Project Ecologist will be preparing written reports on their inspections and share with PCL Lead Project Manager and Lead Construction Manager for review and consideration. Further information on the role of the Project Ecologist is set out in the BMP.

4.3.5 Transgrid management team

The key roles to be filled by Transgrid in connecting the Project to the connection assets and transmission network used by Transgrid include a project manager, a health, safety and environment (HSE) manager, a construction manager and a site manager. Their roles are described below.

Project Manager

The Transgrid Project Manager is responsible for the preparation of preconstruction constructability assessment, budget control, contract administration, planning subcontractor work, tendering and award, subcontract issuance, subcontractor liaison, change management, safety management, and district and owner reporting. The Transgrid Project Manager will also be responsible for direct communication with the Transgrid project team and will engage with the community regarding the Transgrid site.

Construction Manager

The Transgrid Construction Manager has the responsibility to plan, coordinate and supervise all on-site functions to ensure that the project is constructed in accordance with design and quality expectations, within the stipulated budget and schedule. Develop and execute quality control plans, inspect work for conformity to specifications and arrange for correction of defects/ deficiencies. The Construction Manager will also manage site communication between the construction team and project managers.

Health, Safety and Environment Manager

The Transgrid Health, Safety and Environment (HSE) Manager reports to the Transgrid Project Manager and is responsible for direct supervision of the district HSE supervisors and coordinators on all major projects as well as conducting project audits and inspections. The HSE Manager is also responsible for planning, organising and implementing safety training of all construction staff on Transgrid's site.

Site Manager

The Transgrid Site Manager is accountable to and draws authority from the Construction Manager. He is responsible for building excellent relationships with peers, supervisors, direct reports, clients, trade contractors, and consultants.

Commissioning Manager

The Transgrid Commissioning Manager is responsible for managing the safe energisation of plant and the safe connection of the Project to the connection assets and transmission network used by Transgrid.

5 Environmental management framework

5.1 Environmental Management Strategy

As shown in Figure 1.2, the EMS is the overarching environmental document for the Stubbo Solar project. The EMS sets out the environmental management framework for the project and contains the following information that is not covered in detail in this CEMP:

- environmental and related policies of ACEN, PCL and Transgrid
- environmental management system
- structure of environmental documentation, including environmental management plans and subplans across project construction and operation
- lists of all project CoCs and ACEN commitments across project construction and operation
- applicable legislation
- administrative conditions in relation to the DC.

Following the Planning Secretary's approval, ACEN will implement the EMS.

5.2 Environmental and related policies

ACEN is the Proponent and ultimately takes responsibility for compliance with SSD-10452. This responsibility is reflected in the management plans, programs and strategies developed for the project.

As both PCL and TransGrid have been contracted by ACEN to undertake construction of the Stubbo Solar Project, the PCL and TransGrid adopted environmental and related policies/standards will comply with, and where possible exceed, the minimum standards set by ACEN in Section 5 of the EMS.

5.3 General environmental principles

The general environmental principles to be adopted by PCL and Transgrid for the proposed works are:

- complying with statutory requirements (CoCs and legislation)
- minimising impacts on the community and environment
- the timely and efficient response to any environmental incidents and complaints
- rehabilitation of all disturbed land
- continual monitoring, review and reporting on the environmental impacts of the works.

5.4 Environmental management system

As required under the contract with ACEN, PCL will develop and implement a safety and environmental management system for their works. This system will establish a set of minimum HSE requirements for the works and ensure HSE management in line with good industry practices and legislative requirements.

The objective of the safety and environmental management system is to reduce the frequency and severity of accidents and incidents and to pursue the goal of "zero harm" in relation to safety and environment, through continuous improvement.

The safety and environmental management system shall describe in detail how HSE management will occur on the Project and shall be developed using the approach of the Australian and New Zealand standards:

- AS/NZS ISO 45001:2018 Occupational health and safety management systems
- AS/NZS ISO 9001 Quality management systems
- AS/NZS ISO 14001 Environmental management systems.

Further information on the environmental management system is provided in Section 5 of the EMS. The main components of PCL's and Transgrid's environmental management systems are described in the EMS and shown diagrammatically in Figure 5.1.

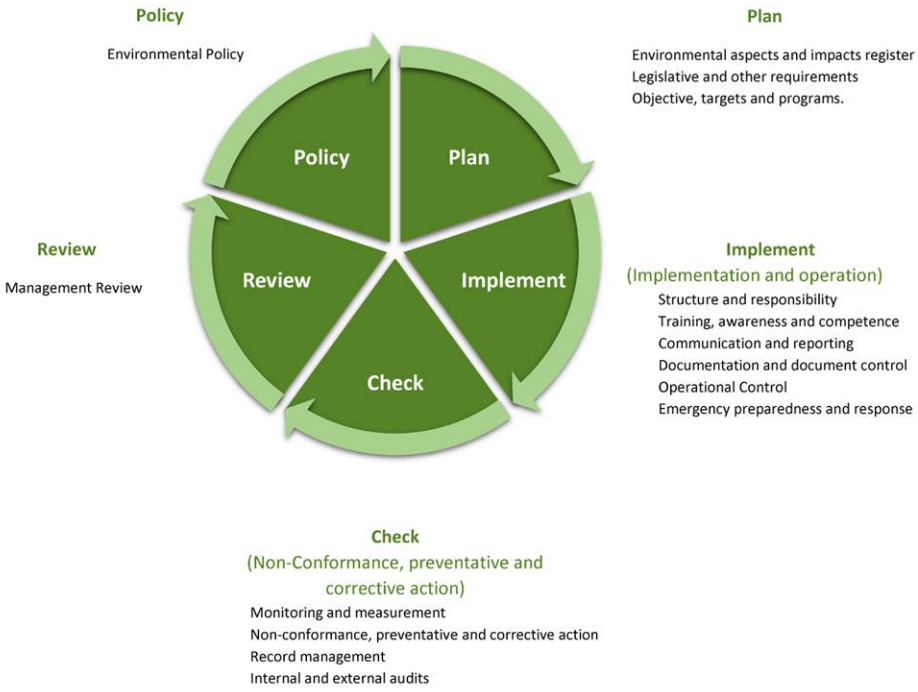


Figure 5.1 Environmental management system process

5.5 Emergency response

An Emergency Plan (EP) has been prepared setting out the actions to be followed by ACEN, PCL and Transgrid in the event of an emergency, covering:

- contact details and communication
- the type and location of emergency equipment
- emergency preparedness and response

- training
- raising the emergency alarm
- emergency evacuation procedures
- testing and recording drills
- fire water supply/fire response trailers
- fire surveillance
- flood response.

A Bushfire Management Plan has also been prepared.

5.6 Risk assessment and management

PCL and Transgrid will create and maintain separate risk registers in consultation with ACEN that will be used to record identified hazards, risk assessment and risk control methods. ACEN will ensure that risk communication is exchanged between all three parties.

A risk assessment process will be undertaken that considers all HSE risks associated with the works. The output of the risk assessment process will be an HSE risk register. The risk register will specifically include, identify and address environmental risks. The risk assessment process will be broadly consistent with the *ISO 31000, Risk management* standard (or Australian Standard equivalent). PCL will use safety management centre (SMC) system to manage all Health, safety and environment (HSE) related issues and records. These would include all safety reports, HSE register and audits, safe work method statement (SWMS), etc.

The risk register will be a live document that is consistently updated as the works progress, with risks and control methods added, reviewed, modified and retired as appropriate.

Risk assessment will be incorporated into daily activities as outlined below.

Safe work method statement (SWMS)

SWMS is used by PCL to manage work in a safe and environmentally responsible manner. SWMSs will be prepared by project personnel for each new work area and activity, ensuring that each SWMS is location- and activity-specific.

Environmental triggers to be noted in the preparation of a SWMS may include:

- ground disturbance
- native vegetation clearing
- welding, grinding and other hot works
- weed control
- excavation and back-filling of trenches
- handling of hazardous materials or wastes.

SWMSs will be used to identify the specific environmental (and safety) objectives and hazards associated with the activities and be approved by the individual responsible for completion of the job.

All SWMSs will be retained and included in SMC.

Pre-activity meetings

Environmentally-focussed meetings will be undertaken by PCL and Transgrid and their subcontractors when new phases of activity commence. The meetings will discuss issues associated with the scheduled work. The discussions will highlight relevant environmental issues as required and keeping records of agendas and outcomes.

Daily pre-start meetings

Daily pre-start meetings will be undertaken and attended by all workers. Attendance registers will be maintained with all workers required to sign in. The pre-start meetings will be held for combined groups of PCL or Transgrid staff and subcontractors working on a specific aspect of the project. During the meetings, the day's activities and the associated environmental and safety risks will be discussed. Lessons or observations regarding environmental and safety risks from previous days will be discussed and incorporated, as appropriate, into the JSEAs.

Weekly toolbox meetings

All contractors will hold toolbox meetings weekly and as required to discuss key safety and environmental topics relevant to the current scope of works. This is a more detailed discussion than that held during pre-start meetings. Attendance records will be maintained and will be considered as part of the site training program.

5.7 Induction and training

5.7.1 Environmental induction processes

Site environmental inductions are to be provided by the contractor for all PCL and Transgrid staff, contractor employees and subcontractor employees entering the site to inform them of their general environmental responsibilities, site-specific values and expectations (on-site and off-site) and environmental management controls, particularly in relation to flora and fauna, water quality, dust management and erosion and sediment controls. Inductions will include (as relevant to the activities to be undertaken by the inductee):

- Code of Conduct and company values
- General Environmental Duty and General Biosecurity Duty
- biodiversity management (see induction requirements in BMP)
- weed and pest management (see induction requirements in BMP)
- cultural heritage management, including encountering aboriginal artefacts (unexpected finds)
- noise and vibration minimisation including approved construction hours
- surface water (including stormwater) management
- erosion and sediment control
- traffic management including air quality
- awareness that access to landholdings other than those required for Stage 2a is not permitted and that signage denoting 'Private Property, Keep Out' (or similar) will be respected

- waste awareness and management
- fuel and chemical management, including the use of spill kits and spill response
- minimising impacts to agricultural practice
- incident management
- bushfire risks and management
- emergency response (including key contacts)
- local health service availability (and need to minimise impacts on local health services)
- complaints management
- stakeholder and community relations management.

All visitors and delivery drivers are to receive a site-specific induction appropriate in length and content for the type of work being undertaken. All inductions including visitors' inductions shall be recorded in Site Induction and Visitor Register document kept at the site office.

Environmental requirements discussed in the induction are reinforced during daily pre-start meetings and also during Toolbox meetings.

5.7.2 Training program

All PCL and Transgrid staff go through an induction and these trainings are refreshed as required.

Environmental awareness will also come through the participation of PCL and Transgrid staff and subcontractors in the following meetings (as described in Section 5.6, above):

- pre-activity meetings
- toolbox meetings (weekly and as required)
- daily pre-start meetings.

5.8 Incident management, emergency response and spill response

5.8.1 Incident management

Any incident that results in harm to the environment and/or off-site receptors is to be regarded as an environmental incident. It is a mandatory requirement for any personnel working for or on behalf of ACEN, PCL or Transgrid to respond to all hazards and events that have affected or have the potential to adversely affect the environment.

As defined in the DC an incident is a set of circumstances that causes or threatens to cause material harm to the environment. Material harm is defined in the DC as harm that:

- involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
- results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or makegood harm to the environment.

In accordance with CoC 7 (Schedule 4), the Planning Secretary will be notified in writing via the Major Projects website. After ACEN becomes aware of and incident they will immediately

notify the Department via this website. Accordingly, the PCL or Transgrid Lead Project Manager will notify the ACEN Project Manager immediately after a reportable incident occurs to enable prompt reporting by ACEN to the Planning Secretary. The notification from ACEN will identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident.

Incident reporting requirements and responsibilities are set out in Table 5.1. The table identifies reportable based on the definition in the DC. It is ACENs responsibility to ensure that notifications are undertaken in accordance with the consent.

Note that safety incidents are defined in site safety documentation separate to this CEMP.

Table 5.1 Incident notification requirements and responsibilities

Incident level	Definition	Notification	Responsibility
Reportable	Causes or threatens to cause material harm to the environment (see definition in DC): • involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or makegood harm to the environment.	• Internal: to PCL/Transgrid HSE Manager, Lead Manager (immediately) • External: to ACEN Project Manager, (immediately) • DPE: to the Planning Secretary, (immediately after the ACEN Project Manager becomes aware of an incident)	• PCL/Transgrid Lead Project Manager • ACEN Project Manager to report to DPE, Planning Secretary

Subsequent notification requirements will be given, and reports submitted in accordance with the requirements set out in Appendix 7 of the DC. This includes submission of a written incident notification addressing the requirements set out below to the Planning Secretary via the Major Projects website within seven days after ACEN becomes aware of an incident. Notification is required to be given under this condition even if the Applicant (ACEN) fails to give the notification required under condition 7 of Schedule 4 or, having given such notification, subsequently forms the view that an incident has not occurred.

The written incident notification will address the following requirements:

- identify the development and application number
- provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident)

- identify how the incident was detected
- identify when the applicant became aware of the incident
- identify any actual or potential non-compliance with conditions of consent
- describe what immediate steps were taken in relation to the incident
- identify further action(s) that will be taken in relation to the incident
- identify a contact for further communication regarding the incident.

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, ACEN will provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested. The written incident notification will include:

- a summary of the incident
- outcomes of an incident investigation, including identification of the cause of the incident
- details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence
- details of any communication with other stakeholders regarding the incident.

The first line of response is to take immediate actions to minimise risks to persons, plant, equipment and the environment. These actions may include:

- stop work
- assess site and make the area safe
- notify other parties that may be affected by the hazard/event.

Response agencies need to be informed of pollution incidents quickly, so action can be coordinated to prevent or limit harm to the environment and human health generally. These are listed in Table 5.2.

Incidents will be recorded in an Incident Register, as outlined in Section 6 of the EMS.

Table 5.2 Response agency contact details

Response agency	Contact details
Environment Protection Authority NSW (EPA NSW)	131 555 or (02) 9995 5555
Ministry of Health NSW	(02) 9391 9000
SafeWork NSW	131 050
The local authority, Mid Western Regional Council	(02) 6378 2850
Fire and Rescue NSW (Gulgong Local Station)	(02) 6374 1049
Rural Fire Service	1800 679 737
Rural Fire Service (Cudgegong Office)	(02) 6372 4434

Response agency	Contact details
Heritage NSW (for Aboriginal finds, as per HMP)	(02) 9873 8500
NSW Police (for human remains, as per HMP)	131 444

5.8.2 Non-compliance notification and response

A project non-compliance is defined in the DC as an occurrence, set of circumstances or development that is a breach of the consent but is not an incident.

Environmental non-compliances will be reported and actioned through the incident management procedures detailed in Section 5.8.1, above.

In accordance with CoC 8 (Schedule 4), ACEN will notify the Department in writing via the Major Projects website within 7 days after becoming aware of any non-compliance with the conditions of this consent. Accordingly, the PCL or Transgrid Lead Project Manager will notify the ACEN Project Manager no greater than 24 hours after a non-compliance is identified to enable prompt reporting by ACEN to the Planning Secretary.

In accordance with CoCs 8 and 9 (Schedule 4) the non-compliance notification to the Planning Secretary will set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

5.8.3 Corrective actions

Once an environmental incident or non-conformance has been reported to the ACEN Project Manager, a set of appropriate corrective actions will be raised by PCL or Transgrid. Measures already implemented, additional measures to be implemented as a result and any corrective actions will be reported to the ACEN Project Manager. Actions will be implemented to the satisfaction of the ACEN Project Manager and their effectiveness confirmed to demonstrate appropriate measures have been implemented to acceptably minimise the risk of reoccurrence.

5.8.4 Spill reporting

In the event that an accidental release of hazardous chemicals occurs at the site, the spill response procedures set out in the hazardous chemicals section in Section 6 of the SWMP will be followed.

If the spill meets the definition of an environmental incident (i.e. causes or threatens to cause material harm to the environment), it will be reported as an incident in accordance with Section 5.8.1, above.

5.8.5 Emergency preparedness, response and contacts

The EP for the Stubbo Solar project considers:

- site activities
- site emergency response team contacts
- external emergency contacts
- emergency equipment
- emergency preparedness and response
- training needs
- raising the emergency alarm
- emergency evacuation procedures
- testing and recording drills
- fire hydrants / fire response trailers
- fire watch.

The Bushfire Management Plan considers:

- bushfire protection measures
- bushfire emergency management plan
- fire weather – situational awareness
- defendable space, asset protection zones and vegetation clearance
- access
- water and suppression
- storage of hazardous and flammable materials
- fire response training and awareness
- evacuation and shelter in place options
- bushfire preparations and response actions.

Relevant phone numbers in case of an environmental emergency are shown in Table 5.1, above.

5.9 Document management system

PCL and Transgrid will implement a web-based project and document management system for project correspondence, including the communication and transmittal of all information requests and responses and the issue of all drawings and documents and the review and approval of the same. Further information on the document management system is provided in Section 5 of the EMS.

6 Inspections, monitoring and auditing

6.1 Site inspections and monitoring

Regular site inspections, as detailed below, will be a key component of the environmental monitoring program.

During the works, PCL, Transgrid and subcontractors will conduct regular inspections to confirm compliance with the CEMP and subplans and to ensure all construction footprints are compliant with approved development plans. Inspection records will be maintained by PCL and Transgrid and reported to ACEN on a regular using environmental and safety inspection checklists.

Inspection reports will be circulated weekly to the PCL and Transgrid Project Managers and the on-site team by the safety coordinators via a system called SMC (Safety Management Centre). Key environmental risks and issues will be discussed at pre-start team meetings and toolbox meetings taking into account the specific risks and issues associated with the proposed day's work (e.g. associated with the specific activities to be undertaken, and external risk factors such as the weather). Risks and issues are updated daily.

Daily inspections

The PCL and Transgrid Construction Managers will ensure that site personnel are undertaking daily inspections of the construction activities they are overseeing to ensure general compliance with the CEMP and subplans. All areas identified for improvement will be addressed directly and inspection will be recorded in the SMC.

Weekly monitoring

Once per week (at least) during construction, the PCL and Transgrid Construction Managers and/or delegate(s) will conduct monitoring of construction activities to ensure compliance with the CEMP and subplans. All areas identified for improvement will be added to a corrective action register.

Monthly inspections

Once per month (at least) during construction, the PCL and Transgrid Project Managers and/or delegate(s) will conduct a thorough inspection of construction activities to ensure compliance with the CEMP and subplans (see Table 6.1 in Section 6.1). The PCL and Transgrid Project Managers and/or delegate(s) will also conduct an inspection of the condition of the roads for, and responding to, any emergency repair and/or maintenance requirements. All these inspections and areas identified for improvement will be recorded in SMC.

Table 6.1 lists environmental aspects and the associated frequency of inspection and monitoring, cross-referencing the section of this report or the management subplan where the monitoring requirements are set out. Specific monitoring and inspection requirements are summarised in in Section 9, Table 9..

In addition to the overall inspection and monitoring responsibilities of the PCL and Transgrid Construction Managers and Project Managers, outlined above, Table 9. also outlines specific

responsibilities of the Traffic Supervisor, HSE Supervisor, Project Ecologist and Emergency Controller

Table 6.1 Site inspection and monitoring frequency matrix

Aspect	Frequency				
	Daily	Weekly	Fortnightly	Monthly	As required*
Transport (refer to TMP)					
Traffic control measures	Yes	-	-	-	Yes
Land management (see Section 8.2)					
Livestock farming and wellbeing	-	Yes	-	-	-
Property fences and gates	-	Yes	-	-	-
Air quality and dust (see Section 8.4)					
Dust	Yes (dry conditions)	-	-	-	-
Biodiversity (see BMP)					
Vegetation clearance	-	-	-	-	Yes
Fencing		Yes	-	-	-
Salvaged fauna	-	-	-	-	Yes
Weeds	-	-	-	Yes	-
Pest animals	-	-	Yes	-	-
Noise and vibration (see Section 8.5)					
Noise	-	-	-	-	Yes
Visual environment (see Section 8.6)					
Visual pollution	-	Yes	-	-	Yes
Lightspill	-	-	-	-	Yes
Heritage (see Section 8.7)					
Aboriginal cultural heritage (avoidance)	-	Yes	-	-	-
Aboriginal and historic cultural heritage (chance finds)	-	-	-	-	Yes

Aspect	Frequency				
	Daily	Weekly	Fortnightly	Monthly	As required*
Soil and water (see SWMP)					
Vegetation	-	Yes	-	-	-
Tracked mud and dirt	Yes	-	-	-	-
Drains	Yes	-	-	-	Yes
Stream crossings and culverts	-	Yes	-	-	Yes
Settlement basins, bunds, sediment fences, filters and screens	-	Yes	-	-	Yes
Chemical storage areas	-	Yes	-	-	Yes
Hazards (see EP and Bushfire Management Plan)					
Fire risk management	Yes (during high risk days)*	Yes	-	-	-
Waste management (see WMP)					
Waste	-	Yes	-	-	Yes
Socio-economic environment (see AES)					
Accommodation	-	-	-	Yes	-

* Refer to Section 9, Table 9.1 for further explanation of triggers for monitoring/inspection

6.2 Auditing

6.2.1 Overview

Audits are an essential means by which the applicant and the regulatory authorities ensure a project's compliance with environmental objectives.

Project and internal audits are to be conducted during mobilisation, construction and de-mobilisation in accordance with the audit program. The importance of environmental risks and the results of previous audits shall be considered when compiling the schedule. The schedule should also consider other management plans and the frequency of auditing required for each discipline.

6.2.2 Internal audits

PCL and Transgrid will conduct regular audits of management controls to monitor compliance with this CEMP. All audit actions will be resolved by the responsible entity/contractor providing evidence that the action has been completed. If subcontractors are conducting the audits, they will communicate the results of the audits to PCL or Transgrid on a regular basis. Table 6.1 summarises the internal audit program.

Table 6.2 Indicative internal audit program

Timing	Type	Objective
Within three months start of construction	Internal	Establish that all management controls are being implemented, and compliance with environmental performance objectives are being achieved
Every six months subsequent to the initial internal audit	Internal	Establish that all management controls are being implemented, and compliance with environmental performance objectives are being achieved. Ensure any prior non-compliances have been addressed

6.2.3 External audits

In accordance with CoC 11 (Schedule 4), PCL and Transgrid will commission independent environmental audits of the development in accordance with the *Independent Audit Post Approval Requirements* (2020) within 3 months of commencing construction. The independent audit will be carried out in accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020). Additionally, in accordance with the requirements the Independent Audit Post Approval Requirements (2020), the ACEN Project Manager will:

- review and respond to each Independent Audit Report prepared under condition 11 of Schedule 4 of the development consent, or condition 13 of Schedule 4 of the development consent where notice is given by the Planning Secretary;
- submit the response to the Planning Secretary;
- make each Independent Audit Report, and ACEN's response to it, publicly available within 60 days of submission to the Planning Secretary, unless otherwise agreed by the Planning Secretary.

Independent Audit Reports and ACEN's response to audit findings will be submitted to the Planning Secretary within two months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.

PCL and Transgrid will manage the independent environmental auditing process, make documents and site personnel available as required and implement the recommendations of the audits.

Proposed independent auditors will be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.

It is noted that the Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in condition 11 of Schedule 4 upon giving at least 4 weeks' notice to the Applicant of the date upon which the audit will be commenced.

Table 6.2 summarises the external audit program.

Table 6.2 Indicative external audit program

Timing	Type	Objective
Within three months start of construction	Independent Environmental Audit	Establish that all management controls are being implemented, and compliance with environmental performance objectives are being achieved
Subsequent audits as requested by the Planning Secretary	Independent Environmental Audit	Establish that all management controls are being implemented, and compliance with environmental performance objectives are being achieved. Ensure any prior non-compliances have been addressed

6.3 Communication

6.3.1 Notification of Department

Under the DC, ACEN has various obligations to notify the Department in relation to the commencement, cessation or staging of the development and providing plans in relation to the project.

In accordance with Schedule 4, CoC 4 of the DC, prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the ACEN will notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then ACEN will notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.

In accordance with Schedule 4, CoC 5, prior to commencing construction, ACEN will submit detailed plans of the final layout of the development to the Department via the Major Projects website, showing comparison to the approved layout and including details on the siting of solar panels and ancillary infrastructure, via the Major Projects website.

In accordance with Schedule 4, CoC 6, prior to commencing operations or following the upgrades of any solar panels or ancillary infrastructure, ACEN will submit work as executed

plans of the development showing comparison to the approved final layout plans to the Department via the Major Projects website.

ACEN is also required to notify the Department of incidents and non-compliances, as outlined in Section 5.8.

6.3.2 Internal communications

Communications within the project will be managed by PCL and Transgrid, who will ensure internal communications are documented, able to be tracked and accessible.

6.3.3 Other external communications

External communications will be undertaken in accordance with the CEP for the Stubbo Solar project.

PCL and Transgrid will immediately notify ACEN who will notify the relevant authority in a timely manner of any instances of statutory non-compliance.

6.3.4 Complaint investigation and response

ACEN, PCL and Transgrid recognise that complaint investigation and response is an important part of their quality management system. Complaint investigation and response will be undertaken as outlined in the CEP for the Stubbo Solar project.

6.4 Documentation and Records Management

6.4.1 Requirements

PCL's and Transgrid's subcontractors will document, implement and maintain this CEMP. This will be done by:

- maintaining site inductions and recording attendances
- ensuring workers are trained and competent to undertake their activities
- ensuring control measures are implemented, fit-for-purpose, and where relevant inspected and maintained regularly
- ensuring, when noted, non-compliances are reported appropriately
- ensuring appropriate corrective actions are implemented in a timely manner
- auditing performance against requirements regularly.

Each contractor is responsible for maintaining their environmental management system documents, ensuring the records are up-to-date and regularly reviewed.

6.4.2 Document Control

Document control is an important part of the environmental management system and documents will be readily available to ensure all employees have easy access to them. The accessible documents will be the current versions and obsolete or superseded documents will be made inaccessible and withdrawn from all points of use.

Each contractor will have a system to share controlled documents. The system will allow all employees to access the documents.

6.4.3 Records management

To ensure this CEMP is implemented effectively, the records of inspections, incidents, management actions and similar will be appropriately managed. Examples of the records that will be kept include:

- relevant correspondence from regulators
- minutes of environmental management-related meetings
- surveys of project site footprint to ensure consistency with approved design
- staff training records
- records of dangerous goods (DGs)/hazardous substances brought on to site or taken off site
- environmental monitoring results (e.g. vegetation clearance, fauna mortalities, weed and feral pest observations, water samples, groundwater samples, noise monitoring, etc.)
- records of complaints and incidents and the resulting responses
- records of non-compliances and the resulting corrective actions
- audit reports (internal, external)
- site inspection records (including photographs) and action requests arising from inspections
- photographic and video records (e.g. pre-construction site conditions, such as stream condition, vegetation condition, etc.).

Where records are related to certain events or locations on site, the record will be tied to GPS coordinates.

There will be a transition process at the end of construction during all records will be transferred from PCL/Transgrid to ACEN for long-term record maintenance.

6.4.4 Review and improvement

PCL's and Transgrid's subcontractors will undertake on-going review and improvement of existing systems and controls.

Review is a critical element of the environmental management system and involves a formal evaluation of the adequacy of the system – taking into account any new environmental issues, legislation, changing circumstances and the need for continual improvement.

In order to ensure a rigorous, all-encompassing review process, the contractors will conduct regular management review meetings. These meetings should be attended by individuals with either executive or specialist responsibility. At the Stubbo Solar project this may include:

- the ACEN Project Manager
- the ACEN HSE Manager
- the PCL/Transgrid Project Manager
- the PCL/Transgrid HSE Manager
- the PCL/Transgrid Construction Manager

- the Transgrid Site Manager
- the subcontractor management representatives, as appropriate.

6.4.5 Update of strategies, plans or programs

In accordance with Schedule 4, CoC2, ACEN will, with the support of PCL and Transgrid:

- update the strategies, plans or programs required under the DC to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site
- review and, if necessary, revise the strategies, plans or programs required under the DC to the satisfaction of the Planning Secretary within 1 month of the:
  - submission of an incident report under condition 7 of Schedule 4;
  - submission of an audit report under condition 9 of Schedule 4; or
  - any modification to the conditions of this consent.

As stated in Schedule 4, CoC3, with the approval of the Planning Secretary, the Applicant (ACEN) may submit any strategy, plan or program required by this consent on a progressive basis. To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Planning Secretary for approval. With the agreement of the Planning Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.

ACEN will ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.

If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program will clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

7 Environmental context

EMPs consider how actions might impact on various aspects of the environment (physical, ecological, heritage, socio-economic). During the construction phase of the project, the environmental aspects described below need to be considered.

7.1 Physical aspects

7.1.1 Land

The site generally comprises gently undulating hills and low hills. The eastern area has higher elevation (greater than 500 metres AHD) and western area has lower elevation (to approximately 46 metres AHD). The highest point being the north-eastern corner.

The site has the following four main types of landforms:

- Drainage (175 ha): This includes Stubbo Creek and its tributaries, Pine Creek which intersects the study area from the northwest corner, and the numerous minor ephemeral drainage lines formed between hill slopes.
- Flat (154.4 ha): Flat or very gently sloping landforms, primarily located around drainage lines within the central environmental exclusion zone.
- Slopes (1373.9 ha): Gentle to moderate slopes, often intersected with minor drainage lines.
- Ridgelines or crests (68.6 ha): Elevated crests and minor ridgelines including spurs.

The site is a predominantly cleared agricultural land primarily used for livestock grazing and intermittent cropping.

7.1.2 Water

Hydrology, potential for flooding impact and groundwater as described below. Additional detail is provided in the SWMP.

Hydrology

The site is located within the Macquarie-Bogan Rivers System and is within the upper catchment of Stubbo Creek. Stubbo Creek is a semi-permanent stream with a depth of up to 30 cm and width 1 to 4 m that crosses the project site and is located within the environmental exclusion zone.

Waterways in the vicinity of the site includes Pine Creek and Merotherie Creek in the north of the project site, both of them which discharge to Slapdash Creek approx. 1.7 km west of the site. In the south of the project site, Gum Creek is located and connects to Slapdash Creek. Slapdash Creek flows south and discharges to Waldra Creek, which flows into the Cudgegong River, connecting to Lake Burrendong south of Gulgong.

Potential for flooding impact

The results of the flood modelling suggested that the area is categorised as H1: 'Generally safe for vehicles, people and buildings', with the exception of waterways and confined drainage

lines which are mostly within the environmental exclusion zone during both 5 per cent Annual Exceedance Probability (AEP) and 1 per cent AEP events (see SWMP).

The site area is identified as low flood risk area largely because of the steep catchment grades and defined waterways allowing to drain water before it reaches a high depth.

Groundwater

The presence of shallow groundwater or springs occurs in association with rock fractures identified by valleys present in the study area. The majority of these occur within the central development exclusion zone.

Outside of these fracture zones, groundwater is expected to occur at greater depths from the surface and at depths greater than the development proposed excavation depths of 1.5 to 2.4 m.

NSW records for groundwater bores show one bore (Bore ID No. GW016732) within the project site boundary. There are two other bores near to the site, one bore (Bore ID No. GW016368) located to the south of the site and the other bore (Bore ID No. GW801270) to the west.

7.1.3 Soils

Desktop soil mapping of the site (Ramboll 2020) identified that two primary soil types have been mapped within the project area, comprising siliceous sands and yellow solodic soils/soloths. These soils are dispersible and highly erodible. More details on soils type are provided in the SWMP.

7.1.4 Air quality

The local air quality could be impacted by exhaust emissions and dust generation.

Exhaust emissions

Air emissions will be generated from vehicles, plant and equipment, including:

- earthmoving machinery and equipment, including excavators, scrapers and loaders
- material handling equipment, including forklifts and cranes
- vehicles travelling to and from the site, including light vehicles transporting construction personnel and heavy vehicles delivering construction materials
- water trucks for dust suppression.

Fugitive dust emissions

Dust generation as a result of surface disturbance works, including earthworks and vehicle movements on unsealed roads, will be expected to occur as a result of the project.

Surface disturbance works are relatively minor for solar farm projects. However, works will include:

- site vehicles such as 4WDs driving on tracks around the site to access work areas
- earthmoving machinery conducting excavation, grading, stockpiling, etc.

- machinery moving around the work area
- stockpiled soil

7.2 Ecological aspects

The site is highly modified due to its history of cropping and grazing, and apart from scattered paddock trees, native vegetation is largely absent in the development site. A brief description on flora, fauna, weeds, pests and threatened species are discussed below. More detailed information is included in the BMP. The management of biodiversity, weeds and pests is discussed in Section 8.3 below and the BMP.

7.2.1 Flora and fauna

A biodiversity development assessment report (a BDAR) was prepared by Ecological Australia to support the EIS for the Project and found the following:

- The large paddocks contain pastural grasses, legumes with scattered native paddock trees.
- The vegetation within the site is identified as Plant Community Type (PCT) 281, belonging to the Rough Barked Apple - red gum - Yellow Box woodland in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion and Plant Community Type (PCT) 1770, belonging to Narrow-leaved Ironbark – Red Stringybark - Black Pine woodlands in the Brigalow Belt South. The proposed project has the potential direct impact on 5.29 ha of PCT 281 and 0.24 ha of PCT 1770.
- Two threatened fauna species, Black Falcon (*Falco subniger*) and Barking Owl (*Ninox connivens*), have been sighted in or around southern end of the development site.
- Presence of hollow-bearing trees with large hollows (>20cm diameter) which acts as habitat for birds like Galah (*Eolophus roseicapilla*), Eastern Rosella (*Platycercus eximius*) and Sulphur-crested Cockatoo (*Cacatua galerita*).
- Numerous small farm dams are present across the development site. These areas present habitat for common species such as ducks, herons and grebes. However, because of the bare and eroded banks and lack of vegetation cover, habitat quality is low.
- The development site contains mapped Key Fish Habitat only at the location of the western cable crossing of Stubbo Creek. The Key Fish Habitat is shown in Figure 3.9 of the BMP.

7.2.2 Weeds and pests

The BDAR (Eco Logical 2020) includes the following weed species gathered as part of the BAM plots required for the assessment process. Appendix 2 provides details of location of weed species within the PCT Descriptions.

Weed species

- *Arctotheca calendula (*Cape Dandelion)
- *Trifolium* spp. (Clovers)
- *Medicago* sp. (Medic)
- *Echium plantagineum* (Paterson's Curse)

- *Lolium* sp. (Rye Grass)
- *Eragrostis cilianensis* (Stinkgrass)
- *Avena* sp. (Oats)
- *Spergularia rubra* (Red Sandspurry),
- *Lepidium* spp. (Peppergrasses).
- *Acetosella vulgaris* (Sheep Sorrel)
- *Hypochaeris radicata* (Flatweed)

Pest mammal species

- *Oryctolagus cuniculus* (European Rabbit)
- *Sus scrofa* (Pig)
- *Vulpes vulpes* (Red Fox)

An additional construction weed survey was carried out in May 2023 prior to commencement of construction as set out in the BMP.

7.2.3 Threatened species

No threatened flora species were identified in the site as the area is too degraded for the threatened flora to exist. However, some fauna species like Regent Honeyeater, Swift Parrot and White-throated Needletail have potential to occur. In addition, Barking Owl and Black Falcon have been sighted in or around southern end of the development site.

7.3 Cultural heritage

A total of 25 Aboriginal cultural heritage sites were recorded within the project area and the sites identified were nine isolated finds, three isolated finds with PADs, two artefact scatters, nine artefact scatters with PADs, one PAD and one modified tree. Most of the sites (20 sites) were recorded in the drainage landforms, two in the slopes, two in the flats landforms and one in drainage and flats. In total, 309 stone artefacts were recorded during the survey.

Twenty-four of the 25 heritage sites identified within the study area fall within the central environmental exclusion zone, including buffer areas, and thus will not be impacted by the project. These sites are shown in Figures 4.1 and 4.2 of the HMP. One site, Rosevale IF-01, has been identified as an isolated find in the slopes within the project area. This isolated find will not be impacted by the project as it is no longer within the development footprint of Stubbo Solar project. The isolated find will be managed according to Section 5.2 of the HMP.

No known places of historical heritage value or significance were identified within, or intersecting, the development site.

The management of cultural heritage including aboriginal cultural heritage is discussed in Section 8.7 below and the HMP.

7.4 Noise and vibration

Land-use in the vicinity of the site is predominantly cropping and grazing, and ambient noise levels are typical of a rural environment with background noise from insects, wildlife and wind

through trees and vegetation. Noise may be generated by machinery and equipment such as harvesters, boom sprayers and tractors.

Residences in the area are sparse. These residences would be expected to generate low levels of noise as a result of equipment such as generators or on-site water pumps. Eleven residences that are located within 2 km of the development site have been identified as nearest sensitive noise receivers that could potentially be impacted by the project.

7.5 Socio-economic environment

Socio-economic impacts on local communities, both positive and negative, have the potential to occur as a result of large-scale developments such as the construction of a solar project.

The social aspects that may be affected include increases in:

- nuisance noise and dust
- waste and litter contaminating crops and/or impacting livestock
- traffic
- mud and sediment tracked from the project site onto local roads by site vehicles.

The economic aspects that may be affected include an increased:

- use of local businesses
- spend within the community by construction workers
- use of accommodation leading to shortages for other interested parties
- use of equipment and services leading to shortages for other interested parties.

The project is located within the Mid-western Regional Local Government Area (LGA). This rural region consists predominantly of irrigated land, with the agricultural, forestry and fishing industries being the main employers. More detailed information on social and economic aspects of the region are provided in the AES.

Surrounding land use zones include several areas zoned as environmental management (E3) approximately four kilometres north of the study area, and an area zoned as large lot residential (zone R5) approximately 2.5 kilometres south of the study area.

Community engagement will be undertaken during construction as outlined in the CEP Section 6.

7.6 Sensitive receivers

Sensitive receivers comprise rural residential dwellings, as shown on Figure 7.1 and Figure 7.2.

Eleven residences are located within 2 km of the site, as listed below:

- R1: associated residence, 1.4 km southeast
- R2: associated residence, 0.3 km west
- R3: associated residence, in the centre of the site
- R4: Residence 1.91 km northeast
- R5: Residence 1.93 km northeast
- R6: Residence 1.63 km west
- R7: Residence 1.07 km east

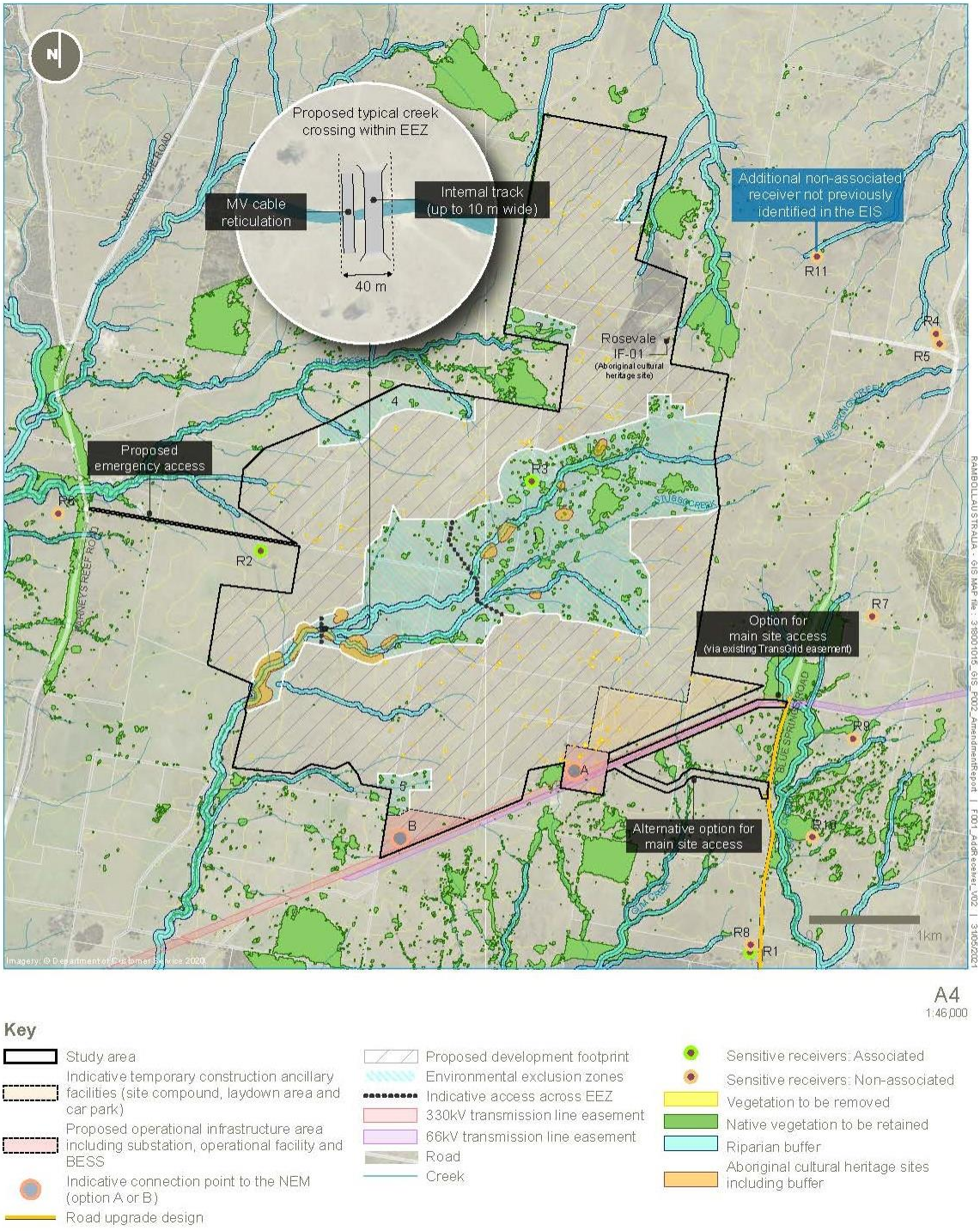
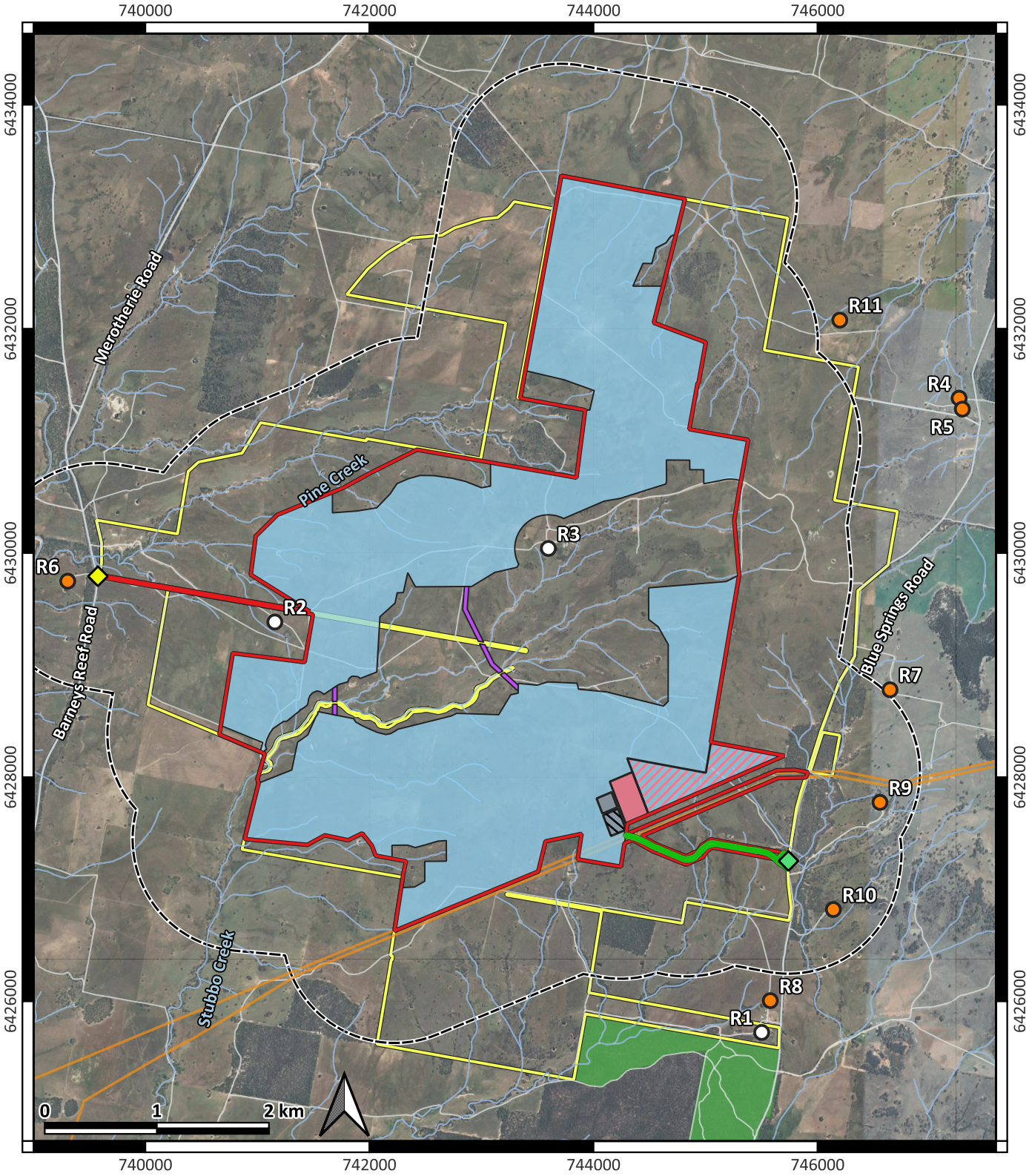


Figure 7.1 Sensitive receivers (from Ramboll 2021b)



- Associated receiver
- Non-associated receiver
- Site access point
- Emergency access point
- Access road, project Stage 1
- Existing transmission line
- Road
- Main watercourse
- Watercourse, tributary
- Project site
- Project lot boundary
- Substation
- BESS
- Switchyard (Transgrid)
- Laydown area
- Solar array extent
- Proposed access corridor
- State Forest
- 1 km radius from project site

AE1229 Stubbo Solar project
Figure 7.2 Sensitive receivers in relation to project Stage 2a layout

ACCENT ENVIRONMENTAL

Created 12/07/2023
CRS: GDA 20 MGA 55
Scale: 1:50,000 at A4
Page size: A4

Base map: Google Satellite [Jul 2023]
Additional data: NSW RoadSegment, NSW Hydroline, NSW_Six_Mid_Western_Cadastral_data, NSW ElectricityTransmissionLine

- R8: Residence 1.41 km southeast
- R9: Residence 0.68 km southeast
- R10: Residence 0.58 km southeast
- R11: Residence 1.1 km northeast

Residences within 2 km of the site are considered to be sensitive receivers for statutory assessment purposes, excluding the three (R1-R3, which are associated receivers and are considered part of the commercial development of the project). The associated receivers have written agreements with ACEN.

7.7 Visual amenity

A number of activities are likely to occur in the construction (or pre-construction) phase of the development may be visible from areas surrounding the development envelope. These include:

- ongoing detailed site assessment including technical investigations
- various minor civil works at the site access point
- building and use of construction facilities, including portable structures and laydown areas
- construction of ancillary infrastructure
- glint and glare from solar panels that may affect sensitive receivers
- various construction and directional signage
- vegetation clearing, excavations and earthworks
- construction related vehicles and equipment gaining access to site
- various construction activities including erection of solar panels with associated electrical infrastructure works, including power conversion blocks
- the use of lighting at night to assist with construction activities and/or site security, if a permit for work at night has been obtained.

8 Management measures

The management measures set out in this section have been developed to enable ACEN, PCL and Transgrid to achieve compliance with relevant statutory requirements (as outlined in Section 2), to meet the objectives of corporate environmental policies and requirements, to minimise the risk of adverse environmental impacts, and to drive continuous improvement.

Where a particular aspect of environmental management is addressed in a subplan, the subplan is cross-refenced in this section rather than duplicating the management measures. This is so there is only one consistent, up-to-date source for all commitments. The subplans are stand-alone documents and not appended to this CEMP.

8.1 Transport

The project will require a workforce of up to 520 full time equivalent employees which are expected to primarily be located in Mudgee and Gulgong, with all plant expected to be delivered from Port Botany. It is anticipated that the works will run for a period of approximately 24 months. The construction process is largely confined on-site, with no construction operations requiring the closure of, or limitation to, vehicle access along Blue Springs Road, Cope Road, or Barneys Reef Road.

The primary traffic impacts relate to the traffic generation associated with the transport of materials and the workforce to and from the site, with these effects able to be managed with minimal impact to the road network.

A TMP has been prepared outlining traffic management requirements for the Stubbo Solar farm.

8.2 Land management

8.2.1 Potential impacts

There is potential for project construction to reduce agricultural productivity or impact other productive land uses.

8.2.2 Objectives

The objectives of land management are to:

- manage construction activities to minimise impacts to agricultural productivity or other productive land uses
- continue consultation with participating landholders to minimise disruption to agricultural activities during construction and operation (in accordance with commitment LU4).

8.2.3 Management measures

To minimise the impacts to agricultural practices by the development, PCL and Transgrid will implement the following controls:

Vegetation clearing and land management

- implement and maintain soil and water management measures as set out in the SWMP and ESCP
- all vegetation clearing activities will be in accordance with the relevant project vegetation clearing permit conditions and approval requirements as outlined in the BMP – Protocol 1-Vegetation Clearing Procedure
- vegetation clearing will be minimised as far as possible as outlined in the BMP. This includes:
  - demarcating retained vegetation with high visibility fencing or flagging tape
  - commencing revegetation within 10 days of completion of any construction or upgrading activities and re-establish ground cover within 3 months to minimise the risk of erosion (see BMP and SWMP)
  - re-establishing ground cover using topsoil, salvaged native vegetation and seeds stockpiled on site for beneficial re-use as per Protocol 4 of the BMP "Stockpiles and Re-Using Resources as Woody Debris and Bushrock Removal"
  - properly maintain the ground cover with appropriate perennial species as outlined in the BMP
  - undertaking weed management as outlined in the BMP
- hazardous chemical spills will be managed and remediated in accordance with the SWMP
- waste materials will be appropriately removed and disposed in accordance with the WMP

Access to the project site and adjacent properties

- only approved entry and exit points, as well as internal access tracks will be used during all construction activities and deliveries:
    - approved entry and exit points, as well as access routes to the site are defined in Section 3.5 of the TMP
    - internal access tracks are shown in the site layout plan (Appendix B of the SWMP)
- all project staff and visitors will abide by the access protocols and measures defined in Section 4 of the TMP:
    - project requirements such as on-site speed limits and location of parking and laydown areas will be signposted throughout the site
- construction and delivery movements will be confined to the project site boundary where possible
- access to other landholdings is not anticipated during Stage 2a. If access to other landholdings is required during Stage 2a, such as for monitoring inspections of the exclusion zones, approval from affected landholders will be obtained by the ACEN Project Manager prior to entry
- property fences and gates will be installed, maintained and reinstated to a condition equal to or better than the pre-existing condition, as per agreements with landowners, and instructions displayed on farm gates will be adhered to
- all gates are to have 'Private Property, Keep Out' (or similar) signage on both sides of the gate, excluding the gates to the emergency access points, which will have 'Emergency Exit' signage on the internal side of the gate and 'Private Property, Keep Out' (or similar) signage on the external side of the gate.

Livestock

- Sheep grazing will not occur on site until the commencement of Stage 2b.
- A Grazing Management Plan (GMP) will be developed and submitted to DPE at least three months prior to the commencement of Stage 2b. The GMP will be appended to the BMP.
- care will be undertaken at all times while working in proximity to livestock
- travel speeds minimised when passing livestock
- livestock will not be fed, handled, mustered or disturbed in any manner
- the landowner will be immediately notified regarding any sick, injured or dead livestock observed during construction.

8.2.4 Monitoring

Monitoring of the site and the effectiveness of the control measures is necessary to minimise land use impacts and ensure stock from adjoining properties is not significantly impacted. The monitoring measures include:

- inspecting sediment controls, exposed soils and revegetation (as outlined in SWMP and BMP)
- inspecting on-site traffic management measures, including access points and tracks, traffic controls (signage) and adherence to traffic management protocols defined in the TMP
- observing any negative impacts on livestock near the site including sick, injured or dead livestock
- inspecting fences and gates, documenting and repairing any damage.

The Monitoring Plan is shown in Section 9.

8.3 Biodiversity

The construction of the Stubbo Solar project will require clearance of vegetation and a requirement to avoid disturbance of vegetation in designated areas such as within the central environmental exclusion zone. Pre-clearance surveys and the salvage of fauna species will be required, where possible, during construction, and weed and pest animal management will be important components of site management during construction.

A BMP has been prepared as a subplan to the CEMP outlining biodiversity management and weed and pest animal species management requirements for the Stubbo Solar project. The BMP includes protocols for the following that are to be followed during the construction phase of the project, including:

- Vegetation Clearing Procedure
- Stockpiles and Re-Using Resources as Woody Debris and Bushrock Removal
- Habitat Tree Removal
- Management of Displaced Fauna
- Weed Management
- Feral Pest Management

- Fence Construction and Management
- Vehicle Hygiene Procedure
- Exclusion Fencing/Exclusion Zones
- Waterways Crossings.

8.4 Air quality and dust

8.4.1 Potential impacts

Construction activities have the potential to cause air pollution through the generation of dust during earthworks, and when trafficking plant and vehicles over unsealed surfaces. Dust has the potential for amenity impacts on nearby receivers and can impact the health of vegetation by coating leaves. Air quality can also be affected by emissions from vehicles, plant and equipment.

8.4.2 Objectives

The objective of air quality management is to protect the beneficial uses of air quality. This will be done by ensuring:

- works that have the potential to generate dust are planned and designed appropriately
- adequate provisions are provided to protect site personnel and members of the public
- the impacts on air quality are acceptably minimised.

8.4.3 Management measures

To minimise the dust generated by the development PCL and Transgrid will implement the following dust management measures:

- avoiding, where possible, vegetation removal, earthworks and trafficking plant and vehicles over unsealed surfaces during dry and/or windy conditions
- grading and ongoing maintenance of internal access roads to reduce potential to deteriorate and generate dust
- minimising vegetation clearing as far as possible, and re-vegetating and/or rehabilitating disturbed land surfaces and stockpiles as soon as practicable as outlined in the BMP, SWMP and ESCP
- enforcing on-site speed limits by posting signs on site, briefing project staff and visitors through inductions and toolbox talks, as well as ensuring construction staff adhere to the drivers' code of conduct, in accordance with the TMP
- covering soil and aggregates that will be transported on public roads
- using water trucks for dust suppression as required along internal, unsealed access roads and disturbed areas, particularly during dry and windy conditions
- optimising and minimising vehicle movements onsite through the strategic location of laydown areas, site offices and parking areas and efficient logistics planning

- ensuring dust suppression measures take into consideration weather conditions (including wind strength and direction), extended dry periods and any applicable MWRC water restriction levels:
  - the weather on the project site will be monitored daily/weekly in accordance with Section 6 of this CEMP/Section 7 of the SWMP
  - during extended periods of dry and windy weather, the dust suppression measures defined in this section will be undertaken more frequently until the objectives of this section are met
  - if current dust suppression methods are not effective, the SWMP and ESCP will be amended in collaboration with PCL and Transgrid to further minimise sources of dust.

To minimise vehicle, plant and equipment emissions by the project, PCL, Transgrid and their subcontractors will implement the following:

- inspecting and maintaining vehicles, plant and equipment to ensure they are operating efficiently, and in accordance with the manufacturer's requirements
- switching off vehicles, plant and equipment when not in use.

8.4.4 Monitoring

Monitoring of the site and the effectiveness of the control measures is necessary to ensure air pollution (particularly dust) is not posing unacceptable risks to receivers or the environment. The monitoring measures include:

- inspection of the site (particularly access roads) for:
  - visible vehicle-, plant- or equipment-generated dust
  - dust generated by earthworks and other activities
  - dust generated from exposed/bare ground
- visual inspection of dust suppression measures to ascertain their effectiveness (i.e. minimal dust observed after measure implemented)
- inspection of plant and vehicles for visible excessive air emissions during construction.

Monitoring frequencies are shown in Table 9.1 Stubbo Solar Project Environmental Monitoring Plan

8.5 Noise and vibration

8.5.1 Potential impacts

There is the potential for construction noise to disturb the amenity of local residents. Activities may include vegetation clearance and earthworks, delivery of solar panels and mounting systems by road transport, installing the infrastructure, and reversing beepers on large vehicles and other plant.

There is also the potential for vibration from construction activities to disturb the amenity of local residents. Activities may include delivery of components by road transport, installing the panels and mounting system, and using earthmoving machinery.

8.5.2 Objectives

The objective of noise management is to minimise the noise levels at the nearby sensitive receivers.

8.5.3 Management measures

Management measures to minimise the noise impacts during construction will include:

- monitoring and mitigating the noise generated by any construction, upgrading or decommissioning activities on the site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (ICNG) (DECC, 2009), or its latest version
- adherence to construction hours:
  - construction to occur between 7 am to 6 pm Monday-Friday and 8 am to 1 pm on Saturdays
  - no construction works to be held on Sundays and NSW public holidays
  - if works outside of these hours are proposed, approval from the Planning Secretary is required
- all plant and equipment used on site, or in connection with the development will be maintained in a proper and efficient condition, and operated in a proper and efficient manner
- PCL will determine if noise suppression is required for plant and equipment onsite – when selecting plant or equipment PCL will contact manufacturers or suppliers and determine whether the equipment purchased has sound power levels at or below those listed in Table 4.1 of the noise impact assessment (Appendix G) of the EIS (upon which the construction noise modelling was based)
- plant and equipment used on site:
  - will be positioned within the site so as to as to maximise, as far as practical, the distance to noise sensitive receivers (NSRs)
  - will be positioned to make use of natural shielding such as topography
  - will be orientated so that noise will not be directed towards NSRs
  - will be fitted with well-maintained noise shielding and noise suppression measures (PCL Lead Construction Manager to inspect the equipment for the required shielding and suppression measures)
  - will be operated in a quiet and efficient manner and in designated time periods for individual construction activities as defined within the project schedule
  - will not be left idling between tasks, rather they will be shut down or throttled down to a minimum between tasks to avoid unnecessary noise and to ensure periods of respite are provided.
  - will be regularly maintained and if required (the equipment exceeds the manufacturer's soundpower specifications by 15%) the equipment will be repaired or replaced
- neighbours of the project will be consulted by PCL and Transgrid and notified in writing regarding the timing of major deliveries as well as potentially noisy activities (i.e. piling works) at least 48 hours prior to the delivery/activity

- the Complaints Register (see Section 6 of the CEP) will be published on the website and updated monthly
- implementing the following noise management measures, as required:
  - sequencing of site activities to avoid concurrent construction works in the vicinity that may contribute to additional noise
  - turning off plant that is not being used
  - repairing or replacing equipment that becomes noisy
  - identifying and implementing, where feasible and reasonable, alternate work practices which generate less noise (e.g. use of electric equipment instead of diesel or petrol powered).

8.5.4 Monitoring

Monitoring of the site will be undertaken to confirm whether impact mitigation and management measures are effective and to respond to any noise complaints. In particular, monitoring will include:

- regular onsite inspections will be undertaken to ensure the equipment are running efficiently and are not making too much noise
- short term attended noise monitoring of construction noise will be undertaken in accordance with A*S1055:2018 Acoustics - Description and measurement of environmental noise*
- short term attended noise monitoring will be undertaken by a suitably qualified and experienced noise specialist and include the following:
  - the use of noise monitoring equipment in accordance with AS1055:2018
  - daytime monitoring when there is no rainfall and wind speeds are less than 5 m/s at the microphone (in accordance with A*S1055:2018* and the Noise Policy for Industry guideline (NSW EPA (2017)) at the three closest non-associated residences (R9, R10 and R11, see Section 7.6)
  - monitoring will be undertaken at the commencement of high-noise generating activities (e.g. operation of mulcher, roller and compactor, piling rig)
  - if noise levels exceed the standard daytime construction noise management level (NML) specified in the EIS (LAeq,15minute of 45 dB), weekly monitoring will be undertaken until such time as noise levels comply with the guidelines
- short-term attended noise monitoring will also be undertaken at NSRs if required to help resolve any noise complaints
- monitoring in response to complaints will occur at a similar time of day and with similar construction activities to when the complaint was made (if possible)
- in cases where noise levels are exceeded, an investigation will be undertaken to determine the reason for the exceedance and management measures as outlined above in Section 8.5.3 will be implemented in accordance with the ICNG.

Noise monitoring is listed in Table 9.1 in Section 9.

8.6 Visual environment

The construction of the Stubbo Solar project will create visual impacts at and around the site that will need management.

8.6.1 Potential impacts

There is potential for construction of the project to impact on the surrounding visual; environment by:

- potential glint and glare during panel installation
- excessive displays of advertising signs or logos on site
- leaving disturbed ground bare and vulnerable to erosion
- light spillage from night lighting
- visual impacts associated with litter or waste materials generated during construction.

8.6.2 Objectives

To minimise the visual impact of the project on surrounding sensitive receivers (residents and road users).

8.6.3 Management measures

The Stubbo Solar Project site selection process and EIS process took into consideration sensitive receptors and the proximity of public roadways to mitigate visual impacts, including from glint and glare. In addition, the substation switchyard is located in a low point to minimise visual impacts.

PCL and Transgrid will manage the visual impact of the project by:

- not mounting any advertising signs or logos on site, except where this is required for identification or safety purposes
- vegetating and/or rehabilitating disturbed land surfaces and stockpiles as soon as practicable as outlined in the SWMP and ESCP
- minimising light spillage from the development to road users, residential sensitive receivers and fauna species (mostly nocturnal species) by ensuring that any external lighting associated with the development:
  - is installed as low intensity lighting (except where required for safety or emergency purposes)
  - does not shine above the horizontal plane
  - complies with *AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting*, and the *Dark Sky Planning Guidelines* (DPE 2018) or their latest versions
  - follows the Best Practice Lighting Design guidance in the *National Light Pollution Guidelines for Wildlife* (DEE 2020).
- removing temporary hoardings, barriers, traffic management and signage when no longer required

- keeping the site tidy and well maintained, including the secure storage and regular removal off-site of packaging materials (particularly cardboard and plastics) in accordance with the WMP
- avoiding storage of materials beyond the construction site boundaries.

Infrastructure that will be installed as part of the project has been designed to reduce visual impact to sensitive receivers with the solar panels, and in particular, designed to absorb rather than reflect sunlight. While the impact to sensitive receivers is considered low (as reported in the EIS), measures to reduce residual visual impacts will include, as required:

- using non-reflective surfaces and paint colours that blend with the surrounding features of the site on ancillary infrastructure
- retaining existing roadside plantings along the eastern boundary of the site where possible in accordance with the BMP and commitments made in the EIS
- retaining and protecting existing vegetation within the environmental exclusion zones to maintain the existing level of screening
- progressively rehabilitating areas of temporary disturbance as outlined in the BMP.

8.6.4 Monitoring

Monitoring measures to ensure that impacts on the visual environment are being effectively minimised will comprise:

- checking that temporary hoardings, barriers, traffic management and signage have been removed when no longer required
- regularly inspecting the site to ensure it is kept tidy and well maintained and that packaging materials are being securely stored and regularly removed
- checking the light spill of the external lights after they are installed to ensure impacts to sensitive receivers are minimised
- visual inspections for glint and glare from the project site after installation of panels and in response to any complaints.

Frequency of monitoring measures are defined in Table 9.1.

8.7 Heritage management

The construction of the Stubbo Solar project will impact the land surface and subsurface and clearing of native vegetation and project earthworks may impact Aboriginal cultural heritage values as well as historic heritage values.

8.7.1 Aboriginal cultural heritage management

Direct or indirect impacts on known sites of Aboriginal cultural heritage value identified during the EIS will need to be avoided and any chance finds of artefacts will need to be managed effectively.

An HMP has been prepared by ACEN and is a subplan to the CEMP. The HMP outlines the Aboriginal heritage management requirements for the Stubbo Solar project, including

protocols to be followed for chance finds of items of Aboriginal cultural heritage value. PCL and Transgrid will follow the management measures and procedures set out in the HMP, as relevant to their works.

8.7.2 Historic heritage management

No known places of historical heritage value or significance were identified within, or intersecting, the development site. A protocol for the discovery of new historic heritage items is outlined below.

Potential types of unanticipated historic artefact find

A historic artefact is anything which is the result of past activity not related to the Aboriginal occupation of the area. Historic artefacts may include pottery, wood, glass and metal objects as well as the built remains of structures, sometimes heavily ruined.

Heritage significance of historic items is assessed by suitably-qualified specialists who place the item or site in context and determine its role in aiding the community's understanding of the local area, or their wider role in being an exemplar of state or even national historic themes.

Procedure to follow in the event of discovery of unanticipated find

In the event a new historic heritage item is identified during construction activities the following steps should be taken:

- **Cease all works immediately** – All ground surface disturbance in the area of the finds should cease immediately, then:

  a) the discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted

  b) the site supervisor will be informed of the find(s).

- **Contact NSW Police** – If finds are suspected to be human skeletal remains, then NSW Police will be contacted as a matter of priority.
- **Contact an archaeologist** – If there is substantial doubt regarding the historic significance for the finds, then gain a qualified opinion from an archaeologist as soon as possible. This can circumvent proceeding further along the protocol for items which turn out not to be significant. If a quick opinion cannot be gained, or the identification is that the item is likely to be significant, then proceed to the next step.
- **Notify Heritage NSW** – Notify Heritage NSW as soon as practical on 131 555 providing any details of the historic find and its location.
- **If the find is insignificant in the view of the heritage specialist** – if, in the view of the heritage specialist or Heritage NSW, the finds appear not to be significant, work may recommence without further investigation. Keep a copy of all correspondence for future reference.
- **If the find is significant in the view of the heritage specialist** – if, in the view of the heritage specialist or Heritage NSW, finds appear to be significant, facilitate the recording and

assessment of the finds by a suitably qualified heritage specialist. Such a study should include the development of appropriate management strategies.

- **a significant find has been made** – If the find(s) are determined to be significant historic items (i.e. of local or state significance), any re-commencement of ground surface disturbance may only resume following compliance with any legal requirements and gaining written approval from Heritage NSW.

8.8 Soil and water

There is the potential for local waterways to be impacted through the off-site migration of sediment eroded from disturbed land and from spills of hazardous chemicals.

An SWMP has been prepared as a subplan to the CEMP outlining the soil and water management requirements for the Stubbo Solar project. The SWMP includes the management of hazardous chemicals (including dangerous goods), flood management and the management of unexpected contaminant finds.

An ESCP outlining specific control measures to be used for the prevention and management of erosion is appended to the SWMP.

8.9 Hazards

Hazards associated with the Stubbo Solar project during construction include:

- fire risk within the site, and the risk of bushfire external to the site
- the storage and handling of dangerous goods.

To address these and other hazards, a Bushfire Management Plan and EP have been prepared as separate stand-alone documents. A FSS will be prepared for the BESS for Stage 3. In addition, the management of dangerous goods is set out in the SWMP (under hazardous chemicals).

8.10 Waste management

The construction of the Stubbo Solar project will generate significant quantities of waste, not all of which can be recycled. A WMP has been prepared as a subplan to the CEMP outlining waste management requirements for the project. The WMP sets out how waste management will be undertaken with regard to the NSW waste hierarchy, including maximising the recycling of packaging materials.

8.11 Socio-economic environment

The construction of the Stubbo Solar project will have a significant social impact (both positive and negative) on nearby landholders and local towns where the construction workforce will be located. A key issue requiring management during construction is the impact of the workforce on the availability of accommodation in the local area and on employment.

An AES has been prepared as a subplan to the CEMP outlining the means by which accommodation and employment impacts will be managed during project construction.

A Voluntary Planning Agreement has been agreed between ACEN and Mid-Western Regional Council. The funding need has been identified and prioritised based on potential project impacts and in collaboration with Council, the community, and the NSW Government. ACEN has also implemented a "social investment program" – a discretionary process targeting investment within local community.

9 Monitoring summary

Routine (according to pre-determined schedules) and non-routine (unscheduled, e.g. event-based) inspection and monitoring will be undertaken during project construction to determine whether impact mitigation and management measure are effective and to identify and resolve unforeseen impacts.

All instruments and devices used for measuring or monitoring any parameter under any condition of the CEMP will be calibrated in accordance with relevant standards, and appropriately operated and maintained. Records of calibration will also be maintained.

The results of environmental monitoring will be recorded and maintained by PCL and Transgrid and reported monthly to ACEN.

The measures for monitoring impact mitigation outlined in Section 8 and in the stand alone environmental management subplans are consolidated in the monitoring plan Table 9.1 below, together with frequency of action and responsibilities.

The monitoring measures from the subplans have been included in Table 9.1 for convenience and to provide an overall statement of monitoring effort. However, each subplan is the primary source of monitoring requirements in relation to the environmental aspect the subplan covers. The subplans will be directly cross checked by the PCL Lead Project Manager if they have been more recently updated than this CEMP. Similarly, this CEMP will be reviewed and updated by the PCL Lead Project Manager if there is a change to another plan that directly impacts the CEMP.

Table 9.1 Stubbo Solar Project Environmental Monitoring Plan

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
Transport				
Traffic monitoring measures are described in the Table 9 "Management and Monitoring Summary" of the TMP				
Land management				
Livestock farming and wellbeing	To determine whether the project has had any adverse effects on the farming or wellbeing of livestock within or adjacent to the site	Inspections to ensure livestock access points and crossings have not been altered Observations of any straying, trapped or injured livestock	Weekly	PCL Construction Manager
Property fences and gates	To determine whether the condition of the fences and gates have deteriorated	Conduct regular inspections to ensure fences and gates have not deteriorated and are working effectively	Weekly	PCL Construction Manager
Biodiversity				
Biodiversity monitoring measures are described in the Table 4-2 "Multi-level Trigger, Action, Response, Monitoring and reporting requirements" of the BMP				

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
Air quality and dust				
Dust	To identify dust generation requiring management	Visual inspection of construction activities including vehicle, plant and equipment movement; vegetation clearance; and earthworks for dust generation; dust suppression measures	Daily during dry conditions, particularly when windy Weekly at all other times	PCL Construction Manager
		Visual inspection of disturbed areas and stockpiles for dust generation		
		Visual inspection of plant and vehicles for visible air emissions	Fortnightly	PCL Construction Manager
Noise and vibration				
Noise	To ensure the equipment are running efficiently and are not making too much noise	Onsite inspections will be undertaken to ensure the equipment are running efficiently and are not making too much noise	Fortnightly	PCL Construction Manager
Noise	To investigate noise complaints To identify if construction noise management levels	Short term attended noise monitoring will be undertaken by a suitably qualified and experienced noise specialist and include the following: • the use of noise monitoring equipment in accordance with AS1055:2018	If a complaint is received If noise reducing mitigation measures are implemented	PCL Construction Manager

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
	have been exceeded so that additional management measures may be implemented, where feasible and reasonable	• daytime monitoring when there is no rainfall and wind speeds are less than 5 m/s at the microphone (in accordance with AS1055:2018 and the Noise Policy for Industry guideline (NSW EPA (2017)) at the three closest non-associated residences (R9, R10 and R11, see Section 7.6) • monitoring will be undertaken at the commencement of high-noise generating activities (e.g. operation of mulcher, roller and compactor, piling rig • if noise levels exceed the site-specific noise criteria defined in the EIS, weekly monitoring will be undertaken until such time as noise levels comply with the guidelines • monitoring in response to complaints will occur at a similar time of day and with similar construction activities to when the complaint was made (if possible	Out-of-hours construction (if approved) Testing prior to and during any high-risk noise-generating activities	
Visual environment				
Visual pollution	To ensure that impacts on the surrounding visual environment are minimised	Checking that temporary hoardings, barriers, traffic management and signage have been removed when no longer required	After removal	PCL Construction Manager

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
		Regularly inspecting the site to ensure it is kept tidy and well maintained and that packaging materials are being securely stored and regularly removed	Weekly and in response to any complaints	PCL Construction Manager
Lightspill	To ensure that impacts on the surrounding visual environment are minimised	Checking the light spill of the external lights after they are installed to ensure impacts to sensitive receivers are minimised	After installation and in response to any complaints	PCL Construction Manager
Glint and glare	To ensure glint and glare from the project site affecting sensitive receivers is minimised	Visual inspection for glint and glare from the project site at a sensitive receiver	After installation of solar panels and in response to any complaints	PCL Construction Manager
Heritage				
Measures to protect known Aboriginal objects	To ensure known Aboriginal objects are not impacted	Conduct regular inspection of the integrity of the fence protecting the 24 recorded Aboriginal sites located within the environmental exclusion zone.	Weekly	PCL Construction Manager
		Conduct regular inspection of the integrity of the fence protecting the Aboriginal site IF-01 not located within the environmental exclusion zone.	Weekly	PCL Construction Manager

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
Vehicle impacts on known Aboriginal sites	To ensure impacts on known Aboriginal sites is avoided	Vehicle access is restricted to approved access routes. If additional or alternative access is required, the proposed route will be inspected by a suitably qualified archaeologist and RAP/s	As required	ACEN Project Manager
Erosion impacts on known Aboriginal sites	To ensure impacts on known Aboriginal sites is avoided	Monitoring Aboriginal site condition through regular environmental auditing	Monthly, with additional auditing / Aboriginal site monitoring following significant wet weather events or site flooding	ACEN Project Manager
Soil and water				
Soil and water monitoring measures are described in Appendix E "Stubbo Solar soil and water management monitoring requirements" of the S&WMP				
Hazards				
Bushfire monitoring measures are described in Table 3 "Project component and associated APZ" in Section 3.10 "Bushfire Preparations and Response Actions" of the Bushfire Management Plan				
Fire risk management	Ensure firefighting services have suitable and unobstructed vehicle access to the site	Inspection of vehicle access routes to confirm that access is being maintained (including access to the APZ and static water supplies)	Weekly during construction, and opportunistically	Emergency Controller

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
	Minimise risk of fire ignition	Inspection to ensure vehicle movements off access roads and through long grasses are minimised (and avoided during total fire ban days, see below)	Weekly during construction	Emergency Controller
		Inspection to ensure that on total fire ban days banned activities are not occurring (e.g. works with potential to cause a spark or ignition, vehicle operation over unmanaged grass areas)	Daily during total fire ban days	Emergency Controller
	Ensure fire water supply provisions are maintained	Inspection of water levels and volumes in fire water supply tanks	Weekly	Emergency Controller
	Pre-warning of potential bushfire approach	Monitor NSW RFS and BOM websites for bushfire alerts	Daily during high / extreme / catastrophic fire danger periods	Emergency Controller
Hazardous materials and dangerous goods monitoring measures are described in Appendix E “Stubbo Solar soil and water management monitoring requirements” of the S&WMP				
Waste management				
Waste classification	To ensure no waste disposed of contrary to its appropriate	Checking that waste is stored in appropriately-labelled containers	Weekly	PCL Construction Manager

Aspect	Purpose of monitoring	Monitoring	Frequency	Responsibility
	disposal classification			
Waste Management Register	To ensure no inaccuracies are made when entering data on the Waste Management Register	Cross-checking with other appropriate documents	Each entry of data on the Waste Management Register	PCL Construction Manager
Socio-economic environment				
Accommodation and employment monitoring measures are described in Section 12.3 “Monitoring during construction” of the AES				

10 References

AS/NZS (2018). AS/NZS ISO 31000:2018: Risk management - Guidelines (Standard), 2nd Edition

DEE (2020). National Light Pollution Guidelines for Wildlife Including marine turtles, seabirds and migratory shorebirds. Department of the Environment and Energy. Version 1.0, January 2020

DPE (2018). Dark Sky Planning Guidelines, Protecting the observing conditions at Siding Spring. Department of Planning and Environment, State of New South Wales, Australia. 2018

DPE (2018). Compliance Reporting: Post Approval Requirements. Department of Planning and Environment, State of New South Wales, Australia. June 2018

DPE (2020). Independent Audit: Post Approval requirements. NSW Department of Planning, Industry and Environment. May 2020

Ecological Australia (2020). Biodiversity Development Assessment Report: Stubbo Solar Farm, prepared for UPC\AC Renewables Australia. November 2020.

Landcom (2004). Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, Office of Environment, New South Wales

NRAR (2018). Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018). Natural Resources Access Regulator, NSW Department of Industry. INT19/15607

NSW EPA (2014). Waste Classification Guidelines. Accessed 20 May 2021 from https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines

NSW EPA (2017). Noise Policy for Industry. NSW Environment Protection Authority. October 2017.

OzArk (2020). ACHAR and Historic Heritage Assessment: Stubbo Solar Farm prepared for UPC\AC Renewables Australia. December 2020

Ramboll (2020) Stubbo Solar Farm: Environmental Impact Statement, prepared for UPC\AC Renewables Australia Pty Ltd by Ramboll Australia Pty Ltd. December 2020

Appendix A: Conditions of consent for CEMP

Table A1 relevant conditions from Development Consent - Application Number: SSD-10452

Condition No.	Condition Description	Reference
Schedule 2 Administrative Conditions		
Obligations to minimise harm to the environments		
1	*In meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development.*	EMS/ CEMP Section 1.3
Terms of Consent		
2	*The Applicant must carry out the development:* *(a) generally in accordance with the EIS; and* *(b) in accordance with the conditions of this consent.* *Note: The general layout of the development is shown in Appendix 1.*	EMS/ CEMP Section 2
3	*If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.*	EMS/ CEMP Section 2
Operation of Plant and Equipment		

Condition No.	Condition Description	Reference
9	*The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is:* *(a) maintained in a proper and efficient condition; and* *(b) operated in a proper and efficient manner.*	EMS
Schedule 3 Environmental Conditions - General		
Transport: Over-Dimensional and Heavy Vehicle Restrictions		
2	*The Applicant must ensure that the:* *a) development does not generate more than:* • *60 heavy vehicle movements a day during construction, upgrading and decommissioning;* • *20 over-dimensional vehicle movements during construction, upgrading and decommissioning; and* • *5 heavy vehicle movements a day during operations; on the public road network; and* *b) length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 26 metres, unless the Planning Secretary agrees otherwise.*	TMP
3	*The Applicant must keep accurate records of the number of over-dimensional and heavy vehicles entering or leaving the site each day for the duration of the project.*	TMP
Transport: Access Route		
4	*All over-dimensional and heavy vehicles associated with the development must travel to and from the site via Golden Highway, Ulan Road, Cope Road and Blue Springs Road as identified in Appendix 1 and Appendix*	TMP

Condition No.	Condition Description	Reference
	5. Note: The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles on the road network.	
Transport: Site Access		
5	*All vehicles associated with the development must enter and exit the site via the preferred site access point off Blue Springs Road, as identified in Appendix 1 and Appendix 5.*	TMP
6	*If the applicant cannot secure access via the preferred site access point detailed in condition 5 of Schedule 3 of this consent, all vehicles associated with the development must enter and exit the site via the alternative site access point off Blue Springs Road, as identified in Appendix 1 and Appendix 5.*	TMP
7	*The site access point off Barneys Reef Road may only be used for emergency purposes.*	TMP
Transport: Road Maintenance		
9	*The Applicant must:* *a) undertake an independent dilapidation survey to assess the:* • *existing condition of Ulan Road, Cope Road and Blue Springs Road on the transport route, prior to construction, upgrading or decommissioning works; and* • *condition of Ulan Road, Cope Road and Blue Springs Road on the transport route, following construction, upgrading or decommissioning works;* *b) repair Ulan Road, Cope Road and Blue Springs Road on the transport route if dilapidation surveys identify that the road has been damaged during construction, upgrading or decommissioning works;*	TMP

Condition No.	Condition Description	Reference
	in consultation with the relevant road's authority, to the satisfaction of the Planning Secretary. If there is a dispute about the repair of Ulan Road, Cope Road and Blue Springs Road between the applicant and the relevant roads authority, then either party may refer the matter to the Planning Secretary for resolution. The Planning Secretary's decision on the matter must be final and binding on both parties.	
Transport: Operating Conditions		
10	*The Applicant must ensure:* *a) the internal roads are constructed as all-weather roads;* *b) there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site;* *c) the capacity of the existing roadside drainage network is not reduced;* *d) all vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and* *e) vehicles leaving the site are in a clean condition, with loads appropriately covered or contained, to minimise dirt being tracked onto the sealed public road network*	TMP
Transport: Traffic Management Plan		
11	*Prior to commencing road upgrades, the Applicant must prepare a Traffic Management Plan for the development in consultation with TfNSW and Council and to the satisfaction of the Planning Secretary. This plan must include:* *a) details of the transport route to be used for all development-related traffic.* *b) details of the road upgrade works required by condition 8 of Schedule 3 of this consent;* *c) details of the measures that would be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including:*	TMP

Condition No.	Condition Description	Reference
	• *details of the dilapidation surveys required by condition 7 of Schedule 3 of this consent;* • *temporary traffic controls, including detours and signage)* • *notifying the local community about development-related traffic impacts;* • *procedures for receiving and addressing complaints from the community about development- related traffic;* • *minimising potential cumulative traffic impacts with other projects in the area, including during construction, upgrading or decommissioning works;* • *minimising potential for conflict with school buses and other road users as far as practicable, including preventing queuing on the public road network (measures also required during operation of the project);* • *minimising dirt tracked onto the public road network from development-related traffic;* • *details of the employee shuttle bus service, including pick-up and drop-off points and associated parking arrangements for construction workers, and measures to encourage employee use of this service;* • *encouraging car-pooling or ride sharing by employees;* • *scheduling of haulage vehicle movements to minimise convoy length or platoons;* • *responding to local climate conditions that may affect road safety such as fog, dust, wet weather and flooding;* • *monthly monitoring for, and responding to, any emergency repair and/or maintenance requirements; and* • *a traffic management system for managing over-dimensional vehicles;* *d) a driver's code of conduct that addresses:* • *travelling speeds;* • *driver fatigue;* • *procedures to ensure that drivers adhere to the designated transport routes and speed limits; and* • *procedures to ensure that drivers implement safe driving practices;*	

Condition No.	Condition Description	Reference
	e) a program to ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan. *Following the Planning Secretary's approval, the Applicant must implement the Traffic Management Plan.*	
Land Management		
12	*The Applicant must maintain the agricultural land capability of the site, including:* *a) establishing the ground cover of the site within 3 months following completion of any construction or upgrading;* *b) properly maintaining the ground cover with appropriate perennial species and weed management; and* *c) maintaining grazing within the development footprint, where practicable, unless the Planning Secretary agrees otherwise.*	CEMP Section 8.2.3
Biodiversity: Vegetation Clearance		
13	*The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.*	BMP
Biodiversity: Biodiversity Offsets		
14	*In accordance with the timing in Table 1, the Applicant must retire biodiversity credits of a number and class specified in Table 2 and Table 3 below, unless the Planning Secretary agrees otherwise. The retirement of these credits must be carried out in accordance with the NSW Biodiversity Offsets Scheme and can be achieved by:*	BMP

<table>
<tr><th>Condition No.</th><th>Condition Description</th><th>Reference</th></tr>
<tr><td></td><td>
a) acquiring or retiring 'biodiversity credits' within the meaning of the Biodiversity Conservation Act 2016;
b) making payments into an offset fund that has been developed by the NSW Government; or
c) funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.

Table 1: Timing for retirement of biodiversity credits
<table>
<tr><th>Project Element</th><th>Timing</th></tr>
<tr><td>Road Upgrades</td><td>Prior to commencing road upgrades</td></tr>
<tr><td>Project site</td><td>Prior to commencing construction</td></tr>
</table>

Table 2: Ecosystem Credit Requirements
<table>
<tr><th rowspan="2">Vegetation community</th><th rowspan="2">PCT ID</th><th colspan="2">Credits required*</th></tr>
<tr><th>Road upgrades</th><th>Project Site</th></tr>
<tr><td>Western Grey Box –cypress pine shrub grass shrub tall woodland</td><td>81</td><td>40</td><td>-</td></tr>
<tr><td>White Box grassy woodland</td><td>266</td><td>1</td><td>-</td></tr>
<tr><td>Rough-Barked Apple –Red gum – Yellow box woodland</td><td>281</td><td>89</td><td>354</td></tr>
</table>
</td><td></td></tr>
</table>

Condition No.	Condition Description	Reference

Slaty Gum woodland (Moderate – good)	*1177*	*19*	*-*
Narrow-leaved Ironbark –Red Stringybark –Black pine woodland	*1770*	*-*	*2*

Table 3: Species Credit Requirements

Vegetation community	***Credits required****	
	Road upgrades	*Project Site*
Acacia ausfeldii (Ausfeld's Wattle)	*152*	*-*
Diuris tricolor (Pine Donkey Orchid)	*114*	*-*
Grevillea wilkinsonii (Tumut Grevillea)	*229*	*-*
Small Purple-pea (Swainsona recta)	*152*	*-*
Silky Swainson-pea (Swainsona sericea)	*152*	*-*
Major Mitchell's Cockatoo (Lophochroa leadbeateri)	*152*	*-*

<table>
<tr><th>Condition No.</th><th>Condition Description</th><th>Reference</th></tr>
<tr><td></td><td>
<table>
<tr><td>Gang-gang Cockatoo (Callocephalon fimbriatum)</td><td>152</td><td>-</td></tr>
<tr><td>Glossy Black-Cockatoo (Calyptorhynchus lathami)</td><td>152</td><td>-</td></tr>
<tr><td>Sloane’s Froglet (Crinia sloanei)</td><td>114</td><td>-</td></tr>
<tr><td>Brush-tailed Phascogale (Phascogale tapoatafa)</td><td>152</td><td>-</td></tr>
<tr><td>Powerful Owl (Ninox strenua)</td><td>152</td><td>-</td></tr>
<tr><td>Barking Owl (Ninox connivens)</td><td>152</td><td>279</td></tr>
<tr><td>Superb Parrot (Polytelis swainsonii)</td><td>152</td><td>-</td></tr>
<tr><td>Masked Owl (Tyto novaehollandiae)</td><td>152</td><td>-</td></tr>
</table>
* note that credits have been recalculated since the DC was issued
</td><td></td></tr>
<tr><td colspan="3">Biodiversity: Biodiversity Management Plan</td></tr>
<tr><td>15</td><td>Prior to commencing road upgrades, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary. This plan must:
a) include a description of the measures and timeframes that would be implemented for:
• protecting vegetation and fauna habitat outside the approved disturbance areas;</td><td>BMP</td></tr>
</table>

Condition No.	Condition Description	Reference
	• *managing the remnant vegetation and fauna habitat on site;* • *minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;* • *minimising the impacts to fauna on site and implementing fauna management protocols;* • *avoiding the removal of hollow-bearing trees during spring to avoid the main breeding period for hollow-dependent fauna;* • *rehabilitating and revegetating temporary disturbance areas with species that are endemic to the area;* • *maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; and* • *controlling weeds, feral pests and pathogens;* *b) include a program to monitor and report on the effectiveness of mitigation measures; and* *c) include details of who would be responsible for monitoring, reviewing and implementing the plan. Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan.* *Note: If the biodiversity credits are retired via a Biodiversity Stewardship Agreement, then the Biodiversity Management Plan does not need to include any of the matters that are covered under the Biodiversity Stewardship Agreement.*	
Amenity: Construction, Upgrading and Decommissioning Hours		
16	*Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading or decommissioning activities between:* *a) 7 am to 6 pm Monday to Friday;* *b) 8 am to 1 pm Saturdays; and*	EMS/CEMP Section 3.3

Condition No.	Condition Description	Reference
	c) at no time on Sundays and NSW public holidays. *The following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Planning Secretary:* • *the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or* • *emergency work to avoid the loss of life, property and/or material harm to the environment.*	
Amenity: Noise		
17	*The Applicant must:* *a) minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version; and* *b) ensure that the noise generated by the operation of the development during the night does not exceed 35 dB(A) LAeq,15min to be determined in accordance with the procedures in the NSW Noise Policy for Industry (EPA, 2017) at any non-associated residence.*	CEMP Section 8.5.3
Amenity: Dust		
18	*The Applicant must minimise the dust generated by the development.*	CEMP Section 8.4.3
Amenity: Visual		
19	*The Applicant must:*	CEMP Section 8.6.3

Condition No.	Condition Description	Reference
	a) minimise the off-site visual impacts of the development, including the potential for any glare or reflection; *b) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and* *c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.*	
Amenity: Lighting		
20	*The Applicant must:* *a) minimise the off-site lighting impacts of the development; and* *b) ensure that any external lighting associated with the development:* • *is installed as low intensity lighting (except where required for safety or emergency purposes);* • *does not shine above the horizontal; and* • *complies with Australian/New Zealand Standard AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting, and the Dark Sky Planning Guidelines (DPE 2018) or its latest versions.*	CEMP Section 8.6.3
Heritage: Protection of Heritage Items		
21	*The Applicant must ensure the development does not cause any direct or indirect impacts on the Aboriginal heritage items identified in Table 1 of Appendix 6 or any Aboriginal heritage items located outside the approved development footprint.*	HMP
22	*Prior to carrying out any development that could directly or indirectly impact the heritage item identified in Table 2 of Appendix 6, the Applicant must salvage and relocate the item/s that would be impacted to a*	HMP

Condition No.	Condition Description	Reference
	suitable alternative location, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010), or its latest version.	
Heritage: Heritage Management Plan		
23	*Prior to carrying out any development that could directly or indirectly impact the heritage items identified in Appendix 6, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:* *a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;* *b) be prepared in consultation with Heritage NSW and Aboriginal Stakeholder* *c) include a description of the measures that would be implemented for:* • *protecting the Aboriginal heritage items identified in Table 1 of Appendix 6 or items located outside the approved development footprint, including fencing off the Aboriginal heritage items prior to carrying out any development that could directly or indirectly impact the heritage items identified in Table 2 of Appendix 6;* • *salvaging and relocating the Aboriginal heritage items located within the approved development footprint, as identified in Table 2 of Appendix 6;* • *a contingency plan and reporting procedure if: -previously unidentified heritage items are found; or -Aboriginal skeletal material is discovered;* • *ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions; and* • *ongoing consultation with Aboriginal stakeholders during the implementation of the plan; and* *d) include a program to monitor and report on the effectiveness of these measures and any heritage impacts of the project.*	HMP

Condition No.	Condition Description	Reference
	Following the Planning Secretary's approval, the Applicant must implement the Heritage Management Plan.	
Soil and Water: Water Supply		
24	*The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.* *Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development*	SWMP
Soil and Water: Water Pollution		
25	*The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the POEO Act.*	SWMP
Soil and Water: Operation Conditions		
26	*The Applicant must:* *a) minimise erosion and control sediment generation;* *b) ensure any solar panels and ancillary infrastructure and any other land disturbance associated with the construction, upgrading or decommissioning of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version;* *c) ensure the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the site;*	SWMP

Condition No.	Condition Description	Reference
	d) ensure all works are undertaken in accordance with the following, unless DPIE Water agrees otherwise: • *Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018), or its latest version; and* • *Policy and Guidelines for Fish Habitat Conservation and Management (2013), or its latest version.*	
Soil and Water: Soil and Water Management Plan		
27	*Prior to commencing construction, the Applicant must prepare a Soil and Water Management Plan for the development in consultation with DPIE Water. This plan must:* *a) demonstrate how the project will meet conditions 25 and 26(a) to (d); and* *b) include details of the soil erosion control measures including sediment basins. The Applicant must implement the Soil and Water Management Plan for construction upgrading, operation and/or decommissioning of the development.* *The Applicant must implement the Soil and Water Management Plan for construction upgrading, operation and/or decommissioning of the development.*	SWMP
Hazards: Fire Safety Study		
28	*Prior to commencing construction of the battery storage facility, the Applicant must prepare a Fire Safety Study for the development, to the satisfaction of FRNSW and the Planning Secretary. The study must:* *a) be consistent with the:* • *Department's Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study' guideline;*	Outside scope of Stage 2a

Condition No.	Condition Description	Reference
	• *NSW Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems;* • *relevant Australian Standards and International Guidelines; and* *b) describe the final design of the battery storage facility.* *Following completion of the Study, the Applicant must implement the measures described in the Fire Safety Study.*	
Hazards: Storage and Handling of Dangerous Goods		
29	*The Applicant must store and handle all chemicals, fuels and oils used on-site in accordance with:* *a) the requirements of all relevant Australian Standards; and* *b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids* *In the event of an inconsistency between the requirements (a) and (b) above, the most stringent requirement must prevail to the extent of the inconsistency.*	SWMP
Hazards: Operating Conditions		
30	*The Applicant must:* *a) minimise the fire risks of the development, including managing vegetation fuel loads on-site;* *b) ensure that the development:* • *includes at least a 20 metres defendable space around the perimeter of the solar array area that permits unobstructed vehicle access;* • *manages the defendable space and solar array areas as an Asset Protection Zone;*	Emergency Plan (EP) and Bushfire Management Plan

Condition No.	Condition Description	Reference
	• *complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 (or equivalent) and Standards for Asset Protection Zones;* • *is suitably equipped to respond to any fires on site including provision of a 20,000 litre water supply tank fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection located adjacent to an internal access road;* *c) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and* *d) notify the relevant local emergency management committee following construction of the development, and prior to commencing operations.*	
Hazards: Emergency Plan		
31	*Prior to commencing construction, the Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development and provide a copy of the plan to the local Fire Control Centre. The Applicant must keep two copies of the plan on- site in a prominent position adjacent to the site entry point at all times. The plan must:* *a) be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning' and RFS's Planning for Bushfire Protection 2019 (or equivalent);* *b) identify the fire risks and hazards and detailed measures for the development to prevent or mitigate fires igniting;* *c) include procedures that would be implemented if there is a fire on-site or in the vicinity of the site;* *d) list works that should not be carried out during a total fire ban* *e) include availability of fire suppression equipment, access and water;* *f) include procedures for the storage and maintenance of any flammable materials;*	EP

Condition No.	Condition Description	Reference
	g) notification of the local RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation proposed to be carried out during a bushfire danger period to ensure whether conditions are appropriate *h) detail access provisions for emergency vehicles and contact details for both a primary and alternative site contact who may be reached 24/7 in the event of an emergency;* *i) include a figure showing site infrastructure, Asset Protection Zone and the on-site water supply tank;* *j) include location of hazards (physical, chemical and electrical) that may impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations;* *k) include details of the location, management and maintenance of the Asset Protection Zone and who is responsible for the maintenance and management of the Asset Protection Zone;* *l) include bushfire emergency management planning; and* *m) include details of the how RFS would be notified, and procedures that would be implemented, in the event that:* • *there is a fire on-site or in the vicinity of the site;* • *there are any activities on site that would have the potential to ignite surrounding vegetation; or* • *there are any proposed activities to be carried out during a bushfire danger period; and* *n) include details on how the battery storage facility and sub-systems can be safely isolated in an emergency. The Applicant must implement the Emergency Plan for the duration of the development.* *The Applicant must implement the Emergency Plan for the duration of the development.*	
Waste		

Condition No.	Condition Description	Reference
32	*The Applicant must:* *a) minimise the waste generated by the development;* *b) classify all waste generated on site in accordance with the EPA's Waste Classification Guidelines 2014 (or its latest version);* *c) store and handle all waste on site in accordance with its classification;* *d) not receive or dispose of any waste on site; and* *e) remove all waste from the site as soon as practicable, and ensure it is reused, recycled or sent to an appropriately licensed waste facility for disposal.*	WMP
Accommodation and Employment Strategy		
33	*Prior to commencing construction, the Applicant must prepare an Accommodation and Employment Strategy for the development in consultation with Council, and to the satisfaction of the Planning Secretary. This strategy must:* *a) propose measures to ensure there is sufficient accommodation for the workforce associated with the development;* *b) consider the cumulative impacts associated with other State significant development projects in the area and tourism activity;* *c) investigate options for prioritising the employment of local workers for the construction and operation of the development, where feasible; and* *d) include a program to monitor and review the effectiveness of the strategy over the life of the development, including regular monitoring and review during construction.* *Following the Planning Secretary's approval, the Applicant must implement the Accommodation and Employment Strategy.*	AES

Condition No.	Condition Description	Reference
Schedule 4: Environmental Management and Reporting		
Environmental Management: Revision of Strategies, Plans and Programs		
1	*Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:* *a) provide the strategic framework for environmental management of the development;* *b) identify the statutory approvals that apply to the development;* *c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;* *d) describe the procedures that would be implemented to:* • *keep the local community and relevant agencies informed about the operation and environmental performance of the development* • *receive, handle, respond to, and record complaints* • *resolve any disputes that may arise* • *respond to any non-compliance* • *respond to emergencies; and* *e) include:* • *references to any plans approved under the conditions of this consent; and* • *a clear plan depicting all the monitoring to be carried out in relation to the development* *Following the Planning Secretary's approval, the Applicant must implement the Environmental Management Strategy.*	The EMS a) The EMS document b) EMS Section 2. CEMP Section 2 provides details on the statutory approvals c) EMS Section 5.5. CEMP Section 5.5 provides details on roles and responsibilities d) EMS Sections 6, 7 & 8. CEMP Sections 7 & 8 provides details on community engagement and complaint management

Condition No.	Condition Description	Reference
		e) EMS Sections 4 and 6. CEMP Section 9 (Table 9.1) provides details on the required monitoring
2	*The Applicant must:* *a) update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and* *b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the:* • *submission of an incident report under condition 7 of Schedule 4.* • *submission of an audit report under condition 9 of Schedule 4; or* • *any modification to the conditions of this consent.*	CEMP Section 6.4.5
Environmental Management: Updating and Staging of Strategies, Plans or Programs		
3	*With the approval of the Planning Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis. To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Planning Secretary for approval. With the agreement of the Planning Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.* *Notes:*	CEMP Section 6.4.5

Condition No.	Condition Description	Reference
	• *While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.* • *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*	
Notification: Notification of Department		
4	*Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.*	CEMP Section 6.3.1
Notification: Final Layout Plans		
5	*Prior to commencing construction, the Applicant must submit detailed plans of the final layout of the development to the Department via the Major Projects website, showing comparison to the approved layout and including details on the siting of solar panels and ancillary infrastructure, via the Major Projects website*	CEMP Section 6.3.1
Notification: Work as Executed Plans		

Condition No.	Condition Description	Reference
6	*Prior to commencing operations or following the upgrades of any solar panels or ancillary infrastructure, the Applicant must submit work as executed plans of the development showing comparison to the approved final layout plans to the Department via the Major Projects website.*	CEMP Section 6.3.1
Notification: Incident Notification		
7	*The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 7.*	CEMP Section 5.8
Notification: Non-Compliance Notification		
8	*The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.*	CEMP Section 5.8
9	*A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.*	CEMP Section 5.8
10	*A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*	CEMP Section 5.8
Independent Environmental Audit		

Condition No.	Condition Description	Reference
11	*Independent Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020) to the following frequency:* *(a)within 3 months of commencing construction; and* *(b)within 3 months of commencement of operations.*	CEMP Section 6.2.3
12	*Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.*	CEMP Section 6.2.3
13	*The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in condition 11 of Schedule 4 upon giving at least 4 weeks' notice to the Applicant of the date upon which the audit must be commenced.*	CEMP Section 6.2.3
14	*In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Applicant must:* *a) review and respond to each Independent Audit Report prepared under condition 11 of Schedule 4 of this consent, or condition 13 of Schedule 4 where notice is given by the Planning Secretary.* *b) submit the response to the Planning Secretary; and* *c) make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Planning Secretary. unless otherwise agreed by the Planning Secretary*	CEMP Section 6.2.3
15	*Independent Audit Reports and the Applicant's response to audit findings must be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.*	CEMP Section 6.2.3

Condition No.	Condition Description	Reference
Incident Notification and Reporting Requirements, Condition 1, Appendix 7		
1	Written Incident Notification Requirements *A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition 7 of Schedule 4 or, having given such notification, subsequently forms the view that an incident has not occurred.*	EMS Section 6.2.1
2	Written Incident Notification Requirements *Written notification of an incident must:* *a) identify the development and application number;* *b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);* *c) identify how the incident was detected;* *d) identify when the applicant became aware of the incident;* *e) identify any actual or potential non-compliance with conditions of consent;* *f) describe what immediate steps were taken in relation to the incident;* *g) identify further action(s) that will be taken in relation to the incident; and* *h) identify a project contact for further communication regarding the incident.*	EMS Section 6.2.1
3	Written Incident Notification Requirements *Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as*	EMS Section 6.2.1

Condition No.	Condition Description	Reference
	determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.	
4	Written Incident Notification Requirements *The Incident Report must include:* *a) a summary of the incident;* *b) outcomes of an incident investigation, including identification of the cause of the incident;* *c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and* *d) details of any communication with other stakeholders regarding the incident.*	EMS Section 6.2.1

Appendix B:
EIS and Amendment report commitments for CEMP

Table B1 Consolidated EIS and Amendment report commitments

ID	Management/ mitigation measure	Management plan/Timing
Consultation		**CEP**
C1	*UPC\AC is committed to ongoing consultation through detailed design and compliance with TransGrid's design requirements including:* • *ensuring that the design and construction of the access track is compliant with the TransGrid Easement Guidelines* • *ensuring that any fencing and gates within the easement corridor are designed and installed in accordance with the TransGrid Fencing Guidelines and that access to the easement by TransGrid is provided for* • *maintaining the condition of the track into the future* • *accounting for times when TransGrid may need to close or modify the track to operate and maintain their assets* • *continued consultation with the landowner to put in place any requisite property interests and consultation with TransGrid to ensure that their usage of the easement is not materially impaired.*	Prior to construction/ construction
Biodiversity		**BMP**
B1	*Clearing protocols will be developed that identify vegetation to be retained, prevent inadvertent damage and reduce soil disturbance (e.g. removal of native vegetation by chainsaw instead of heavy machinery where only partial clearing is proposed).* *Fencing (or other barriers as required) and signage will be placed around those areas of vegetation to be maintained to prevent any accidental construction damage and provide a permanent barrier between the development footprint and retained areas.* *The type of fencing during construction may be of a temporary nature and scale that is robust enough to withstand damage during this stage of work.* *Use of appropriate machinery for vegetation removal adjacent to retained areas.*	Prior to construction/ construction
B2	*Pre-clearance surveys will be undertaken prior to tree clearing.*	Prior to construction/ construction

ID	Management/ mitigation measure	Management plan/Timing
	Active breeding or nesting identified during pre-clearance surveys will be avoided in August, September and October which is the breeding/nesting period for most fauna species. *A qualified ecologist/licenced wildlife handler will supervise tree removal in accordance with best practise methods.*	
B3	*A procedure will be developed for the relocation of habitat features (e.g. fallen timber, hollow logs) to adjacent retained habitat.*	Prior to construction
B4	*Monitoring will be undertaken within the environmental exclusion zones to ensure biodiversity values are not significantly affected by indirect impacts. This may include:* • *comparison against EIS baseline monitoring* • *consideration of natural seasonal variation* • *development of trigger values for the commencement of adaptive management actions* • *details of proposed adaptive management actions to reduce or eliminate recorded impacts.*	Construction/ decommissioning
B5	*Appropriate controls will be implemented to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways.* *All works within proximity to the drainage lines will have adequate sediment and erosion controls (e.g. sediment barriers, sedimentation ponds). Revegetation will also commence as soon as is practicable to minimise risks of erosion.*	Prior to construction/ construction
B6	*Construction works will only be undertaken during daylight hours and night lights will not be used. Lights associated with operation will be directional to avoid unnecessarily shining light into adjacent retained vegetation where possible.*	Construction/ operation
B7	*Dust suppression measures will be implemented to limit dust onsite. Revegetation will also be commenced as soon as practicable to minimise areas likely to create dust.*	Construction
B8	*All machinery will be cleaned prior to entering and exiting the study area to minimise the transport of weeds to vegetated areas to be retained. Weeds that are present within the study area that are listed under the NSW Biosecurity Act 2015 will be managed.*	Construction

ID	Management/ mitigation measure	Management plan/Timing
B9	*All personnel working on the project will undertake an environmental induction as part of their site familiarisation. This will include:* • *site environmental procedures (vegetation management, sediment and erosion control, exclusion fencing and noxious weeds)* • *what to do in case of environmental emergency (e.g. chemical spills, fire, injured fauna)* • *key contacts in the case of an environmental emergency.*	Construction
B10	*A Traffic Management Plan will be developed which includes speed limits and controls to reduce risk of fauna strike. Any vehicle strike incidents will be recorded.*	Construction/ operation
B11	*A strategy will be developed and implemented to protect vegetation and habitat adjacent to the project. This will outline the following:* • *rubbish disposal guidance* • *prohibition of wood collection* • *prohibition of lighting of fires* • *no-go-zones for native vegetation outside the development footprint* • *speed limits on the surrounding road network*	Construction
B12	*Suitable species will be used as ground cover species in any revegetation areas*	Construction
B13	*All waterway crossings will be designed in accordance with Policy and Guidelines for Fish Friendly Waterway Crossing (DPI, n.d.) where appropriate.*	Detailed design
B14	*Noting that minimising vegetation removal has been a key objective in developing the proposed Blue Springs road upgrade concept design, opportunities to further reduce impacts to vegetation would be considered where possible during the detailed design and construction and impacts at the intersection of Cope Road would be limited to trimming of vegetation needed to provide safe sight distance where possible.*	Detailed design
Aboriginal heritage		**HMP**

ID	Management/ mitigation measure	Management plan/Timing
AH1	*The proponent will develop the ACHMP which is to be agreed to by the RAPs and DPIE. The ACHMP will also include an unanticipated finds protocol, unanticipated skeletal remains protocol and long-term management of any artefacts.*	Prior to construction
AH2	*The Aboriginal site (Rosevale IF-01) within the development footprint for the project will be salvaged by a surface collection of visible artefacts. The recommended methodology for the salvage will be finalised after the approvals process has been completed in the ACHMP but will include the measures outlined in Section 9.3.1 of the ACHAR (Appendix D). The salvage works will include the mapping, analysis and collection of the surface artefact at the affected site. Results will be included in a brief report to preserve the data in a useable form and an Aboriginal Site Impact Recording Form (ASIRF) will be submitted to AHIMS.*	Prior to construction
AH3	*All land-disturbing activities will be confined to within the development footprint and associated tracks and/or crossings. Should the parameters of the proposed work extend beyond this, then further archaeological assessment may be required.*	Construction
AH4	*The addendum survey area would be included in the Aboriginal cultural heritage management plan (ACHMP), which will detail the processes for managing unanticipated Aboriginal heritage items or potential human remains encountered during the life of the project.*	Prior to construction
Historic heritage		**HMP**
HH1	*If items of historic heritage significance are uncovered during the project, then the Unanticipated Finds Protocol for Historic Heritage included in Appendix 5 of the Aboriginal cultural heritage and historic heritage assessment (Appendix D) will be enacted.*	Construction
HH2	*To avoid the potential for harm to historic objects on unassessed adjacent landforms, all ground surface disturbing activities will be confined to the development footprint.*	Construction
HH3	*An unanticipated finds protocol for historic heritage will be developed and implemented as required during construction.*	Construction
HH4	*The addendum survey area will be included in the Unanticipated Finds Protocol for Historic Heritage which will detail the processes*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	for managing unanticipated historic heritage items during the life of the project.	
Soils		**SWMP**
S1	*Disturbed areas will be progressively stabilised and rehabilitated as construction is completed to minimise the extent of bare soil.*	Construction
S2	*The following measures will be implemented to manage the risk of contaminants and impacts on surrounding environments:* • *appropriate storage (including bunding) of all potential contaminants (i.e. chemicals and fuels) onsite to reduce risks of spills contaminating waterways and land* • *protocol for the discovery of contaminants in the study area during works, including requirements to stop work, remediate and dispose of contaminants as necessary* • *measures for mitigating soil contamination by fuels or other chemicals (including notification to EPA, emergency response requirements etc)* • *measures for the ongoing inspection and maintenance of machinery/vehicles to ensure that they remain in a clean condition free of fluid leaks.*	Prior to construction / prior to operation
S3	*The photovoltaic arrays will be designed to allow for enough space between rows of panels for establishment of groundcover and implementation of weed controls*	Detailed design
Land use		**SWMP**
LU1	*Land management within the study area will include measures to minimise impacts to surrounding agricultural land use with reference to DPI's publication Infrastructure proposals on rural land (Kovac, M and Briggs, G, 2013). These measures will also be implemented during operation of the project and will include strategies to minimise impacts of aerial spraying. The land management measures will aim to minimise impacts on:* • *land and soil capability within the development footprint* • *biosecurity both at a local and regional level* • *soil erosion* • *surface water runoff* • *agricultural activities on neighbouring properties.*	At all times

ID	Management/ mitigation measure	Management plan/Timing
LU2	*Biosecurity management will include:* • *measures to manage the impacts of weeds, disease and pest animals during construction, operation, and decommissioning activities* • *biosecurity response measures where impacts are identified* • *contingency measures in the event that existing measures are inadequate in managing the risk/impact.*	At all times
LU3	*Consultation will be undertaken with Mid-Western Regional Council, DPIE and other relevant stakeholders including mining and exploration licence holders, and native title claimants in order to identify potential impacts on surrounding land uses and develop measures to address concerns.*	Detailed design/ prior to construction
LU4	*Consultation will continue to be undertaken with participating landholders to minimise disruption to agricultural activities during construction and operation.*	Detailed design/ prior to construction
LU5	*Options will be further investigated to consider the feasibility of grazing within the study area throughout operation, in consultation with landholders.*	Detailed design/ prior to construction
LU6	*A decommissioning and rehabilitation plan will be prepared that outlines the rehabilitation objectives and strategies to return the study area to its pre-existing condition for agricultural land use. This will include but not be limited to:* • *rehabilitation objectives and strategies* • *describing the design criteria of the final land use and landform* • *performance indicators to be used to guide the return of the land back to agricultural production* • *expected timeline for the rehabilitation program.*	Prior to decommissioning Outside scope of Stage 2a
Landscape character and visual		**CEMP**
LCV1	*The design will retain the existing roadside planting where possible along the eastern boundary of the site to reduce the overall visual impact.*	Detailed design
LCV2	*Consideration will be given to the colours of the PCUs, the battery facility, O&M buildings and storage shed to ensure minimal*	Detailed design

ID	Management/ mitigation measure	Management plan/Timing
	contrast and to help blend into the surrounding landscape to the extent practicable.	
LCV3	*Existing vegetation within the environmental exclusion zones will be retained and protected to maintain the existing level of screening.*	Construction/ operation
Noise and vibration		**CEMP**
NV1	*Construction noise and vibration management measures will be implemented consistent with recommendations contained within the ICNG.*	Construction
Traffic and transport		**TMP**
T2	*A construction traffic management plan will be prepared in consultation with TfNSW and Mid-Western Regional Council. The plan will include:* • *details of the transport route to be used for all project-related traffic* • *details of any road upgrade works required by Development Consent* • *a protocol for undertaking independent dilapidation surveys to assess the existing condition of the proposed construction routes prior to construction, upgrading or decommissioning activities and the condition of the proposed construction routes following construction, upgrading or decommissioning activities* • *a protocol for the repair of the construction routes if dilapidation surveys identify these roads to be damaged during construction, upgrading or decommissioning works* • *details of the measures that will be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including:* • *Temporary traffic controls, including detours and signage* • *Notifying the local community about project-related traffic impacts* • *Procedures for receiving and addressing complaints from the community about project related traffic* • *Minimising potential for conflict with school buses, other road users during peak hours and rail services as far as practicable (measures also required during operation of the project)*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	• *Minimising dirt tracked onto the public road network from project-related traffic* • *Scheduling of haulage vehicle movements to minimise convoy length or platoons* • *Responding to local climate conditions that may affect road safety such as fog, dust and wet weather* • *Responding to any emergency repair or maintenance requirements* • *A traffic management system for managing over-dimensional vehicle trips to and from the project* • *a program to ensure drivers associated with the project receive suitable training on the Driver Code of Conduct and any other relevant obligations under the CTMP* • *a flood response plan detailing procedures and options for safe access to and from the site in the event of flooding* • *controls for transport and use of dangerous goods in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development, Australian Dangerous Goods Code and Australian Standard 4452 Storage and Handling of Toxic Substances.*	
T4	*Parking requirements for the project construction and operation workforce will be provide onsite and parking will not be provided on public roads adjacent to the site.*	Prior to construction
T5	*A full and detailed assessment will be undertaken by a suitably qualified bridge Engineer of the structural and load capacity of all bridges and culverts on any and all proposed access routes to be used by oversize/over mass vehicles. The assessment reports will be provided to Mid-Western Regional Council for approval prior to commencement of construction.*	Prior to construction
T6	*Pre and post dilapidation reports, with the exception where road upgrades are being undertaken by UPC\AC as part of the project, will be prepared for existing road assets along the proposed transport routes in consultation with Council for each phase of the development (construction, operation, decommissioning).* *Damage to existing road assets caused by the project would be repaired at the full cost of the proponent.*	Prior to construction
T7	*Prior to the commencement of the relevant construction work involving heavy vehicle movements to site, 'Advance truck warning signs' (W5-22 Size B) with distance plates (W8-5 Size B), will be*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	erected adjacent to Cope Road, 250 metres from its intersection with Blue Springs Road. The signs will be removed at completion of construction.	
T8	*Relevant approvals from the National Heavy Vehicle Regulator and TfNSW will be obtained by the proponent prior to the transportation of any oversize/over mass loads on public roads.*	Prior to construction
Water		**SWMP**
W1	*Infrastructure with the potential to cause pollution to waterways in the event of flooding, such as inverters and battery storage will be located with a minimum 300 mm freeboard above the maximum 1% AEP flood level.*	Detailed design
W2	*Solar panels will be designed to provide a minimum of 300 mm freeboard for the lowest edge above the maximum 1% AEP flood level.*	Detailed design
W3	*The panel structure will be designed to withstand the flood velocities expected at the site.*	Detailed design
W4	*No infrastructure will be placed within 20 m of any Strahler 3 or above order streams.*	Detailed design
W5	*All waterway crossings will be designed and constructed in compliance with the Department of Primary Industries, Office of Water, Guidelines for riparian corridors on waterfront land and Guidelines for watercourse crossings on waterfront land.*	Detailed design
W6	*Further flood investigations and hydrological and hydraulic modelling will be carried out where required during detailed design to ensure the flood immunity objectives and design criteria for the project are met. The modelling will be used to define the nature of both main stream flooding and major overland flow across the development footprint under pre- and post- project conditions and to define the full extent of any impact that the project will have on patterns of both main stream flooding and major overland flow.*	Detailed design
W7	*A construction soil and water management plan (CSWMP) will be prepared to outline measures to manage soil and water impacts associated with the construction works, including contaminated land. The CSWMP will provide:*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	• *measures to minimise/manage erosion and sediment transport both within the construction footprint and offsite including requirements for the preparation of erosion and sediment control plans (ESCP) for all progressive stages of construction measures to manage waste including the classification and handling of spoil* • *procedures to manage unexpected contaminated finds* • *measures to manage stockpiles including locations, separation of waste types, sediment controls and stabilisation* • *measures to manage accidental spills including the requirement to maintain materials such as spill kits* • *controls for receiving waterways which may include: o Designation of 'no go' zones for construction plant and equipment o Creation of catch/diversion drains and sediment fences at the downstream boundary of construction activities where practicable to ensure containment of sediment-laden runoff* • *erosion and sediment control measures will be implemented and maintained at all work sites in accordance with the principles and requirements in Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom 2004) and Volume 2D (NSW Department of Environment, Climate Change and Water 2008b), commonly referred to as the "Blue Book"*	
W8	*The use of any farms dams during construction will be agreed with the landholder and the estimated maximum harvestable right dam capacity will not be exceeded.*	Construction
W9	*No artificial structures planned to be installed in the creek in the central environmental exclusion zone except for two waterway road and cable crossings. The waterway road and cable crossings would be designed and constructed in compliance with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).*	At all times
Hazards and risks		**EP/Bushfire Management Plan**
H1	*A Construction Bushfire Management Plan (BMP) will be prepared in consultation with the Rural Fire Service, and to the satisfaction of the Secretary. The BMP will include the management and*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	mitigation measures described in Section 4.14.1 of the response to submissions report.	
H3	*A Bush Fire Emergency Management and Evacuation Plan will be prepared consistent with 'Development Planning A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan (NSW RFS, 2014) and Australian Standard AS3745 2010 'Planning for Emergencies in Facilities'. The plan will include:* • *detailed measures to prevent or mitigate fires igniting;* • *work that should not be carried out during total fire bans; availability of fire-suppression equipment,* • *access and water;* • *storage and maintenance of fuels and other flammable materials;* • *notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate; and* • *appropriate bush fire emergency management planning.* *A copy of the plan will be displayed and available for review in a prominent location directly adjacent to the site's main entry point/s.*	Prior to construction/ prior to operation
H4	*The operator will contact Mid-Western Local Emergency Management Committee (LEMC) to discuss how the site will be considered under the Mid-Western Local Disaster Plan (DISPLAN).*	Prior to operation
H5	*Prior to construction, a Fire Safety Study will be prepared by a suitably qualified bushfire expert providing full details of the required water storage for fire-fighting requirements. The report will include location and capacity of tanks, methods of pumping to provide sufficient pressures, and details of any proposed internal reticulation or hydrant network.*	Prior to construction
H6	*From the start of building works, the property around all buildings will be managed as an inner protection area for a distance of 50 metres in accordance with the requirements of Appendix 4 of Planning for Bush Fire Protection 2019. Road access to the site, power transmission, fencing and any other services to the site are excluded from this requirement. The following requirements will apply when establishing and maintaining an inner protection area:*	During construction and operation

ID	Management/ mitigation measure	Management plan/Timing
	• *tree canopy cover should be less than 15% at maturity* • *trees at maturity should not touch or overhang the building* • *lower limbs should be removed up to a height of 2 metres above the ground* • *tree canopies should be separated by 2 to 5 metres* • *preference should be given to smooth barked and evergreen trees* • *large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings* • *shrubs should not be located under trees* • *shrubs should not form more than 10% ground cover* • *clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation* • *grass should be kept mown (as a guide grass should be kept to no more than 100mm in height)* • *leaves and vegetation debris should be removed.*	
H8	*The principles from NFPA 855, AS 5139, IEC 62897, UL 9540, UL95 40A and the FM Global's Development of Sprinkler Protection Guidance for Lithium Ion Based Energy Storage Systems will be considered during detailed design of the BESS, where they are appropriate for the project and feasible.*	Detailed design / prior to construction
Socio-economic		**AES**
SIA1	*An Accommodation and Employment Strategy will be developed and implemented for the project in consultation with Mid-Western Regional Council. This strategy will:* • *propose measures to manage workforce accommodation to minimise the effects of non-local hires during construction on short-term accommodation availability and the local housing market* • *include a code of conduct for the projects workforce, particularly to avoid anti-social behaviour at peak construction and align with Mid-Western Regional Council's existing industry agreements* • *to the extent possible and within UPC's control, consider the cumulative impacts associated with other State significant development projects in the area, including nearby mines*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	• *investigate options for prioritising the employment of local workers for the construction and operation of the project, where feasible* • *include a program to report measures undertaken or implemented in line with the strategy include a program to monitor and review the effectiveness of the strategy over the life of the project, including regular monitoring and review during construction.*	
SIA2	*A community benefit share fund will be developed. Funding need will be identified and prioritised based on potential project impacts and in collaboration with Mid-Western Regional Council, the community, and the NSW Government.* *Opportunities may include sponsorship, grant assistance, strategic community partnerships or co-ownership schemes.*	Prior to construction
SIA3	*Investigation will be undertaken into the value of investment in local tertiary training institutions to address skills shortages where identified during the development of the Accommodation and Employment Strategy. Where value is identified and a strategy is defined, investment will be targeted through the community benefit share fund.*	Prior to construction
SIA4	*During development of the Accommodation and Employment Strategy, further consultation with local short-term accommodation providers will be undertaken to identify and where appropriate secure, accommodation for the non-local portion of the construction workforce.*	Prior to construction
SIA5	*During development of the Accommodation and Employment Strategy, further consultation with local employment service providers will be undertaken to identify and where appropriate secure, local hires.*	Prior to construction
Waste and resources		**WMP**
WR1	*A construction waste management plan will be prepared in consultation with Council. The waste management plan will include:* • *details of the quantities of each waste type and the proposed reuse, recycling and disposal locations*	Prior to construction

ID	Management/ mitigation measure	Management plan/Timing
	• *details on measures to reduce the types and volumes of waste* • *measures to maximise reuse and recycling*	
WR2	*All waste generated from the project will be assessed, classified and managed in accordance with the Waste Classification Guidelines (EPA, 2014)*	At all times
WR3	*Wastes will be disposed of at suitable facilities permitted to accept the waste*	At all times
WR4	*Management of wastes will follow the resource management hierarchy principles in accordance with the WARR Act (i.e. avoid > reduce > reuse > recycle > recover > disposal)*	At all times
WR5	*Skip bins will be made available onsite to enable waste separation for recycling (e.g. separate skip bins for cardboard recycling, plastics and timber collection)*	Construction/ operation
WR6	*General waste bins will be provided for disposal of materials that cannot be cost-effectively recycled*	Construction/ operation
WR7	*The site septic system will be installed and operated in accordance with Council regulations*	Construction/ operation
WR8	*All trucks transporting waste from the site will have covered loads to prevent spillage and other nuisances*	Construction/ operation
Air quality		**CEMP**
AQ1	*Protocols to minimise air quality impacts will be included in the CEMP*	Prior to construction
AQ2	*Water trucks will be used for dust suppression along internal, unsealed access roads and disturbed areas when required (i.e. if visible dust emissions are observed).*	At all times
AQ3	*The traffic management plan will include optimisation of vehicle movements onsite reducing wheel generated dust.*	At all times

ID	Management/ mitigation measure	Management plan/Timing
AQ4	*Dust suppression measures will take into consideration weather, extended dry periods and Mid-Western Regional Council water restriction levels.*	At all times
Cumulative		**CEP**
CU1	*Develop and implement a community and stakeholder engagement plan that includes ongoing consultation with neighbouring operations to manage any cumulative impacts*	Construction

Appendix C:
RtS report commitments

Commitments from response to submissions (RtS) report

COMMITMENT H3 – BUSH FIRE EMERGENCY MANAGEMENT AND EVACUATION PLAN

A Bush Fire Emergency Management and Evacuation Plan will be prepared consistent with 'Development Planning - A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan (NSW RFS, 2014) and Australian Standard AS3745 2010 'Planning for Emergencies in Facilities'. The plan will include:

- *detailed measures to prevent or mitigate fires igniting*
- *work that should not be carried out during total fire bans*
- *availability of fire-suppression equipment*
- *access and water*
- *storage and maintenance of fuels and other flammable materials*
- *notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate; and*
- *appropriate bush fire emergency management planning.*

COMMITMENT SIA1 – ACCOMMODATION AND EMPLOYMENT STRATEGY

An Accommodation and Employment Strategy will be developed and implemented for the project in consultation with Mid-Western Regional Council. This strategy will:

- *consider various workforce scenarios assuming the construction period overlaps with other major projects and considering peak tourism activity*
- *include detailed information regarding the number of beds and types of accommodation to be-utilised monthly for the period of construction.*

COMMITMENT WR1 – CONSTRUCTION WASTE MANAGEMENT PLAN

A construction waste management plan will be prepared in consultation with Mid-Western Regional Council. The waste management plan will include:

- *details on how the waste will be transported to disposal locations during construction and decommissioning*

UPC\AC will continue to consult with Mid-Western Regional Council around specific details of the waste management strategy throughout the life of the project.

COMMITMENT H5 – FIRE SAFETY STUDY

Prior to construction, a Fire Safety Study will be prepared by a suitably qualified bushfire expert providing full details of the required water storage for fire-fighting requirements. The report will include location and capacity of tanks, methods of pumping to provide sufficient pressures, and details of any proposed internal reticulation or hydrant network.

Appendix D:
Guidelines and standards

Guidelines and standards

The following guidelines and standards have been extracted from Appendix A Applicable Legislative Requirements, from the Stubbo Solar Principal's Project Requirements Part A - Project Overview.

- Australian Standard (AS) 2601-2001: The Demolition of Structures
- AS 1547-2012 *On-site domestic wastewater management*
- AS 1940-2017 *The Storage and Handling of Flammable and Combustible Liquids*
- Building Code of Australia
- Independent Audit Post Approval Requirements (NSW Government 2020)
- International Erosion Control Association Australia (IECA) *Best Practice Erosion and Sediment Control*
- ISO 31000 *Risk Management - Principles and Guidelines on Implementation*

Appendix E:
DPE review comments and ACEN responses

Planning, Industry & Environment

Document: Construction Environmental Management Plan (CEMP)
Revision: Version 7 dated 21 June 2023 and Version 8 dated 8 July 2023
Reviewed: Katie Weekes on 4 July 2023 and 10 July 2023.

		Editorial note: Blue text – DPE comments following Applicant response 8 July 2023, Revision 8. Green text - ACEN response		
Obligation to Minimise Harm to the Environment, Condition 1, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
In meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development.	Yes	Section 1.1 addresses this condition.	-	-
Terms of Consent, Condition 2, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Applicant must carry out the development: (a) generally, in accordance with the EIS; and (b) in accordance with the conditions of this consent. *Note: The general layout of the development is shown in Appendix 1.*	Yes	Addressed in Section 2.	-	-
Terms of Consent, Condition 3, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.	Yes	Addressed in Section 2.	-	-
Terms of Consent, Condition 4, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Applicant must comply with any requirement/s of the Planning Secretary arising from the Department's assessment of:	Yes	This condition is addressed in Section 5.10.1 of the EMS.	-	-
(a) any strategies, plans or correspondence that are submitted in accordance with this consent;				
(b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and				