

Sapphire Solar Farm

Environmental Management Strategy

December 2020



Delivering Energy, Powering Communities.

Document Control

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Contents

1	Introduction	8
1.1	Plan Purpose and Scope.....	10
1.2	Conditions of Consent.....	12
1.3	Development Application Commitments	14
1.4	Relevant Previous Studies.....	19
2	Environmental Management Framework.....	20
2.1	Environmental Management Strategy.....	20
2.2	Environmental Policy and Commitment	21
3	Statutory Approvals	22
3.1	Identification of Environmental Aspects and Impacts	22
3.2	Relevant Legislation	26
3.3	Statutory Approvals	30
3.4	Environmental Objectives and Targets	30
3.5	Environmental Management Plans and Programs	30
4	Implementation and Operation	32
4.1	Structure and Responsibility	32
4.2	Training, Awareness and Competence	34
4.2.1	Site Induction	34
4.2.2	Environmental Training.....	34
4.2.3	Toolbox Talks.....	34
4.2.4	Records.....	34
4.3	Communication.....	35
4.3.1	Internal Communication	35
4.3.2	External Communication.....	35
4.4	Complaints Management and Dispute Resolution	35
4.4.1	Complaints Management.....	35
4.4.2	Dispute Resolution.....	36
4.5	Document Control.....	36
4.6	Emergency Preparedness and Response	36
5	Environmental Monitoring, Corrective Action and Audits	38
5.1	Environmental Monitoring.....	38
5.2	Non-Compliances	39
5.3	Incident Management.....	40
5.4	Incident Register	41
5.5	Corrective and Preventative Action	41

5.6	Audits	41
6	Review	43
7	References	44

Appendix A: Satisfaction of the Secretary

Appendix B: CWP Renewables Environmental Policy

Appendix C: Environmental Objectives, Targets, Indicators, Monitoring, Frequency and Responsibility

Table of Tables

Table 2.1	Conditions of Consent Relevant to this Plan and Plan Reference Location.....	12
Table 2.2	Development application commitments relevant to EMS and EMS reference location	14
Table 2.3	Relevant previous studies to the project	19
Table 3.1:	Structure of the EMS.....	20
Table 4-1:	Risk definitions.....	23
Table 4-2:	Risk consequences	23
Table 4-3:	Risk matrix.....	24
Table 4-4:	Initial risk register	25
Table 4-5:	Legislation register	27
Table 4-6:	Additional plans	31
Table 5-1:	Roles and responsibilities	32
Table 6-1	Monitoring activities	38
Table C-1	Environmental Objectives, Targets, Indicators, Monitoring, Frequency and Responsibility..	1

Table of Figures

Figure 1.1	Project layout.....	9
Figure 1.2	Stage 1 Project layout	11
Figure 2-1:	ISO14001:2015 Plan-Do-Check-Act extract	20

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Key terms used in this plan

Term	Definition
BCD	Biodiversity Conservation Division
BMP	Biodiversity Management Plan
BGW	Box Gum Woodland
CCC	Community Consultative Committee
CHMP	Cultural Heritage Management Plan
CFP	Chance Finds Protocol
Council	Glen Innes Severn Council and/or Inverell Shire Council as relevant.
CWP	CWP Renewables Pty Ltd
DECC	Department of Environment and Climate Change (now DPIE)
Development Application	Refer to the definition of EIS (below), the Development Application was formed by those component parts
Development Consent	SSD-8643
Development Footprint	The area of physical disturbance associated with the construction of the Project, comprised of temporary impacts and permanent impacts.
DAWE	Commonwealth Department Agriculture, Water and the Environment and Energy (now Commonwealth Department of the Environment)
DPIE	NSW Department of Planning, Industry and Environment (formerly the Department of Planning and Environment (DPE))
EIS	Environmental Impact Statement, and consistent with the definitions in the Consent Conditions, the EIS incorporates: The environmental impact statement for Sapphire Solar dated January 2018, the associated response to submissions dated March 2018 and additional information provided by the Applicant dated 19 July 2018 (referred to in this report as the Additional Information Memo July 2018)
EMS	Environmental Management Strategy
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPC	Engineering Procurement and Construction contractor; also refers to any other principal contracting entity engaged on the Project, such as TransGrid
ERP	Emergency Response Plan
LGA	Local Government Area
Project Site	The land within the cadastral boundaries associated with the proposed Project, as defined in Appendix 2 of the Development Consent and as described in the EIS and associated documents and shown in Figure 1.1.

Term	Definition
Proponent	Sapphire Solar Farm Pty Ltd
RMP	Risk Management Plan
RMS	Roads and Maritime Services
TEC	Threatened Ecological Community
The Minister	Minister for the Environment (Commonwealth)
The Project	Sapphire Solar Farm
The Secretary	Secretary of Department of Planning, Industry and Environment (NSW)
TMP	Traffic Management Plan

1 Introduction

The Proponent (Sapphire Solar Farm Pty Ltd) has obtained development approval for the Project (Sapphire Solar Farm (SSF); shown in Figure 1.1). The Project involves the construction, operation and decommissioning of a utility-scale photovoltaic (PV) solar farm and battery-based storage at Kings Plains, within the Inverell Shire Local Government Area (LGA) 30 km east of Inverell in northern NSW. The project has an approved generating capacity of approximately 180 megawatts (MW) and approval to build a battery storage facility with a capacity of 50 MW/100 MW hours.

The project is located on a 2,423 hectare (ha) site that is situated within and adjacent to the Sapphire Wind Farm. The Project will utilise some of the existing wind farm infrastructure including access roads and the grid connection point (the existing Sapphire Wind Farm substation which connects into the 330 kilovolt (kV) TransGrid transmission line).

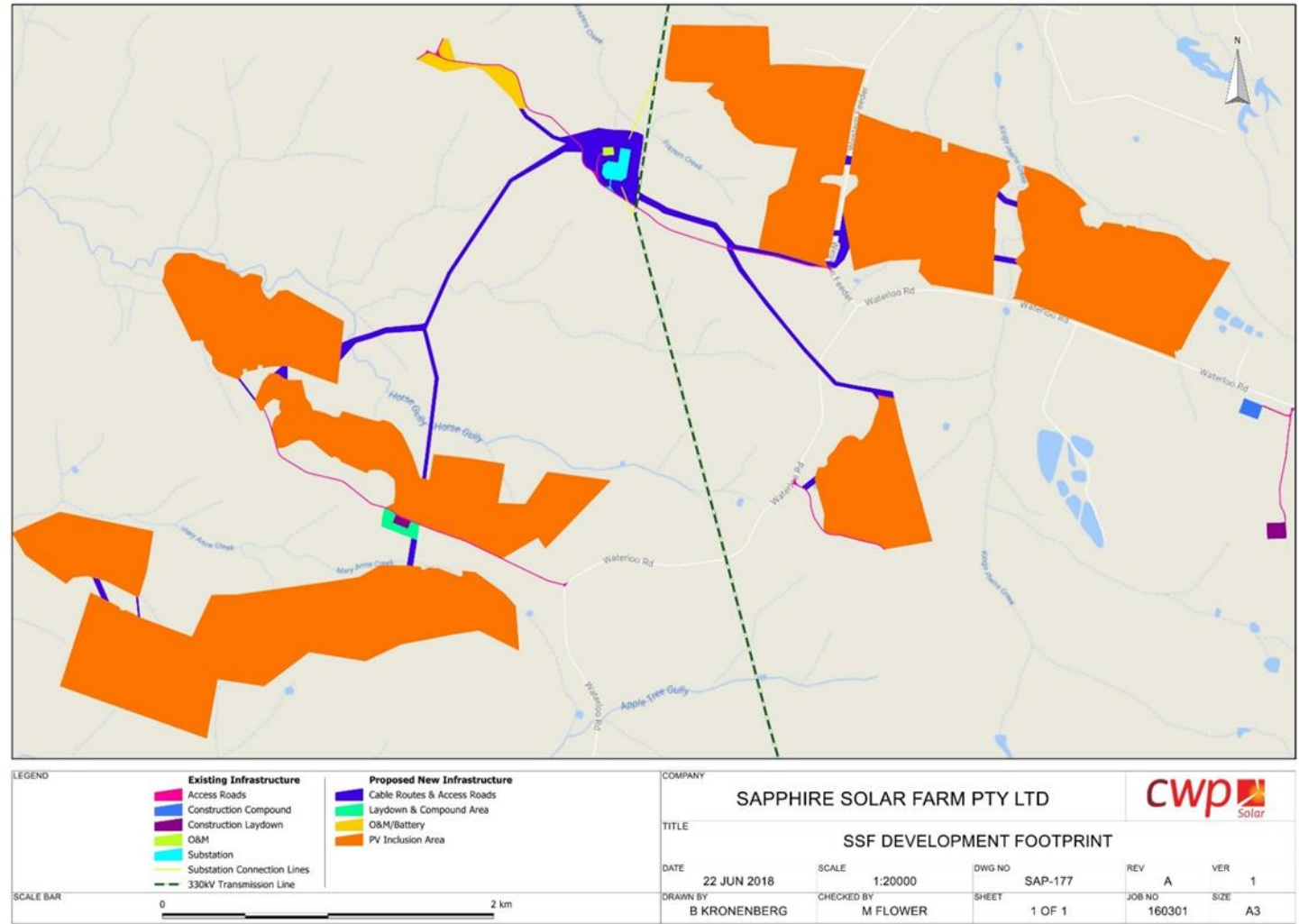
The Project was granted development consent by the DPIE under the Environmental Planning and Assessment Act, 1979 (EP&A Act) on 16/8/18. It was granted consent by the Minister for the Environment (according to the Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act)) on 15/10/2018.

The development approval is therefore conditional based on the consent conditions:

- NSW EP&A Act Development Consent SSD8643; and
- Commonwealth EPBC Act Approval 2017/8121.

This document is the Environmental Management Strategy (EMS) required by, and addressing elements of, those approval conditions as they relate to construction and operation.

Figure 1.1 Project layout



1.1 Project Staging

It is intended that Sapphire Solar Farm will be constructed and operated in stages.

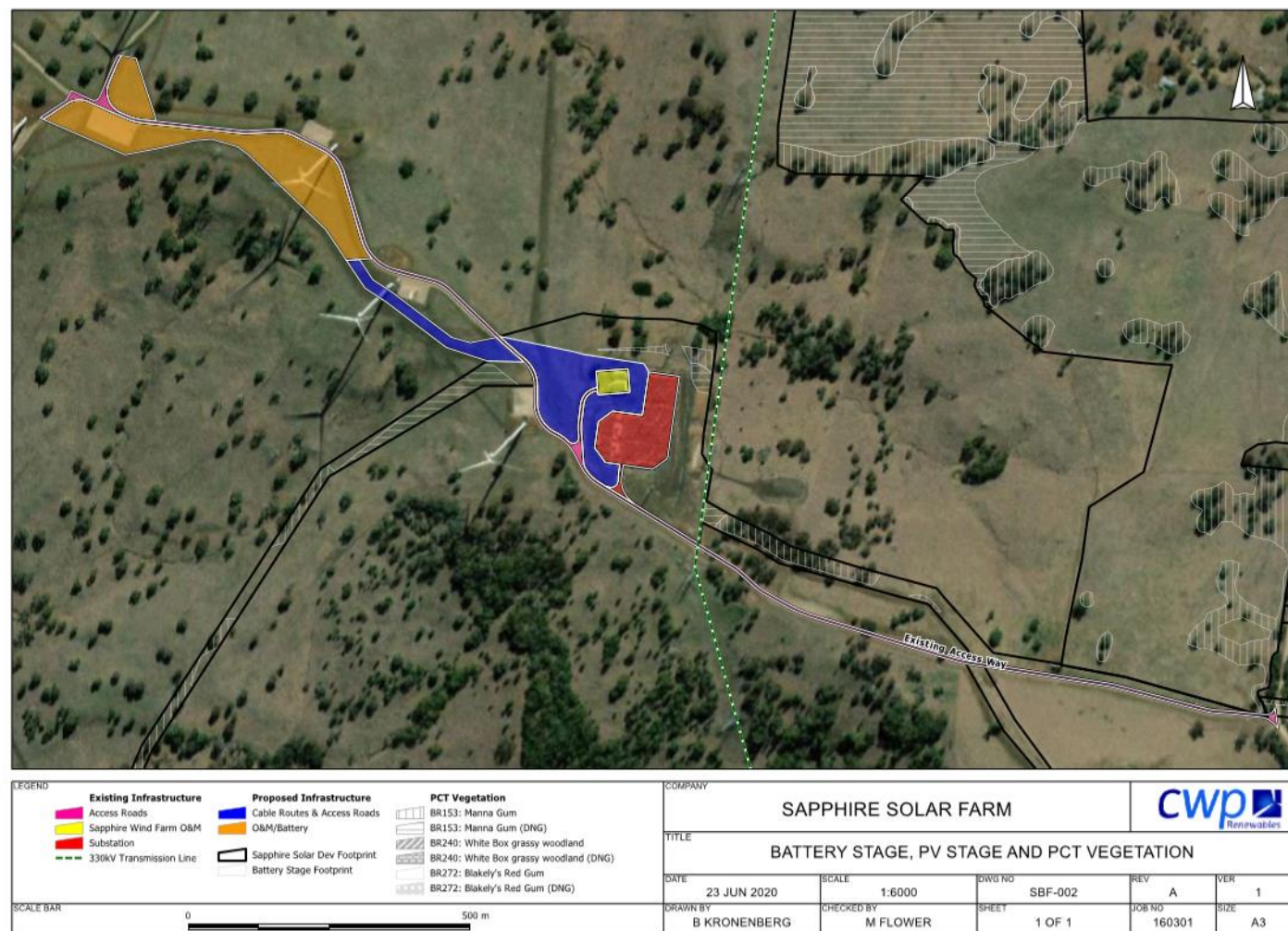
Stage 1 will involve construction and operation of the battery storage component of the solar farm. This Stage will include establishment of electrical cables between the battery and existing Transgrid substation, construction of a site compound and operational maintenance facility. Access to the site will be via Western Feeder Road and the existing internal roads of Sapphire Wind Farm will be used.

Construction is planned to commence in early 2021 and will take approximately 6 months. Once operational, the battery may be upgraded, added to and / or replaced.

Subsequent stage / s of the Sapphire Solar Farm will be the construction and operation of the solar photovoltaic (PV) component of the project.

Refer to Figure 1.2 for the general location of the Stage 1 infrastructure and proposed development footprint.

Figure 1.2 Stage 1 Project layout



2 Plan Purpose and Scope

This EMS has been prepared for Stage 1 of the Project to:

- satisfy the requirements of the Development Consent (detailed in Section 2.1); and
- enact the management measures and commitments made in the Development Application (DA) (detailed in Section 2.2).

The content of the document has been guided by the studies detailed in Section 2.3.

To manage compliance with the applicable statutory approvals, the Project Environmental Officer and contractors will maintain a compliance register to monitor and track obligations.

2.1 Conditions of Consent

The consent conditions relevant to this plan and the location at which the sub-conditions are addressed are demonstrated in Table 2.1.

Table 2.1 Conditions of Consent Relevant to this Plan and Plan Reference Location

SSD8643_1 Approval	Condition of Consent	Location in this Plan
Schedule 2 Condition 5 Staging of the Development	The Applicant may construct, operate and decommission the development in stages. Where staging of the development is proposed, the conditions of this consent are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).	Section 1.2 describes the staged approach to construction and operation of the Project. This EMS addresses Stage 1 of the Project.
Schedule 4 Condition 1 Environmental Management Strategy	1. Prior to the commencement of construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	Environmental Management Strategy (EMS): Whole document Secretary satisfaction: Appendix A
	(a) provide the strategic framework for environmental management of the development;	Section 3
	(b) identify the statutory approvals that apply to the development;	Section 4
	(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 5.1
	(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;	Section 5.3.2
	• receive, handle, respond to, and record complaints;	Section 5.4

SSD8643_1 Approval	Condition of Consent	Location in this Plan
	• resolve any disputes that may arise;	Section 5.4
	• respond to any non-compliance;	Section 6
	• respond to emergencies; and	Section 6
	(e) include: • references to any plans approved under the conditions of this consent; and	Section 4.5
	• a clear plan depicting all the monitoring to be carried out in relation to the development.	Section 6.1 Appendix C
Schedule 3 Condition 11 (part of) Biodiversity Management Plan	Prior to the commencement of construction, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with OEH and DoEE, and to the satisfaction of the Secretary. This plan must: (a) include a description of the measures that would be implemented for: - rehabilitating and revegetating temporary disturbance areas; - controlling weeds and feral pests	EPC prepared plans: Rehabilitation Management Program Vertebrate Pest Management Program Weed Management Program
Schedule 4, Condition 2 Environmental Management and Reporting	2. The Applicant must: (a) update the strategies, plans or programs required under this consent to the satisfaction of the (b) Secretary prior to carrying out any upgrading or decommissioning activities on site; and (c) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Secretary within 1 month of the: • submission of an incident report under condition 4 of Schedule 4; or • any modification to the conditions of this consent.	Section 6
Schedule 4, Condition 3 Environmental Management and Reporting	3. 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 Secretary for approval. 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 Secretary for approval.	Section 6

SSD8643_1 Approval	Condition of Consent	Location in this Plan
	With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties referred to under the relevant condition of this consent. Notes: • <i>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.</i> • <i>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.</i>	

2.2 Development Application Commitments

In the various application documents the proponent made commitments in regard to environmental management. Table 2.2 presents the commitments relevant to this plan and the section of the EMS where it is addressed.

Table 2.2 Development application commitments relevant to EMS and EMS reference location

Document and Section	Commitment	Where Addressed
Environmental Impact Statement (EIS) s8.1	The Project's management plans will include:	-
	- Identification of the potential impacts of the Proposed Development and the measures identified to mitigate these impacts as described in Section 8.2 of this EIS;	In each relevant plan
	- Details of how environmental safeguards are to be implemented;	
	- Details of the timing of the implementation of the mitigation measures;	
	- Clearly defined allocations of environmental responsibilities for all staff members and contractors;	
	- Monitoring and reporting requirements to demonstrate compliance with licensing and approval requirements; and	
	- Procedures for review and updating of the management plans.	

Document and Section	Commitment	Where Addressed
EIS s8.1	The Project will create an environmental manual for staff and contractors throughout the construction, operation and decommissioning of the Proposed Development.	This EMS, and subsequent EPC / O&M prepared plans
EIS s8.2: Table 8-1 SoCs	<i>Air Quality Management Plan (AQMP)</i> The management plans will incorporate an air quality management plan that will: - Define designated access and travel routes; - Set onsite speed limits; - Adopt trip management protocols to avoid unnecessary trips e.g. car-pooling for construction staff; - Management protocols for identify, minimise and treat dust emissions; and - Development a complaints procedure to promptly identify and respond to issues generating complaints.	EPC / O&M prepared plan
EIS s7.5.4 EIS s7.9.4 EIS s8.2: Table 8-1 SoCs	<i>Chemicals Handling Measures</i> The management plans will incorporate chemicals handling procedures that will include protocols for: - training to raise awareness of chemical handling; - monitoring risks of unexpected releases (i.e. machinery inspection and maintenance); - refuelling; and - the storage of any potential contaminants on site.	EPC / O&M prepared plan
EIS s8.2: Table 8-1 SoCs	<i>Community Engagement Plan (CEP)</i> Prepare and implement a Community Engagement Plan (CEP) that will include the protocols to: - Update the community on Project progress; - Update relevant stakeholders of the timing of any potentially adverse impacts; and - Resolved any complaints received. Require EPC company to ensure local contractors/suppliers/workers are provided with timely information regarding potential opportunities.	EPC / O&M prepared plan
EIS s8.2: Table 8-1 SoCs	<i>Construction Noise and Vibration Plan (CNVP)</i> The relevant management plan will incorporate a construction noise and vibration management plan that will:	EPC prepared plan

Document and Section	Commitment	Where Addressed
	- Define hours of work in accordance with construction noise guidelines, and an out of hours work protocol; - Specify the requirement for noise management and selection of mobile plant; - Include noise awareness training and induction for workers; - Consider adverse weather conditions; - Detail communication with the community as required; - Be used as a working document on-site by contractors and subcontractors to ensure everyone is aware of their responsibilities; - Development of combined noise management agreement in conjunction with neighbouring renewable Projects should construction overlap; - Develop an incident response procedure; and - Outline noise monitoring requirements.	
EIS s7.5.4	<i>Contamination Chance-Finds Response Measures</i> The Project will outline a response to previously unidentified contamination.	EPC / O&M prepared plan
EIS s7.10.2 EIS s8.2: Table 8-1 SoCs	<i>Emergency Response Plan</i> The emergency response plan will: - Detail the mitigation of and response to electrical and bush fires, specifically including the methods required to safely shut down and isolate the necessary components of the solar farm; and - Be provided to NSW Rural Fire Service and NSW Fire and Rescue.	EPC / O&M prepared plan
EIS s7.5.4	<i>Erosion and Sediment Control Measures</i> The construction works are short term and would be managed in accordance with the Managing Urban Stormwater: Soils and Construction series, namely: - Managing Urban stormwater: Soils and Construction, Volume 1, 4th Edition (known as the Blue Book) (Landcom, 2004); - Volume 2A Installation of Services (DECC, 2008a); and - Volume 2C Unsealed Roads (DECC, 2008b). Design and construction of access tracks should also be carried out in accordance with: - Guidelines for planning, construction and maintenance of tracks (DLWC, 1994); - Policy and Guidelines for Fish Friendly Waterway Crossings (NSW DPI, 2004); and	EPC prepared plan

Document and Section	Commitment	Where Addressed
	- Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge, 2003).	
EIS s7.5.4 EIS s8.2: Table 8-1 SoCs	<i>Erosion and Sediment Control Measures (including Rehabilitation Management Plan)</i> The management plans will incorporate erosion and sediment control measures that will include provisions for the: - Installation and maintenance of erosion controls for the duration of the construction phase; - Requirements for regularly inspecting erosion and sediment controls, including maintaining a register; - Machinery to arrive and leave site in a clean condition sediment tracking on sealed roads; - Minimisation of areas to be cleared; - General site activity limitations and controls; - Land cover rehabilitation and revegetation (including management considerations and remedy underneath PV areas); - Soil management including separation of topsoil and subsoil for stockpiling and the correct placement during backfill; - Appropriately handling and stockpiling soil to minimise weed infestation and maintain soil structure and microbial activity; and - Protocol to be followed for heavy rainfall event predictions.	EPC prepared plan
Response to Submissions (RtS) Table 2.1	<i>Erosion and Sediment Control Measures</i> Sediment and erosion controls will be formulated in post-approvals environmental management plans.	EPC prepared plan
EIS s8.2: Table 8-1 SoCs	<i>Hazard/Risk Control Measures</i> For minimising hazards around plant, measures will be prepared including various design, construction and operational controls. The management plans will provide safety protocols, including but not limited to: - Basic training of all staff in the use of firefighting equipment on site; - Firefighting equipment lists will be detailed in the Work Method Statements; - Management procedures for hot works, smoking, vehicle use off formal access tracks, and the use and storage of fuel and flammable chemicals; and - Daily monitoring of the Fire Danger Rating, and communication of any further mitigation measures required to all staff and contractors.	EPC / O&M prepared plan

Document and Section	Commitment	Where Addressed
RtS Table 2.1	<i>Land Rehabilitation Measures (decommissioning)</i> Rehabilitation objectives and strategies including indicators to guide rehabilitation after decommissioning will be outlined in principle in the Environment Management System EMS.	EPC prepared plan
EIS s8.2: Table 8-1 SoCs	<i>Spill Response Procedure</i> The management plans will incorporate a spill response procedure that will include: - Processes to mitigate any soil contamination that occurs on site, including the emergency response and EPA notification procedures.	EPC / O&M prepared plan
EIS s7.11.4 EIS s8.2: Table 8-1 SoCs	<i>Waste Management Plan</i> A waste management plan will be prepared and included in the relevant environmental management plans, and will provide: - Protocols to identify opportunities to follow the waste hierarchy, to ensure that waste is minimised, recovered, and disposed of appropriately, and also to ensure a culture of responsible waste management is upheld by staff; - Quantification, classification, and tracking of all waste streams - to encourage waste reduction and minimise inter-contamination of waste streams; - Controls on the disposal methods of all waste streams; - Provision of recycling facilities onsite to reduce waste streams; - Provision of a dedicated waste management area onsite; - Protocols on the transportation of waste, for example covered loads; and, in the case where lithium ion batteries must be disposed of during construction: - Provisions as per the ADG Code for the packaging, transportation of spent lithium-ion batteries to collection and/or recycling facilities; and - An export permit under section 40 of the Hazardous Waste Act will be obtained prior to spent batteries being exported.	EPC / O&M prepared plan
EIS s7.5.4	<i>Waste Management Plan</i> To avoid release to the environment, all hazardous materials (fuels, lubricants, herbicides, etc.) will be disposed of offsite in accordance with NSW EPA guidelines.	EPC / O&M prepared plan
EIS s7.9.4	<i>Waste Management Plan</i> Waste produced from toilets shall be stored until it is trucked off site and disposed of in accordance with DECC requirements.	EPC / O&M prepared plan

Document and Section	Commitment	Where Addressed
EIS s7.9.4 EIS s8.2: Table 8-1 SoCs	<i>Water Management Measures</i> This will include identifying water sources consistent with the EIS: - potable, non-potable, and rain water uses; and - use of harvestable rights of dams.	EPC / O&M prepared plan
EIS s7.5.4 EIS s8.2: Table 8-1 SoCs	<i>Weed Management Plan</i> Weed management strategies will be included in the management plans and include strategies to prevent and minimise the spread of weeds, including: - Management protocols for any declared priority weeds according to the stipulations of the Biosecurity Act (including identifying priority weeds in the area prior to construction); and - Protocols for weed hygiene in relation to plant and machinery entering and leaving the Site, and the importation of fill.	EPC / O&M prepared plan

2.3 Relevant Previous Studies

This EMS builds on relevant information contained in studies and reports listed in Table 2.3.

Table 2.3 Relevant previous studies to the project

Report Name	Date	Author	Study Purpose	Summary
Sapphire Solar Farm Environmental Impact Statement	January 2018	Eco Logical Australia (ELA)	Primary DA and environmental impact assessment document.	Contains detailed Project description, environmental impact assessment, environmental management and mitigation measures.
Sapphire Solar Farm Response to Submissions Report	March 2018	CWP Solar Pty Ltd	Response to submissions received during public exhibition.	Contains detailed response to all public and Government agency submissions.
Additional Information Memo	19 July 2018	CWP Solar Pty Ltd	Additional information requested by DPIE to address items regarding the location and extent of the development footprint.	Contains a definite development footprint and review of all environmental impacts of that development footprint.

3 Environmental Management Framework

3.1 Environmental Management Strategy

The EMS provides a strategic framework for environmental management of the Project. The strategy outlines the Proponent's commitment to community engagement, environmental management and reduction of any Project related impacts.

The strategic framework is structured generally in accordance with ISO 14001:2015's process of Plan → Do → Check → Act (refer Figure 3).

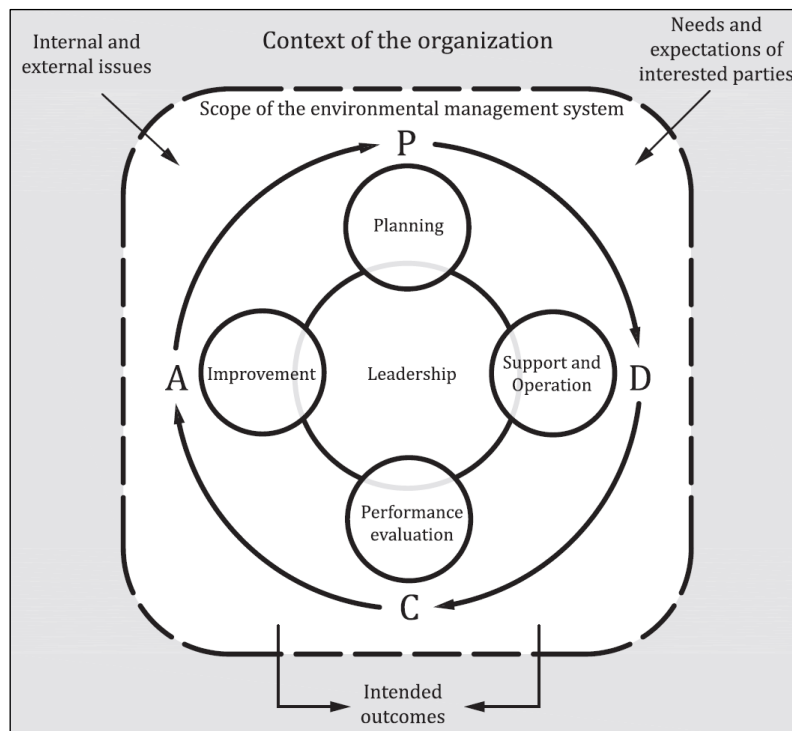


Figure 3: ISO14001:2015 Plan-Do-Check-Act extract

A description of this process and its relationship to the EMS is included in Table 3.1.

Table 3.1: Structure of the EMS

Feature	Requirements	Where addressed in EMS
Plan	Establish the objectives and processes necessary to deliver results in accordance with the organisation's environmental policy.	Section 4
Do	Implement the process.	Section 5
Check	Monitor and measure processes against environmental policy, objectives, targets, legal and other requirements and report the results.	Section 6

Feature	Requirements	Where addressed in EMS
Act	Take actions to continually improve performance of the EMS.	Section 6

3.2 Environmental Policy and Commitment

All Project activities will be undertaken in accordance with the relevant principles of the Project Owner's Environmental Policy, which will be structured generally in accordance with ISO 14001:2015 and will specifically commit to:

- Continual improvement of environmental performance;
- Prevention of pollution;
- Compliance with relevant legal and other requirements; and
- Developing a framework for identifying objectives and targets.

The policy will be communicated to all staff and contractors during induction and will be available via the Project website. It will be periodically reviewed against environmental performance and industry practice.

A copy of CWP Renewable's Environmental Policy is contained in Appendix B.

4 Statutory Approvals

4.1 Identification of Environmental Aspects and Impacts

Environmental aspects and impacts were identified in the Development Application which formed the basis of the Development Consent. Prior to commencement of the Project, the EPC Contractor will prepare a Risk Management Plan (RMP) to identify potential environmental risks and proposed mitigations measures to be implemented throughout construction and operation of the Project.

The RMP will include criteria to evaluate and categorise risks, as well as a comprehensive risk register identifying:

- Risk identification;
- Initial or inherent risk level;
- Responsibilities;
- Evaluation; and
- Management measures.

The RMP will evaluate and categorise the risks and the appropriate mitigation measures associated with the following items:

- Flora, fauna and weed control;
- Traffic and pedestrians;
- Community;
- Air quality including dust;
- Indigenous Heritage and chance finds;
- Non – Indigenous heritage;
- Soil and water including creek crossings;
- Construction noise and vibration;
- Contaminated land (including acid sulphate soils);
- Waste generation;
- Civil construction waste such as spoil;
- Asbestos;
- Storage and use of hazardous materials; and
- Battery installation.

Once complete the RMP will be:

- Reviewed and updated as required;
- Communicated to relevant staff and subcontractors;
- Used to develop Safe Work Methods Statements and / or site management processes for construction activities and operations;
- Where relevant communicated to site workforce through site inductions, environmental notice boards and tool box talks;
- Environmental controls will be integrated into construction methodology; and
- Used to inform the development of Emergency Management Plans.

The RMP will be a progressive document that is proposed to be updated relevant to the Stage of the Project. The RMP will initially address Stage 1 of the construction phase of the Project. Prior to the commencement of subsequent Stages and operation and decommissioning, the Project risk register will be comprehensively reviewed and updated. Environmental aspects and impacts that are identified as high risk will be considered during the formation of environmental management programs and plans and formulated actions and procedures will be incorporated into staff training.

An initial risk register is outlined below Table 4-1 - Table 4-4, and will form the basis of the EPC's RMP. It is not intended to be an exhaustive list of all possible risks however indicates some anticipated risks, risk ratings and the relevant management plans which details a more thorough analysis of the risk, controls and mitigation measures.

Table 4-1: Risk definitions

Rating	Likelihood Description
Certain	Almost certain to occur within the next 12 months or is imminent
Likely	Likely to occur within the next 12 months
Possible	Could occur but not likely to occur in a given year
Remote	May occur in exceptional circumstances

Table 4-2: Risk consequences

Consequence	Description
Catastrophic	Catastrophic damage to species numbers or habitat leading to irreversible impact on local or regional population viability. Legal action involving major criminal charges and/or civil suits with possible fines and costs exceeding \$1 million Long term cessation of core activities >12 months
Major	Major loss in numbers or habitat leading to a substantive adverse impact on local or regional population viability. Material harm to the environment, that is: - it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or - it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, and - loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment. Large numbers or ongoing complaints
Moderate	Moderate loss in numbers or habitat may have a minor adverse impact on local or regional population viability Isolated complaints that can be effectively managed to avoid recurrence. Does not entail material harm to the environment.
Low	Repeated small impacts would not cause a substantive adverse impact on flora and fauna; no impact on local or regional population viability; No complaint; Impact is localised and contained within the site.

Table 4-3: Risk matrix

Likelihood	Consequence			
	Catastrophic	Major	Moderate	Minor
Certain	High	High	High	Medium
Likely	High	High	Medium	Low
Possible	High	Medium	Low	Low
Remote	Medium	Medium	Low	Low

Table 4-4: Initial risk register

Construction Activity	Potential Impact	Likelihood	Consequence	Risk	Relevant Plan
Clearing and grubbing	Habitat removal (native vegetation and hollow bearing trees)	Remote	Moderate	Low	BMP
	Habitat Modification	Remote	Moderate	Low	BMP
	Degradation of adjacent areas of habitat	Possible	Moderate	Medium	BMP
	Habitat removal (rock outcrops)	Remote	Minor	Low	BMP
Excavation of tracks, laydown areas	Habitat modification	Remote	Moderate	Low	SWP
	Erosion of disturbed areas and stockpiles	Possible	Moderate	Low	SWP
Operation of machinery and plant	Collisions with wildlife	Likely	Minor	Low	TMP
	Habitat alienation	Possibly	Moderate	Low	BMP
Pole and overhead transmission line installation	Erosion of disturbed areas	Possible	Moderate	Low	SWP
	Erosion of stockpiles	Possible	Minor	Low	SWP
	Reduced air quality (dust)	Possible	Minor	Low	AQMP
Trenching for underground transmission line installation	Habitat removal	Remote	Minor	Low	BMP
	Habitat modification	Possible	Minor	Low	BMP
	Erosion of disturbed areas and stockpiles	Possible	Moderate	Low	SWP
	Pollution (sedimentation or spill risk) to local waterways	Possible	Minor	Low	SWP
	Trap hazard to fauna	Possible	Moderate	Low	BMP
Earthworks	Erosion and sedimentation	Likely	Moderate	Medium	SWP
	Disturbance to Aboriginal heritage artefacts	Remote	Minor	Low	CHP
	Noise complaints	Likely	Moderate	Medium	CNVP

Construction Activity	Potential Impact	Likelihood	Consequence	Risk	Relevant Plan
Vehicle movements	Depositing soil on sealed section of Waterloo Road	Remote	Minor	Low	SWP/ TMP
Refueling	Pollution	Possible	Moderate	Low	SWP
Hot works	Ignition risk for bushfire	Remote	Major	Medium	SWMS
Waste management	Unlawful disposal of waste	Remote	Moderate	Low	WMP
	Not recycling materials	Remote	Minor	Low	WMP
Equipment deliveries	Complaints	Likely	Moderate	Medium	TMP
Vehicle Movements	Delay to school buses	Possible	Moderate	Low	TMP

4.2 Relevant Legislation

In preparing the Environmental Impact Statement and subsequent approval a number of legislative, regulatory and statutory instruments were reviewed. The key instruments which apply to the construction and operation of the Project are detailed in Table 4-5.

Table 4-5: Legislation register

Legislative Instrument	Legislative Requirement	Plan Response
Commonwealth		
<i>Environment Protection & Biodiversity Conservation Act 1999</i> (EPBC Act)	The EPBC Act protects Matters of National Environmental Significance (MNES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others).	Stage 1 of the Project does not impact on MNES as the Box Gum Woodland will be avoided. As such, offsets for Stage 1 are not required under the EPBC Approval. If impacts to Box Gum Woodland occurs during subsequent stages, biodiversity offsets will be provided accordingly. No other MNES are occur at the site and are likely to be impacted.
<i>Native Title Act 1993</i>	The <i>Native Title Act 1993</i> recognises the rights and interests of Indigenous people to land and aims to provide for the recognition and protection of common law native title rights. Areas of land where native title may exist include public road reserves and other Crown land.	The Site is located within the area covered by a Native Title Claim made by the Gomeroi People in 2012. However, the Proposed Development is located on freehold land and former Crown roads that have since transferred to Inverell Shire Council and is therefore not subject to Native Title claims.
<i>Renewable Energy (Electricity) Act 2000</i>	The Renewable Energy (Electricity) Act 2000 aims: (a) to encourage the additional generation of electricity from renewable sources; (b) to reduce emissions of greenhouse gases in the electricity sector; and (c) (c) to ensure that renewable energy sources are ecologically sustainable.	The Project will be accredited as a Renewable Energy Generator to create Renewable Energy Certificates.
<i>Hazardous Waste (Regulation of Exports and Imports) Act 1989</i>	The <i>Hazardous Waste (Regulation of Exports and Imports) Act 1989</i> regulates the export, import and transit of hazardous waste to ensure human beings and the environment, both within and outside of Australia are protected from the harmful effects of hazardous wastes.	Presently, there are few facilities to recycle lithium-ion batteries in Australia. Spent batteries, if exported for recycling will require an export permit under section 40 of the Hazardous Waste Act.
NSW Legislation		
<i>Biodiversity Conservation Act 2016</i>	The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest wellbeing of the	Biodiversity offsets are not required to be retired for Stage 1 of the Project as it intended that there will be no impact to

Legislative Instrument	Legislative Requirement	Plan Response
	community, now and into the future, consistent with the principles of ecologically sustainable development.	relevant species and vegetation communities. Offsets will be provided for subsequent stages where there is an impact and .
<i>Biosecurity Act 2015</i>	The Biosecurity Act repealed the <i>Noxious Weeds Act 1993</i> and provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.	Weed management will be undertaken in accordance with the provisions of the <i>Biosecurity Act 2015</i> .
<i>Crown Lands Act 1989</i>	Crown land includes Crown reserves, state parks, land that is leased or licensed, minor ports, river entrances, caravan parks, places of cultural and community significance, submerged land of public waterways (except where under the ownership of NSW Maritime Authority) and Crown roads.	Stage 1 of the Project will not impact on any Crown Land or Crown roads.
<i>Environmental Planning and Assessment Act 1979</i>	The EP&A Act is the principal planning legislation for NSW. It provides a framework for the overall environmental planning and assessment of development proposals.	The Project was assessed and approved under Division 4.1 of the EP&A Act.
<i>Fisheries Management Act 1994</i>	The FM Act provides for the protection, conservation, management and recovery of threatened species, populations and ecological communities as defined under the Act.	Stage 1 of the Project will not impact on Kings Plains Creek, accordingly a management plan will not be prepared for this stage.
<i>Heritage Act 1977</i>	Historic relics, buildings, structures and features are protected under the <i>Heritage Act 1977</i> .	There are no identified heritage items within the Project.
<i>Mining Act 1992</i>	The objective of the <i>Mining Act 1992</i> is to encourage and facilitate the discovery and development of mineral resources in NSW, having regard to the need to encourage Ecologically Sustainable Development	The Project does not impact on any current Mining Leases.
<i>National Parks and Wildlife Act 1974</i>	The main aim of the NPW Act is to conserve the natural and cultural heritage of NSW.	The Project will implement the approved Chance Finds Protocol.
<i>Protection of the Environment Operations Act 1997</i>	The objectives of the POEO Act are to protect, restore and enhance the quality of the environment, in recognition of the need to maintain ecological sustainable development.	The Project will be managed to ensure pollution risks to soil, waterways and air quality are avoided or minimised. An Environment Protection Licence is not required.

Legislative Instrument	Legislative Requirement	Plan Response
<i>Roads Act 1993</i>	Section 138 of the <i>Roads Act 1993</i> sets out the requirement for approval to carry out certain works within the vicinity of a road.	A Section 138 Permit is not required for the Project.
<i>Rural Fires Act 1997</i>	The <i>Rural Fires Act 1997</i> provides for the preparation, mitigation and suppression of bush and other fires in local government areas and to provide protection of infrastructure and environment, economic, cultural, agricultural and community assets from damage arising from fire.	A Fire Management Plan will be prepared for the Project as required by condition 3.26.
<i>Waste Avoidance and Resource Recovery Act 2001</i>	The <i>Waste Avoidance and Resource Recovery Act 2001</i> introduces a scheme to promote extended producer responsibility for the life-cycle of a product.	A Waste Management Plan will be prepared by the EPC contractor.
<i>Water Management Act 2000</i>	The WM Act regulates controlled activities on waterfront land in NSW as well as the access to water for consumptive use.	Water Access Licences will be obtained if water is required for construction purposes. A permit under section 91 of the WM Act is not required as described in section 89J of the EP&A Act.
NSW State Environmental Planning Policies		
<i>State Environmental Planning Policy No. 44 (Koala Habitat)</i>	SEPP 44 aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for <i>Phascolarctos cinereus</i> (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline.	There is no core Koala habitat is located within the Project.
<i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i>	SEPP 33 defines and regulates the assessment and approval of potentially hazardous or offensive development.	A hazardous activities assessment was completed during the development phase of the Project.

4.3 Statutory Approvals

In order to ensure compliance with the applicable statutory approvals, the Project Environmental Officer will maintain a compliance register to track and monitor compliance.

Clause 17 of Schedule 1 of the POEO Act concerns electricity generation works. General electricity works is a scheduled activity and requires an EPL where the activity has the capacity to generate more than 30 MW of electrical power. General electricity generation works is defined as “the generation of electricity by means of electricity plant that, wherever situated, is based on, or uses, any energy source other than wind power or solar power. As a result an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act) is not required for the construction and operation of the Project.

4.4 Environmental Objectives and Targets

Environmental objectives and targets will be set and reviewed for construction and operational phases. These will reflect the intent of the Project Environmental Policy and will measure performance of the Project. The targets will be developed to address the following:

- The RMP;
- Statutory and other requirements;
- Outcomes of community and agency consultation; and
- The Project’s organisational, economic and social considerations.

At a minimum, the objectives and targets will be set for the following:

- Environmental risks where the adequacy of mitigations has identified to be ‘Satisfactory’ or lesser;
- Total number of non-conformances;
- Total number of complaints received internally and from the community;
- Implementation of the EMS;
- Staff training; and
- Assessment of the environmental competency of relevant staff.

Appendix C contains a table outlining the environmental objectives, targets, indicators, monitoring, frequency and responsibilities.

4.5 Environmental Management Plans

The Development Consent required several Environmental Management Plans be prepared to deal with a specific environmental aspect or impacts in addition to the EMS. The specific plans are:

- Biodiversity Management Plan;
- Aboriginal Chance Finds Protocol; and
- Traffic Management Plan (TMP).

All the environmental management plans will be reviewed annually and if required with information relevant to the stage of the Project at the time.

The Project Environmental Officer will be responsible for maintaining the management plans and making the plans available to staff, contractors and the public via the Project website. All staff and contractors will be responsible for conducting Project related works in accordance with the management plans.

Environmental Management Programs will be created by the EPC to meet the requirements of the Approvals and abovementioned management plans. They will largely be the responsibility of the EPC to develop and implement.

The EIS identified the key environmental factors of the Project. The Environmental Factors identified in the planning stage for the Project are:

- Biodiversity
- Aboriginal cultural heritage
- Historic heritage
- Landuse and soils
- Visual Impact
- Noise
- Traffic and access (transport)
- Water Resources
- Hazards and Risks (Battery Storage, Bushfire and Electrical fire, Electromagnetic interference)
- Waste and resource use
- Socio – Economic Factors
- Cumulative impacts

Prior to the commencement of construction and operational activities, the EPC / O&M will prepare the plans / programs listed in Table 4-6 for Stage 1.

Table 4-6: Additional plans

Plan Type	EIS Commitment or CoC
Air Quality Management Plan (AQMP)	EIS s8.2: Table 8-1 SoCs
Chemicals Handling Measures	EIS s8.2: Table 8-1 SoCs
Community Engagement Plan (CEP)	EIS s8.2: Table 8-1 SoCs
Construction Noise and Vibration Plan (CNVP)	EIS s8.2: Table 8-1 SoCs
Contamination Chance-Finds Response Measures	EIS s7.5.4
Emergency Response Plan	EIS s8.2: Table 8-1 SoCs
Erosion and Sediment Control Measures	EIS s7.5.4
Hazard/Risk Control Measures	EIS s8.2: Table 8-1 SoCs
Land Rehabilitation Measures (decommissioning)	RtS Table 2.1
Rehabilitation Management Program	Schedule 3, Condition 11(a)
Spill Response Procedure	EIS s8.2: Table 8-1 SoCs
Vertebrate Pest Management Program	Schedule 3, Condition 11(a)
Waste Management Plan	EIS s8.2: Table 8-1 SoCs
Water Management Measures	EIS s8.2: Table 8-1 SoCs
Weed Management Program	Schedule 3, Condition 11(a)

5 Implementation and Operation

5.1 Structure and Responsibility

It is the responsibility of all Project staff members and contractors to implement the requirements outlined in this Strategy. Specific responsibilities for administering, implementing, monitoring and reporting are detailed in Table 5-1. Each Contractor will be responsible for implementing the actions identified in the management plans and programs in order to comply with the Development Consent conditions.

Table 5-1: Roles and responsibilities

Role	Responsibility
Principal Project Manager (during construction) / Asset Manager (during operations)	• Responsible for implementation of CWP Renewables Environmental Policy; • Responsible for management of EPC Contractor; • Responsible for delivery of the Project in accordance with this EMS and associated plans and statements; • Review and approve Project design changes, and update Project Environmental Officer and Project Community Officer; • Provide adequate resources to allow the implementation of the Project EMS; • Issue non-conformance notices and to issue actions to avoid or minimise potential environmental impacts, and failing the effectiveness of such steps, order cessation of a specific activity. • Ensure all Project personnel attend a site induction prior to commencing work; and • Hold regular Project team meetings.
Project Environmental Officer	• Ensure site specific environmental requirements are fulfilled and be the primary point of contact for community and liaison; • Ensure sub-contractors and agents comply with the EMS, management plans and programs; • Undertake internal environmental auditing and reporting; • Be the primary point of contact for regulatory agency liaison; • Oversee environmental monitoring; • Report to the Principal Project Manager on environmental performance of the EPC and sub-contractors; • Ensure the community is well informed of activities at the Project site, and activities which may affect the Community and their interests; • Ensure all staff and contractors are aware of the community consultation requirements and complaints protocols; and • Management of a Project complaints register.
Independent Environmental Auditor	• Review the adequacy of the measures undertaken to deliver the Project in accordance with the EMS, management plans, programs, Development Consent and Commonwealth approval;

Role	Responsibility
	• Request reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, direct that relevant actions be ceased immediately; and • Provide an audit report to be forwarded to the Secretary or Minister as relevant that: ○ assesses whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under the consent; and ○ recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under the consent.
<i>EPC Project Manager</i>	• Overall responsibility for all contractors and subcontractors involved in the Project; • Develop the Risk Management Plan for construction, and maintaining that plan throughout construction; • Consult with Principal Project Manager in relation to all Project design plan changes; • Ensure adequate resources are available for all contractors and subcontractors to deliver the Project in compliance with the EMS and other relevant documents; • Ensure all contractors and subcontractors are inducted prior to commencing work; • Hold regular Project team meetings and toolbox talks, ensuring information is shared between all site personnel; and • Support and attend Community Consultative Committee (CCC) meetings at the request of the Principal Project Manager.
<i>EPC Environmental Officer</i>	• Obtain the relevant licences and approvals for construction including any quarry licences and commercial water licences; • Manage environmental incidents in accordance with Section 5.7; • Prepare reports on compliance to the satisfaction of the Project Environmental Officer; • Prepare environmental induction training materials in accordance with the EMS and associated plans; • Undertake inspection and audit and carry out the project in accordance with environmental requirements and targets and objectives; and • Delivery of the management plans and programs identified in Section 3.4.2, and the additional responsibilities identified in the Biodiversity Management Plan and heritage related controls (e.g. Chance Finds Protocol).

Role	Responsibility
<i>All Employees and Contractors</i>	• Complete a site induction prior to commencing works on site; • Attend all environmental training as required; • Comply with the environmental controls in this EMS and all associated plans, sub plans and strategies; • Undertake all activities in accordance with agreed procedures and work methods; • Implement the actions identified in their management plans and programs in order to comply with the Development Consent conditions; and • Follow instructions of the Project Environmental Officer.

5.2 Training, Awareness and Competence

Training awareness and competence systems have been designed to ensure contractors and staff have an adequate understanding of the Project's environmental aspects and impacts, the requirements or relevant programs and plans, and their own responsibilities and tasks. The system includes a site induction, ongoing targeted environmental training, and tool box talks. It will be delivered by the EPC Contractor and O&M contractor who will maintain records of environmental training.

5.2.1 Site Induction

All staff and contractors working on site will be required to undertake a site induction prior to commencing work (including construction and operations) on the site. Inductions will address the requirements of this EMS and highlight the relevant roles and responsibilities. Emergency response training will be incorporated in the induction training.

A visitor Induction will be developed and given for people attending the Site, but not engaged in daily work activities. This could include members of the media, politicians, delivery drivers, staff, consultants and invited guests visiting the Proponent or contractor.

5.2.2 Environmental Training

Targeted environmental training will be conducted for key construction tasks or work areas that are considered particularly sensitive e.g. site access and biodiversity management. The environmental training content will be developed by EPC Environment Officer in consultation with the Project Environmental Officer.

5.2.3 Toolbox Talks

Regular toolbox talks will identify the environmental risks, mitigation measures and responsibilities relevant to the activities being completed. More detailed toolbox talks will be completed as needed to address specific environmental issues, environmental incidents or improvement initiatives. Toolbox talks will be coordinated by the EPC Project Manager to facilitate sharing of information between all site personnel.

5.2.4 Records

Training records will be maintained by the EPC Environmental Officer to demonstrate compliance with the requirements of this EMS, and records will include:

- Who was trained;
- When training occurred;
- Name and relevant details of trainer; and

- Description of training content.

Copies of these records will be forwarded to the Project environmental Officer for their records.

5.3 Communication

Effective, two-way communication between the Project and external stakeholders is imperative to the success of the EMS and the Project as a whole.

5.3.1 Internal Communication

Communication between the Project staff and EPC contractors is classified as internal communication and will be typified by emails, phone-calls, meetings, tool-box talks and internal reporting (e.g. audit reports, progress reports and incident reports). The Project Environmental Officer is responsible for handling internal communication related to the environmental aspects and impacts of the Project. The Project training system also forms part of the internal communication process through induction and ongoing training information on environmental aspects and impacts.

5.3.2 External Communication

External communication is between the Project and external stakeholders such as neighbours, the wider community, government agencies and general public. External communication methods include: Project website, social Media, advertisements, letters, emails and information/complaints telephone line. The Principal Project Manager will be the primary point for contact for all external communication throughout construction. The primary contact during Operations will be determined prior to the commencement of that stage.

The Project website (<https://www.sapphirewindfarm.com.au/sapphire-solar/>) is one of the core external communication tools. It is regularly updated with the Project status and will make publicly available copies of documents specified in Schedule 4, Condition 7 of the consent. These documents include:

- the EIS;
- the final layout plans for the development;
- current statutory approvals for the development (including relevant management plans required by the approvals);
- the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
- how complaints about the development can be made;
- a complaints register; and
- any other matter required by the Secretary;

In addition to a site website, the Proponent will maintain a social media presence to keep the broader community informed about the Project, its progress and any matters that may impact on the community such as scheduled roadworks along Waterloo Road.

External communication commenced during the site identification phase and will continue until the Project is decommissioned.

5.4 Complaints Management and Dispute Resolution

5.4.1 Complaints Management

The Project has implemented the following avenues for complaint registration:

- 1300 793 608 is the Project's 24 – hour telephone number
- PO Box 62 Inverell NSW 2360

- ssf@cwprenewables.com

The Complaints Register will record:

- (a) Date and time of complaint/enquiry;
- (b) Type of communication (i.e. telephone, mail, meeting, email etc.)
- (c) Name, address, contact telephone number of complainant/enquirer (if possible, and permitted by the complainant/enquirer);
- (d) Nature of the complaint and enquiry;
- (e) Actions taken in response including timeframes for implementing the action;
- (f) If no action was taken, the justification for why not; and
- (g) When and how the complainant/enquirer was notified of the outcome or provided an answer.

Complaints will be responded to within 24 hours. Initial contact with the complainant will either outline actions taken to resolve the complainant or a holding statement while the complaint is being investigated. Depending on the nature and complexity of the complaint resolution may take additional time.

By its nature the Complaints Register will contain sensitive personal details. A copy of the Complaints Register will be placed on the Project website, however it will not contain and personal information relating to the complaint or the person making the complaint.

5.4.2 Dispute Resolution

The Project complaints handling process is designed to avoid disputes arising following the receipt of a complaint. As per Section 5.4.1, all complaints will be responded to within 24 hours. It is the Project's aim to maintain a good relationship with all internal and external stakeholders so that no disputes eventuate. In event that a complaint is unable to be resolved satisfactorily, either party may refer the dispute to an independent dispute resolution process.

5.5 Document Control

The Principal Project Manager will establish a document control process to ensure environmental documentation remains current and can be easily located and reviewed. SSF will maintain all documents in accordance with a quality management system. A summary of the proposed system is as follows:

- Keeping hard copies and electronic copies of documents in accordance with the ISO 9001/2008 Standard of Quality Management, where applicable;
- A Quality Assurance and Version Control Table is included at the beginning of every document, where appropriate;
- All documentation is to be retained for the life of the Project.

The Principal Project Manager will establish and maintain a document register. The register will be used to manage controlled documents (i.e. documents requiring approval for implementation and revision) produced by the Project team.

It is the responsibility of the Project Environmental Officer to ensure that document control of environmental documents and records is functioning effectively.

5.6 Emergency Preparedness and Response

An Emergency Response Plan (ERP) will be prepared by the EPC Contractor prior to the commencement of construction and operation. Emergency response measures shall be developed to

manage environmental emergencies, should they occur. The plan will include the process to be followed in the event of an emergency (including evacuation details and muster points) and communication procedures. The plan will include a list of emergency contacts, and maps to muster points and the nearest emergency facilities. The plan will identify the need for any additional specific emergency response plans to be prepared.

All staff will be trained in emergency preparedness and response. Higher risk activities will involve a higher degree of preparedness and training.

6 Environmental Monitoring, Corrective Action and Audits

6.1 Environmental Monitoring

Environmental monitoring will be used to measure performance of the EMS and compliance with relevant statutory requirements. The Project Environmental Officer will review the EPC Environmental Officer's regular internal monitoring during construction to ensure the contractors are complying with their commitments and the relevant conditions of approval.

Environmental monitoring checklists will be developed, and environmental inspections will include evaluation of performance against objectives and targets identified in the environmental management plans and programs. The EPC Environmental Officer will undertake a range of daily, weekly and monthly inspections and monitoring activities as outlined in Table 6-1.

Table 6-1 Monitoring activities

Frequency	Area or Activity
Daily inspections	Open trenches for trapped fauna;
	Areas of recent clearing of habitat trees for returning fauna;
	Weather forecast;
	Fire Danger Rating;
	Dust generation and abatement measures;
Weekly monitoring	Effectiveness of installed erosion and sediment control measures;
	Noise minimisation and mitigation;
	Waste generation and management;
	Hazardous material storage;
	Biodiversity impacts including preclearing surveys;
	Cultural heritage impacts;
	Emergency preparedness;
	Corrective Actions Notices issued;
Monthly monitoring	Rehabilitated areas: • Stability assessment and erosion present; • Groundcover %; • Weeds present; • Monthly resource usage (fuel, energy);
	Chance cultural heritage finds;
	Complaints received;
	Corrective Actions undertaken;
	Environmental incident reports;
	Waterloo and Western Feeder Roads for pavement integrity and drainage;
Additional specialist or focussed monitoring	Ad hoc caused by environmental triggers, or as required by specific management plan.

Frequency	Area or Activity
Erosion and sedimentation control measures will be inspected:	• weekly; • at least 24 hours prior to predicted rainfall; • daily when rainfall is occurring; and • after the rainfall event has finished;
Biodiversity	Clearing activities will be monitored at the time of clearing;
Vehicle weed inspections:	At time of on boarding new vehicle;
	When vehicle returns to site after one-month absence;
	When vehicle is driven through areas of known weeds;
Waterloo and Western Feeder Roads	A road inspection and assessment of ongoing heavy vehicular access to the site will be undertaken by the Site Manager under the following conditions: • Rainfall exceeding 58mm/hr which equates to the 1 hour 2% Annual Exceedance Probability for Project area calculated from the Bureau of Meteorology website • Where greater than 50mm of rainfall has been recorded in a 24 – hour period at either the Glen Innes or Inverell Automatic Weather Stations

The Project Environmental Officer will undertake an internal audit against the Conditions of Consent and associated plans on a quarterly basis during construction. A full independent audit as described in Schedule 4 Condition 6 will be undertaken within six months of the commencement of construction and will be led and conducted by a suitable qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary for Planning.

All monitoring results and records will be kept for the duration of the Project. The results of monitoring may be referred to a specialist consultant, if required.

6.2 Non-Compliances

Any non-compliances will be recorded by the Project Environmental Officer and reported to the Project Manager. The Project Environmental Officer will prepare a Correction Action Notice for the non – conformance outlining the corrective action to be undertaken. If the non – conformance is an “incident” then compliance with the incident reporting notification requirements as outlined in Section 6.3 must be achieved.

A non-compliance may be identified by substantiated community complaint, site monitoring or independent audit. In the event of a non-compliance, investigation by the Project Environmental Officer will occur with a view to identifying the source, reason and implications of the non-compliance. Remedial actions will be developed in consultation with the relevant staff members and may include:

- Amendment of the EMS and associated management plan;
- Additional control measures;
- Staff training;
- Amended procedures; or
- Disciplinary actions.

Once the course of action to correct a non-compliance has been determined the EPC Contractor will implement the remedial actions and report to the Project Environmental Officer.

The EPC Contractor must report a non-conformance to the Project Environmental Officer who will notify the Secretary and any other relevant agencies per the requirement of condition 4.5.

6.3 Incident Management

Environmental Incidents are defined under several pieces of legislation. Part 5.7 of the Protection of the Environment Operations Act 1997 (POEO Act) requires that all environmental incidents be reported to the EPA. An incident is defined in the Conditions of Consent as:

“A set of circumstances that causes or threatens to cause material harm to the environment.”

Where Material harm is defined as:

“Is 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 make good harm to the environment.”

All environmental incidents will be immediately reported to the Project Environmental Officer and immediate remedial actions undertaken in consultation with the Project Manager.

The Project Environmental Officer will immediately notify the Secretary and any other relevant agencies of any incident that is required by condition 4.4.

For incidents that aren't required to be notified per condition 4.4 the EPC contractor is required to investigate the incident, undertake required corrective action and keep records.

All staff and contractors will be trained in incident reporting during the site induction. This training will include information on the responsibility of every staff member to report incidents and how to report an incident.

All environmental incidents and responsive actions will be recorded on an Environmental Improvement Notice and reported at Project management meetings. This notice will record:

- Name and role of employee recording the incident;
- Date and time of incident;
- Location of incident;
- Size and type of land area affected (e.g. creek, vegetation, road etc.);
- Type of incident (e.g. spill, fire etc.);
- Details of any offsite impacts;
- Immediate responses and further actions; and
- Adaptive management changes to avoid repeat of an incident.

All events/incidents must be closed out to the satisfaction of the Project Environmental Officer and the Project Manager. A non-conformance report will be completed for any incident related to non-conformance with this EMS.

6.4 Incident Register

All environmental incidents will be reported to the Project Environmental Officer immediately. The Project Environmental Officer will direct immediate remedial actions in consultation with the Project Manager. The Project Environmental Officer and Project Manager will determine if any external agencies need to be notified (e.g. Environmental Protection Authority (EPA), DPIE, Council, Roads and Maritime Services (RMS)).

In the event of an Environmental Incident, the Project Environmental Officer will immediately notify the Secretary in writing and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment.

All environmental incidents and responsive actions will be recorded in an Incident Register and reported at Project management meetings.

All incidents must be closed out to the satisfaction of the Project Environmental Officer and the Project Manager.

An incident report will be completed for any incident related to non-compliance with the Development Consent, the EMS or any subsequently created management plans, procedures or programs. Within seven (7) days of the date of the incident, the Project Environmental Officer shall provide the Secretary and any other relevant agencies with a detailed report on the incident, and such further reports as may be requested.

6.5 Corrective and Preventative Action

The Project Environmental Officer will review the EMS and subsequent plans prior to construction and then at least every six months from commencement of construction. The review will ensure the controls reflect any changes in legislation or work procedures.

The review will consider if any changes to the EMS are required based on:

- Environmental monitoring results;
- Complaints;
- Incident reports;
- Non-conformances;
- Relevant legislative changes; and
- Changes in construction methodology.

Continual improvement through adaptive management of the EMS will be achieved by ongoing compliance reviews and reporting. Project Environmental Officer involvement in regular management meetings and tool-box talks will identify opportunities for improved environmental management in response to work procedures, complaints and non-conformances.

Major changes to the EMS will require approval of the DPIE.

6.6 Audits

In accordance with Schedule 4, Condition 6 of the Development Consent.

“Within six months of commencement of construction, or as directed by the Secretary, the Applicant must commission and pay the full cost of an independent Environmental Audit of the development. The audit must:

- (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
- (b) be carried out in consultation with the relevant agencies;

- (c) assess whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and
- (d) recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under this consent.

Within 3 months of commencing an independent Environmental Audit, or unless otherwise agreed by the Secretary, a copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations.

The recommendations of the independent Environmental Audit must be implemented to the satisfaction of the Secretary.”

The Independent Environmental Auditor will prepare an audit program in accordance with the DPIE *Post-Approval Requirements Independent Audit Guidelines DPE June 2018* and in accordance with the principles of *AS/NZ ISO 19011:2003 – Guidelines for Quality and/or Environmental Management Systems Auditing*.

In addition to the full external audit the Project Environmental Officer will conduct an internal audit three, nine, twelve and fifteen months of the commencement of construction. The internal audit will inform CWPR and the EPC of compliance against the Conditions of Consent and be used to update a range of construction documents, plans and procedures.

7 Review

Regular formal site inspections in accordance with programs and plans and daily general observations of the site will be undertaken. Any problems or risks identified during this process will be assessed and, where required, reported as a non-conformance.

An internal review of the Project EMS will be undertaken periodically and in accordance with condition 2 schedule 4. The strategy will be revised in accordance with condition 3 schedule 4. Additional formal reviews will occur following any major design changes in construction or operations.

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Appendices

Appendix A: Satisfaction of the Secretary

Appendix B: CWP Renewables Environmental Policy

Appendix C: Environmental Objectives, Targets, Indicators, Monitoring, Frequency and Responsibility

Appendix A

Satisfaction of the Secretary

Appendix B

CWP Renewables Environmental Policy

CWP Renewables Pty Ltd		Document Ref:	CWP_POL_02	
Integrated Management System		Issue:	A	
Policy Title:	Environmental Policy	Prepared By:	Phaedra Reynolds	
		Approved By:	Jason Willoughby	
		Date Approved:	January 2019	
Page 1 of 1		Next Review Due:	January 2020	Policy

Scope

This policy applies to CWP Renewables (CWPR), its Australian subsidiaries or future subsidiaries and associated entities.

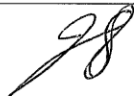
CWP Renewables are committed to sustainable environmental practices by:

- Ensuring projects minimise environmental detriment, and maximise environmental benefit
- Minimising the company's environmental footprint

To achieve this, CWP Renewables are committed to:

- Ensuring there is an effective framework for continual improvement to prevent environmental impacts directly or indirectly related to its operations in all business streams
- Assessing new activities and techniques for environmental impact early in their development
- Conducting regular audits and management reviews to monitor the effectiveness and suitability of the system
- Complying with or exceeding all current and relevant environmental legislation and regulations and where no appropriate regulations exist, appropriate standards are adopted
- Ensuring an effective mechanism exists for setting and reviewing environmental objectives and targets
- Ensuring documented procedures are established and maintained to detail how environmental matters associated with projects and internal business operations are communicated to all employees, customers and contractors, and how relevant information is made available to the public
- Monitoring all processes to ensure that all operational practices are sustainable and that CWP Renewables practices incorporate safe and responsible disposal of all residual wastes, together with an efficient use of natural resources and energy
- Running all aspects of the business in such a manner to minimise and handle any environmental incidents and emergencies should they occur
- Setting measurable Environmental objectives as part of its Environmental Management system
- The protection of the environment including the prevention of pollution.
- Senior Management are committed to the Environmental Policy and overall continual improvement

Signed:



Date Approved: 1st January 2019

Jason Willoughby
Chief Executive Officer
CWP Renewables Pty Ltd

Appendix C

Environmental Objectives, Targets, Indicators, Monitoring, Frequency and
Responsibility

Table C-1 Environmental Objectives, Targets, Indicators, Monitoring, Frequency and Responsibility

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Biodiversity	Manage Threatened Species within the current legal framework	Prepare and implement Biodiversity Management Plan	<i>Refer to biodiversity management plan:</i> • <i>Threatened species and impact minimisation measures: Sections 3.1 and 3.2.</i> • <i>Weed management measures: Section 3.5.</i>			
	Minimise and manage the impacts on existing vegetation community and natural environment in project area					
	Meet statutory obligations for weed management					
	Manage weed species to ensure no introduction of new weed species to previously non-infected areas					
	No spread of weed species beyond those areas already infested					

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Indigenous Cultural Heritage	Manage objects and places of Indigenous cultural heritage	Prior to commencement of construction identify objects and places of Indigenous cultural heritage	Avoidance of areas of Indigenous cultural heritage	Background data review and site inspection	Prior to disturbance in each work area	EPC
	Meet statutory obligations for cultural heritage management	Prepare and implement Chance Finds Protocol (CFP)	Chance finds handled in accordance with the CFP	Site activity reports	Monthly	Prepare CFP: Proponent Implement CFP: EPC Review implementation data of CFP: Proponent

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Landuse and Soil Management	Meet statutory obligations in relation to soils and landuse management	Prepare and implement overarching Erosion and Sediment Control Plan (ESCP) and site works plans for proposed site works	Mitigations are proposed on plans and suitable	Review overarching ESCP prior to construction	Prior to construction	Prepare ESCP and site works plans: EPC
	Minimise and manage the impacts of construction on soils landscape		No erosion			
			Rectification of erosion control failures	Review site works plans one week prior to works commencing in that area Active site works area inspections during construction	One week prior to commencement of new construction areas During active site works	Review overarching ESCP and site works plans: Proponent Inspections: EPC and Proponent
				Review adequacy of works	Weekly Before predicted rainfall events After rainfall events	Confirm controls are in place and functioning: EPC Inspection role: Proponent

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Landuse and Soil Management (cont'd)		Minimise vegetation clearing and earthworks, and rehabilitate bare earth progressively	Regarding overclearing: <i>refer to biodiversity management plan</i> Earthworks are minimised Regarding rehabilitation: refer below.	Review site works plans one week prior to works commencing in that area Active site works area inspections during construction	One week prior to commencement of new construction areas During active site works	Prepare ESCP and site works plans: EPC Inspections: EPC and Proponent
	Design and construction of creek crossings to be carried out in accordance with Conditions of Consent	Minimise and manage the impacts of construction on riparian zones	No erosion Rectification of erosion control failures	Review adequacy of works	Weekly Before predicted rainfall events After rainfall events	Confirm controls are in place and functioning: EPC Inspection role: Proponent

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Landuse and Soil Management (cont'd)	Revegetation of disturbed areas with a suitable seed and fertilizer mixture as recommended by the Project Environmental Officer and as described in the Rehabilitation Management Plan	Prepare and implement Rehabilitation Management Plan Revegetation of disturbed areas as soon as practicable with a seed mix designed for high ground cover, low bare ground and low weed presence	Allowing for time required for species to germinate and grow to provide cover, as well as natural variability of drought conditions: Low bare ground relative % cover (<30%) Ground cover species relative % cover (>70%) Minimal weed species (<5%)	Relative % vegetation cover recorded in rehabilitated areas	Monthly following rehabilitation	Prepare and implement Rehabilitation Management Plan: EPC Monitor relative % ground cover: EPC Inspection role: Proponent
		Separation of topsoil and subsoil for stockpiling and correct reinstatement to ensure a suitable growth medium is retained	Separate stockpile areas for topsoil and subsoil Suitable reinstatement layering	Evidence of separate stockpiles noted in site works plans and site activity reports	At time of construction	EPC

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Landuse and Soil Management (cont'd)	Minimise dust generation	Active dust management	Minimal visible dust generation	Visual observation	Daily	EPC
Visual	Minimise visual impact during construction	Minimal changes to visual amenity during construction	Use of muted, low contrast colours for infrastructure, so that they blend into the landscape as far as possible Infrastructure selected to minimise potential for reflectivity and glare Site Nil complaints received	Infrastructure selection and signage proposed by EPC to be confirmed with the Proponent Instigate and monitor complaints receiving facilities (phone, email)	Ongoing	Infrastructure selection and signage proposed: EPC Review role: Proponent Complaints handling: Proponent

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Visual (cont'd)		Minimise vegetation clearing and earthworks, and rehabilitate bare earth progressively	Regarding overclearing: <i>refer to biodiversity management plan</i> Earthworks are minimised Regarding rehabilitation: refer below.	Review site works plans one week prior to works commencing in that area Active site works area inspections during construction	One week prior to commencement of new construction areas During active site works	Prepare ESCP and site works plans: EPC Inspections: EPC and Proponent
		Minimise night lighting	Minimal night lighting Nil complaints received	Infrastructure selection proposed by EPC to be confirmed with the Proponent Instigate and monitor complaints receiving facilities (phone, email)	Ongoing, included in monthly reports	Infrastructure selection: EPC Complaints handling: Proponent

[illegible]

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Traffic and Access	Meet statutory obligations in relation to site access, road conditions and traffic flow	Prepare and implement Traffic Management Plan	<i>Refer to traffic management plan:</i> • Site access, road conditions and traffic flow: Section 2. • Community impacts: Section 5. • Road network impacts: Sections 3 and 4.			
	Minimise impact on surrounding community due to construction traffic					
	Minimise impact on road network due to construction traffic					
Water Resources	Minimise impacts of watercourse crossing of Kings Plains Creek	Prepare and submit to the Secretary a Watercourse Crossing Plan for crossing Kings Plains Creek for the part of the Project located between the Western Feeder and Waterloo Road	Watercourse crossing plan prepared and agreed by Secretary	Plan agreement by Secretary	Prior to construction in that area	EPC
		Minimal erosion at crossing	Visual evidence of erosion	Regarding erosion refer to landuse and soil management section		

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Environmental Hazards	Minimise and manage of impacts of hazardous materials on the natural environment in and beyond the Site	Prepare and implement Fire Safety Study (FSS)	Project design incorporates FSS requirements	Project design review	Prior to construction commencement	Prepare FSS: Proponent Project design: EPC Review project design: Proponent
		Supply minimum of 20,000 litres of water for firefighting purposes at site entrance;	Project design incorporates water provision requirements	Project design review	Prior to construction commencement	Project design: EPC Review project design: Proponent
		Store all hazardous or hazardous goods in accordance <i>Australian Standard AS1940-2004: The storage and handling of flammable and combustible liquids</i>	Compliance with standard	Site activity reports	Monthly	EPC

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Environmental Hazards (cont'd)		Prepare and implement a Spill Response Strategy	Spill Response Strategy prepared and activities compliant	Spill Response Strategy review Site activity reports	Prior to commencement of construction Monthly Ongoing	Prepare and implement: EPC Strategy review role: Proponent
		Prior to commencement of operations prepare a Fire Management and Emergency Response Plan (FMERP) (to include firefighting equipment register)	FMERP prepared and activities compliant	FMERP review Site activity reports	Prior to commencement of construction Monthly Ongoing	Prepare and implement: EPC FMERP review role: Proponent

Theme	Objective	Target	Indicators	Monitoring	Frequency	Responsibility
Waste and Resource Use	Meet statutory obligations in relation to waste generation management	Minimise and manage production of waste on Site	All waste classified in accordance with the EPA's Waste Classification Guidelines 2014 (or its latest version) Preparation of Waste Register Project not to receive or dispose of any off site waste on site	Site activity reports	Monthly	EPC

