



Bomen Solar Farm

Environmental Management Strategy

Prepared by Renew Estate Pty Ltd
for Energy Solutions Pty Ltd

DOCUMENT CONTROL SHEET

Control	Details
Prepared for	Energy Solutions Pty Ltd
Project	Bomen Solar Farm
Report	Environmental Management Strategy
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Current version	V3
Date	15/05/19
Approved by	Yogen Mathur (Energy Solutions Pty Ltd)

Version	Date	Details	Approval
DRAFT V1	23/01/19	ISSUED TO DP&E	Will Stone
V2	10/05/19	ISSUED TO DP&E	Yogen Mathur
V3	13/05/19	ISSUED TO DP&E	Yogen Mathur

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ABBREVIATIONS

ARA	Appropriate Regulatory Authority
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CoC	Condition of Consent
AC	Alternating Current
ACHMP	Aboriginal Cultural Heritage Management Plan
DC	Direct Current
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EP&A Act	Environment Planning and Assessment Act 1979
EPC	Engineer Procure Construct
GHD	GHD Pty Ltd
HSE	Health, Safety and Environment
HVNL	Heavy Vehicle National Law
kV	Kilovolt
LEP	Local Environmental Plan
MW	Megawatt
NHVR	National Heavy Vehicle Regulator
NSW	New South Wales
O&M	Operation and maintenance
OEMP	Operational Environmental Management Plan
OSOM	Oversize Overmass
RE	Renew Estate
REP	Regional Environmental Plan
TBC	To be advised
SSD	State Significant Development
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SoC	Statement of Commitment
WHSEMP	Work, Health, Safety and Environmental Management Plan for construction

1. INTRODUCTION

1.1. Purpose of this document

Development Consent has been granted by the NSW Department of Planning and Environment (DP&E) for the construction, operation and decommissioning of a 120 megawatt (MWdc) solar farm and associated infrastructure at Bomen, New South Wales (NSW) (referred to as the 'Project').

This Environmental Management Strategy (EMS) is the overarching environmental management document for the Bomen Solar Farm, relevant to all stages of the project. It outlines the strategy for achieving full compliance with the Minister's Development Consent through the design, construction, operation and decommissioning of the Project.

This EMS addresses Schedule 4, Condition 1 of the Project Conditions of Consent (CoC), shown in Table 1. The CoC are also further discussed in Section 2.1.1.

Table 1 Condition of Consent

Condition of Consent (Schedule 4, Condition 1)	Where addressed
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:	This document
a) provide the strategic framework for environmental management of the development;	Section 3
b) identify the statutory approvals that apply to the development;	Section 2
c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 3.3
d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> - 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 	Section 6 Section 7.1 Section 7.2 Section 4.4 Section 5
e) include: <ul style="list-style-type: none"> - 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. 	Section 3.4 Section 4.2 and Appendix B.
Following the Secretary's approval, the Applicant must implement the Environmental Management Strategy.	-

1.2. Project Overview

The Project includes constructing, operating and eventually decommissioning a 120 MWdc solar farm at Bomen, about seven kilometres north-east of the Wagga Wagga central business district (CBD).

Subject to final detailed design, the primary components of the Project include:

- about 400,000 photovoltaic solar modules
- about 4,500 trackers comprising single-axis tracking framing systems mounted on steel piles
- up to 44 power conversion stations including electrical switchgear, inverters and medium voltage transformers
- new on-site electrical switchyard and substation
- connection into the National Electricity Market via about 3.5 kilometres of 132 kV transmission line between the proposed on-site substation and the existing TransGrid Wagga North Substation. The transmission line may be overhead or underground, or a combination of both, subject to detailed design.
- battery storage system
- control building including office, supervisory control and data acquisition systems, operation and maintenance facilities, spare parts and staff amenities serviced by septic systems and rainwater tanks
- car park
- internal DC and AC cabling for electrical reticulation
- internal all-weather access tracks
- internal fire trail and bushfire asset protection zones
- security fencing around the solar farm
- vegetation screening – plantings along the site boundaries where required and within the site in select areas
- meteorological stations
- subdivision of four lots to allow the purchase of the required land for the proposal site as shown in the plans of proposed subdivision.

The approved layout is shown in Figure 1.

The construction period is expected to be nine to 12 months from site establishment to commissioning, commencing in the third quarter of 2019.

The operational lifetime of the solar farm is about 30 years.

Decommissioning at the end of the operational life of the solar farm would involve removing all above ground infrastructure and rehabilitating the site to allow it to be used for other purposes.

The land to which the Project applies is:

- Lot 1 DP1249028 (formerly part of Lot 11 DP1130519 prior to subdivision)
- Lot 3 DP1249028 (formerly part of Lot 2 DP590756 prior to subdivision)
- Lot 8 DP1249028 (formerly part of Lot 174 DP751405 prior to subdivision)
- Lot 7 DP1249028 (formerly part of Lot 108 DP751405 prior to subdivision)

- Lot 110 DP751405
- Lot 109 DP751405.

An easement will be established across the following lots for the new transmission line:

- Lot 2 DP594679
- East Bomen Road
- Lot 22 DP1085826
- Lot 1 DP1115229 (TransGrid Wagga North substation).

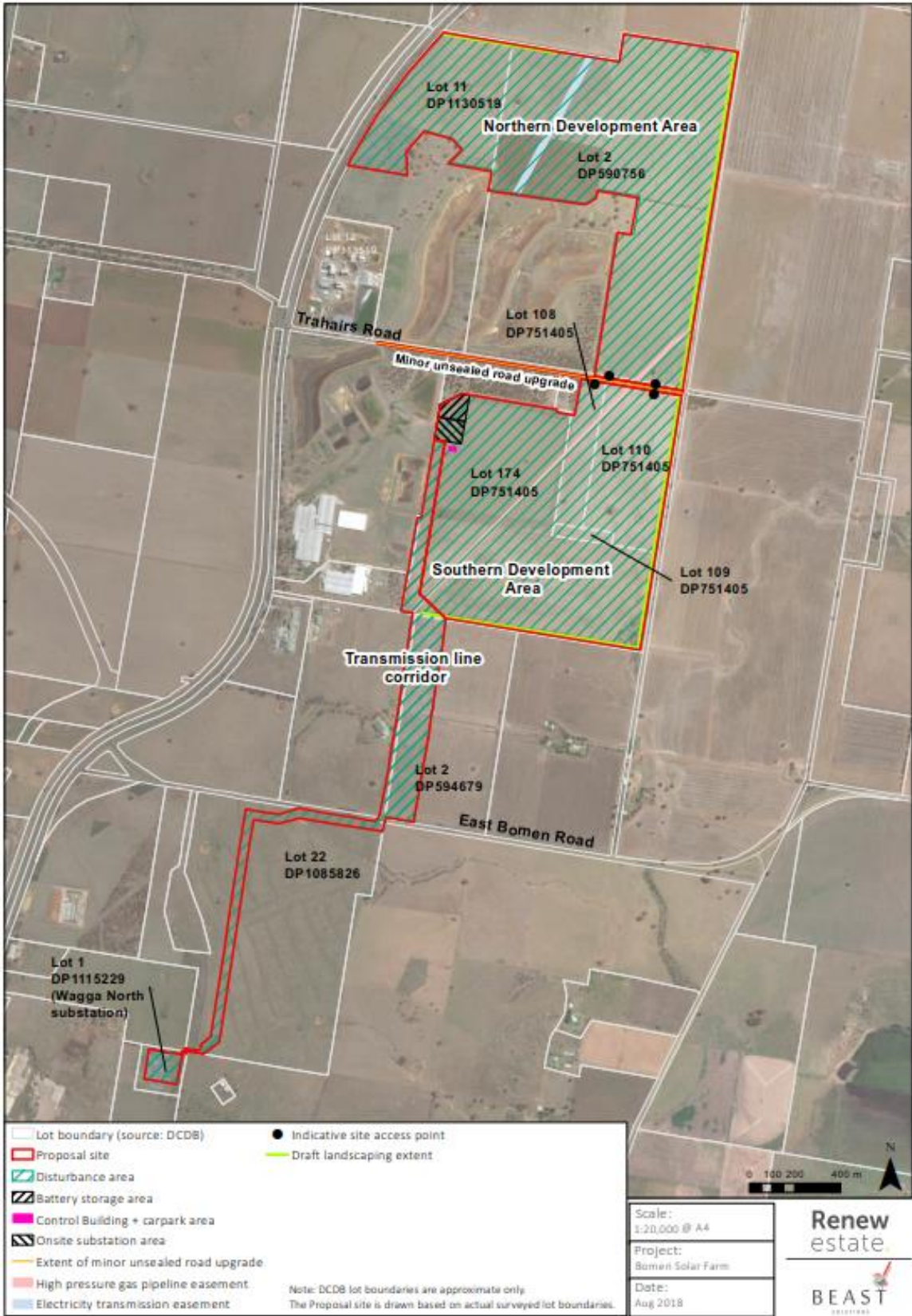


Figure 1 Approved layout (as per Appendix 1 of the Development Consent).

2. STATUTORY REQUIREMENTS

This section describes the statutory requirements that are applicable to the Project. Statutory requirements that are not applicable to the Project are not discussed. Further details on common statutory requirements that are not applicable to this Project are described in the Environmental Impact Statement prepared for the Project (GHD, April 2018). All statutory requirements are collectively referred to as the Project obligations hereafter.

2.1. Development Consent

The Project received Development Consent from the Minister of Planning on 8 October 2018. The statutory context of the consent is outlined below.

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and its associated regulations provide the framework for assessing environmental impacts and determining planning approvals for developments and activities in NSW. The need or otherwise for Development Consent is set out in environmental planning instruments – State Environmental Planning Policies (SEPPs), Regional Environmental Plans (REPs) or Local Environmental Plans (LEPs).

Part 4 of the EP&A Act provides for the control of development that requires Development Consent. Depending on the circumstances of the proposal, the consent authority may be the local Council or the Minister for Planning.

Part 4, Division 4.1 of the EP&A Act establishes an approval regime for development that is declared to be State Significant Development by either a SEPP or Ministerial Order. The Project is considered to be 'State Significant Development' as it is of a type listed in Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP):

Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that:

(a) has a capital investment value of more than \$30 million, or

(b) has a capital investment value of more than \$10 million and is located in an environmentally sensitive area of State significance.

As the Project is for an electricity generating facility and has a capital investment of over \$30 million, it is State Significant Development.

In accordance with Section 89E of the EP&A Act, the Minister for Planning is the consent authority for State Significant Development, and the approval process is managed by the DP&E.

Pursuant to Clause 8A of Section 78A of the EP&A Act, an Environmental Impact Statement (EIS) is required to support a development application for State Significant Development.

An EIS was prepared for the Project by GHD Pty Ltd (GHD). The EIS was prepared to address the Secretary's Environmental Assessment Requirements (SEARs) and the form and content requirements set out in Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. The EIS was publicly exhibited from 21 April 2018 to 21 May 2018. During the exhibition period, the public and agencies were invited to make submissions.

Following the EIS exhibition period, Renew Estate prepared a Response to Submissions Report to address issues raised by the public and agencies. The Response to Submissions Report was submitted to the Department of Planning and Environment (DP&E) on 29 June 2018 and was supplemented with the following additional information provided to DP&E in August 2018:

- Biodiversity Development Assessment Report for the transmission line (GHD, August 2018)
- Updated Final Aboriginal Archaeological Cultural Heritage Impact Assessment (AECOM, REV G 14 Aug 2018)
- Preliminary Hazards Assessment Supplementary Assessment (GHD, Rev 0, August 2018).

2.1.1. Conditions of Consent and Statement of Commitments

The Development Consent granted by the Minister of Planning includes a number of Conditions of Consent (CoC) which must be complied with. CoC 2, Schedule 2 states:

The Applicant must carry out the development:

- a) generally in accordance with the EIS; and*
- b) in accordance with the conditions of this consent.*

In the context of the above, the EIS includes the EIS document (GHD, April 2018) and the following documents submitted as part of the Response to Submissions:

- Response to Submissions Report (Renew Estate, V1 29 June 2018)
- Biodiversity Development Assessment Report for the transmission line (GHD, August 2018)
- Updated Final Aboriginal Archaeological Cultural Heritage Impact Assessment (AECOM, REV G 14 Aug 2018)
- Preliminary Hazards Assessment Supplementary Assessment (GHD, Rev 0, August 2018).

The documentation submitted as part of the Response to Submissions included revised mitigations measures, which supersede the mitigation measures proposed in the EIS document. These revised mitigation measures must be complied with and are referred to as the Statement of Commitments (SoC) hereafter.

Compliance with the CoC and SoC is further discussed in Section 4.

2.2. Other Permits Required

This section outlines any permits or approvals required for the Project that are addition to the Development Consent. Tracking the status and compliance of these permits is discussed in Section 4.1.

The permits and approvals required for the Project are to be reviewed following completion of detailed design to ensure any additional required approvals are identified.

2.2.1. Permits under the Roads Act 1993

The *Roads Act 1993* is administered by Roads and Maritime Services, local councils or the Department of Industry – Land. Roads and Maritime Services has jurisdiction for classified roads, local councils for non-classified roads and the Department of Industry - Land for Crown roads or Crown road reserves.

Under Section 138 of the *Roads Act 1993*, a person must not impact or carry out work on or over a public road otherwise than with the consent of the appropriate roads authority.

The Project involves the following works within a public road:

- Installation of underground electrical cables across Trahairs Road (Council road).
- Installation of underground transmission line across East Bomen Road (Council road).
- Establishment of site entrances on Trahairs Road.
- Any maintenance work required on Trahairs Road following construction.

A permit is required from Council for the above works under Section 138 of the *Roads Act 1993*.

2.2.2. Permits under Section 68 of the Local Government Act 1993

Section 68 of the *Local Government Act 1993* specifies a range of activities where approvals are required to be obtained from Council. These are often in addition, or ancillary to, Development Consent requirements and are known as 'Section 68 Activity Approvals'.

A person may carry out an activity specified in Section 68 only with the prior approval of Council.

The Project involves the following works which require a Section 68 Activity Approval:

- Operate a system of sewage management

An Activity Approval is required from Council for the above works under Section 68 of the *Local Government Act 1993*. The operation of a system of sewage management on the Project relates to the operation of septic systems.

2.2.3. Construction and Occupation Certificates under the Environmental Planning and Assessment Act 1979

Part 6 of the *Environmental Planning and Assessment Act 1979* specifies when additional certification is required to be approved by Council for building and subdivision works.

Where a Development Consent has been issued for proposals involving building works, a Construction Certificate must be obtained prior to commencement of any building works. The Construction Certificate certifies that building work is being completed in accordance with specified plans and specifications or standards which comply with the requirements of relevant regulations.

Following the completion of construction, an Occupation Certificate is required which authorises that the use of the new building is in accordance with the Development Consent.

2.2.4. Rural Fires Act 1997

If proposed, prior to conducting any Hot Works in a Total Fire Ban an exemption under Section 99 of the *Rural Fires Act 1997* must be obtained from the Commissioner of the NSW Rural Fire Service (RFS).

2.2.5. Over-dimensional Vehicle Permits under Heavy Vehicle National Law

The National Heavy Vehicle Regulator (NHVR) administers one set of laws (the Heavy Vehicle National Law (HVNL)) for heavy vehicles over 4.5 tonnes gross vehicle mass. The HVNL consists of the Heavy Vehicle National Law (the schedule to the *Heavy Vehicle National Law Act 2012*) and four sets of regulations. The HVNL commenced on 10 February 2014 in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria. Each of them passed a law that either adopts or duplicates the HVNL (with some modifications) as a law of that State or Territory.

The Project requires that any over-dimensional vehicles used during construction obtain an Oversize Overmass Permit (OSOM) from the NHVR.

Note: For Class 1 and 3 (including Special Purpose Vehicles and Oversize Overmass) permits in NSW, approval can be sought through Roads and Maritime Services and individual councils as an alternative to the NHVR.

3. STRATEGIC FRAMEWORK

3.1. Overview

This EMS is the overarching environmental management document for the Bomen Solar Farm, relevant to all stages of the project. It outlines the strategy for achieving full compliance with the Minister's Development Consent through the design, construction, operation and decommissioning of the Project.

3.2. Environmental Policy

An environmental policy has been prepared for the Project, which is to be adopted by all personnel involved in the Project. A copy of the policy is provided in Appendix A.

3.3. Roles and Responsibilities

The Project Owner has ultimate responsibility and accountability to ensure that the Project is designed, built, operated, upgraded and decommissioned in accordance with the Development Consent. However, all actions to achieve compliance with the Development Consent will be undertaken by the EPC contractor during construction, and O&M contractor during operation.

Figure 2 outlines the structure of organisations and key roles involved in the construction and operation of the Project. Table 2 and

Table 3 outlines the responsibilities of the key roles relevant to health, safety and the environment (HSE).

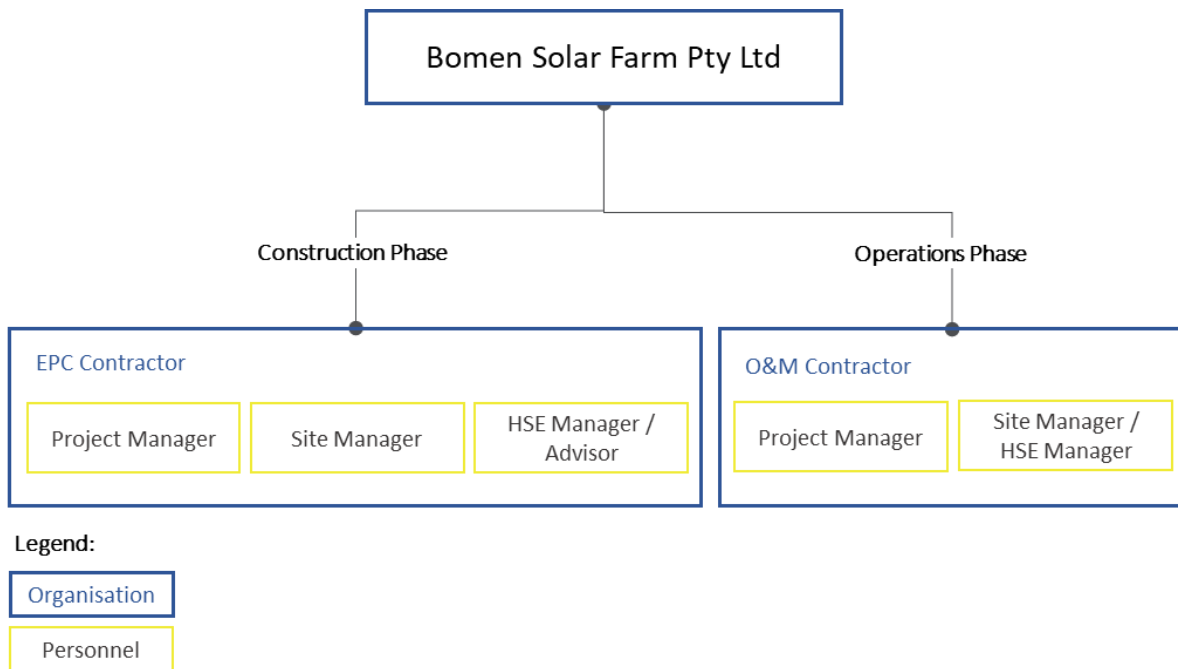


Figure 2 Structure of organisations and key roles

Table 2: EPC contractor key roles

Role	Responsibilities
EPC Contractor Project Manager	<p>The EPC Contractor Project Manager is responsible for providing general support to site and HSE management. The Project Manager shall:</p> <ul style="list-style-type: none"> • Ensure that the duties of the EPC Contractor are fulfilled • Overall responsibility for environmental performance across the Project • Maintain a working knowledge of this EMS and all environmental management plans, and be aware of all environmental legislative requirements. • Fully understand the hazards, risks and potential environmental impacts associated with the work to be undertaken as part of this project • Ensure the project HSE Risk Assessment is reviewed and updated at least monthly and after any incident to ensure controls are in place and working effectively. • Ensure all required environmental management plans are prepared and approved prior to work commencing at the site • Ensure a project Safety in Design risk assessment and/or HSE Risk Assessment are available and prepared prior to work commencing • Ensure environmental monitoring is undertaken • Ensure incidents at the site are reported, managed and investigated in accordance with the organisation’s Incident Reporting and Investigation processes • Ensure monthly HSE reporting is completed • Ensure all corrective actions for HSE non-compliances are implemented • Ensure sub-contractor HSE assessments are completed prior to engagement • Ensure the workplace is safe and that all personnel on site adhere to the HSE management system requirements • Ensure incident investigations are conducted and investigation reports prepared. • Ensure specific conditions of Regulatory Authorities, or license and notice requirements, where applicable, are being complied with • Liaise with stakeholders, regulatory authorities, and the Project owner on environment related matters • Respond to community complaints about the project’s construction activities, in the case that they arise.
EPC Contractor Site Manager	<p>The EPC Contractor Site Manager is responsible for the general supervision and day-to-day coordination of all activities at the Project site. The Site Manager is responsible for ensuring all works and workers comply with this document and all environmental management plans.</p>

Role	Responsibilities
	<p>The Site Manager shall:</p> <ul style="list-style-type: none"> • Maintain a working knowledge of this EMS and all environmental management plans, and be aware of all environmental legislative requirements. • Fully understand the hazards, risks and potential environmental impacts associated with the work to be undertaken as part of this project • In consultation with workers, prepare Safe Work Method Statements (SWMS) • Review and approve SWMSs supplied by contractors • Take part in the development of the HSE Risk Assessment • Where required, assist with the preparation of Job Safety and Environmental Risk Assessment (JSEAs) • Take part in daily pre-start meetings and scheduled toolbox meetings • Be aware of any fire restrictions and Total Fire Bans in the work area, and communicate to all personnel on site • Ensure that site inductions are provided for all workers and visitors • Maintain site induction and qualification records including records of all relevant licences and tickets • Communicate relevant HSE information to all workers on site • Complete inspections as per the Site Inspection Schedule • Maintain the project HSE action register • Undertake Chief Warden Responsibilities in the event of an emergency or incident whilst on site and take part in any incident investigations • Ensure that all required site HSE documentation is maintained • Monitor on site conditions to ensure potential nuisances, such as dust generation, do not arise • Identify and provide environment protection measures to be installed on project construction sites as works progress • Identify and record environmental non-compliances and notify the Project Manager • Recommend improvements to environmental management plans to enhance on site HSE performance; • Ensure subcontractor environmental performance fulfils the requirements of this EMS and all environmental management plans.

Role	Responsibilities
EPC Contractor HSE Manager / Advisor	<p>The EPC Contractor HSE Manager / Advisor and support personnel are responsible for overseeing the HSE management on the project. The Manager / Advisor shall:</p> <ul style="list-style-type: none"> • Maintain a working knowledge of this EMS and all environmental management plans, and be aware of all environmental legislative requirements. • Fully understand the hazards, risks and potential environmental impacts associated with the work to be undertaken as part of this project • Facilitate initial HSE Risk Assessment for the project • Collaborate with and support project team to develop the required environmental management plans. • Conduct audits on the Project to ensure compliance with all requirements of this EMS and all environmental management plans. • Conduct audits on project sub-contractors • Conduct and/or manage incident investigations (as required) and providing reports to the Project Manager • Provide support and advice to all project delivery team members • Provide training and information sessions to work groups as required • Monitor legislation and industry guidelines to ensure continuing compliance • Manage the day-to-day operational activities of all Project HSE support staff • Provide general HSE advice as required • Consult with appropriate stakeholders in the development and implementation of all environmental management plans • Ensure that all relevant parts of environmental management plans are included into the site induction • Develop and provide the audit and site inspection schedules • Assist with the resolution of Health and Safety issues • Assist in the preparation of Safe Work Method Statements where required • Advise the Project Manager regarding liaison with stakeholders, regulatory authorities, and the Project Owner on HSE matters where required • Advise the Project Manager regarding responses to community complaints about the project's construction activities, should they arise.

Table 3: O&M contractor key roles

Role	Responsibilities
O&M Contractor Project Manager	<p>The O&M Project Manager shall:</p> <ul style="list-style-type: none"> • Ensure that the duties of the O&M Contractor are fulfilled • Overall responsibility for environmental performance across the Project • Maintain a working knowledge of this EMS and all environmental management plans, and be aware of all environmental legislative requirements. • Fully understand the hazards, risks and potential environmental impacts associated with the work to be undertaken as part of this project • Ensure the project HSE Risk Assessment is reviewed and updated at least annually and after any incident to ensure controls are in place and working effectively. • Ensure all required environmental management plans are prepared and approved prior to operations commencing at the site • Ensure environmental monitoring is undertaken • Ensure incidents at the site are reported, managed and investigated in accordance with the organisation’s Incident Reporting and Investigation processes • Ensure all corrective actions for HSE non-compliances are implemented • Ensure quarterly HSE reporting is completed • Ensure sub-contractor HSE assessments are completed prior to engagement • Ensure the workplace is safe and that all personnel on site adhere to the HSE management system requirements • Ensure incident investigations are conducted and investigation reports prepared. • Ensure specific conditions of Regulatory Authorities, or license and notice requirements, where applicable, are being complied with • Liaise with stakeholders, regulatory authorities, and the Project owner on environment related matters • Respond to community complaints about the project’s construction activities, in the case that they arise.
O&M Contractor Site Manager / HSE Manager	<p>The O&M Site Manager will also fulfil the role of the HSE Manager during operations.</p> <p>The Site Manager shall:</p> <ul style="list-style-type: none"> • Maintain a working knowledge of this EMS and all environmental management plans, and be aware of all environmental legislative requirements. • Fully understand the hazards, risks and potential environmental impacts associated with the work to be undertaken as part of this project

Role	Responsibilities
	<ul style="list-style-type: none"> • Consult with appropriate stakeholders in the development and implementation of all environmental management plans • In consultation with workers, prepare Safe Work Method Statements (SWMS) • Review and approve SWMSs supplied by contractors • Where required, assist with the preparation of JSEAs • Ensure that all relevant parts of environmental management plans are included into the site induction • Ensure that site inductions are provided for all workers and visitors • Maintain site induction and qualification records including records of all relevant licences and tickets • Communicate relevant HSE information to all workers on site • Complete inspections as per the Site Inspection Schedule • Maintain the project HSE action register • Undertake Chief Warden Responsibilities in the event of an emergency or incident whilst on site and take part in any incident investigations • Ensure that all required site HSE documentation is maintained • Monitor on site conditions to ensure potential nuisances, such as dust generation, do not arise • Monitor legislation and industry guidelines to ensure continuing compliance • Identify and provide environment protection measures to be installed on project construction sites as works progress • Identify and record environmental non-compliances and notify the Project Manager • Conduct audits on the Project to ensure compliance with all requirements of this EMS and all environmental management plans. • Recommend improvements to environmental management plans to enhance on site HSE performance; • Ensure subcontractor environmental performance fulfils the requirements of this EMS and all environmental management plans. • Conduct audits on project sub-contractors • Conduct and/or manage incident investigations (as required) and providing reports to the Project Manager <ul style="list-style-type: none"> • Advise the Project Manager regarding liaison with stakeholders, regulatory authorities, and the Project Owner on HSE matters where required • Advise the Project Manager regarding responses to community complaints about the project's construction activities, should they arise.

3.4. Environmental Management Plans

This section describes the framework of the suite of environmental management plans for the Project as required by the CoC and the SoC.

An overview of the suite of environmental management plans is illustrated in Figure 3.

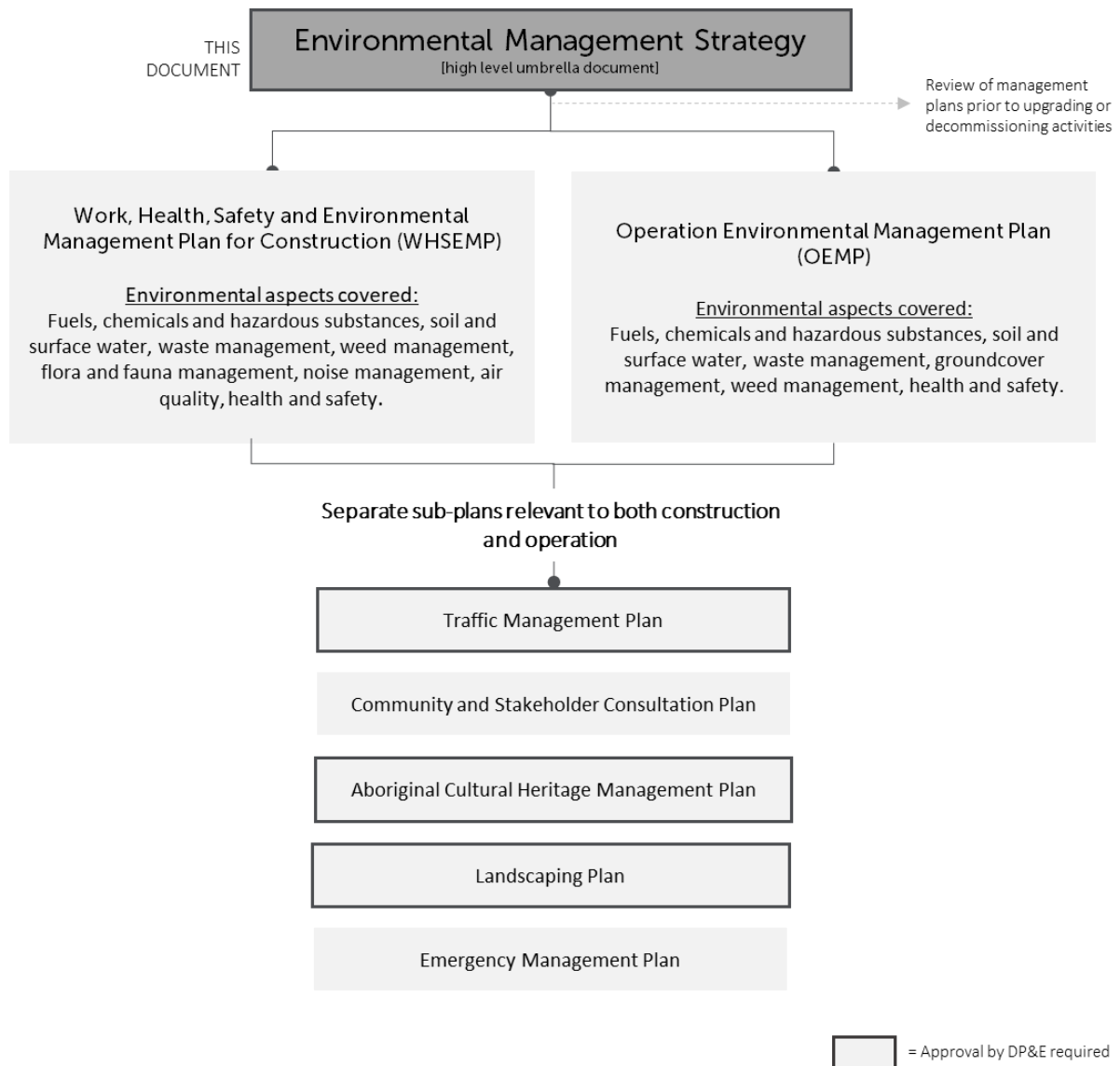


Figure 3 Framework for the suite of environmental management plans for the Project

3.5. Environmental Objectives, Targets and Monitoring

Environmental objectives, targets and environmental monitoring requirements have been established for each environmental aspect, to gauge the project's environmental performance. These are provided in Appendix B and include the monitoring task or control to be monitored, timing/frequency, person responsible and measurement criteria.

Refer to Section 4 for further information on monitoring and compliance management.

3.6. Reporting

3.6.1. Construction

The EPC contractor will prepare monthly construction reports for the Project Owner which will include an environment component outlining, at a minimum the following:

- A summary of the results of the site inspections (refer Section 4.2.1).
- Any non-compliances and corrective actions taken.
- Environmental activities undertaken including a summary of any vegetation clearance and reinstatement undertaken (location, amount).
- A copy of an updated compliance register.
- A copy of an updated complaints register.
- Consultation undertaken.

Incidents will be reported in accordance with Section 5.

3.6.2. Operation

The O&M contractor will prepare quarterly operation reports for the Project Owner which will include an environment component outlining, at a minimum the following:

- A summary of the results of the site inspections (refer Section 4.3.1)
- Any non-compliances and corrective actions taken.
- Environmental activities undertaken including any environmental related maintenance (e.g vegetation management) and rehabilitation
- A copy of an updated compliance register.
- A copy of an updated complaints register, if applicable.
- Consultation undertaken if applicable.

Incidents will be reported in accordance with Section 5.

3.7. Revision of Strategies, Plans and Programs

In accordance with CoC 2 Schedule 4, the EPC contractor, O&M contractor or decommissioning contractor (as relevant to the stage of project) must:

- a) update the strategies, plans or programs required under the Development Consent to the satisfaction of the 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 the Development Consent to the satisfaction of the Secretary within 1 month of the:
- submission of an incident report under CoC 4 of Schedule 4;
 - submission of an audit report under CoC 5 of Schedule 4; or
 - any modification to the conditions of the Development Consent.

Internal reviews and updating of strategies, plans or programs may also be undertaken where opportunities for improvement are identified, allowing for continual improvement in environmental management performance.

Reviews shall consider:

- outcomes of audit or monitoring data (non-compliances, improvement opportunities etc.)
- outcomes of investigations from incidents and/or complaints
- feedback from the community or regulators
- changes in adjacent land use
- changes in legislation.

3.8. Environmental Training

3.8.1. General site induction

All Project personnel and subcontractors are to complete a general site induction prior to commencing work on-site. The site induction will include an environmental awareness component, prepared by the HSE Manager, covering the following items:

- Overview of this EMS, statutory requirements, and the suite of environmental management plans to be complied with.
- Roles and responsibilities relevant to health, safety and the environmental management.
- Overview of the site and immediate site surroundings, including environmentally sensitive areas.
- Potential environmental impacts (e.g. noise, waste, dust, erosion and sedimentation, weeds etc) and environmental controls under the WHSEMP or OEMP (as relevant to the stage of the Project).
- Aboriginal cultural heritage awareness, covering the matters outlined in Section 11 of the Project Aboriginal Cultural Heritage Management Plan (Section 11: Aboriginal Heritage Induction).
- Fire, emergency and spill response.
- Incident management procedure.
- Complaints management protocol.
- Community issues.

3.8.2. Visitor induction

A visitor is anyone who enters the site on a once off or infrequent occasion for purposes that do not involve any form of construction work activity or work connected with construction activities (e.g. a visit from a senior manager to check progress).

All visitors accessing the project work areas are to be accompanied at all times by a fully inducted EPC Contractor representative who is familiar with the project and hazards present. The person receiving the visitor(s) is responsible for providing a visitor induction to each visitor with instructions on specific safety requirements and any notable hazards associated with the site.

3.8.3. Daily pre-start meetings

Daily pre-start meetings will be used to inform the workforce of the day's/shift's activities, hazards and safework practices, environmental controls, activities that may affect the works, coordination issues and other information that may be relevant to the day's work.

Pre-start meetings may be project-wide and/or held for specific work areas. Pre-start meetings will be facilitated by the Site Manager.

3.8.4. Toolbox talks

Tool-box talks will be used to communicate with personnel on construction related Health, Safety and Environmental issues on a regular basis and in response to any specific concerns that arise during the construction process.

Tool-box talks will be managed by the Site HSEQ Manager and delivered by the Site Manager, HSEQ Manager or another member of the HSEQ team.

Tool-box talks will be tailored to project specific environmental issues that are relevant at the time of talk. Examples of tool-box talk environmental topics include but are not limited to:

- Vegetation clearing controls
- Housekeeping and waste
- Concrete washout.
- Erosion and sedimentation control
- Weed hygiene
- Aboriginal cultural heritage
- Plant and equipment maintenance;
- Refuelling.

3.8.5. Training records

The Site Manager will keep records of Project personnel experience, qualifications and training undertaken, including site inductions, in a training register. The training register should include the following details:

- Who was training
- When the person was trained
- The name of the trainer
- A general description of the content of the training.

4. COMPLIANCE MANAGEMENT

4.1. Compliance Register

A compliance register shall be maintained throughout the life of the Project, detailing all Project obligations and their status, including the CoC, SoC and any other permitting and approval requirements. The compliance register is to be updated monthly by the EPC Contractor during construction and submitted to the Project Owner for review. The compliance register will be updated quarterly by the O&M Contractor during operations and submitted to the Project Owner for review.

4.2. Monitoring during construction

4.2.1. Site Inspections

During construction the HSE Manager or Site Manager will be responsible for carrying out environmental monitoring through site inspections as per the monitoring schedules in Appendix B. Sub-contractors will attend inspections in relevant areas as required.

At completion of an inspection, the HSE Manager will have prepared the following:

- A completed site inspection checklist
- Actions to address identified improvement opportunities.
- A HSE Non-Compliance Report (NCR) for any non-compliances identified.

Non-compliance is defined in Section 4.4. If a non-compliance is identified, the corrective action protocol outlined in Section 4.4.1 will be followed.

An improvement opportunity is where the effectiveness of environmental controls could be increased, but there is no associated non-compliance.

4.2.2. Independent Environmental Audit

As per CoC 5, Schedule 4, within 6 months of the commencement of construction, or as directed by the Secretary, an Independent Environmental Audit must be commissioned. 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 of the development 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 the development 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.

4.2.3. Compliance Report for Hazards conditions

In accordance with CoC 26 Schedule 3, one month prior to commissioning of the development, the Compliance Report must be submitted to the Secretary for approval, detailing compliance with CoC 20 to 26, Schedule 3, inclusive. Commissioning of the development must not commence until approval has been given by the Secretary.

4.3. Monitoring during operation

4.3.1. Site Inspections

During operations, the Site Manager will be responsible for carrying out monthly environmental inspections using standard forms. At completion of the inspection, the Site Manager will prepare the following:

- A completed site inspection checklist
- Actions to address identified improvement opportunities.
- A HSE NCR for any non-compliances identified.

4.4. Non-Compliances

A non-compliance, as defined in the Development Consent, is “an occurrence, set of circumstances or development that is a breach of the Project Obligations, but is not an incident”. An incident is defined in the Development Consent as “a set of circumstances that causes or threatens to cause material harm to the environment” (refer to Section 5 Incident Management).

Any member of the project team may raise a non-compliance.

A non-compliance might include:

- Failing to comply with Project obligations (environmental regulations, a CoC, SoC or conditions of any other license/permits acquired).
- A serious breach of HSE requirements.
- Carrying out an unsafe work practice that has the potential to cause harm to the environment (i.e. near misses). Note: if the practice had potential to cause material harm to the environment it would be classified as an incident (see Section 5).
- Activities that have caused actual harm to the environment not permitted by the Development Consent as covered in the environmental impact assessment documentation. Note: if the activity caused material harm to the environment it would be classified as an incident (see Section 5).
- Non-compliances raised by the Project Owner or by state and local authorities or agencies.

4.4.1. Corrective Action Protocol

If a non-compliance is identified, a HSE Non-Compliance Report (NCR) shall be completed and issued to the HSE Manager, or if the non-compliance is the responsibility of a subcontractor, the NCR is to be issued to the relevant subcontractor. In completing the NCR, the below will be undertaken:

1. Record the origination details (name and position of the originator) and the company which the NCR is issued to if the non-compliance is the responsibility of a subcontractor.

- Describe the non-compliance in detail and assign an Initial Risk Level using the following HSE Non-Compliance risk matrix:

HSE Non-Compliance Risk Matrix

			Potential or actual environmental impact			
			No Impact	Minor Impact	Moderate Impact	Major Impact
			No environmental impact	Minor environmental impact	Moderate environmental impact	Major environmental impact
Likelihood of environmental impact	Almost Certain	Has occurred / expected to occur regularly under normal circumstances	Medium	Medium	High	Critical
	Likely	Expected to occur at some time	Low	Medium	High	Critical
	Occasional	May occur at some time	Low	Low	Medium	High
	Unlikely	Not likely to occur in normal circumstances	Low	Low	Medium	Medium

- Identify and describe the cause of the non-compliance. The cause could be due to human error, process/procedure issue, equipment defect etc.
- List the required corrective actions that will address the non-compliance and its cause to prevent reoccurrences. Appoint a deadline for implementation. The appointed timeframe to close out the non-compliance will take into consideration the Initial Risk Level. A higher risk will require a more urgent deadline than a lower risk.

Once the corrective actions and are identified, assign a Residual Risk Level by assessing the resulting risk with the proposed corrective actions using the HSE Non-Compliance Risk Matrix.

- Provide the NCR report to the Project Manager to seek approval for the proposed corrective actions and timeframe.
- Issue the NCR to the HSE Manager for implementation of the corrective actions, or the relevant subcontractor if the non-compliance is the responsibility of a subcontractor.
- Notify the DP&E of the non-compliance and the proposed corrective actions in accordance with the following section.

4.4.2. Notification to DP&E

In accordance with CoC 4 Schedule 4, the Department must be notified in writing to compliance@planning.nsw.gov.au within 7 days after the Project Owner becomes aware of any non-compliance with the conditions of the Development Consent. The notification must identify the development (Bomen Solar) and the application number for it (SSD 8835), 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 done, or will be, undertaken to address the non-compliance.

5. INCIDENT MANAGEMENT

An incident is defined in the Development Consent as a set of circumstances that causes or threatens to cause material harm to the environment.

Material harm is defined in the Development Consent 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 make good harm to the environment).

5.1. Incident Management Procedure

This procedure details the protocols to be followed in the event of an incident. The Emergency Management Plan is also to be used in the event of an emergency.

1. Site personnel at the incident site to respond to the incident by:
 - a. Isolating the area affected by the incident;
 - b. Stopping works around the area;
 - c. Implementing emergency response plans if required and/or administer first aid if required.
 - d. Notifying the Site Manager verbally.
2. Site Manager to establish an On-Site Incident Control Person which should be the most senior person present at the incident site.
3. Site Manager or On-Site Incident Control Person to notify the Project Manager.
4. Site Manager to consult with HSE Manager to determine incident severity and the significance of the potential environmental impact, and next course of action.
5. HSE Manager to undertake appropriate external notifications (refer Section 5.2).

5.2. External Notifications

All incidents, whether they cause material harm or have the potential to cause material harm, will be notified in writing to the DP&E immediately at compliance@planning.nsw.gov.au. This is in accordance with CoC 3 of Schedule 4. The notification must identify the development (Bomen Solar) and the application number (SSD 8835) and set out the location and nature of the incident.

Depending on whether the incident resulted in material harm or just had the potential to cause material harm, further agency notification is required, as outlined below.

If the HSE Manager determines material harm exists, relevant agencies will be immediately notified and provided the following relevant information:

- the time, date, nature, duration and location of the incident;
- the location of the place where pollution is occurring or is likely to occur (if relevant);
- the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known (if relevant);

- the circumstances in which the incident occurred (including the cause of the incident, if known); and
- the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

The agencies that may need to be notified include:

- NSW Environmental Protection Authority on **131 555 or (02) 9995 5555**
- The NSW Ministry of Health **02 9391 9000**
- Safe Work NSW (formerly WorkCover) on **13 10 50**
- The local authority, Wagga Wagga City Council on **1300 292 442** (day time hours)
- Fire and Rescue NSW on **000** or for Mobiles Only **112**
- Rural Fire Service in Wagga Wagga on **02 6971 4500**.

5.3. Incident Reporting and Investigation

As soon as the incident has been contained and external notifications undertaken, the HSE Manager will immediately investigate and record the following relevant information in an Incident Report. A summary of Incident Reports will be retained for reporting requirements and made available to agencies on request.

- the time, date, nature, duration and location of the incident;
- the location of the place where pollution is occurring or is likely to occur (if relevant);
- the nature, the estimated quantity or volume and the concentration of any pollutant involved, if known (if relevant);
- the circumstances in which the incident occurred (including the cause of the incident, if known); and
- the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

This information will be used to identify and understand the cause of the incident with a view to modifying procedures to avoid the potential for a recurrence. The types of preventative actions taken could include revision of a Safe Work Method Statement or undertaking targeted environmental due diligence prior to works re-commencing.

6. COMMUNITY AND STAKEHOLDER ENGAGEMENT

6.1. Consultation during project planning

Extensive community and stakeholder consultation was undertaken during the preparation of the EIS for the Project and responses were taken into consideration in the design of the Project and mitigation measures for environmental impacts. Those consulted include:

- Landowners and residents, including:
 - landowners or residents whose property adjoins the project site; and
 - other local landowners or residents who are likely to be directly affected by the proposal or are on or near the project's potential transport routes
- Aboriginal people, Aboriginal organisations or their representatives with cultural or heritage connections with the project area
- The industrial neighbours to the project site
- Wagga Wagga City Council – General Manager and Manager of City Strategy
- Wagga Wagga City Council Councillors
- The Hon. Daryl Maguire MP (Member for Wagga Wagga)
- The Hon. Michael McCormack (Member for Riverina)
- NSW Department of Planning & Environment
- NSW Office of Environment and Heritage
- NSW Environment Protection Authority
- Other regulators via the DP&E
- Murrumbidgee Landcare
- NSW Rural Fire Service
- The Eunony Valley Association
- The Wagga Business Chamber
- The Committee for Wagga
- Regional Development Australia
- NSW Department of Industry
- Local media.

Details of the consultation undertaken during the EIS stage are provided in the EIS and Response to Submissions Report.

6.2. Consultation during pre-construction

Prior to the commencement of construction, this document and various other plans required by the CoC will have been reviewed by the DP&E and approved by the Secretary of DP&E or their nominee.

Other government agencies will also be consulted during the development of certain management plans as listed in Figure 3.

Prior to construction, consultation will also continue with the community through newsletters which provide an update on the status of the Project and construction timelines.

6.3. Consultation during construction

A Community and Stakeholder Consultation Plan will be prepared for the Project which outlines the consultation strategies and protocols to manage the concerns of stakeholders and any impacts on local landowners during construction of the Project. The Plan will include:

The plan will include (but not be limited to) the following:

- protocols to keep the community and stakeholders updated about the progress of the project and its benefits
- protocols to inform relevant stakeholders of potential impacts of construction activities such as changes to traffic conditions and night works (if permits for night works are obtained).
- protocols to allow the community to make complaints or identify any concerns with the project.

Information on how local businesses, contractors or service providers can express an interest in the project will be continually disseminated via various methods throughout the pre-construction and construction phases.

6.4. Consultation during operation

The Community and Stakeholder Consultation Plan will include protocols to manage the concerns of stakeholders and any impacts on local landowners during operation of the Project.

The Plan will include (but not be limited to) the following:

- protocols to keep the community and stakeholders updated about the operation of the project and its benefits
- protocols to inform relevant stakeholders of potential impacts of scheduled site activities outside of typical operation.
- protocols to allow the community to make complaints or identify any concerns with the project.
- protocols to keep the community and stakeholders updated about the operation of the project and its benefits.

Information on how local workers, contractors or service providers can express an interest in the operation of the project will be displayed on the project website. Efforts will be made to engage with local schools, universities and community groups who may be interested in visiting the site or learning more about renewable energy.

6.5. Website

A website has been established for the Project (www.bomensolarfarm.com.au) and will be maintained by the BSF Construction Manager during operations and the Asset Manager during operations.

In accordance with CoC 6 Schedule 6, the website will make the following information publicly available at minimum, as relevant to the stage of the development:

- Environmental Impact Statement and Response to Submissions

- Final layout plans for the development
- Current statutory approvals for the development
- Approved strategies, plans or programs required under the CoC (inc. environmental management plans)
- How complaints about the Project can be made
- The Complaints Register (refer Section 7.1)
- Results of any independent environmental audits including the responses to the recommendations (refer Section 4.2).
- Any other matter required by the Secretary.

7. COMPLAINTS MANAGEMENT

7.1. Complaints Management Protocol

The following avenues are available for community complaints:

Email: jucoburn@beon-es.com.au

Phone line: 0437 648 009

Postal address: 11 Tavistock Place, Melbourne VIC 3000

These details will also be provided on the project website. The telephone number, postal address and email address will also be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public. Contact cards for complaints will be located in the local post office and community centres with information that advertises the above contact information for complaints. These cards will also be available at all community engagement meetings and events, in addition to being listed on all newsletters and flyers that are distributed within the community.

In the event of an environment-related complaint from the community, the BSF Construction Manager during construction and the Asset Manager during operation will ensure the matter is recorded and will undertake further investigation. The details of the complaint will be recorded in a Complaints Register which will include the following:

- The date and time, where relevant, of the complaint.
- The means by which the complaint was made (telephone, mail or email).
- Any personal details of the complainant that were provided, or if no details were provided, a note to that effect.
- The nature of the complaint.
- Any action(s) taken in relation to the complaint, including timeframes for implementing the action.
- If no action was taken in relation to the complaint, the reason(s) why no action was taken.
- The status of the complaint (i.e. open/closed).

The Complaints Register will be managed and maintained by the EPC Contractor during construction and the O&M Contractor during operations. The Site Manager will be responsible for:

- Providing an initial response to the person complaining within 24 hours of the complaint being made, advising them that their complaint is being investigated.
- Forwarding the complaint details to the relevant personnel and contractor, where required.
- Ensuring that the complaint is addressed in a timely manner and that the complaint addressed adequately, ensuring a full response is sent.
- Logging all details on the complaint in the Complaints Register.
- Notifying the relevant authorities, if necessary, in accordance with statutory requirements.
- Ensuring the Complaints Register is made available on the project website and updated regularly, in accordance with CoC 6 Schedule 4, with personal details kept private.

7.2. Dispute Resolution

In the event that the procedure for investigating and responding to a complaint, including the implementation of measures for avoiding a recurrence cannot be resolved and a dispute does arise, the EPC contractor (during construction) or O&M contractor (during operations) will do the following:

- Advise DP&E that there is a dispute.
- Provide DP&E with copies of the relevant complaint history.
- If determined necessary by DP&E, engage a specialist with expertise relevant to the issue at hand to investigate the dispute and provide recommendations for resolution.
- Advise the third party in dispute and DP&E in writing, as to when the dispute investigation will be completed.
- Provide the third party and DP&E a copy of the dispute investigation report, inclusive of the EPC/O&M contractor's intentions with regards to the implementation of the recommendations for resolution.

APPENDIX A ENVIRONMENTAL POLICY

Bomen Solar Farm is committed to generating renewable energy in an environmentally responsible manner.

Our commitments - we will:

- Comply with relevant environmental laws, regulations and industry codes of practice;
- Set measurable targets and long-term objectives against which continuous improvements and progress can be reported;
- Maintain an environmental management system that conforms to our Conditions of Consent and Statement of Commitments;
- Control the impact of our operations on the environment and community through effective planning and risk management strategies;
- Communicate pertinent environmental responsibilities and obligations to employees, contractors, consultants and visitors and provide appropriate education;
- Establish and maintain a program for the continual improvement of the environmental management system and environmental performance;
- Use resources and energy efficiently, minimise waste, emissions and pollution from our activities; and
- Engage, consult and communicate with employees, contractors, visitors and the community to build a shared commitment to ongoing environmental improvement.

APPENDIX B ENVIRONMENTAL MONITORING

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
<p>Environmental Aspect: <u>Aboriginal Cultural Heritage</u></p> <p>Objective: To minimise adverse impacts to Aboriginal cultural heritage values.</p> <p>Target: No unauthorised impacts to Aboriginal cultural heritage values.</p>						
Aboriginal Cultural Heritage	Construction	Prior to construction commencing, and weekly throughout construction.	Confirm permanent stock-proof fencing with signage is installed and in good condition around the Aboriginal heritage site (AHIMS ID 56-1-0590)	HSE Manager	Fencing is installed and in good condition	ACHMP
Aboriginal Cultural Heritage	Construction	Prior to construction commencing in Lot 22 DP1085826, and weekly throughout construction works in Lot 22 DP1085826.	Confirm temporary bunting and signage around is installed and in good condition around the heritage sites in Lot 22 DP1085826	HSE Manager	Bunting is installed and in good condition	ACHMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Aboriginal Cultural Heritage	Construction	Weekly	Inspect site induction register to ensure all staff have undertaken the site induction (which includes Aboriginal heritage awareness and the unexpected discovery protocol).	HSE Manager	All staff have completed induction.	ACHMP / WHSEMP
<p>Environmental Aspect: <u>Traffic</u></p> <p>Objective: To minimise traffic safety risks and disruption to local users of the road network.</p> <p>Target: No traffic incidents or complaints related to traffic.</p>						
Traffic	Refer to Traffic Management Plan for monitoring requirements.					
<p>Environmental Aspect: <u>Fuels, chemicals and hazardous substances</u></p> <p>Objective: To minimise the risk of environmental contamination and impact to the health and safety of personnel.</p> <p>Target: No environmental spills or contamination or health and safety incidents.</p>						
Fuels, chemicals and hazardous substances	Construction	Weekly	Inspect fuel/chemical/hazardous substance storage areas to ensure there are no spills, any waste storage drums are in good condition, all materials are being stored in bunded areas at least 50 metres away from drainage lines, and bund drain valves are locked closed.	HSE Manager	<ul style="list-style-type: none"> ▶ No spills ▶ All materials are stored in bunded areas >50m away from drainage lines ▶ Bund drain valves are locked closed 	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Fuels, chemicals and hazardous substances	Construction	Daily	Inspect on-site vehicles and mobile plant for leaks.	HSE Manager	No leaks	WSHEMP
Fuels, chemicals and hazardous substances	Construction	Monthly	Inspect Safety Data Sheet (SDS) Register and respective SDSs to ensure they are up to date.	HSE Manager	All hazardous substances on site are listed in the SDS Register and have valid SDSs.	WSHEMP
<p>Environmental Aspect: <u>Soil and surface water</u></p> <p>Objective: To minimise the risk of adverse impacts to soil or water resources and environmentally sensitive areas.</p> <p>Target: No impacts from erosion and sedimentation or contamination on environmentally sensitive areas on-site and off-site.</p>						
Soil and surface water	Construction	Weekly	Inspect vehicles at site to ensure that they arrive and leave the site clean and free of soil and mud in the wheels and underbody.	HSE Manager	Vehicles are entering and leaving the site free of soil and mud	WSHEMP
Soil and surface water	Construction	Daily	Inspect Trahairs Road and Byrnes Road to ensure any tracked soil is cleaned up.	HSE Manager	No tracked soil or soil deposits on Trahairs Road or Byrnes Road remaining at the end of the work day.	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Soil and surface water	Construction	<ul style="list-style-type: none"> ▶ Daily during dry weather ▶ Within the first two hours following a storm (during work hours) ▶ At least three times a day during prolonged rainfall 	Inspect erosion and sediment controls to ensure they are in good condition and are effective for controlling erosion and sedimentation on both the up and down stream sides of the controls.	HSE Manager	Erosion and sediment controls are in good condition and are effective.	WSHEMP
Soil and surface water	Construction	Daily	Inspect excavated areas for evidence of contamination and implement the unexpected finds protocol if contamination is suspected.	HSE Manager	No evidence of contaminated soil or rubble.	WSHEMP
<p>Environmental Aspect: <u>Waste</u></p> <p>Objective: To minimise the potential for environmental impact of wastes generated on site.</p> <p>Target: No contamination or environmental impact caused by wastes generated on site.</p>						
Waste	Construction	Weekly	Inspect site to ensure waste is being appropriately managed in accordance with its waste classification under the NSW EPA's Waste Classification Guidelines 2014.	HSE Manager	<ul style="list-style-type: none"> ▶ Waste is stored appropriately. ▶ No litter has migrated off-site 	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Waste	Construction	Weekly	Inspect Waste Disposal Register to ensure all prescribed wastes are disposed to an appropriately licensed facility by a licensed waste contractor.	HSE Manager	Waste Disposal Register is up to date and reflects correct waste management.	WSHEMP
Waste	Construction	Weekly	Inspect site to ensure no waste is being disposed on site.	HSE Manager	No waste disposal on site	WSHEMP
Waste	Construction	Weekly	Inspect waste transport trucks leaving the site to ensure they are covered.	HSE Manager	Waste transport trucks leaving the site are covered.	WSHEMP
<p>Environmental Aspect: <u>Visual Impacts and Landscaping</u></p> <p>Objective: To minimise impacts to visual amenity to surrounding sensitive receptors.</p> <p>Target: Landscaping screening successfully establishes in accordance with the Landscape Plan.</p>						
Visual Impacts	Construction	Weekly	Inspect site to sure all construction plant, equipment, waste and excess materials are contained within the designated boundaries of the site, and the site is tidy.	HSE Manager	<ul style="list-style-type: none"> ▸ No construction plant, equipment, waste and excess materials are outside the site boundary ▸ Site is tidy 	WSHEMP
Landscaping	Refer to Landscape Plan for monitoring requirements.					

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Environmental Aspect: <u>Weed management</u> Objective: To prevent the introduction of new weeds to the site and weed spread from the site to off-site areas, and to manage weed infestations on the site. Target: No uncontrolled weed infestations on site and no complaints regarding off-site weed spread.						
Weeds management	Construction	Weekly	Inspect the site for weed infestations.	HSE Manager	▸ No weed infestations.	WSHEMP
Weeds management	2 weeks after weed control	As required	If any weed control is being implemented, inspect the site for weed control effectiveness	HSE Manager	90% reduction in weed cover	WSHEMP
Weeds management	Construction	Daily	Inspect Trahairs Road and Byrnes Road to ensure any tracked soil is cleaned up.	HSE Manager	No tracked soil on Trahairs Road or Byrnes Road remaining at the end of the work day.	WSHEMP
Weeds management	Construction	Weekly	Inspect vehicles at site to ensure that they arrive and leave the site clean and free of soil, seed and plant material in the wheels and underbody.	HSE Manager	Vehicles are entering and leaving the site free of soil, seed and plant material	WSHEMP
Weeds management	Refer to Landscaping Plan for pest and weed control monitoring for the landscaping zones.					

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
<p>Environmental Aspect: <u>Flora and fauna</u></p> <p>Objective: To minimise impacts to flora and fauna within the site and surrounding areas.</p> <p>Target: No unauthorised impacts to vegetation and no harm to threatened fauna.</p>						
Flora and fauna	Construction	Weekly	Inspect site to ensure the No Go Zone is fenced off from the site, and that the fencing is in good condition, to prevent inadvertent vegetation removal within the No Go Zone.	HSE Manager	No Go zone is fenced off and fencing in good condition.	WSHEMP
Flora and fauna	Prior to vegetation removal	As required	If tree removal is scheduled outside of the period of January to August, an ecologist shall investigate if any hollows are being used for breeding by threatened species, and implement controls as necessary to prevent breeding disruption.	HSE Manager	Any hollows in use by threatened species are not removed until controls are implemented by ecologist.	WSHEMP
Flora and fauna	Construction	Weekly until tree removal complete	Inspect landscaping zones to ensure felled limbs with hollows have been placed on the ground in a way that replicates natural woody debris, and not stacked.	HSE Manager	Felled limbs with hollows present in landscaping zones and are not stacked.	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Flora and fauna	Construction	Weekly	Inspect dams being retained to ensure no unnecessary disturbance to aquatic habitat.	HSE Manager	No unnecessary disturbance of dams.	WSHEMP
<p>Environmental Aspect: <u>Fire risk</u></p> <p>Objective: To minimise risk of fire spreading across the site and ignition on site.</p> <p>Target: No fire occurs on site.</p>						
Fire risk	Construction	Monthly	Inspect groundcover to ensure it is short within the APZ area.	HSE Manager	Groundcover is short	WSHEMP
Fire risk	Following grass cutting prior to and during the declared fire season	As required	Inspect groundcover to ensure grass clippings have not accumulated.	HSE Manager	No accumulated grass clippings on site	WSHEMP
Fire risk	Construction	Monthly	Inspect retained trees to ensure branches below 2 meters from the ground have been pruned.	HSE Manager	No branches are 2 meters from the ground.	WSHEMP
Fire risk	Construction	Total Fire Ban days	Inspect construction activities to ensure no hot works are occurring without a hot works exemption from the NSW Rural Fire Service.	HSE Manager	No hot works occurring.	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
<p>Environmental Aspect: <u>Construction noise</u></p> <p>Objective: To minimise noise generated from construction activities.</p> <p>Target: No unauthorised noise emissions.</p>						
Construction Noise	Construction	Weekly	Observe operating machinery to ensure they are not being used in a way which produces unnecessary noise (high speed/power etc).	HSE Manager	No unnecessary noise	WSHEMP
Construction Noise	Construction	Weekly	Observe operating machinery to ensure broadband reversing alarms are being used when reversing instead of tonal alarms.	HSE Manager	No tonal reversing alarms being used	WSHEMP
Construction Noise	Construction	Weekly	Observe operating machinery to ensure engine covers are closed and they are not left idling for prolonged periods.	HSE Manager	<ul style="list-style-type: none"> ▸ No open engine covers while machinery is operating. ▸ No machinery left idling for prolonged periods. 	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Construction Noise	Construction	Following receipt of a noise complaint	Following receipt of a noise complaint, noise monitoring will be undertaken and reported as soon as possible. If exceedances are detected, the situation will be reviewed to identify means to attempt to reduce the impact to acceptable levels.	HSE Manager	No exceedances of applicable noise criteria beyond any exceedances predicted in the Noise and Vibration Assessment prepared by GHD (GHD, Feb 2018).	WSHEMP
<p>Environmental Aspect: <u>Air Quality</u></p> <p>Objective: To prevent the release of dust from the site.</p> <p>Target: No off-site dust deposits or complaints regarding dust.</p>						
Air Quality	Construction	Weekly	Undertake surveillance for visible dust generation and smoke emissions.	HSE Manager	<ul style="list-style-type: none"> ▶ No airborne dust ▶ No smoke being emitted from vehicles for more than 10 seconds. 	WSHEMP
Air Quality	Construction	Weekly	During dry weather inspect site to identify any dust deposits that indicate an off-site impact.	HSE Manager	No off-site dusts deposits	WSHEMP
Air Quality	Construction	Weekly	Inspect site to ensure stockpiled material are located in areas not subject to high wind.	HSE Manager	No evidence of stockpiled material blowing away.	WSHEMP

Type of monitoring	Timing	Frequency	Monitoring task	Person Responsible for control	Measurement criteria	Environmental control reference
Air Quality	Construction	Weekly	Inspect trucks leaving the site to ensure they are covered if transporting loose material such as soil.	HSE Manager	No trucks transporting loose material leave the site uncovered.	WSHEMP
Air Quality	Construction	On days of strong wind	On days of strong winds, inspect site to ensure no works that disturb vegetation, soil or stockpiles are being carried out.	HSE Manager	No airborne dust.	WSHEMP
Air Quality	Construction	Weekly	Observe site vehicle movements to ensure speed limits are being adhered to.	HSE Manager	No exceedance of speed limits.	WSHEMP

LANDSCAPING MONITORING

Extract from Landscaping Plan (Table 4: Management actions, timeframes, responsibilities and monitoring)

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
OUTCOME TO BE ACHIEVED: 1. Establishment - Installation of visual screening							
Construction phase	1.1 Finalise planting list and order plants	Consult with local native plant nursery and place order based on desired planting list and densities (Table 3)	Site (construction) manager	Six months prior to planting	Order is placed well in advance of planting to ensure appropriate species can be obtained	<ul style="list-style-type: none"> Retain evidence of plant order and include in six monthly report to DPE Contact nursery monthly to check on order progress 	<ul style="list-style-type: none"> If local indigenous nursery does not stock appropriate species, then contact other nurseries in the Riverina/SW Slopes or investigate seed collection and propagation options.
		Jayfield nursery and Riverina Highlands Community Nursery have been suggested for consideration during consultation.					

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	<p>1.2 Ripping</p> <p>Required for all management zones prior to planting.</p>	<p>Vehicles will attend a local wash-down facility to ensure all vehicles are weed, soil and weed-seed free prior to entering the site.</p> <p>Contact Dial Before You Dig to check for underground services in areas to be ripped</p> <p>Mark-out and rip planting lines (300-500 mm deep) while soil is hard to achieve a 'deep shatter'</p> <p>In MZ4 only rip lines will occur in a non-grid pattern and follow the natural landscape contour to avoid undue rilling and the formation of gullies.</p>	<p>Site (construction) manager and revegetation contractor / farmer</p>	<p>Well prior to planting. If possible undertake ripping/soil preparation in late summer or early autumn, before autumn break or significant rainfall</p>	<p>Rip lines established at desired depth for all management zones (Figure 2)</p>	<ul style="list-style-type: none"> Immediately after ripping inspect depth and effectiveness of rip lines Take photos of rip lines and include in six monthly report to DPE If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE 	<ul style="list-style-type: none"> If rip lines are ineffective have contractor repeat ripping as necessary If weather conditions mean effective soil shatter cannot be achieved then consider hand or mechanical digging of planting holes

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	1.3 Fencing installation (‘livestock proof fencing installation’ Figure 3)	Mark-out and fence boundaries with livestock proof fencing and install gates for maintenance and access All screening and revegetation areas are to be fenced off to protect plants from trampling and herbivory.	Site (construction) manager and fencing contractor	Prior to planting	Livestock proof fencing installed and functional with appropriate access for maintenance.	<ul style="list-style-type: none"> • During and immediately after fencing inspect locations and appropriateness of installation • Take photos of fencing and include in six monthly report to DPE • If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE 	<ul style="list-style-type: none"> • If fencing is not to appropriate location or livestock proof standards have fencing contractor remediate any issues.
	1.4 Weed spraying (pre-planting)	Broad acre and spot spraying of annual grasses and weeds within proposed planting areas following relevant herbicide application standards and procedures.	Site (construction) manager and weed / pest contractor	4-6 weeks prior to planting, after autumn break.	Reduction in live weed cover by 90%.	<ul style="list-style-type: none"> • Within 14 days of spraying (herbicide activation period) inspect the site for kill effectiveness • Take photos of weed spraying effects and include in six monthly report to DPE • If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE 	<ul style="list-style-type: none"> • If first weed spraying is not considered effective after 14 days then repeat spraying to achieve 90% weed cover reduction

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	1.5 Pest animal control (pre-planting)	Inspect the site for any rabbit warrens and treat as necessary by physical or chemical means	Site (construction) manager and weed / pest contractor	Prior to planting	No evidence of rabbits / hares present in planting areas and no evidence of damage to plantings	<ul style="list-style-type: none"> Monitor site weekly during establishment period for evidence of pest animals (scats, diggings) Take photos of pest control works and effects, and include in six monthly report to DPE If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE 	<ul style="list-style-type: none"> If pest animals that pose a serious threat to planting establishment cannot be effectively controlled then consider intensive further pest control, or additional fencing and guarding of plantings.

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	1.6 Planting and Guarding	<p>Plant species at recommended densities within vegetation screening areas identified in Figure 2 and Table 3.</p> <p>Stake and guard all plantings with standard tree guards, or equivalent.</p>	Site (construction) manager and revegetation contractor	<p>Planting and guarding to take place in winter, preferably between July-August.</p> <p>It is noted that condition 7 of the COCs states that vegetation buffer must be planted prior to the commencement of operations.</p>	Vegetation successfully planted and guarded prior to the commencement of operations.	<ul style="list-style-type: none"> • During and immediately after planting and guarding inspect locations and appropriateness of works. • Inspect plantings every two days for the first two weeks for signs of pest animal damage. • Take photos of initial planting and include in six monthly report to DPE. • Tree guards will be monitored and removed when guarding is deemed to be no longer required by revegetation contractor. If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE. 	<ul style="list-style-type: none"> • If conditions are too dry for planting during the scheduled planting period (e.g. declared drought), planting will still go ahead in that period and plantings will be watered by way of water truck or similar as necessary for their survival. • Tubestock is to be actively watered while stored prior to installation and immediately after installation to reduce heat stress and shock after planting. Apply watering to plantings through their first winter-spring period or as deemed necessary to their survival by the site manager or revegetation contractor see 2.2 below. • If standard tree guarding is not effective then undertake additional fencing and guarding of plantings use 1.5 m tall guards / netting.

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	1.7 Review	A review of the Landscaping plan will be carried out within two months of operation commencing.	Project Manager	Within two months of operation commencing	Review completed and any additional management items addressed.	If significant changes identified Landscape plan to be updated	If internal review does not occur , the first six monthly monitoring report to DPE should discuss any additional management items identified during the first two months of operation.
	1.8 Loss of hollows	Felled limbs with hollows will be placed in woodland or plantings along the boundary of the development area. The woody debris retained will be spread in a fashion that replicates the natural occurrence of woody debris in the environment and will not be stacked.	Site (construction) manager and revegetation contractor	As required during construction	Felled limbs are successfully relocated to MZ1, MZ2, MZ3, MZ4 or surrounding refuge habitat	<ul style="list-style-type: none"> • During and immediately after tree felling all limbs to be inspected for hollows • Take photos of hollow relocation and include in first six monthly report to DPE. 	Any loss of hollow that are not retained on site will need to be offset with like for like nest boxes within the planting area

OUTCOME TO BE ACHIEVED: 2. Effective screening during intensive management period

Construction / Operational phase	<p>2.1 Achievement of satisfactory growth rates and effective screening</p> <p>(monitoring during intensive management period)</p>	<p>Establish at a minimum one repeatable photo monitoring point per each management zone to demonstrate growth rates and screening effectiveness.</p> <p>The phot point will make up one corner of a 10 meter by 10 metre quadrat where the following monitoring data will be recorded:</p> <ul style="list-style-type: none"> • Number of individuals • Height (cm) • DBH (cm) • Survival Rate <p>All growth rate data will be recorded and used measure growth/survival rates of plantings and will be included in six monthly report to DPE</p>	<p>Site (construction) manager and bush regeneration contractor</p>	<p>Measure plant rate and take photos every three months for first two years, or after this period depending on planting success (up to three years)</p>	<p>Satisfactory growth is occurring as per desired heights in Table 3. Photos are taken and catalogued</p>	<ul style="list-style-type: none"> • Every three months document planting success (i.e. which species grow best) and growth data from a 10 x10 metre quadrat at a rate of one quadrat per management zone and compile into six monthly report for DPE. • Collate and review repeated photo point monitoring and compile into six monthly report for DPE 	<ul style="list-style-type: none"> • If consecutive monitoring events indicate plant growth is inhibited or slow site construction manager and/or revegetation contractor are to apply additional establishment techniques where required these can include the use of mulch, fertiliser, additional watering/weeding, and soil enhancement (inoculation). Any additional establishment techniques are to be documented and included in six monthly monitoring reports for DPE. • The six monthly reports will indicate the need for replacement planting through the measure of survival rates. • If plant deaths occur or growth rates are unacceptable use monitoring results to determine which species are performing best and use these species for any replacement plantings to achieve effective screening (see infill planting process below)
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Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	2.2 Watering during intensive management period	Water juvenile plants to ensure establishment	Site (construction) manager and/or revegetation contractor	Weekly watering (or as required) over the three months following planting, or beyond this period if drought conditions prevail (see 1.6)	95% survival rate for planted vegetation following three months of watering	<ul style="list-style-type: none"> Use regular monitoring of planting site to determine if watering is required (e.g. signs of drought stress, plant wilting early in the day, local soil moisture levels based on effective rainfall at Wagga weather station) Document each watering event and include in six monthly report to DPE 	<ul style="list-style-type: none"> Watering is a measure to assist plant survival, if water is unavailable due to severe drought conditions then contact DPE to discuss contingencies for screening plantings
	2.3 Weed spraying during intensive management period	Spot spray along planting zones to control any weeds that establish	Site (construction) manager and weed contractor	Spray monthly for the first 12 months (or as seasonal conditions allow), then quarterly for three years or when canopy establishes to shade out weeds	Visual screening area is 95% native vegetation	<ul style="list-style-type: none"> Within 14 days of maintenance spraying (herbicide activation period) inspect the site for kill effectiveness Take photos of weed spraying effects and use native plant growth rate monitoring to demonstrate success and report to DPE If appropriate, retain contractor invoices as evidence of works and include in six monthly report to DPE 	<ul style="list-style-type: none"> If first weed spraying is not considered effective after 14 days then repeat spraying

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	2.4 Pest animal control during intensive management period	Inspect the site for any rabbit warrens and treat as necessary by physical or chemical means (warren ripping, baiting, shooting). Inspect for evidence of other pests such as pigs, hares and foxes, or native herbivores such as kangaroos. If present treat as necessary by physical or chemical means (additional fencing for kangaroos, baiting and shooting of pigs, hares)	Site (construction) manager and weed / pest contractor	Three times annually for first three years	No evidence of rabbits, foxes, pigs or hares present in planting areas and no evidence of damage to plantings	<ul style="list-style-type: none"> Use regular monitoring of planting site to determine if pest animal control is required, or effective based on signs (e.g. scats, diggings) and/or physical damage to plantings If appropriate, retain contractor invoices as evidence of pest animal control works and include in six monthly report to DPE 	<ul style="list-style-type: none"> If fencing, tree guarding and pest control has not been effective then undertake additional fencing and guarding of plantings using 1.5 m tall guards / netting, or implement a more intensive pest control program.
	2.5 Infill planting	Replace any dead plants with new stock of the species that are growing most successfully	Site (construction) manager and revegetation contractor	Plant new plants in winter	Failed plantings identified and replaced with new stock to achieve 95% survival rate	<ul style="list-style-type: none"> See above for monitoring frequency and process for planting site success and growth rates 	<ul style="list-style-type: none"> If plant deaths above 5% occur or growth rates are unacceptable use monitoring results to determine which species are performing best and use these species for any replacement plantings to achieve effective screening

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	2.6 Monitoring of fences during intensive management period	Monitor fence condition	Site (construction) manager	Quarterly over three years following installation or up to three years depending on success	Fences and gates are in good working order and are effective at excluding livestock, or pest animals	<ul style="list-style-type: none"> Take photos of fence condition and include in six monthly report to DPE If appropriate, retain contractor invoices for fence repairs and include in six monthly report to DPE 	<ul style="list-style-type: none"> If fencing requires repair then undertake works or engage fencing contractor to remediate any issues.

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
OUTCOME TO BE ACHIEVED: 3. Ongoing maintenance of effective screening (year 4 onward after intensive management)							
Operational phase	3.1 Weed spraying during maintenance period	Spot spray within management zones to control any weeds that establish	Site manager and weed contractor	Spray twice annually as seasonal conditions allow or in response to particular weed issues that arise	Visual screening area is 95% native vegetation	<ul style="list-style-type: none"> Within 14 days of maintenance spraying (herbicide activation period) inspect the site for kill effectiveness 	<ul style="list-style-type: none"> If first weed spraying is not considered effective after 14 days then repeat spraying
	3.2 Pest animal control during maintenance period	Inspect the site for any rabbit warrens and treat as necessary by physical or chemical means (warren ripping, baiting, shooting). Inspect for evidence of other pests such as pigs, hares and foxes, or native herbivores such as kangaroos. If present treat as necessary by physical or chemical means (additional fencing for kangaroos, baiting and shooting of pigs, hares)	Site manager and weed / pest contractor	Inspect twice annually or as pest animal issues arise	No evidence of rabbits, foxes, pigs or hares present in planting areas and no evidence of damage to mature plants	<ul style="list-style-type: none"> Use monitoring of planting site to determine if pest animal control is required, or effective based on signs (e.g. scats, diggings) and/or physical damage to plantings 	<ul style="list-style-type: none"> If standard fencing, tree guarding and pest control has not been effective then implement a more intensive pest control program.

Project phase	Management actions	Task breakdown	Responsibility	Timeframe	Success criteria / indicators	Monitoring frequency / reporting action	Contingency to address failure
	3.3 Monitoring of fences during maintenance period	Monitor fence condition	Site manager	Inspect twice annually	Fences and gates are in good working order and are effective at excluding livestock, or pest animals	<ul style="list-style-type: none"> Quarterly 	<ul style="list-style-type: none"> If fencing requires repair then undertake works or engage fencing contractor to remediate any issues.
	3.4 Planted vegetation maintenance and trimming	If planted vegetation interferes with public or private infrastructure / assets then undertaken trimming to relevant industry standards	Site manager	Inspect annually	Screening effectiveness is maintained and infrastructure / assets are protected	<ul style="list-style-type: none"> Annually 	<ul style="list-style-type: none"> Not applicable

TRAFFIC MANAGEMENT MONITORING

Extract from Traffic Management Plan (Table 5 Traffic controls to be implemented)

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
General					
T1	<p>Traffic Control Plans (TCPs) will be prepared by a suitably qualified person, with input from the relevant subcontractors, which detail the layout and nature of temporary traffic control devices necessary to ensure the safe movement within a particular area on the public road network. TCPs may include the following (note this list is not exhaustive):</p> <ul style="list-style-type: none"> • temporary traffic safety controls such as signage to notify road users, speed limits, detours, UHF frequencies and other; • specific control measures to be implemented during local climatic events such as extreme wet weather events, fog and dust storms; • transport routes for heavy vehicles (and over-dimension vehicles where required); • location of any school bus routes and bus stops in the vicinity of the site; and • Consideration of any of developments in the area that may have cumulative impacts with the Project. <p>TCPs will be consistent with the measures contained in this TMP and will comply with the requirements of Australian Standard AS 1742.3 2009 Manual of uniform traffic control devices, Traffic control for works in roads and the Traffic Control at Work Sites manual (RTA 2010).</p>	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager and HSE Advisor	Record of Traffic Control Plans, record of incidents, observations.	Weekly
T2	Existing access to private properties is to be maintained unless otherwise agreed with the property owner in advance.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning • Operation 	Site Manager	Record of complaints, observations.	During access works
T3	All construction vehicle drivers must comply with the Driver Code of Conduct (Appendix A).	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager	Record of incidents and complaints, observations.	Weekly
T4	All project vehicle drivers must be competent, licensed drivers.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning • Operation 	HSEQ	Record of incidents, observations.	Weekly

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
T5	All vehicles regularly used for the Project will be serviced regularly and maintained in good working order.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning • Operation 	HSEQ and office manager	Records of services logged in vehicle maintenance registers.	Monthly
T6	Construction equipment, machinery and vehicles are to be appropriately sized for the task.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager	Observations.	Weekly
T7	Energy efficiency and related carbon emissions are to be considered in the selection of vehicles and machinery.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	HSEQ and site manager	Procurement records.	Monthly
T8	Local suppliers will be used to limit transport where practicable.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	HSEQ	Procurement records.	Monthly
T9	An independent dilapidation survey will be commissioned to document the condition of Trahairs Road before and after construction, upgrading or decommissioning activities, in accordance with the protocol described in Section 11 of this TMP. Any deterioration attributable to the Project will be reinstated to its pre-existing condition by the Project in accordance with Section 11 of this TMP.	<ul style="list-style-type: none"> • Pre- and post-construction • Pre- and post upgrading/ decommissioning 	HSEQ and site manager	Records of dilapidation reports and repair work undertaken.	Pre and post construction, upgrading and decommissioning.
T10	If glint or glare from the solar panels is demonstrated to be a nuisance, distraction and/or hazard to the public road, glare mitigation measures shall be implemented.	<ul style="list-style-type: none"> • Operation 	Construction Manager	Record of complaints.	As required
Site access					
T11	Site entrances are to be established at the indicative locations identified in Figure 3. A permit under Section 138 of the Roads Act 1993 must be obtained for the minor surface works required in the Trahairs Road corridor at the gate locations (refer section 7.1).	<ul style="list-style-type: none"> • Construction 	Site Manager, HSEQ (permit)	Observations, Section 138 approval granted.	Prior to and following site entrance establishment
T12	The capacity of the existing road drainage system is to be maintained on Trahairs Road during the establishment of site entrances.	<ul style="list-style-type: none"> • Construction 	Site Manager	Section 138 approval granted.	Prior to and following site entrance establishment

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
T13	All vehicles entering the site are to use only the site access points established on Trahairs Road.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning • Operation 	Site Manager and Logistics Manager	Observations, record of incidents.	Weekly
T14	All vehicles are to be loaded and unloaded within the site, and enter and leave the site in a forward direction.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager and Logistics Manager	Observations, record of incidents.	Weekly
T15	Turning around on Trahairs road is not to be permitted.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager	Observations, record of incidents.	Weekly
T16	Provision will be made within the site to accommodate turn around movements without the need for reversing.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning 	Site Manager	Observations, record of incidents.	Weekly
T17	Appropriate exclusion barriers, signage and site supervision are to be employed at all times to ensure that the works area is controlled and that unauthorised vehicles and pedestrians are excluded from the site.	<ul style="list-style-type: none"> • Construction • Upgrading/ decommissioning • Operation 	Site Manager	Observations, record of incidents.	Weekly
Internal site controls					
T18	Internal access roads are to be constructed as all-weather roadways.	<ul style="list-style-type: none"> • Construction 	Site Manager	Design documentation	At completion of design
T19	Delivery vehicles are to remain on the internal access roads except for instances when this is not practicable.	<ul style="list-style-type: none"> • Construction 	Site Manager	Observations, record of incidents.	Weekly
T20	Designated pedestrian areas/paths/access points are to be provided where appropriate, to ensure safe pedestrian movement.	<ul style="list-style-type: none"> • Construction 	Site Manager	Observations, record of incidents.	Weekly
T21	In addition to the internal all-weather access roads, a 10 metre wide defensible space is to be established around the perimeter of the whole of the solar arrays that permits a minimum four metre wide unobstructed vehicle access for fire-fighting vehicles.	As per Fire and Emergency Management Plan.			

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
T22	Sufficient designated parking is to be provided on site for all vehicles, and no parking or storing of materials is to occur on the public road network in the vicinity of the site..	• Construction	Site Manager	Observations	Weekly
T23	All construction vehicles leaving the site are to be in a clean condition to minimise dirt being tracked onto the sealed public road network.	• Construction • Upgrading/ decommissioning	Site Manager	Observations	Weekly
T24	Any vehicle wash downs and/or concrete truck washouts onsite are to be within a designated bunded area on an impervious surface.	• Construction • Upgrading/ decommissioning	Site Manager	Observations	Monthly
T25	All vehicles are to be covered when transporting loose materials to and from the site.	• Construction • Upgrading/ decommissioning	Site Manager	Observations	Weekly
Heavy vehicles					
T26	The number of heavy vehicle movements per day during construction must not exceed 60, unless otherwise agreed by the Secretary.	• Construction	Site Manager and Logistics Manager	Record of the number of heavy vehicles entering and leaving the site each day.	Weekly
T27	The number of heavy vehicle movements per day during operation must not exceed 6, unless otherwise agreed by the Secretary.	• Operation	Site Manager and Logistics Manager	Record of the number of heavy vehicles entering and leaving the site each day.	Weekly
T28	The length of any vehicles (excluding over-dimensional vehicles) used for the Project must not exceed 26 metres, unless otherwise agreed by the Secretary.	• Construction Operation	Site Manager and Logistics Manager	Record of the number of heavy vehicles entering and leaving the site each day.	Weekly
T29	The number of over-dimensional vehicle movements during construction must not exceed 1, unless otherwise agreed by the Secretary.	• Construction	Site Manager and Logistics Manager	Record of the number of over-dimensional vehicles entering and leaving the site each day.	Weekly

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
T30	Over-dimensional vehicles used during construction must obtain an Oversize Overmass Permit (OSOM) from the NHVR (refer Section 6.2).	• Construction	Site Manager and Logistics Manager, delivery partner	OSOM permit	Weekly
T31	The number of over-dimensional and heavy vehicles entering and leaving the site each day is to be recorded.	• Construction Operation	Site Manager and Logistics Manager	Record of the number of heavy and over-dimensional vehicles entering and leaving the site each day.	Weekly
T32	All over-dimensional and heavy vehicles associated with the Project must travel to and from the site via the Sturt Highway, Byrnes Road, Eunony Bridge Road and Trahairs Road and the approved site access points (see Figure 3 and Figure 4).	• Construction Operation	Site Manager and Logistics Manager	Observations, record of complaints and incidents	Weekly
T33	The real-time management of deliveries is to be managed to reduce the potential for queuing of trucks both outside the site entrance and within the site, through the implementation of scheduling (e.g. staging of deliveries) and communication protocols.	• Construction	Site Manager and Logistics Manager	Observations, record of complaints	Weekly
T34	Heavy delivery vehicles from ports are to start transportation as soon as container loads are safely secured, resulting in single vehicle movements rather than convoy/platoon traffic to avoid conflicts with other motorists and congestion upon arrival to site.	• Construction	Site Manager and Logistics Manager, delivery partner	Observations, record of complaints and incidents	Weekly
T35	The laydown and delivery area will include adequate provision for standing of multiple heavy vehicles, to allow multiple deliveries to occur simultaneously without causing queuing. The laydown and delivery area will also be designed to allow for heavy vehicles to safely unload away from pedestrian areas, and without the need for reversing.	• Construction	Site Manager	Observations, record of complaints	Weekly
T36	Consider the use of shuttle buses to transport workers to and from the site to minimise light vehicle traffic and parking required.	• Construction	Site Manager	Evidence of analysis of workforce locations and shuttle bus feasibility.	Prior to peak construction period.

Control Ref #	Environmental Control	Implementation		Inspection and monitoring	
		Timing	Responsibility	Measurement criteria	Frequency
Response to local climatic conditions					
T37	<p>Specific control measures are to be implemented during local climatic events such as extreme wet weather events, fog and dust storms. Measures may include (but not be limited to):</p> <ul style="list-style-type: none"> reduced speed limits that apply in certain conditions, such as reduced visibility due to dust or fog; temporary suspension of heavy vehicle movements to and from, or within the site to suit weather conditions; additional dust suppression in the event of dust storms or high winds. <p>Drivers are to be notified where possible when specific control measures are in force, or when there are any changes to road conditions.</p>	<ul style="list-style-type: none"> Construction 	Site Manager and Logistics Manager, delivery partner	Observations, record of incidents	Weekly
Emergency repair and maintenance					
T38	Any damage to the road infrastructure on the heavy vehicle route (Figure 4) from the site to the intersection of Eunony Bridge Road and Sturt Highway which poses a potential safety risk to road users, is to be reported immediately to HSEQ who is to determine whether emergency repair is required.	<ul style="list-style-type: none"> Construction 	Site Manager and HSE Advisor	Observations, record of complaints and incidents	Weekly
T39	If necessary, construction vehicle movements are to be suspended for the duration of the emergency repairs or appropriate alternative haulage routes identified. Relevant road authorities will be consulted immediately regarding the use of alternative haulage routes.	<ul style="list-style-type: none"> Construction 	Site Manager and Logistics Manager, delivery partner and HSE Advisor	Observations, record of complaints and incidents	Weekly