Broken Hill Solar Plant Operational Environmental Management Plan

Provides the overarching environmental management requirements for the Broken Hill Solar Plant

agl

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Document revision history

Date	Version	Author	Comments
1	31.08.2016	D. Wagner	First draft issued for comment
2	14.09.2016	S. Craig	Updated with comments provided by Project ER & AGL

3	27.10.2016	S. Craig	Updated with comments provided by DPE
4	24.01.2017	D. Wagner	Minor Update to Table 3
5	13.04.2017	D. Wagner	Updated with comments provided by DPI Water on 14.03.2017
6	10.10.2019	S. Philippides/ B Lacey	Updated with the new AGL document template formatting. Minor updates to the document text, no material changes to risks/controls.
7	28.01.2020	S. Philippides/ B Lacey	Minor update to Section 2.2 regarding lease assignment
8	14.01.2021	S. Philippides	Heritage management details added to section 9.

1. Introduction

1.1. Scope of the OEMP

This Operational Environmental Management Plan (OEMP) has been prepared by AGL (Asset Manager) to meet the requirement of Condition C4 of the Broken Hill Solar Plant Conditions of Approval (MP10_0202, 2013). Condition C4 requires the preparation and implementation of an OEMP that describes and documents the ongoing environment management processes associated with the operation and maintenance of the Broken Hill Solar Plant (BHSP).

AGL is the Asset Manager of the BHSP, while First Solar (Australia) Pty Ltd (hereafter referred to as First Solar) is the operator of the BHSP. A Maintenance Services Agreement (MSA) commenced between AGL and First Solar on 25 September 2015. The term of the agreement is 5 years, i.e. until 6 October 2020. Under the terms of this agreement First Solar maintains a presence on the site.

The OEMP has been developed to provide guidance to Project personnel, consultants and contractors to ensure the Project meets all legal, regulatory and stakeholder obligations. It is to be implemented in conjunction with First Solar's ongoing responsibilities as the operator, and to meet the requirements of Condition C4 (listed in Table 1 below).

The OEMP has been developed in conjunction with First Solar, to ensure personnel at BHSP are aware of the Environment, Health and Safety (EHS) controls that apply to their daily operational activities. Additionally, the First Solar BHSP EHS Manual (which includes an Environmental Compliance Manual incorporating First Solar's OEMP responsibilities) provides specific guidance and awareness relating to EHS management at the BHSP for operational personnel, contractors and visitors.

The First Solar BHSP EHS Manual has been established to ensure that all maintenance activities, undertaken by First Solar employees, contractors and visitors (of any tier), on behalf of AGL, are carried out in a manner that meets or exceeds the requirements of all relevant legislation, project approvals and corporate requirements.

The following table identifies where each of the requirements listed under Development Condition A2, C4, and C13-C15 has been addressed within the OEMP and the First Solar BHSP EHS Manual.

Table 1 Operational Approval Consent Condition C4

Condition C4	Section of OEMP where addressed
The Proponent shall prepare and implement an Operation Environmental Management Plan in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004), or any replacement guideline. The Plan is to be prepared in consultation with the Crown Lands Division of the Department of Trade and Investment and Council as relevant. The Plan shall include but not necessarily be limited to: (a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to the operation of the project, including all consents, licences, approvals and consultations;	This OEMP & Appendices. The First Solar BHSP EHS Manual.
(b) a management organisational chart identifying the roles and responsibilities for all relevant employees involved in the operation of the project;	Refer to First Solar BHSP EHS Manual Section 4.5 & Appendix R
(c) overall environmental policies to be applied to the operation of the project;	Section 3

	Refer to First Solar BHSP EHS Manual Section 3.1
(d) standards and performance measures to be applied to the project, and means by which environmental performance can be periodically monitored, reviewed and improved, (where appropriate) and what actions would be taken in the case that non-compliance with the requirements of this approval are identified. In particular the following environmental performance issues shall be addressed: (i) bushfire hazard and risk management; (ii) management and maintenance of offsets; (iii) inspection, monitoring and maintenance of all watercourse crossings; (iv) management measures for the site, including management of vegetation, soil erosion, dust weed control and landholder liaison.	Section 3 (i) Section 9 Schedule 1 (ii) Section 9 Schedule 2 and Appendix B – Biodiversity Offset Management Plan (iii) Section 9 Schedule 3 (iv) Section 9 Schedule 4, 5 & 9 Refer to First Solar BHSP EHS Manual Section 6.5, 6.6, 6.7 & 6.8
(e) the environmental monitoring requirements outlined under this approval;	Section 10 Refer to First Solar BHSP EHS Manual Section 6.5 & 6.6
(f) measures to monitor and manage flood impacts in consultation with DPI (Water) (formerly NOW);	Section 6.1.8 Section 9 Schedule 3 Refer to First Solar BHSP EHS Manual Section 6.5.3
(g) information on water sources;	Refer to First Solar BHSP EHS Manual Section 6.5.2
(h) complaints handling procedures as identified in conditions C13 to C15;	Section 6 Refer to First Solar BHSP EHS Manual Section 6.5.12
(i) specific consideration of relevant measures to address any requirements identified in the documents referred to under conditions A2b) and A2c) of this approval; and	This OEMP & Appendices. The First Solar BHSP EHS Manual.
(j) management policies to ensure that environmental performance goals are met and comply with the conditions of this approval.	Section 3 First Solar BHSP EHS Manual Section 3, 4, 5, 6, 7 & 8
The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of Operation of the project or within such period as otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval. Proponent shall make the Plan publicly available as soon as practicable and provide a copy of the Plan to the Crown Lands Division of the Department of Trade and Investment as soon as practicable.	Refer to Broken Hill Solar Plant Pre-Operational Compliance Report
C5 (d) Biodiversity Offset Management Package (BOMP)	
Following final design and prior to the commencement of construction, or as otherwise agreed to by the Director-General, the Proponent shall develop and submit a Biodiversity Offset Management Package for the approval of the Director-General. The package shall detail how the ecological values lost as a result of the Project will be offset. The Biodiversity Offset Management Package shall be developed in consultation with the OEH and shall (unless otherwise agreed by the Director-General) include, but not necessarily be	Section 9.2 and Appendix B (Biodiversity Offset Management Plan) First Solar BHSP EHS Manual Section 6.5.8

limited to the monitoring requirements for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including i) the monitoring of the condition of species and ecological communities at offset locations; ii) the methodology for the monitoring program(s), including the number and location of offset monitoring sites, and the sampling frequency at these sites; iii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH.	
Conditions C13-C15 (referenced in C4 above)	
Condition C13 of the Development Consent states: Prior to the commencement of construction, the Proponent shall ensure that the following are available for community complaints for the life of the project (including construction and operation) or as otherwise agreed by the Director-General: a) A 24 hour telephone number on which complaints about construction and operational activities at the site may be registered; b) a postal address to which written complaints may be sent; and c)an email address to which electronic complaints may be transmitted. The telephone number, postal address and e-mail address shall be advertised in a newspaper circulating in the local area on at least one occasion prior to the commencement of construction; and at six-monthly intervals during construction and for a period of two years following commencement of operation of the project. These details shall also be provided on the Proponent's internet site required by condition C11. The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the construction site(s), in a position that is clearly visible to the public.	Section 6 First Solar BHSP EHS Manual Section 6.5.11 & 6.5.12
Condition C14 of the Development Consent states: The Proponent shall record details of all complaints received through the means listed in condition C13 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to: d)the date and time, of the complaint; e) the means by which the complaint was made (telephone, mail or email); f) any personal details of the complainant that were provided, or if no details were provided, a note to that effect; g) the nature of the complaint; h) any action(s) taken by the Applicant in relation to the complaint, including timeframes for implementing the action; and i)	Section 6 First Solar BHSP EHS Manual Section 6.5.11 & 6.5.12
Condition 15: The Proponent shall provide an initial response to any complaints made in relation to the project during construction or operation within 48 hours of the complaint being made. The response and any subsequent action taken shall be recorded in accordance with condition C14. Any subsequent detailed response or action is to be provided within two weeks.	Section 6 First Solar BHSP EHS Manual Section 6.5.11 & 6.5.12

1.2. Structure of the OEMP

The OEMP is structured as follows:

- Section 1 Introduction (this section): identifies the scope and objectives for the EMP);
- Section 2 Site Overview: includes a summary of the facility, operational assets and activities that comprise BHSP;
- Section 3 Operational Environmental Management Framework: explains AGL's EHS management framework (including Corporate EHS Management System, EHS Strategy and Policy commitments). The OEMP is designed to demonstrate linkages with existing processes to ensure environmental performance is consistent with these requirements;

- Section 4 Risk Management: summarises AGL's overall approach to risk identification and assessment at the Corporate, Business Unit and site levels. The OEMP has been designed to specifically address environmental risks identified in the current BHSP wind farm risk register;
- Section 5 Legislative and Other Requirements: includes a summary of core legislative requirements relevant to BHSP operations and activities. Effective implementation of the management controls and provisions detailed in this OEMP is intended to ensure compliance with legislative requirements. Legislative requirements must be reviewed and updated on a periodic basis;
- Section 6 Implementation and Operation: identifies key roles and responsibilities for environmental performance, management and review (including implementation of this OEMP) at BHSP;
- Section 7 Reporting: provides an overview of reporting requirements as specified by legislation and internal practices;
- Section 8 Contractor Management: identifies current tools and controls used to identify and manage environmental risks associated with contractors;
- Section 9 Management of environmental aspects and impacts: outlines preventive action, mitigation measures and management controls to protect environmental aspects and prevent impacts in accordance with legislative and other requirements;
- Section 10 Monitoring, Measurement and Evaluation: outlines key requirements for monitoring and review;
- Section 11 Incident Reporting, Investigation and Emergency Management: reinforces existing processes and procedures outlined in AGL's EHS incident management procedure and First Solar BHSP EHS Manual.
- Section 12 Management Review: details the process to continually review and improve environmental performance.

Both the AGL OEMP and the First Solar BHSP EHS Manual are provided to the Director-General of the Department of Planning & Environment to collectively satisfy the submission and approval requirements of Condition C4.

1.3. Objectives of the OEMP

The key objectives of this OEMP are to:

- demonstrate AGL's compliance with the Project Approval requirements as defined by Condition C4, preparation and implementation of an OEMP;
- provide for a systematic approach for the identification, management and continual review of environmental aspects and impacts relevant to the BHSP operations;
- outline AGL's EHS framework as the Owner, including EHS strategy, policy commitments, risk management and specific site level implementation requirements;
- define Business Unit specific environmental compliance obligations including legislative and other requirements; and
- identify key requirements for leaders, employees and contractors to ensure awareness of responsibilities relating to AGL's environmental performance.

1.4. Target Zero – HSE Objectives

AGL's HSE objective is zero harm to our people and the environment. Target Zero is our strategic framework for making this happen, driven by one priority – promoting workplace health and wellbeing and preventing harm to our environment. Its purpose is to drive positive HSE behaviours and outcomes.

Target Zero has three pillars – Visible leadership, simplified systems, risk management; that inform our AGL-wide strategic initiatives and local business/site action plans.

Target Zero: Visible HSE Leadership

Opportunity Statement: Visible HSE leadership underpins the success of the Target Zero program and is critical in embedding line management accountability for HSE performance, building HSE capability across the business and improving AGL's Safety Culture.

Key elements of this initiative include:

- Coached interactions (HSE Walks and Critical Control Checks and Verifications (CCCs or CCVs) cascaded through operational leadership teams to improve the quality of HSE interactions and understanding of Fundamental Risk Management.
- Implementation and embedding of the Safety Lifesaving Rules and AGL Just Culture Model at operational sites.
- Development of a Safety Leadership Scorecard to measure and manage leadership improvement.
- Ongoing Global Safety Index pulse surveys to measure and benchmark Safety Culture improvement.

Target Zero: Simplified Systems

The Target Zero Systems pillar is all about the management systems and tools creating insights that inform a safe and sustainable workplace and environment.

We're bringing our people, systems and tools together to establish an evidence-led approach to predict and prevent risks and hazards, as part of our continuous learning and improvement cycle.

The strategic priorities that strengthen our systems are:

- An effective and simplified HSE Management System
- HSE Compliance Management

Target Zero: Risk Management

The Target Zero Risk pillar relates to the proactive management of risks which drives continuous improvement.

We're identifying, predicting and eliminating risks before they can have an adverse impact on people and the environment, and taking an AGL- wide approach because HSE is a shared responsibility.

The strategic priorities that mitigate against risks:

- HSE Risk Profiles
- Effective contractor management
- Health and Wellbeing Strategy

2. Site Overview

2.1. Facility and Plant Description

The BHSP consists of a 53.76 MW solar PV power station located approximately 5 km south west of Broken Hill. The BHSP occupies one land holding of approximately 200 ha.

The project site is Crown Land administered by the NSW Department of Primary Industries, Catchment and Lands Division. The local area is characterised by mineral processing, Crown Lands, rural activities and the Willyama Common (being public land which covers approximately 97 km2).

The project includes the 53MW solar plant and the 2 x 22 kV transmission line which connects into TransGrid's existing 22 kV substation in Broken Hill.

The BHSP development includes:

- 40 blocks of PV arrays with a total of approximately 0.65 million cadmium telluride (CdTe) thin film PV modules;
- Aboveground and underground electrical cabling to connect the PV arrays to central inverters and transformer;
- Marshalling switchgear to collect the power from PV arrays;
- An operations and maintenance building and amenities;
- Access road, internal roads and parking; and
- Fencing and landscaping around the site.

The power station is connected to the grid via a new overhead transmission line, approximately 2.7 km in length. The transmission line connects the onsite BHSP substation into the existing TransGrid Broken Hill substation. The operational capacity of the BHSP is expected to be an estimated 117,000 MWh of electricity annually.

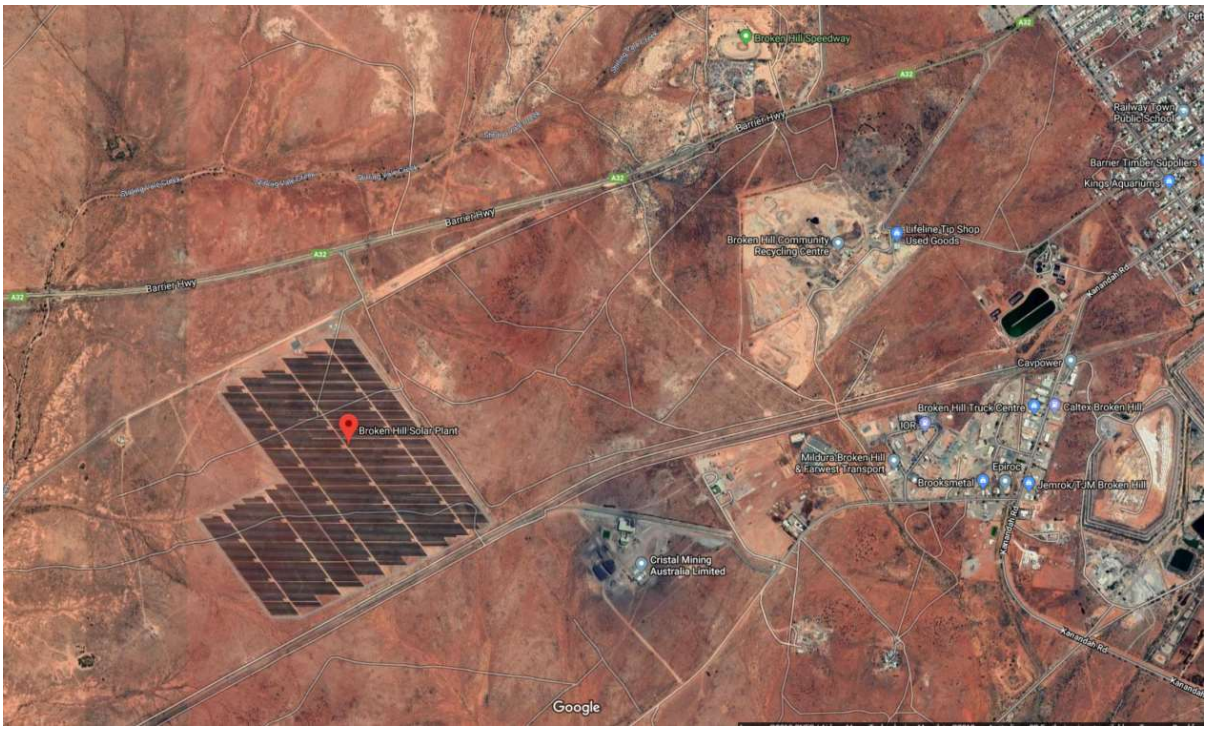

Figure 1. Aerial view of BHSP and Broken Hill township

Figure 2. Aerial Image of BHSP (Nov 2015) Aerial image shows the BHSP with site access from the Barrier Highway, and the overhead line across Willyama Common to the East.

2.2. Ownership

BHSP was one of two large-scale solar photovoltaic (PV) power plants delivered by AGL in 2015, jointly funded by the Australian Renewable Energy Agency (ARENA) and the NSW Government.

The BHSP is owned by Powering Australian Renewables Fund (PARF). AGL announced in November 2016 that it had reached financial close on selling its 53 MW BHSP and 102 MW Nyngan Solar Plant into the fund. PARF is a financing initiative designed by AGL to unlock investment in large-scale renewables energy. The fund was established in 2016 through a partnership with QIC, on behalf of its clients the Future Fund and those invested in the QIC Global Infrastructure Fund.

The BHSP is located on NSW Crown Land, and the State of NSW is the Landlord. PARF Company 4 Pty Ltd is the Assignee, and AGL Pty Ltd is the Tenant.

First Solar is engaged as the operator to provide operations and maintenance works for the BHSP under the Maintenance Services Agreement.

2.3. Site Operation

2.3.1. Hours of Operation

The facility is available to operate 24 hours a day, 7 days a week. Output is dependent on available solar energy.

2.3.2. Management of Supervision

The plant is designed for remote operation, with no requirement for permanent site (shift) based staff. Remote operation is controlled from the AGL control centre located at 699 Bourke Street, Melbourne. As such, the site will be normally manned only Monday to Friday during business hours for conducting routine and breakdown maintenance. Two site staff are generally based at BHSP.

The facility will generally be attended during normal business hours. Remote monitoring of the site will be on a 24 hours per day, 7 days per week basis, from the AGL remote control centre. The controllers in the control room are able to start and stop the generators remotely. They are also able to detect any alarms that are raised on the site.

In the event of an alarm being raised that requires attendance to the facility, two members of the BHSP permanent staff will be “on call”. Once the control room logs the alarm, the controllers can contact the “on call” staff member who is available to reach the site. They can investigate the cause of the alarm and take any necessary action.

2.3.3. Process Description

Photo (light) Voltaic (voltage) or PV modules convert sunlight into DC power. Photons of sunlight excite electrons inside the module, which causes electric current to flow. Modules are connected in series in strings to increase the voltage to ~1500W and thereby reduce line losses caused by transmitting power at low voltages. The strings are connected in parallel and then combined and fed into the Power Conversion Stations (PCS).

The main components in each PCS are a pair of inverters, which convert the DC power into low voltage AC power, and the transformer, which raise the AC voltage to the levels required for transmission – 22kV at Broken Hill. The modules will generate electricity while there is sunshine and if there is a potential difference across the circuit. The inverters can place the modules in open circuit to stop generation from the inverter.

The PCS and its associated modules and DC collector system are called an array, each of which provides approximately 1 to 1.25 Megawatt of DC power. The BHSP has 40 arrays. The AC power output is controlled by two Photovoltaic Combining Switchgear (PVCS) line-ups. These are arranged to collect the electrical power from the PCSs.

3. Environmental Management Framework

3.1. Environmental Policy & Commitment

AGL is committed to the protection of the environment. Through responsible operation and maintenance of the BHSP they can manage all potential adverse environmental effects effectively. All operation and maintenance activities will be conducted in accordance with AGL's Environment Policy (Appendix A).

The AGL Environmental Policy and Integrated HSE Management System provide a guideline for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

3.2. AGL's Integrated HSE Management System

AGL is committed to the health and safety of its people and to the protection of the environment. The HSE Management System (HSEMS) establishes the standards and procedures that apply to AGL sites to ensure HSE compliance requirements and obligations are integrated into business processes across the organisation. There are a number of different types of documents, each with its own purpose to cater for the diverse operations that exist within AGL. The aim is to provide a consistent approach to managing HSE across the business but with the flexibility to be applied to different operations and situations.

The HSEMS is developed in accordance with Australian Standards, AS4801 Occupational Health and Safety Management Systems, AS3806 Compliance Programs and ISO14001 Environmental Management.

The HSEMS comprises a series of corporate commitments by AGL, and includes corporate policies, AGL wide HSE Standards and Procedures, business unit and site HSE procedures, AGL wide Tools and templates, and business unit/site HSE tools and templates (Figure 2).

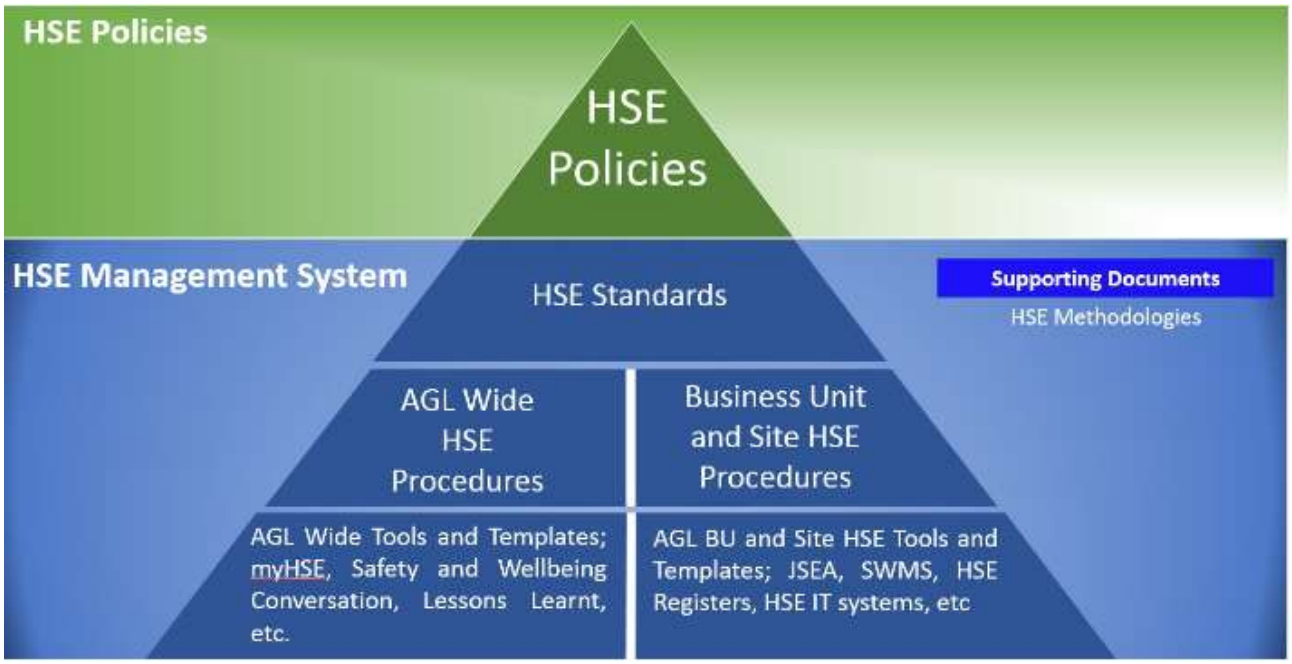

Figure 3. AGL's Integrated EHS framework

3.2.1. HSEMS Documentation

Policies

The HSE Policies outline the AGL's overall HSE position, and indicate the responsibilities and behaviours expected within AGL. They are approved by the Managing Director/CEO. Policies are listed below:

- AGL Health and Safety Policy;
- AGL Environment Policy (refer Appendix A).

HSE Standards

HSE Standards provide a detailed list of mandatory minimum controls required to achieve compliance. It is these minimum controls which form the quantifiable benchmark, in which our internal audit process is built around.

HSE Standards are supported by HSE Methodologies which provide further detail in how the minimum controls can be achieved.

HSE Procedures

AGL Wide HSE Procedures are developed when there is a common, mandatory procedure to be used across the whole organisation, for example Hazard and incident management. AGL wide HSE procedures are mandatory and may also stipulate specific tools that must be used also.

Business Unit Procedures are developed and maintained by a business unit or site. These documents document how the Business Unit meets the HSE Standards. These systems, and all associated documentation, is the responsibility of the business unit or site to maintain and should include the detailed work instructions that are used by employees to guide day-to-day operational processes.

HSE Tools and Templates

AGL Wide Tools and Templates have been created where the need for a uniformed approach to HSE is required. Examples may consist of:

- myHSE - AGL centralised platform to record HSE incidents, Near misses, Hazard and all Regulatory incidents;
- HSE Walks;
- Critical control checks;
- Lessons Learnt; and
- Hazards alerts.

4. Risk Management

4.1. Risk Management framework

AGL is committed to a systematic, transparent, and credible risk management approach, and has adopted an integrated Risk Management Framework in accordance with ISO 31000 and the Australian Standard for Risk Management AS/NZ:4360.

AGL's Risk Management Framework is underpinned by:

- AGL Risk Management Policy
- Generation Planning Risk Policy
- AGL Risk Management Framework Standard
- Group Operations Risk Management Procedure

AGL's approach to Risk Management is aimed at embedding risk management principles and practices into strategy development and day to day business processes to inform decision making and achieve robust and proactive commercial outcomes. The approach is modelled on ISO 31000 and has been adapted to reflect AGL's specific requirements for identifying, assessing and managing risk.

The overall objectives of the Standard are to:

- a) Provide guidance to AGL employees on how to conduct risk assessments;
- b) Ensure consistency and simplicity in approach to risk identification, evaluation and management; and
- c) Establish a common 'risk' language.

A standardised approach across the business will:

- Enable risks to be identified, managed and communicated consistently;
- Provide a solid platform to meaningfully compare and prioritise enterprise wide risk;
- Enable the establishment of AGL's risk profile and input to risk appetite; and
- Allow for comparison between bottom-up and top-down risk assessments.

4.2. Environmental Risk Assessment

The identification, assessment and management of environmental hazards, aspects and impacts associated with BHSP operations should:

- Include all activities, products or services or contractors and suppliers;
- Cover all operations and business processes;
- Ensure that environmental hazard/risk identification, assessment, control of environmental hazards/risks, and evaluation of these activities is conducted;
- Risk assessment methodology shall be based on operational knowledge, experience and AGL's Risk Management requirements;
- EHS risks (environmental aspects and impacts) shall be assessed by suitably qualified personnel/specialists and shall take into account:

- a hazard, aspect or impact becoming an event or incident, and the consequence and severity of such an incident or event;
- the situation or events or combination of circumstances that has the potential to give rise to an environmental incident;
- the sensitivity of the surrounding natural environment;
- approvals and environmental licence requirements;
- outcomes identified in EHS audits, incident investigation and reviews;
- contractor and sub-contractor activities, plant and equipment, and their testing and maintenance;

- Control measures in place shall be:
  - based on established level or risk;
  - in accordance with the risk management hierarchy of controls (i.e. eliminate, substitute, reduce, isolate, protect); and
  - implemented to effectively manage identified and assessed risks to ensure that final risk levels are as low as is reasonably practicable.

4.3. Site Hazard Risk Analysis Prior to Works

At the site level, Risk Analysis is determined by First Solar's Hazard Risk Workshop or HAZID. Individual job hazards and risk assessments are completed by First Solar employees and work teams prior to the commencement of works. There are two types of Risk Analysis that are undertaken by First Solar, these are:

- Job Hazard Analysis (First Solar BHSP EHS Manual Appendix D - Form FS-EHS-IP-F1)
- Pre-Job Briefing & Work Authorisation (First Solar BHSP EHS Manual Appendix E – Form FS-EHS-IP-F2)

Contractors may also prepare Safe Work Method Statements (SWMS) for all tasks.

These requirements are addressed in the First Solar site induction. Both the Job Hazard Analysis and Pre-Job Briefings are expected to identify potential risk and incorporate preventative/corrective actions and control measures for each risk (based on the hierarchy of control).

5. Legislative and Other Requirements

5.1. Relevant Environmental Legislation

All activities associated with the operation and maintenance of BHSP must comply with relevant State and Commonwealth Legislation, Regulations and Regulatory Guidelines. A summary of the relevant legislation and how it may apply to BHSP is provided below.

5.1.1. Commonwealth Legislation relevant for BHSP

Legislation and administering authority	Summary of legislation	Potential Relevance to BHSP
Aboriginal & Torres Straits Islander Heritage Protection Act 1984	The purpose of the Act is the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition. The Minister may make declarations to protect significant Aboriginal areas, objects and classes of objects from threats of injury or desecration. A declaration issued by the Minister to protect an area or object may override any State or Territory approval.	In undertaking our projects, if we discover any Aboriginal remains, we have to comply with the requirements in the Act in reporting the remains to the Minister.
Environment Protection & Biodiversity Conservation Act 1999 (Australian Government Department of the Environment)	All environmental assessments undertaken must consider matters of National Environmental Significance as well as any Commonwealth land. If a significant impact is proposed the approval of the Commonwealth Minister for Environment, Water, Heritage and Arts is required. The Act applies if any action that has, will have or is likely to have a significant impact on: a matter of National Environmental Significance; or Commonwealth land (whether action takes place inside or outside Commonwealth land).	Under the EPBC legislation, the project was determined "not a controlled action". No Commonwealth or threatened species were impacted by the construction of the BHSP. It is not expected operational activities will impact on Commonwealth or threatened species.
National Greenhouse and Energy Reporting Act 2007 (Australian Government Department of the Environment)	Provides for the reporting and dissemination of information related to greenhouse gas emissions, greenhouse gas projects, energy production and energy consumption. Controlling corporations that meet thresholds for the amount of GHG's they emit, or how much energy they consume or produce in a given reporting year are required to report this under the Act.	AGL will record and report NGERs data for the operation of the BHSP as part of its corporate requirements.
National Environment Protection Council Act 1994	The object of this Act is to ensure that, by means of the establishment and operation of the National Environment Protection Council: (a) people enjoy the benefit of equivalent protection from air, water or soil pollution and from noise, wherever they live in Australia; and (b) decisions of the business community are not distorted, and markets are not fragmented, by	AGL is committed to meet the NEPM objectives for all its projects.

Legislation and administering authority	Summary of legislation	Potential Relevance to BHSP
	variations between participating jurisdictions in relation to the adoption or implementation of major environment protection measures. The NEPC achieves its objectives through National Environment Protection Measures (NEPMs) which are broad framework setting statutory instruments that outline agreed national objectives for protecting or managing particular aspects of the environment.	

5.1.2. NSW Legislation relevant for BHSP

Legislation and administering authority	Summary of legislation	Potential Relevance to BHSP
Biosecurity Act 2015	https://www.legislation.nsw.gov.au/#/view/act/2015/24 The primary object of this Act is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.	Weed Management
Environmental Planning and Assessment Act 1979 (EP&A Act) (DP&E – Department of Planning and Environment)	https://www.legislation.nsw.gov.au/#/view/act/1979/203 The Project has been approved under Part 3A the EP&A Act as critical infrastructure.	MCoA relevant to BHSP operational activities to be complied with.
Protection of the Environment Operations Act 1997 (POEO Act) (OEH - Environmental Protection Authority Branch)	https://www.legislation.nsw.gov.au/#/view/act/1997/156 Contains severe penalties for harming the environment, polluting waters, operating equipment inefficiently and incorrectly handling waste. Environmental Protection Licences may be issued by EPA/OEH to regulate and authorise discharges to the environment (e.g. from sediment basins).	The Project does not trigger a scheduled activity for an Environmental Protection Licence. However, the Project team is to prevent pollution and AGL is to notify the EPA of any existing or potential environmental harm during operational work activities.
Waste Avoidance and Resource Recovery Act 2001 (OEH)	https://www.legislation.nsw.gov.au/#/view/act/2001/58 Outlines specific targets and objectives for waste reduction.	Compliance must be achieved in relation to waste management. Permits may be required for offsite disposal of hazardous or contaminated material if used or encountered during operation.
Contaminated Land Management Act 1997 (OEH)	https://www.legislation.nsw.gov.au/#/view/act/1997/140 Establishes a process for investigating and (where appropriate) remediation of land where contamination	Specific approvals are not required however operational activities must comply.

Legislation and administering authority	Summary of legislation	Potential Relevance to BHSP
	presents a significant risk of harm to human health or some other aspect of the environment.	Project team to identify and manage contamination in accordance with the Act.
Water Management Act 2000 (DPI (Water)) (formerly NOW)	https://legislation.nsw.gov.au/#/view/act/2000/92 Relates to the management of surface and groundwater and water management works.	Water is provided from third party suppliers and stored in storage tanks and rainwater is also captured on site. As the project is approved under part 3A of the EP&A Act, under Section 75U requirements to obtain a water use approval under Section 89, a water management work approval under Section 90 or an activity approval under Section 91 of the Water Management is not required.
Water Act 1912	https://www.legislation.nsw.gov.au/#/view/act/1912/44 Manages water extraction from ground and surface waters.	Not applicable as water for operational purposes is provided from third party suppliers and stored in storage tanks, rainwater is also captured on site.
National Parks and Wildlife Act 1974 (NPW Act) (OEH - NPWS branch)	https://www.legislation.nsw.gov.au/#/view/act/1974/80 Addresses the protection of Aboriginal items and places of significance and certain native flora and fauna. A consent under section 90 of the NPW Act is required if an Aboriginal place, relic, or site is to be damaged or destroyed or approval under Section 87 of the Act if disturbance is required.	The BHSP is not in or in the vicinity of any protected areas as defined in the Act
Threatened Species Conservation Act 1995 (OEH- NPWS branch)	https://www.legislation.nsw.gov.au/#/view/act/1995/101 Relates to the protection of species, ecological communities, populations and critical habitat listed as endangered or vulnerable. Approval required if disturbance of threatened species or habitats are to occur.	It is not expected operational activities will impact on threatened species.
Occupational Health and Safety Act 2000 (OHS Regulation 2001) (WorkCover – storage licence, OEH - transport licence for dangerous goods)	https://legislation.nsw.gov.au/#/view/regulation/2001/648 Storage and transport of dangerous goods is to be in accordance with the Act. Licence required for storage and/or transport of prescribed quantities of dangerous goods.	Applies to any operational activities that trigger storage and transport of dangerous goods.

Legislation and administering authority	Summary of legislation	Potential Relevance to BHSP
Environmentally Hazardous Chemicals Act 1985 (OEH)	https://www.epa.nsw.gov.au/your-environment/chemicals/regulating-chemicals-nsw This Act regulates the use and storage of environmentally hazardous chemicals. It provides OEH with assessment and control mechanisms for chemicals and chemical wastes.	Limited chemicals are stored onsite, however these are stored and handled in accordance with legislation.
Rural Fires Act 1997 (NSW Rural Fire Service)	https://www.legislation.nsw.gov.au/#/view/act/1997/65 Establishes the NSW Rural Fire Service and define its functions and to make provision for the prevention, mitigation and suppression of rural fires.	Emergency Response
Roads Act 1993 (RMS)	https://www.legislation.nsw.gov.au/#/view/act/1993/33 Establishes procedures for closing of public roads, roadworks, traffic control devices etc. The Operations contractor is to obtain Road Occupancy Licences (ROL) for use of lanes, and consult on establishing access/exit the BHSP if works are required to be undertaken on adjacent roads.	In the event of major works involving large plant and machinery.

5.1.3. Other requirements

Additionally, BHSP must comply with other environmental requirements and agreements in place as listed below:

Name / No.	Issued by / Agreement with	Description	Date of Issue
Development Consent SSD-5355	Minister for Planning and Infrastructure	The consent allows development and use of land for the purpose of a photovoltaic power plant facility with the a nominal 53.5MW capacity, and associated buildings and works, including; an operations and maintenance building, marshalling switchgear, 22kv transmission line, car parking, internal access tracks, upgrades to existing roads, fencing and landscaping	27/03/2013
	https://www.agl.com.au/-/media/aglmedia/documents/about-agl/how-we-source-energy/broken-hill/approvals-and-licenses/2013/march/instrument-of-approval.pdf?la=en&hash=773E3854516AE41A0954BE4C962E7D86		
Solar Power Plant Lease - lease agreement Within one year from approval from the Director-General the Proponent shall, in conjunction with the lessee of Western Lands Lease 14240, apply to the Crown Lands Division of the Department of Trade and Investment for a Change of Lease Purpose of Western	Between the parties: AGL, lessee of Western Lands Lease 14240 and The State of NSW	Management of a native vegetation offset site, to meet COA C5 to offset the removal of native vegetation associated with the construction of the BHSP and the ancillary 22kv transmission line. Land offsets shall be consistent with the Principles for the use of Biodiversity Offsets in NSW (NSW Office of Environment and Heritage, June 2011). Any land offset shall be enduring and be secured by a conservation mechanism which protects and manages the land in perpetuity.	27/03/2014

Name / No.	Issued by / Agreement with	Description	Date of Issue
Land Lease 14240 to appropriately record the biodiversity offset on title and within the lease conditions as a conservation area.		An Offset Management Plan has been prepared and approved in accordance with COA C5.	

6. Implementation & Operation

6.1. Structure and Responsibility

AGL is responsible for overall environmental management of the ongoing operation and maintenance of BHSP. All personnel and contractors have responsibilities and obligations for environmental protection and management. These are addressed through conditions of employment, contracts or detailed in employee position descriptions. Specific roles and responsibilities are summarised in this section. Leaders are responsible for incorporating specific responsibilities into position descriptions.

For an operational organisation chart, see Appendix R of the First Solar BHSP EHS Manual.

6.1.1. AGL Solar Asset Leader & Asset Performance Leader

It is the responsibility of the AGL Solar Asset Leader (herein referred to as Asset Leader) to:

- Ensure the implementation and review of this OEMP;
- Ensure that environmental matters relating to the site are included in the agenda of site meetings and/or are reported on a regular basis to the Environment Business Partner;
- Ensure the site has environmental communication and consultative arrangements in place with all key stakeholders and contractors;
- Participate in environment risk assessments with relevant personnel;
- Coordinate and manage environmental specialists where required;
- Review incident and/or hazard reports, minutes of meetings and audit reports;
- Participate in incident and/or hazard investigations where appropriate;
- Ensure a continuous improvement approach to all EHS matters;
- Ensure contractors fulfil the obligations and responsibilities required by this plan and their EHS management systems;
- Ensure EHS Inductions for contractors and visitors are undertaken and records maintained;
- Participate and chair when appropriate, EHS meetings and/or Toolbox meetings;
- Ensure audits of the contractor's use of this OEMP are conducted;
- Liaise closely with contractors on environmental matters;
- Assist in preparation of draft site-specific procedures and instructions, where necessary;
- When necessary, participate in JSEA/hazard analysis;
- Issue stop work orders when site conditions are considered to be potentially unsafe and hazardous to personnel, public or the environment;
- Report all environment hazards, near misses and incidents; and
- Conduct emergency response drills as required.

6.1.2. Environment Business Partner

The Environment Business Partner supports the Asset Leader by ensuring the OEMP is maintained, environmental requirements are effectively managed to meet business needs and to ensure compliance with this OEMP. It is the responsibility of the Environment Business Partner to:

- Coordinate the development and periodic review of AGL's OEMP and other associated environmental procedures;
- Participate in environment risk assessments with relevant personnel;
- Assist the Asset Leader in the ongoing review of the protection level needs as work is performed, and that protection levels are adjusted according to the level of environmental risk;
- Assist the Asset Leader with environment specialists and managing scope of works, where required;
- Stop work in emergencies when environmentally harmful working conditions are identified until such conditions are sufficiently corrected;
- Report all environmental incidents, near misses and non-compliance and assist in investigations as required;
- Report significant environmental incidents to the regulatory authorities;
- Provide environmental advice where required;
- Undertake periodic site inspections and audits; and
- Review audit reports and implement action plans for identified corrective and preventative actions.

6.1.3. Health and Safety Business Partner

The Health and Safety Business Partner is responsible for development and maintenance of the site induction program, contractor pre-qualification and communication/escalation of issues relating to environmental risks.

6.1.4. Principal Contractor (First Solar)

It is the responsibility of First Solar) to:

- Ensure day to day activities comply with the requirements of the First Solar BHSP EHS Manual and the OEMP;
- Ensure and contribute to the preparation of maintenance and operations risk assessments, safe work procedures and JSEAs;
- Identify, report and rectify (if possible) potential site hazards;
- Report all environmental incidents, near misses and hazards to the AGL Asset Leader;
- Conduct EHS site inspections;
- Induct site contractors and ensure legal and contractual compliance;
- Control site in the event of an emergency situation; and
- Perform all site inspections as part of general site activity.

6.1.5. All Employees, Contractors & Visitors

Site personnel at all levels are responsible for protecting the environment they work in. Work must be conducted in a manner consistent with AGL's environmental policies and procedures to reduce the risk of environmental harm.

All persons are required to report any deviation from the conditions and controls identified in this OEMP and all incidents, near misses, hazards or any potential/actual environmental harm to their Supervisor.

6.2. Training and Competency

6.2.1. Operational Environmental Management Plan (OEMP)

The Asset Leader will ensure that all site personnel are aware and understand the content of this OEMP and are all aware of their obligations as a result.

6.2.2. First Solar Contractor Induction

All employees that are to perform any type of work on site are required to complete the First Solar Site Induction. The First Solar site induction provides a briefing into specific characteristics of the solar array and First Solar's operational procedures, including permit processes which are used in day to day operation of the site

6.3. Internal and External Communication

6.3.1. Internal Communication

EHS Meetings

Regular EHS meetings are held by First Solar to heighten EHS awareness and to keep employees aware of recent incident analysis, to perform or review EHS self-inspections, and to discuss relevant EHS topics. Individual employees are frequently the best source of information in learning how to work more safely, and regular EHS meetings offer individuals the opportunity to offer their input.

The EHS Meeting is to be considered a brief team meeting, envisioned to take no longer than twenty minutes, providing a forum for discussion of relevant safety and environment hazards, aspects, alerts, audit results, incident investigation outcomes, incentives and strategies. It is an opportunity for two-way exchange of information and discussion of issues in relation to upcoming work activities.

Records of EHS Meetings shall be retained by the First Solar (BHSP EHS Manual Section 4.11).

Other forms of Communication

Other forms of internal communication include:

- AGL's Environment Policy (AGL's intranet - the grid);
- Environmental risk register – online tool, Periscope;
- Environmental performance summary (via AGL's Sustainability Report – external website);
- Environmental incident records (myHSE);
- Environmental training and awareness (the DMS, Empower);
- Legal, regulatory and other requirements updates (email notification updates available from SAI and Envirolaw);
- Audit and review findings and progress reports on subsequent actions (contact Environment Business Partner or Asset Leader); and
- Notice / bulletin boards.

6.3.2. External Communication

Regulatory Authorities

AGL occasionally holds update meetings or informal discussions with the Department of Planning & Environment (DP&E) and Broken Hill City Council. DP&E and Broken Hill City Council are notified immediately of any significant incidents and updated with compliance reports required as per the Conditions of Consent and associated endorsed plans.

AGL will consult with the NSW Department of Primary Industries (Water) (DPI Water) (formerly NSW Office of Water (NOW)) to manage potential flood impacts. Previous correspondence with DPI (Water) was carried out during the construction phase of works, and this OEMP will be provided to DPI (Water) for comment on the operational and maintenance phase of works. Comments provided by DPI (Water) are to be integrated into this OEMP as required.

General Public

AGL provides regular electronic information and reports regarding the environmental performance of the BHSP to the general public via the dedicated public website. All documents relevant to and including this OEMP, subject to confidentiality requirements, shall be made available for public inspection on request.

6.4. Complaints Management

Complaints are managed in accordance with the endorsed AGL BHSP Community Consultation Plan (refer to Appendix D).

First Solar are to liaise with AGL's Asset Leader for all complaints that are received regarding the BHSP and input will be requested from relevant stakeholders where required (i.e. Environment Business Partner, Asset Leader, AGL's Community Relations Manager).

AGL manages and records all complaints received with Advoc8 which is a community and stakeholder engagement specific software database, used to proactively manage relationships. It is used for tracking and monitoring of complaints and issues, record keeping and reporting. Advoc8 is managed by AGL's Community Relations Manager.

7. Reporting

7.1. Compliance Reporting

AGL & First Solar have carried out periodic reporting of compliance status to the Director-General of DP&E as required by condition C16. Compliance Reporting will also be tracked using the Compliance Tracking Program (Appendix C), with input provided from First Solar. AGL also complete internal compliance reporting, using their online tool, AGL Compliance. All ongoing development approval conditions are tracked in the AGL online tool with desired due dates and/or annual reviews. When conditions are due for action, or trigger a review, evidence is attached for verification and the action closed. Any items not closed in time are escalated to management for urgent action.

7.2. Contractor Reporting

Environmental statistics and incidents are submitted by First Solar in their Monthly Reports for review by AGL Management. First Solar will provide AGL with monitoring records and associated management reviews (refer to Section 7 of the First Solar BHSP EHS Manual).

7.3. Sustainability Reporting

BHSP is required to collect, collate and submit environmental performance data each year as part of AGL's Environmental Footprint. This data is published in the Environment chapter of AGL's Corporate Sustainability Report and also used in other communications with a range of external stakeholders, such as potential customers/clients, shareholders and investment funds.

The following data is collected from across AGL's individual sites/business groups and then compiled by the Sustainability Reporting team:

- Steel and concrete;
- Water use;
- Non-hazardous waste – disposed;
- Non-hazardous waste – recycled;
- Hazardous waste – disposed; and
- Hazardous waste – recycled.

The Environment Business Partner is responsible for collating information provided from First Solar into the dedicated Footprint Workbooks which are revised and issued annually.

8. Contractor Management

8.1. Contractor Pre-Qualification

AGL use an external provider (CM3) for pre-qualification of contractors. The system is currently used to assess competency for Health, Safety and Environmental aspects and to ensure that all work carried out by third parties is controlled so as to prevent harm. For small contractors who perform ad hoc work that are not willing to join CM3 for prequalification, AGL also offer paper-based prequalification using the Authority to Mobilise (ATM) form, which is available on the AGL external website via the Contractor Portal.

The ATM is a pre-mobilisation check that must be completed by all suppliers that provide services on AGL sites, or customer locations. Suppliers are required to complete the ATM form and submit it, along with all requested information to their nominated AGL Contract Representative for review and approval, prior to attending AGL sites, or customer locations. The Health & Safety Business Partner is responsible for administration associated with contractor prequalification. First Solar follow their own contractor prequalification process for contractors they engage directly for work on the solar farm.

8.2. Compliance with OEMP

The Asset Leader must ensure all contractors and sub-contractors are supervised to monitor compliance with the provisions of this OEMP. Contractors may develop and work under their own Environment Plans and Management Systems, however this site specific OEMP is to be considered the overarching document.

9. Management of Environmental Aspects and Impacts

This section includes a number of Schedules that have been developed to specifically identify the relevant environmental aspects, impacts and controls for the BHSP operations, taking into account risks included in the current site risk register and relevant legal and other requirements. The following schedules are included:

- Schedule 1: Bushfire Hazard and Risk Management
- Schedule 2: Biodiversity Offset Management
- Schedule 3: Water Crossing Management
- Schedule 4: Vegetation Management
- Schedule 5: Air Emissions
- Schedule 6: Waste Minimisation and Management
- Schedule 7: Hazardous Substances
- Schedule 8: Land and Groundwater Contamination Management
- Schedule 9: Operational Noise Management
- Schedule 10: Heritage Management

Specific commitments, actions and conditions necessary to ensure that environmental protection requirements are managed effectively are identified. Controls, monitoring and record keeping/reporting requirements for each schedule are covered in each section as applicable.

Refer to Appendix E for an Environmental Constraints Map.

9.1. Schedule 1 – Bushfire Hazard and Risk Management

9.1.1. Description

This schedule details bushfire management measures for the site including those elements relevant to the maintenance activities at the site.

9.1.2. Roles

Asset Leader, Site Technicians, First Solar Site Manager, Environment Business Partner, Contractors

9.1.3. Management Requirements

During the operational phase, the following management measures described below are to be adopted:

- Asset protection areas maintained (including monitoring and maintenance of vegetation in the solar arrays);
- Ongoing engagement with RFS
- Maintenance of fire-fighting equipment

For Operational aspects that site management and personnel need to be aware of in implementing the bushfire management measures refer to Section 6.5.13 of the First Solar BHSP EHS Manual. This includes

managing fire risks at the site and in particular actions to prevent fires and how to identify, maintain, replace and use firefighting equipment (FFE).

9.1.4. Records

- Evidence of RFS engagement
- Monthly Environment Report (provided by First Solar)
- Rehabilitation and revegetation monitoring (provided by First Solar) & maintenance forms.

9.2. Schedule 2 – Biodiversity Offset Management

9.2.1. Biodiversity Offset Management Plan

A Biodiversity Offset Management Plan was developed during development of the BHSP which documents how AGL will meet its obligations under Consent Condition 5 on site. The plan was implemented during construction to ensure native vegetation had been appropriately surveyed, so any vegetation removed during construction could be appropriately offset. Operational requirements noted in the Biodiversity Offset Management Plan are covered in this schedule below.

The plan was developed to offset the ecological values lost as a result of the project. The Biodiversity Offset Management Plan was approved by the Department of Planning and Environment on 27 August 2013 (see Appendix B).

Land offsets shall be consistent with the Principles for the use of Biodiversity Offsets in NSW (NSW Office of Environment and Heritage, June 2011). Any land offset shall be enduring and be secured by a conservation mechanism which protects and manages the land in perpetuity.

Delivery management measures to be implemented by AGL in accordance with the Biodiversity Offset Management Plan include erecting and maintaining a stock proof fence around the part of the lease that is defined as a conservation area. Ongoing monitoring will be undertaken, and general measures include cat and/or fox control, rabbit control, exclusion of feral goats and ongoing weed control of the site.

9.2.2. Roles

Asset Leader, Environment Business Partner, Contractors.

All management measures are the responsibility of and financed by AGL.

9.2.3. Management of the Offset Site

General Management

- Construct appropriate fencing (e.g. standard stock/farm fencing with lockable gate) around the Offset Area, to control vehicle and stock access;

Maintain fencing in functional condition and repair promptly if damage occurs;

- Ensure signage around the offset site is maintained;
- Maintain the incidence of woody environmental weeds at their current low levels;
- Control and eradicate any new woody or environmental weeds before they reproduce;
- Control and where applicable eradicate any other significant environmental weeds identified during the ongoing site monitoring.

Monitoring and Reporting of Offset Site

- An independent, experienced ecologist shall undertake monitoring works;
- Permanent photo points will be established at marked positions within the Offset Site. Photo points will be located to adequately characterise the current vegetation condition and monitor changes in weed levels;
- Photographs will be taken annually and more frequently as required to document specific management activities including fencing and removal of weeds;
- Appropriate records will be kept for each monitoring event (date, time, location, description of features or actions within each photograph);
- General observations will be made in the Offset Site to identify new management issues, such as new weed species, and monitor effectiveness of management activities;
- Monitoring reports will be completed on at least an annual basis, undertaken during early spring or summer. Each monitoring report will include:
  - Photographs and accompanying notes;
  - Evidence of management actions and an assessment of their effectiveness;
  - Recommendations for remedial actions if necessary;
  - Recommended changes to the following year's annual works program.
- A completed Monitoring and Reporting form (results of monitoring would be submitted in an annual report to OEH and made publicly available on the AGL website). Note: The decision to reduce or continue annual reporting will be made by OEH following submission of each report.

Where appropriate, recommendations to alter the management actions to better achieve the required Net Gain should be provided in a timely manner.

9.2.4. Records

- BHSP Offset Monitoring Reports;
- Native vegetation plans and maps from development / construction;
- Permits / approvals – if native vegetation removal required (considered unlikely);
- Incident reports.

9.3. Schedule 3 – Water Crossing Management

9.3.1. Description

This schedule describes water crossing management at BHSP and key management requirements to prevent the pollution to and soil erosion build up within water crossings (i.e. culverts).

The site drainage system consists of a multiple culverts and causeways. Stormwater is all directed into these culverts and causeways.

To ensure that the culverts / causeways remain effective, First Solar is responsible for inspection and monitoring of the water crossings (refer to Section 6.5.1 & 6.5.3 of the BHSP EHS Manual).

First Solar's monitoring results are to be recorded on the Weekly Environmental Inspection (Form-D01- refer to Appendix Q of the BHSP EHS Manual). This information is then to be passed on to AGL, who is responsible primarily for ongoing maintenance of the water crossings.

9.3.2. Roles

Asset Leader, Site Technicians, Environment Business Partner, Contractors

9.3.3. Management Requirements

- All clean stormwater runoff must be diverted away from areas that are likely to cause stormwater contamination (e.g. bunds, chemical and fuel storage areas, vehicle wash bays, soil or aggregate stockpiles, maintenance areas);
- Works involving soil disturbance, excavations must be managed to prevent erosion and minimise contact with stormwater;
- All soil or material stockpiles should be placed away from drainage lines and stormwater pits;
- No fuel handling or refuelling of plant and equipment adjacent to water crossings;
- Operating procedures must be in place and effectively implemented for the unloading of chemicals at the site;
- Vegetation shall be maintained to reduce dust/particulates discharged to stormwater;
- Follow up on inspections of the culverts / causeways carried out by First Solar (following any flows to check for debris or damage), in order to provide necessary maintenance (refer to Section 6.5.1 of the BHSP EHS Manual for monitoring requirements for water crossings).
- Where there is build up due to blockages and general functioning of water crossings (i.e. erosion / stability issues within and adjacent to the culverts), then the cause will be determined and the necessary maintenance requirements, including debris removal and culvert / causeway damage repair, will be undertaken to ensure compliance with the relevant approval conditions (Refer to Sections 6.5.3 & 6.5.4 of BHSP EHS Manual).
- Where build up in water crossings due to soil erosion and is occurring as a result of ineffective, poorly maintained, or defective re-vegetation, (i.e. erosion / stability issues within and adjacent to the culverts), then the cause will be determined and the necessary maintenance requirements undertaken to ensure compliance with the relevant approval conditions (Refer to Sections 6.5.3 & 6.5.4 of BHSP EHS Manual). AGL will maintain the erosion and sediment controls, which are to be updated on the Compliance Tracking Program (Appendix C).

9.3.4. Inspections and Monitoring

First Solar Monthly Reports to monitor any soil erosion that may arise from water flows across areas that are for example particularly slow to re-vegetate (Refer to Section 6.5.1 of BHSP EHS Manual).

9.3.5. Records

- Inspection records – to be provided by First Solar;
- Maintenance records;
- Compliance Tracking Program (Appendix C).

9.4. Schedule 4 – Vegetation Management

9.4.1. Description

This schedule covers maintenance and management of the health of vegetated areas on site. Revegetation and groundcover management activities through the operations stage are designed to keep dust and soil erosion to a minimum.

9.4.2. Roles

Asset Leader, Site Technicians, Environment Business Partner, Contractors

9.4.3. Management Requirements

Vegetation and groundcover monitoring will ensure the following:

- Vegetation management options such as reseeding or chemical weed treatment initiated as soon as is required;
- Engaging specialist contractors on an as-required basis to advise on long term management of groundcover at the site. Such specialists would assess the site for weed control and appropriate species diversity (including proportion of native species in the mix) on a 6-12 monthly basis until such a time that weeds are controlled, and revegetation is of good health and self-sustaining. The areas to be addressed will include vegetation on site and well as the revegetation along the transmission line south of the Barrier Highway.
- Implement re-spraying of weed affected areas where woody weed regrowth is identified (see section 6.5.4 & 6.5.6 of the BHSP EHS Manual).
- Vegetation cover to be maintained so that dust does not create a nuisance on or off-site.
- Any areas of native vegetation temporarily disturbed by the construction phase of the project are to be revegetated with indigenous species;
- Weed control is to be initiated where required, to remove introduced flora that spontaneously colonises areas affected/disturbed by construction, particularly noxious weeds;
- Monitoring to be undertaken for a minimum of two years after construction to ensure that temporarily disturbed areas are kept weed-free;
- Ensure ongoing maintenance and upkeep, including weed removal and spraying as required;
- Where vegetation clearance may result in soil disturbance, soil stabilisation techniques must be employed.
- Implementation of the Erosion and Sediment Control (ESC) Plans for the Site^.

The Erosion and Sediment Control (ESC) Plans implemented by First Solar during construction are to be carried over into the operational phase. If the plans require amending or updating, AGL will provide an update, with First Solar responsible for ongoing monitoring and maintenance of erosion and sediment controls.

Also note that First Solar is required to carry out a Weekly Inspection Checklist and a Groundcover Monitoring Record (see section 6.5.1 of the BHSP EHS Manual) to be provided to AGL in order to manage the revegetation progress. First Solar is required to rectify any defects in the revegetation under instruction from AGL.

9.4.4. Records

- Inspection records – to be provided by First Solar;

- Erosion and Sediment Control Plans;
- Maintenance records.

9.5. Schedule 5 – Air Emissions

9.5.1. Description

This process describes the management principles to be adopted to reduce and control the pollution generated from site activities.

The BHSP is expected to generate approximately 126,000 megawatt hours (MWh) of clean, renewable electricity each year. On an annual basis, the project will produce enough electricity to meet the needs of approximately 17,000 average New South Wales homes.

The project will reduce greenhouse gas (GHG) emissions by over 105,840 tonnes of CO2 equivalent per annum, assuming a rate of 0.84 tonnes per MWh of electricity. This is roughly equivalent to removing approximately 29,000 cars from the road. Particulate and heavy metal emissions will also be reduced.

Air emissions are not necessarily a high risk for a green energy site such as the BHSP.

Dust levels on site will be managed by primarily ensuring adequate groundcover outside and (particularly) within the arrays. In addition, speed limits will be enforced on access roads and alleys. Water may be used as a dust suppressant during periods of intense dust generation.

To minimise greenhouse gas emissions, vehicles should not be left running when not in use.

9.5.2. Roles

Asset Leader, Site Technicians, Environment Business Partner, Contractors

9.5.3. Management Requirements

- No idling of plant and equipment when not in use.
- All equipment to be maintained and serviced in accordance with manufacturing guidelines.
- Routine inspections on equipment are carried out by First Solar bi-weekly by visual inspections.
- Vegetation cover to be maintained, so dust does not create a nuisance on or off-site.
- Speed limits enforced on site.

9.5.4. Records

- Weekly Environmental Inspection checklist;
- Maintenance reports.

9.6. Schedule 6 – Waste Minimisation and Management

9.6.1. Description

This schedule describes the process for waste minimisation and management in accordance with the EPA's waste hierarchy and legislative requirements. The waste hierarchy is a set of priorities for the efficient use of resources; this underpins the objectives of the Waste Avoidance and Resource Recovery Act 2001 (see

figure below, from https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy).

Waste is defined as any matter, whether solid, liquid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration of the environment. If not properly managed waste can cause pollution and adverse impacts on the environment.

The wastes hierarchy is an order of preference and states that waste should be managed in accordance with the hierarchy, with avoidance being the most preferred option and disposal being the least (refer Figure 3).

Wastes generated from commercial or industrial sources that are potentially hazardous to humans or the environment require a higher level of control and are called ‘restricted wastes’ or ‘hazardous waste’. These wastes are regulated under the clause 49 of Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act) and a formal and documented waste classification is required before these wastes can be disposed of.

The management of contaminated soil is considered separately in Schedule 8 – Land and Groundwater Contamination.

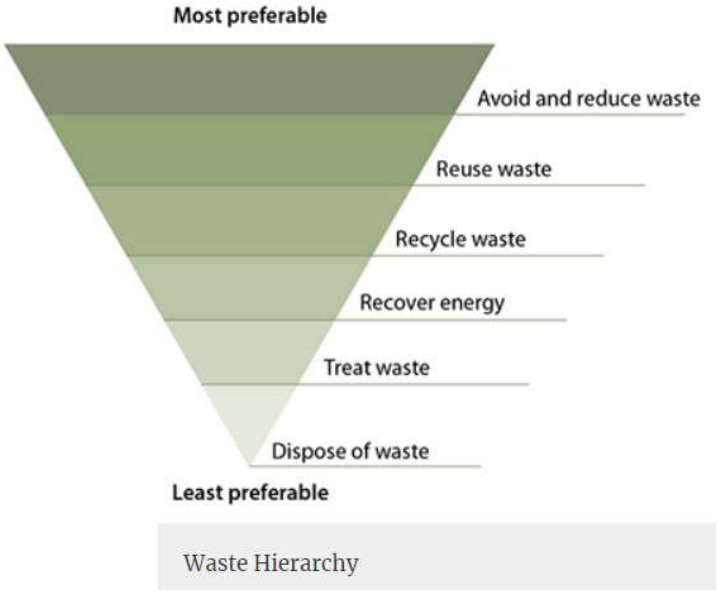

Figure 3 EPA NSW Waste Hierarchy

9.6.2. Roles

Asset Leader, Site Technicians, Contractors, Environment Business Partner, Waste Contractor

9.6.3. Management Requirements

Waste Management

The four main waste management activities to be managed on this site are:

- Waste Streams;
- Collection and Transport;
- Sorting and Processing;
- Recycling and Reuse or Disposal.

Waste Streams

The main waste streams produced on-site may include:

- general rubbish;
- office waste – paper, used photocopier and printer cartridges;
- putrescible waste – solid waste that contains organic matter, i.e. food scraps;
- solid inert waste – concrete, bricks, timber, plastic, glass, scrap metal, materials etc;
- hazardous substances – cleaning chemicals, waste oils, oily rags and spill materials etc.

Process

The site needs to identify, quantify, assess, register and monitor all waste streams generated and/or managed on this site. The following activities/methods should be followed to define the waste materials generated:

- Assessment of Waste Streams
  - All identified waste streams should be assessed in accordance with the waste hierarchy options:
    - Elimination, minimisation or waste reduction
    - Recycling or reuse opportunities
    - Treatment and disposal options
- Monitor all waste streams generated:
  - Targeted site inspections should be in place to ensure that all waste streams are managed effectively.

Waste avoidance and minimisation

The waste hierarchy will be followed (where possible) with avoidance being the most preferred option. Waste minimisation includes:

- Developing and implementing this waste management procedure to reflect statutory requirements;
- Recycling program;
- Where possible, construction waste such as concrete and spoil should be reused on site or recycled;
- Provision of the appropriate number, type specific and clearly labelled bins on site for each of the different types of waste;
- Bins monitored for cross-contamination of wastes.

Where recycling facilities are available, materials must be managed in accordance with Table 2.

Table 2 Waste Management Options

Material	Waste Management Option
Contaminated Soil	Recycle or reuse on site if opportunity exists – provided contamination is remediated. If removed from site, transported by an EPA licensed contractor and disposed in accordance with EPA regulations
Felled Vegetation (except fragments of noxious weeds)	Mulched for re-use, or used for habitat logs

Material	Waste Management Option
Plastics	Recycling facility - not to landfill
Metal / Steel	Recycle or reuse - not to landfill
Oils & Containers	Recycling facility - not to landfill
Empty paint tins	Recycling facility - not to landfill
Petroleum products from spills (absorbed in spill kit material)	Transported by an EPA licensed contractor and disposed in accordance with Laws
Timber (untreated)	Recycle or reuse – not to landfill
Litter	Recycle or dispose to landfill
Office Waste	Recycle if opportunity exists

9.6.4. Storage and handling

The following waste storage and handling measures shall be in place:

- Designated waste storage areas on site for the storage and handling of the different waste streams;
- Regular inspections undertaken including the weekly housekeeping inspections (refer to Section 6.5.1 of BHSP EHS Manual);
- Designated storage location for temporary storage of hazardous and restricted wastes;
- Hazardous and restricted wastes are to be kept in secure, clearly labelled containers within bunded areas;
- The designated waste collection contractor shall be engaged when the containers reach 75% capacity to avoid any waste overflowing.

9.6.5. Waste Transport

- Waste contractors used for the transport of hazardous and restricted wastes must be appropriately licensed by the EPA and must be able to demonstrate that waste is taken to an EPA licensed disposal facility;
- Any hazardous and restricted waste to be transported requires the use of waste tracking form for each load of waste;
- The hazard category shall be specified on the form, so to determine the type of waste facility able to accept such waste;
- All vehicles, tanks, containers and secondary containers shall be maintained at all times to prevent any spillage or leakage of regulated waste of other contaminants.
- First Solar as the waste producer, has the following responsibilities:
  - Ensure that the waste is managed according to the EPA's waste hierarchy and that the waste goes to an appropriate facility;
  - Waste tracking forms are used for transport of all restricted and hazardous waste;

9.6.6. Waste Treatment and Disposal

All waste for treatment and disposal shall be sent to a licensed waste management or disposal facility. If any on-site treatment of waste is required, this should be in accordance with EPA requirements (e.g. approval/licences).

- Methods for disposal of wastes are defined in NSW EPA's Waste Classification Guidelines which provides details on the classifications for waste materials and their appropriate requirements for transport and disposal (https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines);
- Hazardous wastes or goods shall be tracked through waste tracking forms and manifests;
- Details of all waste disposed of and recycled shall be collated annually as part of AGL's Annual Sustainability Report.

9.6.7. Records

- EPA waste transport certificates;
- Waste contractor monthly reports / invoices showing monthly totals of waste disposed and recycled;
- Footprint Workbook.

9.7. Schedule 7 – Hazardous Substances

9.7.1. Description

The purpose of this schedule is to ensure that handling and managing of hazardous substances (including storage, transport and use) are in accordance with regulatory requirements and the associated environmental risks are minimised on all sites. Disposal of hazardous substances is covered in Schedule 6 - Waste Minimisation and Management. Land and Groundwater Contamination is addressed in Schedule 8 – Land and Groundwater Contamination.

9.7.2. Roles

Asset Leader, Site Technicians, Environment Business Partner, Health and Safety Business Partner

9.7.3. Potential impacts

A variety of hazardous substances are stored at BHSP which if not managed correctly could lead to regulatory non-compliance and environmental harm. The key failures to site activities relating to hazardous waste management and their environmental risks include:

- Loss of containment during handling and transport
  - Soil and land contamination;
  - Pollution of stormwater;
  - Release into and pollution of surface waters;
  - Groundwater contamination.
- Incorrect storage and bunding
  - Bunding does not meet EPA/legal requirements;
  - Spills or overflows into land and waters from failure of storage containers and bunding.

- Incorrect or inappropriate disposal
  - EPA licensing and disposal requirements not met.

Chemicals stored on site

The following bulk chemicals are stored on site:

- All of the 40 Power Conversion Stations has a medium voltage transformer with 1880 litres of biodegradable coolant oils, which are bunded for 110% capacity;
- The site also has two auxiliary transformers on site which have vegetable-based transformer oil. These are not bunded. The vegetable-based transformer oil is not considered a dangerous good;
- Small quantities of packaged chemicals are also stored on site, namely chemicals for cleaning/wash of facility and equipment, bottled gas i.e. carbon dioxide for fire protection and lubricating oils.

9.7.4. Management Requirements

Storing Hazardous Substances

The storage requirements for hazardous substances are determined based on their physical and chemical properties. The following requirements should be met on site:

- MSDS's to be provided for all hazardous materials which are kept in the store manager's room and kept up to date via MSDS database;
- The storage areas are to be clearly signposted;
- Where different substances are stored in the same room, the MSDS will be consulted prior to storage to verify compatibility of substances;
- Non-compatible substances will be stored separately so that loss of containment will not cause a dangerous situation;
- Fuels and chemicals will not be stored or handled in the vicinity of waterways or drainage lines;
- Storage areas will be protected against damage from vehicles, mobile plant etc;
- In each area of the premises where hazardous substances are stored or handled, provision will be made for spill containment that will:
  - contain the spill;
  - enable spilled or leaked substances and any solid or liquid effluent arising from the incident to be cleaned up and disposed of.
- Waste drums will be located in designated bunds, signed and covered storage areas.

Spill containment

To minimise leaks and spills the following features have been incorporated into the design of the BHSP:

- Provision of adequate bunding for:
  - all chemical and oil storage vessels;
  - transformers (excluding auxiliary transformers);
  - all generators (bunding or other sealed enclosure).
- Bunding for all transformers are constructed to have a capacity that is sufficient to contain the entire oil inventory in addition to a suitable allowance for stormwater;

- Transformers are fitted with oil and temperature alarms to detect the loss of oil. The alarm is monitored in the AGL control room, which is attended 24 hours a day;
- The transformer bunds are fitted with Petro Plug drain valves, which drains rainwater from oil bund during normal operation and closes in contact with oil to seal bund. Bund floor is angled to drain towards Petro Plug.

9.7.5. Inspections and Maintenance

- Weekly inspections of bunds and hazardous substances storage area to ensure integrity of bunds and no evidence of leaks;
- Regular maintenance regime of plant and equipment to ensure systems and alarms are in working order;
- Weekly checks and continual replenishment of spill kits of appropriate type and number around the facility.

9.7.6. Disposing and Transporting of Hazardous Substances

All unused and excess chemicals and materials will be removed and disposed of in accordance with the MSDS and the relevant EPA waste disposal guidelines (as described in Schedule 6 - Waste Minimisation and Management).

Disposal of containers as well as any leftover contents will be tracked via the waste disposal processes outlined in the process in Schedule 6 – Waste Minimisation and Management.

Only licensed transporters will be used to collect and transport hazardous materials which will be tracked using waste transport certificates. Refer to Schedule 6 – Waste Minimisation and Management.

9.7.7. Records

- Waste transport certificates;
- Training attendance records;
- Incidents involving hazardous goods;
- Inspection and monitoring results.

9.8. Schedule 8 – Land and Groundwater Contamination Management

9.8.1. Description

This process describes the requirements for identifying, managing and minimising land and groundwater contamination on site. Land and groundwater contamination may result from accidental spills of oils or chemicals, improper handling and disposal of hazardous substances or leaks from oil storages (electrical transformer fluids/oils).

9.8.2. Roles

Asset Leader, Site Technician, Environment Business Partner, Contaminated Land Specialist/Consultant

9.8.3. Management Requirements

Preventing and Managing Spills

- Contamination from spills and leaks of fuels and chemicals will be prevented and managed with adequate bunding and regular inspections.
- All prescribed waste (wastes generated from commercial or industrial sources that are potentially hazardous) generated from works, including contaminated soil, shall be transported by contractors holding a current EPA waste tracking licence for the transportation and disposal of those substances and provide correctly completed waste transport certificates (refer Schedule 6 – Waste Minimisation and Management);
- Hazardous substances storage area to be monitored weekly for leaks and spills;
- All spills (regardless of size) are to be reported immediately to the Asset Leader (or Site Operator) as per Section 11 – Incident Reporting, Investigation and Emergency Management.

Interception of potentially contaminated materials

- Regular visual inspections shall identify any potential sources of land or groundwater contamination and prevention measures to be undertaken investigated;
- If unexpected contaminated or foreign material is identified within the site boundaries the Asset Leader and the Environment Business Partner are to be notified;
- An appropriately qualified consultant may be required to undertake sampling and analysis of the suspected contaminated materials;
- Prior to removal offsite, soil must be classified prior to off-site reuse or disposal in accordance with EPA's Waste Classification Guidelines;
- Contaminated soil and other materials (i.e. absorbent materials used for cleaning up spills) will be treated as prescribed waste and transported in accordance with EPA requirements as per Schedule 6 – Waste Minimisation and Management;
- If stockpiling of contaminated soil or other materials becomes necessary, a designated area will be set aside (lined and (if feasible) covered to prevent leaching). Any stockpiles of contaminated soil or potentially contaminated material will be clearly signposted/labelled.

9.8.4. Records

- EPA Waste Transport Certificates;
- Inspection records;
- Monitoring records (First Solar weekly site inspections to monitor the BHSP for potential land and groundwater contamination. Refer to Section 6.5.1 of the BHSP EHS Manual for monitoring requirements).

9.9. Schedule 9 – Operational Noise Management

9.9.1. Description

This schedule describes the mitigation undertaken to prevent adverse impacts associated with operational noise of the BHSP and associated overhead transmission line.

Due to the nature of the activities, plant and equipment on site during the maintenance phase, there are not expected to be sources of excessive noise or vibration. A small number of light vehicles and a portable diesel-powered generator will be the only noise-generating items remaining on the site. These items all generate noise at levels less than industrial noise guidelines, occupational noise levels and are not expected to present an environmental, health or safety impacts.

Monitoring and mitigation measures including complaint management procedure is a First Solar) requirement and are outlined in Section 6.5.9 of the First Solar EHS Manual.

9.9.2. Roles

Asset Leader, Site Technician, Environment Business Partner, Community Relations Manager, Contractors

9.9.3. Management Requirements

Design

To mitigate any potential disturbance the following measures were incorporated into the original design of the facility:

- Selection of appropriately maintained equipment and ongoing monitoring for defects (Contractor requirement (First Solar) – refer to Section 6.5.1 of BHSP EHS Manual).
- Aeolian vibration was mitigated by use of dampers installed across the Broken Hill transmission line in accordance with the requirements of AS7000 Table Z1.
- Complaints procedure.

Operation and Maintenance

The following mitigation measures will be implemented to ensure works do not create adverse effects on surrounding areas:

- Inspections check for unusual noise, any irregularities are noted and further investigated;

9.9.4. Records

- Noise complaints;
- Communications with land holders / residents.

9.10. Schedule 10 – Heritage Management

9.10.1. Description

Prior to the construction phase, an Aboriginal Heritage Management Plan (AHMP) was commissioned by AGL and prepared by OzArk Environmental and Heritage Management (October 2013). This AHMP was developed in consultation with registered Aboriginal stakeholders and the NSW Office of Environment and Heritage (OEH).

The AHMP recorded 14 Aboriginal sites, 13 of these sites are located within the main Project Area with a one further site identified adjacent to the transmission line easement. The majority of these sites were located in bare alluvial fan washout areas associated with the narrowly incised ephemeral drainage channels that trend from southeast to northwest across the study area. The sites identified were either isolated stone artefacts or low density stone artefact scatters. Three raw material types were identified, being silcrete, chert and quartz, with silcrete being dominant. Detailed descriptions of each site are provided in the AHMP.

The eight Aboriginal sites within the Impact Footprint of the project (BHS-4, BHS-5, BHS6, BHS-7, BHS-8, BHS-9, BHS-12 and BHS-14) were salvaged via surface collection and have had Aboriginal Site Impact Recording Forms (ASIRFs) produced and lodged with OEH.

Sites BHS1, BHS-2, BHS-3, BHS-10 BHS-11 an BHS-13 need to be protected through both the construction and operational phases of the solar plant.

Refer to the Aboriginal Heritage Management Plan Broken Hill Solar Plant - OzArk Environmental and Heritage Management Pty Ltd (October 2013) for more information: https://www.agl.com.au/-/media/aglmedia/documents/about-agl/how-we-source-energy/broken-hill/141001_au1-1411653-fs-cemp-broken-hill-solar-pv-power-station-final-rev-3.pdf?la=en&hash=3C298C4E4FF489400333DE325CE51049.

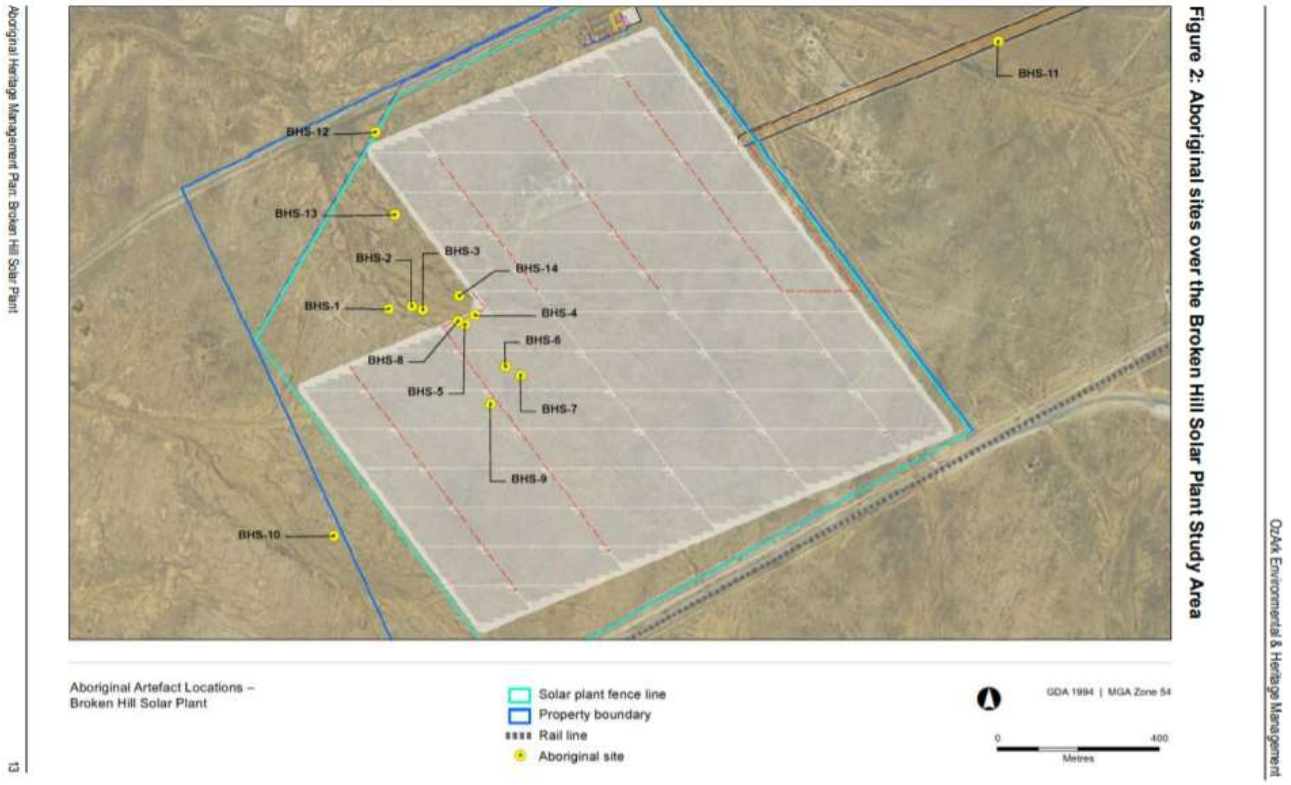

Figure 2: Aboriginal sites over the Broken Hill Solar Plant Study Area

9.10.2. Roles

Asset Leader, Site Technician, Environment Business Partner, Community Relations Manager, Contractors

9.10.3. Management Requirements

Avoid known heritage locations

Sites BHS1, BHS-2, BHS-3, BHS-10 BHS-11 an BHS-13 must be avoided.

Solar Plant staff will be made aware of these locations.

Unexpected cultural heritage finds

If during operations, a person believes or knows that they may have discovered a cultural heritage place and/or object, they must:

- Immediately stop work at the find location; and:
  - Do not remove or disturb the find;
  - Secure the find by creating an exclusion zone to prevent disturbance, removal or interference; and
  - Record the location of the find, to assist with undertaking notification and/or reporting.

- Notify the relevant AGL Leader and/or the Environment Business Partner, and all site personnel of the find ; and
- Wait until notice is received from the relevant Leader(s) and/or the Environment Business Partner on how to proceed.

If required, the site must apply for an exemption, permit or authorisation for the recovery of the object and/or human remains. Conditions prescribed in the exemption, permit or authorisation must be adhered to.

The discovery of a cultural heritage place and/or object must be reported, as soon as practicable, to the relevant regulatory authority(ies).

If it is reasonably likely that the cultural heritage place and/or object found is of indigenous origin, the site must also notify and consult with the relevant indigenous community(ies) or representative(s).

In the event of uncovering human remains on an AGL controlled site, personnel must:

- Immediately stop any works being carried-out within the area where the human remains have been discovered and restrict access to the area;
- Report the discovery to the Police, as soon as practicable, and to the relevant regulatory authority(ies) if required; and
- If it is reasonably likely that the human remains found are of indigenous origin, the AGL controlled site must also notify and consult with the relevant indigenous community(ies) or representative(s).

9.10.4. Records

- Incident reports

10. Monitoring, Measurement and Evaluation

10.1. General

Environmental inspections, monitoring and auditing will be undertaken to assess the effectiveness of management requirements specified in this OEMP and overall compliance with regulatory requirements, specifically consent condition C16.

10.2. Inspections and Maintenance

Environmental inspections occur as part of operation and maintenance and management visits (Table 3).

Table 3 Summary of BHSP general site and maintenance inspections

Inspection	Responsible Person	Timeframe	Records
Daily site checks	First Solar	Daily	Technician rounds
Weekly site inspection	First Solar	Weekly	Weekly Inspections Folder – Site Operators Control Room. An electronic copy sent to AGL and included in the monthly report
Compliance tracking	AGL	Every 12 months (or as required)	Electronically and results issued to First Solar

AGL's Compliance with management actions is to be recorded on the Compliance Tracking Program (refer to Section 10.6 and Appendix C and Section 6.8 & 7 of the BHSP EHS Manual). The Compliance Tracking Program forms an integral part of the Reporting requirements under consent condition C16a Environmental Monitoring.

Specific monitoring is identified within each of the Schedules contained in this OEMP and Section 6.5.1 of the BHSP EHS Manual.

10.3. Audits

AGL is to implement a program for independent environmental auditing in accordance with AS/NZ ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing. The audit program will ensure effective management of environmental impacts resulting from the operation and maintenance of the BHSP. To ensure continuous improvement, environmental audits are conducted as per Table 4. Section 7 of the First Solar BHSP EHS Manual provides guidance on audit requirements.

Table 4 Scheduled audits for BHSP noting the audit frequency and person's responsible

Audit	Frequency	Responsibility
Internal due diligence / compliance review audit	Three-yearly (or more frequent as required)	Asset Leader /Environment Business Partner / External consultants
Internal and external HSEMS audits	As required	Group Audit HSE Systems Team
Regulatory Authority Audits	As required	Asset Leader / Environment Business Partner
Internal audit in response to incidents, changes, events or non-conformances	As required	Asset Leader / Environment Business Partner

10.4. Corrective and preventive actions

Results of all AGL inspections and audits will be recorded and tracked in AGL's Audit Tracker or incident reporting system, myHSE and forwarded to the Asset Leader for review and coordination of follow-up actions as necessary. The Environment Business Partner will provide assistance where required. These actions will be discussed directly with the nominated responsible persons for timely action and close out. Risk registers shall be updated as required to reflect significant audit/review findings. Any environmental hazards raised, are to be recorded in the incident management system, myHSE.

10.5. Compliance Tracking Program

AGL is required under consent condition C16 to implement a Compliance Tracking Program, in Appendix C, which is updated with information provided by First Solar. First Solar is to provide AGL with a Compliance Tracking Form, which incorporates operational monitoring requirements (refer to Section 6.2 & Section 6.8 of First Solar BHSP EHS Manual). First Solar is to update the Compliance Tracking Form regularly so that AGL and project stakeholders (e.g. Department of Planning & Environment) can readily review the compliance status of the operations as required. The Compliance Tracking Program is contained within Appendix C.

11. Incident Reporting, Investigation and Emergency Management

11.1. Incident Management Process

AGL has a company-wide procedure as part of its HSE Management System - 'Incident, Near Miss and Hazard Management Procedure'.

All AGL sites need to meet the requirements of this procedure in relation to notification, risk level classification, recording, investigation and corrective actions of all actual and potential environmental incidents, near misses and hazards.

All environmental incidents need to be managed in accordance with the Incident, Near Miss and Hazard Management Procedure and all reportable or high potential incidents entered into the AGL incident management system, myHSE.

The myHSE system provides:

- a central system to report all HSE incidents, hazards and near misses;
- a place that lets you manage and close out your actions that arise from incidents; and
- a dashboard that gives you key HSE information for reporting and analysis purposes.

The following steps should be followed in the event of an incident.

Step 1 – Immediate response

Following the identification of a hazard or incident, immediate response actions must be taken by personnel at the scene only if safe and practicable to do so.

Once the necessary precautions have been carried out, the incident, hazard or near miss must be reported by First solar to provide AGL with incident details relevant to maintenance specific incidents to enable AGL to meet statutory obligations.

Step 2 – Assess incident for 'risks' and notification

The Direct Leader must establish if a hazard, near miss or incident requires notification to Regulatory Authorities in consultation with the Environment Business Partner and Group Legal (if required) as soon as possible after an incident occurs.

As a minimum, all incidents should be notified immediately to the Direct Leader and Asset Leader, who will then escalate to the Environment Business Partner.

If the incident is notifiable, which has the potential to create Director liability, the Direct Leader and Group Legal must notify the Directors of the relevant AGL entity.

Step 3 – External notification

The Environment Business Partner or Asset Leader is to complete external notification (if required) by contacting the relevant regulatory authorities.

In NSW under the POEO Act, the following agencies/authorities (for Broken Hill region) need to be notified immediately following an environment incident that causes or threatens to cause material harm, in order of priority, are as follows:

- Fire and Emergency Services: In the event of a spill or fire, the Fire Brigade should be called on 000. State Emergency Services should be called on 132500.
- Environmental Protection Authority (EPA): 131555.
- Ministry of health (via local Public Health Unit): Local Hospital is Broken Hill (08) 8080 1333
- WorkCover NSW: 121050
- Broken Hill City Council: (08) 8080 3300

As per the development consent, AGL is also responsible for notifying the Director-General at the earliest opportunity of any incident that has caused, or threatens to cause, material harm to the environment. Within 7 days of the date of the incident, AGL shall also provide the Director-General and any relevant agencies with a detailed report on the incident.

Step 4 – Internal notification

- 1. If the environment hazard, near miss or incident has been classified as a notifiable incident, the Direct Leader must immediately notify the Head of Function, Environment Business Partner and Environment Manager.
- 2. The Head of Function must immediately notify the Head of HSE and General Manager Operations Support;
- 3. The General Manager Operations Support must notify the Group Operations Executive General Manager.

Hazards, near misses and incidents must be entered into myHSE prior to the end of shift.

Step 5 – Reporting requirements

- The Reporting Person or Delegate must enter details of the incident into myHSE as directed by the Direct Leader and prior to the end of shift;
- The Direct Leader must verify details of the incident and complete the Leader Report within 2 business days of the incident being reported;
- The Environment Business Partner must complete the HSE BP Report within 7 days of the Leader Report being completed;
- The HSE Manager (Systems, Reporting and Data) must verify the HSE BP Report within 30 days (or within 7 days if Significant Incident) of the HSE BP Report being completed; and
- The Head of HSE must approve the HSE BP Report prior to distribution.

Step 6 – Incident investigation

All hazards, near misses and incidents must be investigated. The type of investigation to be carried out shall be determined by the risk classification of the hazard, near miss or incident in accordance with the Investigation Procedure (AGL-EHS-PRO-012.2).

Assign investigation in myHSE to determine root cause of the incident and to recommend actions to eliminate or mitigate the risk of reoccurrence.

Step 7 – Corrective and preventative actions

Create action plans, record actions in myHSE and assign responsibilities.

Step 8 – Monitor, verify and close incident

The incident management process should be monitored, and completion of actions should be verified. Following this, the incident should be closed in myHSE.

11.2. Lessons Learnt

Lessons Learnt are communicated throughout the business for incidents that have occurred on site and have been risk ranked (as according to FIRM) high or above. They provide a snapshot of information to bring awareness to the incident, actions that have been developed and the lessons learnt from operations. This system provides a preventative strategy for controlling future incidents of the same type. These are stored on AGL's intranet 'The Grid.'

11.3. Emergency Management

First Solar, as the operator, will implement an Emergency Response Plan to protect its people and assets, the community and the environment in the event of an emergency. This plan is reviewed and updated annually (Refer to Section 8.4 of the First Solar BHP EHS Manual).

First Solar must ensure that appropriate equipment is available to respond to emergencies and that staff are trained in proper response. With support from the AGL Health and Safety Business Partner, First Solar is responsible for ensuring that evacuation procedures, emergency contact numbers and emergency equipment diagrams are clearly displayed in work areas, and that appropriate measures are undertaken to prevent emergencies wherever possible. All personnel and visitors to site will be made aware of the site emergency procedures during the relevant site induction.

12. Management Review

12.1. Management Review and Continual Improvement

AGL is committed to regularly reviewing and continually improving its environmental performance. Review of the Environmental Management System is conducted at least every two years to ensure the systems continuing suitability and effectiveness in satisfying the Company's HS and E policies, objectives and legislative requirements. The scope of the review is comprehensive and includes:

- Findings of the independent audits;
- Performance against Key Performance Indicators;
- Major non-conformances or incidents recorded;
- Issues raised by government authorities (if any); and
- Scheduling of internal audits.

Reviews are documented, which includes any observations, conclusions and recommendations. Management shall approve the Company's related procedures and any subsequent changes or modifications.

12.2. OEMP Review

This OEMP is to be reviewed at a minimum every five years. This process is to be managed by the Asset Leader with assistance from the Environment Business Partner and First Solar where required

The review will incorporate the following:

- Review of the Environment Risk Register. This should be undertaken as a workshop involving key personnel;
- Review of any changes to the legislative and regulatory framework. This review should be led by the Environment Business Partner and involve specialist legal advice where appropriate. The impact of any legislative or regulatory changes on the management of environment impacts should also be addressed;
- Update of the OEMP based on the outcomes of the above reviews.

This OEMP will also be reviewed and if necessary, amended and updated following:

- Any major incident (review may be restricted to applicable sections);
- Upon receipt of new licences and permits; and
- When directed by regulatory authorities.

Appendix A – AGL Environment Policy

Appendix B – Biodiversity Offset Management Plan

Appendix C – Compliance Tracking Program

Appendix D – Community & Stakeholder Engagement Plan

Appendix E – BHSP Environmental Constraints Map