




BROKEN HILL BESS PROJECT
**SOIL AND WATER MANAGEMENT PLAN
STAGE 1 - BESS**

 Valmec Document No.: **4017-PLA-HS-010** Rev: **03**

 Consortium Document No.: **0775-ENV-GEN-90-005** Rev: **3**

	Name	Title	Signature	Date
Originator:	K. Brown / Fyfe	HSE Manager / Fyfe		04/04/2023
Document Owner:	Richard Green	Project Manager		04/04/2023

VAL Rev	AGL Rev	Date	Revision Status	Author	Review	Approval
A	A	17/03/2022	Issued for Review	VAL	KB	JA
B	B	11/05/2022	Issued for Review	Fyfe		
0	00	2/06/2022	Issued for Consultation	Fyfe		
1	01	18/08/2022	Issued for Consultation	Fyfe		
2	02	23/08/2022	Issued for Use	Fyfe		
3	03	04/04/2023	Issued for Use	Fyfe		

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Record of Consultation.

Date	Issues Raised	Addressed	Approved
23/06/2022	Document issued to DPE for consultation (Rev 0)	n/a	
23/08/2022	Comments received 23.08.22 via email	Comments received addressed in Rev 2	
04/04/2023	Document recommended for review by independent investigation on stockpile event to reflect site conditions and changing circumstances.	Document reviewed and updated with addition of section 4.2.1.6 Management of Change with Site Conditions.	

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Development Consent Approval Mapping

The following sections within this plan contain the Development Consent requirements to assist with confirmation of such.

Development Consent Sections	Soil and Water Management Plan References
<p>Water Supply</p> <p>20. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.</p> <p><i>Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.</i></p>	Section 4.2.1 Water Supply
<p>Water Pollution</p> <p>21. The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the POEO Act.</p>	Section 4.2.2 Water Pollution
<p>Operating Conditions</p> <p>22. The Applicant must:</p> <ul style="list-style-type: none"> (a) minimise erosion and control sediment generation; (b) ensure the battery storage and ancillary infrastructure and any other land disturbance associated with the construction, upgrading or decommissioning of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version; (c) ensure the battery storage and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the site; (d) ensure all works are undertaken in accordance with Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018), unless DPE Water agrees otherwise. 	Section 4.2.5 Operating Conditions and Controls
<p>Soil and Water Management Plan</p> <p>23. Prior to commencing construction, the Applicant must prepare a Soil and Water Management Plan for the development in consultation with DPE Water. This plan must:</p> <ul style="list-style-type: none"> (a) demonstrate how the project will meet conditions 21 and 22(a) to (d); and (b) include details of the soil erosion control measures including sediment basins. <p>The Applicant must implement the Soil and Water Management Plan for construction upgrading, operation and/or decommissioning of the development.</p>	Sections 4 to 4.2.13 and Section 5 Soil and water Management Plan

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1 INTRODUCTION

Valmec Pty Ltd is committed to continually improving our environmental performance through cost-effective solutions that minimise our environmental impact, prevent pollution and support sustainable development.

In line with our Core Value of Respect – People, Environment, Culture, we:

- Adopt environmental management as a key value, requiring staff and subcontractors to work in accordance with our environmental management plans;
- Identify all significant potential environmental impacts relevant to our operations and implement risk controls to mitigate against such impacts;
- Fulfil all of our compliance obligations relating to legislation, standards, government guidelines and environmental approvals;
- Regularly review our performance, making changes as necessary to ensure ongoing improvement; and
- Monitor advances in environmental controls, technology, and regulatory trends relevant to our operations.

1.1 PROJECT OVERSIGHT WITH SOIL AND WATER MANAGEMENT PLAN

The Soil and water Management Plan has been aligned with the Development Consent Approval under Section 4.38 of the *Environmental Planning & Assessment Act 1979* which has been authorised by the Minister for Planning and Public Spaces and is registered as the Broken Hill Battery Storage System (BESS) Project - Application Number SSD-11437498.

The Development Consent was designed against an initial Environmental Impact Statement (EIS) and assesses the environmental impacts of the project against the activities being conducted also under Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*.

The EIS was prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*.

Components of the Development Consent (Schedule 3, Section 4.1.6(g)) and EIS have been aligned into the EPC Contract which have been integrated within the Soil and Water Management Plan to ensure adequate oversight and control with the design, implementation and monitoring against the projects operational scope with the actual and potential activities that interact with the environment.

This oversight is to ensure all controls established through the Environmental Statutory and Regulatory Conditions have been defined and adequately controlled, supporting sound governance, compliance with environmental practices throughout the project life-cycle. This includes EPC Contract performance measures with biodiversity management for the project.

1.2 OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

In meeting the specific environmental performance criteria established under this Soil and Water Management Plan, the Principle Contractor (PC) must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the development, construction, commissioning and operation of the project.

This Soil and Water Management Plan shall be implemented as defined in the Construction Environmental Management Plan-4017-PLA-HS-002, which includes further controls for environmental aspects and potential impacts.

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1.3 CONTRACTOR TO PERFORM

Valmec Australia Pty Ltd (Valmec) and Fluence Energy Pty Ltd (Fluence) have agreed to establish the Consortium for the purpose of entering into the EPC Contract and performing and completing the Works in accordance with the conditions of the EPC Contract.

1.4 PROJECT DESCRIPTION

AGL Macquarie Pty Limited (AGL) will build, own, operate and maintain a Battery Energy Storage System (BESS) with a capacity of approximately 50 megawatts (MW) and 50 megawatt-hour (MWh) (Facility). The Project would provide a range of network services to augment the reliability of energy supply at Broken Hill. The Project would also provide storage and firming capacity to the National Energy Market (NEM) as well as additional services to assist grid stability including frequency control ancillary services.

The proposed location of the BESS (the Site) is on two lots at 74 to 80 Pinnacles Place, Broken Hill, 2880 (Lots 57 and 58 of DP 258288). The Project would also involve the installation of a transmission connection between the Site and the nearby TransGrid Broken Hill substation, which would traverse Lot 7302 DP1181 and Lot 2 DP 1102040.



Figure 1: Proposed project boundaries

The Facility shall be constructed and installed by the Consortium within the battery limits defined in the Principal's Requirements (refer Figure 1 above). For more detail on the Project's Scope of Work, refer BHBESS - EPC Contract - Schedule 03 (Principal's Requirements) - Rev 4 FINAL.

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1.5 PURPOSE

The purpose of this plan is to describe the processes and workplace arrangements that the Consortium uses to minimise its environmental impact, manage compliance with project statutory and regulatory conditions, with a project objective of preventing pollution and delivering sustainable development solutions and initiatives.

1.6 SCOPE

This plan applies to all work activities under the scope of the AGL Broken Hill BESS Project, referred to hereafter as “the Project”.

Specific provisions of this plan may be substituted with alternative arrangements if they provide a level of environmental compliance and minimises impact better than provided by this plan, at the approval of the Project Manager in consultation with the HSE Lead for the project.

1.7 DEFINITIONS

The following definitions apply for the purpose of this plan:

Term	Definition
CEMP	Construction Environmental Management Plan.
Competent	Ability to apply knowledge and skills to achieve intended results from operational experience and education.
Conformity	Fulfilment of a requirement (ie. EIS, Development Consent, EPCC, and CEMP).
DC	Development Consent as required by the Minister for Planning and Public Open Spaces and Section 4.38 of the Environmental Planning & Assessment Act 1979.
DPE Water	Department of Planning and Environment NSW.
EIS	The Environmental Impact Statement for Broken Hill Battery Storage System
Environment	Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships.
Environmental Aspect	An element of an organisation's activities, products, and services that interact with the environment. These can include discharges to water, emissions to air, waste and use of natural resources and materials.
Environmental Impact	Any change to the environment, whether adverse or beneficial, resulting from a facility's activities, products, or services (the effect that people's actions have on the environment).
EPCC	Engineer Procure Construct Contract.
Incident	Occurrence arising out of or in the course of work that could or does result in death, injury or ill-health, or equipment or environmental damage. <ul style="list-style-type: none"> • ‘Accident’ refers to incidents incurring injury, ill health, damage or harm. • ‘Near-miss’ refers to incidents not incurring injury, ill health, damage or harm but have the potential to do so.
Material harm	Is harm that: <ul style="list-style-type: none"> • involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development.
Non-compliance	An occurrence, or development that is a breach of this Soil and Water Management Plan but is not an incident.
Non-conformity	Non-fulfilment of a requirement (ie. EIS, Development Consent, EPCC, and CEMP).
POEO Act	Protection of the Environment Operations Act 1997.
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements.
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable, non-polluting and sustainable.
Significant Environmental Aspect	An Environmental aspect that has significant characteristics in terms of risk impact (ie. Legal requirement, protected species, habit, licence conditions), and if not controlled can cause a significant impact (ie. Pollution, degradation, environmental harm, prosecution, breach, non-compliance and or non-conformity).

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Term	Definition
Shall	'Shall' indicates a mandatory provision within this Biodiversity Management Plan.

2 PLANNING

2.1 HSEQ POLICY AND CORE VALUES

The Consortium and its subcontractors will conduct all work in accordance with the following:

- Valmec HSEQ Policy - VAL-POL-001
- Valmec Core Values - VAL-POL-002

These will be posted on the noticeboard/s on the Project and are freely available to all interested parties via our website www.Consortium.com.au. All personnel are introduced to Consortium policies during their induction.

2.2 CONTEXT OF THE ORGANISATION

The Consortiums executive management and board review and evaluate the context of the organisation with all projects during the planning phases to address risk and opportunity, which relate to external and internal factors, supporting the strategic direction of the business and the needs and expectations of interested parties.

Interested parties are those parties who may receive or be impacted by our products and services, or those parties who may otherwise have a significant interest in the project. Refer to Appendix 1 Interested Party Analysis to address risk and opportunity with stakeholders.

Any project improvement planning is prepared following periodic reviews of any planning arrangements and to assist with any management of change towards compliance and or continual improvement, to ensure the project is meeting environmental performance objectives in line with the project deliverables.

2.3 COMPLIANCE OBLIGATIONS

For the purposes of this plan, the project and subsequently Consortium’s environmental compliance obligations are contained within the following legislation as defined from the EIS, Development Consent and EPC Contract and includes:

- Protection of the Environment Operations (POEO) Act 1997
- Environmental Planning & Assessment Act 1979
- Environmental Planning & Assessment Regulation 2000
- Water Management Act 2000
- Protection of the Environment Operations Act 1997
- Environmental Subordinate Legislation and Guidelines
- Industry and Governmental Approval Bodies
- Australian and International Standards
- Soils and Construction (Landcom, 2004) – Storm Water Management Manual
- Projects Legal Register (see Appendix D)

Actions to address specific compliance requirements have been listed in the relevant sections of this plan inclusive of conditions set by the Development Consent and included in the Projects Legal Register.

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Environmental legislation is also accessed through Lawstream via the Consortium intranet, or via the NSW EPA government website. Environmental standards are also through SAI Global via the Consortium intranet, or requested through the Consortium HSEQ team. Other documentation may be requested through the relevant Consortium or AGL representative.

2.4 ENVIRONMENTAL PERFORMANCE INDICATORS

Within the context of Consortium objectives, AGL policy, compliance obligations and community expectations, the following environmental targets have been developed:

Performance Indicator	Target	Result
<i>General</i>		
Number of major non-conformances identified during audits	0	
Number of environmental incidents notifiable to the regulator	0	
Number of environmental regulator notices, fines or prosecutions	0	
<i>Aspect-specific</i>		
Number of erosion and sediment related complaints	0	
Number of dust related complaints	0	
Number of hazardous substance spills > 20 L	0	
Number of hazardous substance spills not contained or completely cleaned-up	0	
Number of unauthorised water discharges into waterway (including where/if Dewatering / hydrotesting is required)	0	

2.5 ENVIRONMENTAL AWARENESS

The ‘Environmental Induction’ module of the Consortium is an awareness module that introduces employees and subcontractors to:

- The importance of environmental management;
- The Environmental Policy;
- Consortium’s significant environmental aspects and the key risks associated with each aspect;
- The minimum operational controls required for each risk and associated environmental aspect;
- The monitoring and effectiveness of operational controls; and
- The process for reporting environmental incidents.

Project specific environmental requirements shall be focused on within the induction stage with environmental aspects, specifically those of significance, obligations and associated operational controls. Specific aspects relating to risks associated with soil and water (sediment management, water supply, pollution, dewatering, chemical storage) will be highlighted within the induction and associated controls and procedures made aware to all personnel to understand the obligations and assessments to be completed prior to proceeding with work to avoid accidental spills, pollution and site preparedness prior to end of day site departure.

All individuals shall complete the Project Specific Induction before working onsite.

Additional refresher training will be conducted on various environmental matters from time to time during dedicated training sessions, emergency drills or periodic toolbox meetings. Subcontractors will be required to participate if they are at the workplace at the time and the content relates to their scope of work.

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Training on the environmental aspects specific to everyone’s individual role will be addressed during other training specific to that specific role (ie. Soil and Water Management). Training in this context refers to a range of methods (e.g. formal in-house work group training, one-on-one coaching and online modules), which will be documented against learning outcomes and required competency.

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2.6 ROLES AND RESPONSIBILITIES

All individuals within the project are responsible for following processes and taking all care to control the environmental conditions within their specific duties and overall obligations. All individuals are accountable for achieving their objectives within the area of responsibility, as a minimum and as outlined below:

2.6.1 Senior Management (Directors, General Managers and Operation Managers)

Responsible for the overall environmental performance of the Consortium including (but not limited to):

- Maintain an awareness of environmental matters relevant to Consortium's scope of work.
- Ensure resources are provided and processes established to minimise environmental risks.
- Ensure processes are in place to ensure reported incidents and other environmental issues are addressed appropriately.
- Ensure processes are in place to comply with legal requirements.
- Verify that resources and processes are in place and being used effectively.
- Monitoring and measurement of Environmental conditions are being evaluated and reported upon.

2.6.2 Project Manager

Overall responsibility for establishing any further Consortium Environmental duties within the project, including (but not limited to):

- Ensure that this plan meets workplace and AGL needs, and is fully implemented.
- Demonstrate visible leadership and lead by example at all times.
- Report and escalate Environmental incidents in accordance with the agreed timeframes.
- Manage relationships within the Consortium, in liaison with Consortium Management and AGL.
- Liaise with the HSE Lead with all areas of this plan, implementation and performance evaluations.
- Action any risks or opportunities with this plan.

2.6.3 Immediate Managers and Supervisor(s)

Responsible for managing the environmental compliance within the project and their work crew(s) with activities, that interact with the environment and controlled through this plan, including (but not limited to):

- Demonstrate visible leadership at all times with Environmental, activities & associated controls.
- Communicate any risks with construction activities that interact with the Environment to work crews at pre-start meetings and identify adequate controls.
- Review authority to work (ATW), safe work method statements (SWMS), job hazard environmental analysis (JHEA) and ensure the key environmental risks (Environmental Aspects) of the crew's work activities are adequately identified and controlled as required by this plan.
- Ensure that any ATW or permit to work issued is understood and Environmental controls applied with the permit holder and the work crews.
- Ensure any Environmental "Hold Points" are listed and detailed on the JHEA.
- Stop work if conditions change or the required Environmental controls are not fully established or not effective in meeting the conditions of this plan.
- Resolve Environmental hazards or concerns that are reported by the work crew and escalate as required.
- Coordinate any local emergency response within the work area for any actual Environmental impacts.
- Work closely with the HSE Lead and HSE Advisor within the project to ensure compliance obligations with activities are understood and achieved within this plan.
- Liaise with the HSE Lead and HSE Advisor with all areas of this plans implementation and performance evaluations.

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2.6.4 HSE Lead

Responsible for ensuring Environmental Management systems and supporting activities meet the conditions of this plan and provides oversight with such conditions within the project with pre-mobilisation, mobilisation, execution, performance evaluation, reporting, incident management, initiatives and improvement activities.

The HSE Lead shall be onsite and shall be responsible for operational oversight with assurance audits, Environmental controls and the HSE Advisor for the project, including (but not limited to):

- Assist with the mobilisation and implementation of this plan.
- Demonstrate visible leadership by example at all times within the Environmental function.
- Monitor the implementation of this plan and overall Environmental performance outcomes.
- Assist Line Management to ensure this plan meets the needs of AGL and within the project.
- Ensure that all incidents and non-conformances are investigated according to the level of risk exposure.
- Schedule Environmental assurance audits and inspections to meet project and AGL requirements.
- Assist with reporting on Environmental objectives and performance within the project.
- Monitor the status of corrective actions arising from audits and inspections and evaluate effectiveness.
- Support the Project Team with all Environmental requirements, guidance, and information.

2.6.5 HSE Advisor

The HSE Advisor is responsible for implementing, supporting and monitoring Environmental controls and performance through assisting workplace personnel to meet their Environmental duties within this plan.

The HSE Advisor requirements include (but not limited to):

- Demonstrate visible leadership by example at all times within the Environmental function.
- Assist other workplace personnel in understanding and fulfilling their Environmental responsibilities.
- Maintain Environmental training and awareness to schedule with inductions and onsite activities.
- Facilitate Environmental activities against this plan and monitor effectiveness with operational controls.
- Monitor workplace performance against this plans Environmental objectives.
- Maintain oversight control of all plant, equipment, chemical storage, lay-down and construction areas.
- Coordinate Environmental Emergency Response readiness and activities.
- Conduct Environmental assurance audits and inspections with activities against this plan.
- Maintain Environmental communications relevant to the work scope and project phases.
- Maintaining corrective actions arising from audits and inspections, evaluating effectiveness.
- Liaise with the HSE Lead with all areas of this plan's implementation and performance evaluations.

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2.6.6 All Personnel

All personnel are responsible for taking reasonable care to ensure they understand the requirements of this plan within its operational scope of the project, including (but not limited to):

- Understanding the Environmental risks and associated controls with disturbance to the ground and Soil and Erosion Management during construction activities.
- Not proceeding if unsure of environmental responsibilities and requirements and seek advice from their immediate Supervisor, HSE Advisor or HSE Lead.
- Comply with the requirements of this plan, authority to work (ATW), safe work method statements (SWMS), job hazard environmental analysis (JHEA) and ensure the key environmental risks with the work activities are adequately identified, understood and controlled as required by this plan.
- Ensure any Environmental “Hold Points” are listed and detailed on the JHEA.
- Report and control any Environmental incidents that occur from construction activities, immediately to their supervisor for response and escalation.
- Support the implementation of this plan and identify any areas of Environmental Improvement.

2.6.7 Consortium Obligations – Soil and Water Management

Obligations under the Environmental Impact Statement, Development Consent and EPC contract for Soil and Water Management are detailed within this plan and supporting information referenced.

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3 ENVIRONMENTAL ASPECTS, ASSOCIATED IMPACTS AND RISK CONTROLS

Environmental Aspects are elements of Consortium’s activities, products or services that can interact with the environment. Examples of environmental aspects include:

- Project activities that interact with air, land, water, flora, fauna, community, heritage.

Environmental impacts are any changes to the Environment (adverse or beneficial) from the Consortium’s activities, products, or services. Examples of environmental impacts include:

- Pollution, degradation, noise, dust, visual amenity, light, odour, complaints, unauthorised discharges, air quality, water quality, soil quality, erosion, loss of habitat.

Environmental Aspects that are classified as **significant** are those aspects of priority which are required to be controlled. All aspects of significance are listed on the Projects Environmental Aspects Register

The project has held a Construction Risk Assessment Workshop (CRAW) and addressed all Environmental aspects within the project scope and identify required controls. An Environmental Aspects Register has been developed which shall specify controls for all Environmental aspects, especially those of significance and detail such controls within the Management Plans specified within the Development Consent and EPC Contract. Refer to the projects Environmental Aspects Register.

Environmental aspects and impacts risks are reviewed at least annually and at the planning phase of major projects. The environmental component of the risk register is maintained in business solution is subsequently updated as required. A copy of this register is contained within Appendix C.

3.1 ENVIRONMENTAL ASPECTS RISK MANAGEMENT PROCESS

The Consortium for the project has developed a Construction Risk Assessment which address all Environmental aspects within the project scope and identify required controls. An Environmental Aspects and

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Impacts Risk Register has been defined which specifies such controls for all Environmental aspects within this plan, required by Environmental Impact Statement the Development Consent and EPC Contract.

The Environmental Aspects Register for the project details Soil and Water Management risk factors and associated controls that shall be applied with all construction activities.

Critical controls for Soil and Water risks are to be listed on the authority to work and safe work method statement as a minimum, with any further controls and hold points are also to be listed within the job hazard environmental analysis (JHEA) with construction activities.

All construction activities and Environmental risks are to be understood and applied by the individuals supervising and conducting such activities, and all Environmental operational controls are to be verified with all personnel prior to activities occurring and when any change with the activities or work scope occurs.

This risk register is to updated as required, including when new hazards are identified and corrective actions are close out. The current project risk register completed post the project kickoff HAZOP meeting is included in Appendix C.

3.2 SOIL AND WATER MANAGEMENT AWARENESS INDUCTION TRAINING

On mobilisation all staff, workers (including contractors and visitors) shall undergo training as part of their onsite approval conditions, which will include the importance of Soil and Water Management and operational controls within this plan, inclusive of roles and responsibilities.

The training will also focus on the Consortiums Environmental Policy, Environmental Aspects and associated impacts, operational controls to protect unauthorised and or uncontrolled discharges to land which may impact other receptors (i.e., flora, fauna, and receiving waters) within the construction footprint. Training will also focus on, water management, erosion and sediment controls, unexpected finds and emergency response, which are also supported through the following CEMP. Refer to:

- 4017-PLA-HS-002-Broken Hill BESS Project Construction Environmental Management Plan

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4 SOIL AND WATER MANAGEMENT PLAN

The Soil and water Management Plan describes how the project manages and minimises erosion and sediment generation, preservation and use of water, management of surface and ground water, drainage, water pollution and prevention, soil and water control measures for construction, decommissioning, upgrading and operation within the project.

The plan details the activities, processes, and methods to achieve these activities and includes a description of the control measures and timeframes that require implementation for:

- Water supply and water pollution;
- Erosion and sediment control;
- Stormwater management;
- Drainage systems and management;
- Stockpile management;
- Unexpected finds and soil contamination(s); and
- Soil and water management control measures.

The Soil and Water Management Plan (SWMP) is part of the Construction Environmental Management Plan (CEMP) and will be supported by a Job Environmental Hazard Analysis (JHEA) to cover the following requirements:

- Measures to manage erosion and stormwater.
- Stockpile management procedures for segregating spoil and preventing cross contamination of clean spoil (virgin excavated natural material or excavated natural material) with potentially contaminated soil.
- Measures for stockpiles and storage areas to be located near the upstream (eastern) end of the Site, to prevent any loose materials being washed away into the downstream drainage system.
- Processes for handling and storing spoil, including potentially or known contaminated soil/fill in accordance with the Protection of the Environment Operations Act (POEO) 1997, and protocols for waste classification and tracking for off-site disposal.
- Measures to manage the unexpected interception of groundwater during construction.
- Measures to manage unexpected contamination finds during construction.
- Emergency response measures including clean-up and reporting procedures.

4.1 SOIL AND WATER MANAGEMENT PLAN OPERATING CONDITIONS OBJECTIVES

The following operating conditions objectives for the project with the Soil and Water Management Plan include (But not limited to):

- Minimise erosion and control sediment generation;
- Ensure the battery storage and ancillary infrastructure and any other land disturbance associated with the construction, upgrading or decommissioning of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) Manual, or its latest version;
- Ensure the battery storage and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the site; and
- Ensure all works are undertaken in accordance with Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018), unless DPE Water agrees otherwise.

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4.2 SOIL AND WATER MANAGEMENT PLAN AND MITIGATION CONTROL MEASURES

The following Soil and Water Management Plan and mitigation control measures during construction outline the requirements and operational controls that are to be established, monitored and maintained throughout the construction phases and stages and shall include the following (But not limited to):

- Water supply and pollution;
- Erosion and sediment controls;
- Operating conditions and controls;
- Drainage and stormwater management;
- Spill containment;
- Aqueous Wastes
- Unexpected finds and contamination(s);
- Earthworks compaction and moisture control;
- Disposal of surplus soil(s);
- Filling and compaction; and
- Cleaning and rehabilitation of site.

4.2.1 Water Supply

The project must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply. The amount of water required by the project per stage is to be calculated prior to commencement of the project and the delivery and usage of water monitored and recorded to monitor the volumes utilised is in accordance with the calculated quantity.

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.

4.2.2 Water Pollution

The project must ensure that the development does not cause any water pollution, as defined under Section 120 of the *POEO Act Prohibition of Pollution of Waters* which states:

- A person who pollutes any waters is guilty of an offence.
- An offence of water pollution committed by a corporation is an offence attracting special executive liability for a director or other person involved in the management of the corporation.
- Pollute waters includes cause or permit any waters to be polluted.

Daily shutdown procedures must include the inspection of the site sediment control requirements and installation of any controls to mitigate the potential for any sediment transportation or loss should a rain or wind event occur prior to the next active workday.

Weekly inspections must ensure all chemicals are correctly stored and banded as required onsite, appropriately labelled and current SDS available. Sediment fence around the downstream perimeter of the site must ensure that the control device is in a working manner (not laden with sediment, properly keyed into soil). All soil stockpiles are to be monitored for signs of slumps or sediment loss lying against sediment fence barrier.

Upon construction of the sediment control swale and basin, these infrastructures are to be inspected for any signs of erosion, and where sighted rectified as appropriate (eg. Soil binder or geotextile on bed/banks, rock spoil (with geofabric beneath) around discharge point from basin so no sediment loss occurs external to the site).

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4.2.3 Erosion and Sediment Control

This Stormwater Management Plan (SWMP) has been developed prior to project mobilisation and implemented in accordance with project requirements, which includes an Erosion and Sediment Control Plan (ESCP) which is part of the CEMP (4017-PLA-HS-002).

The ESCP outlines how soil sediments and pollutants will be prevented from leaving the project site during construction and outline responsibilities for maintenance and corrective actions inclusive of required operational controls which shall be monitored and evaluated for effectiveness during the construction phases and stages.

Disturbed land within the project construction zone has the potential for erosion and sediment run-off, particularly when large areas of land have been exposed, and this can lead to public nuisance, impeded drainage infrastructure and potential impacts to biodiversity ecosystems.

Erosion & Sediment controls shall be implemented as detailed within this plan and includes at a minimum:

- Quantity of land disturbed at any one time will be kept to the minimum required by the works schedule, and various work schedules will be coordinated to minimise the time that disturbed land remains exposed.
- An erosion and sediment control process shall be approved by the principal and be applied with disturbed land.
- Allow stormwater to pass through the site in a controlled manner and at non-erosive flow velocities.
- All erosion and sediment controls to be inspected before and after significant wet weather events. The inspection to focus on suitability and serviceability of the controls. Additional controls will be installed or repairs made prior to or after wet weather events when required.
- Plant and vehicles will follow designated traffic ways within the traffic management plan to avoid disturbing stabilised cleared land.
- Long-term soil stockpiles will be located away from natural waterways and other sloped areas.
- Minimise negative impacts to land or properties adjacent to the activities (including roads).
- Regular inspections of sediment and erosion controls utilised on the project with any repair works completed immediately to ensure continued serviceability.

4.2.4 Dust Management

Disturbed land has the potential to generate large amounts of dust that is blown to adjacent properties. Generated dust can cause nuisance and inconvenience to other land users, and high levels can damage crops and other plant life or cause adverse health effects. The following controls will be implemented to minimise dust generation:

- Quantity of land disturbed at any one time will be kept to the minimum required by the works schedule, and various work schedules will be coordinated to minimise the time that disturbed land remains exposed.
- Water carts, or similar suitable devices, will be used to water designated traffic ways and other dust-generating areas to minimise the levels of dust generated.
- Plant and vehicles will stick to designated traffic ways wherever possible to avoid disturbing stabilised cleared land, and their speed will be limited to reduce dust generated on unsealed roadways.
- If planned works contain a significant risk of nuisance dust (e.g. extensive clearing), a Site Dust Risk Assessment (VAL-F-050) will be completed and prevention / control measures implemented accordingly.

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4.2.5 Operating Conditions and Controls

The following operating conditions for soil and water management shall be implemented and adhered to for the project:

- Minimise erosion and control sediment generation;
- Ensure the battery storage and ancillary infrastructure and any other land disturbance associated with the construction, upgrading or decommissioning of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) Manual.
- Ensure the battery storage and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the project site; and
- Ensure all works are undertaken in accordance with Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018), unless DPE Water agrees otherwise.

4.2.6 Drainage and Stormwater Management

The Consortium shall provide systems for the collection, treatment, and final disposal of all wastewater from the project facility. Refer to **Appendix B Stormwater Concept Plan** and the EPC Contract Stormwater Management.

Site drainage will be designed in accordance with AS3500 Plumbing and Drainage and shall be designed to cater for an increase in flows generated by the Site to limit post-development flows to pre-development flows in all events up to and including a 1% annual exceedance probability (AEP) storm event, in accordance with the Intensity-Frequency-Duration design rainfalls in conjunction with the most recent Australian Rainfall and Runoff.

Site drainage shall also incorporate spill containment measures, both for bunded and non-bunded areas. Storm water from roadways and hardstand areas shall be directed, using kerb and gutter or concrete spoon drains, to underground drains via inlet pits.

Drains shall grade towards the stormwater pond. Rainfall over gravelled and native landscaped areas shall be allowed to seep into the soil.

Storm water from roofed buildings shall drain directly to the stormwater pond. Excavations shall be fully drained prior to any construction works within them.

4.2.6.1 Subsurface Drainage

Pipes used in subsurface drains shall comply with AS2439.1 Type 2. The strength shall not be less than Class SN8. The minimum diameter of pipes shall be 100mm. The subsoil trench width shall be not less than 300mm. The distance between the top of the pipe and the sub-base shall be not less than 300mm, or 400mm to finished earthworks level in the switchyard generally.

4.2.6.2 Groundwater Management

Prior to any construction works, any hazards and risks to groundwater need to be identified and measures undertaken to prevent any contamination to groundwater resources. The Groundwater Investigations completed prior to the EIS found that the Project is unlikely to intercept groundwater. Soil logs undertaken at the Site ranged from 3 to 8 m deep with no groundwater encountered, however historical groundwater levels within a 1km radius of the site identified that standing groundwater could be as close as 2 m below ground level (bgl) but could also be up to 20 m bgl.

A water monitoring program should be established to determine baseline levels for water quality monitoring be established in accordance with the NEPM guidelines.

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Where groundwater is unexpectedly intercepted during construction works (i.e. leaching from a shallow water table), works are to be suspended immediately to limit any potential contamination of the groundwater. A Water Access Licence (WAL) must be obtained as per the Water Management Act 2000 unless the take is less than 3 ML of water per year for any aquifer interference activities listed in Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018.

Where contamination is suspected to have occurred, notification of the incident must be completed immediately with an investigation completed within the required timeframes. A plan should be considered to determine how the area of the potential contaminating activity can be contained prior to proceeding with any further works. This plan must also consider whether any dewatering is required, and if so how the dewatering will be undertaken and where any potential contaminated water will be disposed of in accordance with regulations.

4.2.7 Spill containment

Batteries contain hazardous substances. As such, spill containment measures shall be incorporated into the design of the battery enclosures to protect the site and downstream environment should there be a spillage on-site. A proprietary system is proposed to manage this spill containment. Therefore, no additional spill containment is required as part of the Stormwater Management – Concept Design for the Project.

4.2.8 Aqueous Wastes

Contaminated aqueous effluents may include (but not be limited to) water contaminated with oil, coolant inhibitors or other compounds that may impact the environment surrounding the Facility if released into that environment through the storm water systems or otherwise.

The Consortium shall install systems for the safe collection, storage and final disposal of all the contaminated or potentially contaminated aqueous effluents from the Facility and common services facilities (so as not to cause Contamination) as outlined within this plan and the CEMP.

4.2.9 Unexpected Finds and Contamination

An unexpected finds process has been detailed within the EMS (4017-PLA-HS-010) Section 6.5.1 and appended to this plan as Appendix F) to ensure that potentially contaminated material is appropriately managed. The process forms part of the Environmental Management Strategy for the project and ensures that any material identified as contaminated is being disposed off-site, with the disposal location and results of testing submitted to AGL prior to approval and removal from the project site.

The below objectives outline the purpose and intent of the unexpected finds procedure:

- Prevent exposure of contaminated soil, sediment and groundwater to the human population whilst occupying, working on or using the site;
- Appropriately manage and/or dispose of soil, water and sediment waste disturbed during development activities in accordance with relevant EPA guidelines.
- Removal of potential ongoing sources of environmental contamination (unexpected finds such as historical sub-surface petroleum storage, if encountered) in an appropriate manner with guidance from suitably qualified personnel;
- Given asbestos in soil has not currently been identified during limited intrusive investigation activities, should asbestos be identified, its occurrence will be assessed and managed via application of the Unexpected Finds Procedure;
- In the event that oily materials are encountered, the provisions outlined in the unexpected finds protocol will be implemented, comprising inspection, testing and appropriate action as advised by the Remediation Consultant.

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- The sampling frequency of the identified substance/materials shall meet the minimum requirements outlined in EPA (1995) in addition to those outlined in the RAP. In the event of an Unexpected Find, it is anticipated that the suitability of the implemented characterisation assessment and the proposed validation strategy be discussed with the site auditor prior to finalisation of the Unexpected Find works.
- Unexpected finds to be recorded in the material tracking plan, where encountered.

4.2.10 Earthworks Compaction and Moisture Control

Prior to beginning excavations or foundation preparation, the surface should be stripped of all vegetation and topsoil. Vegetation and topsoil should be stored in temporary stockpiles available for subsequent reuse if required.

Remove the transformer from site and recover as much metal as possible. Test soil surrounding the transformer for contamination. If the soil is contaminated, soil remediation work shall be carried out.

4.2.11 Stockpile Management

Conservation of all soils that are disturbed by the construction works must be managed through best practice soil management practices so that soil resources are able to maintain their beneficial reuse in the enhancement or the rehabilitation of the site.

Construction must be undertaken using the following methodology:

- Clearing and mulching woody vegetation including root balls;
- Clearing weeds and stockpiling separately for treatment (bury or remove off site);
- Stockpiling mulch or using as ESC (e.g. mulch berms);
- Topsoil is to be stockpiled separately to excavated subsoils or used as temporary ESC. The top 50mm should be stockpiled separately to preserve the seedstock;
- Topsoil stockpiles should not be stored in stockpiles greater than 2m in height (to avoid overheating and breakdown of quality);
- Stockpiles are to have sediment fence installed 1 m beyond the toe of the batter on the downstream side to prevent any soil loss;
- Stockpiles must be well away from the highbanks of any waterways, not located within overland flow paths and/or including any infrastructure that discharges to waterways within the project area;
- During Stage 1 of the construction of the BESS, stockpile locations are to be located such that they do not overlap any drainage infrastructure (sediment control swale or sediment basin) and are adequately bunded with sediment fence on the downstream side of the bunds to avoid any transportation of sediment towards these drainage infrastructure (as shown in Appendix E);
- Where stockpiles are located in close proximity to stormwater infrastructure, additional controls such as gully bag / filter sock around kerb inlets (as appropriate);
- Where topsoil stockpiles are to be in-situ long term (i.e. greater than 12 weeks) protection of the surface with grass seed and/or soil binder to be considered.

4.2.12 Stockpile Management and disposal of contaminated soils

Where soils are potentially or known to be contaminated, they are to be separately stockpiled prior to being disposed of offsite. These stockpiles must:

- Contained in a manner to limit contamination to the groundwater, any nearby surface water and the area they are sited on;

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- Preferentially covered up to limit runoff;
- Where possible (for smaller volumes) contained within skip bins and covered up;
- Be tested for contaminants by a suitably qualified personnel to determine the appropriate disposal methodology and site that is able to receive the contaminated soil;
- Be disposed of by an appropriate sub-contractor;
- Have completed all necessary paperwork to track the offsite disposal location and volume.
- If asbestos or pfas is considered to be amongst the contaminants, works are to cease, the area excluded and fenced off and be managed in accordance with the recommendations of a suitably qualified professional.

Prior to disposal, consideration of whether there is a duty to report is required in accordance with the legislation and the incident reporting requirements of the project must be completed.

4.2.13 Disposal of Surplus Soil(s)

The Consortium is responsible for all surplus soil of excavated material not suitable for re-use. Surplus soil and excavated materials shall not be disposed of on the site, unless by arrangement with the Principal.

Topsoil should be used for re-vegetation and landscaping on fill batters and the like. Excess topsoil shall be spread in low stockpiles or berms not exceeding 1m depth adjacent to roadwork to encourage regrowth from seeds and organic matter in the topsoil. The disposal of topsoil shall not impact on the effectiveness of the drainage systems constructed on the site.

4.2.14 Filling and Compaction

Excavation shall not be backfilled until structures such as drainage, cables and other construction details have been inspected, tested and approved. All soil fill material used shall be thoroughly compacted until the specified degree of compaction is obtained.

The Consortium shall ensure the fill material is at its optimum moisture content for compaction. The dry density of compacted soil shall not be less than 95% of the value obtained in a standard laboratory test. Fill material shall be free from organic or unstable matter, alluvium and other deleterious material such as metal, plastic, wood etc.

Rocks and boulders shall be broken up to such a size as to be readily incorporated in the spreading thickness of layers of fill construction. The material forming the upper surface of fill shall contain sufficient binder to achieve a dense working surface.

4.2.15 Cleaning and Rehabilitation of Site

The Consortium is responsible for cleaning the Site to an equivalent state to which it was originally found, including but not limited to the reinstatement to original condition of vegetated areas, gates, fences, and other affected property.

This will be subject to imposition of the new permanent assets such as roads, dams, fencing, gates, hardstands, drains, culverts and buildings. The general approach for the rehabilitation shall be agreed with the Principal, included into the Construction Environmental Management Plan, and should include as a minimum the following:

- Compliance with the requirements of the Authorisations and legislation.
- Battering of any cut and or fill on Site shall be appropriate for the use (stabilisation, drainage, erosion, foundations, roads etc) proposed.
- The revegetation of the disturbed areas including drainage.

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- The placement of sufficient topsoil over any disturbed areas to enable revegetation to occur must comply with the intended use and Design Life as required.
- Relocation, removal and or spreading of any excess material stockpiled during construction.

All rehabilitation within the project site is managed through the Development Consent and EPC Contract obligations.

4.2.16 Management of Change with Site Conditions

All site conditions are assessed on a daily basis against the construction activities inclusive of a daily audit and inspection of soil and water management and sediment control(s) in accordance with Section **4.2.5 Operating Conditions and Controls** of this plan to ensure that any other land disturbance associated with the construction and upgrading of the development have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual.

All site conditions and changes are also managed as detailed through section **5.2 Audits and Inspections** of this plan.

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5 MONITORING AND IMPROVEMENT

5.1 PERFORMANCE REPORTING

Performance reporting against environmental objectives and indicators shall be conducted as detailed within this plan, evaluated for compliance and communicated within the Consortium consultation and reporting process.

The monthly HSE Report must contain, as a minimum:

- Details of all HSE Incidents (both actual and potential);
- Details up to date Corrective Actions Registers;
- Summary of key correspondence with Government agencies, including any notices or directions issued by a Government agency in relation to HSE matters;
- A complaints register;
- Status of the Risk Register, including closure of action items and methods used and forthcoming activities.
- Leading indicators (actual against planned) and lagging indicators:

Lagging Indicators:

➤ Environmental Incidents

<i>General</i>
Number of major non-conformances identified during audits
Number of environmental incidents notifiable to the regulator
Number of environmental regulator notices, fines or prosecutions
<i>Aspect-specific</i>
Number of erosion and sediment related complaints
Number of dust related complaints
Number of hazardous substance spills > 20 L
Number of hazardous substance spills not contained or completely cleaned-up
Number of unauthorised water discharges into waterway (including where/if Dewatering / hydrotesting is required)

Leading Indicators:

➤ Key Performance Indicators (KPIs)

<i>KPI</i>	<i>Required KPI performance for the relevant month</i>	<i>Performance Measure</i>
Environmental Material Harm Events	Zero environmental harm events	Number of Environmental Harm Events
HSE Incident Notification	Notify the principal of all Incidents/events in accordance with requirements	Number of HSE Incidents reported including: <ul style="list-style-type: none"> • Timeframes

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	timeframes set out in this schedule.	<ul style="list-style-type: none"> Details (as per Schedule 4, Section1)
HSE Incident Investigations	Complete all HSE Incident Investigations in accordance with requirements and timeframes set out in this schedule.	Number of HSE Incident Investigations completed and reports provided
HSE Incident corrective actions	Corrective actions from HSE Incident Investigations completed within timeframes and are verified for completeness and effectiveness	Number of corrective actions from HSE Incident investigations completed within agreed timeframes
HSE inspections performed	Internal contractor HSE Inspections (HSE walks/interaction/critical control checks) performed in accordance with HSMP, EMP or project assurance plan (as applicable).	Number of HSE inspections completed/number of HSE inspections required.
HSE Audits	Contractor HSE audits performed in accordance with the HSMP, EMP or project assurance plan (as applicable).	Number of HSE audits performed/number of HSE audits required.
HSE Audit and inspection corrective actions	Corrective actions from HSE Audits and inspections completed and are verified for completeness and effectiveness	Number of corrective actions from HSE audits and inspections completed within agreed timeframes

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5.2 AUDITS & INSPECTIONS

Conformance with the Construction Environmental Management Plan Assurance and Audit schedule shall be applied with assessment and evaluation activities against the projects Environmental performance outcomes.

Audits and inspections shall be conducted through the following formats:

- Daily / Weekly - the Consortium Construction Supervisor will conduct daily and weekly inspections using the Site Weekly Checklist (VAL-F-027)
- Monthly - the Consortium HSE Advisor will conduct a HSE audit monthly, using the Hazard Inspection / HSE Audit form (VAL-F-022). The AGL HSE Representative will be invited to participate in monthly audits with all feedback and observations listed on the Hazard Inspection / Health and Safety Audit form.
- Subcontractors should expect to have a sample of their compliance requirements reviewed during each of the periodic audits.
- All non-compliances will be managed through the HSE Database and will be closed out within the time specified. All completed action items will be verified by the Project Manager (or delegate). In the event that the principal identifies a non-compliance with the Environmental Management Plan the non-compliance is to be rectified immediately.

Non-compliance or conformances with this plan shall be treated as a hazard, near-miss or incident, investigated and rectified within agreed timeframes within the Consortium and project.

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5.3 INCIDENT REPORTING AND INVESTIGATION

Environmental incidents (including the classifications) will be managed in accordance with the Consortium Incident Reporting and Investigation procedure (VAL-PRO-054) against the AGL Incident Reporting Criteria and investigated to a depth proportionate with the actual and potential environment impacts of the event. All Environmental incidents will be reported verbally immediately, and an initial report submitted to AGL as soon as possible and within the timeframes as set out within the EPC Schedule 4, section 15.4 and shown in Table 5.1 below.

Table 5-1 – Incident Verbal and Initial Incident Report Timeframes

Incident Type	Verbal Notification	Initial Incident Report
Near Miss (FIRM Low Risk Incident)	Immediately	Within 24 hours
Near Miss (FIRM Moderate Risk Incident)	Immediately	Within 24 hours
First Aid	Immediately	Within 4 hours
Medical Treatment Injury/Illness	Immediately	Within 2 hours
Lost Time Injury/Illness	Immediately	Within 2 hours
Environmental: causes or threatens material harm	Immediately	Within 2 hours
Environmental: does not cause or threaten material harm	Immediately	Within 24 hours
SIF	Immediately	Within 2 hours
SIF Potential	Immediately	Within 2 hours
High Potential (FIRM High Risk and Above Incident) and Regulatory Notifiable Incidents	Immediately	Within 2 hours

An Environmental incident is considered ‘significant’ and warrants a formal incident investigation by the HSE Team if the actual consequences are ‘Minor’ or above, or if the potential consequences are ‘Moderate’ or above. AGL representatives including the HSE Manager and Stakeholder/ Approvals Manager will be invited to participate in the conduct of the Incident Investigation Process. Incidents will be investigated to a depth proportionate to their complexity and level of risk, using a formal root cause analysis method where appropriate. Witness statements (VAL-F-327) will be treated as private and confidential. A copy of the Incident Investigation Report (VAL-F-042) will be forwarded to AGL for review/feedback prior to final submission at the conclusion of the investigation and within 14 days of the event.

The HSE Leads will coordinate regulatory reporting with AGL and other involved parties whenever it is required.

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5.4 MANAGEMENT REVIEW

The Consortium Leadership will review the environmental program and its performance at planned intervals to ensure continued system effectiveness and alignment with policy and objectives. Various methods include:

- Environment will be a standing agenda item at all Senior Management Team (SMT) meetings. Items to be discussed include significant issues or improvements and any reported incidents and near-misses.
- The HSE Lead will issue a HSE report to the SMT each month detailing HSE performance. Items will include current leading and lagging indicators; any incidents, near misses; any regulatory changes; and progress against HSE improvement plans.
- HSE management meetings will be held weekly and monthly to review the status of Consortium's HSE management system. Items to be discussed include Consortium's HSE objectives and performance, the current status of iMACS, and the planned HSE strategy for the next period.
- Additional review meetings will be held whenever a significant issue or trend is identified that requires SMT-wide action.

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6 EMERGENCY RESPONSE

6.1 EMERGENCY PLANNING

Emergency planning and incident management procedures are included in following in Figure 7.1 and Tables 6.1 1 and 6.2. Included is a list of emergency contact details and various specific management procedures for potential emergencies. **Prior to any action, identify materials involved and obtain appropriate PPE.**

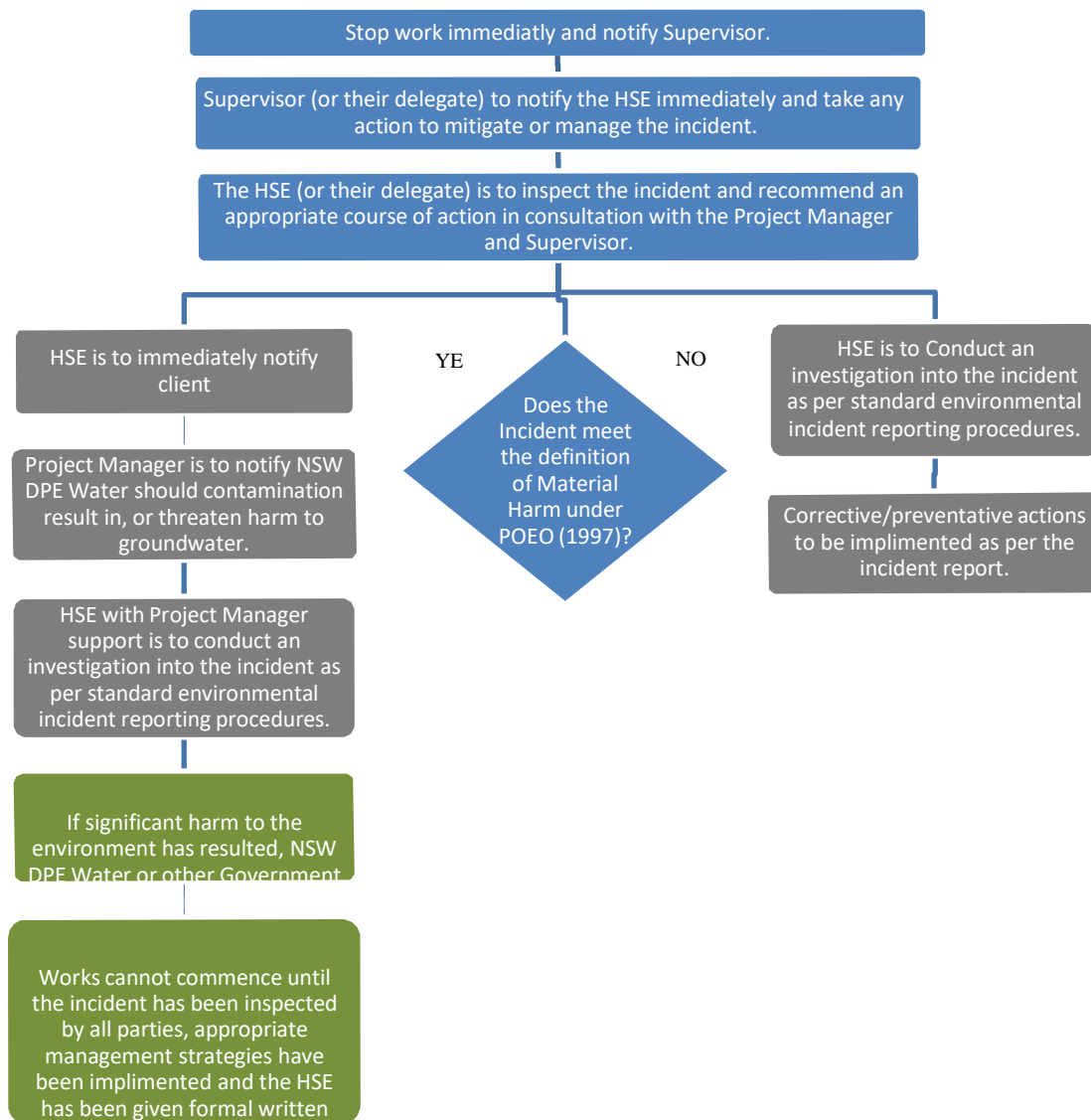


Figure 1: Procedure in Dealing with Environmental Incidents

Notes:

*An unexpected event may result in harm to the environment and requires some action to minimise the impact or restore the environment.

6.1.1 Definition of ‘Material Harm’

Under Section 147, the Meaning of Material harm to the environment is:

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(1) For the purposes of this Part

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- (a) harm to the environment is material if—
 - (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
 - (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

(2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

6.1.2 Incident Management Procedures

Table 6-1 - Environmental Incident Management Procedure for Minor Hydrocarbon Spills

	Action	Responsibilities	Comments
1	Stop further leak	Person causing/ finding leak	If leak from drum take action to stop the leak. For example, roll drum so that leak area is uppermost. If leak from pipe close valve.
2	Inform Superintendent/Supervisor	Construction Project Manager/ Site Foreman	Stop human and vehicular traffic and isolate area.
3	Determine the magnitude and destination of the leak	Site Foreman	For major spills on site or If spill has escaped off site contact the EMR immediately.
4	Form a barrier around leak/spill to contain	Construction Project Manager/ Site Foreman	Soil or sand can be utilised. Absorbent booms (usually provided within spill kits) are effective.
5	Empty the spill source	Construction Project Manager/ Supervisor	Transfer fuel/ oil from failed container into another drum etc.
6	Place barriers around drains and outlets	Construction Project Manager/ Supervisor	Seal drain entry points by blocking with sand bags or other available material.
7	Obtain oil spill kit and apply absorbent material	Construction Project Manager/ Supervisor	Use 'absorbent' or equivalent.
8	Clean up and remove absorbent material to waste bin	Construction Project Manager/ Supervisor	Either shovel or use bob cat loader for larger quantities.
9	Clean up surface soil by excavating	Construction Project Manager/ Supervisor	Stockpile contaminated material in designated area. Validate remediation by sampling.
10	Inform Project Engineer and complete incident log	Construction Project Manager/ Supervisor	Record incident and investigate.

Table 6-2 Environmental Incident Management Procedure for Impending Wet Weather

	Action	Responsibilities	Comments
1	Keep aware of weather conditions and impending significant storm events and inform all supervisors.	Contractor Project Manager	Forecasts from Weather Bureau

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	Action	Responsibilities	Comments
2	Inspections to be undertaken of sediment control devices in critical areas	Contractor Project Manager	Assessment of their condition or status
3	Ensure silt fences/ sandbagging repairs performed	Contractor Project Manager	Sediment build-up removed, controls in good condition.
4	Sumps to be able to function at full capacity and diversion drains are in place. All accumulated waters should be removed and properly disposed so that on-site storage capacities are maximised.	Contractor Project Manager	It should be assumed all surface water is contaminated. Onsite storage and removal of waters must be by licensed waste transport company, or in compliance with the conditions of a restricted wastewater acceptance approval issued by SA Water.
5	Ensure stockpiles are in a state of stability and not in a position to impact on public thoroughfares/watercourses	Contractor Project Manager	Sealed/covered with plastic, surrounded on low side with sediment fencing.
6	Ensure that hazardous substances storage areas/ bunds are sufficient to prevent land or water contamination	Contractor Project Manager	Stored appropriately
7	Ensure adequate supplies of control devices are on hand	Contractor Project Manager	Supplies sediment fencing/sandbags/hay bales.
8	Personnel to be on hand for emergency work during storm event	Contractor Project Manager	Pumping of excavations, handling of excess potentially contaminated surface water.

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APPENDIX A: INTERESTED PARTY ANALYSIS

Interested Parties	Requirements/Expectations	HSEQ MS Processes
Community	<ul style="list-style-type: none"> - Noise /Dust - Traffic - Local content - Charities 	<ul style="list-style-type: none"> - Environmental policies - Traffic management plans - Sustainability programs - Consortium charitable work
Consortium	<ul style="list-style-type: none"> - Provision of quality service - "Product" delivered on schedule & budget - Safe /operational product being delivered - Clear documentation detailing processes - Clear understanding of contractual requirements - Client specifications being met 	<ul style="list-style-type: none"> - HSEQ certification, policy and processes - Project Execution plans - Compliance with client specifications / technical procedures and verifying documents/document control process - HSEQ Management Plans - Contract process, contract/tender reviews/ Internal kick off meetings - Technical procedures and verifying documents/ internal audits - Risk workshops
Employees	<ul style="list-style-type: none"> - Payment for work - Performance feedback - Safe work environment - Training - Access to information - Clear instruction 	<ul style="list-style-type: none"> - Payroll/DCR - Employee evaluations - HSEQ Processes - In-house/External training programs / VOC - Consortium Intranet/ iMACS - On boarding
Government/Regulators	<ul style="list-style-type: none"> - Compliance with legislation - Environmental legal requirements 	<ul style="list-style-type: none"> - EIS, Development Consent EPC Contract - Lawstream - Environmental policies & procedures - Environmental Monitoring
Management	<ul style="list-style-type: none"> - Clear instruction on company direction - Access to information - Management of client requirements/expectations - Suitable information for planning and execution - Assessment of progress 	<ul style="list-style-type: none"> - Management meetings and feedback - Consortium Intranet/ iMACS - Progress meetings / Weekly / monthly reports - Reporting programs to clients, business and board
Share Holders	<ul style="list-style-type: none"> - Financial return - Company growth - Risk reduction 	<ul style="list-style-type: none"> - Financial processes - Quality controlled product - Marketing/Sales/Promotion
Suppliers	<ul style="list-style-type: none"> - Clear understanding of contractual requirements - Clear understanding of product required - Applicable documentation - Specifications being met 	<ul style="list-style-type: none"> - Subcontractor management process/ Kick off meetings - Detailed purchase orders - Supplier deliverables/ document control process - External audit by Consortium - Monitoring of supplier processes - Technical procedures and verifying documents

BROKEN HILL BESS PROJECT

SOIL AND WATER MANAGEMENT PLAN – STAGE 1 - BESS



APPENDIX B: STORMWATER CONCEPT PLAN



Figure 3 Stormwater Concept Plan

All proposed table drains are V-shape cross sectional profile with a longitudinal slope of 1%, depth between 0.3 - 0.35m deep spanning 3.6 - 4.1m in width. The exact geometry of each drain would be determined during the detailed design phase, as will the size of the culvert.

Stormwater Drainage Concept Design Layout

The Site was split into 4 sub-catchments (identified as C1 to C4) based on the existing site grading assuming minimal earthworks would be required as part of the Project. Each catchment follows the existing grade of the Site and drains to a table drain adjacent to the proposed circulation roadway internal of the Site, as shown below in Figure 3.

The main battery area (Catchments C1 and C2) and the northern office buildings drain to table drains located on the inside of the access road. These drains follow the access road to the southern side of the Site, where they discharge through a culvert located under the access road and into the proposed detention basin.

The carpark area (Catchment C3) discharges into a separate table drain to reduce the amount of water flowing across the access road. This drain discharges directly into the proposed detention basin without the need for an additional culvert.

The small area to the west of the access road (Catchment C4) drains directly off the Site. As the area is both the smallest and most permeable catchment, there would be a negligible amount of discharge directly to the crown land and matches existing discharge conditions.

Discharge from the Site would be from the detention basin. To avoid issues of scour/erosion due to concentrated flows, scour protection would be design and included in the next stage of design development.

Pipes used in subsurface drains shall comply with AS2439.1 Type 2. The strength shall not be less than Class SN8. The minimum diameter of pipes shall be 100mm.

The subsoil trench width shall be not less than 300mm. The distance between the top of the pipe and the sub-base shall be not less than 300mm, or 400mm to finished earthworks level in the switchyard generally.

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APPENDIX C: ASPECTS AND IMPACTS RISK REGISTER

Valmec Environmental Aspects and Impact Risk Register - BESS Project



Item	Aspects	Impacts	Consequences	Inherent Risk Assessment			Controls (So Far As Is Reasonably Practicable)	Procedures	Residual Risk Assessment			ALARP	Action Items	Responsibility	Due Date	Status	
				Likelihood	Consequence	Risk			Likelihood	Consequence	Risk						
1	CLEARING, EXCAVATIONS AND BULK EARTHWORKS	Loss of Vegetation	Clearing activities directly remove vegetation from the area, and earthworks that disturb topsoil have the potential to restrict or inhibit future vegetation regrowth.	Unlikely	Minor	Low (5)	<ul style="list-style-type: none"> Clearing will only be conducted in accordance with any formal land clearing permits. These permits will be available on site in hard copy prior to any clearing commencing and the personnel involved will review the documentation prior to starting work. An Excavation / Clearing / Penetration Permit (VAL-F-007) will be raised by the Valmec supervisor prior to starting works to ensure that all necessary controls specified in the approved clearing documentation are implemented throughout the works (e.g. barricading protected areas). Wherever practical, removed topsoil will be stockpiled for re-use, such as for rehabilitation or remediation. Only vegetation to the extent necessary for construction and for safety (e.g. maintaining road corridors) will be removed. All other vegetation will not be disturbed. Top soil removal to be stockpiled, covered and maintained (IECA guidelines) for remediation applications. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HS-008 Biodiversity Management Plan	Rare	Minor	Low (3)						
2		Aboriginal Heritage and Historical Sites Disturbed		Unlikely	Moderate	Medium (9)	<ul style="list-style-type: none"> Clearing will only be conducted in accordance with any formal land clearing permits. These permits will be available on site in hard copy prior to any clearing commencing and the personnel involved will review the documentation prior to starting work. Each specific object or location known to be significant for Aboriginal heritage or historical reasons will be barricaded and signposted to prevent accidental damage or disturbance. This barricading will also include a significant exclusion zone where possible. All persons at the workplace will be informed of the existence of heritage-related locations as part of their workplace induction. Heritage-related locations will be detailed on workplace layouts, drawings and other similar documentation. If an item or location of potential significance is found, the following actions will be taken: <ul style="list-style-type: none"> Work will stop in the immediate and surrounding areas. The area will be barricaded and secured as appropriate to prevent further disturbance. Any previously uncovered items will be covered if there is a potential for wet weather. The Client will be contacted to agree on further direction (e.g. professional assessment, specialist removal, notifications to the landowner, relevant government department or Aboriginal representative groups). The event will be reported as an environmental incident. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HS-009 Aboriginal Heritage Management Plan	Rare	Moderate	Medium (6)						
3		Dust Generation and Management	Disturbed land has the potential to generate large amounts of dust that is blown to adjacent properties. Generated dust can cause nuisance and inconvenience to other land users, and high levels can damage crops and other plant life or cause adverse health effects.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> Quantity of land disturbed at any one time will be kept to the minimum required by the works schedule, and various work schedules will be coordinated to minimise the time that disturbed land remains exposed. Water carts, or similar suitable devices, will be used to water designated traffic ways and other dust-generating areas to minimise the levels of dust generated. Plant and vehicles will stick to designated traffic ways wherever possible to avoid disturbing stabilised cleared land, and their speed will be limited to reduce dust generated on unsealed roadways. Large areas of cleared land may be ripped/scarified, hydro mulched or chemically stabilised to minimise soil exposure to wind. Chemical stabilisers must have no adverse environmental impacts (e.g. Dustex). If planned works contain a significant risk of nuisance dust (e.g. extensive clearing), a Site Dust Risk Assessment (VAL-F-050) will be completed in line with "A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities, and prevention / control measures implemented accordingly. Stock piles to be covered and suppressed to limit dust exposure and to preserve soil quality. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HA-010 Soil and Water Management Plan_A	Unlikely	Minor	Low (5)						
4		Erosion Control	Disturbed land and soil stockpiles have the potential for significant erosion and sediment run-off, particularly when large areas of land have been exposed, and this can lead to public nuisance, impeded drainage and damage to aquatic ecosystems through high turbidity.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> Quantity of land disturbed at any one time will be kept to the minimum required by the works schedule, and various work schedules will be coordinated to minimise the time that disturbed land remains exposed. Large areas of cleared land will be ripped / scarified or hydro mulched to minimise wind speed and run-off water speed, when required. Plant and vehicles will stick to designated traffic ways wherever possible to avoid disturbing stabilised cleared land. Loose soils, steep slopes and riparian vegetation (river banks) will not be cleared wherever possible. Excavations on slopes will have leading edges barricaded or similar (e.g. using sandbags) to prevent large quantities of water flowing in and eroding sides of excavations. Long-term soil stockpiles will be located away from natural waterways and other sloped areas. Stock pile management, Pond installation and Sediment basin controls. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HA-010 Soil and Water Management Plan_A	Unlikely	Minor	Low (5)						
7		Acid Sulphate Soils (Not anticipated)	Acid sulphate soils (ASS) are not considered a credible risk for this project, however, symptoms of acid-sulphate soils are identified in an area not previously considered at-risk, Valmec will consult its Client for further direction; at the direction of the Client, Valmec will support soil testing programs.	Unlikely	Minor	Low (5)	<ul style="list-style-type: none"> Soil investigation reports will be assessed or requested from customers during the tendering phase of a project to confirm the presence of known acid-sulphate soils, allowing for the appropriate strategies to be established during the planning phase. Planned earthworks extending below 5 m AHD (Australian Height Datum) will be assessed for the potential for acid-sulfate soils against government-provided risk maps (typically coastal areas). Earthworks above this level will not be considered at significant risk of acid-sulfate soils. Where planned works have been identified to be within risk areas, a field investigation will be conducted to consider soil and subsurface water characteristics (in consultation with the Client - this may have already been completed for the workplace). Where field inspection indicates significant potential for acid-sulfate soils, an acid-sulfate soils management plan will be developed for the workplace. If symptoms of acid-sulfate soils are identified in an area not previously considered at-risk, Valmec will consult its Client for further direction. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HA-010 Soil and Water Management Plan_A	Rare	Minor	Low (3)						
8		WORKPLACE LAYOUT AND SETUP	Chemical Storage	The primary environmental risk related to chemical storage is uncontained release of hydrocarbons or hazardous substances. This has the direct risk of localised soil contamination and the indirect risk of aquatic contamination through rainfall run-off into drains and waterways.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> A register of chemicals and their SDS will be maintained readily available for each workplace. SDS will have Australian emergency numbers and be less than five years old, or the most recent version. Chemicals will be the least hazardous practical alternative and in the least hazardous practical form. A bonded chemical storage area will be provided to store quantities of hazardous substances. Hazardous substances will be stored in their designated storage area when not in use. Designated chemical storage areas must be away from any drains, waterways or other similar features posing a direct risk of aquatic contamination. Chemical handling equipment and drip trays will be provided where appropriate. Chemical containers will be maintained in good condition, and decanted containers will be labelled with the product name and any significant safety information. Appropriate fire extinguishers, spill kits and PPE will be provided in case of an incident. These will be of a type, quantity and rating suitable to the nature and volume of chemicals at the workplace. Spill kits, fire extinguishers and other emergency equipment (e.g. emergency showers) must be repaired / replenished / replaced and their readiness confirmed following their use in an emergency incident or drill. These must also be checked at regular intervals to confirm readiness, these checks must be documented (i.e. via a sticker, tag or inspection checklist). 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 0775-HAS-GEN-90-001-RDA-IFR Broken Hill BESS Project Health and Safety Management Plan	Unlikely	Minor	Low (5)					
9			Housekeeping and Public Amenity	The condition of workplaces, laydown and storage areas has the potential to cause public nuisance, littering and public safety risks if not properly maintained.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> Work materials and other items will be neatly stored, and sufficient space, fixtures and furnishings will be provided to facilitate this. Loose items stored in areas where they may be transported by the wind will be secured or removed. Work areas will be left in an appropriately clean and tidy condition at the end of each shift. Complaints and concerns from members of the public will be addressed promptly, including documenting the event (VAL-F-076) and reporting the occurrence to Valmec's Client(s) as required. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 0775-HAS-GEN-90-001-RDA-IFR Broken Hill BESS Project Health and Safety Management Plan / CCMP	Unlikely	Minor	Low (5)					
10	Terrestrial Fauna		Native, feral and other animals may enter the workplace during or after-hours, placing themselves and site personnel at significant risk of harm.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> Workplaces will be securely fenced to deter entry by personnel and larger animals. Typically 'rabbit-proof' fencing will be used at fixed facilities. Food scraps will be securely stored in lidded bins and regularly removed from site to deter scavengers. Pets will not be permitted on site. Feeding and / or capture of native or feral animals will not be permitted (except by a specialist handler engaged to remove the animal). Excavations deeper than 0.5 m will be installed with 'fauna ramps' if left open at the end of a shift. Excavations deeper than 0.5 m will be inspected for the presence of fauna at the start of each shift. Pipe lengths longer than 30 m will be capped to prevent fauna entry. If fauna is located within the workplace (other than snakes), it will be encouraged to leave. For snakes and other fauna that remain in the workplace, a specialist handler will be engaged to assist with its removal. In these cases, personnel will monitor the animal's location at a distance to avoid aggravation until the handler arrives. Fauna removals by a third-party handler will be reported as an incident (refer to section 4.3). Removal of snakes to be managed through a permit and authorised / approved fauna handler. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HS-008 Biodiversity Management Plan	Unlikely	Minor	Low (5)						

Valmec Environmental Aspects and Impact Risk Register - BESS Project



Item	Aspects	Impacts	Consequences	Inherent Risk Assessment			Controls (So Far As Is Reasonably Practicable)	Procedures	Residual Risk Assessment			ALARP	Action Items	Responsibility	Due Date	Status
				Likelihood	Consequence	Risk			Likelihood	Consequence	Risk					
11	PLANT AND EQUIPMENT USE	Hot Work & Fire Prevention	Hot work such as welding (including welding stub management), grinding, mechanical cutting or oxy-cutting pose a risk of unintentionally starting a small-scale on-site fire with minor safety risks or a large-scale bushfire with significant environmental impact and public safety risks.	Possible	Moderate	High (13)	<ul style="list-style-type: none"> Hot work will be conducted only in designated hot works areas, unless under the control of a Hot Work permit (VAL-F-004) detailing the applicable safety and other fire prevention requirements. No hot works permits will be issued on days of total fire ban, unless an exemption has been granted, in which case the work will be conducted only in accordance with the terms of the exemption. Fire extinguishers will be readily available during hot works, and will be of a class and size appropriate to the risks involved in the work. Vegetation within 5 m of planned hot works will be protected by 'humpy' (or similar enclosure), fire blankets (or similar barrier), or thorough 'wetting-down' of vegetation. If 'wetting-down' is the sole method used to protect vegetation, this will be completed both prior to works commencing and following completion of works, and a person will be assigned for 'fire-watch' for 30 mins following completion of works. In addition, the following controls will be implemented to minimise the risk of fires more generally: Fire extinguishers will be provided at various locations around site in case of a fire; including at flammable liquid storage and with construction vehicles. Plant and vehicles may only travel on designated roads and work areas. Smoking is permitted only in the designated areas and butts must be placed into the provided bins. Burning-off of refuse, vegetation and other waste will not be permitted. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan Fire Safety Study / Hotwork procedure and Permit System	Rare	Moderate	Medium (6)					
12		Noise and Vibration	Mobile plant, generators and other machinery (such as air compressors) may generate significant levels of noise that proves a nuisance to adjacent land users.	Unlikely	Major	High (14)	<ul style="list-style-type: none"> Stationary items of equipment with the potential to generate significant noise levels (e.g. generators) will be enclosed, screened or otherwise located to minimise noise levels. Exhaust mufflers, machine guarding, screens and other silencing devices will be fitted wherever appropriate and maintained in serviceable condition. Plant and equipment will be shut off or 'throttled down' while not in active use, and shut down outside of working hours. Particularly noisy activities (e.g. jackhammering) will be restricted to between 9 am and 6 pm weekdays wherever practical (in residential areas). 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan (Noise and Vibration)	Rare	Moderate	Medium (6)					
		Wash-Down Facilities	Plant and vehicle wash-down facilities generate waste water that is often contaminated with significant levels of detergents, hydrocarbons and suspended soils, and as such cannot be simply discharged to drains or the surrounding environment.	Possible	Moderate	High (13)	<ul style="list-style-type: none"> Wash-down facilities will be contained on an impervious pad (such as lined and reinforced concrete) to prevent contaminated run-off leaching into groundwater. Wash-down facilities will have bund walls, intercept drains or an alternative method of preventing run-off from flowing into stormwater drainage systems or the surrounding environment. Water run-off from wash-down facilities should be treated to remove hydrocarbons (e.g. oily water separator unit) and to remove suspended solids (e.g. sediment traps and de-emulsification basin) prior to discharge to sewer systems. If both of these items are not implemented, then water run-off will be captured and periodically removed (using a licensed waste contractor as applicable). Oily-water separator units, where installed, must be regularly serviced and maintained in good condition, and rated for the peak wastewater flow expected through the system. Waste water will only be discharged to sewer systems in accordance with the requirements of the local water authority (as specified in a water discharge authorisation, trade waste permit or similar). Transmission line wash down facilities for external travel routes. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan 4017-PLA-HA-010 Soil and Water Management Plan_A	Rare	Moderate	Medium (6)					
17	WASTE STORAGE AND DISPOSAL	Waste Storage and Disposal	Valmec's scope of work generates a range of solid and liquid wastes, both hazardous and non-hazardous to human health and the environment. Valmec's overarching waste management objective is to prevent contamination or environmental harm due to inappropriate disposal of waste. Controlled waste removal.	Possible	Minor	Medium (8)	<ul style="list-style-type: none"> Impacts of waste will be minimised by using the hierarchy of controls: Avoid, Reduce, Reuse, Recycle, and Dispose. Different containers will be provided to segregate the collection of different waste streams (e.g. food waste, solid inert waste, oils & greases, recyclable paper & cardboard, scrap metal). Waste collection facilities will be regularly emptied to prevent overflows or mixing different kinds of waste. Bins will be provided at various locations around the workplace to minimise waste build-up and prevent littering. Work areas will be made clean and tidy at the end of each shift, and kept as clean and tidy as practical throughout works. Bins will be covered if they contain domestic / food waste, or if their contents are likely to be picked up by the wind and cause litter. Controlled waste will be removed from the workplace only by licensed contractors, in accordance with the terms and conditions of their licence. 	4017-PLA-HS-002_0_AGL Broken Hill BESS Project Environmental Management Plan - Waste Management Process.	Unlikely	Minor	Low (5)					

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APPENDIX D: PROJECT LEGAL REGISTER

BROKEN HILL BESS PROJECT

LEGAL REGISTER



Aspect	Legislation	Key Requirements	Relevance / Controls	Compliance
Air	Protection of the Environment Operations (Clean Air) Regulation 2002	The Regulation deals with the sale of domestic solid fuel heaters and requires the heaters to be certified as complying with emission limits set out in the relevant Australian Standard. It also prohibits tampering with such heaters. In relation to motor vehicles, the Regulation deals with the following matters: <ul style="list-style-type: none"> • the emission of air impurities, including excessive smoke from motor vehicles; • the compulsory fitting and maintenance of anti-pollution devices, and exemptions from these requirements; and • the method of transfer of petrol into a vehicle's fuel tank. 	CEMP	
Noise	Protection of the Environment Operations (Noise Control) Regulation 2000	This Regulation: <ul style="list-style-type: none"> • sets out the offences under the Protection of the Environment Operations Act 1997 and related Acts and regulations for which on-the-spot fines ('penalty notices') may be issued, and the amount of such fines; • specifies the organisations who can authorise their officers to issue penalty notices for particular offences; and • authorises the service of a penalty notice relating to an offence, applying to an owner of a motor vehicle or vessel, on the owner without naming the address of the owner and by leaving the penalty notice on that vehicle or vessel. 	CEMP	
Water	Water Management Act 2000	The NSW Water Management Act is administered by the Office of Water. An Act to provide for the protection, conservation and ecologically sustainable development of the water sources of the State, and for other purposes.	CEMP SWMP	
Erosion & Sediment Control	Soil Conservation Act 1938	An Act to make provision for the conservation of soil resources and farm water resources and for the mitigation of erosion; for these and other purposes to amend the Crown Lands Consolidation Act 1913 and certain other Acts; and for purposes connected therewith.	CEMP SWMP	
Waste Management	Protection of the Environment Operations (Waste) Regulation 2005 No.96	Sets out a number of requirements relating to non-licensed landfill sites, non-licensed waste activities and non-licensed waste transporting, for eg the way in which waste must be stored or transported, reporting and record-keeping requirements; <ul style="list-style-type: none"> • sets out certain reporting and record-keeping requirements in relation to scheduled waste facilities and scheduled landfill sites; • exempts certain waste streams from the full waste tracking and record keeping requirements; • sets out special requirements relating to asbestos and clinical waste. 	CEMP	
Waste Management	Waste Avoidance and Resource Recovery Act 2001	This Act: <ul style="list-style-type: none"> • promotes waste avoidance and resource recovery; • repeals and replaces the Waste Minimisation and Management Act 1995; • establishes a scheme to promote extended producer responsibility in place of industry waste reduction plans; and • continues the Waste Fund for the purposes of funding relevant programs. 	CEMP	
Native Title	Aboriginal Land Rights Act 1983	The Native Title Act 1993 (NSW) (NT Act) provides for the recognition and protection of native title for Aboriginal peoples and Torres Strait Islanders. The NT Act recognises native title for land over which native title has not been extinguished and where persons are able to establish native title are able to provide continuous use, occupation or other classes of behaviour and actions consistent with a traditional cultural possession of those lands. It also makes provision for Indigenous Land Use Agreements (ILUA) to be formed, as well as a framework for notifying of native title stakeholders for certain future acts on land where native title has not been extinguished.	EIS - It is noted that Lots 57 and 58 in DP258288 (i.e. the Site) are freehold, whilst Lot 7302 in DP1181129 is freehold land that is administered by Broken Hill City Council and is classified as Commons under the Commons Management Act 1989	
Native Title	Aboriginal Land Rights Act 1983	The Aboriginal Land Rights Act 1983 (ALR Act) was established to provide land rights to Aboriginal persons, as well as provide for representative Aboriginal Land Councils to vest land in those Councils. The ALR Act, is administered by the NSW Department of Aboriginal Affairs and establishes a compensatory regime, which	EIS - The parcel (Lot 7302 of DP1181129), where only the transmission line is proposed, is subject	

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Aspect	Legislation	Key Requirements	Relevance / Controls	Compliance
		<p>recognises that land is of spiritual, social, cultural and economic importance to Aboriginal people. The ALR Act established the NSW Aboriginal Land Council (NSWALC) and a network of over 120 Local Aboriginal Land Councils (LALCs) and requires these bodies to:</p> <ul style="list-style-type: none"> • Take action to protect the culture and heritage of Aboriginal persons in the LALC’s area, subject to any other law • Promote awareness in the community of the culture and heritage of Aboriginal persons in the LALC’s area. <p>LALCs constituted under the ALR Act can make claims. The Registrar of the ALR Act must maintain the Register of Aboriginal Land Claims under section 166 of the ALR Act. All land claims that have been made under the Act are recorded in the Register.</p>	to an undetermined Aboriginal Land Claim number 40469 lodged by the NSWALC under the ALR Act. AGL has undertaken consultation with BHLALC and the NSWALC over the land claim	
Cultural Heritage (including indigenous heritage)	Heritage Act 1977	<p>An Act to conserve the environmental heritage of the State Heritage significance interpretation. In this Act:</p> <ul style="list-style-type: none"> • State heritage significance, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item. • Local heritage significance, in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item. • An item can be both of State heritage significance and local heritage significance. An item that is of local heritage significance may or may not be of State heritage significance. • Aboriginal heritage items and places are also covered by this act. 	CHMP	
Biodiversity / Flora / Fauna	Environment Protection and Biodiversity Conservation Act 1999	<p>The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) requires the approval of the Commonwealth Minister for the Environment for actions that may have a significant impact on Matters of National Environmental Significance (MNES). Approval from the Commonwealth Minister is in addition to any approvals under NSW legislation. The EPBC Act lists nine MNES that must be considered when assessing the environmental impacts of a project. These matters are:</p> <ul style="list-style-type: none"> • World heritage properties • National heritage places • Ramsar wetlands of international significance • Threatened species and ecological communities • Migratory species • Nuclear actions (including uranium mining) • Commonwealth marine areas • Great Barrier Reef Marine Park • A water resource, in relation to coal seam gas development and large coal mining development 	BMP CEMP	
Biodiversity / Flora	Biodiversity Conservation Act 2016	<p>The purpose of the Biodiversity Conservation Act 2016 (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development (described in section 6(2) of the Protection of the Environment Administration Act 1991). Section 7.9(2) of the BC Act states that a development application for SSD is to be accompanied by a biodiversity development assessment report (BDAR) (as defined under section 7.1 of the BC Act), unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.</p>	BMP	
Biodiversity / Flora	Native Vegetation Act 2003 Native Vegetation Conservation Act 1997	<p>The objects of this Act are:</p> <ul style="list-style-type: none"> • to provide for, encourage and promote the management of native vegetation on a regional basis in the social, economic and environmental interests of the State, • to prevent broadscale clearing unless it improves or maintains environmental outcomes, • to protect native vegetation of high conservation value having regard to its contribution to such matters as water quality, biodiversity, or the prevention of salinity or land degradation, 	BMP	

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Aspect	Legislation	Key Requirements	Relevance / Controls	Compliance
		<ul style="list-style-type: none"> to improve the condition of existing native vegetation, particularly where it has high conservation value, to encourage the revegetation of land, and the rehabilitation of land, with appropriate native vegetation, and in accordance with the principles of ecologically sustainable development. 		
Biodiversity / Flora / Fauna	National Parks and Wildlife Act 1974	An Act to consolidate and amend the law relating to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects; to repeal the Wild Flowers and Native Plants Protection Act 1927, the Fauna Protection Act 1948, the National Parks and Wildlife Act 1967 and certain other enactments; to amend the Local Government Act 1919 and certain other Acts in certain respects; and for purposes connected therewith. The act also makes provision for the protection of Aboriginal places of significance.	BMP CHMP	
Biodiversity / Flora / Fauna	Threatened Species Conservation Act 1995	<p>The objects of this Act are as follows:</p> <ul style="list-style-type: none"> to conserve biological diversity and promote ecologically sustainable development, to prevent the extinction and promote the recovery of threatened species, populations and ecological communities, to protect the critical habitat of those threatened species, populations and ecological communities that are endangered, to eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities, to ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed, and to encourage the conservation of threatened species, populations and ecological communities by the adoption of measures involving co-operative management. 	BMP CEMP	
Dangerous Goods	Dangerous Goods Act 1975	Act relates to the storage, conveyance, possession and licensing of dangerous goods.	A Dangerous Goods register will be established for the project and will detail the regular audit intervals for compliance with the act and regulation.	
Contaminated Land	Contaminated Land Management Act 1997	<p>The general object of this Act is to establish a process for investigating and (where appropriate) remediating land areas where contamination presents a significant risk of harm to human health or some other aspect of the environment.</p> <p>Section 60 of the CLM Act also includes a 'duty to notify' where significant contamination is identified. This section would be relevant if any previously unidentified contamination is encountered that exceeds notification thresholds.</p>	<p>EIS - A search of the NSW EPA contaminated land database (undertaken on 8 April 2021) confirmed that the site is not listed as a contaminated site under the CLM Act. As a result, no further attention is afforded to the CLM Act for the purpose of this SSDA.</p> <p>CEMP – Process to provide Notification where contaminated land is uncovered.</p>	
Chemical Use	Environmentally Hazardous Chemicals Act 1985	The Act sets up the Hazardous Chemicals Advisory Committee. Its functions include advising the EPA in relation to the assessment and control of chemicals that are environmentally hazardous. The EPA may assess chemicals under the Act. The EPA may declare substances to be chemical wastes for the purposes of the Act. Examples of substances that have been so declared include dioxin contaminated waste materials and PCB (polychlorinated biphenyl) wastes.	The project has chemicals on site for use in cleaning, etc, which may be the subject of a chemical control order (s10(1)) from the EPA including the manner in which the chemicals are stored, used and disposed.	
National environment protection matters	National Environment Protection Council (New South Wales) Act 1995	This Act provides for the establishment of a National Environment Protection Council (NEPC) that has power to make national environment protection measures. The New South Wales government will implement national environment protection measures (NEPMs) in New South Wales in a variety of ways, including via	CEMP	

BROKEN HILL BESS PROJECT

LEGAL REGISTER



Aspect	Legislation	Key Requirements	Relevance / Controls	Compliance
		<p>legislation. The Department of Environment and Conservation (NSW) is one agency that will administer the implementation of national environment protection measures in New South Wales. NEPMs implemented using EPA legislation include those relating to:</p> <ul style="list-style-type: none"> • assessment of site contamination; • used packaging materials; • movement of controlled waste; • national pollutant inventory. 		
Ozone	Ozone Protection Act 1989	<p>This Act provides a broad power to make regulations to control or prohibit the production and use of:</p> <ul style="list-style-type: none"> • substances that deplete stratospheric ozone when emitted into the atmosphere and • articles that contain or use those substances in their operation. 	CEMP	
Weed Management	Pesticides Act 1999	<p>This Act controls and regulates the use of pesticides in New South Wales. It is an offence under the Act:</p> <ul style="list-style-type: none"> • to use a pesticide in a manner that injures or is likely to injure another person (section 10); • to use a pesticide in a manner that damages or is likely to damage any property of another person (section 10); • to use a pesticide in a manner that harms any non-target animal or plant, or harms any animal or plant if there is no approved label or permit for the pesticide (section 11); • to willfully or negligently use a pesticide in a manner that causes material harm to threatened species or protected animals (section 9); • to possess or use an unregistered pesticide without a permit (sections 12 and 13); • to fail to read an approved label or permit before using a registered pesticide (section 14); • to use a registered pesticide contrary to the approved label (section 15); • to keep registered pesticides in a container without an approved label (section 16); • to possess or use a restricted pesticide without being authorised by a certificate of competency or a pesticide control order (section 17). 	CEMP - Engage a suitably qualified (licenced) personnel to manage weed control	
Weed Management	Biosecurity Act 2014	<p>The aim of the act is to introduce controls to manage:</p> <ul style="list-style-type: none"> • Animal and plant pests, diseases, weeds and contaminants that are economically significant for primary producing industries; • Threats to terrestrial and aquatic environments arising from animal and plant pest and diseases; • Public health and safety risks from contaminants, non-indigenous animals, nuisance bees and weed species known to contribute to public health problems; • Animal and plant pests and diseases and contaminants that may have an adverse effect on community activities, infrastructure, health and wellbeing. 	CEMP	
Approvals to conduct activities	Protection of the Environment Operations Act 1997 (POEO Act)	<p>There is a broad allocation of responsibilities under the Act between the EPA, local councils and other public authorities. The EPA is made the regulatory authority for:</p> <ul style="list-style-type: none"> • activities listed in Schedule 1 to the Act and the premises where they are carried on; • activities carried on by a State or public authority; and • other activities in relation to which a license regulating water pollution is issued. <p>• In nearly all other cases, the regulatory authority is the relevant local council.</p>	EIS Development Consent - SSD-11437498	
Approvals to conduct activities	Environmental Planning and Assessment Act 1979	<p>The objects of this Act are:</p> <ul style="list-style-type: none"> • to encourage: <ul style="list-style-type: none"> o the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment, o the promotion and co-ordination of the orderly and economic use and development of land, o the 	EIS Development Consent - SSD-11437498	

BROKEN HILL BESS PROJECT

LEGAL REGISTER



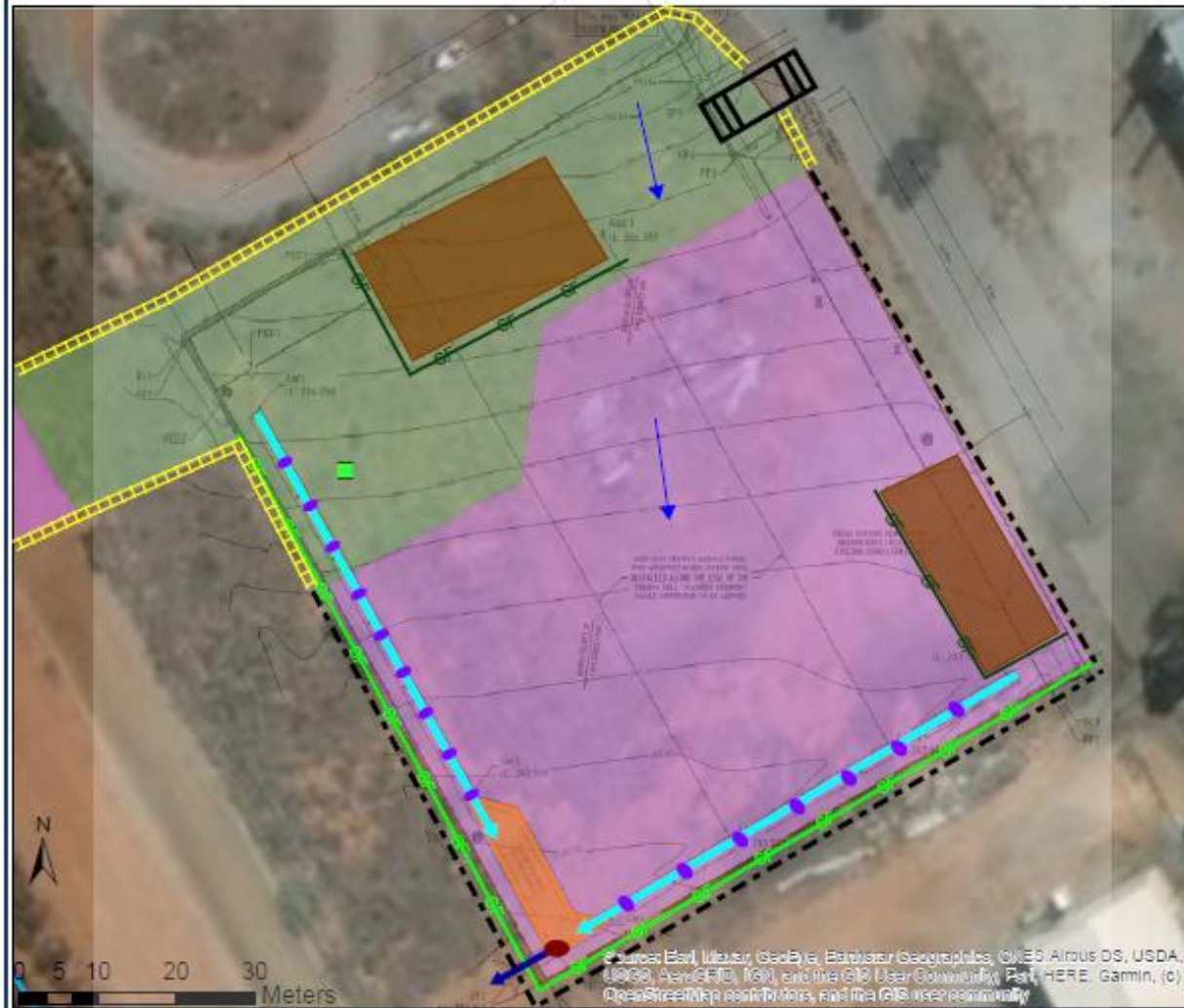
Aspect	Legislation	Key Requirements	Relevance / Controls	Compliance
		<p>protection, provision and co-ordination of communication and utility services, o the provision of land for public purposes, o the provision and co-ordination of community services and facilities, o the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and o ecologically sustainable development, and o the provision and maintenance of affordable housing,</p> <ul style="list-style-type: none"> • to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and • to provide increased opportunity for public involvement and participation in environmental planning and assessment. 		

BROKEN HILL BESS PROJECT
SOIL AND WATER MANAGEMENT PLAN – STAGE 1 - BESS



APPENDIX E: STOCKPILE LOCATIONS

BROKEN HILL BESS PROJECT
 STOCKPILE MANAGEMENT PLAN
 STAGE 1 - BESS CONSTRUCTION



LEGEND

-  Highly degraded / cleared (No PCT)
-  Bluebush Shrubland - Low Condition
-  STOCKPILE LOCATION²
-  SECURITY FENCE
-  SEDIMENT FENCE
-  (Refer to PSD1742-33A-050-01)
-  SHAKER GRID
-  SEDIMENT CONTROL SWALE (BY OTHERS)¹
-  CULVERT (BY OTHERS)
-  ROCK RIFFLE (spacing to be every 10m - see typical swale drain section)
-  ROCK FILTER
-  EXCLUSION ZONE
-  HIGH THREAT WEED

Notes:
 1. Refer to PSD1742-33A-050-01
 2. Stockpile location may be moved to suit current construction phase on the basis of:
 - not to be located within sediment control swale or sediment control pond and
 - is bunded on the downstream side (as shown) with sediment fencing to avoid any transportation of sediment into the sediment control swale.

BROKEN HILL BESS PROJECT
SOIL AND WATER MANAGEMENT PLAN – STAGE 1 - BESS



APPENDIX F: UNEXPECTED FINDS PROCEDURE

BROKEN HILL BESS PROJECT

UNEXPECTED FINDS PROCEDURE



The Consortium Project Manager will retain the overall responsibility for implementing the unexpected finds procedure for all construction works undertaken within, or near, the project area.

1.1 MANAGEMENT OF UNEXPECTED FINDS

Where unexpected contamination is identified or suspected by personnel involved in construction works within or near the project area, works will be temporarily suspended in the affected area. This area will be isolated to minimise the potential for disturbance of the affected material, soil and/or water. Field personnel are to notify the Project Manager who will then contact the AGL to inform of the impact to the intended works. The Project Manager, with guidance from the HSE Officer, will be responsible for organising the evaluation of the nature of the unexpected find.

1.2 UNEXPECTED FINDS PROCEDURE

In the event that a person on-site identifies an unexpected find, the Consortium will undertake the actions presented in Table 1.1 below.

Table 1.1 Unexpected Finds Procedure

Step No.	Description	Action
1	Potential contaminated soil, groundwater or surface water, or ACM, is encountered during construction activities.	Cease work in the potentially impacted area as soon as it is safe to do so and move away from the area. Assess the potential immediate risk to worker health and surrounding environment posed by the unexpected find and assess if evacuation or assistance of emergency services is required. Follow reporting requirements as per
2	Environmental management and work health safety management	Delineate an exclusion zone around the impacted area using fencing and/or appropriate barriers and signage. Additional control measures may be required for: <ul style="list-style-type: none">• Odours and/or volatile compounds: odours suppression and no flames/sparks signage.• Potential asbestos containing materials: if area is small cover with weighted plastic sheeting or geofabric. For larger areas, use regular dust suppression as conditions require – refer to the Work Health and Safety Plan for required controls.• Install environmental controls around the site to contain the contaminated material including diversion of water to minimise potential spread via surface water runoff in accordance with the Soil & Water Management Plan (SWMP).• Personal Protective Equipment (PPE) will be worn if conditions have changed as per the relevant Safety Data Sheet (SDS) and worker safety requirements.
3	Assess the unexpected find	A Contaminated Land Consultant should assess the unexpected find and provide: <ul style="list-style-type: none">• Preliminary assessment of the nature of suspected contamination and immediate management controls if needed.

BROKEN HILL BESS PROJECT

UNEXPECTED FINDS PROCEDURE



Step No.	Description	Action
		<ul style="list-style-type: none"> • Advise what further assessment and/or remediation works are required and how such works are to be undertaken in accordance with contaminated site regulations and guidelines – refer to the CEMP. • The assessment may include a requirement to undertake a targeted site investigation to sample and analyse contaminated media. <p>Suspected or identified contamination will be characterised with consideration of ASC NEPM (NEPC, 2013) and soil material will be classified in accordance with the Waste Classification Guidelines (NSW EPA, 2014).</p>
4	Management or mitigation action and reporting	<p>Based on advice of the Contaminated Land Consultant, implement necessary management or mitigation actions to minimise risk to human health and the environment and to allow the construction activities to recommence.</p> <p>Record details of the unexpected find and the actions undertaken, including the following, and notify the auditor, landowner; local council and/or NSW EPA:</p> <ul style="list-style-type: none"> • Location, nature and extent of unexpected find • Scope, methodology and results of any investigation. • Scope, methodology and outcomes from any remedial activities completed. • Results of any validation sampling or clearance certificates (i.e. for asbestos). • Implemented changes to risk control measures.
5	Recommence works	<p>The Contaminated Land Consultant will provide relevant information and recommendations to the Consortium Project Manager, particularly for considering any changes to existing site management plans.</p> <p>Recommence construction works once mitigation or remediation works have been implemented, sampling has validated that the remediation strategy has been successful and if it is then deemed safe to do so by the AGL, the Consortium Project Manager & HSE Officer and the auditor.</p>

BROKEN HILL BESS PROJECT

UNEXPECTED FINDS PROCEDURE



2.1 ENVIRONMENTAL CONTROL MEASURES AND COMPLIANCE

2.2 ROLES AND RESPONSIBILITIES

In addition to those detailed in the EMS & CEMP, the roles and responsibilities presented in Table 5.1 are relevant to the Unexpected Finds Procedure.

Table 2.1 Roles and Responsibilities

Role	Responsibility
HSE Officer	Provide training at commencement of project of potential of Unexpected Finds and the requirements under this procedure.
Foreman	Communicate discovery and nature of unexpected finds to contamination consultant.
Project Manager	Stop Works, ensure area is isolated and Unexpected Finds Procedure is implemented.

2.3 REPORTING REQUIREMENTS AND TIMEFRAMES

All Environmental incidents will be reported verbally immediately, and an initial report submitted to AGL (who will submit a written incident notification to the Planning Secretary via the Major Projects website) as soon as possible and within the timeframes as set out within the EPC Schedule 4 and shown in Table 2.2 below.

Table 2.2 - Incident Verbal and Initial Report Timeframes

Incident Type	Verbal Notification	Initial Incident Report
Near Miss (FIRM Low Risk Incident)	Immediately	Within 24 hours
Near Miss (FIRM Moderate Risk Incident)	Immediately	Within 24 hours
First Aid	Immediately	Within 4 hours
Medical Treatment Injury/Illness	Immediately	Within 2 hours
Lost Time Injury/Illness	Immediately	Within 2 hours
Environmental: causes or threatens material harm	Immediately	Within 2 hours
Environmental: does not cause or threaten material harm	Immediately	Within 24 hours
SIF	Immediately	Within 2 hours
SIF Potential	Immediately	Within 2 hours
High Potential (FIRM High Risk and Above Incident) and Regulatory Notifiable Incidents	Immediately	Within 2 hours

Environmental incidents (including the classifications) will be managed in accordance with the Consortium Incident Reporting and Investigation procedure (VAL-PRO-054) against the AGL Incident

BROKEN HILL BESS PROJECT

UNEXPECTED FINDS PROCEDURE



Reporting Criteria and investigated to a depth proportionate with the actual and potential environment impacts of the event.

An Environmental incident is considered 'significant' and warrants a formal incident investigation by the HSE Team if the actual consequences are 'Minor' or above, or if the potential consequences are 'Moderate' or above. AGL representatives including the HSE Manager and Stakeholder/ Approvals Manager will be invited to participate in the conduct of the Incident Investigation Process. Incidents will be investigated to a depth proportionate to their complexity and level of risk, using a formal root cause analysis method where appropriate. Witness statements (VAL-F-327) will be treated as private and confidential. A copy of the Incident Investigation Report (VAL-F-042) will be forwarded to AGL for review/feedback prior to final submission at the conclusion of the investigation and within 14 days of the event.

The HSE Leads will coordinate regulatory reporting with AGL and other involved parties whenever it is required.

2.4 TRAINING

Personnel involved in construction works in the project area will be made aware of, and trained, in the recognition of potential unexpected finds. Training will be undertaken as a part of general site induction and refreshed periodically at toolbox meetings.

Training will provide general awareness for recognition of potential contamination and hazardous materials, so that works can be suspended temporarily to allow evaluation by an appropriately qualified person. Project workers will be trained in identifying the following:

- Soil that appears to be contaminated based on visual and olfactory indicators;
- Asbestos (i.e. either bonded or friable);
- Groundwater or surface water that appears to be contaminated based on visual and olfactory observations (including potential hydrocarbon sheens on the water surface, free phase liquids such as petroleum fuel, discolouration etc.);
- Drums or USTs;
- Fill containing waste (e.g. ash, slag, refuse, demolition materials).

2.5 MONITORING AND INSPECTION

Monitoring and inspection will be conducted in accordance with sections 7.1 and 7.3 of the Broken Hill Battery Energy Storage System Project EMS. Results and actions of monitoring and inspection are to be recorded as specified within the CEMP.

2.6 AUDITING

Internal and external audit requirements will be conducted as outlined within section 7.3 of the Broken Hill Battery Energy Storage System Project EMS.