

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Finley Solar Farm

Amendment Record

Date	Description	Prepared by	Reviewed by	Approved by
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18/02/2019	Updated to reflect comments from ESCO Pacific	Chris Stewart	Kane Williams	Chris Stewart
25/02/2019	Updated for 1 outstanding item in section 9.3	Chris Stewart	Kane Williams	Chris Stewart



Table of Contents

Amendment Record	1
1. Key Acronyms and Abbreviations	4
2. Introduction.....	4
2.1 <i>Signal Energy Australia Overview</i>	<i>5</i>
2.2 <i>Project Overview.....</i>	<i>5</i>
2.3 <i>Site Description</i>	<i>5</i>
2.4 <i>Development Consent Conditions.....</i>	<i>6</i>
2.5 <i>Approvals, Licenses, Permits.....</i>	<i>12</i>
2.6 <i>Environmental Plans.....</i>	<i>12</i>
2.9 <i>Contractual Obligations.....</i>	<i>13</i>
3. Scope of Works (Construction)	13
4. Environmental Policies	16
4.1 <i>Signal Energy Environmental Policy.....</i>	<i>16</i>
5. Legal and Other Requirements	17
6. Signal Energy Environmental Objectives and Targets.....	20
7. Structure and Responsibilities	22
7.1 <i>Finley Solar Farm Pty Ltd Structure and Responsibilities.....</i>	<i>24</i>
8. Environmental Risk Assessment	25
9. Significant Environmental and Social Impacts.....	26
9.1 <i>Air Quality.....</i>	<i>26</i>
9.2 <i>Noise and Vibration</i>	<i>28</i>
9.3 <i>Traffic and Transport.....</i>	<i>30</i>
9.4 <i>Visual Amenity.....</i>	<i>31</i>
9.5 <i>Biodiversity.....</i>	<i>32</i>
9.6 <i>Cultural Heritage Management.....</i>	<i>33</i>
9.7 <i>Soil and Water Quality.....</i>	<i>34</i>
9.8 <i>Waste Management.....</i>	<i>36</i>
9.9 <i>Weed and Pest Management.....</i>	<i>39</i>
9.10 <i>Bushfire</i>	<i>39</i>
9.11 <i>Socio-Economic</i>	<i>41</i>
10. Implementation	43
10.1 <i>Training and Awareness</i>	<i>43</i>



10.2	<i>Site Induction</i>	44
10.3	<i>Toolbox Training</i>	44
10.4	<i>Daily Site Inspections and Surveillance</i>	44
10.5	<i>Weekly Site Environmental Inspection</i>	44
10.6	<i>Environmental Records</i>	44
11.	Emergency Planning and Response	45
11.1	<i>Environmental Incident Levels</i>	45
11.2	<i>Environmental Incident Investigation and Close-out</i>	46
11.3	<i>Reporting Incidents to Regulatory Authorities</i>	47
11.4	<i>Complaints and Complaints Response</i>	47

1. Key Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
AEMO	Australian Energy Market Operator
CEMP	Construction Environmental Management Plan
DCC	Development Consent Condition
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EMS	Environmental Management System
OEH	Office of Environment and Heritage
NER	National Energy Regulator
RAP's	Registered Aboriginal Stakeholders
RMS	NSW Roads and Maritime Services
SSD	State Significant Project

2. Introduction

This CEMP has been prepared by Signal Energy to meet the requirements set out in Schedule 4 - Environmental Conditions – Environmental Management and Reporting of the Development Consent (Application # SSD 8540).

This Plan has been developed to further support the Environmental Management Strategy and to identify and provide the strategic framework for environmental Management for expected environmental impacts arising from the construction of the Finley Solar Farm (Project).

The purpose of this CEMP is to provide the framework for environmental management of the construction phase of the Project. It is the responsibility EPC Contractor (project personnel, contractors and subcontractors) to comply with the objectives and requirements of this CEMP and related documents where required by their respective scope of works.

The CEMP provides an operational framework for all environmental management plans as required by the Development Consent (SSD 8540), including but not limited to:

- Environmental Management Strategy
- Biodiversity Management Plan
- Cultural and Heritage Management Plan (including Chance Finds Protocol)
- Stormwater Management Plan (including management of erosion & sedimentation and flood risk)
- Landscaping Plan (including management of weeds)
- Traffic Management Plan (including, where relevant, management of Dust and Noise);
- Accommodation and Employment Strategy.
- Other environmental management and mitigation measures set out in the Environmental Impact Statement (EIS as referred to in the Development Consent – SSD 8540) where relevant to construction activities.

Specifically, this document:

- Provides the strategic framework for environmental management of the Project, including management of environmental aspects not specifically required by the Development Consent (SSD 8540);
- Sets the environmental objectives or standards to be achieved in compliance with legislations, standards and guidelines and in accordance with the EIS and the Development Consent;
- Identifies relevant legal requirements and Development Consent Condition (DDC)

- Refers to the EIS to identify environmental aspects of the construction activities and operation and the potential environmental impacts which may result;
- Describes the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project for Signal Energy and their respective Contractors;
- Describes strategies to ensure site personnel (Signal Energy and their respective Contractors) are aware of the environmental risks associated with the activity, and are trained in the measures and contingency plans to deal with them;
- Details the monitoring and review program to evaluate environmental performance and ensure the effectiveness of environmental controls and contingency plans in accordance with commitments set out in the EIS;
- Outlines the mechanisms for communication of environmental information throughout the organisation and other stakeholders;
- Describes the procedures that would be implemented to:
 - Keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - Receive, handle, respond to, and record complaints;
 - Resolve any disputes that may arise;
 - Respond to any non-compliance;
 - Respond to emergencies;
 - Measures to mitigate potential environmental impacts and protect any special environmental characteristics of the site;

2.1 Signal Energy Australia Overview

Signal Energy have been engaged by ESCO Pacific (the Applicant) to undertake the construction and operation of the utility scale solar energy facility with a capacity up to 175 megawatts (MW) on Lots 133, 134 & 136 DP752299, 198 Canalla Road, Finley, NSW.

Signal Energy is an Australian Engineering, Procurement and Construction (EPC) Company specialising in the construction of renewable energy projects.

Headquartered in Sydney, Signal Energy has a highly experienced management team of energy infrastructure, engineering, procurement and construction professionals with specific experience in the construction of utility-scale renewable energy projects in Australia and internationally.

Signal Energy recognises the importance of conducting business operations in an environmentally responsible, sustainable and safe manner. Signal Energy are committed to health and safety, innovation and service excellence, being a responsible business and supporting the communities in which we work.

2.2 Project Overview

The proposed Finley Solar Farm is a 175-megawatt (MW) utility-scale renewable energy project that will be located west of the township of Finley in New South Wales (NSW), and will generate renewable energy from the power of the sun. Finley has been chosen as the location of the solar farm because of the relatively high solar irradiance in the region and the capacity of the Essential Energy and TransGrid electricity networks to transmit the power generated by the farm.

2.3 Site Description

The Finley Solar Project is located approximately 6 km west of Finley, 45 km east of Deniliquin, 105 km north of Shepparton (Victoria) and 150 km south-west of Narrandera within Berrigan Shire Local Government Area (LGA). The Shire is located to the north of the Murray River, halfway between Albury and Echuca, and is situated in the Southern Riverina region of NSW. The main land use of the region is rural and consists



predominantly of grazing, cropping, and irrigated lands, with its primary income derived from the agriculture industry.

Due to a long history of agriculture and grazing, the Project area has been highly modified. The Project area is bounded to the north and south by Broockmanns Road and Broughans Road, respectively. The nearest major roads are the Riverina Highway located approximately 1.5 km to the north and Newell Highway which passes through Finley approximately 6 km to the east. The development foot-print for the solar farm will utilise approximately 385 ha. A 132kV transmission line crosses the north of the Project area and connects with TransGrid's Finley 132 substation located immediately adjacent to the north-eastern boundary of the site.

2.4 Development Consent Conditions

The below table outlines how this Management Plan meets the requirements of Conditions (Schedule 3) of the Development Consent (Application # SSD 8540)

Condition	Relevant Section of the CEMP
<p>Heavy Vehicle Restrictions 2. The Applicant must ensure that the: (a) development does not generate more than: • 38 heavy vehicle movements a day during construction, upgrading or decommissioning; • 10 oversized vehicle movements during construction, upgrading or decommissioning; or • 4 heavy vehicle movements a day during operations; on the public road network; and (c) length of any vehicles (except for oversized vehicles) used for the development does not exceed 19 metres, unless the Secretary agrees otherwise 3. The Applicant must keep accurate records of the number of heavy vehicles entering or leaving the site each day.</p>	<p>Section 9.3 and the approved Traffic Management Plan</p>
<p>Access Route 4. All vehicular traffic associated with the development must travel to and from the project site via the Riverina Highway, Canalla Road and the approved site entry points (shown in Appendix 1)</p>	<p>Section 9.3 and the approved Traffic Management Plan</p>
<p>Road Upgrades 5. Prior to the commencement of construction, and to the satisfaction of RMS and Council and in accordance with the Austroads Guide to Road Design (as amended by RMS supplements), the Applicant must: (a) upgrade the intersection of the Riverina Highway and Canalla Road including a Basic Right Turn (BAR) and Basic Left Turn (BAL) treatment; and (b) upgrade the section of Canalla Road from its intersection of the Riverina Highway to a minimum of 50 m, including paving and widening of the road to allow two-way heavy vehicle traffic.</p>	<p>Section 9.3 and the approved Traffic Management Plan</p>
<p>Channel Crossings 7. The Applicant must ensure all irrigation channel and drainage channel bridge crossings located on the project site (shown in Appendix 1) are:</p>	<p>Section 9.7 and Erosion and Sediment Control Plan</p>



<ul style="list-style-type: none"> • consistent with Department of Industry – Lands & Water’s Guidelines for Controlled Activities on Waterfront Land (2012); and • completed in consultation with relevant landowners, including Murray Irrigation Limited 	
<p>Traffic Management Plan</p> <p>8. Prior to the commencement of any road upgrades required under this consent, the Applicant must prepare a Traffic Management Plan for the development in consultation with the RMS and Council, and to the satisfaction of the Secretary. This plan must include:</p> <p>(a) details of the entire transport route to be used for development-related traffic;</p> <p>(b) a protocol for undertaking dilapidation surveys to assess the:</p> <ul style="list-style-type: none"> • existing condition of local roads on the transport route/s prior to construction, upgrading or decommissioning activities; and • condition of the transport route/s following construction, upgrading or decommissioning activities; <p>(c) a protocol for the repair of any roads identified in the dilapidation surveys to have been damaged during construction, upgrading or decommissioning works;</p> <p>(d) details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction, upgrading or decommissioning works, including:</p> <ul style="list-style-type: none"> • temporary traffic controls, including detours and signage; • notifying the local community about project-related traffic impacts; • procedures for receiving and addressing complaints from the community about development related traffic; • minimising potential for conflict with school buses, rail services and other motorists as far as practicable; • scheduling of haulage vehicle movements to minimise convoy length or platoons; • responding to local climate conditions that may affect road safety such as fog, dust, wet weather; • responding to any emergency repair or maintenance requirements; and • a traffic management system for managing over-dimensional vehicles; and <p>(e) a driver’s code of conduct that addresses:</p> <ul style="list-style-type: none"> • travelling speeds; • driver fatigue; • procedures to ensure that drivers adhere to the designated transport routes; and • procedures to ensure that drivers implement safe 	<p>Section 9.3 and the approved Traffic Management Plan</p>

<p>driving practices. Following approval, the Applicant must implement the plan</p>	
<p>Landscaping 9. The Applicant must establish and maintain a mature vegetation buffer around the site at the locations outlined in the figure in Appendix 1 to the satisfaction of the Secretary. This vegetation buffer must: (a) be planted prior to the commencement of operations; (b) consist of a variety of vegetation species that are endemic to the area; (c) be effective at screening view of the solar panels and ancillary infrastructure on site from surrounding residences within 3 years of the commencement of construction; and (d) be properly maintained and kept free of weeds. 10. Prior to the commencement of construction, the Applicant must prepare a detailed Landscaping Plan for the development in consultation with RMS, Council and surrounding landowners, to the satisfaction of the Secretary. This plan must: (a) include a description of measures that would be implemented to ensure that the vegetated buffer achieves the objectives of condition 9 (b) – (d) of this consent; (b) include a program to monitor and report on the effectiveness of these measures; and (c) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions. Following approval, the Applicant must implement the plan</p>	<p>Section 9.4, 9.5 and the Landscaping Management Plan</p>
<p>Land Management 11. Following any construction or upgrading on site, the Applicant must: (a) restore the ground cover of the site as soon as practicable, but within 12 months of completing any construction or upgrades, using suitable species; (b) maintain ground cover; and (c) keep this ground cover free of weeds</p>	<p>Section 9.7 and Erosion and Storm water Control Plan</p>
<p>Biodiversity 12. Prior to the commencement of construction, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with OEH, and to the satisfaction of the Secretary. This plan must: (a) include a description of the measures that would be implemented for: • minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development; • minimising the impacts to fauna on site (including fauna interaction with perimeter fencing) and implementing fauna management protocols; • avoiding the removal of hollow-bearing trees</p>	<p>Section 9.5 and the Biodiversity Management Plan</p>

<p>during spring to early summer to avoid the main breeding period for hollow-dependent fauna;</p> <ul style="list-style-type: none"> • rehabilitating and revegetating temporary disturbance areas; • protecting vegetation and fauna habitat outside the approved disturbance areas; • maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; • controlling weeds and feral pests; and <p>(b) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions. Following approval, the Applicant must implement the plan.</p>	
<p>Noise 13. Unless the Secretary agrees otherwise, the Applicant may only undertake construction, upgrading or decommissioning activities on site between:</p> <p>(a) 7 am to 6 pm Monday to Friday; (b) 8 am to 1 pm Saturdays; and (c) at no time on Sundays and NSW public holidays.</p> <p>The following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Secretary:</p> <ul style="list-style-type: none"> • the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or • emergency work to avoid the loss of life, property and/or material harm to the environment. <p>14. The Applicant must minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version.</p>	Section 9.2
<p>Dust 15. The Applicant must minimise the dust generated by the development</p>	Section 9.4 and 9.7
<p>Lighting 17. The Applicant must:</p> <p>(a) minimise the off-site lighting impacts of the development; and (b) ensure that all external lighting associated with the development:</p> <ul style="list-style-type: none"> • is installed as low intensity lighting (except where required for safety or emergency purposes); • does not shine above the horizontal; and • complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version 	Section 9.4
<p>Cultural Heritage 18. If human remains are discovered on site, then all work surrounding the area must cease, and the</p>	Section 9.6 and the Cultural Heritage Management Plan/Chance Finds Protocol



<p>area must be secured. The Applicant must notify the NSW Police and OEH as soon as possible following the discovery, and work must not recommence in the area until this is authorised by OEH.</p> <p>19. Prior to the commencement of construction, the Applicant must prepare a Chance Finds Protocol for the development in consultation with the Aboriginal stakeholders, and to the satisfaction of OEH. Following approval, the Applicant must implement the Chance Finds Protocol.</p>	
<p>Soil and Water</p> <p>20. The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the Protection of the Environment Operations Act 1997.</p> <p>21. The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the Protection of the Environment Operations Act 1997.</p> <p>22. The Applicant must:</p> <ul style="list-style-type: none"> (a) minimise any soil erosion associated with the construction, upgrading or decommissioning of the development in accordance with the relevant requirements in the Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version; (b) ensure the solar panels and associated infrastructure are designed, constructed and maintained to avoid causing any tunnel erosion on site; (c) implement appropriate flood management practices to ensure post-development flows from the site are limited to pre-development flows for all storms up to and including the 100-year Average Recurrence Interval event; and (d) ensure all works (including waterway crossings) are undertaken in accordance with the Guidelines for Controlled Activities on Waterfront Land (2012), or its latest version. 	<p>Section 9.7 and the Erosion, Sediment and Storm Water Control Plan</p>
<p>Storage and Handling of Dangerous Goods</p> <p>23. The Applicant must:</p> <ul style="list-style-type: none"> (a) store and handle all dangerous or hazardous materials on site in accordance with AS1940-2004: The storage and handling of flammable and combustible liquids, or its latest version; (b) ensure the substation is suitably bunded; and (c) minimise any spills of hazardous materials or hydrocarbons, and clean up any spills as soon as possible after they occur. 	<p>Section 9.5, 9.7 and 9.8</p>
<p>Bushfire</p> <p>24. The Applicant must:</p> <ul style="list-style-type: none"> (a) minimise the fire risks of the development; (b) ensure that the development: <ul style="list-style-type: none"> includes at least a 10 metre defendable space around the perimeter of the solar array area that permits unobstructed vehicle access; • manages the defendable space and solar array 	<p>Section 9.10</p>



<p>area as an Asset Protection Zone;</p> <ul style="list-style-type: none"> • complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2006 (or equivalent) and Standards for Asset Protection Zones; • is suitably equipped to respond to any fires on site; <p>(c) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and</p> <p>(d) notify the relevant local emergency management committee following construction of the development, and prior to the commencement of operations.</p> <p>26. The Applicant must:</p> <p>(a) minimise the waste generated by the development;</p> <p>(b) classify all waste generated on site in accordance with the EPA's Waste Classification Guidelines 2014 (or its latest version);</p> <p>(c) store and handle all waste on site in accordance with its classification;</p> <p>(d) not receive or dispose of any waste on site; and</p> <p>(e) remove all waste from the site as soon as practicable, and ensure it is sent to an appropriately licensed waste facility for disposal.</p>	<p>Section 9.8 and Section 11</p>
<p>Accommodation and Employment</p> <p>27. Prior to the commencement of construction, the Applicant must prepare an Accommodation and Employment Strategy for the development in consultation with Council, and to the satisfaction of the Secretary. This strategy must:</p> <p>(a) propose a strategy to facilitate the accommodation of the workforce associated with the development;</p> <p>(b) investigate options for prioritising the employment of local workers for the construction and operation of the development where feasible; and</p> <p>(c) include a program to monitor and review the effectiveness of the strategy over the life of the development.</p> <p>Following the Secretary's approval, the Applicant must implement the strategy</p>	<p>Section 9.11 and Accommodation and Employment Strategy</p>

The below table outlines how this Management Plan meets the requirements of Conditions (Schedule 4) of the Development Consent (Application # SSD 8540)

Condition	Relevant Section of the CEMP
Provide the strategic framework for environmental management of the development	Section 9.11 Significant Environmental and Social Impacts
Identify the statutory approvals that apply to the development	Section 2.5 Approvals, Licenses and Permits



Describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development	Section 7 (Signal Energy Organisational Structure and Responsibilities)
Describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise; • respond to any non-compliance; • respond to emergencies; and 	Section 9.11 (Socio-Economic Mitigation Measures) Section 11.4 (Complaints and Complaints Response)
Include: <ul style="list-style-type: none"> • Copies of any plans approved under the conditions of this consent; and • A clear plan depicting all the monitoring to be carried out in relation to the development. 	Section 2.6 (Environmental Plans) Section 9.11 Signal Environmental and Social Impacts

This CEMP has also been developed to meet the condition(s) set out in the following section of the EPC Contract: -

- Section 8 – Environmental Requirements and Management
- Appendix 11.4 – Construction Environmental Management Plan

2.5 Approvals, Licenses, Permits

Development Consent Conditions are clearly set-out in the Development Consent (Application # SSD8540). The below Management plans have been developed to meet the specific conditions: -

- Accommodation and Employment Strategy (Schedule 3 - Item 27)
- Traffic Management Plan (Schedule 3 - Item 8)
- Erosion, Sediment and Storm Water Management Plan (Schedule 3 - Item 21 and 22)
- Landscaping Plan (Schedule 3 - Item 10)
- Cultural Heritage Management Plan and Chance Finds Protocol (Schedule 3 - Item 18 and 19)
- Biodiversity Management Plan (Schedule 3 - Item 12)

In the event that works are required in addition to the specified Scope of Works, dependent on the scope, Signal Energy will seek the necessary approvals.

2.6 Environmental Plans

The following Plans (required by the Development Consent) are to be read in conjunction with this CEMP: -

- Environmental Management Strategy
- Accommodation and Employment Strategy
- Traffic Management Plan
- Erosion, Sediment and Storm Water Management Plan
- Landscaping Plan
- Cultural Heritage Management Plan (including Chance Find Protocol)
- Biodiversity Management Plan

- Emergency Management Plan
- Safety and Health Management Plan
- Quality Management Plan

2.9 Contractual Obligations

Signal Energy will ensure that the following requirements are adhered to by all Sub-Contractors in accordance the Contract:

- Compliance with all conditions of approval relevant to the Project;
- Suitably qualified environmental resources will be provided to undertake environmental duties relevant to the Project, including the implementation of the CEMP as required;
- Mechanisms will be established and implemented to ensure continual improvement; and
- Compliance with any reasonable direction given by a referral Agency or Finley Solar Farm Pty Ltd representative to improve or rectify the Project's environmental practices is adhered to;

The Sub-Contractors Environmental Management Plans addresses all relevant requirements detailed in the Signal Energy environmental documentation, including all relevant project approvals, licences and permits

3. Scope of Works (Construction)

The Works include but are not limited to the following:

- The design, engineering, procurement and construction of:
 - PV modules appropriately rated for the environment and of a sufficient quantity to meet the Guaranteed Peak Power, inclusive of all DC cabling between the PV modules;
 - Single axis tracking arrays and foundation design (or designs) suitable for:
 - The Site-specific geotechnical conditions
 - The location and wind region; and
 - Soil corrosion properties and Design Life;
 - PCU's inclusive of RMU, LV/MV step-up transformers, either pre-assembled skid mounted or Containerised units or assembled on site on concrete pads, all in accordance with the PCU suppliers warranty conditions. The PCU's shall be supplied inclusive of all wiring and connections required;
 - 33kV Collection Station inclusive of a control room which shall house 33kV switchgear and associated protection and control Equipment and TNSP equipment;
 - 33kV underground reticulation system connecting the PCU's to the 33kV Collection Station;
 - 33kV underground cables between the 33kV Collection Station and the Substation including cable terminations on both ends;
 - 132kV transmission line between TransGrid's 132kV substation and the Solar Farm 132kV/33kV substation;
 - 132kV/33kV substation inclusive of a 132kV/33kV transformer and a control room which shall house associated protection and control Equipment and TNSP equipment;
 - O&M facilities including the O&M Building, workshop/storage warehouse, ablutions, and carpark;
 - Meteorological stations;
 - SCADA system;
 - Security system;

- Earthing, equipotential bonding and lightning protection system associated with all the above;
- Civil works including:
 - Site clearing and preparation;
 - Site entrance, access road, internal roads and hardstands;
 - Site establishment to include the provision of erosion control and drainage protection, fencing and signage as required to comply with the Development Consent;
 - Fencing including required gates, emergency exits and fencing around the Substation compound to the TNSP specifications;
 - Construction of the platform for the Substation to house the 33/132kV transformer, as per the TNSP's specifications and requirements;
 - Drainage, water and sewerage works as further described in this Works Specification;
 - Foundations;
 - Landscaping;
 - All services required for the O&M Building; and
 - All civil works required to comply with the conditions of the Development Consent;
- Dilapidation surveys, topographic survey, feature survey and geotechnical investigations and hydrology assessments;
- Factory Acceptance Testing (FAT), type testing, commissioning and Acceptance Testing;
- Development, coordination, technical and regulatory compliance, and approvals including:
 - Compliance with the Development Consent conditions;
 - Obtaining all approvals and permits from the Responsible authorities for construction;
 - Development, in consultation with the Principal, and subsequent implementation of, the CEMP;
 - Development, in consultation with the Principal, and subsequent implementation of, a Construction Noise Management Plan (CNMP);
 - Compliance with all aspects of the Project Agreements;
 - All necessary technical and regulatory approvals required from Responsible authorities, to satisfy all the Contractor Responsibilities to meet requirements under the Connection Agreement as defined within the Responsibility Matrix;
 - Design interfacing, co-ordination and technical negotiations with the TNSP to ensure that the Connection Works is completed without any gaps in scope;
 - Provision of R1 PSSE models to a standard acceptable by the TNSP and AEMO;
 - Active engagement with the Principal, the TNSP and AEMO to support the timely endorsement of network acceptance modelling and to secure agreement on the GPS, including the undertaking of grid modelling and development of recommendations for changes to the GPS;
 - Provision of all necessary information and data for accreditation with CER and generation licence;
 - Undertaking the NEM registration process, on behalf of the Principal as well as any other registration required in order to export electrical energy; and
 - Undertaking all the necessary tests and validation exercises to achieve R2 endorsement from AEMO and the TNSP;



- Integration of the SCADA System with the TNSP and AEMO to enable data transfer and control as per the NER and AEMO requirements;
- Initial operation of the Solar Farm prior to Commercial Operation;
- Temporary offices, car parking and storage compound for the duration of the construction phase and facilities required to comply with the conditions of consent (permit conditions);
- Training of the Principal's Personnel in the safe operation and maintenance of the completed solar farm;
- Full design documentation, issued for construction and as-built drawings, and operational and maintenance documentation

4. Environmental Policies

4.1 Signal Energy Environmental Policy

Signal Energy Australia Pty Ltd (Signal Energy) and its Officers (Directors and General Manager) are committed at all levels to sustainable development during the engineering, procurement and construction (EPC) of renewable energy projects. Signal Energy is committed to implementing and maintaining environmentally sustainable practices that demonstrate a high standard of responsible Environmental Management.

Signal Energy strives to preserve resources by focusing their construction activities in the renewable energy sector which assists in the conservation of energy produced by non-renewable resources, and by methods which pollute the environment.

Signal will demonstrate a high standard of responsible Environmental Management by:

- Communicating and encouraging the teaching of the Signal Energy Environmental Policy and procedures to all employees;
- Making business decisions that work towards achieving sustainable development and minimise pollution - noise, visual impact, odour and the accumulation of waste;
- Responding to the environmental challenges in all areas of our business;
- Ensuring that our employees, subcontractors, suppliers and consultants are aware of and comply with their environmental obligations with respect to Signal Energy operations and activities under their control;
- Striving to reduce our impact on the environment by minimising waste generation through reduction, reuse and recycling;
- Working with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Eliminating or minimising adverse environmental effects and risks by reducing and, where possible, eliminating the use of harmful substances and ensuring the correct and safe disposal of all substances;
- Addressing environmental concerns in all planning decisions and encourage design and procurement procedures that adhere to the principles of the Environmental Policy;
- Periodically review and revise our Environmental Policy and procedures to maintain their relevance; and
- Complying with all applicable environmental laws, regulations, statutory obligations and relevant voluntary codes of practice;

The Signal Energy Integrated Management System is designed to exceed the requirements of ISO 14001:2015. It has the full support of the Signal Energy Management Team and its successful implementation and maintenance is a commitment by them. This Policy will be communicated to all employees and made available to the public and interested parties.

Adherence to the Environmental Policy, as well as active participation in reducing the overall environmental impact is a requirement of all employee's and Subcontractors at Signal Energy.

Our success is driven by the value we bring to our projects. It is our commitment to ensure that this policy is implemented in a cooperative and consultative work environment.

Robbin Russell
General Manager
Signal Energy Australia

July 2018

5. Legal and Other Requirements

The Project shall be delivered in compliance with all applicable Acts and Regulations relevant to the scope of works. A General Register of legal and other requirements for this Project is contained in the table below. This register will be reviewed at regular intervals e.g. during management reviews and updated with any applicable changes. Any changes to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other communication methods.

Regulatory and Other Requirements	Description and Relevance
<i>Environmental Planning and Assessment Act 1979 (NSW)</i>	The NSW <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) is the core legislation relating to planning and development activities in NSW. It is the principal law overseeing the assessment and determination of development proposals, and all development in NSW is assessed in accordance with the provisions of the EP&A Act.
<i>Protection of the Environment Operations Act 1997 (NSW)</i>	<i>The Protection of the Environment Operations Act 1997</i> (POEO Act) establishes the State's environmental regulatory framework and includes licensing requirements for certain and is administered by the EPA.
<i>Crown Lands Act 1989 (NSW)</i>	The <i>Crown Lands Act 1989</i> , administered by the Minister for Crown Lands, regulates the management of Crown land for the benefit of the people of New South Wales
<i>Local Land Service Amendment Act 2016 (NSW)</i>	The <i>Local Land Service Amendment Act</i> provides a framework for the management and conservation of native vegetation in NSW, in accordance with Ecologically Sustainable Design principles, with an aim of preventing broad scale clearing unless it improves the condition of high conservation value native vegetation and encourage rehabilitation of the land.
<i>Biodiversity Conservation Act 2016 (NSW)</i>	The <i>Biodiversity Conservation Act 2016</i> (BC Act) governs the management and conservation of biodiversity in NSW, which includes all flora, fauna and ecological communities, consistent with principles of ecologically sustainable development of the <i>Protection of the Environment Administration Act 1991</i> (NSW).
<i>Biodiversity Conservation Regulation 2017 (NSW)</i>	Section 6.8 of the <i>Biodiversity Conservation Regulation 2017</i> (the BC Regulation) requires that a Biodiversity Development Assessment Report (BDAR) for a development application must include details of offsets for impacts, including the number and classes of biodiversity credits required to be retired in accordance with the like-for-like requirements of the offset rules. The credentials of the assessors that established these offsets and the date of the assessment is also required under the BC Regulation.
<i>Fisheries Management Act 1994 (NSW)</i>	The broad objective of the <i>Fisheries Management Act 1994</i> (FM Act) is to conserve, develop and share the fishery resources of the State for the benefit of present and future generations.
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as Matters of National Environmental Significance (MNES). The purpose of the EPBC Act is to ensure that actions likely to cause a significant impact on MNES undergo an assessment and approval process. Under the EPBC Act, an 'action' includes a project, undertaking, or activity. An action that 'has, will have or is likely to have a significant impact on a matter of national environmental significance' is deemed to be a 'controlled action' and may not be undertaken without prior approval from the Commonwealth Minister for the Environment (the Minister).
<i>National Parks & Wildlife Act 1974 (NSW)</i>	The National Parks & Wildlife Act 1974 (NPW Act) protects Aboriginal heritage (places, sites and objects)

	<p>within NSW. Protection of Aboriginal heritage is outlined in s86 of the Act, as follows:</p> <ul style="list-style-type: none"> • “A person must not harm or desecrate an object that the person knows is an Aboriginal object” s86(1), • “A person must not harm an Aboriginal object” s86(2) • “A person must not harm or desecrate an Aboriginal place” s86(4).
<i>National Parks & Wildlife Regulation 2009 (NSW)</i>	<p>The National Parks and Wildlife Regulation 2009 (“NPW Regulation”) provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The NPW Regulation 2009 outlines the recognised due diligence codes of practice which are relevant to this report, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes.</p>
<i>Heritage Act 1977 (NSW)</i>	<p>The NSW Heritage Act 1977 makes provisions to conserve the State’s historic heritage. It provides for;</p> <ul style="list-style-type: none"> • The identification and registration of items of State heritage significance; • The interim protection of items of State heritage significance; and • Constitutes the Heritage Council of New South Wales.
<i>Native Title Act 1993 (Commonwealth)</i>	<p>The Native Title Act provides a national framework for the recognition and protection of native title i.e. the rights and interests, recognised by common law, possessed under traditional laws and customs of Aboriginal and Torres Strait Islander people.</p> <p>The Act recognises the ownership of land or waters by Aboriginal and Torres Strait Islander groups prior to European settlement and provides a mechanism for determining where native title exists, who holds it, and identifies compensation for actions affecting it. The Act establishes ways in which future dealings affecting native title may proceed and sets standards for those dealings.</p> <p><u>A Native Title search has been undertaken for the development and it has been determined that there are no registered claims over the Project area.</u></p>
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)</i>	<p>The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 enables the Australian Government to respond to requests to protect areas and objects of particular significance to Aboriginal people, if it appears that state or territory laws have not provided effective protection.</p> <p>An Aboriginal and Historic Heritage Assessment has been prepared for the development which has determined that there are no items or areas of Aboriginal cultural heritage significance within the development site.</p>
<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010)</i>	<p>The purpose of the guidelines is to establish the requirements for consultation with the registered Aboriginal parties as part of the heritage assessment process to determine potential impacts of proposed activities on Aboriginal objects and places and to inform decision making for any application for an Australian Heritage Impact Permit (AHIP).</p>
<i>Code of Practice for Archaeological Investigations of Objects in NSW (2010)</i>	<p>The purpose of this Code of Practice is to:</p> <ul style="list-style-type: none"> • establish the requirements for undertaking test excavation as a part of archaeological investigation without an AHIP; and • establish the requirements that must be followed when carrying out archaeological investigation in NSW where an application for an AHIP is likely to be made.
<i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (2011)</i>	<p>The purpose of this document is to provide:</p> <ul style="list-style-type: none"> • Guidance on the process for investigating and assessing Aboriginal cultural heritage in NSW and

	<ul style="list-style-type: none"> • OEH's requirements for an Aboriginal cultural heritage assessment report.
<i>Biosecurity Act 2015 (NSW)</i>	The <i>Biosecurity Act 2015</i> establishes a system for the identification and control of noxious weeds in NSW. The NW Act divides noxious weeds into five categories which determine the level of control required. Responsibility for the control of noxious weeds lies with the owner and/ or occupier of private land and crown land, local councils and other public authorities.
<i>Water Management Act 200 (NSW)</i>	The objectives of the <i>Water Management Act 2000</i> are to provide for the sustainable and integrated management of the water sources of NSW for the benefit of both present and future generations.
<i>Roads Act 1993 (NSW)</i>	The <i>Roads Act 1993</i> (Roads Act) provides a framework for the management of roads in NSW. It provides for the classification of roads and the declaration of the Roads and Maritime Services (RMS) and other public authorities for both classified and unclassified roads. The Roads Act confers functions on RMS and other roads authorities and allows distribution of such functions between RMS and other roads authorities.
<i>State Environmental Planning Policy (State and Regional Development) 2011</i>	<p>The Project triggers SSD in accordance with Division 4.1 of Part 4 of the EP&A Act, as it is a type of development listed in Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011. Pursuant to Clause 8 of the SEPP.</p> <p><u>Accordingly, the Finley Solar Project is classified as an SSD under Part 4 of the EP&A Act, as it has a capital investment value of approximately \$150 million</u></p>
<i>State Environmental Planning Policy (Infrastructure) 2007</i>	<p>The Project site is zoned RU1 Primary Production under the Berrigan Local Environment Plan (LEP) 2013. Under RU1 zoning electricity generating works or solar energy systems are prohibited, however under the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) development of electricity generation works or solar energy systems is permissible on any land with consent within a 'prescribed rural zone'.</p> <p><u>Accordingly, the proposed development satisfies Clause 34 of the ISEPP and is permitted within zone RU1 Primary Production.</u></p>
<i>State Environmental Planning Policy No:33 – Hazardous and Offensive Development</i>	<p>Provides definitions for hazardous and offensive industry based on the likely impacts of the proposal. A potentially hazardous industry is defined within SEPP 33 as "a development for the purpose of any industry which, if the development were to operate without employing any measures to reduce or minimise its impact, would pose a significant risk to human health, life or property, or to the biophysical environment".</p> <p><u>The development has been designed such as to avoid significant risk to human health, life, property or the biophysical environment through either avoidance of sensitive areas or the employment of mitigation measures. It is considered that SEPP 33 is not relevant to the Finley Solar Project due to its non-hazardous and non-offensive nature.</u></p>
<i>State Environmental Planning Policy (Rural Lands) 2008</i>	<p>The aims of State Environmental Planning Policy (Rural Lands) 2008 are to:</p> <ul style="list-style-type: none"> • Facilitate the orderly and economic use and development of rural lands for rural and related purposes; • Identify Rural Planning Principles and the Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State; • Implement measures designed to reduce land use conflicts;

	<ul style="list-style-type: none"> Identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations; and Amend provisions of other environmental planning instruments relating to concessional lots in rural subdivisions. <p><u>It is considered that the development is consistent with the aims of the SEPP, and is also not identified as state significant agricultural land</u></p>
<i>Berrigan Local Environment Plan 2013</i>	The Berrigan LEP 2013 governs land use within the Berrigan Shire LGA. The Berrigan LEP provides local environmental planning provisions for land in Berrigan in accordance with the relevant standard environmental planning instrument under section 33A of the EP&A Act.
<i>Berrigan Development Control Plan 2014</i>	<p>The Berrigan DCP 2014 (the DCP) supplements the Berrigan LEP by providing more detailed controls and guidelines for development across the Fairfield LGA. The proposal is SSD; therefore Clause 11 the SRD SEPP applies. Clause 11 states:</p> <p>Development control plans (whether made before or after the commencement of this Policy) do not apply to:</p> <ul style="list-style-type: none"> State significant development, or development for which a relevant council is the consent authority under section 89D (2) of the Act. <p>Whilst the provisions of the DCP do not apply to the Project, the development has been designed to take into consideration the relevant requirements of the Berrigan DCP 2014.</p>
<i>Riverina Murray Regional Plan 2036</i>	<p>The proposed Finley Solar Farm falls within the Riverina Murray region of NSW. DPE has prepared the Riverina Murray Regional Plan 2036 (RMRP) for the region which provides a 20-year blueprint for the future of the Riverina Murray (DPE 2017).</p> <p>The plan sets out the NSW Government's vision for the Riverina Murray, which is to create a diversified economy founded on Australia's food bowl, iconic waterways and a strong network of vibrant and connected communities.</p> <p>The Government has set four goals for the region to achieve this vision:</p> <ul style="list-style-type: none"> A growing and diverse economy; A healthy environment with pristine waterways; Efficient transport and infrastructure networks; and Strong, connected and healthy communities. <p><u>The development of the Finley Solar Farm is consistent with these objectives, in particular the development of a growing and diverse economy</u></p>

6. Signal Energy Environmental Objectives and Targets

Environmental objectives and targets for Signal Energy are established by the Project Management Team in consultation with Subcontractors and employees. Objectives and targets are recorded within this Plan and are continually monitored through the Management Review function and by review of project specific monthly reporting.

Signal Energy continually monitors all shortcomings or opportunities for improvement that have been identified. Opportunities for improvement goals set by Management for the business may be identified through any of the following;



- Management Annual Review;
- Significant non-conformances and corrective actions;
- Project Specific Meetings and Toolbox Talks
- Client and Contract Meetings
- Internal and external audit reports;
- Incidents and near misses;
- Identified Environmental impacts;

The CEMP Objectives and Targets are aligned to the overarching policies documented COA's summarised below.

Below is the specific Environmental Objectives and Targets for the Finley Project: -

Objective	Target	Indicator	Responsibility
Construction of the project in accordance with COA's and relevant licenses	Compliance to Statutory Approvals	Internal and Independent Audit Feedback	Project Manager, Construction Manager and SHEQ Adviser
Construction of the project in accordance with approved Environmental Management Plans outlined in section 2.6 of this Plan.	Compliance to approved Management Plans	Internal and Independent Audit Feedback	Project Manager, Construction Manager and SHEQ Adviser
There is Nil Environmental Harm from Signal Energy (including Subcontractors) work activities	Nil Environmental Harm	All environmental impacts are analysed and responded too to ensure no environmental Harm	Construction Manager and SHEQ Adviser
Achieve Continual Client satisfaction	Customer Service feedback (Daily/Weekly and Monthly) from Clients	Positive customer feedback through Client meetings	Signal Energy Management Team
Client and Public complaints are rectified 100% of the time	100% Rectification	Customer complaints, NCR's and OFI's will be closed out as per the assigned dates	Construction Manager and SHEQ Adviser
Signal Energy Design and Plan works to achieve sustainable development and minimise pollution (e.g. noise, waste and Dust)	Meet Client and public Expectations Adhere to COA's	Client, Internal and Independent Audit Feedback	Signal Energy Management Team

Signal Energy are to work with clients and communities within the Berrigan Shire Council to ensure that impact on locals is mitigated to ALARP	To have minimal impact on local communities in which their projects are situated	Public Feedback, Complaints Registers.	Signal Energy Management Team
Continuous system improvement	Complete Internal Audits and relevant Corrective Actions within assigned timeframes	Audits completed and Corrective Actions Closed out.	Construction Manager and SHEQ Adviser

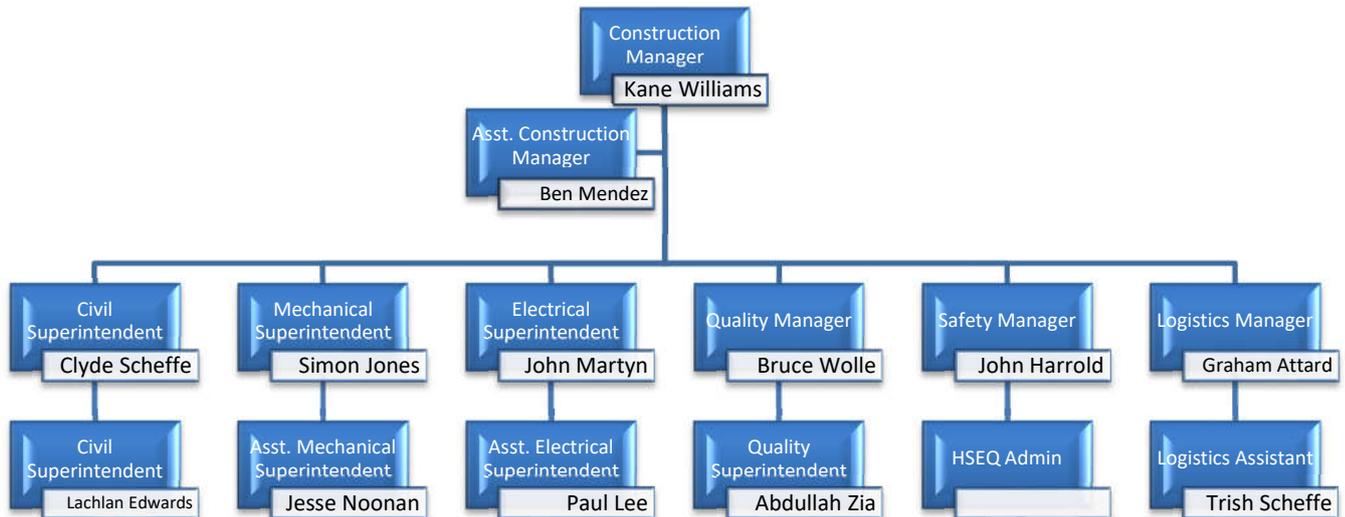
7. Structure and Responsibilities

The project specific organisational structure is provided below.

All Signal Energy personnel (including subcontractors) have a general environmental duty of care as defined in the Environmental Protection Act and are responsible for their own environmental performance whilst on site.

The general structure of authority and reporting flow paths is shown in Figure 1.

Figure 1.



Role	Responsibilities
Project Manager	<ul style="list-style-type: none"> • Promote Environmental performance, at every opportunity as a core value of the organisation. • Ensure there is adequate and efficient resources available • Be familiar with, understand, and enforce the legislative duties and Signal Energy company and project specific regulations and requirements, as well as other pertinent and accepted work practices; • Exercise stop work responsibility when Environmental Aspects present themselves • Work closely with and support the Construction Manager for the execution of this Strategy.
Construction Manager	<ul style="list-style-type: none"> • Overall project environmental management and due diligence on-site. • Allocation of resources • Promote environmental incident avoidance; • Respond to environmental incidents; • Corrective and preventative action; and • Emergency preparedness and response.
SHEQ Manager/Adviser	<ul style="list-style-type: none"> • Reporting of Environmental Issues as required to the Finley Solar Farm Pty Ltd Project Director and Environmental Manager • Development of this CEMP, Subplans and revisions. • Ensuring that all project personnel receive appropriate environmental inductions and additional training as required; • Ensure that relevant Audit tools and schedules are developed and adhered to. • Monitoring of performance of this CEMP and Subplans • Maintenance of up-to-date CEMP and documents at the site; • Where necessary, ensuring environmental inspections (at least on a monthly basis) are undertaken and any environmental records are kept
Other Managers and Superintendents	<ul style="list-style-type: none"> • Support the Construction Manager to ensure project environmental management and due diligence; • Assist in allocation of resources; • Ensuring that all site personnel receive appropriate environmental inductions and additional training as required; • Reporting on this CEMP; • Promote environmental incident avoidance; • Respond to environmental incidents; • Corrective and preventative action; • Emergency preparedness and response; • Approval of any chemicals entering the site;

	<ul style="list-style-type: none"> • Emergency response manager; • Compliance with permits, local council guidelines and regulatory requirements; and • Monitoring of subcontractor compliance with the EMP.
Subcontractors Supervisors	<ul style="list-style-type: none"> • Contractors shall be required to comply with the specific COA's, performance objectives of the contract, and CEMP. • Submit an applicable Construction Environmental Management Plan to Signal Energy for review and approval before the commencement of any work on-site. • Participate in the implementation of this CEMP and their own CEMP; • Work with site supervisors to ensure their activities are undertaken in a manner which does not cause environmental harm; • Rectify environmental controls removed or damaged by their activities; and • Report situations that have, or may result in environmental harm
All On-Site Personnel	<ul style="list-style-type: none"> • Report any activity that has resulted in, or has the potential to result in an environmental incident immediately to the Site Manager, Project Manager and SHEQ Adviser; • Where necessary, ensuring environmental inspections are undertaken and any environmental records are kept; • Carry out all activities in accordance with this CEMP; • Identify and report non-conformances; • Implement corrective and preventative action; and • Work with the project team in planning and implementing environmental requirements.

7.1 Finley Solar Farm Pty Ltd Structure and Responsibilities

Finley Solar Farm Pty Ltd as Trustee for the Finley Solar Trust is responsible for the overall implementation of this Environmental Management Strategy and all Management Plans listed in this EMS.

Project Director/Project manager

The Project Director/Project manager will be responsible for:

- Ensuring all relevant Management Plans are in place,
- Establishing a rigid management and reporting structure to implement and monitor these plans,
- Ensuring compliance with this Management Plan.

Environmental Management representative

The Environmental Management representative/HSE Manager will be responsible for:

- Aiding and giving advice to Contractors listed in this document in order for this EMS to be implemented properly,



- Review of this Environmental Management Strategy in consultation with the EPC Contractor, the O&M Contractor and TransGrid,
- Carrying out inspections, monitoring each condition and reporting any findings,
- Providing project-wide advice to ensure consistent approach and outcomes are achieved, including communication between the Contractors where required by Environmental Management Plans and/or Development Consent conditions,
- Liaising with the Secretary and contacting the relevant Agencies where required by legislations, Development Consent conditions and Management Plans as listed in this EMS,

8. Environmental Risk Assessment

Environmental aspects as referred to in this document are those activities associated with the Project that have the potential to cause, or result in, environmental harm.

An environmental risk management assessment has been utilised to identify and assess the environmental aspects associated with the Project, and to recommend appropriate mitigation strategies to minimise the likelihood of environmental risks associated with each aspect to be included in an Environmental Management Plan where required. This process involves:

- Identifying the risk/aspect;
- Analysing the risk/aspect (determining likelihood and consequence);
- Evaluating the risk/aspect; and
- Treating the risk.

Risk Matrix					
Severity	Exposure				
	E - Remote	D - Unlikely	C - Possible	B - Likely	A - Certain
1 - Slight	1	1	1	2	3
2 - Minor	1	2	2	3	3
3 - Moderate	1	2	3	4	4
4 - Major	2	3	4	5	5
5 - Extreme	3	3	4	5	5

EXPOSURE – How likely is this event to happen?		
CODE	DESCRIPTOR	DEFINITION
A	Certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Might possibly occur at some time
D	Unlikely	Could occur at some time but doubtful
E	Remote	May occur but only in exceptional circumstances
SEVERITY – If this does happen, how severe would the outcome be?		
CODE	DESCRIPTOR	DEFINITION



5	Extreme	Fatality/ multiple serious injuries, environmental disaster, huge cost
4	Major	Serious/life threatening injury, severe environmental damage, major cost
3	Moderate	Injury requiring medical treatment, contained environmental impact, moderate cost
2	Minor	First aid treatment, some environmental/financial impact
1	Slight	No injury, low environmental/financial impact
Risk Level Code	Description	Actions
5	EXTREME	Do not undertake task. Modify process / design.
4	VERY HIGH	Do not undertake task. Modify process / design, Action plan required including controls to manage risk. Requires senior management attention
3	HIGH	Action plan required including controls to manage risk. Requires senior management attention
2	MEDIUM	Specify management responsibility
1	LOW	Manage by routine procedures

9. Significant Environmental and Social Impacts

Using the Finley Solar Farm EIS (Statement of Commitment), and the above Risk Assessment, the significant environmental impacts have been listed below, with a summary of control measures to be implemented and monitored. Detailed mitigation measures are defined below and further in relevant Environmental Sub-Plans.

All environmental mitigation shall be communicated through the Finley Solar Farm Site Induction. Relevant Audit Tools will also be developed in accordance with the performance objectives below and the mitigation measures outlined in the relevant EMP's.

9.1 Air Quality

Issues

The most common pollution generating sources in the area include vehicle emissions, dust from unsealed roads, agricultural activities (cropping, stock movement, earth moving), and wood fuelled fires.

Emissions to the atmosphere from the Project during construction will be temporary, and restricted to dust caused by land disturbance, and vehicle, plant and equipment exhaust emissions.

Dust emissions during operation are not expected to be significant.

Environmental Performance Objectives

- Minimal dust moving off-site and minimum dust on-site;
- No complaints from neighbouring properties;
- Construction equipment operating according to manufacturer's specifications; and
- Compliance with the relevant regulation
- Compliance with Condition 15 (Schedule 3) of the Development Consent

Mitigation Measures

Action	Responsibility	Timing
Water Trucks to be used during construction for dust suppression as required for: 1. Internal unsealed access roads and 2. Disturbed areas	Signal Energy Subcontractors	When required
Dust suppression requirements during construction will take into consideration weather conditions and the likelihood of extended dry periods	Signal Energy Subcontractors	When required
Ensure all construction related stockpiles are covered or regularly watered to prevent dust emissions.	Signal Energy Subcontractors	When required
Minimise surface disturbance and maintain surface cover where possible	Signal Energy Subcontractors	Always
Confine traffic to defined roads and tracks on-site where possible	Signal Energy Subcontractors	Always
Construction vehicles onsite are to observe speed limits.	All Personnel	Always
Dust generating activities shall be limited during periods of high velocity wind, as determined by the Construction Manager in consultation with the SHEQ Adviser and Subcontractor Representatives	Construction Manager (Signal Energy)	When required
Visual monitoring for dust resulting from construction activities shall be undertaken by all personnel. Excessive dust generation shall be reported to the appropriate Subcontractor Supervisor or Signal Energy Superintendent.	All Personnel	When required
All dust complaints from construction activities shall be recorded and reported to the Construction Manager, Superintendent or SHEQ Adviser immediately after receipt of the complaint. All actions taken are to be recorded.	SHEQ Adviser (Signal Energy)	When required
All trucks transporting spoil and fill material to and from the site shall have covered loads if travelling on public roads.	Signal Energy Subcontractors	Always
All trucks, plant and temporary equipment used on site shall be regularly serviced such that they operate efficiently and do not emit excessive exhaust.	Signal Energy Subcontractors	Always
Visual monitoring shall be conducted and maintenance records of all trucks, plant and machinery are to be kept.	Signal Energy Subcontractors	Always
All vehicles, plant and equipment will be cleaned on a regular basis.	Signal Energy Subcontractors	When required
All vehicles, plant and equipment will be switched off when not in continuous use	Signal Energy Subcontractors	Always

Action	Responsibility	Timing
A Construction Traffic Management Plan has been prepared and will be implemented to assist with the management of vehicle generated dust	SHEQ Adviser (Signal Energy)	Before Project Commencement
Burning of vegetation or other waste materials is not permitted.	All Personnel	At all times

9.2 Noise and Vibration

Issues

A Noise Impact Assessment (NIA) has been undertaken to assess the potential construction, operational and traffic noise impacts associated with the project.

The results of the noise assessment determined that:

- Exceedances of up to 19 dB over the construction noise limit (40 dB) are predicted at 5 receptors when construction activities are being undertaken near the closest site boundary;
- No exceedances of the highly affected noise limit of 75 dB are predicted during construction;
- No exceedances of the adopted Project Specific Noise Levels (PSNL) are predicted for operational noise; and
- No exceedances of road traffic noise criteria are predicted for traffic generated by the development.

Given that construction noise levels are predicted to exceed the relevant limits at 5 receptors noise management mitigation measures are included below to ensure that construction noise from the Project is appropriately managed and minimised.

Environmental Performance Objectives

- Construction activities will only occur between site specified hours
- Construction noise from the project is minimised
- Maintain compliance with the conditions of the project approval and legislation relating to noise
- Provide a protocol for monitoring and assessing construction noise impacts on surrounding private receptors
- Effective communication with the local community and regulators regarding construction of the proposed project.
- Compliance with condition 13 and 14 (Schedule 3) of the Development Consent.

Mitigation Measures

Action	Responsibility	Timing
Contact details provided to all surrounding residences so as they can directly contact a Signal Energy Representative (Liaison Person) on-site if they have any issues with noise generated during the project. All Complaints will also be reported through to Finley Solar Farm Pty Ltd.	Construction Manager (SEA)	Project Duration
All complaints and queries related to noise generated by substation Works (TransGrid's scope of work) will be immediately forwarded to Finley Solar Farm Pty Ltd.	SHEQ Manager	Project Duration

Action	Responsibility	Timing
<p>Construction activities will only occur between site specified hours: - Monday - Friday: 6am-7pm Saturday: 7am-5pm Sunday & Holidays: 7am-5pm</p> <p>In Addition to the defined control measures below, Signal Energy will strictly enforce the below for all work carried out <u>on Saturday, Sunday, and 6am -7am/6pm-7pm weekdays: -</u></p> <ul style="list-style-type: none"> The Signal Energy Liaison Person will further formally consult with the 5 NSR's surrounding the project to ensure they are kept up to date with works programme and ensure that any issues are identified and rectified. All work utilising Plant and Equipment (e.g. Piling Machine, Excavators etc.) will not be permitted within 500m of an identified Noise Sensitive Receptor (NSR) during the extended work hours. To ensure compliance with the 500m rule a visual marker will be erected. Targeted Noise Monitoring will be undertaken at the 5 identified NSR's during extended work hours to ensure compliance with the after-hours Construction Noise Limit. If noise limits are exceeded or a compliant is received, Signal Energy will implement appropriate control measures to resolve the compliant or ensure compliance with the limits. 	Construction Manager (Signal Energy) and Signal Energy Subcontractors	Project Duration
Construction site personnel shall be made aware of all community attitudes and noise complaints through toolbox talks and awareness training sessions	Construction Manager (Signal Energy)	When required
Stationary equipment such as generators shall be located as far as practicable from noise sensitive receptors. Noise barriers are to be utilised where required	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
All vehicles and equipment shall be turned off when not in use.	Signal Energy Subcontractors	Always
All construction equipment shall be fitted with noise suppression devices (e.g. mufflers) and be kept in good working condition.	Signal Energy Subcontractors	Project duration
Regular maintenance of plant and construction equipment shall be conducted to ensure items are kept in good working order.	Signal Energy Subcontractors	Project duration
A Construction Noise Monitoring Programme will be implemented throughout the project duration, that will include periodic checks at the 5 identified Sensitive Receptors outlined in the Noise Impact Assessment. If noise levels exceed 19dB over the CNL then control measures will be implemented.	Construction Manager (Signal Energy)	Project Duration
All noise complaints from construction activities shall be recorded and reported to the Construction Manager, immediately after receipt of the complaint. All actions taken are to be recorded and will be developed on a case by case basis.	SHEQ Adviser (Signal Energy)	When required

Action	Responsibility	Timing
The closes inverter to a an NSR is Inverter 2 and Inverter 32 which are minimum 200m away from these residences.	Construction Manager (Signal Energy)	Project Duration

9.3 Traffic and Transport

Issues

A Traffic Impact Assessment (TIA) has been prepared to assess the impact of the development on the performance of the surrounding road network. The TIA for this proposal considered impacts associated with increased traffic generation, site access, parking, intersection performance, and safety. The main issue to be managed throughout the project is the increased traffic volumes on Riverina Highway and Canalla Road.

Environmental Performance Objectives

- A Traffic Management Plan (TMP) has been prepared in consultation with RMS and in accordance with the RMS Traffic Control at Worksites Manual (2010). This plan was approved by the DPE on the 25/10/2018.
- The TMP complies with Condition 8 (Schedule 3) of the Development
- Vehicle and Haulage limits and routes have been approved by RMS, Berrigan Shire Council and the DPE

Mitigation Measures

Action	Responsibility	Timing
A Construction Traffic Management Plan (TMP) has been prepared in consultation with RMS and in accordance with the RMS Traffic Control at Worksites Manual (2010).	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
Notification to local personnel (community and Neighbours) regarding traffic and transport would be undertaken if any of the following were to change: - <ol style="list-style-type: none"> 1. Road closures 2. Parking. 3. speed limit change 	Construction Manager (Signal Energy)	Prior to commencement of Construction and as required throughout Construction
The on-site TMP outlines but not limited to the below: - <ul style="list-style-type: none"> • Traffic Flow • Speed Limits • Access and Egress • Parking • Emergency Access All Signal Energy employees and Subcontractors must comply with the approved TMP.	Signal Energy Subcontractors	Project duration

Action	Responsibility	Timing
Vehicle and Haulage limits and routes have been approved by RMS, Berrigan Shire Council and the DPE. This is to include but not limited to: - <ul style="list-style-type: none"> • Predicted additional daily traffic • Haulage routes • Site Access and Egress 	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
All Traffic Management requirements are communicated through the Signal Energy On-site Induction.	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
Stabilised access points (e.g. rumble grids, rock pad) shall be installed at site entry/exit points.	Construction Manager (Signal Energy)	Prior to commencement of Construction

9.4 Visual Amenity

Issues

The existing landscape character is dominated by rural activities and residential dwellings. A number of view sheds were identified as having the potential for a visual impact from the proposed development. The majority of views to the proposal area were found to have a moderate impact.

Considering the solar panels will remain at a static 45-degree angle in the mornings and afternoons, the resulting specular glare is likely to have a negligible influence on sensitive receivers, and any glare would reflect in an opposing direction away from the receptor. There is also expected to be no glare hazard for aircraft or motorists.

Environmental Performance Objectives

The design principles of the development seek to avoid, reduce and where possible, remedy adverse effects on the environment through the implementation of mitigation measures, which propose a combination of primary mitigation measures such as boundary tree planting and landscaping, visual treatments at landowner's properties, and temporary screening of construction activities.

Mitigation Measures

Action	Responsibility	Timing
Avoid un-necessary loss or damage to vegetation adjacent to the site and within the site by protecting trees prior to construction and/or trimming vegetation to avoid total removal	Construction Manager (Signal Energy)	Prior to commencement of Construction
Minimise light spill from development into adjacent visually sensitive properties by ensuring the site is not over-lit and by properly directing construction lighting	Signal Energy Subcontractors	Project duration
Temporary hoardings, barriers, traffic management and signage to be removed when no longer required.	Signal Energy Subcontractors	Project duration

Action	Responsibility	Timing
Signal Energy Subcontractors to implement the approved Landscaping Management Plan (approved by DPE on 29/11/2018) to ensure: - <ul style="list-style-type: none"> Planting is undertaken as early as possible to replace any vegetation that will provide screening to adjacent residential properties and sensitive receivers. Landscape maintenance works are undertaken to maximise the health and effectiveness of existing and new plantings. Where any unplanned removal of visually significant vegetation occurs, a plan is to be prepared to mitigate and reduce visual influence 	SHEQ Adviser (Signal Energy) and Signal Energy Subcontractors	Prior to commencement of Construction
The construction site is to be kept tidy and well maintained, including removal of all rubbish at regular intervals. There shall be no storage of material beyond the construction boundaries	Signal Energy Subcontractors	
Worksite compound and site sheds are positioned away from visually sensitive areas and appropriate screening will be installed as required to minimise visual impacts.	Construction Manager (SEA)	Prior to commencement of Construction

9.5 Biodiversity

Issues

The proposed development of the Finley Solar Farm may result in both direct and indirect impacts on biodiversity. The direct impacts of the project are expected to comprise:

- The removal of up to 4.06 ha of native vegetation within the development site,
- The removal of up to two hollow-bearing trees.

The indirect impacts of the project potentially may include:

- Erosion of disturbed areas leading to sedimentation affecting any downgradient habitat or habitat within drainage channels,
- Water quality impacts (e.g. increased turbidity and suspended solids) affecting any downgradient habitat or habitat within drainage channels,
- Disturbance of fauna during construction due to noise generated by vehicles, equipment and construction activities.

Environmental Performance Objectives

The Finley Solar Farm Biodiversity Management Plan contains the mitigation measures to adhere to Schedule 3 - condition 12 of the Development Consent (SSD 8840): which includes: -

- Minimise clearing and avoid unnecessary disturbance of vegetation that is associated with the construction and operation of the development
- Minimise the impacts to fauna on site (including fauna interaction with perimeter fencing) and implement fauna management protocols
- Avoid the removal of hollow-bearing trees during spring to early summer to avoid the main breeding period for hollow-dependent fauna
- Rehabilitate and revegetate temporary disturbance areas
- Protect vegetation and fauna habitat outside the approved disturbance areas
- Maximise the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site,
- Control weeds and feral pests.

Mitigation Measures

Action	Responsibility	Timing
A Biodiversity Management Plan has been developed and approved by the DPE on 01/11/2018. Both the mitigation measures identified in the Biodiversity Management Plan and those outlined below shall be implemented and monitored. Please refer to <i>FIN_BiodiversityManagement_Plan</i>	SHEQ Adviser (Signal Energy)	Project duration
To minimise vegetation removal, site access for construction and operation will be from the north via Canalla Road only	All Personnel	Project duration
Access roads within the site will be located, where possible, along existing tracks currently used for agricultural purposes.	Signal Energy Subcontractors	Prior to commencement of Construction
Where practical, all paddock and hollow bearing trees to be removed will be placed in areas of retained vegetation to provided additional fauna habitat.	Signal Energy Subcontractors	During clearing
Where appropriate native vegetation cleared from the project site will be mulched for re-use on the site to stabilise bare ground or used in landscaping areas	Signal Energy Subcontractors	During clearing
Any injured animals are to receive veterinary attention immediately. Once recovered, animals shall be relocated to an area of similar habitat adjoining the Project area.	Wildlife Handler	Project duration
In the case of the presence of other fauna species, the spotter/catcher shall encourage the fauna to leave by reasonable means or capture and relocate it in the local environment prior to felling and trimming.	Wildlife Handler	Prior to clearing
Vegetation to be cleared shall be restricted to that required for the construction of the Project. No vegetation outside the disturbance approval area shall be cleared.	Construction Manager (Signal Energy)	Project duration
SHEQ Adviser or qualified delegate shall be present during construction at all times to address any environmental issues in a timely manner. This may include (but limited to) overseeing vegetation clearing, liaising with spotter/catcher contractors, reporting any environmentally relevant information to the Construction Manager and ensuring conformance occurs for all environmental requirements.	SHEQ Adviser (Signal Energy)	Project duration

9.6 Cultural Heritage Management

Issues

No Aboriginal sites were identified during the visual inspection of the Project area and it has been concluded that it is unlikely that unidentified Aboriginal objects are present in the Project area (ACHM 2017:8-9).

Environmental Performance Objectives

The Finley Solar Farm Cultural Heritage Management Plan (Approved on 01/11/2018 by DPE) identifies the mitigations measures to adhere to Schedule 3 – condition 18 and 19 of the Development Consent (SSD 8840) which includes: -

Discovery of Human Remains

If human remains are discovered on site, then all work surrounding the area must cease, and the area must be secured. The Applicant must notify the NSW Police and OEH as soon as possible following the discovery, and work must not recommence in the area until this is authorised by OEH.

Chance Finds Protocol

Prior to the commencement of construction, the Applicant must prepare a Chance Finds Protocol for the development in consultation with the Aboriginal stakeholders, and to the satisfaction of OEH. Following approval, the Applicant must implement the Chance Finds Protocol.

Mitigation Measures

Action	Responsibility	Timing
A Cultural Heritage Management Plan/Chance Finds Protocol will be implemented by Signal Energy with all relevant information provided in the site induction.	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
In the event of suspected cultural heritage items being identified on site, all works within the immediate area of the find will cease and the area made secure to enable inspection and sampling of the site. Any unexpected finds are to be reported immediately to Signal Energy.	All Personnel	When required
If suspected cultural heritage items are identified the OEH must be notified via the Enviroline 131555. The registered Aboriginal Party (RAPS) are to be notified along with the heritage consultant to ensure the site is assessed and managed	SHEQ Adviser (Signal Energy)	When required
In the unlikely event that skeletal remains are identified, work must cease immediately in the vicinity of the remains and the areas made secure. SEA must then contact the local NSW Police who will make the initial assessment as to whether the remains are a part of crime scene or possible aboriginal remains.	Construction Manager (Signal Energy)	When required
If suspected archaeological resources are identified, work with the affected area must cease and the are secured. The Heritage division of the OEH must be notified in accordance with Section 146 of the Heritage Act 1977	SHEQ Adviser (Signal Energy)	When required

9.7 Soil and Water Quality

Issues

A Surface and Groundwater Assessment has been undertaken to assess the impact of the proposed development on the surface and groundwater resources in the locality, including surrounding water users and Groundwater Dependand Ecosystems (GDE's).

The development is anticipated to have minimal impacts on the surrounding surface water environment, flow regimes (flooding), quality, quantity, features, or local or regional hydrology. Although some of the possible impacts will include: -

- Contamination from sediment and unintended spillages of fuel, lubricants, herbicides, sewage and other chemicals
- Increased soil compaction through additional access tracks and other hardstand areas changing runoff characteristics and potential for concentrated flows
- Increased imperviousness of the site through installation of solar panels

Environmental Performance Objectives

To ensure that impacts are minimised an Erosion, Sediment and Stormwater Control Plan (ESSCP) will be implemented, along with various site management protocols not limited to the below mitigation measures: -

This Erosion, Sediment and Storm Water Control Plan has been developed to meet the requirements set out in items 21 and 22 (Schedule 3 - Environmental Conditions – General) of the Development Consent (Application # SSD 8540).

Mitigation Measures

Action	Responsibility	Timing
Development and implementation of a Construction and Operational Erosion and Sediment Control Plan in accordance with Managing Urban Stormwater: Soils & Construction (Landcom 2004).	SHEQ Adviser (Signal Energy)	Prior to commencement of Construction
Consultation with adjacent landholders shall be ongoing to manage interaction between the solar farm and other properties.	Construction Manager (Signal Energy)	Project duration
Soil resources will be managed to ensure the future viability of the site for agricultural production, including: - <ul style="list-style-type: none"> • Optimisation and recovery of useable topsoil and subsoil • Establishment of effective soil amelioration procedures and practices; and • Separation of topsoil and subsoil to ensure that soils are re-instated in the right order 	Signal Energy Subcontractors	Project duration
Erosion and sediment controls shall be installed progressively during site works.	Signal Energy Subcontractors	Project duration
Erosion and sediment controls will be visually inspected as part of the Environmental Audit schedule. During periods of rainfall causing runoff a compulsory inspection protocol will be implemented.	SHEQ Adviser (Signal Energy)	Project duration
Stabilised access points (e.g. rumble grids, rock pad) shall be installed at site entry/exit points.	Signal Energy Subcontractors	Prior to construction
Regular equipment cleaning of equipment shall be completed to minimise the tracking of sediment from vehicles, plant and equipment onto Canalla Road and the Riverina Highway	Signal Energy Subcontractors	Project duration
Stockpile topsoil appropriately to minimise weed infestation and maintain soil organic matter, soil structure and microbial activity	Signal Energy Subcontractors	Project duration
Minimise surface disturbance and maintain surface cover where possible	Signal Energy Subcontractors	Project duration

Action	Responsibility	Timing
Where possible, construction works should be staged in a manner that minimises the duration and extent of exposed soils and sub-soils.	Signal Energy Subcontractors	Project duration
Refuelling of plant and machinery to be done at least 50m away from water bodies and constructed drainage lines in an impervious bunded area.	Signal Energy Subcontractors	Project duration
All fuels, chemicals and other potential contaminants to be storage at least 50m from water bodies and constructed drainage lines in an impervious bunded area.	Signal Energy Subcontractors	Project duration
All on-farm drainage infrastructure and discharge locations to Murray Irrigation Ltd drains are to be maintained in a functional condition.	Signal Energy Subcontractors	Project duration
All Murray Irrigation Ltd infrastructure (channels, drains, access infrastructure) shall remain unaffected by the works;	Signal Energy Subcontractors	Project duration
Private works, Corporation works, access and maintenance requirements of Murray Irrigation Ltd shall be undertaken as outlined in their Works Policy (Murray Irrigation Ltd, 2008);	Construction Manager (Signal Energy)	Project duration
Signal Energy to develop and implement procedures within the ESCP for the testing, treatment and discharge of construction waste water	SHEQ Adviser (Signal Energy)	Prior to construction
Grass cover to be established and/or maintained under all solar panel arrays to maximise water infiltration whilst balancing risk of fire from build-up of combustible vegetation;	Signal Energy Subcontractors	Project duration
All solid and liquid waste to be appropriately stored in containers awaiting collection and disposal to approved facilities off site;	Signal Energy Subcontractors	Project duration
All machinery and plant to be checked daily to ensure no leakage of fuels, lubricants or other liquids;	Signal Energy Subcontractors	Project duration
All staff to be appropriately trained through toolbox talks for the minimisation and management of unintended spills	SHEQ Adviser (Signal Energy)	Project duration
Water requirements for the site to be imported to site via commercial arrangements with local water authorities.	Signal Energy Subcontractors	Project duration
Prior to the conclusion and decommissioning of the development, a Rehabilitation and Decommissioning Plan will be prepared in consultation with NSW Department of Primary Industries (DPI).	SHEQ Adviser (Signal Energy)	Before decommissioning commences

9.8 Waste Management

Issues

There will be various waste streams from the construction phase of the project including the following: -



- Workforce general waste;
- Packaging materials (i.e. cardboard, plastic, timber pallets, metal strapping);
- Excess building materials;
- Scrap metal and cabling materials (i.e. steel, aluminium, copper);
- Plastic and masonry products;
- Waste concrete products;
- Excavation of topsoils and scalping of vegetation; and
- Temporary ablutions waste.

Environmental Performance Objectives

Waste management for the development will be undertaken consistent with the waste management hierarchy in the following order of priority from most desirable to least desirable:

- **Avoid:** Waste avoidance by reducing the quantity of waste being generated. This is the simplest and most cost-effective way to minimise waste. It is the most preferred option in the waste management hierarchy.
- **Re-use:** Reuse occurs when a product is used again for the same or similar use with no reprocessing. Reusing a product more than once in its original form reduces the waste generated and the energy consumed, which would have been required to recycle.
- **Recycle:** Recycling involves processing waste into a similar non-waste product consuming less energy than production from raw materials. Recycling spares the environment from further degradation, saves landfill space and saves resources.
- **Dispose:** Removing waste from worksites and dumping on a licensed landfill site, or other appropriately licensed facility.

Waste generated from the construction and operation of the proposed facility will be managed efficiently to ensure that the diversion of waste from landfill is maximised.

Mitigation Measures

Action	Responsibility	Timing
Waste materials, including spoil and construction wastes, should be separated onsite into dedicated bins/areas where practicable, for either reuse onsite, to be recycled or disposed of in an appropriate manner at licensed facilities. Local commercial reuse opportunities will be investigated where reuse on-site is not practical;	Signal Energy Subcontractors	Project duration
Waste storage facilities and spoil placement areas shall be located in easily accessible locations, away from existing drainage lines.	Construction Manager Signal Energy	Project duration
Watercourse, site drains and waterbodies shall not be polluted by waste.	All Personnel	Project duration
Green waste shall be mulched and reused onsite for landscaping and rehabilitation if appropriate	Signal Energy Subcontractors)	When required during clearing



Action	Responsibility	Timing
The waste storage area shall be of adequate capacity to handle the volumes of waste being stored without posing a risk to the environment	Signal Energy Subcontractors	Project duration
Ordering will be limited to only the required amount of materials.	Signal Energy Subcontractors	Project duration
No litter to be left onsite. All work areas to be tidied each day.	All Personnel	Project duration
Lids and seals shall be maintained on all odour generating waste material; and all domestic and food scrap waste shall be secured to prevent wildlife access	All Personnel	Project duration
No waste is to be burned or buried on site	All Personnel	Project duration
Storage and disposal of chemicals shall be in accordance with SDS and Australian Standards for storage of chemicals and dangerous goods.	Signal Energy Subcontractors	Project duration
Regulated wastes shall be stored in an appropriately secure containment area and managed by appropriately qualified licensed contractors.	Signal Energy Subcontractors	Project duration
All sewage waste generated on site shall be collected and pumped out as necessary for offsite disposal to an appropriately licensed facility.	Construction Manager (Signal Energy)	Project duration
<p>Inspections of the waste storage area and facilities shall be conducted, as part of the scheduled environmental inspection. Inspections shall include;</p> <ul style="list-style-type: none"> • Ensuring the waste material is being properly separated, stored and labelled; • Checking the condition of the receptacles and secondary containment systems; • Ensuring the spill kits are available and full, and PPE is available where required 	SHEQ Adviser (Signal Energy)	Project duration
<p>The Site Induction & toolbox training shall include information on the following waste management issues:</p> <ul style="list-style-type: none"> • Reuse and recycling strategies; • Waste handling, waste storage and disposal; • Management of waste spills, contamination and contaminated material; 	SHEQ Adviser (Signal Energy)	Project duration



9.9 Weed and Pest Management

Issues

The Finley solar farm development will result in the increased movement of vehicles and people to the Project site, particularly during the construction phases. As a result, the primary risk to biosecurity is the spread of weeds that may result from the increased movement of vehicles in and out of the site. Weed seeds can be dispersed easily on the tyres and undercarriages of vehicles and on the clothing of construction personnel.

Rubbish bins containing food scraps and other perishable waste can potentially attract pest animals at the Project site, including rats, cats, and foxes.

Environmental Performance Objectives

The spread of weeds and pest management will generally be controlled through

- Confining vehicle and machinery movements (where possible) to formed access tracks during all phases of the Project.
- A vehicle wash down procedure will also be implemented for vehicles entering the development site.
- Management measures would focus on early identification of invasive weeds, effective management controls, and a regular maintenance program.
- Rubbish bins containing food wastes will be covered and serviced on a regular basis.
- Rabbit, wild dog, and fox numbers would be controlled through targeted pest management during the operational phase of the Project.

Mitigation Measures

Action	Responsibility	Timing
All site personnel shall be inducted on the weed management requirements, vehicle and equipment cleaning procedures, and weed & pest identification and reporting. Additional toolboxes and training sessions shall be rolled out as required.	SHEQ Adviser (Signal Energy)	Project duration
All vehicles, machinery, plant, and equipment shall be declared clean before accessing the site.	Signal Energy Subcontractors	Project duration
Establish wash down areas for machinery and personal. These areas will have sediment fencing erected around their perimeter to contain any water used to wash machinery <i>Wash down facilities will either be established on-site or an identified existing site within Finley will be utilised with required controls will be utilised.</i>	Construction Manager (Signal Energy)	Project duration
Where applicable, all property fences and gates shall be repaired and kept closed to prevent stock movement between properties.	Construction Manager (Signal Energy)	Project duration

9.10 Bushfire

Issues

The proposed development is not located within a bushfire prone land mapped area, however there is still a risk of possible grass fires/bushfire risk over surrounding lands.

Environmental Performance Objectives

Signal Energy intend on mitigating the chance of a bushfire through the implementation of the below controls. Mitigation measures will also be reviewed by NSW RFS District Fire Control Centre and shall include: -

- 24/7 contact details including alternative telephone contact;
- Site infrastructure plan;
- Firefighting water supply plan;
- Site access and internal road plan;
- Construction of asset protection zones and their continued maintenance;

The following mitigation and management measures will be implemented to ensure bushfire safety at the development:

Mitigation Measures

Action	Responsibility	Timing
<p>Asset Protection Zone: The entire development site shall be managed as an Asset Protection Zone as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones'.</p> <p>This requirement should include a 10m wide Asset Protection Zone to be provided around the perimeter of the Solar Farm. Isolated paddock trees, and woodlots can be retained as they are relatively small in size and of a low risk, as long as vegetation does not touch the proposed solar array panels, and access is maintained around the perimeter.</p>	Construction Manager (Signal Energy)	Project duration
<p>Electricity, water and gas services: The proposed development shall have a non-combustible 20,000 litre dedicated water tank with Storz fitting and other fire-fighting equipment in compliance with Australian Standards.</p> <p>Dedicated fire-fighting water supply from either this tank or dams should be specifically for fire tanker refilling/on site fire-fighting. A petrol or diesel or solar powered fire-fighting pump and 30m hose reel with steel nozzle is recommended and can be mounted on a 4WD with water tank. This can be used for grass fire/ember attack fighting by the proponent in the advent of a fire.</p>	Construction Manager (Signal Energy)	Project duration
<p>Internal access roads: All internal roads shall be two-wheel drive, all weather roads (except when crossing a drainage/irrigation channel - use of single lane internal bridge) around the perimeter of the site and safe design which enable safe access for emergency services and allow crews to work with equipment about the vehicle.</p>	Construction Manager (Signal Energy)	Project duration
<p>Emergency management: - Suitable management arrangements for the implementation of the Emergency Evacuation Plan shall be developed.</p>	SHEQ Adviser (Signal Energy)	Project duration

<p>A Bush Fire Management Plan (BFMP) shall be prepared in consultation with NSW RFS District Fire Control Centre. The BFMP will include:</p> <ul style="list-style-type: none"> • 24/7 contact details including alternative telephone contact; • Site infrastructure plan; • Firefighting water supply plan; • Site access and internal road plan; • Construction of asset protection zones and their continued maintenance; • Location of hazards (Physical, Chemical and Electrical) that will impact on firefighting operations and procedures to manage identified hazards during firefighting operations; and • Such additional matters as required by the NSW RFS District Office (Plan review and update). 		
<p>The Local Fire & Rescue Brigade shall be informed of the proposal, once approved, regarding its operation, water supplies, and layout;</p>	<p>SHEQ Adviser (Signal Energy)</p>	<p>Project duration</p>
<p>Location of hazards (physical, chemical, and electrical) that will impact on firefighting operations and procedures to manage identified hazards during firefighting operations will be identified.</p>	<p>SHEQ Adviser (Signal Energy)</p>	<p>Project duration</p>
<p>The interior of any buildings should have all necessary fire safety provisions (sprinklers, fire extinguishers, smoke alarms) as required by the relevant Australian Standards and legislation</p>	<p>SHEQ Adviser (Project duration)</p>	<p>Project duration</p>

9.11 Socio-Economic

Issues

The key potential social and economic impacts that may result from construction of the proposed development include:

- Increased employment – there is the potential for employment to be generated during the construction phase through the use of local contractors and labour hire;
- Increased traffic on local roads and hazards associated with construction traffic;
- Influx of workers putting pressure on local accommodation and health services; and
- Short term air quality, noise and visual impacts.

Environmental Performance Objectives

- Providing regular Project updates to the community and businesses;
- Providing a schedule of activities when there may be heavy vehicles accessing the Project site or when noisy activities may occur;
- Establishment of a complaints handling procedure and a response protocol;
- Preparation of regular project factsheets for distribution to the surrounding residents.
- Ongoing liaison with local community and business representatives to ensure the use of local contractors, labour, materials, and services during construction and operations;
- Liaison with local businesses and services to determine accommodation options and availability so as local tourism is not affected, particularly during the construction phase



- Liaison with tourism representatives to ensure local events are not impacted by accommodation short falls; and Continued engagement with Berrigan Shire Council to discuss community and business concerns.

Mitigation Measures

Action	Responsibility	Timing
Preparation of a Consultation and Stakeholder Engagement Plan which includes: <ul style="list-style-type: none"> • Providing regular Project updates to the community and businesses; • Providing a schedule of activities when there may be heavy vehicles accessing the Project site or when noisy activities may occur; • Establishment of a complaints handling procedure and a response protocol; and • Preparation of regular project factsheets for distribution to the surrounding residents. 	SHEQ Adviser (Signal Energy)	Project duration
Ongoing liaison with local community and business representatives to ensure the use of local contractors, labour, materials, and services during construction and operations;	Construction Manager Signal Energy	Project duration
Liaison with local businesses and services to determine accommodation options and availability so as local tourism is not affected, particularly during the construction phase;	Project Manager (Signal Energy)	Project duration
Liaison with tourism representatives to ensure local events are not impacted by accommodation short falls; and Continued engagement with Berrigan Shire Council to discuss community and business concerns.	Project Manager (Signal Energy)	Project duration

9.12 Dangerous Goods & Hazardous Materials

Mitigation Measures

Action	Responsibility	Timing
A Safety Data Sheet (SDS) for each dangerous good and hazardous substance used on site shall be available on site and will be located near the place of use.	Signal Energy Subcontractors	As required
A register shall be kept on site of all hazardous materials and dangerous goods used on site.	Signal Energy Subcontractors	Project duration
All personnel involved in the handling of hazardous materials shall be suitably qualified / experienced. Additional toolbox training on the properties, hazards, maintenance and PPE associated with hazardous substances shall be provided where required.	SHEQ Adviser (Signal Energy)	Project duration / When required

Action	Responsibility	Timing
Herbicides shall only be used by suitably licensed personnel, in accordance with the manufacturer's procedures and guidelines.	Signal Energy Subcontractors	When required
Spill kits shall be provided in all dangerous goods and hazardous materials storage and handling areas. All key staff shall be trained in spills prevention and clean up.	Signal Energy Subcontractors	Project duration
Storage and handling areas shall be located >50m from any waterways and be constructed in accordance with the relevant Australian Standard, including secondary containment impervious to the materials being stored and appropriate signage at the entrance to the storage area.	Signal Energy Subcontractors	Project duration
Secondary containment systems (e.g. bunding, drip trays, etc.) shall be: <ul style="list-style-type: none"> In place for all hazardous and dangerous goods storage, transfer and refuelling areas. Constructed from material that is impervious to the material being stored or transferred Designed and constructed to minimise the risk of leakage, spillage or contaminated fire water from contaminating the surrounding soil 	Signal Energy Subcontractors	Project duration
All vehicles and plant shall be sent offsite for major maintenance.	Signal Energy Subcontractors	Project duration
Regular inspections shall be undertaken to ensure the structural integrity of storage facilities and secondary containment systems. These inspections shall occur as part of the scheduled site environmental inspections.	SHEQ Adviser (Signal Energy)	Project duration
All equipment and vehicle operators shall be trained in the safe operation of the equipment (including operating procedures for the refilling and maintenance of fuel storage tanks) and the relevant emergency response procedures.	Signal Energy Subcontractors	When required
In the event of any spill or leak to the environment, action shall be taken immediately to contain the spill, and the spill response procedures initiated.	Signal Energy Subcontractors	When required
Where any spill to the environment has occurred regardless of scale, Signal Energy shall be notified immediately.	Signal Energy Subcontractors	When required
No abrasive blasting or wet blasting shall occur on site.	Construction Manager (Signal Energy)	Project duration

10. Implementation

10.1 Training and Awareness

All Signal Energy personnel and/or subcontractors shall be formally inducted and provided with specific awareness training in relation to the environmental aspects and mitigation methods outlined above, as they apply to each activity.

10.2 Site Induction

Prior to commencing works on site, all personnel shall undertake a site-specific induction addressing the environmental management risks and requirements for the construction of the Finley Solar Farm. The environmental induction shall include as a minimum:

- The relevant environmental legislation;
- General environmental duties;
- Conditions of the relevant licences and approvals;
- The environmental aspects and mitigation strategies provided in section 9 above;
- Definitions and management of environmental incidents;

10.3 Toolbox Training

Toolbox training shall be conducted on a weekly basis and shall include environmental risks and responsibilities where required. The Signal Energy SHEQ Adviser may from time to time provide additional toolbox topic training materials or require environmental stand-down toolbox training to occur in response to specific high-risk issues identified on the project.

10.4 Daily Site Inspections and Surveillance

Inspections and surveillance of construction and upgrading activities (including subcontractors) will be undertaken on a day-to-day basis. These inspections will not be documented unless significant non-conformances with the CEMP are identified.

10.5 Weekly Site Environmental Inspection

The effectiveness of environmental mitigation measures outlined in section 9 of the CEMP and other Management Plans referenced in Section 2.6 of this CEMP will be assessed weekly by the Construction Manager, SHEQ Adviser, or a nominated delegate, unless otherwise specified. A site environmental inspection checklist will be developed within the Lucidity Inform Module addressing the key environmental impacts and mitigation measures which have the potential to arise during construction activities.

Actions identified in weekly inspections are to be closed out prior to the subsequent inspection, in accordance with the allocated action priority report. However, in certain circumstances only and upon consultation with the Construction Manager, an extended timeline to close out particular actions may be established.

10.6 Environmental Records

The SHEQ Adviser will maintain the following records:

- The CEMP and associated sub-plans;
- Relevant approvals, regulatory licences and permits;
- Inspection records and checklists;
- Environmental monitoring results;
- Environmental accident/incident/emergency reports;
- Non-conformance documentation;
- Environmental complaint reports;
- Waste reports;
- Audit reports; and
- Management review minutes and action taken.

Where hard copy records are provided they will be scanned and available electronically. Each set of records will be allocated a register/index for easy reference and filing. Records will be maintained for at least the minimum period specified by the Client and/or relevant legislation; and will be available to Client Representatives and authorised Government officers as required.

11. Emergency Planning and Response

Environmental management will include planning for potential emergencies at the site. The organisational structure, responsibilities and on-site contact details for all emergencies is specified in the Emergency Management Plan.

Emergency response documents, and the contact details of all relevant stakeholders, will be housed at the Project site office and displayed on site. The procedure for environmental emergencies shall also form part of the project Safety and Health Management Plan.

All personnel will receive training in appropriate Emergency Response Procedures associated with the ERP as part of the site induction.

11.1 Environmental Incident Levels

Environmental Incidents/Non-Conformances is classified into three levels as detailed below:

Level 3 – Major	Level 2 - Major	Level 1 - Minor
Level 3 Environmental Incidents create permanent or long term damage to the environment. This damage will result in the environment taking 12 months or more to return to pre-existing conditions.	Level Two Environmental Incidents create short to medium term damage to the environment. This damage will result in the environment taking up to 12 months to return to pre-existing conditions	Level Three Environmental Incidents typically cause short term or nuisance damage. The damage is easily rectified usually within one day. Class 3 incidents do not cause medium or long term damage.
Parameters		
<ul style="list-style-type: none"> • Serious or material environmental harm or damage. • Reportable prosecution - > \$50,000 	<ul style="list-style-type: none"> • Potential or actual material environmental harm or damage reportable as per State regulation • Prosecution <= \$50,000 • Notice to provide records to regulatory authority as other notice > \$5,000 • Infringement Notices 	<ul style="list-style-type: none"> • Environmental Pollution • No mandatory external reporting • Typically <\$5,000
Examples		
<ul style="list-style-type: none"> • Sediment basin/containment pond fails • Spreading fire ants/electric ants/crazy ants outside of the restricted area • Breaking an Environmental Protection Order / Notice / Licence conditions 	<ul style="list-style-type: none"> • Damage to cultural/heritage items, i.e. controlled discharge from concrete saw cutting. • Complete failure of Erosion Sediment Controls where run off leaves the site. • Wilful or negligent damage to Erosion Sediment Controls – conc. off site 	<ul style="list-style-type: none"> • Oil Leak <=5 L, i.e. hydraulic oil leak • Fuel leak/spill <=5 L, i.e. from refuelling equip. • Chemical leak/spill <=5 L, i.e. curing compound radiator fluid. • Sediment Control: <ul style="list-style-type: none"> - Damage or partial failure

Level 3 – Major	Level 2 - Major	Level 1 - Minor
<ul style="list-style-type: none"> • Wilful discharge or disposal of contaminated materials/liquids off site or waterways • Wilful damage/destruction to native vegetation • Wilful damage/destruction of cultural/heritage artefacts or significant places 	<ul style="list-style-type: none"> • Working outside of hours nominated in the Development Consent • Deliberate discharge of water outside of approved limits offsite, i.e. into stormwater • Damage to external property as a result of construction vibration • Any fuel/oil/chemical leaks/spills to waterways. • Any fuel/oil/chemical spills contained on site 5 L – 1000 L • Damage of loss to treated/vulnerable/ endangered species, i.e. protected by Legislation • Litter leaving the site • Overflow from on-site sewage collection tanks • Disposal of waste at an unapproved facility: <ul style="list-style-type: none"> - Construction waste - Spoil material - Liquid waste • Incorrect storage of regulated/contaminated or hazardous waste: <ul style="list-style-type: none"> - Oils - Contaminated material - Sewage - Asbestos • Not having required licence permits or approvals • Sediment/containment ponds breached • Complaints relating to odour • Transport and disposal of fire ant items outside of fire ant restricted area • Supplying plant material containing pest plant reproductive material 	<ul style="list-style-type: none"> - Where run-off does not leave the site - Wilful or negligent damage to Erosion Sediment Controls • Dust emission (remaining visible at 20 m from site – or visible at a sensitive receptor, whichever is less, e.g. dust settlement on surrounding properties.) • Lights – unwanted illumination of neighbouring properties. • Complaints – record all unless validated. • Damage to vegetation to be retained/ protected • Not covering loads on truck carrying material off site.

11.2 Environmental Incident Investigation and Close-out

For all incidents, an Incident Report shall be raised within the Lucidity (Signal Energy and Subcontractors), and for all Level 2 and 3 Incidents, a detailed Investigation Report will be completed using the Lucidity Incident Reporting module.

Where a Level 3 Incident has occurred, the SHEQ Manager will initiate the investigation and allocate responsibilities and an external consultant may be engaged. Legal privilege shall be established if required.

For all environmental incidents, the Client Representative shall be notified immediately (within 2 hours of the incident occurring). Signal Energy and/or TransGrid in consultation with Finley Solar Farm Pty Ltd will make the determination to notify the relevant authority. The relevant site personnel shall work with the Client Representative as required during incident investigation activities.

11.3 Reporting Incidents to Regulatory Authorities

Environmental harm

The Secretary shall be notified immediately (without delay) of any incident causing or threatening material harm to the environmental. The Signal Energy Construction Manager or SHEQ Manager is responsible for immediately notifying Finley Solar Farm Pty Ltd as required of the nature and circumstance in which the event happened and seek direction as to the appropriate communication pathway for notifying the appropriate agencies.

Release of contaminants

Any release of contaminants must be reported to the appropriate regulatory body in accordance with the above protocol for environmental harm. Where a release involves stormwater and has not, or will not, result in material environmental harm the incident shall be reported to the relevant local authority (e.g. Berrigan Shire Council or Murray Irrigation). The release shall be reported as soon as practicable, after becoming aware of the release.

A written notice detailing the following information must be provided to the relevant authority of any spill or release of contaminants:

- The name of the operator, including their registration certificate number;
- The name and telephone number of a designated contact person;
- Quantity and substance released;
- Person(s) involved;
- The location and time of the release;
- The suspected cause of the release;
- A description of the effects of the release;
- The results of any monitoring performed in relation to the release;
- Actions taken to mitigate any environmental harm caused by the release; and
- Proposed actions to prevent a recurrence of the release.

11.4 Complaints and Complaints Response

Complaints shall be registered, tracked and responded to in accordance with the following timeframes:

- Complaint entered into Lucidity Incident Module (Signal Energy and their sub-contractors)
- Initial response provided to the complainant and Client within 24 hours indicating the matter is being addressed; and
- Detailed response including details of the complaint and the action taken / further action planned to alleviate the problem provided to the client within ten working days.

The following details will be recorded as a minimum:

- Date;



- Issue / Complaint;
- Affected Neighbours;
- Activity Date;
- Follow up / complaints – Actions; and
- Follow up / complaints – date.

