

**GOONUMBLA SOLAR FARM**  
ENVIRONMENTAL MANAGEMENT STRATEGY

PREPARED FOR:  
**FRV SERVICES AUSTRALIA PTY LTD**

JUNE 2019



<b>Report Title:</b>	<i>Goonumbla Solar Farm</i>
<b>Project:</b>	<i>Environmental Management Strategy</i>
<b>Client:</b>	<i>FRV Services Australia Pty Ltd</i>
<b>Report Ref.:</b>	<i>219204_EMS_001A.docx</i>
<b>Status:</b>	<i>Final</i>
<b>Issued:</b>	<i>14 June 2019</i>

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### Revision History

<b>Version</b>	<b>Date</b>	<b>Reason</b>	<b>Approved</b>
V.1	31/1/2019	Submission to DPE	FRV
V.2	22/2/2019	Incorporating DPE comment	FRV
V.3	14/6/2019	DPE Approval	FRV

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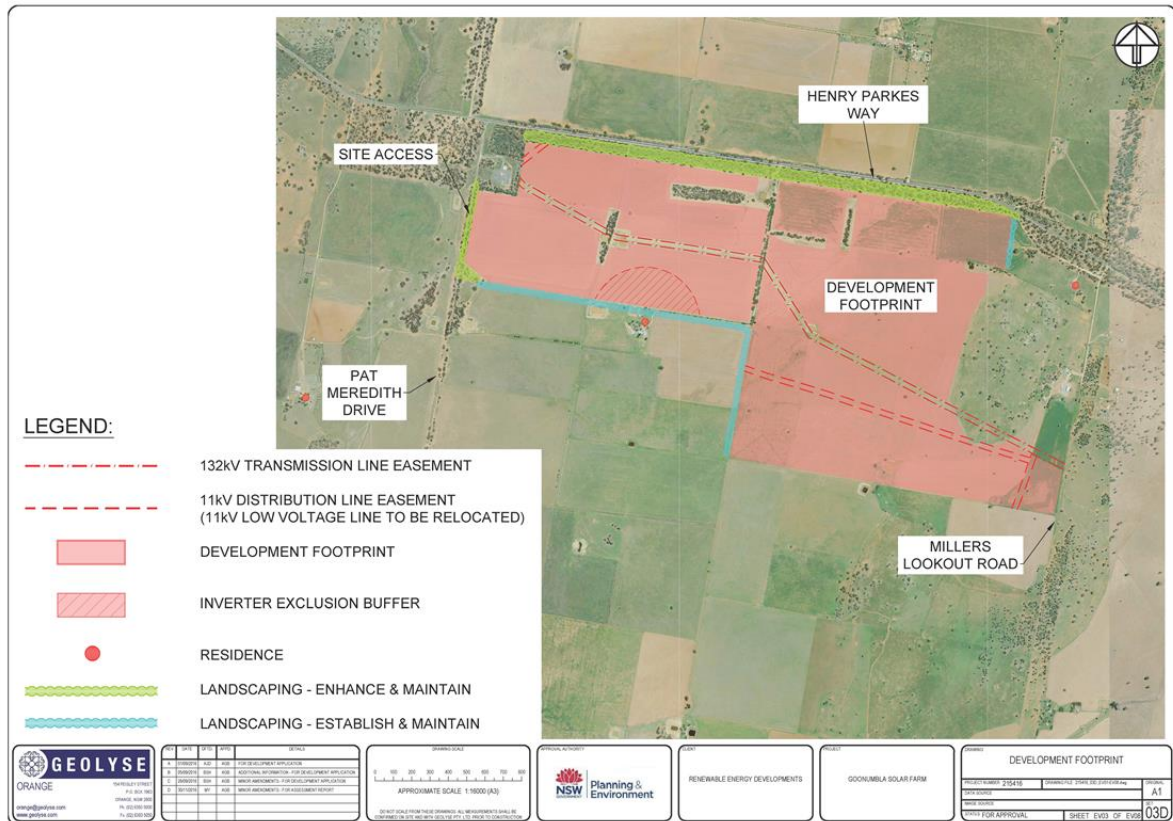
## Abbreviations

CEMP	Construction Environmental Management Plan
CoA	Condition of Approval
CFP	Chance Finds Protocol
CHMP	Cultural Heritage Management Plan
DMP	Decommissioning Management Plan
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EMS	Environmental Management Strategy
EPC	Engineering, Procurement and Construction
ERP	Emergency Response Plan
FRNSW	Fire and Rescue NSW
FRV	FRV Services Australia Pty Ltd
GSF	Goonumbla Solar Farm
LP	Landscaping Plan
MM	Mitigation Measure
NRAR	Natural Resource Access Regulator
OEH	Office of Environment and Heritage
OEMP	Operations Environmental Management Plan
PSC	Parkes Shire Council
RAP	Registered Aboriginal Parties
RFS	Rural Fire Service
RMP	Recommissioning Management Plan
RMS	Roads and Maritime Services
SWMP	Soil and Water Management Plan
TMP	Traffic Management Plan
WAE	Works As Executed

# Introduction

## 1.1 APPROVED PROJECT

The Goonumbla Solar Farm (GSF) was granted development consent on 5 December 2016 (SSD 7618). The approved General Layout is shown below.



**Figure 1: Approved Layout**  
Source: Development Consent SSD 7618

## 1.2 APPLICANT

The Applicant is the overall developer and owner of GSF. FRV Services Australia Pty Ltd (FRV) is the GSF Applicant.

## 1.3 CONTRACTOR

An Engineering Procurement and Construction (EPC) contractor will be engaged by the Applicant to build the GSF.

## 1.4 STRATEGY FUNCTION

This Environmental Management Strategy (EMS) has been prepared to satisfy a Condition of Approval (CoA). Specifically, Schedule 4 CoA (1) requires:

### ***Environmental Management Strategy***

1. *Prior to the commencement of construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:*

*(a) provide the strategic framework for environmental management of the development;*

*(b) identify the statutory approvals that apply to the development;*

*(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;*

*(d) describe the procedures that would be implemented to:*

- keep the local community and relevant agencies informed about the operation and environmental performance of the development;*
- receive, handle, respond to, and record complaints;*
- resolve any disputes that may arise;*
- respond to any non-compliance;*
- respond to emergencies; and*

*(e) include:*

- 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.*

*Following the Secretary's approval, the Applicant must implement the Environmental Management Strategy.*

Pursuant to the definition in the Department of Planning and Environment's (DPE) Development Consent, construction is defined as:

*The construction of the development, including but not limited to the carrying out of any earthworks on site and the construction of solar panels and any ancillary infrastructure (but excludes any upgrades to the public road network required under this consent, geotechnical drilling and/or surveying).*

Operation is defined as:

*The operation of the development, but does not include commissioning, trials of equipment or the use of temporary facilities.*

The operation of the development in this EMS is taken to mean when the GSF is generating electricity into the grid.

## 1.5 STRUCTURE

The structure and scope of this EMS has been prepared consistent with the specification in DPE's CoA.

**Table 1.1 – EMS Structure**

<b>Section</b>	<b>Content</b>
2	Provides the strategic framework for environmental management of the GSF
3	Identifies the statutory approvals that apply to the GSF.
4	Identifies the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the GSF.
5	Describes the procedures that would be implemented to keep the local community and relevant agencies informed about the operation and environmental performance of the GSF.
6	Specifies the procedures that would be implemented to receive, handle, respond to and record complaints.
7	Describes the procedures that would be implemented to resolve any disputes that may arise.
8	Describes the procedures that would be implemented to respond to any non-compliance.
9	Describes the notification procedures that would be implemented in the event of an incident.
10	Describes how and when the Emergency Response Plan will be prepared so that there are procedures to respond to emergencies.
11	Explains the program for the conduct and reporting of monitoring to be carried out in relation to the GSF.

## 1.6 STRATEGY REVISION

The Applicant will update this EMS and associated plans to the satisfaction of the Secretary prior to carrying out any upgrading or decommissioning activities at the site.

This EMS and associated plans will also be reviewed and, if necessary, revised within one month of:

- an incident report being reported to DPE (refer **Section 9**); or
- any modification to the existing development consent conditions.

Any changes to the management plans will be approved by the Secretary, before implementing the changes, and in consultation with relevant agencies.

# Strategic Framework

## 2.1 ENVIRONMENTAL STRATEGY

A strategy is a plan of action designed to achieve an overall aim.

The Applicant's aim is to design, construct, operate, upgrade and decommission the GSF in full compliance with the Minister's Development Consent.

Schedule 2 CoA (2) states:

*The Applicant must carry out the development:*

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

In the context above, Environmental Impact Statement (EIS) includes the Mitigation Measures (MM) made in both the

- *Goonumbla Solar Farm – Environmental Impact Statement (Geolyse, September 2016); and*
- *Goonumbla Solar Farm – Submissions Report (Geolyse, November 2016).*

The environmental management objective is to therefore comply with all CoA and MM.

## 2.2 PLAN OF ACTION

The plan of action is to identify all CoA and MM that require an environmental deliverable and ensure that these are prepared at the appropriate stage of the development, prepared in consultation with relevant stakeholders, and then are diligently implemented.

The mechanism for achieving this is for a clear delineation of contractually enforced responsibilities between the Applicant and the EPC Contractor and identifying the key environmental hold-points that must be achieved before the GSF can be built, operated, upgraded and decommissioned.

**Table 2.1** provides a summary of these key hold points. It provides a full and complete listing of all plans/actions that must be prepared and/or undertaken throughout the life of the development. It includes clarification of what third party consultation and/or approval is required in the preparation and sign-off on these plans, and is based on compliance with the CoA and MM.

These hold points provide the framework and reference for checks that obligations (CoA) and commitment (MM) are known and acted upon.

**Table 2.1 – Environmental Hold Points**

Plan	Reference	Compliance Requirement
<b>PRIOR TO CONSTRUCTION</b>		
Final Layout Plans	CoA5 Schedule 2	Detailed plans of the final layout (including details on the siting of solar panels and ancillary infrastructure) must be submitted to the Department of Planning and Environment.
Construction Certificate(s)	CoA 9 Schedule 2	Obtain Construction Certificate(s) for proposed building works, pursuant to Part 6 (Division 6.3) of the <i>Environmental Planning and Assessment Act 1979</i> .
Notification of Works	CoA 8 Schedule 2	Notify the Department of Planning and Environment in writing of the date of commencement of construction.  If construction is to be staged, the Department of Planning and Environment must be notified in writing prior to the commencement of the relevant stage, identifying the development that would be carried out during the relevant stage.
Landscaping Plan	CoA 11 Schedule 3	Preparation of a Landscaping Plan prepared in consultation with the Roads and Maritime Service, Office of Environment and Heritage and Parkes Shire Council, and submitted to the Department of Planning and Environment.
Stormwater Plan(s)	CoA 123 Schedule 3	Prepare detailed Stormwater Plan(s) to the satisfaction of Parkes Shire Council and submit a copy of these plans to the Department of Planning and Environment.
Chance Finds Protocol	CoA 18 Schedule 3	Preparation of a Chance Finds Protocol in consultation with the Aboriginal Stakeholders and to the satisfaction of the Office of Environment and Heritage.
Site Salvage	CoA 19 Schedule 3	In consultation with Aboriginal Stakeholders and the Office of Environment and Heritage: <ul style="list-style-type: none"> <li>- Record the identified heritage items on site and submit the standard documentation to the Aboriginal Heritage Information Management System</li> <li>- Relocate any heritage items that would be disturbed by the development to suitable alternative locations on the site;</li> <li>- Protect all heritage items on site, including those that would remain in situ as well as those that are relocated, from any impact.</li> </ul>

**Table 2.1 – Environmental Hold Points**

Plan	Reference	Compliance Requirement
<b>PRIOR TO CONSTRUCTION</b>		
Traffic Management Plan	CoA 9 Schedule 3	Traffic Management Plan developed in consultation with Parkes Shire Council and RMS, to the satisfaction of Department of Planning and Environment.
Soil Survey	MM	Undertake a soil survey as described in the Australian Soil and Land Survey Handbook and include soil testing to include clay content, electrical conductivity and exchangeable cation capacity for both top and subsoils to identify if any ameliorants should be incorporated at construction stage during cable laying in sodic soils to prevent tunnel erosion or final soil placement.
Soil and Water Management Plan	MM	Preparation of a Soil and Water Management Plan developed in consultation with the Natural Resource Access Regulator.
Construction Environmental Management Plan	MM	Preparation of a Construction Environmental Management Plan.
<b>PRIOR TO OPERATION</b>		
Research Program	CoA 19 (c) Schedule 3	The conduct of a research program for the recorded Millers Lookout axe quarry site, to the satisfaction of OEH, will be undertaken independently to the construction/operation of the GSF. The reason for this is because this recorded site sits outside the development site. The research program will commence prior to operation.
Work as Executed Plans	CoA 7 Schedule 2	WAE plans must be submitted to the Department of Planning and Environment.
Notification of Works	CoA 8 Schedule 2	Notify the Department of Planning and Environment in writing of the date of commencement of operations.  If operation is to be staged, the Department of Planning and Environment must be notified in writing prior to the commencement of the relevant stage, identifying the development that would be carried out during the relevant stage.
Occupation Certificate	CoA 9 Schedule 2	Obtain Occupation Certificate(s) for use of the building works, pursuant to Part 6 (Division 6.3) of the <i>Environmental Planning and Assessment Act 1979</i> .
Emergency Response Plan	CoA 26 Schedule 3	Preparation of an Emergency Response Plan in consultation with the Rural Fire Service and Fire & Rescue NSW.
Operations Environmental Management Plan	EMS	Preparation of an Operations Environmental Management Plan.
<b>PRIOR TO (FUTURE) UPGRADING OF SOLAR PANELS AND ANCILLARY INFRASTRUCTURE</b>		
Revised Layout Plans	CoA 6 Schedule 2	Plans must be submitted to the Department of Planning and Environment incorporating the proposed upgrades.
Notification of Works	CoA 8 Schedule 2	Notify the Department of Planning and Environment in writing of the date of commencement of upgrading.  If upgrading is to be staged, the Department of Planning and Environment must be notified in writing prior to the commencement of the relevant stage, identifying the development that would be carried out during the relevant stage.

**Table 2.1 – Environmental Hold Points**

Plan	Reference	Compliance Requirement
<b>FOLLOWING (FUTURE) UPGRADING OF SOLAR PANELS AND ANCILLARY INFRASTRUCTURE</b>		
Work As Executed Plans	CoA 7 Schedule 2	WAE plans must be submitted to the Department of Planning and Environment following any upgrades.
<b>PRIOR TO CESSATION OF OPERATIONS</b>		
Notification of Works	CoA 8 Schedule 2	Notify the Department of Planning and Environment in writing of the date of cessation of operations.
<b>PRIOR TO RECOMMISSIONING/DECOMMISSIONING</b>		
Notification of Works	CoA 8 Schedule 2	Notify the Department of Planning and Environment in writing of the date of commencement of decommissioning.  If decommissioning is to be staged, the Department of Planning and Environment must be notified in writing prior to the commencement of the relevant stage, identifying the development that would be carried out during the relevant stage.
Decommissioning/Recommissioning Management Plan	MM	Twelve (12) months prior scheduled decommissioning/recommissioning, preparation of either a Decommissioning or Recommissioning Management Plan for Department of Planning and Environment approval.
<b>WITHIN 18 MONTHS OF CESSATION OF OPERATIONS</b>		
Rehabilitated site	CoA 28 Schedule 3	Rehabilitate the site to the satisfaction of the Department of Planning and Environment.

# Statutory Approvals

Statutory approvals include licences, permits, consents and/or authorisations that are required, pursuant to legislative obligations, prior to undertaking specific activities.

Approvals relevant to the GSF are listed below.

**Table 3.1 – Statutory Approvals**

<b>Approval</b>	<b>Act</b>	<b>Comment</b>
s.68 Approval	<i>Local Government Act 1993</i>	Prior to installation of an onsite sewerage treatment system to service the permanent site office and maintenance building, a s.68 approval is required to carry out a sewerage work.  Portable chemical toilets are proposed for the construction workforce. No s.68 approval is required in this circumstance.
Construction and Occupation Certificates	<i>Environmental Planning and Assessment Act 1979</i>	For proposed building works.
s.99 Exemption	<i>Rural Fires Act 1997</i>	If proposed, prior to conducting any Hot Works in a Total Fire Ban an exemption must be obtained from the Commissioner of the NSW Rural Fire Service (RFS).
s.138 Permit	<i>Roads Act 1993</i>	Construction of the property access off Pat Meredith Drive requires securing a s.138 permit from Parkes Shire Council (the relevant roads authority).

# Environmental Management

## 4.1 REQUIREMENT

This section of the strategy identifies the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the GSF.

## 4.2 DEVELOPMENT APPLICANT

FRV, as the development Applicant, has responsibility to manage and ensure that the GSF is designed, built, operated, upgraded and decommissioned in accordance with the Development Consent.

The Applicant's Project Manager has full authority to manage these obligations.

## 4.3 CONTRACTOR

An EPC contractor will have responsibility to build the GSF for the Applicant.

The contractual requirements extend to the design and construction of the GSF in compliance with the Development Consent. This responsibility extends to all employees and/or sub-contractors engaged by the Contractor to build the GSF.

The Contractor's Project Manager has full authority to ensure these obligations are met.

## 4.4 FUTURE RESPONSIBILITIES

The entities that will have responsibilities to operate, upgrade and decommission the GSF are yet to be determined.

Notwithstanding, those entities will assume relevant responsibilities and accountability to either operate, upgrade or decommission the GSF in compliance with the existing Development Consent.

These responsibilities will be specified and incorporated into the Operations Environmental Management Plan (OEMP) and Decommissioning Management Plan (DMP) or Recommissioning Management Plan (RMP) prior to the GSF either being operated, recommissioned or decommissioned.

# Stakeholder Engagement

## 5.1 ACCESS TO INFORMATION

The local community and relevant agencies will be kept up to date about the operation and environmental performance of the development by providing up to date information on the GSF website.

## 5.2 WEBSITE

The GSF website will make the following information publicly available as relevant to the stage of the development:

- Environmental Impact Statement.
- Final layout plans for the development;
- Current statutory approvals for the development.
- Proposed staging plans for the construction, operation or decommissioning (if relevant).
- How complaints about the development can be made;
- A complaints register.
- Any other matter required by the Secretary.

The Applicant will keep this information up to date.

## 5.3 STAKEHOLDER ENGAGEMENT

As a precursor to construction FRV has initiated engagement with relevant stakeholders. This has included to date:

- Activated the Goonumbla Solar Farm website, incorporating a contact tab that enables and encourages any member of the community to lodge a request for information.
- Writing letters to all neighbours within 2 km of the development site; introducing FRV, providing an update on the project schedule, offering to meet for one on one consultation, and providing contact name and details for neighbours to discuss the project with FRV's representative.
- Meeting with Parkes Shire Council staff and scheduling a briefing presentation to Councillors for 5 March 2019.
- Instigated contact and preliminary consultations with Roads and Maritime Service and Central West Local Land Services.
- Presented the GSF project to the Elders Advisory Committee on Tuesday 21st May.
- -Consultation with all relevant stakeholders in relation to the completion of management plans.
- On-going updates to Council personnel.

These engagement initiatives will continue as the project progresses, and relationships and communications will be bridged with the EPC Contractor.

# Complaints Management

## 6.1 SCOPE

This section describes the procedures that would be implemented to receive, handle, respond to and record complaints.

## 6.2 MEANS OF MAKING A COMPLAINT

Prior to the commencement of construction the Contractor will ensure that the following contact details are available for the community to make a complaint:

- A telephone number.
- A postal address to which written complaints may be sent.
- An email address to which electronic complaints may be transmitted.

These details, when known, will be provided on the GSF website.

## 6.3 HOW ANY COMPLAINT WILL BE HANDLED

### 6.3.1 CONSTRUCTION

Any complaint received will be immediately logged in a ***Complaints Register***.

As soon as is practicable the Contractor will investigate the cause of the complaint and identify actions required to avoid a recurrence. Regardless of circumstance this initial response will be completed with 24 hours of receiving the complaint.

If so requested when the complaint was received, the Contractor will also make contact with the complainant to discuss the issue, the cause and advise them of the actions taken to avoid a recurrence.

This investigation and contact will be fully documented on a ***Complaint Record*** maintained by the Contractor and the ***Complaints Register*** will be updated and uploaded onto the GSF website.

### 6.3.2 OPERATION

Any complaint received will be immediately logged in a ***Complaints Register***.

As soon as is practicable the GSF Operations Manager will investigate the cause of the complaint and identify actions required to avoid a recurrence. Regardless of circumstance, this initial response will be completed with 24 hours of receiving the complaint.

If so requested when the complaint was received, the Operations Manager will also make contact with the complainant to discuss the cause and advise them of the actions taken to avoid a recurrence.

This investigation and contact will be fully documented on a ***Complaint Record*** maintained by the GSF Operations Manager and the ***Complaints Register*** will be updated and uploaded onto the GSF website.

## 6.4 RECORDING COMPLAINTS

Any and every complaint will be documented through maintaining an up to date **Complaints Register** (cross referenced against a **Complaint Record**).

### 6.4.1 COMPLAINTS REGISTER

The **Complaints Register** will record:

- A complaint reference number.
- The date and time the complaint was received.
- Whether the complainant wanted to be contacted.
- Nature of the complaint.

During construction the **Complaints Register** will be updated on a weekly basis and posted on the GSF website.

During operations the **Complaints Register** will be updated on a monthly basis and posted on the GSF website.

As the **Complaints Register** will be publicly available, it is not proposed to include details of who the complainant is on this register.

### 6.4.2 COMPLAINTS RECORD

The **Complaints Record** will record:

- the date and time of the complaint;
- the means by which the complaint was made (telephone, mail or email);
- any personal details of the complainant that were provided, or if no details were provided a note to that effect;
- the nature of the complaint;
- any actions taken in relation to the complaint, including timeframes for implementing the action;
- if no action was undertaken in relation to the complaint, the reasons why no action was taken; and
- if the complainant wanted to be contacted, whether the action taken was considered acceptable to the complainant.

A copy of every **Complaints Record** will be filed and held on-site and, on request, be provided to:

- the Department of Planning and Environment; or
- Environment Protection Authority;
- Parkes Shire Council; or
- the complainant.

As the **Complaints Record** will contain information on who made the complaint, it is not proposed to make this information publicly available on the GSF website.

Quarterly, copies of all **Complaints Records** will be provided to the Department of Planning and Environment.

# Dispute Resolution

## 7.1 COMMITMENT

In the event that the procedure for investigating and responding to a complaint, including the implementation of measures for avoiding a recurrence, can not be resolved and a dispute does arise, the Contractor (during construction) and the Applicant (during operations) propose the following.

- Advise both DPE and PSC that there is a dispute.
- Provide both DPE and PSC with copies of the relevant complaint history, including relevant documentation in the form of **Complaints Record(s)**.
- Engage a specialist with expertise relevant to the issue at hand to investigate the dispute and provide recommendations for resolution.
- Advise the third party in dispute, DPE and PSC, in writing, as to when the dispute investigation will be completed.
- Provide the third party, DPE and PSC a copy of the dispute investigation report, inclusive of the Contractor's/Applicant's intentions with regards to the implementation of the recommendations for resolution.

# Non-Compliance

## 8.1 COMMITMENT

A failure to comply with a Condition of Approval (CoA), Mitigation Measures (MM) or statutory approval will constitute a non-compliance.

## 8.2 RESPONSE

In the event of a non-compliance the Contractor (during construction) and Applicant (during operations) will undertake the following five steps, consistent with the guidance advice for *ISO 14001 – Environmental management systems*.

**Table 8.1 – Non-compliance Response**

Step	Action
React	React to the non-compliance and, as applicable, <ol style="list-style-type: none"> <li>1. Take action to control and correct it.</li> <li>2. Deal with the consequences, including mitigating adverse environmental impacts.</li> </ol>
Evaluate	Evaluate the need for action to eliminate the cause of the non-compliance in order that it does not recur or occur elsewhere by: <ol style="list-style-type: none"> <li>1. Reviewing the non-compliances.</li> <li>2. Determining the cause of the non-compliances.</li> <li>3. Determining if similar non-compliances exist, or could potentially occur.</li> </ol>
Act	Implement any action required.
Review	Review the effectiveness of any corrective action taken.
Change	Make changes to the environmental management plans, if necessary.

## 8.3 CORRECTIVE ACTION

Any non-compliance will trigger a **Corrective Action** appropriate to the significance of the effect of the non-compliance. The Contractor (during construction) and the Applicant (during operations) will retain documented information as evidence of the nature of the non-compliance and any subsequent actions taken, and the results of the **Corrective Action**.

## 8.4 DEPARTMENT NOTIFICATION

The DPE will also be notified in writing to [compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au) within 7 days after FRV becomes aware of any non-compliance.

The notification will:

- identify the development (**Goonumbla Solar Farm**) and the application number (**SSD 7618**);
- set out the condition of consent that the development is non-compliant with;
- the way in which it does not comply;
- the reasons for non-compliance (if known); and
- what actions have been done, or will be, undertaken to address the non-compliance.

# Incident Management

## 9.1 MATERIAL HARM

The Minister's development consent defines an incident as:

*A set of circumstances that:*

- *causes or threatens to cause material harm to the environment; and/or*
- *breaches or exceeds the limits or performance measures/criteria in this consent.*

The Minister's development consent defines material harm to the environment as:

*Actual or potential harm to the health and safety of human beings or to ecosystems that is not trivial.*

It is noted that this definition is not entirely consistent with the definition of 'material harm' as specified in s.147 of the *Protection of the Environment Operations Act 1997* relating to a pollution incident. Under this Act 'material harm' also includes impact that:

*results in actual or potential loss of property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).*

There are associated legal obligations to notify the Environment Protection Authority (EPA) where a pollution incident occurs such that material harm to the environment is caused or threatened.

## 9.2 IMMEDIATE RESPONSE

Any incident that occurs that causes or threatens to cause material harm will be reported immediately to the Contractor's Construction Manager (during construction) or the Applicant's Operation's Manager (during operations).

Upon receiving notification of an incident, the Construction Manager/Operations Manager (or their nominee if off-site at the time of the incident) will immediately attend the incident and:

- Isolate the area affected by the incident;
- Stop works around the area;
- Implement containment measures to prevent the impact of the incident spreading; and
- Make a determination as to whether the incident has caused or threatens to cause material harm.

## **9.3 EXTERNAL NOTIFICATIONS**

### **9.3.1 DUTY TO REPORT**

If the Construction Manager/Operations Manager (or their nominee if off-site at the time of the incident) has determined the incident has caused or threatens to cause material harm, he/she will, pursuant to requirements under Part 5.7 (Duty to notify pollution incidents) of the *Protection of the Environment Operations Act 1997* ***immediately*** notify the EPA.

The EPA will be notified (verbally) and provided the following relevant information.

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

The EPA may direct the Contractor/Applicant to notify such other persons of the incident as the EPA requires.

### **9.3.2 NOTIFICATIONS**

Following EPA notification the Contractor/Applicant will then immediately notify DPE and PSC.

## **9.4 INCIDENT INVESTIGATION**

### **9.4.1 AVOID RECURRENCE**

As soon as the incident has been contained and external notifications undertaken the Contractor/Applicant will then undertake an incident investigation. One purpose of the investigation will be to identify and understand the cause of the incident with a view to modifying procedures to avoid the potential for a recurrence. The types of preventative actions taken could include revision to a Construction Work Method Statement or undertaking targeted Environmental Due Diligence sessions at tool box meetings prior to works re-commencing.

### **9.4.2 RESTORATION**

The other purpose of the incident investigation will be to define the appropriate remediation work required in order to address any bio-physical impact of the incident. The appropriate remediation work (if required) would be determined by the specific circumstances of the incident.

## **9.5 INCIDENT REPORTING**

### **9.5.1 DOCUMENTATION**

Any environmental incident will be recorded on an *Environmental Incident Report* and an updated *Environmental Incidents Register* will be maintained.

Each *Environmental Incident Report* will include details on:

- the date, time and duration of the incident;
- clarify whether there was material harm to the environment;
- detail the nature of the incident;
- climatic conditions;
- the location of the incident;
- pollutants involved;
- circumstances in which the incident occurred; and
- corrective action taken; external notification (EPA).

### **9.5.2 DISSEMINATION**

For an incident in which material harm has or could have resulted and the EPA has been notified, the Contractor/Applicant will provide reporting to the EPA as may be instructed, in accordance with the timeframes that may be so specified by the EPA.

Consistent with Schedule 4 CoA 3, the Contractor/Applicant will, within 7 days of the date of the incident, provide DPE with a detailed report on the incident, and such further reports as may be requested.

# Emergency Response

## 10.1 REQUIREMENT

The Minister's consent requires that an Emergency Response Plan (ERP) be prepared in consultation with the Rural Fire Service (RFS) and Fire and Rescue NSW (FRNSW) prior to commencement of operations.

## 10.2 OPERATIONS EMERGENCY RESPONSE PLAN

CoA 26 Schedule 3 requires:

***Emergency Response Plan***

*Prior to the commencement of operations, the Applicant must prepare an Emergency Response Plan for the development in consultation with the RFS and Fire & Rescue NSW. This plan must identify the fire risks and controls of the development, and the procedures that would be implemented if there is a fire on site or in the vicinity of the site. Two copies of the plan must be kept on site in a prominent position adjacent to the site entry point at all times.*

# Performance Monitoring

## 11.1 MONITORING PROGRAM

A suite of monitoring will be undertaken for the GSF development. This will include:

- monitoring designed to ensure compliance with the Minister's Development Consent and the commitments made in this Environmental Management Strategy; and
- monitoring designed to ensure that on-ground mitigation measures, procedures and work practices that will be detailed in specific environmental plans are not only being implemented, but are effective in achieving requisite environmental outcomes.

## 11.2 MANAGEMENT REVIEWS

The Applicant will conduct two types of management reviews to ensure compliance with the Minister's Development Consent and the commitments made in this Environmental Management Strategy.

### 11.2.1 PROGRAMMED REVIEWS

For the duration of the construction, the Applicant will undertake quarterly management compliance reviews. The focus of these reviews will be on the implementation of the commitments made in this Environmental Management Strategy and compliance with the Development Consent. Each management review will be documented and posted onto the GSF website.

Post construction, annual management compliance reviews will be undertaken.

### 11.2.2 TRIGGERED REVIEWS

Separate to these programmed reviews the Applicant will conduct a management review in the event of the following three circumstances:

1. There is an **environmental incident** with circumstances that have caused or threatened to cause material harm to the environment. Refer **Section 9.1** for the definition of material harm.
2. In the event that the procedure for investigating and responding to a complaint, including the implementation of measures for avoiding a recurrence, can not be resolved to the satisfaction of a third party, and a **dispute has arisen**.
3. Any **modifications to the existing Development Consent**.

## 11.3 ENVIRONMENTAL PLANS

**Table 11.1** identifies the various environmental plans required by either Conditions of Approval or Mitigation Measures identified in the *Response to Submissions* (Geolyse, November 2016).

Each of these plans will identify procedures and work practices designed to minimise adverse environmental impacts and comply with the Minister’s development consent. They will each include, where appropriate, performance criteria and the targeted monitoring.

**Table 11.1 – Environmental Plans**

<b>Plan</b>	<b>When</b>
Landscaping Plan	Before construction.
Chance Finds Protocol	Before construction.
Construction Environmental Management Plan	Before construction
Research Program	Before operation
Emergency Response Plan	Before operation
Operations Environmental Management Plan	Before operation
Recommissioning Management Pan	Before recommissioning
Decommissioning Management Plan	Before decommissioning

Any changes to these management plans will be approved by the Secretary, before implementing the changes, and in consultation with relevant agencies.

## 11.4 MONITORING SCHEDULE

As each of the above plans are prepared and approved an updated Monitoring Schedule will be collated and posted onto the GSF website. This Monitoring Schedule will incorporate specific monitoring requirements detailed in each of these plans so as to provide a single reference document that summarises all monitoring requirements associated with the GSF development.

# References

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**Department of Infrastructure Planning and Natural Resources (2004)** *Guideline for the Preparation of Environmental Management Plans*

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**International Organization for Standardization (2015)** *ISO 14001:2015(E) Environmental management systems – Requirements with guidance for use*

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**Geolyse (November 2016)** *Goonumbla Solar Farm – Submissions Report*

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**Geolyse (September 2016)** *Goonumbla Solar Farm – Environmental Impact Statement*

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