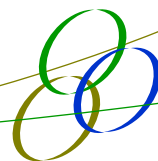



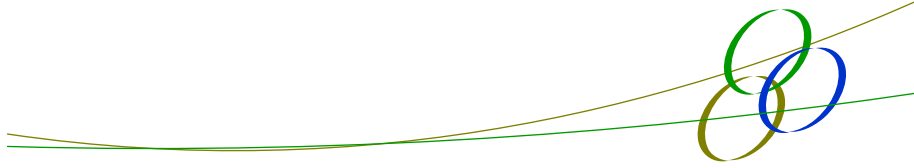


## CRUDINE RIDGE WIND FARM ENVIRONMENTAL MANAGEMENT STRATEGY FINAL

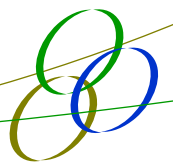
*Prepared for Crudine Ridge Wind Farm Pty Ltd  
Prepared by Environmental Property Services*



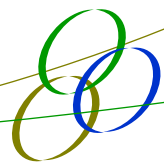
<b>Contact Information and Declaration</b>			
<b>Declaration:</b>	<p>The opinions and declarations in this Environmental Management Strategy are ascribed to EPS and are made in good faith and trust that such statements are neither false nor misleading.</p> <p>In preparing this Environmental Management Strategy, EPS has considered and relied upon information obtained from the public domain, supplemented by discussions between key EPS staff, representatives from governing agencies and independents, including Crudine Ridge Wind Farm Pty Ltd.</p>		
<b>Prepared by:</b>	<table border="1"><tr><td>Alina Tipper Environmental Consultant Environmental Property Services PO Box 348 NELSON BAY NSW 2315 Ph: 02 4981 1600</td><td> ..... Alina Tipper</td></tr></table>	Alina Tipper Environmental Consultant Environmental Property Services PO Box 348 NELSON BAY NSW 2315 Ph: 02 4981 1600	 ..... Alina Tipper
Alina Tipper Environmental Consultant Environmental Property Services PO Box 348 NELSON BAY NSW 2315 Ph: 02 4981 1600	 ..... Alina Tipper		
<b>Application subject land address:</b>	Subject land as per the Development Consent SSD-6697 MOD 1, Appendix 1: Schedule of Land.		



<b>Quality Assurance &amp; Version Control Table</b>				
<b>Project: Crudine Ridge Wind Farm Environmental Management Strategy</b>				
<b>Client:</b>	Crudine Ridge Wind Farm Pty Ltd			
<b>Rev No.</b>	<b>Date</b>	<b>Our Reference</b>	<b>Author</b>	<b>Reviewer</b>
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V02	08.05.2017	20170508_11289_Crudine Ridge EMS_V02	M. Branson	N/A
V03	18.05.2017	20170515_11289_Crudine Ridge EMS_V03	A. Tipper	N/A
V04	06.06.2017	20170606_11289_Crudine Ridge EMS_V04	A. Tipper	N/A
V05	03.08.2017	20120804_11289_Crudine Ridge EMS_V05	M. Branson & EPC Contractor	N/A
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V07	10.08.2017	20170810_11289_Crudine Ridge EMS_V07	A. Tipper	N/A
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<b>Checked by</b>	13.12.2017			K. Tierney
<b>Approved by</b>	13.12.2017			S. McCall
<b>ENVIRONMENTAL PROPERTY SERVICES</b>				

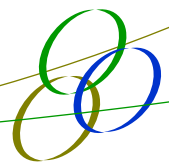


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<b>Website:</b> <a href="http://www.enviroproperty.com.au">www.enviroproperty.com.au</a>	



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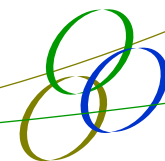
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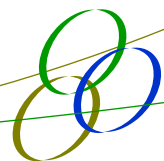
### **Appendices**

- Appendix A – Copies of Approved Strategies, Plans and Programs
- Appendix B – Monitoring Plan
- Appendix C – Environmental Improvement Notice Template



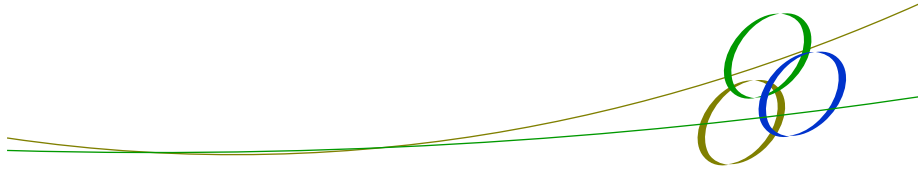
## Abbreviations

Abbreviation/Term	Meaning
<b>BBMP</b>	Bird and Bat Management Plan
<b>BCA</b>	Biodiversity Conservation Act 2016
<b>BDC</b>	Biodiversity Conservation Division of DPIE
<b>BMP</b>	Biodiversity Management Plan
<b>BCC</b>	Bathurst City Council
<b>BGW</b>	Box Gum Woodland
<b>CCC</b>	Community Consultative Committee
<b>CRWF</b>	Crudine Ridge Wind Farm Pty Ltd
<b>CWP</b>	CWP Renewables
<b>Council</b>	Mid-Western Regional Council and Bathurst City Council
<b>DECC</b>	Department of Environment and Climate Change (now DPIE)
<b>DPIE</b>	Department of Planning Industry and Environment
<b>DoE</b>	Department of the Environment
<b>Development Consent</b>	SSD-6697 MOD 1
<b>Development Corridor</b>	The approved Development Corridor as defined in the Development Consent, comprising of a 100m buffer around all approved infrastructure.
<b>Development Footprint</b>	The area of physical disturbance associated with the construction of the Project, comprised of temporary impacts and permanent impacts, including those along Aarons Pass Road and Bombandi Road.
<b>EA</b>	Environmental Assessment
<b>EMS</b>	Environmental Management Strategy
<b>EPA</b>	Environment Protection Authority
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPBC Act</b>	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
<b>EPC</b>	Engineering Procurement and Construction contractor; also refers to any other principal contracting entity engaged on the Project, such as TransGrid
<b>ERP</b>	Emergency Response Plan
<b>LGA's</b>	Local Government Area's
<b>MOD1 / Modification</b>	SSD-6697 Modification
<b>MWRC</b>	Mid-Western Regional Council

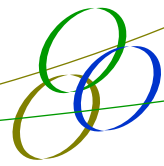


<b>Abbreviation/Term</b>	<b>Meaning</b>
<b>Project Site</b>	The land within the cadastral boundaries associated with the proposed Project, as defined in the Development Consent and Modification.
<b>RMP</b>	Risk Management Plan
<b>RMS</b>	Roads and Maritime Services
<b>TEC</b>	Threatened Ecological Community
<b>The Minister</b>	Minister for the Environment and Energy
<b>The Project</b>	Crudine Ridge Wind Farm
<b>The Secretary</b>	Secretary of Department of Planning and the Environment
<b>TMP</b>	Traffic Management Plan





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# 1 INTRODUCTION

## 1.1 Overview of the Project

Crudine Ridge Wind Farm (the Project) is an approved renewable energy project located near Pyramul, NSW, approximately 45km south of Mudgee and 45km north of Bathurst. The Project consists of up to 37 wind turbines each with a maximum height of 160m from foundation to the uppermost blade tip. The Project will also comprise access roads, internal electrical reticulation, temporary construction compounds, rock crushing facilities, concrete batching plant(s), a substation, an operations and maintenance facility, approximately 15 km of overhead transmission line and a switching station. A map of the Project is provided in Figure 1-1.

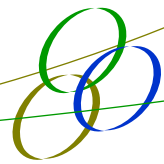
The Project will have a generation capacity of approximately 133 MW and will connect to the existing 132kV TransGrid transmission line oriented north-south approximately 16 km east of the substation site. The Project will be constructed primarily on freehold land, as well as Crown and Council land across two Local Government Areas (LGAs) Mid-western Regional Council (MWRC) and Bathurst City Council (BCC). Land to be used for the Project is secured under lease and license arrangements. The Project will be constructed and operated by Crudine Ridge Wind Farm Pty Ltd (CRWF) with transmission infrastructure owned and operated by the network service provider.

This Environmental Management Strategy (EMS) has been prepared based on the approved project infrastructure, including 57 available turbine locations and all infrastructure options presented in the EA. It is noted that the Project is only permitted to construct up to 37 turbines and associated infrastructure. Prior to construction an Engineering Procurement and Construction (EPC) contractor has been appointed to deliver the construction phase of the Project. In this EMS the term EPC is used to represent any contractor engaged by the Project Owner to deliver works under supervision of the Principal for the Project.

The EPC has undertaken undertake a detailed design process which:

1. Confirmed which of the turbine locations are to be constructed;
2. Identified the final micrositied locations of those turbines;
3. Confirmed the ancillary infrastructure to be used for the Project; and
4. Provided detailed civil and electrical designs for all infrastructure, including the clearance limits required during construction.

The EPC is responsible for the delivery of construction in accordance with this EMS, associated plans, the Development Consent and the Commonwealth approval.



## 1.2 Purpose and Scope

This Environmental Management Strategy (EMS) provides the framework for environmental management during the construction and operation of the Project, and on-going public and agency consultation. The EMS guides compliance with the Development Consent (SSD-6697) MOD 1 and other relevant requirements – see Section 3.2. This EMS is based on the mitigation measures included in the project Environmental Assessment (EA). The EMS considers *ISO 14001:2015 Environmental Management Systems – Requirements and Guidance for Use*.

## 1.3 Objectives of Strategy

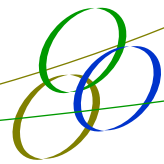
The objectives of the EMS are to:

- Provide the overarching framework for minimising and controlling the environmental impacts of the Project using principles included in ISO 14001:2015;
- Ensure compliance with all relevant legislation, the Development Consent and Commonwealth Approval;
- Enable the Project team to minimise disruption and inconvenience to the community during construction;
- Equip all project staff and contractors with the appropriate training, equipment and delegations to implement their environmental obligations under this EMS; and
- Provide mechanisms to identify and manage environmental impacts arising from changes to design or construction methodology.

## 1.4 Development Consent Conditions

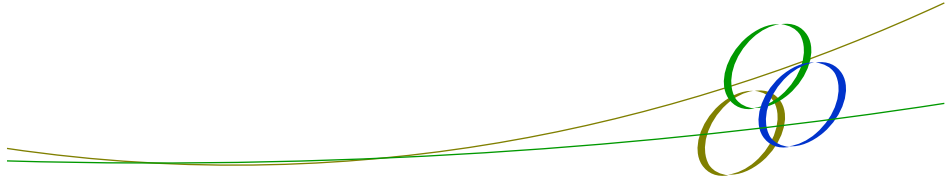
As per Condition 2, Schedule 2 of Development Consent SSD-6697 MOD 1 the development will be carried out generally in accordance with the Environmental Assessment (EA) and in accordance with the conditions of consent. As per Condition 3, Schedule 2 the conditions of consent will prevail to the extent of any inconsistency with the EA. The approved EMS and associated management plans and programs will also prevail to the consent of any inconsistency with the EA.

This EMS has been prepared to satisfy Condition 1, Schedule 5 of Development Consent SSD-6697 MOD 1. Details of the specific requirements of this condition are included in Table 1-1.

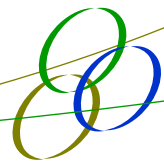


**Table 1-1: Compliance with requirements of Development Consent**

Requirement	Where addressed
1. Prior to the commencement of construction, the Applicant shall prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	Entire document.
(a) provide the strategic framework for environmental management of the development;	Section 2.1
(b) identify the statutory approvals that apply to the development;	Section 3.2
(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 4.1
(d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> <li>• keep the local community and relevant agencies informed about the operation and environmental performance of the development;</li> </ul>	Section 4.3, 4.7 and 5.5.
<ul style="list-style-type: none"> <li>• receive, handle, respond to and record complaints;</li> </ul>	Section 4.4.1
<ul style="list-style-type: none"> <li>• resolve any disputes that may arise;</li> </ul>	Section 4.4.2
<ul style="list-style-type: none"> <li>• respond to any non-compliance;</li> </ul>	Section 5.2
<ul style="list-style-type: none"> <li>• respond to emergencies; and</li> </ul>	Section 4.8
(e) include: <ul style="list-style-type: none"> <li>• copies of any strategies, plans and programs approved under the conditions of this consent; and</li> </ul>	Appendix A
<ul style="list-style-type: none"> <li>• a clear plan depicting all the monitoring to be carried out in relation to the development.</li> </ul>	Appendix B



**Figure 1-1: Project Plan**



## 2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

### 2.1 Environmental Management Strategy

The EMS provides a strategic framework for environmental management of the Project. The strategy outlines CRWF commitment to community engagement, environmental management and reduction of any project related impacts.

The strategic framework is structured generally in accordance with ISO 14001:2015's process of Plan → Do → Check → Act.

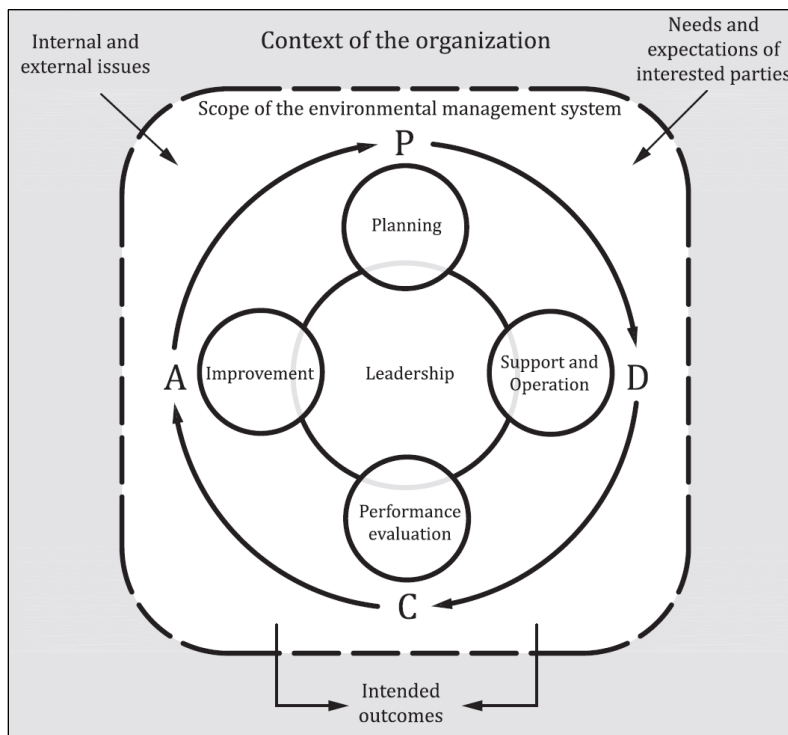


Figure 2-1: ISO14001:2015 Plan-Do-Check-Act extract.

A description of this process and its relationship to the EMS is included in Table 2-1.

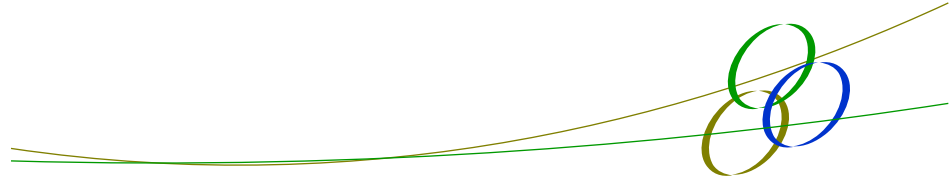


Table 2-1: Structure of the EMS

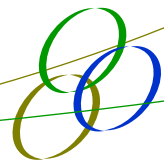
Feature	Requirements	Where addressed in EMS
<b>Plan</b>	Establish the objectives and processes necessary to deliver results in accordance with the organisation's environmental policy.	Section 3.3
<b>Do</b>	Implement the process.	Section 4
<b>Check</b>	Monitor and measure processes against environmental policy, objectives, targets, legal and other requirements and report the results.	Section 5.1
<b>Act</b>	Take actions to continually improve performance of the EMS.	Section 5.4

## 2.2 Environmental Policy and Commitment

All activities at the Project will be undertaken in accordance with the relevant principles of the Project Owner's Environmental Policy, which will be structured generally in accordance with ISO 14001:2015 and will specifically commit to:

- Continual improvement of environmental performance;
- Prevention of pollution;
- Compliance with relevant legal and other requirements; and
- Developing a framework for identifying objectives and targets.

The policy will be communicated to all staff and contractors during induction and will be available via the project website. It will be periodically reviewed against environmental performance and industry practice.



## 3 PLANNING

### 3.1 Identification of Environmental Aspects and Impacts

Environmental aspects and impacts were identified in the Environmental Assessment which formed the basis of the Development Consent. Prior to commencement of construction of the Project, the Contractor will prepare a Risk Management Plan (RMP) to identify potential environmental risks and proposed mitigations measures to be implemented throughout construction and operation of the Project.

The Risk Management Plan will include criteria to evaluate and categorise risks, as well as a comprehensive risk register identifying:

- Risk identification;
- Initial or inherent risk level;
- Responsibilities;
- Evaluation; and
- Management measures.

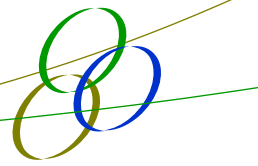
The RMP will be a progressive document that is proposed to be updated relevant to the stage of the project. The RMP will initially address the construction phase of the Project. Prior to the commencement of subsequent stages such as operation and decommissioning, the project risk register will be comprehensively reviewed and updated by the Principal Project Manager. Environmental aspects and impacts that are identified as high risk will be considered during the formation of environmental management programs and plans and formulated actions and procedures will be incorporated into staff training.

### 3.2 Statutory Approvals

In order to ensure compliance with the applicable statutory approvals, the Project Environment Officer will maintain a compliance register that will be readily accessible by all staff and contractors. At a minimum, the register will include the following approval related documentation:

- The Project EA (including the Statement of Commitments and ancillary reports);
- Response to Submissions Report;
- Development Consent SSD-6697 Mod 1;
- The documents submitted in support of the first application to modify the consent (MOD1), including the Environmental Assessment dated December 2018,





- the Response to Submissions dated January 2019 and the Supplementary Information dated February 2019.
- Environmental Protection License 21090; and
- Commonwealth Approval 2011-6206.

### 3.3 Environmental Objectives and Targets

Environmental objectives and targets will be set and reviewed regularly throughout construction. These will reflect the intent of the Project Environmental Policy and will measure performance of the EMS. The targets will be developed with regards to the following:

- The RMP;
- Statutory and other requirements;
- Outcomes of community and agency consultation; and
- the Project's organisational, economic and social considerations.

At a minimum, the objectives and targets will be set for the following:

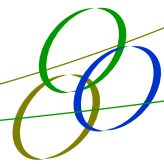
- Environmental risks where the adequacy of mitigations has identified to be 'Satisfactory' or lesser;
- Total number of non-conformances;
- Total number of complaints received internally and from the community;
- Implementation of the EMS;
- Staff training; and
- Assessment of the environmental competency of relevant staff.

### 3.4 Environmental Management Programs and Plans

Where necessary, Environmental Management Programs and Plans will be prepared to enable effective risk management, compliance with relevant statutory requirements, and consistency with the Environmental Policy, Environmental Management Strategy, environmental objectives and targets.

#### 3.4.1 Environmental Management Programs

Environmental Management Programs will be developed to achieve environmental objectives and targets. The programs will contain specific information on timing of actions, milestones/targets and reviews. They will also contain information on resources to be allocated and responsibilities.



Programs may be developed for items such as:

- Rectifying issues following the receipt of a complaint or an incident being reported;
- Targeting ongoing training relevant to risks where the adequacy of mitigations has identified to be 'Satisfactory' or lesser in the Risk Management Plan; and
- To address areas for improvement, or non-conformance identified in environmental audits.

Environmental Management Programs will be created in consultation with the EPC and, in some instances, will be the responsibility of the EPC to develop. The Project Environment Officer will maintain a register of all programs and will ensure they are easily accessible to all staff and contractors.

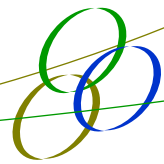
### **3.4.2 Environmental Management Plans**

Environmental Management Plans will be developed where a specific environmental aspect or impact requires planning and implementation of mitigation measures, to be effectively managed. The Development Consent requires the following management plans be developed in addition to the above:

- Biodiversity Management Plan, containing:
  - Biodiversity Offset Management Plan; and
  - Bird and Bat Adaptive Management Plan (BBMP);
- Aboriginal Heritage Management Plan;
- Traffic Management Plan (TMP); and
- Safety Management Plan (upon commencement of operations).

The above plans will be reviewed and updated relevant to the stage of the development.

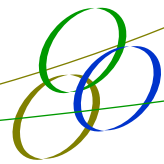
The Project Environment Officer will be responsible for maintaining the management plans above and making the plans available to staff, contractors and the public via the Project website. All staff and contractors will be responsible for conducting Project related works in accordance with the management plans.



Additional management plans and programs have been identified to ensure that key environmental risks identified in the Environmental Assessment, Development Consent and Commonwealth approval are appropriately managed. The EPC will prepare the following management plans or programs for the construction phase, prior to the commencement of construction activities:

- Emergency Response Plan;
- Noise and Vibration Management Plan;
- Contamination and Waste Management Plan;
- Weed Management Plan;
- Erosion and Sediment Control Plan; and
- Bushfire Emergency Plan.

Prior to the commencement of the relevant Project phase, the Principal Project Manager will prepare an Operational Management Plan and Decommission and Rehabilitation Plan.



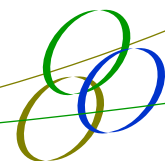
## 4 IMPLEMENTATION AND OPERATION

### 4.1 Structure and Responsibility

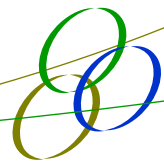
It is the responsibility of all Project staff members and contractors to implement the requirements outlined in this Strategy. Specific responsibilities for administering, implementing, monitoring and reporting are detailed in Table 4-1. Each Contractor will be responsible for implementing the actions identified in the management plans and programs in order to comply with the Development Consent conditions.

**Table 4-1: Roles and responsibilities**

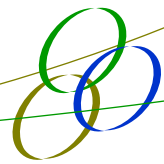
Role	Responsibility	Authorities	Accountabilities
<b>Principal Project Manager</b>	<ul style="list-style-type: none"> <li>• Responsible for delivery of the Project in accordance with this EMS and associated plans and statements;</li> <li>• Review and approve Project design changes, and update Project Environment Officer and Project Community Officer;</li> <li>• Provide adequate resources to allow the implementation of the project EMS;</li> <li>• Issue non-conformance notices and to issue actions to avoid or minimise potential environmental impacts, and failing the effectiveness of such steps, order cessation of a specific activity.</li> <li>• Ensure all project personnel attend a site induction prior to commencing work;</li> <li>• Hold regular project team meetings; and</li> <li>• Support and attend Community Consultative Committee (CCC) meetings with the Project Community Officer.</li> </ul>	<ul style="list-style-type: none"> <li>• To approve all aspects of the EMS, BMP and TMP</li> </ul>	<ul style="list-style-type: none"> <li>• The Board of Crudine Wind Farm</li> </ul>



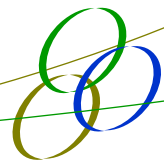
Role	Responsibility	Authorities	Accountabilities
<b>Project Environment Officer</b>	<ul style="list-style-type: none"> <li>• Ensure site specific environmental requirements are fulfilled;</li> <li>• Ensure sub-contractors and agents comply with the EMS, management plans and programs;</li> <li>• Undertake internal environmental auditing and reporting;</li> <li>• Be the primary point of contact for regulatory agency liaison;</li> <li>• Oversee environmental monitoring; and</li> <li>• Report to the Principal Project Manager on environmental performance of the EPC and sub-contractors.</li> <li>• Review clearing data for Aarons Pass Road and provide details to the DPIE</li> <li>• Supervise translocation of <i>Acacia meanthia</i> along Aarons Pass Road</li> </ul>	<ul style="list-style-type: none"> <li>• Approve Site Disturbance Map for Aarons Pass Road</li> <li>• Review EMS, TMP, BMP, BBAMP</li> <li>• Approve EPC contractor plans</li> </ul>	<ul style="list-style-type: none"> <li>• To Principal Project Manager</li> </ul>
<b>Project Community Officer</b>	<ul style="list-style-type: none"> <li>• Be the primary point of contact for community and liaison;</li> <li>• Ensure all staff and contractors are aware of the community consultation requirements and complaints protocols;</li> <li>• Management of a Project complaints register;</li> <li>• Coordinate the CCC serving as the primary interface between the Project and that committee; and</li> <li>• Ensure the community is well informed of activities at the Project site, and activities which may affect</li> </ul>	<ul style="list-style-type: none"> <li>• Approve media communications</li> </ul>	<ul style="list-style-type: none"> <li>• Principal Project Manager</li> </ul>



Role	Responsibility	Authorities	Accountabilities
	<p>the Community and their interests.</p>		
<p><b>Independent Environmental Auditor</b></p>	<ul style="list-style-type: none"> <li>• Review the adequacy of the measures undertaken to deliver the Project in accordance with the EMS, management plans, programs, Development Consent and Commonwealth approval;</li> <li>• Request reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, direct that relevant actions be ceased immediately; and</li> <li>• Provide an audit report to be forwarded to the Secretary or Minister as relevant.</li> </ul>	<ul style="list-style-type: none"> <li>• To undertake independent audit and request all information and access required to do so</li> </ul>	<ul style="list-style-type: none"> <li>• DPIE</li> </ul>
<p><b>EPC Project Manager</b></p>	<ul style="list-style-type: none"> <li>• Overall responsibility for the performance of the EPC and its sub-contractors against the requirements of this plan and the conditions of the Development Consent and Commonwealth approval;</li> <li>• Develop the Risk Management Plan for construction, and maintaining that plan throughout construction;</li> <li>• Consult with Principal Project Manager in relation to all Project design plan changes;</li> <li>• Provide the Project Environmental Officer with detailed designs including mapping demarcating clearing boundaries;</li> </ul>	<ul style="list-style-type: none"> <li>• Approve external communications</li> <li>• Approve TOBAN hot permits</li> </ul>	<ul style="list-style-type: none"> <li>• EPC Consortium Manager</li> </ul>



Role	Responsibility	Authorities	Accountabilities
	<ul style="list-style-type: none"> <li>• Ensure all staff and sub-contractors complete a site environmental and heritage induction prior to commencing work on site;</li> <li>• Ensure adequate resources are available for all contractors and subcontractors to deliver the Project in compliance with the EMS and other relevant documents;</li> <li>• Hold regular project team meetings and toolbox talks, ensuring information is shared between all site personnel; and</li> <li>• Support and attend Community Consultative Committee (CCC) meetings at the request of the Principal Project Manager.</li> </ul>		
<b>EPC Environment Officer</b>	<ul style="list-style-type: none"> <li>• Obtain the relevant licences and approvals for construction including any quarry licences and commercial water licences;</li> <li>• Manage environmental incidents in accordance with Section 4.7;</li> <li>• Prepare reports on compliance to the satisfaction of the Project Environment Officer;</li> <li>• Prepare environmental induction training materials in accordance with the EMS and associated plans;</li> <li>• Delivery of the management plans and programs identified in Section 3.4.2, and the additional responsibilities identified in the Biodiversity Management Plan and Heritage Management Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Approve ground disturbance permits</li> <li>• Approve SWMS</li> <li>• Approve weed and seed inspections</li> <li>• Identify native vegetation</li> <li>• Approve tree felling</li> <li>• Approve waste disposal</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• EPC Project Manager</li> </ul>



Role	Responsibility	Authorities	Accountabilities
All Employees and Contractors	<ul style="list-style-type: none"><li>• Complete a site induction prior to commencing works on site;</li><li>• Attend all environmental training as required;</li><li>• Comply with the specific controls in this EMS and associated plans;</li><li>• Undertake all activities in accordance with agreed procedures and work methods;</li><li>• Implement the actions identified in their management plans and programs in order to comply with the Development Consent conditions; and</li><li>• Follow instructions of the Project Environment Officer.</li></ul>	<ul style="list-style-type: none"><li>• As defined in their scope of works</li></ul>	<ul style="list-style-type: none"><li>• EPC Project Manager</li></ul>

## 4.2 Training, Awareness and Competence

Training awareness and competence systems have been designed to ensure contractors and staff have an adequate understanding of the project’s environmental aspects and impacts, the requirements or relevant programs and plans, and their own responsibilities and tasks. The system includes a site induction, ongoing targeted environmental training, and tool box talks. The Project Environment Officer will maintain records of environmental training.

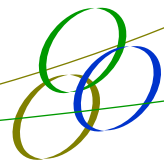
### 4.2.1 Site Induction

All staff and contractors working on site will be required to undertake a site induction prior to commencing work on the site. Inductions will address the requirements of this EMS and highlight the relevant roles and responsibilities. Emergency response training will be incorporated in the induction training. A separate section within the site induction will be cover the vegetation management procedures for works along Aarons Pass Road.

### 4.2.2 Environmental Training

Targeted environmental training will be conducted for key construction tasks or work areas that are considered particularly sensitive e.g. site access and biodiversity management. The





environmental training content will be developed by EPC Environment Officer in consultation with the Project Environment Officer.

#### **4.2.3 Toolbox Talks**

Regular toolbox talks will identify the environmental risks, mitigation measures and responsibilities relevant to the activities being completed. More detailed toolbox talks will be completed as needed to address specific environmental issues, environmental incidents or improvement initiatives. Toolbox talks will be coordinated by the EPC Project Manager to facilitate sharing of information between all site personnel.

#### **4.2.4 Records**

Training records will be maintained to demonstrate compliance with the requirements of this EMS, and records will include:

- Who was trained;
- When training occurred;
- Name and relevant details of trainer; and
- Description of training content.

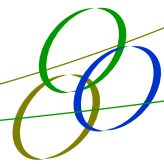
### **4.3 Communication**

Effective, two-way communication between the Project and external stakeholders is imperative to the success of the EMS and the project as a whole.

A Community Consultative Committee (CCC) has been established for the project, as per Schedule 5, Condition 5 of the Development Consent. The Project Community Officer will facilitate interaction between the CCC and the relevant Project personnel. Other personnel may be required to attend CCC meetings at the request of the Principal Project Manager.

#### **4.3.1 Internal Communication**

Communication between the Project staff and EPC contractors is classified as internal communication and will be typified by emails, phone-calls, meetings, tool-box talks and internal reporting (e.g. audit reports, progress reports and incident reports). The Project Environment Officer is responsible for handling internal communication related to the environmental aspects and impacts of the Project. The Project training system also forms part of the internal



communication process through induction and ongoing training information on environmental aspects and impacts.

### **4.3.2 External Communication**

External communication is that between the Project and external stakeholders such as neighbours, the wider community, government agencies and general public. External communication methods include: the CCC, project website, advertisements, letters, emails and information/complaints telephone line.

The project website is one of the core external communication tools. It is regularly updated with the project status and will make publicly available copies of documents specified in Schedule 5, Condition 10 of the consent. These documents include: the EA, site layout plans, approved strategies, plans and programs, comprehensive summary of monitoring results, complaints register, minutes of CCC, and other matters required by the Secretary.

External communication commenced during the site identification phase and will continue until the project is decommissioned. The Project Community Officer will be the primary point for contact for all external communication throughout construction. The primary contact during Operations will be determined prior to the commencement of that stage.

An external communication strategy to cover the vegetation management works along Aarons Pass Road will be implemented prior to the commencement of clearing activities on Aarons Pass Road.

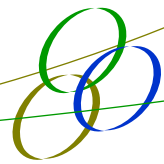
## **4.4 Complaints Management and Dispute Resolution**

### **4.4.1 Complaints Management**

The Project will maintain a 24-hour telephone number, postal address and email address to receive complaints during construction and operation.

The Complaints Register will record:

- (a) Date and time of complaint/enquiry;
- (b) Type of communication (i.e. telephone, mail, meeting, email etc.);
- (c) Name, address, contact telephone number of complainant/enquirer (if possible, and permitted by the complainant/enquirer);
- (d) Nature of the complaint and enquiry;
- (e) Actions taken in response including timeframes for implementing the action;



- (f) If no action was taken, the justification for why not; and
- (g) When and how the complainant/enquirer was notified of the outcome or provided an answer.

Complaints will be responded to within 24-hours either via actions taken to resolve the complainant or a holding statement while the complaint is being investigated.

The Complaints Register will be made available to the public via the project website. The Complaints Register will be updated monthly as per Schedule 5, Condition 10 of the Development Consent.

#### **4.4.2 Dispute Resolution**

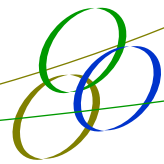
The Project complaints handling process is designed to avoid disputes arising following the receipt of a complaint. As per Section 4.4.1, all complaints will be responded to within 48 hours. It is the Project's aim to maintain a good relationship with all internal and external stakeholders so that no disputes eventuate. In event that a complaint is unable to be resolved satisfactorily, either party may refer the dispute to an independent dispute resolution process.

### **4.5 Document Control**

The Principal Project Manager will establish a document control process to ensure environmental documentation remains current and can be easily located and reviewed. It is planned that CRWF will maintain all documents in accordance with a quality management system. A summary of the proposed system is as follows:

- Keeping hard copies and electronic copies of documents in accordance with the ISO 9001/2008 Standard of Quality Management, where applicable;
- A Quality Assurance and Version Control Table is included at the beginning of every document, where appropriate;
- Documents saved with a consistent naming convention e.g. YYMMDD\_Project Reference Code\_Description\_Version Number (i.e.170502\_CRWF\_ManagementPlan\_v02);
- Each work package or function will have a designated file;
- Each work package or function will have a designated number;
- Each file will contain relevant records, documents and correspondence; and
- All documentation is to be retained for the life of the project.

The Principal Project Manager will establish and maintain a document register. The register will be used to manage controlled documents (i.e. documents requiring approval for implementation and revision) produced by the project team.



It is the responsibility of the Project Environment Officer to ensure that document control of environmental documents and records is functioning effectively. The system is subject to refinement. A project specific document management plan will be created prior to the commencement of construction to ensure that all document controls for the project are fully communicated between all parties.

## 4.6 Operational Controls

To ensure satisfactory environmental performance and that the requirements of the Project Development Consent and other relevant statutory requirements are fulfilled, CRWF will implement operational controls. Specific environmental controls have been included in the EA and the Development Consent. These controls will be expanded upon and standard controls will be developed in the various environmental management plans and programs, refer to Section 3.4.

A risk assessment of each project phase will identify project risks and outline measures and controls required to be implemented to reduce risks (both likelihood and consequences). Once the project environmental risks and measures have been identified, the appropriate mitigation and operational controls will be implemented. Where physical controls will not be effective, work procedures and plans will be employed.

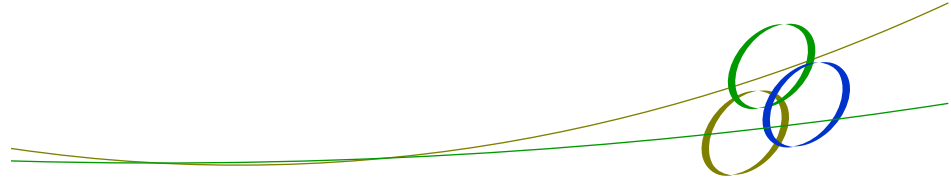
Operating procedures may be prepared for such aspects as land management, water management, energy conservation and deviation/changes to procedures. These procedures will be specific to the site and will be reviewed periodically to ensure effectiveness.

## 4.7 Incident Management

All environmental incidents will be immediately reported to the Project Environment Officer who will direct immediate remedial actions in consultation with the Project Manager.

The Project Environment Officer will immediately notify the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment.

For incidents that don't cause, or threaten to cause, material harm to the environment, but are considered by the Project Environment Officer appropriate to be notifiable incidents, the Secretary and any other relevant agencies shall be notified. Within seven (7) days of the date of the incident, the Project Environment Officer shall provide the Secretary and any other relevant agencies with a detailed report on the incident, and such further reports as may be reasonably requested.



All staff and contractors will be trained in incident reporting during the site induction. This training will include information on the responsibility of every staff member to report incidents and how to report an incident.

All environmental incidents and responsive actions will be recorded on an Environmental Improvement Notice and reported at project management meetings. This notice will record:

- Name and role of employee recording the incident;
- Date and time of incident;
- Location of incident;
- Size and type of land area affected (e.g. creek, vegetation, road etc.);
- Type of incident (e.g. spill, fire etc.);
- Details of any offsite impacts;
- Immediate responses and further actions; and
- Adaptive management changes to avoid repeat of an incident.

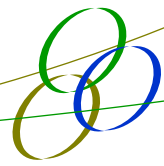
All events/incidents must be closed out to the satisfaction of the Project Environment Officer and the Project Manager. A non-conformance report will be completed for any incident related to non-conformance with this EMS.

Where an incident occurs triggering an exceedance of the criteria and/or performance measures in Schedule 3 of the Development Consent, the Proponent is obligated to ensure that Adaptive Management measures are implemented in accordance with Schedule 5, Condition 3 of the Development Consent.

## 4.8 Emergency Preparedness and Response

An Emergency Response Plan (ERP) will be prepared by the EPC Project Manager prior to the commencement of construction. The ERP will be adapted for the operations phase and will form a component of the Safety Management System required by Schedule 3, Condition 39 of the Development Consent. Emergency response measures shall be developed to manage environmental emergencies, should they occur. The plan will include the process to be followed in the event of an emergency (including evacuation details and muster points) and communication procedures. The plan will include a list of emergency contacts, and maps to muster points and the nearest emergency facilities. The plan will identify the need for any additional specific emergency response plans to be prepared.

All staff will be trained in emergency preparedness and response. Higher risk activities will involve a higher degree of preparedness and training.



## 5 ENVIRONMENTAL MONITORING, CORRECTIVE ACTION AND AUDITS

### 5.1 Environmental Monitoring

Environmental monitoring will be used to measure performance of the EMS and compliance with relevant statutory requirements. The Project Environment Officer will conduct regular internal monitoring during construction to ensure the contractors are complying with their commitments and the relevant Conditions of Approval.

Environmental monitoring checklists will be developed and environmental inspections will include evaluation of performance against objectives and targets identified in the environmental management plans and programs.

All monitoring results and records will be kept for the duration of the project. The results of monitoring may be referred to a specialist consultant, if required.

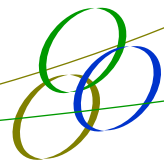
Monitoring and reporting of vegetation management activities along Aarons Pass Road will be reported as outlined within section 6.1.1 of the Biodiversity Management Plan.

### 5.2 Non-Compliances

Any non-compliances will be recorded by the Project Environment Officer and reported to the Project Manager. The Project Environment Officer must ensure compliance with the incident reporting notification requirements as outlined in Section 4.7.

A non-compliance may be identified by substantiated community complaint, site monitoring or independent audit. In the event of a non-compliance, investigation by the Project Environment Officer will occur with a view to identifying the source, reason and implications of the non-compliance. Remedial actions will be developed in consultation with the relevant staff members and may include:

- Amendment of the EMS;
- Additional control measures;
- Staff training;
- Amended procedures; or
- Disciplinary actions.



Where a non-compliance occurs which triggers an exceedance of the criteria and/or performance measures in Schedule 3 of the Development Consent, the Proponent is obligated to ensure that Adaptive Management measures are implemented in accordance with Schedule 5, Condition 3 of the Development Consent.

### 5.3 Incident Register

All environmental incidents will be reported to the Project Environment Officer immediately. The Project Environment Officer will direct immediate remedial actions in consultation with the Project Manager. The Project Environment Officer and Project Manager will determine if any external agencies need to be notified (e.g. Environmental Protection Authority (EPA), Biodiversity Conservation Division of DPIE (BCD), Department of Planning Industry and Environment (DPIE), Council, Roads and Maritime Services (RMS)).

As per Section 4.7, the Project Environment Officer will immediately notify the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment.

All environmental incidents and responsive actions will be recorded in an Incident Register and reported at project management meetings.

All incidents must be closed out to the satisfaction of the Project Environment Officer and the Project Manager.

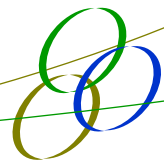
An incident report will be completed for any incident related to non-compliance with the Development Consent, the EMS or any subsequently created management plans, procedures or programs. Within seven (7) days of the date of the incident, the Project Environment Officer shall provide the Secretary and any other relevant agencies with a detailed report on the incident, and such further reports as may be requested.

### 5.4 Corrective and Preventative Action

The Project Environment Officer will review the EMS and subsequent plans prior to construction and then at least every six months from commencement of construction. The review will ensure the controls reflect any changes in legislation or work procedures.

The review will consider if any changes to the EMS are required based on:

- Environmental monitoring results;



- Complaints;
- Incident reports;
- Non-conformances;
- Relevant legislative changes; and
- Changes in construction methodology.

Continual improvement through adaptive management of the EMS will be achieved by ongoing compliance reviews and reporting. Project Environment Officer involvement in regular management meetings and tool-box talks will identify opportunities for improved environmental management in response to work procedures, complaints and non-conformances.

Major changes to the EMS will require approval of the DPIE.

## 5.5 Audits

In accordance with Schedule 5, Condition 8 of the Development Consent, within one (1) year of commencement of construction, and every three (3) years thereafter, unless the Secretary directs otherwise, the CRWF shall commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:

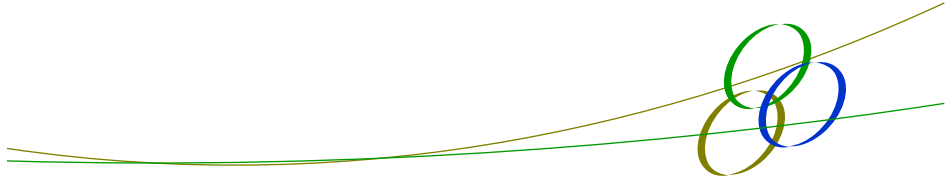
- Be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
- Include consultation with relevant agencies;
- Assess the environmental performance of the development and assess whether it is complying with the requirements of the Development Consent and any relevant Environmental Protection Licences;
- Review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and
- Recommend measures or actions to improve the environmental performance of the development and/or any strategy, plan or program required under these approvals.

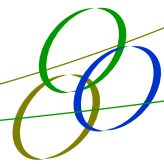
Within three (3) months of commissioning this audit, or as otherwise agreed by the Secretary, CRWF shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

Vegetation management activities along Aarons Pass Road will be compiled as outlined in Section 6.4 of the BMP.

The Independent Environmental Auditor will prepare an audit program in accordance with *AS/NZ ISO 19011:2003 – Guidelines for Quality and/or Environmental Management Systems Auditing*.



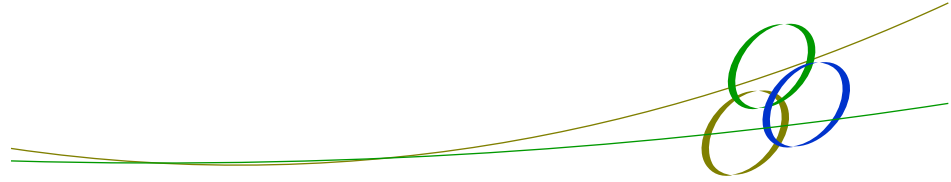




## 6 REVIEW

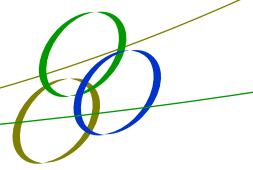
Regular formal site inspections in accordance with programs and plans and daily general observations of the site will be undertaken by the Project Environment Officer. Any problems or risks identified during this process will be assessed and, where required, reported as a non-conformance.

An internal review of the Project EMS will occur every six (6) months to assess performance. The strategy will be revised as necessary. Additional formal reviews will occur following any major design changes in construction or operations.



## 7 REFERENCES

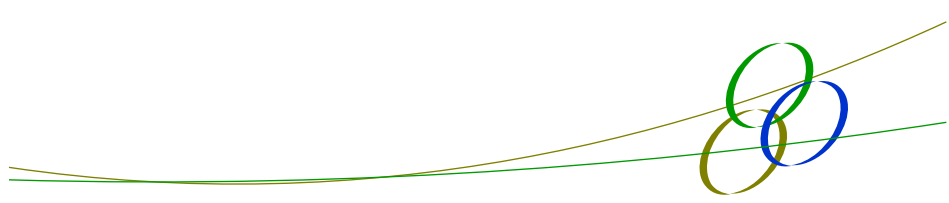
- International Standards Organisation (2015) ISO 14001:2015 Environmental Management accessed at <http://www.iso.org/iso/iso14000>;
- Wind Prospect CWP Pty Ltd (2012) Crudine Ridge Wind Farm – Environmental Assessment; and
- Development Consent SSD-6697 MOD 1.

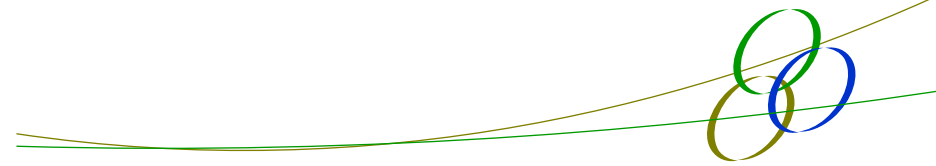


## **Appendix A**

*Copies of Approved Strategies, Plans and Programs*

**Appendix B**  
*Monitoring Plan*

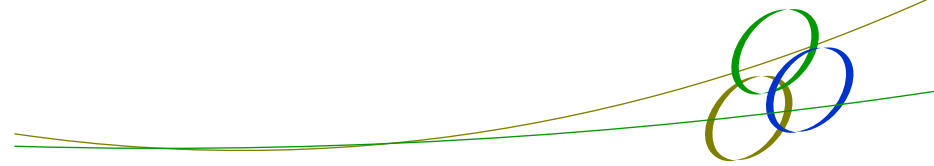




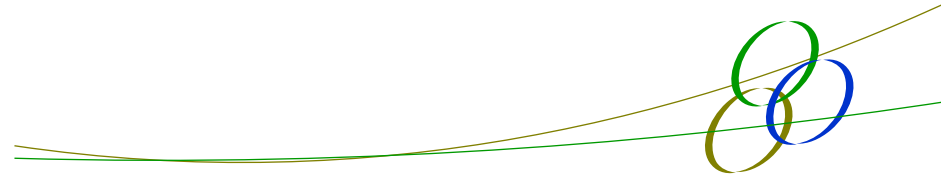
The following table outlines the requirements for monitoring at the Crudine Ridge Wind Farm. Table B-1 includes the source of the requirement, the monitoring requirement, the relevant project stage, the frequency of monitoring and the responsibility for monitoring. This plan will be updated to include relevant monitoring requirements of additional plans and programs, when they are known.

**Table B-1: Monitoring Plan**

Source	Monitoring Requirement	Stage	Frequency	Responsibility
<b>Administration</b>				
S2, C15 [DC]	Ensure all development being carried out onsite is covered by suitable strategies, plans or programs at all times.	Construction	As required	Principal Project Manager
S4, C7 [DC]	Ensure regular reporting of environmental performance is being uploaded to the project website.	Construction	Monthly	Principal Project Manager
<b>Noise</b>				
S2, C14 [DC]	Ensure all plant and equipment used on site or in connection with the development is maintained and operated in a proper and efficient manner.	Construction	As required	EPC Environment Officer
S3, C7 [DC]	Ensure noise generated by any construction or decommissioning is managed in accordance with the best practice requirements outlined in the <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change (DECC), 2009), or its latest version.	Construction and Decommissioning	As required	EPC Environment Officer
S3, C10 [DC]	Ensure that any blasting being carried out during the construction of the development does not exceed the criteria in Table 3 of the Development Consent.	Construction	Per blast	EPC Environment Officer

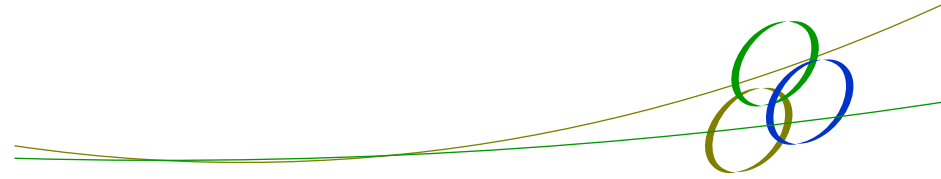


Source	Monitoring Requirement	Stage	Frequency	Responsibility
S3, C11 [DC]	Ensure that noise generated by the operation of wind turbines does not exceed the relevant criteria in Table 4 of the Development Consent at any non-associated residence.	Operation	In accordance with the relevant requirements of the South Australian EPA's <i>Wind Farms – Environmental Noise Guidelines 2009</i> , or latest version, or NSW equivalent.	Project Environment Officer
S3, C12 [DC]	Ensure that any noise generated by the operation of ancillary infrastructure does not exceed 35dB(A) $L_{Aeq}$ at any non-associate residence.	Operation	As required by the Noise Management Plan or Program (to be prepared).	Project Environment Officer
<b>Visual</b>				
S3, C5 [DC]	Ensure shadow flicker from operational wind turbines does not exceed 30 hours per annum at any non-associated residence.	Operation	As required by the Visual Management Plan or Program (to be prepared).	Project Environment Officer
<b>Water Quality</b>				
S3, C17 [DC]	Visual water quality monitoring is to be conducted to ensure the development does not cause any water pollution.	Construction and Operation	Fortnightly	EPC Environment Officer
S3, C18 [DC]	Ensure that all activities are undertaken in accordance with OEH's <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004).	Construction	Monthly	Project Environment Officer and EPC Environmental Officer
S3, C18 [DC]	Ensure that all activities are undertaken in accordance with DPI's guidelines for waterway crossings and fish passage.	Construction	Monthly	Project Environment Officer and EPC Environmental Officer
N/A	Ensure monitoring is completed in accordance with the Erosion and Sediment Control Plan.	Construction	As per the Erosion and Sediment Control Plan.	Project Environment

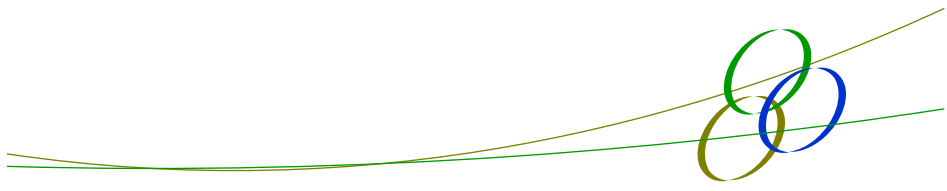


Source	Monitoring Requirement	Stage	Frequency	Responsibility
				Officer and EPC Environmental Officer
<b>Contamination and Hazards</b>				
S3, C18 [DC]	Ensure that storage and handling of all dangerous goods and hazardous materials is undertaken in accordance with AS1940-2004.	Construction	Monthly	EPC Project Environment Officer
N/A	Monitoring in accordance with the Contamination and Waste Management Plan.	Construction	As per the Contamination and Waste Management Plan.	EPC Environment Officer
<b>Biodiversity</b>				
S3, C22 [DC]	Monitoring in accordance with the approved Biodiversity Management Plan.	Construction and Operation	As per Biodiversity Management Plan (to be prepared)	Project Environment Officer
N/A	Monitoring in accordance with the Weed Management Plan.	Construction and Operation	As per the Weed Management Plan	EPC Environment Officer
<b>Traffic and Access</b>				
S3, C32 [DC]	Ensure that all over-dimensional vehicle access to and from the site is via the routes approved under Schedule 3, Condition 32 of the Development Consent.	Construction	Weekly interview of truck escorts during over-dimensional access.	EPC Environment Officer
S3, C33 [DC]	Undertake monitoring of Aarons Pass Road in accordance with the Traffic Management Plan.	Construction	As per the Traffic Management Plan	Project Environment Officer
<b>Waste</b>				
S3, C40 [DC]	Ensure that waste is being classified in accordance with the EPA's <i>Waste Classification Guidelines</i> .	Construction	Weekly monitoring of bins and monthly monitoring of	EPC Environment Officer



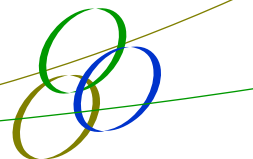


Source	Monitoring Requirement	Stage	Frequency	Responsibility
<b>Emergency Response Plan</b>				
N/A	Ensure monitoring of emergency preparedness occurs in accordance with the Emergency Response Plan.	Construction	In accordance with the Emergency Response Plan.	Project Environment Officer
N/A	Ensure monitoring occurs in accordance with the Bushfire Emergency Plan.	Construction and Operation	In accordance with the Bushfire Emergency Plan	Project Environment Officer



## **Appendix C**

### *Environmental Improvement Notice Template*



## Template Environmental Improvement Notice

Table C-1: Template Environmental Improvement Notice.

Item	Response
Name and role of employee recording the incident:	
Date and time of incident:	
Location of incident:	
Size and type of land area affected (e.g. creek, vegetation, road etc.):	
Type of incident (e.g. spill, fire etc.):	
Details of any offsite impacts:	
Immediate responses and further actions:	
Adaptive management changes to avoid repeat of an incident:	