Boco Rock Wind Farm

Operation Environmental Management Plan

Issue: 27/11/2014

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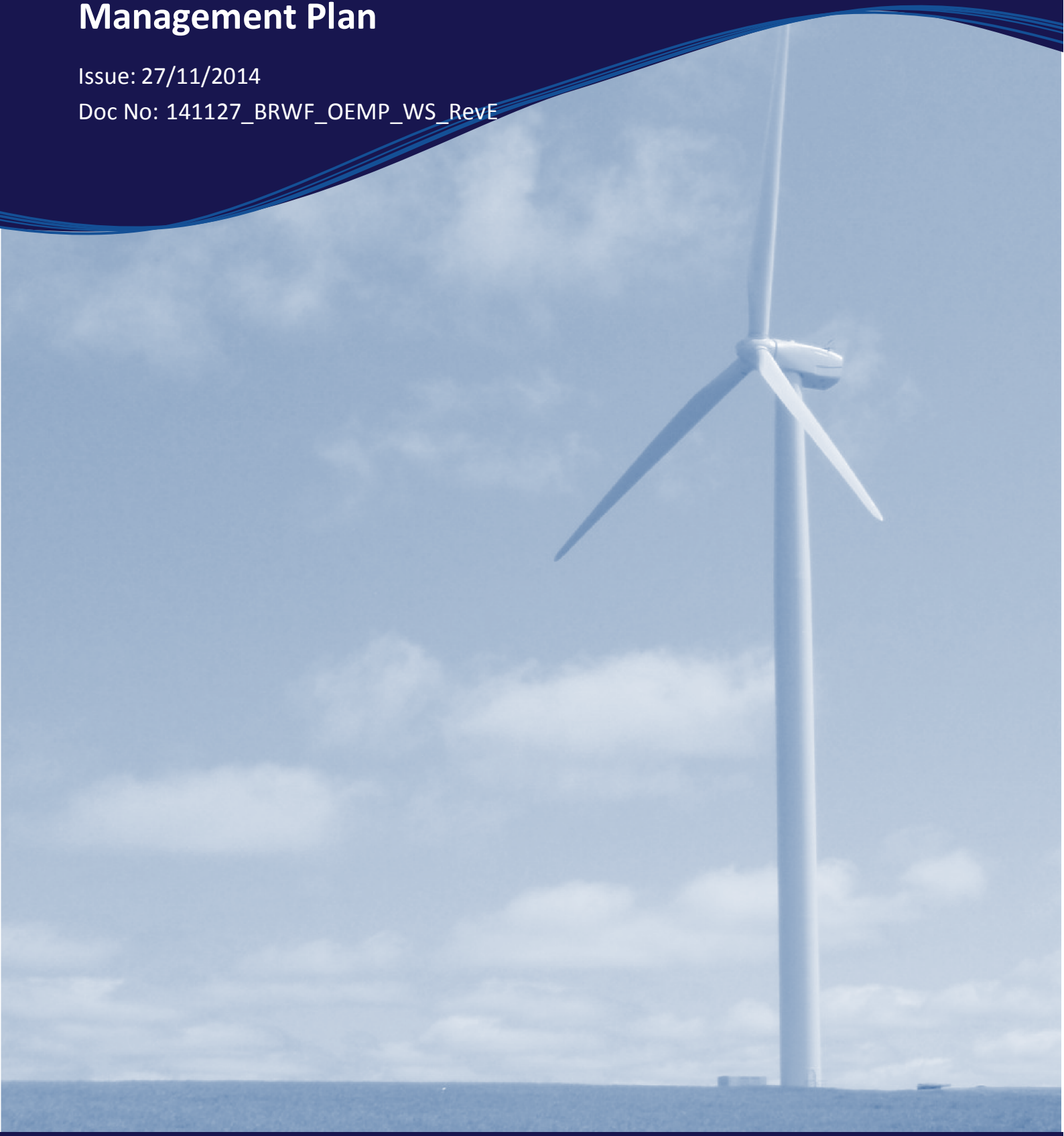

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Revision Control					
Revision	Date	Change Description	Author	Review	Approved
A	26th September 2014	First Issue	Will Stone	E Mounsey	A Oakey
B	11th November 2014	Modifications based on OEH comments	Will Stone	B Jones	B Jones
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This document has been approved on behalf of Boco Rock Wind Farm Pty Ltd by:

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Brett Jones

Operations Manager – Boco Rock Wind Farm

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Table of Contents

Appendices

Abbreviations

AQMP	Air Quality Management Plan
BoP	Balance of Plant
BRWF	Boco Rock Wind Farm Pty Ltd
CEMP	Construction Environment Management Plan
CHMP	Cultural Heritage Management Plan
CIP	Community Information Plan
CoA	Conditions of Approval Issued by DoPE and DoE
CWPR	CWP Renewables, formerly known as Wind Prospect CWP (the Asset Manager)
DoE	The Commonwealth Department of the Environment (formally the Department of Sustainability, Environment, Water, Population and Communities)
DoPE	The NSW Department of Planning and Environment (formally the Department of Planning and Infrastructure)
DPI	The NSW Department of Primary Industries
EE	Essential Energy
EIP	Electromagnetic Interference Plan
EPA	NSW Environmental Protection Agency
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
EPC Contractor	GE Energy and Downer Consortium
ERP	Emergency Response Plan
FFMP	Flora and Fauna Management Plan
GE	GE Energy (WTG Maintenance Contractor)
GED	Grassland Earless Dragon
LRMP	Landscape and Rehabilitation Management Plan
NTG	Natural Temperate Grassland
NOW	NSW Office of Water
NSW	New South Wales
NW Act	Noxious Weeds Act 1993
NVMP	Noise and Vibration Management Plan
OEH	NSW Office of Environment and Heritage (formally the Department of Environment, Climate Change and Water)
OEMP	Operation Environmental Management Plan
POEO Act	Protection of the Environment Operations Act 1997
SLL	Striped Legless Lizard
SWMP	Soil and Water Management Plan
RFS	Rural Fire Service
RMS	Road and Maritime Services
TMP	Traffic Management Plan
TSC Act	Threatened Species Conservation Act 1995
WMP	Waste Management Plan
WMS	Work Method Statement
WONS	Weed of National Significance
WTG	Wind Turbine Generator

Definitions

BRWF Substation	The 33 / 132 kV substation owned by BRWF and located on Site (referred to as Collector Substation in Environmental Assessment)
Project	The entirety of the Boco Rock Wind Farm, including WTG, roads, buildings and electrical infrastructure (including Stage One and any future stages to be built under the Project approvals)
Service Compound	Fenced area containing the Site Office and workshops, located as shown on the Site Plan
Site	Covers the disturbed areas defined by the road, hardstand envelope and substation
Site Office	Offices located as shown on the Site Plan, within the Service Compound
Site Plan	Provided in Appendix A
Stage One	The first stage of the Project consisting 67 WTGs and due to be fully operational in January 2015
Workshop	Maintenance workshops as shown on the Site Plan, within the Service Compound

1 Introduction to the Project

1.1 Background

Boco Rock Wind Farm (the Project) is located on the high altitude plateau of the Monaro high plains, 10km south west of the town ship of Nimmitabel and 30km north of Bombala, New South Wales (NSW) and approximately 40km south of Cooma and 140km south of Canberra. Stage One of the Project consists of 67 x GE1.7-100 wind turbines (with nine turbines de-rated to 1.62 MW) and associated road and electrical infrastructure.

The wind turbines are located on moderate-to-high elevation (900 to 1,100 m above sea level, Australian Height Datum), dominated by the Sherwin's Range running in a north-south direction.

Stage One is expected to achieve full operational status in January 2015 upon completion of construction by a consortium of GE Energy and Downer EDI (the EPC Contractor). A full handover of the facility to the operators, CWP Renewables Pty Ltd (CWPR), will occur at this time.

CWPR is contracted by Boco Rock Wind Farm Pty Ltd (BRWF), the Project owner, to carry out the asset management services for Stage One, including the management of the operational wind farm. CWPR will also manage the operation of the BRWF Substation.

GE Energy (GE) is contracted by BRWF to maintain the wind turbines that comprise Stage One and the BoP Contractor is engaged to maintain the electrical systems (substations, WTG kiosks and underground cabling).

1.2 Project Approvals

1.2.1 State Approval

A planning application for the Project, consisting of an Environmental Assessment, was lodged with the NSW Department of Planning and Environment (DoPE) under Major Project Application 09_0103. The Project was declared a Major Project under section 75B(1)(a) of the Environmental Planning and Assessment Act 1979 (EP&A Act), because it is development of a kind described in Group 8, Clause 24(a) of Schedule 1 of State Environmental Planning Policy (Major Development) 2005.

The Project is classified as *Critical Infrastructure* in accordance with section 75C of the EP&A Act, by virtue of the then Minister's declaration of 11 November 2009 relating to renewable energy projects including Boco Rock Wind Farm (MP09_0103), being development for the purposes of wind farms, which are the subject of a project application lodged pursuant to section 75E or 75M of the EP&A Act.

The Project was approved on the 9th August 2010 by the NSW Minister of Planning, the Hon Tony Kelly MLC, subject to a number of Conditions of Approval (CoA).

1.2.2 Commonwealth Approval

On 18th August 2009, the Federal Minister for the Environment determined that the Project would constitute a *Controlled Action* pursuant to the Environmental Protection and Biodiversity Conservation Act (EPBC Act).

The EPBC Act is the central piece of environmental legislation for the Australian Government and provides the legal framework to protect and manage matters of national environmental significance, while also considering cultural values and society's economic and social needs.

The Project was approved by the Commonwealth Department of the Environment (DoE) on 29th September 2010, subject to a number of CoA.

1.2.3 EPA Regulation

The Protection of the Environment Operations Act 1997 (POEO Act) was amended in 2013 to make the NSW Environment Protection Authority (EPA) the regulatory authority for large-scale wind farms. The changes commenced on 28th June 2013 with transitional provisions applying to existing wind farms and wind farms under construction or about to commence construction, including the Project.

Under the POEO Act, large-scale wind farms are required to hold an Environment Protection Licence (EPL) which is the central means through which the EPA regulates 'scheduled activities'. An EPL was issued to BRWF for Stage One by the EPA on the 10th June 2014, EPL number 20434.

1.3 Project Description

Boco Rock Wind Farm Stage One commenced construction in August 2013 and is due to be complete and fully operational in January 2015. Stage One consists of 67 GE 1.X series WTGs with a hub height of 80 metres above ground level and a rotor diameter of 100 metres. The total nameplate capacity of Stage One is 113.18 MW. A map of Stage One is included in **Appendix A: Site Plan**.

There is potential for additional stages of Boco Rock Wind Farm, utilising the remaining approved WTG locations. This OEMP will be updated and approval sought from DoPE before any additional stage of Boco Rock Wind Farm is operational.

A road network has been constructed to provide for access to each WTG, the BRWF Substation and Service Compound (which consists of the Site Offices and workshops). Each WTG has a hardstand area that was used for the assembly of the wind turbine and is maintained in the event that a major replacement of WTG components is required.

There are 5 separate 33 kV collector circuits to which the WTG are connected via oil filled 690 V/33 kV step up transformers. The collector groups are:

- CG1 – 20 WTG, consisting of two underground 33 kV radial arms, each consisting of 10 WTG. The entire circuit is connected to the BRWF Substation via a 33 kV overhead power line.
- CG2 – 12 WTG, consisting of a radial 33 kV underground circuit with one overhead 33 kV section crossing Avon Lake Road to WTG 36.
- CG3 – 11 WTG, consisting of a radial 33 kV underground circuit.
- CG4 – 12 WTG, consisting of a radial 33 kV underground circuit with an overhead 33 kV crossing at Snowy River Way between WTG 19 and WTG 18.
- CG5 – 12 WTG, consisting of a radial 33 kV underground circuit with an overhead 33 kV crossing at Snowy River Way between WTG 19 and WTG 18. The overhead line is on the same poles as for CG4.

Included with the 33 kV cabling is optic fibre cabling enabling communications between the individual WTG and the wind farm control system. In addition, there is a high speed optic fibre connection to Telstra, connected at WTG 36.

Each of the collector circuits is connected to the BRWF Substation, located in a central part of Stage One. The collector circuits are separately switched and stepped up to 132 kV via two 135 MVA 33/132 kV transformers. The BRWF Substation also includes a 315 kVA auxiliary transformer for provision of low voltage power and a backup 315 kVA diesel generator.

The BRWF Substation is connected to the Steeple Flat substation, located east of BRWF, via a 25km 132 kV single circuit transmission line. Both the Steeple Flat substation and 132 kV transmission line are operated by Essential Energy, the local electricity distributor.

Next to the BRWF Substation is the Service Compound consisting of workshops and offices.

A 35 metre high micro wave tower and a communications cubicle is also installed next to the BRWF Substation for the purpose of communications with Essential Energy.

Two permanent wind monitoring masts, 80 m in height, are located on Site and are used to provide wind resource information to evaluate the performance of the wind farm.

1.4 Project Activities

The primary purpose of the wind farm is the generation of electricity. Each wind turbine will generate electricity at a power level determined by the wind speed and wind direction.

Activities on Site are associated with the ongoing maintenance of the wind turbines, the BRWF Substation and the associated electrical infrastructure. In addition there will be minor maintenance works for the roads, hardstands, drainage systems and fences and gates.

The wind farm will also be operated from the Site Offices in the Service Compound and control room in the BRWF Substation. Site maintenance activity will mostly be limited to light vehicles and the occasional delivery truck for spare parts, other than where major repairs may be undertaken.

A majority of the maintenance activities will be scheduled maintenance of the wind turbines, with light vehicles driving to individual WTGs each day from the Service Compound.

Major repairs, where required, may require larger cranes and trucks to be brought onto Site.

2 Introduction to the OEMP

2.1 Purpose

This Operation Environmental Management Plan (OEMP) sets out the environmental procedures, processes and controls that will be implemented by all operations staff, including contractors, for activities associated with the operation of the Project.

The purpose of this OEMP is to:

1. Provide a management framework that aims to control potential operation impacts on the environment. It includes practical and achievable performance requirements, mitigation strategies, a system of monitoring, reporting and auditing, and a process for implementation of corrective actions;
2. Ensure that all operational staff are made aware of the potential operation impacts on the environment and associated management strategies within which they are expected to conduct their activities;
3. Identify management responsibilities and define reporting requirements;
4. Provide evidence of compliance with relevant legislation, polices, guidelines and requirements to local, State and Commonwealth Authorities; and
5. Provide stakeholders with assurance that the operation of the Project is being managed in an environmentally acceptable manner.

2.2 Environmental Policy

The BRWF Environmental Policy (*BRWF_P_02_Environment Policy*) is a fundamental element of this OEMP and is integral to everything that BRWF and its contractors do. The Environmental Policy is available on the BRWF document management system, displayed in a prominent location in the Service Compound and is a central component of the Site Induction training for all Site Staff.

Boco Rock Wind Farm – Environmental Policy

Boco Rock Wind Farm Pty Ltd is committed to generating safe renewable wind energy in an environmentally responsible manner.

Our Commitments
We will:

- *Comply with relevant environmental laws, regulations and industry codes of practice;*
- *Establish, measure, report and review environmental objectives, key performance indicators and targets;*
- *Maintain an environmental management system that conforms to our Environmental Protection Licence and conditions of approval;*
- *Control the impact of our operations on the environment and community through effective planning and risk management strategies;*
- *Communicate pertinent environmental responsibilities and obligations to employees, contractors, consultants and visitors and provide appropriate education;*

- *Establish and maintain a program for the continual improvement of the environmental management system and environmental performance;*
- *Use resources and energy efficiently, minimise waste, emissions and pollution from our activities; and*
- *Engage consult and communicate with employees, contractors, visitors and the community to build a shared commitment to ongoing environmental improvement.*

2.3 Compliance

The provision of the OEMP is in accordance with **Condition 6.4** of the NSW Minister for Planning's CoA. The OEMP addresses the following, where relevant to the operation of the Project:

1. CoA issued by NSW Minister for Planning under the EP&A Act;
2. CoA issued by the Federal Minister for Environment under the EPBC Act;
3. Requirements within the EPL issued by the NSW EPA under the POEO Act; and
4. Commitments contained within the Statement of Commitments which originally formed part of the Environmental Assessment and development application for the Project.

A full list of the CoA, EPL requirements and commitments relevant to the operations phase of the Project can be found in **Appendix B: Operational Conditions of Approval**, including a table detailing where each item has been addressed in the OEMP.

The OEMP has been prepared in line with *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004) and is consistent with the Construction Environmental Management Plan (CEMP) and associated sub-plans for the Project.

A full list of Environmental Legislation and Regulatory Requirements is provided in **Appendix C**, detailing the applicability of each requirement to the Project.

2.4 Structure

After introducing the Project and the OEMP, the OEMP provides information on the **Responsibilities** of various parties during the operation of the Project. **Management Systems** are then discussed with information provided on documentation systems, environmental policy, risk management, compliance management, inspections, audits and OEMP reviews.

The remainder of the OEMP comprise 11 sub-plans, as shown in the table below.

OEMP Chapter	Plan
5	Soil and Water Management Plan
6	Flora and Fauna Management Plan (including the Reptile and Weed Management Plans and linked to the Bird and Bat Adaptive Management Plan in **Appendix H**)
7	Landscape and Rehabilitation Management Plan
8	Cultural Heritage Management Plan
9	Air Quality Management Plan

OEMP Chapter	Plan
10	Traffic Management Plan
11	Community Information Plan
12	Emergency Response Plan
13	Noise and Vibration Management Plan
14	Waste Management Plan
15	Electromagnetic Interference Plan

3 Organisational Structure and Responsibilities

The Project approval has been granted for Boco Rock Wind farm Pty Ltd (BRWF), the proponent with ultimate responsibility for the Project implementation. BRWF is 100% owned by the Electricity Generating Public Company of Thailand (EGCO) via holding companies.

CWP Renewables Pty Ltd (CWPR) has been engaged to manage and operate Stage One on behalf of BRWF with the WTG maintenance services subcontracted by BRWF to GE Energy (GE) for the initial 10 years of operations. A long term contract is also awarded to the BoP Contractor to maintain the electrical systems (substations, WTG kiosks and underground cabling).

CWPR's responsibilities are to operate Stage One according to the Planning Approval conditions and to the extent of its contract with BRWF.

The organisational chart in **Figure 1** describes the environmental management hierarchy for the operation of the Project.

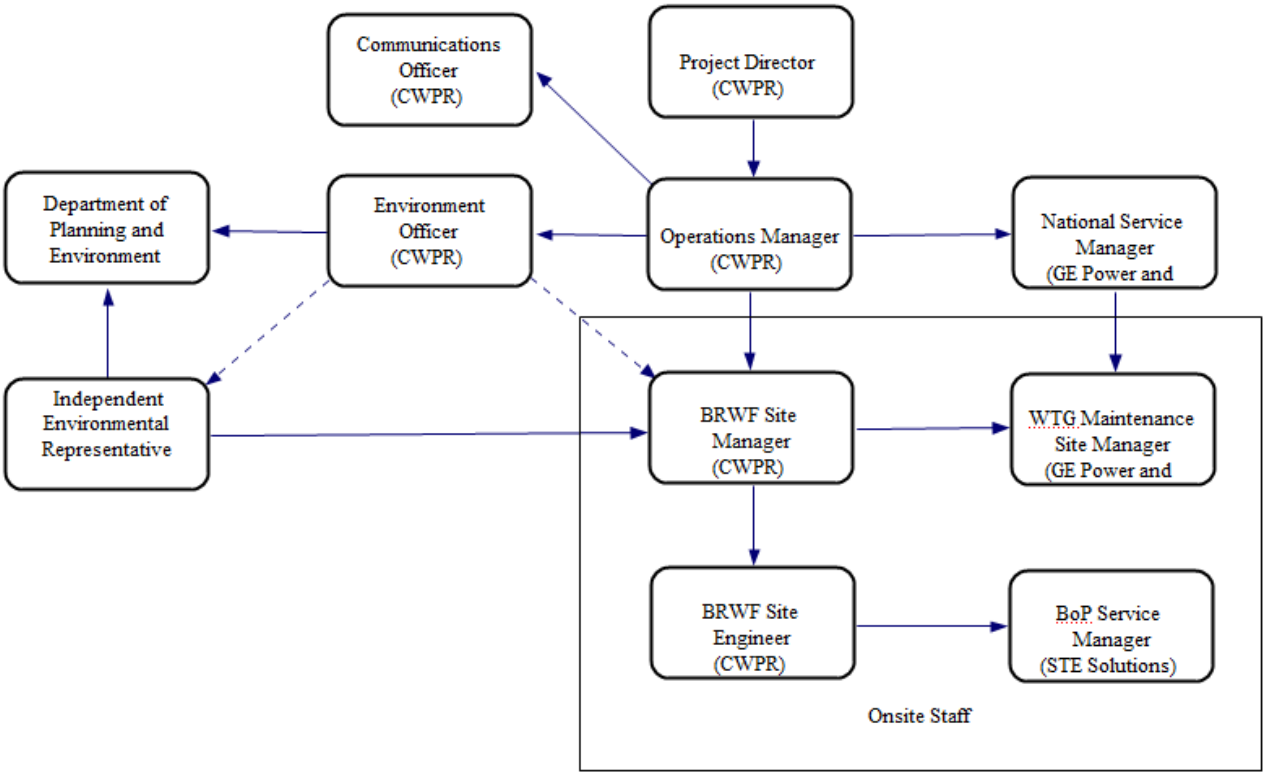

Figure 1 – Organisational chart

3.1 Operations Manager

CWPR has assigned the Operations Manager to have primary responsibility for the overall management of the Project. In the context of this OEMP, this person will have primary responsibility for:

1. Ensuring that environmental audits, both internal and external, and management reviews are undertaken as defined in this OEMP;
2. Ensuring that corrective actions are undertaken;
3. Implementation of environmental practices as defined in the OEMP;
4. Ensuring that the Project risk register is established, reviewed and maintained;
5. Ensuring that the required training for all Project personnel is undertaken;
6. Promoting the reporting of incidents, near misses, hazards, non-conformances, system improvements and customer complaints and ensuring that corrective actions are implemented in a timely manner; and
7. Reporting the Project environmental status and environmental incidents to EGCO.

3.2 Environment Officer

CWPR has assigned the Environment Officer to have primary responsibility for environmental matters. This person will be responsible for:

1. Ensuring compliance of environmental obligations set out in the Project Approvals and the OEMP;
2. Implementation of environmental practices as defined in the OEMP.
3. Management of the implementation of internal and external audits and participation in reviews and implementation of corrective actions;
4. Initiation and management of environmental reviews with the Environmental Representative (ER);
5. Ensuring that environmental responsibilities and accountabilities have been defined and communicated to contractors engaged within their area/s of control;
6. Liaison with relevant regulatory authorities and stakeholders as required;
7. Regular monitoring of environmental performance & compliance;
8. Ensuring that the OEMP is reviewed, maintained and any changes communicated to Site personnel over the life of the Project;
9. Support of the BRWF Site Manager to ensure environmental works are carried out in accordance with the OEMP;
10. Support of Site Staff;
11. Assistance in the investigation of any incidents; and
12. Consultation, as necessary, with BRWF on environmental matters.

3.3 BRWF Site Manager

CWPR has assigned the BRWF Site Manager to have primary responsibility for the day-to-day management of the Site, including coordinating the execution of all services in accordance with the requirements and policies established by BRWF. The BRWF Site Manager is responsible for implementing the OEMP at the Site. Specific responsibilities include:

1. Day to day management / compliance with the Project environmental requirements and polices;
2. Implementation of environmental practices as defined in the OEMP;
3. Reporting , where required, to the BRWF Manager;
4. Overseeing Site operations in compliance with the OEMP and ensuring environmental records are maintained, and available upon request to Government agencies;

5. Reviewing and participating in environmental incident investigations and nominated corrective measures;
6. Attending relevant environmental meetings, consultative forums and audits pertaining to environmental matters;
7. Ensuring that all persons (CWPR and contractors) working on the Site are aware of environmental issues through regular staff meetings and that environmental management is a consistent agenda item;
8. Ensuring that all environmental tasks and checks are undertaken in a timely manner;
9. Ensuring that all persons (CWPR and contractors) within their area/s of control receive appropriate training to perform their work in a safe, legal and competent manner including Site Inductions;
10. Reviewing Project Work Method Statements (WMSs) for adequacy and approving / rejecting the supplied WMSs prior to use on Site;
11. Ensuring that safe equipment and plant is provided and maintained;
12. Ensuring that any identified Hazardous Substances and/or Dangerous Goods are managed; and
13. Ensuring that all contractors operating on Site are operating within BRWF environmental processes.

3.4 BRWF Site Engineer

CWPR has assigned the BRWF Site Engineer to support the BRWF Site Manager in the execution of their responsibilities for environmental management on Site. Specific responsibilities of the BRWF Site Engineer include:

1. Providing a visible commitment to environmental procedures & instruction;
2. Maintenance of environmental records defined within this OEMP;
3. Reporting, where required, to the BRWF Site Manager on environmental issues;
4. Providing technical and process support to the BRWF Site Manager in the implementation of environmental strategies for the Project;
5. Assisting the BRWF Site Manager in Site Inductions and training of all Site personnel, including contractors and visitors;
6. Assisting in the resolution and / or facilitating solutions to Site environmental issues and problems; and
7. Carrying out environmental inspections.

3.5 Communications Officer

The Communications Officer is responsible for enacting parts of the Community Information Plan (see *Section 11*). Responsibilities of the Communications Officer include:

1. Maintaining the public web site with information on the Project;
2. Emails, letters and newsletters to the local community regarding major activities on Site;
3. Organisation of the Community Consultative Committee meetings, including logistic and administrative support;
4. Working with council representatives and community members on the allocation of the community fund;
5. Drafting and coordination of media releases related to the Project; and
6. Representation of BRWF at local events such as rural shows and sporting events.

3.6 Environmental Representative

The Environmental Representative is an independent consultant who is BRWF's principal point of advice in relation to the environmental performance of the Project. This is in line with **Condition 6.1** of the State CoA. Responsibilities of the Environmental Representative include:

1. Overseeing the implementation of all environmental management plans and monitoring programs required under the State planning approval, and advise BRWF upon the achievement of these plans/programs;
2. Considering and advising BRWF on its compliance obligations against all matters specified in the conditions of the State planning approval, the Statement of Commitments, EPBC requirements and all other licences and approvals related to the environmental performance and impacts of the Project;
3. Having the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur; and
4. Reporting back to State and Commonwealth Authorities.

3.7 Site Staff

In addition to CWPR employees on the Site, other staff working on the Site include the employees and sub contractors of the WTG Maintenance Contractor, who have responsibility for the maintenance of the WTG and employees and sub contractors of the Balance of Plant (BoP) Contractor, who has responsibility for maintenance of the electrical balance of plant. As each of these parties are operating under long term and pre-established contracts, they are collectively considered to all be Site Staff. Site Staff responsibilities will include:

1. Immediately ceasing, and reporting, any workplace activity (including that of other persons) which presents an immediate risk to the environment;
2. Where possible, taking immediate steps to control identified hazards in the workplace;
3. Working in a safe manner without risk to themselves, others or the environment;
4. Complying with the OEMP, including all WMSs;
5. Reporting any faulty plant or equipment to the BRWF Site Manager immediately;
6. Complying with Site rules;
7. Complying with emergency and evacuation procedures;
8. Reporting all incidents, near misses and hazards to the BRWF Site Manager immediately;
9. Ensuring full compliance with instruction & training provided by CWPR or their own employer;
10. Participation in toolbox meetings & training programs relating to environment;
11. Participation in incident investigations, risk assessments, inspections and audits as required by CWPR;
12. Use of equipment provided to reduce environmental hazards or emissions; and
13. Contributing to the overall goal for zero environmental impacts and incidents by making suggestions for improvement where identified.

3.8 Subcontractors and Consultants

BRWF will employ a small local pool of subcontractors for minor maintenance works, primarily civil contractors and consultants engaged on technical and compliance matters. Where engaged, these subcontractors will be required to:

1. Undertake Site Inductions and comply with all aspects of this OEMP and all associated compliance documents, permits, procedures and standards;
2. Conduct risk assessments and provide WMSs to CWPR and obtain approval prior to commencement of works;
3. Identify all hazardous substances (contained within MSDS) proposed for use on the Site;
4. Provide other environmental related data as part of the WMS process as defined by this OEMP;
5. Attend Site meetings when requested;
6. Report, investigate and implement corrective measures arising from associated environmental incidents associated with their work; and
7. Attend environmental training and awareness sessions where relevant to their work;

3.9 Visitors

It is expected that all visitors to the Site will be aware of the primary environmental obligations. Visitors will undergo a Site Induction (a simpler version than the induction given to Site Staff, subcontractors and consultants) covering both environmental requirements and safety and be required to acknowledge their understanding of the induction by signing the Site Attendance Log Book.

4 Management Systems

4.1 Information Management

BRWF maintains a hosted dynamic information and document management system. The system is a hosted web based service, specifically tailored as a central repository of all BRWF management systems, forms, registers, processes, work instructions, policies and records including any associated with this OEMP.

A Project Calendar is maintained on the document management system to record and alert staff to all critical dates for compliance, inspections, audits and reviews.

All documents will be re-visioned and controlled as per the *BRWF Operations Management Manual* or as per specific work instructions. Site Staff responsible for record keeping shall ensure records are complete, legible, generated on approved forms, identifiable, traceable, signed where required and indexed and stored both electronically in the BRWF document management system and in the Project filing system.

Documents relevant to this OEMP are referred to in the relevant sections and sub plans. **Appendix D: Management Documents** contains a full list of all documents relevant to the OEMP with a matrix indicating which documents relate to each section.

4.2 Risk Management

The Project maintains a project risk management assessment procedure. Project risks are reviewed at least annually or as required based on events, legislative changes and project updates. . Risks that relate to environmental issues are detailed in this OEMP. **Appendix E** provides information on the risk evaluation methods used for the Project.

4.3 Compliance Management

The Project requires ongoing compliance with the CoA imposed by both State and Commonwealth authorities, the EPL requirements, the Statement of Commitments and any other legislations, rules and regulations. All requirements, relevant to operations can be found in **Appendix B: Operational Conditions of Approval**. A full list of Environmental Legislation and Regulatory Requirements is provided in **Appendix C: Legal and Regulatory Requirements**.

Compliance with planning conditions is tracked through an electronic compliance management system. The system allows for tracking of compliance during distinct phases of the Project and a summary report can also be prepared using the system.

A compliance register (*BRWF_R_21_Compliance Register*) is maintained which lists all the relevant legislation and regulations that are applicable to the Site and where applicable, is addressed by the OEMP.

The compliance register is reviewed annually as part of an internal management review process.

4.4 EPL Reporting Requirements

As a requirement of the EPL, BRWF must supply an *Annual Return* to the EPA each year. The Annual Return comprises:

a) a Statement of Compliance; and
b) a Monitoring and Complaints Summary.

BRWF must supply a *Monitoring Report* along with the Annual Return which contains:

a) an analysis and interpretation of monitoring results; and
b) actions to correct identified adverse trends.

Annual Return and Monitoring Report due dates are noted in the Project Calender.

4.5 Training and Environmental Awareness

All Site Staff, subcontractors and consultants will be required to undergo a comprehensive Site Induction which will include information on standard environmental practices on Site. A Site Induction Package (*BRWF_TP_01_Site Inductions*) will contain a detailed slide presentation which will include information on:

- An outline of the OEMP structure;
- Key environmental risks and requirements;
- The roles and responsibilities of Site Staff, subcontractors and consultants in relation to environmental management; and
- An outline of the process for recording Environmental Incidents.

There will be an assessment at the end of the Site Induction to ensure the key items are understood.

In addition to the Site Induction, training will be provided to all Site Staff to ensure that they are aware of environmental issues and, where required, are trained in specific areas related to their work, including proper use of tools and equipment.

4.6 Environmental Incidents

The incident reporting protocol *BRWF_PR01_Incident Reporting* is to be followed in the event of an environmental incident. The procedure is accessible to all Site Staff on the BRWF document management system.

1. The BRWF Site Manager or delegate is to be informed as soon as reasonably possible of an environmental incident occurring via phone or email.
2. Serious environmental incidents are to be reported to the BRWF Manager and Environment Officer in addition to the BRWF Site Manager. The Environment Officer will determine the need for and timing of any regulatory reporting required, and undertake such reporting.
3. Serious environmental incidents are to be reported to Boco Rock Wind Farm Pty Ltd within 24 hours via email.

4. Incidents causing or threatening material harm to the environment are to be reported to the relevant authorities immediately by the Environment Officer in accordance with the requirements of Part 5.7 of the POEO Act (**R2.1** of the EPL).
5. Written details on the above notification are to be provided to the EPA within 7 days of the date on which the incident occurred (**R2.2** of the EPL).

An environment incidents register is maintained on the BRWF document management system; *BRWF_R_06 Environmental Incident Register*. Incident forms can be completed from this register, automatically logging an incident. All Site Staff are required to use this system to report incidents via this register and are provided appropriate access. This is in addition to any reporting requirements for their own employers.

The Environmental Incident Register is designed to record a broad range of environmental incidents. It will also record the action that is taken to manage them, based on the various management strategies outlined in this OEMP and associated sub plans.

The BRWF Site Manager and Environment Officer maintain an automated watch on the register for new or changed entries.

Where applicable to the incident, emergency response plans for hazardous substance spills, major erosion, and bushfire as defined in this OEMP will be engaged.

Where an incident occurs that is likely to cause significant off Site impacts on people or the environment, the relevant Local Authorities, State and Commonwealth authorities will be notified.

- EPA: Ring 131 555 with written details within 7 days

4.7 Complaints

Complaints can be received from a number of sources including:

- via the Project website http://bocorockwindfarm.com.au/have_your_say;
- via the complaints 24/7 hotline (see website for number);
- via email (see website for address);
- direct to the BRWF Site Manager using published and displayed phone numbers; or
- by personal contact with Site Staff.

An advertisement will be placed in local newspapers (such as Cooma-Monaro Express, Monaro Post and the Bombala Times,) every year during the operations phase to communicate the website address, email, postal address and telephone number for complaints. The same information will also be provided on signage, clearly visible on public roads, nearest to the entries of both the northern and southern clusters of turbines. The locations of the Stage One signage are shown in the table below.

Location	Signage
North East	Dummy Lane off Springfield Road, at main Site entry

South West	Avon Lake Road and the Snowy River Way, at main Site entry

All complaints, including environmental complaints, are recorded on *BRWF_R_03_Complaints Register.* This register is maintained as an online database and allows for the upload of evidence of the complaint received and any actions taken in response. Fields in the register include:

- Date and time of complaint;
- Method of contact (i.e. phone, mail, email, website);
- Complainant name and contact details;
- Nature of complaint;
- Details of complaint;
- Person receiving complaint;
- Action taken;
- Is this issue considered closed; and
- Signoff for closure.

When complaints are received and relate to environmental issues, *BRWF_PR_02_Complaints Procedure* will be followed, as summarised here:

1. Complaints are registered on *BRWF_R_03_Complaints Register*;
2. The BRWF Site Manager is notified and if of a serious nature will inform the Environment Officer, Operations Manager and EGCO within 24 hours and log the matter as an incident;
3. The complaint is responded to by an appropriate staff member which may include modification of operational techniques to avoid recurrence or to minimise ongoing adverse impacts;
4. The complainant will be modified of the actions taken;
5. The outcome of the complaint is documented on the register and appropriate staff members will be notified of the outcome by email; and
6. Activity will continue to be modified, if required.

4.8 Inspections

The BRWF Site Manager will regularly review the environmental performance of service activities and compliance with the OEMP.

Regular inspections of Site activities and environmental performance will be undertaken by the Environment Officer, the BRWF Site Manager and the managers of both the WTG Maintenance Contractor and the BoP Contractor. Site inspections will be recorded on *BRWF_F_01_Inspection Check List*.

BRWF_F_01_Inspection Check List covers a wide range of items. Those relevant to environmental management are:

- Erosion, sediment controls and containment systems (eg. oil separators in substation);
- Weeds and carcasses around road sides, hardstands and culverts;
- Weed seeds on vehicles;
- Rehabilitated grasses and vegetation;
- General housekeeping and segregation of waste.

The frequency of inspections varies from monthly to annual, depending on the item being inspected. This information is provided in the *Monitoring and Inspections* section of each sub plan.

Completed checklists will be recorded and stored appropriately. Any item identified during an inspection that requires investigation will be managed through the incident management system.

The effectiveness of the inspections will be reviewed as part of the BRWF internal management review and where necessary, the level, scope and timing of inspections will be improved through the life of the Project to achieve the required environmental performance.

4.9 Independent Audit

The Project will be subject to an independent audit within two years of the commencement of operation of Stage One, and then as may be directed by DoPE or DoE. This is in accordance with **Condition 4.1** of the State CoA and **Condition 10** of the Commonwealth CoA.

Audits will be undertaken by an independent person or team commissioned by BRWF.

Audits will be conducted in accordance with *ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing*.

Audits will:

- Assess compliance with the requirements of the CoA, the Project Statement of Commitments, the EPL and any other licenses and approvals that apply to the Project;
- Review the effectiveness of the environmental management of the Project; and
- Review the adequacy of BRWF's response to environmental incidents and complaints made about the Project.

The audit report will be provided to DoPE and DoE and a summary of audit results published on the Boco Rock Wind Farm public website.

4.10 Corrective Actions

Where matters of non conformance with the Project planning approval or matters of environmental harm are identified through either inspections, internal audits, external audits or complaints, and it is established through investigation that corrective actions are required to be undertaken, then the item is entered on *BRWF_R_09_Corrective Action Register* and a Corrective Action Request (CAR) is generated, in line with the procedure for undertaking corrective actions.

This will ensure that the CAR is tracked and implemented. The CAR should refer to the original complaint, audit or inspection identifier.

Corrective actions are completed by the persons delegated and follow up of CARs is responsibility of the BRWF Site Manager. All CARs are recorded on *BRWF_R_09_Corrective Action Register* and where related to environmental issues are separately identified.

4.11 OEMP review

The OEMP will be formally reviewed within three years of the commencement of operation and at least every three years after that. The review will ensure that the OEMP is up to date and that any changes to procedures and corrective actions resulting from incidents, complaints, inspections and audits are taken into account.

The OEMP will be amended, as required, based on the outcomes of the review. All changes made to the OEMP will be controlled and it will be the responsibility of the BRWF Site Manager or delegate to ensure that any changes to the OEMP are communicated to Site Staff.

The review will be done by the review team comprising the CWPR Director, Operations Manager, BRWF Site Manager, Environment Officer and, where relevant to their specific work areas, the managers of both the WTG Maintenance Contractor and the BoP Contractor. The management review process will consider the performance against the OEMP with respect to incident trends and compliance with internal and external environmental standards.

DoPE will be provided with a copy of any amended OEMP and the latest version of the OEMP will be uploaded to the Project website. It is acknowledged that minor changes to the OEMP may occur on a regular basis during operation. As such, only significant or substantial version changes will be submitted to DoPE for information purposes.

For significant changes to the OEMP, advice will be sought on whether these changes require approval from DoPE and if this is the case, DoPE and OEH will be consulted.

5 Soil and Water Management Plan

5.1 Background

The purpose of this Soil and Water Management Plan (SWMP) is to identify erosion, sedimentation and water quality issues potentially arising from the Site operational activities, and to minimise the adverse impacts on local waterways and surrounding land. The risks associated with erosion, sedimentation and water quality were high during the construction phase and will remain moderate through the first two years of operation, while the rehabilitation of the disturbed land is established. Once the rehabilitation has been established, the risks are considered low.

In addition, through the operational phase there may be requirements for minor civil works and maintenance of existing drainage to which soil and water management is relevant. The ongoing management of hydrocarbons (fuel and oils) and discharged waste is relevant where the potential exists for spillage into the natural environment.

5.1.1 Applicable Legislation and Guidelines

- Section 120 of the *Protection of the Environment Operations Act 1997*
- *Storing and Handling of liquids: Environment Protection, Participants Manual: Appendix: Technical Considerations* (DECC,2007)

5.1.2 Soil Types

The dominant underlying geology is fine grained tertiary basalt occurring on the crests/ridges and upper slopes within the Site. Lower lying areas have transported clays from the surrounding basalts. The banks of the MacLaughlin River are made up of deposits of gravels, sands, silts and clays.

The soil landscapes of the Cooma 1:100,000 map sheet and DECC (NSW Department of Environment and Climate Change, superseded by OEH) unpublished data indicates five soil units occur at the Site - Brothers, Upper Cooma Creek, Maneroo, Maneroo variant and Quidong.

- Brothers occur within all areas of the Site. The soil is a Dermosol and is formed on slopes of undulating to rolling hills and forms shallow to moderately deep profiles over basalt parent material. It is generally stable as long as there is sufficient ground cover or non-concentrated surface flows.
- Upper Cooma Creek occurs in the north eastern part of Stage One. The soil is a Vertosol and forms in valley flats with deep profiles. It is generally stable, except when the soil is disturbed and exposed. The soil can also have seasonal water logging and inundation.
- Maneroo occurs in the south western part of Stage One. The soil is a Dermosol and forms on the crests and upper slopes of the undulating basalt hills. The profile is generally shallow profiles, however deep profiles can form in localised pockets. It is generally stable as long as there is sufficient ground cover or non-concentrated surface flows.
- Quidong occurs along a limited section of proposed roads for the Project. The soil is a Rudosol and occupies the lower slopes and valley flats associated with the MacLaughlin River. It has low-moderate erodibility. As the area experiences low levels of rainfall, there will be minimal impacts

from water erosion. However, any exposed soil will be at a higher susceptibility to water or wind erosion.

5.1.3 Potential Impacts

The road and hardstand network has been constructed throughout the Site. The traffic on these areas will be primarily light vehicles and some minor wear and tear of these surfaces is expected. Appropriate erosion and sediment control systems have been included during construction to manage and prevent any movement of road materials from the Site area into the natural environment. These systems need to continue to work during rainfall events.

New excavation work, such as for maintenance of cable repairs, provision of additional drainage and erosion controls and major road repairs are possible but are expected to occur very infrequently.

Maintenance activities on the Site for both the wind turbines and the BRWF Substation will require the use of hazardous materials, primarily oils, solvents and paints.

There are diesel and petrol backup generators on Site which will require the use of fuels. Work may also need to be undertaken where no power is available, requiring generators. All these systems will require refuelling.

5.1.4 Management Principles

The key principles of the SWMP are to ensure that erosion, sediment controls, and containment systems are maintained to:

- Control water movement around and through the Site;
- Minimise soil erosion;
- Stabilise disturbed areas;
- Maximise sediment retention on Site; and
- Prevent the discharge of pollutants and contaminants into the natural water courses and native grasslands.

5.2 Risks

Risk Description	Cause	Potential Impacts	Likelihood	Consequence	Risk Score	Mitigation Strategies
Disturbance of sensitive areas	Access to non sensitive areas	Disturbance of soils	Rare	Moderate	Low	Controlled access only to sensitive areas using WMS process
Sediment runoff	Failure of installed erosion and sediment controls or new excavation work undertaken	Destruction of native grass lands, exposure of soils and topsoil stripping, localised flooding, modification of local water quality.	Unlikely	Moderate	Medium	Ongoing inspection and maintenance

Vegetation clearing	Need for maintenance works off the Site	Destruction of native grass lands, exposure of soils and topsoil stripping	Rare	Moderate	Low	WMS to identify preventative measures required for access to these areas
Clean water run-off from substation and service buildings	Overflow from water tanks and roof stormwater runoff	Exposure of soils and topsoil stripping, localised flooding	Rare	Negligible	Low	Ensure water is flowing into established drainage systems
Release of contaminated fluids (oils, solvents, fuels)	Leakage or washout during storage, use or disposal of hazardous material used on Site	Pollution of grass lands and water ways, aquatics, ground water, flora and fauna	Unlikely	Moderate	Medium	Maintenance of storage systems and rules and processes for the proper use and disposal, including training.

5.3 Management Strategies

Management Actions	Strategies	Responsibilities
Environmental incident reporting	Where an environmental impact is observed, including soil erosion, sediment run off or release of hazardous materials regardless of severity by any Site Staff, contractor or by external reporting or complaint, that an *Environmental Incident Report* is lodged and investigated. Records to be maintained according to the requirements of the EPL, part 4. M1 and M2.	Environment Officer
Soil and Water		
Off Site access	A general requirement to not allow access to undisturbed areas. If access is required, a specific WMS including an assessment of environmental impacts will be completed. This requirement is communicated via the Site Induction Package.	BRWF Site Manager
Maintenance of physical erosions controls installed during construction	Monthly inspection for damage to controls and arrange repairs to the controls by the EPC Contractor (for the first two years)	BRWF Site Manager
Maintenance of rehabilitation within drains and swales	Monthly inspection for failure of grass to reseed as per the rehabilitations plans. Arrange further reseeding as required with the EPC Contractor (for the first two years).	BRWF Site Manager
Maintenance of temporary erosion and sediment controls	Where temporary erosion controls remain after construction, regular inspection and maintenance of controls by the EPC Contractor until removed as per the rehabilitation plan.	BRWF Site Manager
Cleaning out of sediment traps after significant rainfall events > 30mm per 24 hours	Site inspections after a significant rainfall event. Maintain a log of where cleanout is required to identify “hotspots” for future inspections.	BRWF Site Manager

Checks to ensure erosion and sediment controls are achieving design function	Six monthly checks for first two years and every two years thereafter to ensure that controls are reducing water velocities and soil is not being transported.	Environment Officer
Vegetation clearing	Policy to minimise any requirement for clearing. If clearing is absolutely essential, WMS required including to undertake an assessment of potential impacts and implement any temporary erosion control required.	BRWF Site Manager
Hazardous Materials		
Identification of hazardous materials	Maintenance of a *Hazardous Materials Register* on Site, accessible by all Site Staff including provision of *Material Safety Data Sheets (MSDS)* and a Site Map showing the location of hazardous materials and allowable storage quantities. The register will also show who is authorised to access and use the materials.	BRWF Site Manager
Storage of hazardous material	When not being used, all hazardous materials must be stored in Australian Standard storage containers and stored according to AS 1940-2004. All storage is to be in the designated locations, secure and only accessible by authorised personnel. All storage containers will be clearly marked, and where indicated by the MSDA, stored separately from other hazardous materials.	BRWF Site Manager
Use of hazardous materials	All personnel using hazardous materials must have appropriate training in the handling and use of the materials. Training records will be maintained with the *Hazardous Materials Register*. Where hazardous materials are to be used for specific tasks, pre-agreed work procedures or a WMS must include relevant instructions for the use of the materials. Included in work instructions will be requirements to ensure that materials are kept away from water sources and off Site areas, use bunds and drip trays appropriate to the volumes in use, using the proper equipment to decant and transfer materials and remove from store the amounts that are required for use.	BRWF Site Manager
Disposal of hazardous material	All hazardous materials requiring disposal shall be disposed of according to the regulatory requirements and requirements of the MSDS. Where licensed contractors are required, they will be used with a record of disposal maintained. There will be NO dumping or disposal of materials other than to licensed waste disposal facilities.	BRWF Site Manager
Emergency response	The emergency response plan for the Site will include instructions on how to deal with a significant spill of hazardous materials. Appropriate spill kits will be maintained in the workshops, the substation and service vehicles to manage potential minor spills, relevant to the activity and material being used. Spill kits will undergo regular maintenance checks.	BRWF Site Manager

Vehicle refuelling and maintenance	Vehicle refuelling or maintenance on Site is to be avoided where possible. Other than emergency situations, a WMS will be created prior to vehicle refuelling or maintenance.	BRWF Site Manager
Generator refuelling	Refuelling of the substation backup generator and the telecommunication backup generator is carried out under established procedures including ensuring spill kits are available and the supervision of a trained person. Refuelling records are maintained.	BRWF Site Manager
Use of paints on Site	It is illegal to dispose of liquid paints into the environment. No wash out of paints is to occur on Site. All painting materials are to be bagged and removed from Site for disposal or cleanup in an appropriate facility. Suitable bags and containers to be available prior to starting work for disposal. Rags available for mopping up spills are to be disposed of appropriately. Unused paint is stored in suitable containers and re-stored in the designated locations.	BRWF Site Manager
Main transformer oil release	Oil released from the main transformer is released into bunds and drains to secondary oil containment. Removal of oil will be via an approved method. Procedure established to manage the release event and removal oil from Site using a licensed operator	BRWF Site Manager
Sewerage system	The Site has a sewerage system installed with an absorption trench. Periodic removal of solids will be required. Procedure established to manage removal of solid waste using a licensed contractor.	BRWF Site Manager

5.4 Management Controls

Control	Purpose	Reference
Incident Reporting and Investigation	Report environmental incidents and subsequent investigations	BRWF_R_06 Environmental Incidents Register
Site Induction Package	Include information on standard environmental practices on Site	BRWF_TP_01_Site Inductions
Monthly Inspections	To identify any issues with erosion, sediment controls and hazardous materials.	BRWF_R_10_Inspections Register
Rainfall Records	Trigger for high rainfall event inspections of erosion controls	Bureau of Meteorology rainfall data
Maintenance Records	Tracking of areas where sediment is being removed or controls are continually failing	Maintenance Management System
External Audits	Includes audits of environmental management systems	BRWF_R_12_Audit Register

Hazardous Material Register	Recording of hazardous materials on Site	BRWF_R_14 Hazardous Materials Register
Material Safety Data Sheets	Information on use and handling of hazardous materials	MSDS file located in Site Office
Training Records	Identification of persons trained in use of hazardous materials	BRWF_R_08_Training Register
Work Instructions, Work Method Statements (WMSs) and Manuals	Instructions including proper use of hazardous materials	Various
Disposal Register	Records of disposal of hazardous materials, oil and sewage	BRWF_R_16_Waste Disposal Register
Safety Equipment Inspections	Includes inspections of spill kits	BRWF_R_15_Equipment Register

5.5 Monitoring and Inspection

Description	Frequency
Ad hoc observation from all Site Staff of controls not working, reported to the BRWF Site Manager. Checked as part of regular on Site activities.	Daily
Inspections of erosions, sediment controls and contaminant systems to determine effectiveness of controls by BRWF Site Manager or delegate. Details recorded on checklist. Including inspection of oil separators in substation.	Monthly
Inspections by BRWF Site Manager or delegate following significant rainfall (>30mm/24 hours) to identify where sediment is observed travelling beyond the erosion and sediment traps. All active erosion events where sediment is observed travelling >3m beyond roads/hardstands/lay down areas/cable routes must be reported and investigated as an environmental incident.	Per event
Assessment of mitigations to DoPE	Within 3 months after the first 24 months period of operation

5.6 Key Performance Indicators

KPI	Measurement
Prevention of environmental issues relating to soil or water contaminations or excessive erosion and rapid response to any incidents	Incident Register
Effective utilisation and maintenance of erosion or sediment control	Inspection Records
Prevention of release of a hazardous material and rapid response to any incidents	Incident Register
100% monthly inspections	Inspection records
100% inspections after significant rainfall events	Inspection records cross referenced with rainfall records
All hazardous materials properly stored	Corrective Actions Requests

All hazardous material records maintained	Corrective Actions Requests
Management of hazardous materials correctly implemented	Corrective Actions Requests

6 Flora and Fauna Management Plan

6.1 Background

The purpose of this Flora and Fauna Management Plan (FFMP) is to describe how ongoing impacts associated with vegetation clearance, removal and disturbance to flora and fauna habitat from the construction phase and further impacts during the operational phase will be managed, in accordance with State and Commonwealth CoA, the requirements of the EPL and the Statement of Commitments.

During the construction phase of the Project there was significant disturbance of natural habitats due to earthworks. Although rehabilitation was undertaken under the CEMP, further monitoring of the impacts on flora and fauna is required during the operations phase. The aim is to continue to protect and preserve native flora and fauna communities and conserve biodiversity, whilst continuing to operate the Site.

The FFMP contains a *Reptile Management Plan* and *Weed Management Plan*. Management of specific impacts on birds and bats is addressed in the *Bird and Bat Adaptive Management Plan* which is found in **Appendix H**.

6.1.1 Applicable Legislation, Regulations and Guidelines

- *Environmental Protection and Biodiversity Conservation Act 1999*(EPBC Act);
- NSW *Noxious Weeds Act 1993* (NW Act);
- *National Parks and Wildlife Act 1974*;
- *National Park and Wildlife Regulation 2002*; and
- *Threatened Species Conservation Act 1995* (TSC Act).

6.1.2 Ecology of Site

The Site comprises farming land which is currently grazed by sheep and / or cattle and has been grazed for multiple generations. Cropping is also evident across some parts of the Site and spray seeding has occurred across many areas for decades.

Natural Temperate Grassland (NTG), Snow Gum / Candle Bark Woodland, Ribbon Gum / Snow Gum Open Forest, derived grassland and disturbed grassland / exotic pasture are the primary vegetation types on Site. Soil landscapes comprise erosional, alluvial and residual landscapes mostly of basalt origin.

There are a number of ephemeral creeks and lakes occurring on Site as well as several dams and small streams. The closest main watercourse is the MacLaughlin River which, at its closest point is located approximately 1 km from the Site. This is a dammed river so water flow is variable and controlled throughout the year.

Maps describing the ecology of the Site are included in **Appendix F**.

6.1.3 Threatened species and communities

Vegetation communities

NTG was identified on Site and is listed as an Endangered Ecological Community under the EPBC Act. Areas mapped (**Appendix F**) as NTG are those that meet the criteria for NTG of the Southern Tablelands (NSW & ACT) under the EPBC Act and obtained a floristic value score of 4 under the Rehwinkel (2007) methodology.

Flora

No plant species listed as threatened in Schedules 1 and 2 of the TSC Act or nationally under the EPBC Act were found on or near the Site. Potential habitat for the following species is present within the Site:

- Mauve Burr-daisy (Calotis glandulosa)
- Trailing Hop-bush (Dodonaea procumbens)
- Monaro Golden Daisy (Rutidosis leiolepis)
- Silky Swainson-pea (Swainsona sericea)
- Austral Toadflax (Thesium australe)

One Rare or Threatened Australian Plant (RoTAP) species and two regionally significant flora species were recorded within the Site.

Category	Scientific Name	Common Name
RoTAP	Discaria pubescens	Hairy Anchor Plant
Regionally Significant Flora	Swainsona monticola	Notched Swainson-pea
	Swainsona behriana	Behr's Swainson-pea

Fauna

Seven threatened fauna species have been recorded within the locality.

Type	Scientific Name	Common Name
Birds	Stagonopleura guttata	Diamond Firetail
Mammals	Miniopterus schreibersii oceanensis	Eastern Bent-wing Bat
	Falsistrellus tasmaniensis	Eastern False Pipistrelle
	Petaurus norfolcensis	Squirrel Glider
Reptiles	Tympanocryptis pinguicolla	Grassland Earless Dragon
	Suta flagellum	Little Whip Snake
	Delma impar	Striped Legless Lizard

BRWF has an ongoing responsibility post construction to ensure the protection of Grassland Earless Dragon (GED), Striped Legless Lizard (SLL) and Little Whip Snake, in accordance with the State (DoPE) CoA, Commonwealth (EPBC Act) CoA and Statement of Commitments. There is potential for these species to be found across the entire Site.

One migratory species, the White-bellied Sea-Eagle (Haliaeetus leucogaster) (EPBC Act), was also recorded within the locality, along the MacLaughlin River.

Threatened fauna species not recorded, for which the Site is likely to provide potential habitat include:

- Brown Treecreeper (Climacteris picumnus victoriae)
- Gang-gang Cockatoo (Callocephalon fimbriatum)
- Hooded Robin (Melanodryas cucullata cucullata)
- Blue-billed Duck (Oxyura australis)
- Barking Owl (Ninox connivens)
- Koala (Phascolarctos cinereus)
- Yellow-bellied Sheath-tail Bat (Saccolaimus flaviventris)
- Pink-tailed Worm-lizard (Aprasia parapulchella)

Potential habitat for the Blue-billed Duck (Oxyura australis) is not present within the direct impact area, however water for the Project during the construction phase was sourced from a dam which may provide habitat for this species.

Migratory fauna species not recorded, for which the Site is likely to provide potential habitat include:

- Great Egret (Ardea modesta)
- Cattle Egret (Ardea ibis)
- Rainbow Bee-eater (Merops ornatus)

Venomous Snakes

Venomous snakes at the Site could include, but are not limited to:

- Little Whip Snake
- Highland Copperhead
- White-Lipped Snake
- Mustard-bellied Snake
- Tiger Snake
- Red-bellied Black Snake
- Eastern Brown Snake
- Small-eyed Snake
- Dwyer's Black-headed Snake
- Curl Snake

6.1.4 Disturbance and Weeds

Agricultural pasture species and weeds are common across the Site. Weeds accounted for approximately 31% of all species recorded across the Site and often occur in localised patches in paddocks where clearing or spraying had been undertaken. Exotic species common throughout the study area included:

- Scotch Thistle (Onopordum acanthium)
- Serrated Tussock (Nassella trichotoma);
- Saffron Thistle (Carthamus lanatus);
- Hairy Brassica (Hirschfeldia incana);
- Dwarf Mallow (Malva neglecta);
- Phalaris (Phalaris aquatica);
- Barley Grass (Hordeum leporinum); and
- Common Storksbill (Erodium cicutarium).

A full list of potential weeds to be found on Site is given in **Appendix G**.

Three weed species listed as noxious weeds under the NSW Noxious Weeds Act 1993 (NW Act) for the Cooma-Monaro and Bombala LGAs and one species listed as a Weed of National Significance (WONS) were recorded within the Site. However, it is likely that other noxious weed species occur; in particular African Love Grass.

For the purpose of this plan, weeds have been classified as follows:

1. Target Weed Species – These are known weed species to occur on Site and are of particular concern (i.e. Noxious Weeds, WONS and priority weeds identified by Cooma-Monaro Shire Council and Bombala Council in the 2004-2009 Regional State of the Environment Report).
2. Priority Weed Species – Weed species of particular concern (as above) but not previously recorded on the Site.
3. General Weed Species – Weed species commonly occurring in the area and of no specific threat.

Scientific Name	Common Name	NW Act Class	WONS
Eragrostis curvula	African Love Grass	4	No
Xanthium spinosum	Bathurst Burr	4	No
Marrubium vulgare	Horehound	4	No
Onopordum acanthium	Scotch Thistle	4	No
Nassella trichotoma	Serrated Tussock	4	No
Hypericum perforatum	St John's Wort	4	No
Rosa rubiginosa	Sweet Briar	4	No

Salix spp.	Willows	5	Yes

6.1.5 Potential Impacts

The road and hardstand network has been constructed throughout the Site and is used for the movement of light vehicles with no expectation of interactions with threatened species of flora and fauna other than where maintenance activities of the drainage and erosion control systems or underground cable repairs would need to occur off the roads and hard stands. These repairs would most likely occur in rehabilitated areas, though it is possible for them to occur in undisturbed areas.

Other ongoing potential impacts during the operations phase would be expected to be:

- Continued outbreaks of weeds resulting from soil disturbance during the construction phase, specifically addressed through the Weed Management Plan
- Impacts of birds and bats with the operational wind turbines, specifically addressed through the Bird and Bat Adaptive Management Plan (see **Appendix H**).

6.1.6 Management Principles

The key principle of the flora and fauna management plan is to ensure that there are minimal ongoing impacts on local flora and fauna in terms of disturbance of habitat.

6.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Disturbance of flora and fauna in undisturbed areas	Maintenance activities off the Site	Damage to flora and ground based fauna (reptiles)	Rare	Moderate	Low	General prohibition without specific approval and planning.
Direct interactions with fauna on the Site	Physical proximity with fauna transiting through the Site	Harm to fauna (and personnel)	Possible	Minor	Medium	Assist all personnel to identify, avoid and deal with accidental interactions with fauna. Information will be provided in site inductions and on posters around the site service compound.
Disturbance of Grassland Earless Dragon, Legless Lizard or Little Whip Snake	Excavations of ground outside of the formed hardstands and roads, including rehabilitated areas	Death of threatened species and penalties under State and Commonwealth regulations	Rare	Moderate	Low	Application of Reptile Management Plan (see *Section 6.3 – Management Strategies*)

Outbreak of weeds	Previous disturbance from construction works or distribution through Site vehicles or importation of quarry materials	Degradation of vegetation value on and off Site	Possible	Minor	Medium	Weed Management Plan (See *Section 6.3 – Management Strategies*)
Death and injury to birds and bats	Collision with wind turbines	Reduction in communities, especially threatened species	Rare	Major	Medium	Bird and Bat Adaptive Management Plan (**Appendix H**)

6.3 Management Strategies

Management Actions	Strategies	Responsibilities
Excavation in undisturbed areas	If any excavation work is required in an area of land previously undisturbed during wind farm construction, a WMS must be completed and OEH must be consulted with prior to work commencing.	BRWF Site Manager
Protection of fauna (including snakes)	Reinforce as part of Site Induction that all native fauna (including snakes) are PROTECTED and that no person is to destroy, take, kill or unnecessarily disturb any plant, animal, bird or mammal, reinforcing minimisation of flora and fauna disturbance.	All personnel
Identification of flora and fauna	Provide as part of the Site Induction Package and on information boards on Site, details of how to identify flora and fauna expected on Site, including which species are considered dangerous (typically snakes)	BRWF Site Manager
Interactions with fauna	Provide as part of the Site Induction Package, information that animals and birds (including feral) should not be fed or deliberately interacted with. Also appropriate warning warnings and instructions on how to deal with identified dangerous animals.	BRWF Site Manager
Sightings of fauna	Sighting of vulnerable species and any carcasses of animals and birds are to be reported. Report forms available to all Site personnel and register of sighting maintained. Requirement included as part of Site Induction Package. Where the sighting involves a reptile, the Reptile Management Plan (below) is to be followed including the notification to OEH of certain species and if considered necessary, a suitably trained ecologist brought onto Site.	All personnel
Sightings of snakes	Where a snake is sighted, under no circumstances should any Site personnel attempt to handle or relocate a snake, unless they have appropriate qualifications and/or experience. Only appropriately trained and qualified persons should attempt to handle or relocate a snake.	All personnel

	If the snake is identified as the threatened Little Whip Snake (which is venomous), then the reptile management procedures apply.	
Sick or injured fauna	Where sick or injured native animals are identified, notify the BRWF Site Manager immediately and advise location. Local wild life recovery will be contacted. This is included in the Site Induction Package.	All personnel
Sightings of weeds	Any observation of weeds should be reported to BRWF Site Manager or delegate. Weed identification charts (see **Appendix G**) provided on Site Information Boards and information included in Site Induction Package.	All personnel
Management of weeds	Where weeds are identified, manage and control weeds in accordance with Weed Management Plan (below)	BRWF Site Manager
Domestic animals	No domestic pets and animals are permitted to be brought on Site by Site Staff during operations.	All personnel
Sick or injured livestock	Where sick or injured livestock are identified, notify the BRWF Site Manager immediately and advise location. The relevant landowner will be contacted.	All personnel
Reptile Management (Reptile Management Plan)		
Timing of off Site excavations	As excavations have the potential to impact on sensitive lifecycle stages for the GED and SLL (i.e. mating, laying and incubation period), disturbance of the ground will not be conducted from 1st November to 31st January without the written approval of DoPE.	Site Supervisors
Requirements for appointment of ecologist	Where ground is to be excavated or cleared, it will be assessed by an appropriately qualified and experienced ecologist (the ecologist) with specialist knowledge of GED's under the authority of: A Scientific License issued under Clause 22 of the National Park and Wildlife Regulation 2002 and Section 132C of the National Parks and Wildlife Act 1974 by the NSW Office of Environment and Heritage. And/or An Animal Research Authority approved by, and in accordance with, an Animal Care and Ethics Committee (ACEC).	Environment Officer
Timing of ecologist inspections	Where assessments are undertaken by the ecologist, they are to occur prior to excavation commencing; up to three weeks before disturbance is to occur prior to November; and up to three days before disturbance is to occur between November and May.	Environment Officer
Scope of ecologists inspections	The ecologist will undertake the following at all potential habitat prior to disturbance: Searches of all tussocks; Searches of ground surface and turning of all moveable rocks greater than 100mm by 100mm (rocks should be left upside down or preferably removed from the Site to discourage any continued use by reptiles);	Environment Officer

	Searches of arthropod holes using endoscope (between May and end of October only); and Should any GEDs, SLLs or LWSs be found, relocation activities (as detailed in *Reptile Relocation* below) will be conducted.	
Record keeping	Where the ecologist undertakes an inspection, a record of inspection will be maintained indicating the date of inspection and date that excavation works were undertaken. Data sheets for pre clearance surveys and fauna records supplied by OEH will be used for data collection where a reptile is found.	Environment Officer
Excavation practices	Where excavations are undertaken: • Trenches and excavated areas are to be dug and filled in sections and not remain open for more than three days. • Each morning, prior to the commencement of any construction or excavation activities, Site personnel are to check open excavated areas deeper than 25 centimetres for any reptiles that may have become trapped. • Should any reptiles be found during daily inspections or prior to backfilling, the relocation procedures outlined in *reptile relocation* must be followed. • Should any non-reptile species be found during daily inspections or prior to backfilling, the BRWF Site Manager is to be notified. The BRWF Site Manager is to contact the ecologist for further advice or to collect/ relocate the animal, if required.	Job Supervisor
Reptile relocation	Where a Grassland Earless Dragon (GED), Striped Legless Lizard (SLL) or Little Whip Snake is found either as part of an excavation activity or as an incidental sighting, the following procedures will be applied: • Person who made the find to notify BRWF Site Manager of the reptile find. • BRWF Site Manager will inspect the reptile and try to identify whether it is one of the species detailed in this Reptile Management Plan. If the BRWF Site Manager is unable to identify the reptile, or is uncertain in the identification then the ecologist will be consulted for identification (e.g. a series of photographs sent by email). • If the reptile is in immediate danger, and if safe to handle, the reptile is to be placed in a calico bag and stored in a cool, dark place until identified by the ecologist. If the reptile is a snake, under no circumstances should any Site personnel attempt to handle the snake, unless they have appropriate qualifications and/or experience. • If the reptile is believed to be a Grassland Earless Dragon (GED), Striped Legless Lizard (SLL) or Little Whip Snake the ecologist will be called to Site to confirm identity and relocate the reptile according to the relocation requirements set out below. • If the reptile is not a Grassland Earless Dragon (GED), Striped Legless Lizard (SLL) or Little Whip Snake the	All Site Staff

	BRWF Site Manager is to relocate the animal to a Site as close as possible to where it was found, but outside the construction area. The BRWF Site Manager may contact the ecologist for direction. • OEH will be notified of any threatened reptile find and where the reptile was relocated within 48 hours of the find. **GED Relocation** Where the reptile is confirmed by the ecologist as being a GED the following procedure will be followed: • If the GED is found between June and October OR on days where the maximum temperature is less than 15°C, the GED will be captured and the University of Canberra (UoC) will be notified. The UoC will be required to pick up the reptiles. The reptile will be held overnight in a cool dark place if required, however if the UoC are unable to pick up the reptile after this time, the reptile may be relocated and the Uoc notified of the relocations. Necessary permits will be held by UoC. • Where the GED is caught between June and October and for some reason is cannot be collected by UoC, the GED will be placed in a cloth bag and transported immediately to the release site. It will then be placed in one of the artificial burrows. Individual GEDs in torpor should be warmed slightly to assist in getting them to enter the burrow and a flat stone placed over the burrow for protection, in a manner that does not prevent them leaving the burrow. • Where found active during the warmer days of the year (outside of the June to October period and max temperature is 15°C or above), the GED should be placed in a cloth bag and immediately transported to the release site where they will be released into a grass sward. • Where relocation occurs it may be to any of the four relocation sites that have been identified. A relocation site cannot be used if it is within 200 metres of the find location to prevent reptile returning to its home location. • Where the reptile is either a Striped Legless Lizard (SLL) or Little Whip Snake, relocated to any of the four relocation sites identified. • If there is any doubt on the suitability of the above sites, an experienced herpetologist familiar with this species should be contacted to discuss an alternative relocation solution. • The OEH will be notified of the find and advised as to where the reptile was relocated within 48 hours of the find.	
Weed Management (Weed Management Plan)		
Identification of weeds	Weed identification information (see **Appendix G**) is to be provided as part of the Site Induction and on information boards. This information is to be reviewed annually using information and bulletins issued from	BRWF Site Manager

	local councils, land services and State and Commonwealth departments. Specialists and weed spraying contractors will also be consulted. An annual training session will be provided to all Site Staff.	
Determination of weed infestation	Monthly inspections and casual observation by Site Staff and landowners.	BRWF Site Manager
Maintenance spraying	Annual maintenance spraying as advised by weed spraying contractor in areas known to have high concentrations of weeds	BRWF Site Manager
Responding to weed infestations	Prompt implementation of weed spraying by local weed spraying contractors.	BRWF Site Manager
Importing of quarry materials	Materials only to be imported from quarries south of Cooma and to be certified as weed free.	Job Supervisor
Site vehicles	Site vehicles regularly inspected for cleanliness and potential seed material. Any vehicles identified with weed seed to be removed immediately from Site and cleaned.	BRWF Site Manager
Bird and Bats - further management strategies in Appendix H: Bird and Bat Adaptive Management Plan (BBAMP)		
Identification of deaths	Observation of carcasses as part of regular Site Inspections. Any dead or injured birds or bats found will be reported as per the procedure and timeframe outlined in the BBAMP.	BRWF Site Manager
Recording deaths and sightings	Register to record observations and sightings. Site Staff provided with identification information as part of the Site Induction Package and on Site information boards	BRWF Site Manager
Studies	Implementation of the Bird and Bat Surveys and reviews under the Bird and Bat Adaptive Management Plan (**Appendix H**) required as part of Condition 3.3 of State CoA. Note: the BBAMP is an 'adaptive plan' and may trigger actions relevant to the operation of the wind farm due to reviews and subsequent risk assessments.	Environment Officer

6.4 Management Controls

Control	Purpose	Reference
Site Induction Package	Reinforcement of need to identify and protect fauna and dealing with interactions with fauna	BRWF_TP_01_Site Inductions
Information boards	Information to identify flora and fauna	BRWF_TP_02_Information Boards
Fauna Sighting Register, including birds and bats	To record all sighting of significant fauna including carcases. Significant fauna identified in Site Inductions.	BRWF_R_03_Fauna Sighting Register
Work Method Statement (WMS)	Ensure no work is completed in non-disturbed areas without an approved	Work Method Statement Procedure

	Work Method Statement (WMS)	
Excavation Record Sheet	To record details on inspections conducted on the works	BRWF_F_02_Excavation Check Sheet
Maintenance records	To record weed spraying activity	Maintenance Management System
Bird and Bat Adaptive Management Plan	Establish manner in which studies are undertaken	Bird and Bat Adaptive Management Plan (**Appendix H**)

6.5 Monitoring and Inspection

Description	Frequency
Inspections of road sides, hardstands and culverts for weed infestations and carcasses	Monthly
Inspections of vehicles for weed seed	Monthly
Audit of weed condition on Site	Annual
Bird and bat monitoring	As per Bird and Bat Adaptive Management Plan

6.6 Key Performance Indicators

KPI	Measurement
No vegetation clearing without correct permits	Corrective Actions Requests
No accidental removal of trees	Corrective Actions Requests
Rapid containment of outbreaks of targeted or priority weed species	Observation Forms
Less than 1 week response time to weed infestations	Job Records
No unauthorised disturbance of flora or fauna	Incident Reports
Reptiles appropriately relocated	Inspection Records
No reports of killed or hurt protected fauna	Incident reports
All threatened species finds reported to OEH	Inspection Records

7 Landscape and Rehabilitation Management Plan

7.1 Background

The purpose of this Landscape and Rehabilitation Management Plan (LRMP) is to detail the landscaping restoration and rehabilitation for all areas of the development footprint disturbed during the construction and operations period, including the areas containing the temporary construction facility sites and sections of construction access roads. In addition, the Lochlea offset site must be rehabilitated in line with the BioBanking Management Plan.

The LRMP aims to ensure that the rehabilitation of the disturbed areas closely resembles the original landform and vegetation structures. This will be achieved by addressing the methods, techniques and timing of rehabilitation and by using appropriate materials. Regular observations will be made and corrective action taken if required.

7.1.1 Revegetation Measures

All revegetation measures have been implemented progressively based on completion of when construction works, climatic conditions and seasons. Where persistent drought or unseasonable climatic conditions mean rehabilitation success is likely to be undermined, plans may be modified or additional time may be required to establish vegetation.

Revegetation of disturbed areas was undertaken as quickly as possible but timed to maximise success. This includes riparian vegetation and other on Site vegetation, in accordance with **Conditions 2.7** and **2.8** of the State CoA. The majority of the rehabilitation occurred in spring 2014, within six months of the cessation of construction activities.

Seed species used for the revegetation of disturbed areas was determined in consultation with the relevant landholders. The EPC Contractor provided documentation in regards to seed species and locations used which is on record.

7.1.2 Potential Impacts

The road and hardstand network has been constructed throughout the Site and is used for the movement of light vehicles. It is not expected that areas that are being, or have been rehabilitated will need to be accessed on a regular basis. Any future access will be for further rehabilitation activities, maintenance or erosion and sediment controls or for maintenance of underground cables.

Stockpiles of gravel are also to be maintained for road maintenance.

Other ongoing potential impacts during the operations phase would be expected to be:

- Failure of existing rehabilitation undertaken during construction
- Weed outbreaks impacting on rehabilitation, addressed by weed mitigation strategies.
- New excavations generally minor and localised in nature.

7.1.3 Management Principles

The key principle of the LRMP is to:

- Ensure that the rehabilitation is maintained to ensure its effectiveness in erosion control and reduce the visual impacts resulting from disturbed earth, such as on batters and cable trenching.

7.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Failure of seed growth in existing rehabilitation	Weather, soil conditions, grazing, poor application	Rehabilitation ceases to provide required erosion control and recovery of visual appearance of landscape	Possible	Minor	Medium	Monitoring and further remedial actions as required
New rehabilitation required	New excavation	Exposed top soils subject to erosion	Rare	Minor	Low	Application of new rehabilitation and WMS
Erosion runoff from stockpiles	Material from road base stockpiles	Sediment into native grasslands and runoffs	Rare	Moderate	Low	WMS to select locations of stockpiles to ensure no runoff into critical areas and appropriate covering and sediment controls

7.3 Management Strategies

Management Actions	Strategies	Responsibilities
Reporting of rehabilitation outcomes	Assessment reports to be undertaken of the rehabilitation outcomes and reported to landholders, and the respective NSW and Commonwealth Government agencies. Performance will be monitored through the use of plots (quadrants and transects), and photo reference points. Assessment to be undertaken by an independent and suitably qualified landscape ecologist (whose appointment has been agreed to by DoPE). Monitoring will continue until the landscape ecologist has verified that rehabilitated areas are well established, in good health and self sustaining.	EPC Contractor for first 2 years, then Environment Officer
Maintenance of rehabilitation	Maintenance of rehabilitated areas as required to ensure the effectiveness of the rehabilitation. Maintenance will be undertaken until such time that the plantings have been verified by an independent and suitably qualified expert as being well established, in good health and self-sustaining.	EPC Contractor for first 2 years, then Environment Officer
Maintenance of screening vegetation	Maintenance of screening vegetation planted as recommended in the *Visual Impact Verification Report*	Environment Officer

	(**Condition 2.23** of the CoA). Vegetation to be maintained until such time that the plantings have been verified by an independent and suitably qualified expert (whose appointment has been agreed to by DoPE) as being well established and in good health. Any plantings which are unsuccessful during that time shall be replaced by the Proponent at no cost to the landowner.	
Replacement of failed rehabilitation	Implementation of program to reseed poorly performing areas with appropriate seed mixes, within a season or time frame appropriate to the seeding being used, taking into account any lessons learnt from the failure of the previous rehabilitation.	EPC Contractor for first 2 years, then Environment Officer
Failure due to erosion	Should previously rehabilitated areas become damaged following a significant rainfall event, then the affected area will be appropriately reinstated with topsoil and re-sown.	BRWF Site Manager
Watering	Maintenance of the watering regimes as determined by the EPC Contractors Site specific rehabilitation management plan.	BRWF Site Manager
Weed management	Maintenance of the weed management regimes as determined by the EPC Contractors Site specific rehabilitation management plan and dictated by the Project Weed Management Plan in this OEMP (*See 6 – Flora and Fauna Management Plan*).	BRWF Site Manager
Establishment techniques	Where additional rehabilitation is required, establishment types and techniques will be determined in consultation with the relevant landholders and can include direct seed drilling and seed spreading. Where direct drill is used, a tractor drawn narrow tyne seeder is the preferred method.	BRWF Site Manager
Spreading of native seeds	Where native seeds are used, alternate method of spreading can include mulch wheel spreader, native grass mulch, rice straw mulch, air seeding and hand casting.	Environment Officer
Seed quantities and density	Quantities and density of seeds spread or planted are to be determined by the seeding contractor used.	Environment Officer
Soil preparation	Where further seeding is to be undertaken, prior to reinstatement of the topsoil layer, compacted areas will be cultivated to a depth suitable to alleviate compaction. Weeds will need to be sprayed out prior to sowing and maintained using spot spraying, when necessary (See Weed Management Plan, Section *6 – Flora and Fauna Management Plan*). Sowing is to only occur when there is adequate moisture in the soil as this provides the seedbed with adequate moisture for germination. However, sowing directly after rain may cause soil compaction. Starter fertiliser is recommended to promote early growth in non-native seedlings and address soil deficiencies at sowing.	Environment Officer
Hydro mulching	Where short term stabilisation needed, or seeding	Environment Officer

	methods are not working, or access is difficult for direct seeding, hydro mulching can be considered for use. Where used, is to be under taken within 48 hours of soil preparation, weather permitting as should not be applied where winds exceed 15km/hr, temperatures greater than 35 degrees Celsius, surface is very wet or when raining or imminent rain. Seed quantities and application rate determined by the contractor. Minimum thickness to be 25 mm within 48 hours of application.	
Planting of cells and tube stock	Where it is determined that cells or tube stock need to be planted into jute mesh, top soil or ripped soils, this must be undertaken using a wet mix of water crystals and slow release fertiliser as per manufacturers recommendations.	Environment Officer
Selection of plant stock	Plants selected for use must be suited to the classified vegetative community as per the species schedule. Plants must be sun and frost hardened. Plants are to be healthy, disease free specimens with strong root systems. Any signs of pests, diseases or weed infestation will be rejected. Plants used for rehabilitation of the Lochlea offset site must be natives, as outlined in the BioBanking Management Plan.	Environment Officer
Timing of planting	Planting and seeding may be staged depending on the season and species, as different species grow at different times of the year and are best planted in accordance with these parameters. Refer to the plant supplier and landscape contractor for time lines.	Environment Officer
Conditions for planting	Planting and seeding will also be affected by the season and weather conditions. Do not plant when wind speeds exceed 45 km/hr; when temperature exceeds 35 degrees or when surface is very boggy.	BRWF Site Manager
Protections of planting	Where considered necessary, protective measures around new plantings may be employed to prevent loss through grazing.	BRWF Site Manager
Planting locations and distributions	The finished planted grassland areas should flow into surrounding natural areas of grassland and should mimic plant communities as they occur naturally. Plants generally occur in groups of 2 – 5 per species. Plant spacing must be interpreted by qualified landscapers and determine based on species. The best ecological outcome will be attained by spacing species as they occur in nature.	Environment Officer
Water quality	Where water is used for watering of plantings, the water must be potable and free of toxins and pollutants.	BRWF Site Manager

7.4 Management Controls

Control	Purpose	Reference
Monthly Inspection Forms	To identify poorly performing rehabilitation	BRWF_F_01_Site Inspection Checklist

7.5 Monitoring and Inspection

Description	Frequency
Inspection of status of growth of grasses in rehabilitated areas	Monthly
Inspection of failure of rehabilitation measures	Monthly
Internal verification of rehabilitation outcomes	Annually
External validation of rehabilitation outcomes	2 years after completion

7.6 Key Performance Indicators

KPI	Measurement
No significant erosion incidents on rehabilitated land as per incident register	Incident register
Vegetation ground cover >90% and weeds <20%	Inspections and Audit Reports

8 Cultural Heritage Management Plan

8.1 Background

This Cultural Heritage Management Plan (CHMP) defines the mitigation measures and monitoring required for the protection and preservation of artefacts and places associated with Aboriginal and European heritage value. The CHMP outlines the processes to be followed when items or remains of cultural heritage significance are discovered, ensuring BRWF operational activities maintain respect for the local/traditional owners.

8.1.1 Aboriginal Heritage

New South Wales Archaeology Pty Ltd (NSW Archaeology) was commissioned in December 2008 to undertake an archaeological and cultural heritage assessment on the proposed Project in accordance with the Director-General's Requirements (DGR's).

A total of 56 Aboriginal object locales, predominantly stone artefacts, were recorded within the assessed survey units. The majority of these locales, had low or very low density stone artefact distribution, resulting in low archaeological potential/sensitivity and therefore low archaeological significance.

A small number of locales were identified and assessed to be of low/moderate or moderate archaeological significance with three of these locales within the footprint of the wind farm: Locales 5 and 8 of Survey Unit 13 and Locale 2 of Survey Unit 19. These three locales are shown on the map in **Appendix I: Stage One Aboriginal Heritage Locales**.

During the environmental assessment, consultation was undertaken with Aboriginal stakeholders in accordance with the Interim Guidelines for Aboriginal Community Consultation (IGACC) – Requirements for Applicants (NSW Department of Environment and Conservation, 2004). A proposed methodology and invitation to tender for the provision of Aboriginal Assessment and Advisory Services dated 9th January 2009 was sent to the following groups who expressed interest in the Project:

- Eden Local Aboriginal Land Council (ELALC);
- Yurwang Gundana Consultancy Cultural Heritage Services;
- Ngunnawal Heritage Aboriginal Corporation;
- Konanggo Consultancy;
- Yukembruk Merung Ngarigo Consultancy Pty Ltd (YMNC) (Representing the Bega Local Aboriginal Land Council); and
- Buru Ngunawal Aboriginal Corporation.

As the Project is situated within both the Bega Local Aboriginal Land Council and Eden Local Aboriginal Land Council boundaries, in accordance with Part C of the IGACC, the assistance of YMNC and ELALC were engaged to conduct field surveys.

It was assessed that the archaeological resource in the Project Site does not surpass significance thresholds under the Aboriginal cultural heritage standards and guidelines kit (National Parks and Wildlife Service, 1997), which would preclude impacts. However, the construction of the Project will result in substantial

physical impacts to any Aboriginal objects which may be located within direct impact areas irrespective of their archaeological significance. That is, any Aboriginal object situated within an area of direct impact will be comprehensively disturbed, and/or destroyed during construction.

As construction is completed the risk associated with interactions with Aboriginal artefacts is significantly reduced. However, care is required to avoid further disturbance in the three locales shown in **Appendix I**.

8.1.2 Non-Aboriginal Heritage

A total of 29 potential heritage items were recorded in and adjacent to the Project. Fences and one recorded sheepfold were the only heritage items to occur within the study area. Heritage items occurring close, but outside of the study area, included a camp site, house ruin and one recorded sheepfold. As construction is complete the risk associated with interactions with heritage artefacts is very minimal. There are no identified no go zones.

8.1.3 Consultation with Aboriginal Stakeholders

Given the low sensitivity of the Site, ongoing consultation with Aboriginal stakeholders is not considered necessary. Consultation with the stakeholders may occur if:

- Unexpected finds are uncovered during the works;
- Excavations are required in Locales 5 and 8 of Sample Unit 13, or Locale 2 of Sample Unit 19; or
- Any complaint or incident is recorded involving an Aboriginal site or cultural heritage issue.

8.1.4 Potential Impacts

It is not expected that there would be any interaction with known cultural sites as part of the day to day operation of the Project.

There may be minor excavations that need to be undertaken, though primarily in previously disturbed areas during construction. The potential impact on cultural sites is very low.

8.1.5 Management Principles

To ensure that all people on Site maintain a general aware of cultural sensitivities to ensure that cultural considerations are acknowledged and respected.

8.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Damage to cultural heritage artefact	Excavation in previously undisturbed areas	Breach of regulations	Rare	Moderate	Low	Requirement for WMSs which incorporate checks prior to work in undisturbed areas
Improper handling of artefact finds	Lack of knowledge in dealing with cultural artefacts	Breach of regulations	Rare	Minor	Low	Basic awareness training during staff induction

8.3 Management Strategies

Management Actions	Strategies	Responsibilities
Awareness and observation	All staff provided with general awareness as part of Site Induction, including awareness of Locales 5 and 8 of SU 13 and Locale 2 of SU 19 shown in **Appendix I**, and required to maintain observation for potential finds while executing works.	BRWF Site Manager
Unexpected Finds Procedure	Maintain an Unexpected Finds Procedure (outlined below), readily available on Site, with awareness of the procedure included into the Site Induction Package.	BRWF Site Manager
Requirements of Unexpected Finds Procedure for Aboriginal finds	DO NOT touch or disturb anything including the natural landscape surrounding the site; DO NOT drive vehicles, move equipment or walk around the Site until instructed to do so; The BRWF Site Manager is to be informed immediately of the find; The work in the area shall cease immediately; The items/areas of potential indigenous/archaeological significance shall be protected from any damage or disturbance. Before leaving the location, physically identify the area of discovery and if possible leave a fellow worker to guard the site; No personnel shall touch, disturb or removed the items discovered; The BRWF Site Manager or delegate shall contact OEH in accordance National Parks and Wildlife Act 1974, registered Aboriginal stakeholders and the Police (where skeletal remains exist); All Site Staff and other sub-contractors are to follow the directions given by the cultural heritage advisors in relation to the item/area; Works shall not recommence until an appropriate strategy for managing the object(s) has been determined in consultation with OEH and the registered Aboriginal stakeholders and written authorisation from OEH is received by the Proponent.	
Requirements of Unexpected Finds Procedure for European heritage finds	DO NOT touch or disturb anything including the natural landscape surrounding the site; DO NOT drive vehicles, move equipment or walk around the site until instructed to do so; The BRWF Site Manager is to be informed immediately of the find; All work likely to affect the relic(s) shall cease immediately; The items/areas of potential heritage significance shall be protected from any damage or disturbance. Before leaving the location, physically identify the area of	

	discovery and if possible leave a fellow worker to guard the site. No personnel shall touch, disturb or removed the items discovered; The BRWF Site Manager or delegate shall contact the Heritage Office in accordance with the Heritage Act 1977; All Site Staff and sub-contractors are to follow the directions given by the Heritage Office in relation to the item/area; and Works shall not recommence until BRWF receives written authorisation from the Heritage Office.	
Operational activities in Locales 5 and 8 of SU 13 and Locale 2 of SU 19	Any operational activities, including road and underground cable maintenance, in previously undisturbed areas within 100m of Locales 5 and 8 of SU 13 and Locale 2 of SU 19 (see **Appendix I**) shall be avoided. If work is required in these areas, a WMS must be completed and OEH must be consulted with prior to work commencing.	BRWF Site Manager

8.4 Management Controls

Control	Purpose	Reference
Site Induction Package	To identify general awareness and procedures when making a cultural heritage find including images and requirement to not knowingly disturb artefacts.	BRWF_TP_01_Site Inductions
Site Maps	To identify known cultural heritage locations as shown in **Appendix I**.	BRWF_TP_01_Site Inductions
Work Method Statement (WMS)	Where work in previously undisturbed areas is required, a WMS will require checks for potential cultural issues and recording of on Site checks for artefacts.	Work Method Statement Procedure
Environmental Incident Register	Recording of finds	BRWF_R_06_Environmental Incident Register

8.5 Monitoring and Inspection

Description	Frequency
Checks during excavation	Per event
External Audits to verify that checks are taking place	As required

8.6 Key Performance Indicators

KPI	Measurement

No accidental damage to cultural heritage sites or artefacts	Incident Registers
100% compliance with checks during excavations off-Site	Audits

9 Air Quality Management Plan

9.1 Background

The principle air pollutants likely to be associated with the construction of the BRWF are particulate matter consisting mainly of dust and vehicle fumes. The nature of any impacts will be short-term and mainly associated with and limited to civil maintenance activity. In general the primary sources of emissions to the atmosphere include dust, plant and vehicle emissions and odours.

9.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Dust levels	Dust arising from vehicle movements on unsealed roads (on and off Site) and civil maintenance activities, exacerbated by high winds, size of vehicle and regularity of travel	Exceeded emission regulations; annoyance for local residences. Also respiratory illness	Unlikely	Minor	Low	Monitoring of dust levels with maintenance and watering if extreme.
Vehicle emissions	Excessive emission from diesel and petrol vehicles	Exceeded emission regulations; Respiratory illness	Rare	Minor	Low	Ensure proper vehicle maintenance
Odours	Odours from paints, solvents.	Exceeded emission regulations; Respiratory illness; poisoning	Rare	Minor	Low	Proper storage and handling
Odours from Septic tanks	Septic tank not working and pump out of tanks.	Exceeded emission regulations; annoyance for local residences	Rare	Minor	Low	Proper maintenance and handling procedures

9.3 Management Strategies

Management Actions	Strategies	Responsibilities
Slowing down vehicle speeds	All drivers of vehicles to slow down past designated residences to and on Site to reduce dust. Reinforce as part of Site Inductions plus information boards on Site.	Operations Manager
Dust Suppression	Watering around areas of residences where levels are extreme due to high winds, when performing maintenance.	BRWF Site Manager

Vehicle Maintenance	Regular vehicle maintenance to ensure that vehicle emissions are maintained at reasonable levels. Removal of vehicles from Site exhibiting excessive emissions.	BRWF Site Manager
Road Maintenance	Maintenance of on Site roads to remove loose materials when required	BRWF Site Manager

9.4 Management Controls

Control	Purpose	Reference
Complaints Register	To record details of dust complaints from landowners and general public re dust levels.	BRWF_R_02_Complaints Register
Induction packs	To reinforce requirements for good vehicle maintenance and travelling slowly past designated residences	BRWF_TP_01_Site Inductions

9.5 Monitoring and Inspection

Description	Frequency
Monitoring of road conditions	Monthly
Assessment of dust control as part of inspections and normal activities	As required

9.6 Key Performance Indicators

KPI	Measurement
No un-actioned complaints regarding dust	Complaints Register

10 Traffic Management Plan

10.1 Background

Traffic coming to and from the Site has impacts for the general public and local residences. This Traffic Management Plan (TMP) outlines the measures to ensure appropriate management of traffic.

10.1.1 Vehicles on Site

The following vehicles are expected to be on Site during the operational phase:

- A majority of the vehicles on Site will be light vehicles, predominately dual cabs or vans. They will be present both in working and non working hours, depending on the specific maintenance requirements.
- Small trucks for delivery of spare parts and maintenance materials, predicted to be five deliveries per week.
- Heavy trucks for delivery of road construction materials, used for maintenance, one per month on average.

In the event of major repairs, major heavy plant including large trucks and cranes can be expected. Occurrences would be rare.

10.1.2 Access Points to Site

The primary access point to the Site will be the entrance on Avon Lake Road opposite WTG 36. All Site Staff will be arriving and departing from work via this entrance and all deliveries to Site will be via this entrance. Local roads used would include Avon Lake Road, Springfield Road, Snowy River Way and Maffra Road.

Site Maintenance Staff would transit around the Site to access various points. In addition to the primary access, entry points to Site include northern access to CG 1, 2 and 3 via Springfield Road and Brechnoch Road, CG 4 and 5 via Avon lake road and Snowy River Way and access to WTG 36 off Avon Lake Road.

10.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Nuisance	Noise and dust	Liveability for residences	Possible	Minor	Moderate	Managed driving habit
Interactions with public road users	Stock, school buses	Vehicular accidents	Likely	Moderate	High	Information for drivers during induction
Presence of large vehicles	Major repairs	Blockage of roads, delays.	Rare	Moderate	Low	Repair specific traffic management plans

10.3 Management Strategies

Management Actions	Strategies	Responsibilities
Deliveries	Maintain a delivery information pack with information on suitable routes and warnings to be provided to delivery companies.	BRWF Site Manager
Speed of traffic	Maintain general awareness of speed restrictions for all staff, included as part of Site Inductions.	BRWF Site Manager
School buses	Maintain general awareness of school bus routes and times for all staff, included as part of Site Inductions.	BRWF Site Manager
Stock on roads	Maintain general awareness as part of Site Inductions and Site meetings. Circulate any advice from landowners of major stock movements.	BRWF Site Manager
Major repairs	Establish a specific traffic management plan for transport associated with major repair. To be communicated to all stakeholders.	BRWF Site Manager

10.4 Management Controls

Control	Purpose	Reference
Induction Packs	Information of travel to and from the Site	BRWF_TP_01_Site Inductions
Transportation Information Packs	Information of routes for transport drivers	BRWF_TP_03_Travel Information Pack
Complaint Register	Record complaints and actions taken regarding traffic related issues	BRWF_R_02_Complaint Register
Safety Incident Register	Record incidences involving Project related vehicles.	BRWF_R_05_Safety Incident Register

10.5 Monitoring and Inspection

Description	Frequency
Audit of complaint records as part of management review	Annual

10.6 Key Performance Indicators

KPI	Measurement
No un-actioned complaints in relation to traffic	Complaints Register
No significant on site vehicle accidents	Safety Incident Register

11 Community Information Plan

11.1 Background

Condition 5.5 of the State CoA requires that BRWF provide a Community Information Plan (CIP) for both the construction and operational phases of the Project. An earlier version of the CIP was approved by the Director-General prior to commencement of construction and is available as a sub plan of the CEMP. The simplified version of the CIP provided here is relevant only to the operation phase of the Project.

This CIP details the processes and control measures initiated for the operational phase of the Project, to ensure that the community remain informed about the Project and that the community have avenues to provide feedback and submit complaints.

11.1.1 Management Principles

The key objectives of the CIP are:

- To keep local residents informed through the timely provision of factual information;
- To keep the local residents informed in regards to operational activities taking place on the Site;
- Provide an avenue for local residents to communicate with BRWF so concerns can be identified and addressed;
- Provide information to the broader community regarding the overall performance of the Project; and
- Provide the broader community with an ability to obtain factual information about the Project and obtain responses with regards to specific questions about the Project.

11.1.2 Stakeholders

The following stakeholder groups have been identified in regards to the Project.

- Local residents, being residents who are not host landowners, but reside within 5 km of a wind turbine within the Project Site.
- Broader Community which generally includes those in reach of local media within the Cooma Monaro Shire Council, the Bombala Shire Council and the Snowy Mountains Shire Council areas.

11.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
General concerns over wind farming	Lack of information	General distrust	Unlikely	Minor	Low	Provision of industry information via website
Concerns over operational matters	Dust, noise, traffic, road conditions	Poor relations with community	Possible	Minor	Medium	Mechanism to complain and responsive resolution

11.3 Management Strategies

Management Actions	Strategies	Responsibilities
Communication of major repair activities	Regular emails and letters to immediate local community with information on specific activities, prior to those activities occurring.	Communications Officer
Provision of information about wind farming to broader community and local residents	Website with information on typical wind farm issues.	Communications Officer
Provision of relevant information about wind farm operations to Stakeholders on a regular basis	Regular updates of the web site, newsletters and media releases about significant Project activities and events.	Communications Officer
Complaints	Provision of a 24/7 hotline with phone number on website, email address for submission of complaints and signage with contact details at all entrances to Site. Project website with email, postal and phone contact details and annual advertisements with details of Complaints hotline. This is in accordance with Condition 5.3 of the State CoA and Part 4, M3 of the EPL. See *Section 4.7 – Complaints* for more information on the Complaints Procedure.	Communications Officer
Complaints Register	Maintained for life of the Project. Includes all complaints received via phone, email, verbally, through the CCC meeting or by person. This is in accordance with Condition 5.4 of the State CoA.	Communications Officer
Complaint resolution	Each complaint record would include the registered complaint, any action taken and evidence of both.	Communications Officer
Visual Impact consultation	Residents who have been assessed to have a moderate to high level of visual impact will be consulted *in person* for preparation of the *Visual Impact Verification Report* to be completed within 6 months of commissioning of the Project. This is in accordance with Condition 2.23 of the State CoA.	Operations Manager
Noise Impact consultation	Landowners who have noise monitoring performed at their residence in accordance with Condition 3.1 of the State CoA will be consulted *in person*.	Operations Manager
Consultative Community Committee	The ongoing operation of the Community Consultation Committee with 3 monthly meetings during the first two years of operation, providing a forum for open discussion between the BRWF operator and community representatives. Details of committee membership will be published.	Operations Manager
Community Funds Committee	Representation of the BRWF on the Cooma Monaro Shire Council and Bombala Shire Council community fund committees.	Operations Manager
Communication of Audits	Publishing consultant reports on noise, TV reception, bird and bat studies, compliance and environmental audits to public web site. Notify local residences, landowners and CCC of outcomes.	Communications Officer

Management Plans	Copies of all management plans and updates to public website.	Communications Officer
Approvals	Links to approvals and updated approvals to public website.	Communications Officer

11.4 Management Controls

Control	Purpose	Reference
Complaints Register	To record details of any complaints from all stakeholders.	BRWF_R_02_Complaints Register
Communication schedule	To ensure schedules are untaken according to the required timing.	BRWF Calender
Media Release Register	To record media releases and provision of information to the community, records date of release and intended date of release.	BRWF_R_20_Media Releases

11.5 Monitoring and Inspection

Description	Frequency
Review of complaints as part of management review	As required
Record of complaints for month recorded in management reports	Monthly

11.6 Key Performance Indicators

KPI	Measurement
No un-actioned complaints received	Complaints Register
Media communications issued within four weeks of intended schedule	Media release register

12 Emergency Response Plan

12.1 Background

There are a number of situations that can require an emergency response action to take place. BRWF's own internal risk assessments require that an Emergency Response Plan (ERP) be maintained, as well as planning conditions issued by DoPE, EPL regulations and commitments made in the Statement of Commitments.

12.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Bush Fires	Ignition of grass and/or trees either on or off the Site by manmade or natural causes	Destruction of property and loss of life	Possible	Severe	High	Site safety procedures to reduce potential of ignition sources
Hazardous materials	Leakage of hazardous materials	Severe illness and severe contamination of the environment	Rare	Severe	Medium	Site safety procedures to reduce potential of ignition sources
Wind farm fires	Equipment failure of plant causing plant to catch fire	Destruction of property and loss of life	Rare	Severe	Medium	Emergency response procedures and good maintenance management
Adverse weather conditions	Severe wind storms, lightning storms	Destruction of property and loss of life	Unlikely	Severe	High	Event warnings and evacuation procedures
Lack of control in an emergency situation	Inappropriate or inadequate training	Destruction of property and loss of life	Rare	Severe	Medium	Specialised training for managers responsible for response
Lack of understanding in an emergency situation	Inappropriate or inadequate training	Destruction of property and loss of life	Rare	Severe	Medium	Regular emergency response training and review of training measures

12.3 Management Strategies

Management Actions	Strategies	Responsibilities
Emergency Management Manuals		
Notifications to Emergency Services	In the event of an emergency, emergency services are to be contacted on 000 and the relevant service or services (RFS, ambulance, police) requested. The nature and location of the emergency must be provided.	BRWF Site Manager, and in their absence the nominated backup person
Identification of location	Site maps for all personnel with location identifiers marked and GPS co-ordinates in AMG and lat/long listed on the back of the map. Maps are located in all vehicles	BRWF Site Manager

	and Service Compound, and a copy of the Site map is to be provided to relevant emergency services.	
Notifications of Emergency	Emergency plans to include details of all personnel required to be notified. At a minimum, this must include the WTG Maintenance Site Manager, BRWF Site Manager, Environment Officer and BRWF Manager.	Operations Manager
Roles in an emergency	The BRWF Site Manager, or delegate if not available will be responsible for overall control of the emergency situation at the Site. They will designate nominated key service team members from all contractors on Site to implement the procedures set out in the emergency manual. Delegated person to provide clerical support to the emergency management team members, including receiving phone calls, maintain a log of communications, obtaining support of emergency personnel. Also co-ordinate emergency services and provide information on the nature of the emergency, hazards, injuries, combustible materials, road works or limited access, toxic materials in the vicinity, number of people on Site. Wardens, who have specific roles across the Site to manage the evacuation of personnel from the various mustering points.	BRWF Site Manager
Mustering and evacuation points	Designated mustering points will be established, shown on all Site plans. When notified of an emergency, all staff on Site will proceed to a mustering point and take further directions from the nominated controller for the mustering point.	BRWF Site Manager
Site evacuation	In the event of an emergency, a BRWF Site Manager or delegate will decide whether evacuation is necessary and the evacuation routes. Inform all staff on Site, check off staff against the Site sign on log. Staff exiting Site via a non-approved evacuation route must contact BRWF Site Manager to register departure from Site.	Wardens and personel
Emergency Control Centre	All emergency situations on Site will be controlled from the Service Compound, unless the emergency dictates that the office and compound area is evacuated. At all times the following equipment must be available at the *Emergency Control Centre*: Site sign-on log, a copy of the Emergency Response Manual, notebooks and pens, telephone conversation log, camera, video camera and/or mobile phone.	BRWF Site Manager
Identification of fire rating	During fire season, fire rating will be obtained from local fire service and displayed in a prominent location in the Site Office.	BRWF Site Manager
Consultation with local fire units	Inspections of fire preparedness by Cooma Rural Fire Service command. Inspections by local brigades, two months into operation and annually. Site information maps provided and updated annually with co-ordinates of WTG and substation and Service Compound.	BRWF Site Manager

	24/7 contact number for use by emergency services.	
Training	Site Inductions to include overview of emergency plans and emergency response procedures. Information on emergency plans maintained on information board. More extensive training for personnel nominated as Site Wardens.	BRWF Site Manager
Un-trained persons	Visitors to Site, when not in the vicinity of the Service Compound must be accompanied by fully inducted personnel.	All personnel
Contact information	Emergency response contact details to be maintained in the Emergence Response Manual, Site Induction Package, information boards, next to each phone and in vehicles. Update annually or as identified.	BRWF Site Manager
Fire Prevention Measures		
Fire fighting (buildings)	Dry powder fire extinguishers to be available around the substation, Service Compound and wind turbines. To be checked annually and tags stamped.	BRWF Site Manager
Fighting fires (open areas)	A fire fighting water cart to be maintained at the Service Compound. Monthly check during fire season for water and pump test run. Nominated personnel to be trained in its use. Record of training maintained.	BRWF Site Manager
Fire first response	Where fires are caused by personnel on Site, every effort must be taken to put the fire out before it gets hold, provided it is safe to do so using fire fighting equipment at hand. The BRWF Site Manager and fire brigade (000) should be notified immediately. Notify landowners, inform all staff and order appropriate evacuations. Deploy fire fighting water cart if safe to do so. Staff must not put themselves at risk.	All Personnel
Reduction of fuels	Ensure no build-up of combustible materials around BRWF Substation and Service Compound (see *Section 14 – Waste Management Plan*). Control of vegetation in the immediate vicinity of all assets. Where unable to be achieved through grazing, grasses to be mown.	BRWF Site Manager
Ignition from fault equipment causing electrical short circuit	Servicing of tools as per manufacturer's recommendations. Tools used in open areas (outside of substation, Service Compound) should have a test tag showing inspection within the last 12 months.	BRWF Site Manager
Ignition from lightning strikes	The WTG and substation have lightning protection that is maintained as part of equipment maintenance. After a lightning storm, when safe to do so, a site inspection is to be carried out looking for ignition hotspots or potentials strikes on equipment.	BRWF Site Manager
Ignition from smoking and disposal of butts	Smoking is only permitted in the designated smoking zones in Service Compound, and in vehicles where company policy allows. Smoking is not allowed anywhere else on Site, including within the WTG or on roads and hard stands.	BRWF Site Manager and all personnel

Ignition of bushfire caused by catalytic converters on petrol vehicles	Only diesel vehicles to be used when operating off the Site roads (permits are required to operate in these areas and will state that diesel only can be used). Site Induction to prevent parking in long grasses. Vehicles to be maintained regularly.	BRWF Site Manager
Bush Fires		
Bushfire Contingency Plan	The Bushfire Contingency Plan sets out actions to manage the situation and reduce risk to people and property when a total fire ban is in force, a bushfire is known to be nearby or approaching the wind farm or a bush fire originates or is travelling through the wind farm. The plan is to be summarised as part of Site Induction, made available on the information board and copies contained within all Site vehicles.	BWRF Manager
Prevention of ignition of trees, bushes and/or grasses caused by welding, metal cutting	WMS must be obtained for all works conducted outside of the workshop that may result in the ignition of a fire. Includes but not limited to grinding, cutting, arc welding, gas welding or any activity that produces a spark or a flame. WMS will not be issued on days that are a total fire ban, where the fire danger rating is very high or above, and on days with high wind present. Appropriate equipment such as fire blankets and fire extinguishers are to be made available and detailed on the WMS. WMS issued by appropriate trained and authorised personnel. Register of authorised personnel maintained.	BRWF Site Manager
Hazardous Materials		
Management of hazardous materials	Undertaken as per the soil and water management plan	BRWF Site Manager

12.4 Management Controls

Control	Purpose	Reference
Incident reports	For recording emergency situations, incidents of works undertaken on high fire rating days, total fire bans or without permits. Also incidents of equipment used that sparked, failure of extinguishers and/or other fire fighting equipment.	BRWF_R_05_Safety Incidents
Fire ratings	Dissemination of fire ratings	BRWF_PR_01_Fire Ratings
Site Sign on Logbook	To identify location of staff in even of emergency and check off who has evacuated site.	BRWF_PR_04_Site Attendance
Training Register	Identifies training for emergency response and wardens	BRWF_R_08_Training Register

Inspections Check sheets	To include identification of build-ups of combustibles	BRWF_F_01_Inspection Check Sheet
Equipment Register	Records of fire fighting equipment on Site	BRWF_R_15_Equipment Register
Maintenance Records	Records of maintenance on major fire fighting safety equipment	Maintenance Management System
Inspection Registers	Record of inspections for fire readiness	BRWF_R_10_Inspection register
Emergency Response Manual	Plan containing all specific actions and information to respond to an emergency	BRWF_MP_06_Emergency Response Manual

12.5 Monitoring and Inspection

Description	Frequency
Monitor all work areas for appropriate fire extinguishers, tagged electrical equipment, correctly stored combustibles, build up of combustible materials and notify BRWF Site Manager if any concerns. Noted in Operations Manager Daily Site Log.	Adhoc
Review of emergency and fire preparedness and against planning conditions, included as part of management review.	As required
Liaison, inspection and regular fire prevention inspections by the Cooma rural fire service and implement any recommendations.	Annually, prior to the commencement of the fire season.

12.6 Key Performance Indicators

KPI	Measurement
Successful evacuation of Site under emergency conditions.	Incident reports
No incidents of work being undertaken without a WMS or on total fire ban days.	Corrective Action Requests

13 Noise and Vibration Management Plan

This Noise and Vibration Management Plan (NVMP) details the processes and control measures to mitigate impacts of operational activity that has the potential to give rise to excessive noise or vibration. The NVWP will comply with the State and Federal CoA, the EPL requirements and Statement of Commitments.

The control measures and mitigation processes shall be implemented by all parties, whether directly employed by BRWF or subcontracted, and will apply to all activities for the Project which may give rise to excessive noise or vibration.

13.1 Applicable Guidelines

- *Wind Farms – Environmental Noise Guidelines*, South Australia EPA, 2003 (SA EPA Guidelines)
- *Assessing Vibration: A Technical Guideline*, DECC, February 2006 (Vibration Guidelines)

13.2 Pre-existing Noise

There are six inhabited dwellings within 2.5 km of a WTG forming part of the Project and no non-involved residences within 3 km of Stage One.

The Monaro Highway is sufficiently far away to the east of the Project Site that background noise levels are unlikely to be affected by road traffic noise. The Snowy River Way intersects the southern cluster of WTGs and is trafficked by local traffic and tourists, particularly during the summer and winter (snow season) periods. All properties surrounding the Site have an ambient background noise environment that is determined by predominantly natural sources which are largely wind influenced.

13.3 Noise Impacts from Operating WTG

The primary noise source from the operational Project will be the aerodynamic noise generated from the rotation of wind turbine blades. Noise is generated by the blades passing through the air and passing the tower creating a 'swishing' sound, with the noise primarily arising at the tip and back edge of the rotor blade.

Stage One has been designed to minimise WTG operational noise through the use of slower spinning wind turbines (GE 1.6-100 WTGs) for those turbines located nearest to residences. These wind turbines are also fitted with GE's Low Noise Trailing Edge technology which utilises serrations on the trailing edge of the blades to reduce noise.

13.3.1 Detailed Design Noise Report

A quantitative noise assessment was conducted by SLR Consulting Australia Pty Ltd (previously Heggies Pty Ltd) as part of the Environmental Assessment for the Project. This assessment was updated to take into account the Stage One final layout design and final WTG model. A Detailed Design Noise Report (DDNR) was produced (issued 4th April 2014) to satisfy **Condition 2.19** of the State CoA. The assessment was based on 'worst case' scenario noise levels and the DDNR demonstrated that Stage One will comply with the CoA and EPL requirements related to WTG operational noise. A map of predicted noise contours from the DDNR is included in **Appendix J**.

13.3.2 Compliance Monitoring

Noise compliance monitoring will be undertaken within 12 months of the final commissioning of Stage One in accordance with **Condition 3.1** of the State CoA and **L3.5** of the EPL. A Noise Compliance Report summarising the noise compliance monitoring results and methodology will be provided to DoPE and the EPA within one month of the completion of monitoring. Chapter 4 of the SA EPA Guidelines details the requirements for compliance checking and these guidelines will be followed to demonstrate compliance.

13.4 Noise Impacts from General Operational Activities

Stage One operational activities involve the operation of the BRWF Substation, light vehicle travel across the Site roads, operational works in the Service Compound and maintenance activities at individual turbines. Noise generated from these activities would be low level and generally only audible during working hours.

General vehicle noise from traffic associated with the Project travelling along the public roads may also be audible at nearby residences, in particular engine brakes of trucks.

13.5 Substation Noise

The BRWF Substation location has been chosen to minimise visibility from public viewpoints and avoid noise impacts. The nearest inhabited residence is 'Boco' which is an involved residence located 2km from the substation. The noise assessment performed by SLR Consulting Pty Ltd for the Environmental Assessment showed that predicted noise levels from the substation are expected to be less than 28 dBA under worst case propagation conditions. This is well within the criteria given in **Condition 2.20** of the State CoA.

13.6 Overhead Transmission Line

There is a short section of overhead 33 kV transmission line that connects the north eastern cluster of WTGs to the BRWF Substation (see **Appendix A: Site Plan**). This transmission line is located 2km from the nearest inhabited residence ('Boco') and, therefore, no corona and aeolian noise impacts are expected.

13.7 Vibration

No impacts from vibration are expected during operations with no blasting activities required for this phase of the Project. WTG bearings will be maintained to ensure smooth and efficient operation and vibration impacts from operating wind turbines will be negligible. Vibrations caused by Site traffic and maintenance activities will be well within the Vibration Guidelines.

13.8 Noise and Vibration Complaints

Complaints specifically relating to operational noise and vibration will be managed through this same procedure as outlined in Section *4.7 – Complaints* with the complaint being entered into the complaints register. However, when related to operational noise and vibration, the following extended procedure will also be followed:

1. Consultation - BRWF representative to contact the person or group who made the complaint to collect further information on the issue. Information to be collected includes:

   a. Nature of noise: Tonal? Intermittent, pulsing or continuous? High or low frequency? Single turbine in particular or whole wind farm?
   b. Time of day: day/night/morning/evening?
   c. Location: Distance from nearest wind turbine. Inside/outside dwelling? Windows open?
   d. Weather conditions: Wind speed and direction, temperature, rain/humidity?
2. Check operational data at nearby turbines to investigate potential operational issues. This may especially be applicable for tonal noise where data from vibration sensors may indicate a failure within the bearings or gearbox. Any operational issues that could potentially result in higher noise emissions would be rectified as soon as possible.
3. Has compliance testing recently been undertaken demonstrating compliance at the relevant receptor (or receptors nearby and closer to the wind farm)? If this is the case and the wind turbines are maintained and operated correctly, further compliance testing should not be required. While wind farm noise should not change over time, if testing has not been performed recently and there is a potential for exceedance (see point 4 below) further testing may be warranted.
4. Evaluate the potential for exceedance at the relevant receptor by considering the predicted noise levels in the *Detailed Design Noise Report* (DDNR), the measurements from the latest noise compliance monitoring and the distance of the receptor from the wind farm. If there is significant potential for exceedance at this receptor and compliance monitoring has not been performed recently, further testing will be conducted. Otherwise, the person or group who made the complaint will be consulted and the results of the DDNR and latest compliance monitoring explained, along with the process that was undertaken to investigate their complaint.
5. If the conditions discussed above are met, noise testing will be commissioned by BRWF. A report will be provided to the person or group who made the complaint and the EPA. If the wind farm is found to exceed the EPA Licence conditions, the *WTG Operation Noise Mitigation Strategy* (see below) will be applied and, if required, further testing will be undertaken. BRWF will work with all concerned parties to ensure that compliance is achieved as quickly as possible.

While the above procedure will be used as the principal guide to determine when any additional testing should be undertaken, BRWF will consider further testing in exceptional circumstances and where warranted to demonstrate to the community compliance with the CoA and EPL requirements.

13.9 WTG Operation Noise Mitigation Strategy

In the event of the noise criteria for operational wind turbine being exceeded, the following mitigation strategy will be applied in order:

1. Enter into an agreement with the relevant landowner.
2. Reduction of turbine noise through low noise operating modes and sector management.
3. Building of acoustic treatments and/or noise screening at the discretion of the relevant landowner.

The above mitigation strategy is consistent with **Condition 3.2** of the State CoA and **Statement 9** of the Statement of Commitments.

13.10 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Noise from WTG exceeding allowable levels as modelled	WTG operating above design levels.	Exceeding regulatory noise levels and requirements to modify operation to comply, fines and disturbance to local residences	Rare	Major	Medium	Confirm noise levels through measurement, perform appropriate maintenance and modify plant operation to achieve compliance
Noise from operating BRWF Substation	Operating plant not performing to specification	Exceeding regulatory noise levels and requirements to modify operation to comply, fines and disturbance to local residences	Rare	Minor	Low	Repair of plant
Noise from workshop	Use of high noise tools	Disturbance	Rare	Minor	Low	Use of tools during day time work hours
Vehicle noise	Vehicles on public roads using engine brakes	Disturbance	Possible	Negligible	Low	Warning signage for Project traffic
Major repairs	Heavy plant and machinery	Disturbance	Rare	Minor	Low	Measurement of noise levels outside of work hours to ensure allowable limits not exceeded

13.11 Management Strategies

Management Actions	Strategies	Responsibilities
General Site Noise		
Delivery times	General prohibition against night time or after hour deliveries, except in emergencies.	Operations Manager
Use of heavy plant	Heavy plant used during standard working hours.	BRWF Site Manager
Noise from workshop activities	Operation of tools during working hours, or noise suppression measures put in place. WMS required to use tools out of hours.	BRWF Site Manager
Noise from WTG maintenance activities	Operation of tools during working hours, or noise suppression measures put in place. WMS required to use tools out of hours.	BRWF Site Manager
Disassembly/assembly of Wind Turbines	Able to operate out of standard operating hours, but assessment of noise levels, consultation with nearest residences within 2 km of works, noise monitoring if requested.	BRWF Site Manager

WTG Noise		
Noise compliance	Independent report of noise compliance assessment, provided to DoPE and the EPA within 12 months of commissioning	Environment Officer
Exceeding of allowable noise levels	Implementation of *WTG Operation Noise Mitigation Strategy*	Operations Manager

13.12 Management Controls

Control	Purpose	Reference
Complaints Register	To record details of noise complaints from landowners and general public	BRWF_R_02_Complaints Register
Work Method Statement (WMS)	To allow non permitted noise generating activities out of hours	Work Method Statement Procedure

13.13 Monitoring and Inspection

Description	Frequency
Noise Monitoring for Compliance	Within 12 months of commissioning of Stage One.

13.14 Key Performance Indicators

KPI	Measurement
No un-actioned complaints in regards to noise and vibration	Complaints Register
Resolution of noise complaints within 3 months	Resolution reports and agreements
Operational wind turbine noise meets CoA and EPL requirements	Noise Compliance Report

14 Waste Management Plan

14.1 Background

The purpose of this Waste Management Plan (WMP) is to detail management and control measures for the storage, handling and disposal of wastes generated during the operational phase in accordance with the State and Commonwealth CoA, the EPL requirements and Statement of Commitments.

14.1.1 Applicable Legislation

Waste Classification Guidelines Part 1: Classifying Waste (DECC, 2008) or any future guideline that may supersede this guideline.

14.1.2 Waste Types

Waste types generated during the operation of the BRWF will include but may not be limited to the following:

Waste Stream	Classification
Scrap metal - off-cut fabricated steel	
Timber & general packaging	
Cable off cuts (Electrical Repairs)	
Human Waste (Sewage)	
Controlled Waste including oils, solvents and fuels	Hazardous waste
Paper and Cardboard	Recycable
Plastics (PET)	Recycable
Metals (copper, aluminium, steel)	Recycable
Domestic waste	General solid waste (putrescibles)
Office waste	

14.1.3 Waste Management Centres

All waste is to be collected and disposed of by a licensed waste contractor. The licensed waste contractor will provide the required waste receptacles and the frequency of pickups will be negotiated on Site.

Nearby waste disposal centres include:

Cooma Landfill

8448 Monaro Highway, Cooma

Types of waste able to be accepted at the Cooma landfill include:

- Recyclables;
- Mixed waste;

- Green waste;
- Drum muster;
- Construction and demolition waste.

14.1.4 Potential Impacts

Primary activities across the Site that are expected to generate waste include the office building (general office waste, sewage, recyclables), workshops (general waste, hazardous waste, recyclables and packaging), substation (general waste, hazardous waste, recyclables) and wind turbines (general waste, hazardous waste, recyclables). Where further civil works take place, waste consisting of excess soils may be generated.

14.1.5 Management Principles

The management of waste generated during the operation of BRWF (Stage One) shall be in accordance with the Waste Classification Guidelines and the principles of ecologically sustainable development, with an emphasis on maximum conservation of resources as provided for in the BRWF Environmental Policy. General principles of waste management include:

- Avoidance and Reduction;
- Re-use;
- Recycle;
- Recover; and,
- Disposal.

14.2 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Pollution of environment with windblown waste	Loose waste around Site and blowing out of vehicles	Waste collecting in waterways and pasture, causing issues for fauna and aquatics	Possible	Negligible	Low	Housekeeping procedures and inspections
Soil contaminations	Leakage of Hazardous materials	Pollution of protected and pasture areas	Rare	Moderate	Low	Procedures for proper storage and handling and provision of equipment
Attracting rodents	Organic waste not properly disposed of	Health of Site personnel	Possible	Negligible	Low	Regular removal of wastes
Breach of waste regulations	Improper disposal	Fines	Rare	Minor	Low	Procedures for proper disposal by licensed contractors

14.3 Management Strategies

Management Actions	Strategies	Responsibilities
General housekeeping	All personnel working on the Site are responsible for good housekeeping practices across the entire Site area and around the substation and Service Compound. Any litter or rubbish is to be picked up and disposed of per this procedure.	All personnel
Waste collected on Site	All waste generated at wind turbines or other work areas is to be picked up and brought back to the Service Compound by the responsible personnel.	All personnel
Waste from off Site	Requirement in Site rules that no waste can be collected from off Site and disposed of or stored on Site. Included in Site Induction.	BRWF Site Manager
Site Inspections	Regular Site Inspections to ensure that overall Site cleanliness is maintained.	BRWF Site Manager
Waste containers	General waste containers and recycling containers will be located throughout the workshop and service building. Receptacles and recycling will be emptied into the main waste containers as required.	BRWF Site Manager
Transportation of waste	All vehicles and skips to be covered when transporting waste.	BRWF Site Manager
Rubbish in vehicles	All vehicles cleared of rubbish and deposited into appropriate receptacles as required.	Vehicle Owners
Smoking	Smoking on Site is only permitted within vehicles where individual company policies allow, and within the designated smoking area within the Service Compound. Cigarette butt disposal containers are provided in the designated zone and for vehicles requiring them. Cigarette butts are deposited in the general waste containers. All cigarettes are to be fully extinguished prior to disposal.	All personnel
Incineration of waste	Incineration of waste, including vegetation and tree trimmings, is prohibited. Included as part of Site Induction Package.	BRWF Site Manager
Green waste	Green waste is to be removed from Site to a licensed green waste disposal. The exception is where trees and logs can be placed to provide suitable habitat, to be done in consultation with an ecologist.	BRWF Site Manager/ Environment Officer
Metal waste	A metal recycling skip is to be maintained in the Service Compound and emptied when full. Metals to be sent to a recycling centre.	BRWF Site Manager

Recyclables	A recycling skip is to be maintained in the Service Compound and emptied when full. Regular inspections to ensure integrity of waste. Signage on information boards to detail what is considered recyclable. Information also included in induction packs. Includes aluminium cans, PET bottles.	BRWF Site Manager
Paper and cardboard	A separate skip is to be maintained for paper and cardboard, which must be covered and emptied when full. Signage on information boards to detail what is considered recyclable.	BRWF Site Manager
Organic waste	Organic waste is to be collected in separate containers and removed from Site regularly to prevent vermin. Can be disposed of to staff member's compost bins or local landowner's compost bins on arrangement with persons.	BRWF Site Manager
Soils	Where excess soils are created as part of any excavation, soils are to be redistributed and, if required, the area is to be rehabilitated per the rehabilitation plan. If soils have to be removed from Site, they are removed to Cooma Landfill.	BRWF Site Manager
Hazardous wastes	Managed as per the hazardous waste management strategies as outlined in the Soil and Water Management Plan.	BRWF Site Manager
Human wastes	Managed as per the Soil and Water Management Plan.	BRWF Site Manager

14.4 Management Controls

Control	Purpose	Reference
Site Inductions	To set out basic responsibilities and information for waste management	BRWF_TP_01_Site Inductions
Inspection Forms	To identify waste issues	BRWF_F_01_Site Inspection Checklist
Complaints Register	To record complaints in relation to waste	BRWF_R_02_Complaints Register
Hazardous Material Register	Treatment of hazardous wastes	BRWF_R_14_Hazardous Materials Register
MSDS Records	Treatment of hazardous wastes	MSDS file in Site Office
Waste Disposal Register	Disposal of wastes including sewage	BRWF_R_16_Waste Disposal Register

14.5 Monitoring and Inspection

Description	Frequency
Inspection of general housekeeping and segregation of waste	Monthly

Checks of MSDS, hazardous waste registers and disposal records	As required

14.6 Key Performance Indicators

KPI	Measurement
No waste or litter observed on the Site	Inspection Reports
All waste disposed of appropriate manner	Waste Disposal Records
No loose or unsecured waste observed	Inspection Reports
No complaints from community/public	Complaints Register
Bins emptied on a regular basis to prevent overflowing and attracting pests and vermin	Inspection Reports
100% compliance with Environmental Procedures, Permits, approvals and OEMP	Audits

15 Electromagnetic Interference Plan

15.1 Background

This Electromagnetic Interference Plan (EIP) outlines the processes and control measures to mitigate impacts of operational activity that have the potential to give rise to electromagnetic interference.

Electromagnetic signals (or radio waves) are transmitted throughout the country as part of telecommunication systems by a wide range of operators. Such systems are used for radar, radio broadcast, television, mobile phones and mobile and fixed radio transmitters.

There is the potential for electromagnetic interference from any large structure, including wind turbines, which occur within or close to the signal path. Signals can be interfered with or reflected by the rotating blades of a wind turbine, which could degrade the performance of the signal.

15.1.1 Potential Impacts

The Project has been designed to avoid interference with point to point radio communication links, with all WTGs placed outside of the First Fresnel zone (or zone of electromagnetic interference) of any links. In addition, no turbines are located within a disruptive distance of a transmitting or communication tower.

Mobile phone reception is mainly dependent on the position of the receiver. The receiver is able to move around both natural and unnatural obstacles in the landscape and wind turbines will have minimal impacts on signal quality.

There is expected to be minimal impact on television picture quality for residences surrounding the Project. There is still the chance, however, that some landowners in the area may be effected, in particular those where the Project interferes with a direct signal from the local transmitting tower.

15.1.2 Management Principles

The key principle of the EIP is to ensure that there are minimal impacts on radio communications, mobile phone reception and television reception due to electromagnetic interference.

15.2 Baseline Television Assessment

Prior to the commencement of commissioning of the Project, BRWF performed an assessment of the existing quality of television reception at a representative sample of receptors located within 5 kilometres of WTGs. This assessment is in line with **Condition 2.37** of the Conditions of Approval and will allow interference attributable to the Project to be determined with more certainty.

15.3 Risks

Risk Description	Cause	Potential Impacts	Probability	Consequence	Risk Score	Mitigation Strategies
Interference to registered communication	Blockage and scattering of signal by WTGs	Loss of service, financial loss to communication service provider,	Rare	Moderate	Low	Modification of antennas and installation of amplifiers to boost

licensees		potential legal action				signals
Mobile phone reception interference in the vicinity of the Project	Blockage and scattering of signal by WTGs	Annoyance for local residences	Rare	Negligible	Low	Investigate options for improving reception, including switching providers and technical solutions for improving reception
Television reception interference at residences within 5km of the Project	Blockage and scattering of signal by WTGs	Annoyance for local residences	Possible	Minor	Medium	Modification or replacement of antenna or parasitic antenna system, land line to a better located antenna or installation of a satellite service

15.4 Management Strategies

Management Actions	Strategies	Responsibilities
Rectification of television reception	As per **Condition 2.38** of the State CoA, in the event of a complaint regarding television/radio transmission during the operation of the Project, from a receptor located within 5 kilometres of a wind turbine, BRWF shall investigate the quality of transmission at the receptor compared to the pre-commissioning situation and where any transmission problems can be reasonably attributable to the Project, rectify the problems through the implementation of such measures as: a) modification to or replacement of receiving antenna; b) installation and maintenance of a parasitic antenna system; c) provision of a land line between the affected receptor and an antenna located in an area of favourable reception; or d) other feasible measures (including satellite receivers).	Environment Officer
Rectification of radio communications	As per **Condition 2.39**, in the event that any disruptions to radio communication service links (installed before construction of the Project) arise as a result of the Project, BRWF shall undertake appropriate remedial measures in consultation with the relevant licensee to rectify any issue within three months of the problem being identified. Such measures may include: a) modification to or relocation of the existing antennae; b) installation of a directional antennae; and/ or c) installation of an amplifier to boost the signal strength.	Environment Officer

15.5 Management Controls

Control	Purpose	Reference
Complaints Register	To record details of noise complaints from landowners and general public	BRWF_R_02_Complaints Register

15.6 Monitoring and Inspection

Description	Frequency
Respond to complaints regards TV reception as per complaints procedures.	Adhoc

15.7 Key Performance Indicators

KPI	Measurement
No un-actioned complaints in regards to electromagnetic interference	Complaints Register
Resolution of electromagnetic interference complaints within 3 months	Resolution reports and agreements

Appendix A: Site Plan

Appendix B: Operational Conditions of Approval

The following table details CoA and commitments that are applicable to environmental management for the *operations phase* of the Project. The full CoA and commitments are available here:

- NSW State Approval: http://majorprojects.planning.nsw.gov.au/
- Statement of Commitments (Chapter 20, Volume 1 of EA): http://majorprojects.planning.nsw.gov.au/
- Commonwealth Approval (ref 2009/4905): http://www.environment.gov.au/epbc
- EPL (Licence number 20434): http://www.epa.nsw.gov.au/prpoeoapp/

Reference	Description	Addressed in OEMP
NSW STATE APPROVAL		
2.7	The Proponent shall ensure that any disturbance to watercourses and/or associated riparian vegetation is rehabilitated to a standard equal to or better than the existing condition in consultation with the NOW and DPI (Fisheries) within six months of the cessation of ***construction*** activities at the relevant area . Any revegetation measures undertaken shall be monitored and maintained consistent with the requirements of condition 2.8.	*Section 5 – Soil and Water Management Plan*
2.8	The Proponent shall implement a revegetation and rehabilitation program for all areas of the development footprint which are disturbed during the ***construction*** of the project however, which are not required for the ongoing ***operation*** of the project including temporary ***construction*** facility sites and sections of ***construction*** access roads. The Proponent shall ensure that all revegetation measures are implemented progressively where possible and in all cases within six months of the cessation of ***construction*** activities at the relevant area. Unless otherwise agreed to by the Director-General, the Proponent shall monitor and maintain the health of all revegetated areas until such time that the plantings have been verified by an independent and suitably qualified expert (whose appointment has been agreed to by the Director-General) as being well established, in good health and self sustaining.	*Section 7 – Landscape and Rehabilitation Management Plan*
2.16	The Proponent shall ensure that the vibration resulting from construction and operation of the project does not exceed the preferred values vibration (for low probability of adverse comment) presented in Assessing Vibration: A Technical Guideline (DECC, February 2006), at any sensitive receptor.	*Section 13 – Noise and Vibration Management Plan*
2.17	The Proponent shall design, operate and maintain the project to ensure that the equivalent noise level ($L_{Aeq\ (10\text{-}minute)}$) from the wind turbine component of the project does not exceed the following limits at any existing sensitive receptor: a) 35 dB(A); or b) the existing background noise level ($L_{A90\ (10\text{-}minute)}$) correlated to the integer wind speed at the turbine hub height at the wind farm site by more than 5 dB(A), whichever is the greater, for each integer wind speed (measured at hub height) from cut-in to rated power of the wind turbine generator. For the purpose of assessment of noise contributions specified under conditions 2.17: a) 5 dB(A) shall be applied to measured noise levels where tonality is present. The presence of tonality shall be determined using the methodology detailed in Wind Turbine Generator Systems- Part 11: Acoustic Noise Measurement Techniques IEC 61400-11:2002 or its latest edition; and b) noise from the project shall be measured at the most affected point within the residential boundary, or at the most affected point within 20 metres of the dwelling, where the dwelling is more than 20 metres from the boundary.	*Section 13 – Noise and Vibration Management Plan*

Reference	Description	Addressed in OEMP
2.18	Notwithstanding conditions 2.17 of this approval, the noise limits specified under conditions 2.17 does not apply to any sensitive receptor where a noise agreement is in place between the Proponent and the respective landowner(s) in relation to noise impacts and/or noise limits. Where a noise agreement has been entered into, the noise agreements shall satisfy the requirements of Guidelines for Community Noise (WHO, 1999) and Section 2.3 of Wind Farms: Environmental Noise Guidelines (South Australian Environmental Protection Agency, 2003).	*Section 13 – Noise and Vibration Management Plan*
2.19	At least 6 months prior to the commencement of commissioning of the wind turbines, the Proponent shall prepare and submit a Detailed Design Noise Report (Wind Turbines) for the Director-General's approval. The Detailed Design Noise Report (Wind Turbines) shall predict noise levels at each of the receptor locations identified in condition 2.17 generally consistent with the procedures presented in Wind Farms - Environmental Noise Guidelines (South Australian Environmental Protection Agency, 2003) considering the final turbine model and layout of the project and worst case operating and meteorological factors to demonstrate that noise levels associated with the final design would be no greater than the noise limits identified in condition 2.17 at surrounding sensitive receptors.	*Section 13 – Noise and Vibration Management Plan*
2.20	The Proponent shall design, construct, operate and maintain the BRWF Substation to ensure that the noise contributions from these components to the background acoustic environment do not exceed the maximum allowable noise contributions specified in Table 3, at the nearest existing sensitive receptor to the substation. The maximum allowable noise contributions apply under wind speeds up to 3 ms-1 (measured at 10 metres above ground level), or under temperature inversion conditions of up to 3 ºC/ 100 metres and wind speeds of up to 2m/s at 10 metres above the ground. (*See CoA for Table 3 and full condition*).	*Section 13 – Noise and Vibration Management Plan*
2.21	The requirements of condition 2.20 do not apply if a negotiated agreement consistent with the requirements of Section 8.3 of the *New South Wales Industrial Noise Policy* (EPA, 2000), exists between the Proponent and the relevant sensitive receptor.	*Section 13 – Noise and Vibration Management Plan*
2.22	The Proponent shall ensure that any overhead transmission line associated with the project is designed, constructed and operated to minimise the generation of corona and aeolian noise as far as ***reasonable and feasible*** at nearest existing sensitive receptors.	*Section 13 – Noise and Vibration Management Plan*
2.23	Within six months of the commissioning of the project, the Proponent shall prepare and submit a Visual Impact Verification Report for the Director-General's approval, confirming the visual impacts of the wind turbines at each non-associated receptor identified in the ***Environmental Assessment*** to be moderately or highly impacted. The Report shall consider the final model and layout of turbines for the project as well as any site-specific mitigating factors at the receptor. The Report shall identify all ***reasonable and feasible*** screen planting options available at each receptor for which impacts have been verified to be moderate to high including demonstrating that these measures have been determined in consultation with affected receptors. The Proponent shall ensure that the identified screen plantings are implemented within a timeframe agreed to with the landowner, however no later than within 18 months of the approval of the Visual Impact Verification Report by the Director-General. Unless otherwise agreed to by the Director-General, the Proponent shall monitor and maintain the health of the plantings until such time that the plantings have been verified by an independent and suitably qualified expert (whose appointment has been agreed to by the Director-General) as being well established and in good health. Any plantings which are unsuccessful during that time shall be replaced by the Proponent at no cost to the landowner.	*Section 7 – Landscape and Rehabilitation Management Plan*
2.25	The Proponent shall ensure that shadow flicker arising from the ***operation*** of the project shall not exceed 30 hours/annum at any non-associated receptor.	It was demonstrated in the EA that no non-associated receptors will exceed 30 hours/annum of shadow flicker. Stage One utilises smaller WTGs than those used in the 'worse-case' assessment and a subset of the approved 125 WTG layout. Any complaints regarding shadow flicker will be dealt with using the complaints process (*Section 4.7 – Complaints*).

Reference	Description	Addressed in OEMP
2.27	With the exception of aviation hazard lighting implemented in accordance with the requirements of this condition, no external lighting other than low intensity security night lighting is permitted on site unless otherwise agreed or directed by the Director-General. Prior to the commencement of ***construction,*** the Proponent shall consult with the Civil Aviation Safety Authority on the need for aviation hazard lighting in relation to the wind turbines and implement such lighting only where it is specifically required by the Civil Aviation Safety Authority. In this case, aviation hazard light shall be implemented in a manner that minimises visual intrusion to surrounding non-associated receptors as far as ***reasonable and feasible***. The potential for any intrusion from night lighting shall be considered as part of the Visual Impact Verification Report required to be prepared under condition 2.23.	This condition was modified to allow for limited high intensity lighting for unplanned maintenance work (DoPE Letter 16/3/2013 ref 09/02014-4). Any complaints regarding lighting will be dealt with using the complaints process (*Section 4.7 – Complaints*). DoPE reserves the right to revoke or amend this approval in the light of complaints.
2.32	The Proponent shall ensure that all project components on site are designed, constructed and operated to minimise ignition risks, provide for asset protection consistent with relevant RFS design guidelines (Planning for Bushfire Protection 2006 and Standards for Asset Protection Undated) and provide for necessary emergency management including appropriate fire-fighting equipment and water supplies on site to respond to a bush fire.	*Section 12 – Emergency Response Plan*
2.33	Throughout the ***operational*** life of the project, the Proponent shall regularly consult with the local RFS to ensure its familiarity with the project, including the ***construction*** timetable and the final location of all infrastructure on the site. The Proponent shall comply with any reasonable request of the local RFS to reduce the risk of bushfire and to enable fast access in emergencies.	*Section 12 – Emergency Response Plan*
2.35	Should increases to the costs of aerial agricultural spraying on any non-associated property surrounding the site be attributable to the ***operation*** of the project, the Proponent shall fully fund to the affected landowner, the cost difference between current aerial agricultural spraying and the increased cost.	Respond when advised through complaint process.
2.36	The Proponent shall store and handle all dangerous goods (as defined by the Australian Dangerous Goods Code) and combustible liquids, strictly in accordance with: a) all relevant Australian Standards; b) a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and *c)* the EPA's Environment Protection Manual Technical Bulletin *Bunding and Spill Management*. In the event of an inconsistency between requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.	*Section 5 – Soil and Water Management Plan*
2.38	In the event of a complaint regarding television/radio transmission during the ***operation*** of the project, from a receptor located within 5 kilometres of a wind turbine, the Proponent shall investigate the quality of transmission at the receptor compared to the pre-commissioning situation and where any transmission problems can be reasonably attributable to the project, rectify the problems within three months of the receipt of the complaint, through the implementation of such measures as: a) modification to or replacement of receiving antenna; b) installation and maintenance of a parasitic antenna system; c) provision of a land line between the affected receptor and an antenna located in an area of favourable reception; or d) other feasible measures. If interference cannot be overcome by the measures outlined in a) to d), the Proponent shall negotiate with the impacted landowner about installing and maintaining a satellite receiving antenna. The Proponent shall be responsible for all costs associated with the mitigation measures.	*Section 15 – Electromagnetic Interference Plan*
2.39	The Proponent shall design and construct the project in consultation with registered communications licensees (including emergency services) to ensure that risks to these services are minimised as far as ***reasonable and feasible***. In the event that any disruptions to radio communication service links (installed before ***construction*** of the project) arise as a result of the project, the Proponent shall undertake appropriate remedial measures in consultation with the relevant licensee to rectify any issue within three months of the problem being identified.	*Section 15 – Electromagnetic Interference Plan*

Reference	Description	Addressed in OEMP
	Such measures may include: a) modification to or relocation of the existing antennae; b) installation of a directional antennae; and/ or c) installation of an amplifier to boost the signal strength.	
2.43	The Proponent shall construct and operate the project in a manner that minimises dust generation from the site, including wind-blown and traffic-generated dust as far as practicable. All project related activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should visible dust emissions attributable to the project occur during ***operation*** and ***construction,*** the Proponent shall identify and implement all practicable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.	*Section 10 – Traffic Management Plan* *Section 9 – Air Quality Management Plan*
2.44	Except as may be expressively provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 which prohibits the pollution of waters.	*Section 5 – Soil and Water Management Plan*
2.46	The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	*Section 14 – Waste Management Plan*
2.47	The Proponent shall maximise the reuse and/or recycling of waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.	*Section 14 – Waste Management Plan*
2.48	The Proponent shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (DECC, 2008), or any future guideline that may supersede that document and where removed from the site is only directed to a waste management facility lawfully permitted to accept the materials.	*Section 14 – Waste Management Plan*
2.49	The Proponent shall ensure that no green waste is burnt on site during the life of the project.	*Section 14 – Waste Management Plan*
3.1	Within 12 months of the commencement of ***operation*** of the project (or such other period as agreed to by the Director-General), the Proponent shall prepare a Noise Compliance Report for the approval of the Director-General which assesses the performance of the project against the operational noise criteria and/ or standards specified in conditions 2.17 and 2.20. The compliance assessment shall be undertaken consistent with the procedures presented in Wind Farms - Environmental Noise Guidelines (South Australian Environmental Protection Agency, 2003) for the wind turbines and the New South Wales Industrial Noise Policy (EPA, 2000) for the substation and at period(s) commensurate with the worst case operational and meteorological factors relevant to the specific project component. Specifically, in relation to the wind turbines this includes monitoring at all relevant rated wind speeds where noise exceedances may occur and the range of stability class conditions expected at receptor locations. The Noise Compliance Report shall specifically consider any modulation related noise generation from the wind turbines and any cumulative noise impacts from the ***operation*** of the wind turbines and the substation. The compliance assessment results shall be submitted to the Director-General within one month of the completion of the monitoring. The Director-General may request that additional noise compliance monitoring be undertaken and completed within a specified timeframe.	*Section 13 – Noise and Vibration Management Plan*

Reference	Description	Addressed in OEMP
3.2	In the event that compliance monitoring indicates that noise from the wind turbines exceeds the noise limits specified under conditions 2.17 and 2.20, the Proponent shall identify ***reasonable and feasible*** noise mitigation and management measures to achieve compliance with the noise limits in the Noise Compliance Report, including a timetable for their implementation. Remedial measures shall include, in the first instance, all reasonable and feasible measures to reduce noise from the project, including but not necessarily limited to sector management of wind turbines. Once all ***reasonable and feasible*** source controls are exhausted, remedial measures may include offering building acoustic treatments and/or noise screening to affected residents, but may only be used to address noise limit exceedances at the absolute discretion of the relevant landowner/resident. The Noise Compliance Report shall include details of at least preliminary discussions with affected landowners, where at-receiver measures are proposed. The Proponent shall implement all mitigation measures approved as part of the Noise Compliance Report in accordance with the implementation timetable identified in the Report. The requirements of this condition do not apply where a noise agreement exists between the Proponent and the relevant receptor in accordance with conditions 2.18 or 2.21.	*Section 13 – Noise and Vibration Management Plan*
3.3	Prior to the commencement of ***construction***, the Proponent shall prepare and submit for the approval of the Director-General a ***Bird and Bat Adaptive Management Program***, which takes account of bird/ bat monitoring methods identified in the current editions of AusWEA Best Practice Guidelines for the Implementation of Wind Energy Projects in Australia and Wind Farm and Birds: Interim Standards for Risk Assessment . The Program shall be prepared and implemented by a suitably qualified expert, approved by the Director-General. The Program shall incorporate Monitoring, and a Decision Matrix that clearly sets out how the Proponent will respond to the outcomes of monitoring. It shall: a) incorporate an ongoing role for the suitably qualified expert; b) set out monitoring requirements in order to assess the impact of the project on bird and bat populations, including details on survey locations, parameters to be measured, frequency of surveys and analyses and reporting. The monitoring program shall be capable of detecting any changes to the population of birds and/ or bats that can reasonably be attributed to the operation of the project, that is, data may be required to be collected prior to the commencement of construction; c) incorporate a decision making framework that sets out specific actions and when they may be required to be implemented to reduce any impacts on bird and bat populations that have been identified as a result of the monitoring; d) identify 'at risk' bird and bat groups, seasons (such as wet seasons where bid species may be attracted to nearby wetlands) and/or areas within the project site which may attract high levels of mortality and include monthly mortality assessments and periodic local population census' and bird utilisation surveys; e) identify potential mitigation measures and implementation strategies in order to reduce impacts on birds and bats such as minimising the availability of raptor perches, swift carcass removal, pest control including rabbits, use of deterrents, and sector management including switching off turbines that are predicted to or have had an unacceptable impact on bird/ bat mortality at certain times; and f) identify matters to be addressed in periodic reports in relation to the g) outcomes of monitoring, the application of the decision making framework, the mitigation measures identified, progress with the implementation of such measures, and their success. The Reports referred to under part f) shall be submitted to the Director-General on an annual basis for the first five years of ***operation*** and every two years thereafter from the commencement of operation (unless otherwise agreed to by the Director-General), and shall be prepared within two months of the end of the reporting period. The Director-General may, at the request of the Proponent, vary the	*Appendix H: Bird and Bat Adaptive Management Plan*

Reference	Description	Addressed in OEMP
	reporting requirement or period by notice in writing to the Proponent. The Proponent may request the Director-General to consider a variation to the reporting requirements at anytime. The Proponent is required to implement ***reasonable and feasible*** mitigation measures as identified under part e) where the need for further action is identified through the Bird and Bat Adaptive Management Program, or as otherwise agreed with the Director-General.	
4.1	Prior to the commencement of ***construction,*** the Proponent shall develop and implement a Compliance Tracking Program for the project, to track compliance with the requirements of this approval during the ***construction*** and ***operation*** of the project and shall include, but not necessarily limited to: a) provisions for periodic review of the compliance status of the project against the requirements of this approval, Statement of Commitments and relevant environmental approvals, licences or permits required and obtained in relation to the project; b) provisions for periodic reporting of compliance status against the requirements of this approval and Statement of Commitments to the Director-General including at least one month prior to the commencement of ***construction*** and ***operation*** of the project; c) a program for independent environmental auditing in accordance with *AS/NZ ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing*; d) procedures for rectifying any non-compliance identified during periodic reviews of compliance or environmental auditing; e) mechanisms for recording environmental incidents and actions taken in response to those incidents; and f) provisions for reporting environmental incidents to the Director-General during ***construction*** and ***operation.***	Establishment of an electronic compliance management system.
5.3	Prior to the commencement of ***construction*** of the project, the Proponent shall ensure that the following are available for community complaints for the life of the project (including ***construction*** and ***operation):*** a) a 24 hour telephone number on which complaints about ***construction*** and ***operational*** activities at the site may be registered; b) a postal address to which written complaints may be sent; and c) an email address to which electronic complaints may be transmitted. The telephone number, the postal address and the e-mail address shall be advertised in a newspaper circulating in the locality on at least six monthly intervals during ***construction*** and at least yearly intervals during the ***operation*** of the project. These details shall also be provided on the Proponent's internet site. The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public.	See *Section 4.7 – Complaints*
5.4	The Proponent shall record details of all complaints received through the means listed under condition 5.3 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to: a) the date and time, where relevant, of the complaint; b) the means by which the complaint was made (telephone, mail or email); c) the nature of the complaint; d) any action(s) taken by the Proponent in relation to the complaint, including timeframes for implementing the action and timeframe for getting back to the complainant with an interim or final response regarding actions taken or proposed to be taken to address the issues raised; and e) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken. The Complaints Register shall be made available for inspection by the Director-General upon request.	See *Section 4.7 – Complaints*
5.5	Prior to the commencement of ***construction***, the Proponent shall prepare a ***Community Information Plan*** which outlines measures for disseminating	See *Section 4.7 – Complaints* and *Section 11 –*

Reference	Description	Addressed in OEMP
	information on the development status of the project and methods for actively engaging with surrounding landowners and members of the community regarding issues that would be of interest/ concern to them during the ***construction*** and ***operation*** of the project. This may include distribution of community newsletters, stakeholder meetings and opportunities for site visits. The Plan shall include but not be limited to: a) procedures to inform the local community of planned ***construction*** activities including construction traffic routes, potential traffic disruptions, high noise generating activities and works outside of normal ***construction*** hours; b) procedures to inform and consult with landowners regarding landscaping measures at their properties in accordance with condition 2.23 of this approval; c) procedures to inform and consult with landowners regarding the outcomes of noise monitoring undertaken at their properties in accordance with condition 3.1 of this approval; d) procedures to inform and consult with landowners regarding the outcomes of compliance reviews and audits of the project; and e) measures outlined in conditions 5.1 to 5.4.	Community Information Plan*Community Information Plan*
6.1	Prior to the commencement of any ***construction*** or ***operational*** activities, or as otherwise agreed by the Director-General, the Proponent shall nominate for the approval of the Director-General a suitably qualified and experienced Environmental Representative(s) independent of the design, construction and operation personnel. The Proponent shall engage the Environmental Representative(s) during any ***construction*** activities, and throughout the life of the project, or as otherwise agreed by the Director-General. The Environmental Representative(s) shall be the Proponent's principal point of advice in relation to the environmental performance of the project and shall have responsibility for: a) overseeing the implementation of all environmental management plans and monitoring programs required under this approval, and advise the Proponent upon the achievement of these plans/programs; b) considering and advising the Proponent on its compliance obligations against all matters specified in the conditions of this approval, the Statement of Commitments, permits and licences; and c) having the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to the Proponent that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur.	See *Section 3.6 – Environmental*
6.4	The Proponent shall prepare and implement an ***Operation Environmental Management Plan*** to detail an environmental management framework, practices and procedures to be followed during ***operation*** of the project. The Plan shall be consistent with *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004) and shall include, but not necessarily be limited to: a) a description of key operational and maintenance activities associated with the project; b) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to ***operation*** of the project, including all approvals, licences, approvals and consultations; c) a description of the roles and responsibilities for all relevant employees involved in the ***construction*** of the project including relevant training and induction provisions for ensuring that all employees, contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval; d) overall environmental policies and principles to be applied to the ***operation*** of the project; e) an environmental risk analysis to identify the key environmental performance issues associated with the ***construction*** phase and details of how environmental performance would be monitored and managed to meet acceptable outcomes including what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:	*Section 1.4 – Project Activities* *Section 1.2 – Project Approvals* *Section 2.3 – Compliance* Condition assumed to apply to *operations*. See *Section 3* - Organisational Structure and Responsibilities *Section 2.2 – Environmental Policy* See *Section 4.2 – Risk Management* and *Appendix E: Risk Matrix* Risks assessed in all sections

Reference	Description	Addressed in OEMP
	(i) measures to monitor and manage noise emissions including: measures to be undertaken to rectify annoying characteristics resulting from the ***operation*** of the project such as but not limited to adverse mechanical noise from component failure, measures for regular performance monitoring of noise generated by the project (in addition to measured identified in conditions 3.1 and 3.2), and measures to proactively respond to and deal with noise complaints; (ii) measures to monitor and manage visual impacts in accordance with the requirements of this approval including maintenance requirements for landscaping measures implemented in relation to the project; (iii) measures to monitor and manage flora and fauna impacts including adaptive bird and bat management in accordance with the requirements of this approval and measures for the monitoring and maintenance of revegetated areas on site (including associated weed management) consistent with the requirements of conditions 2.7 and 2.8; (iv) measures to monitor and manage dust emissions (including dust generated by traffic on unsealed internal access tracks); (v) measures to monitor and manage operational traffic impacts particularly during maintenance events where operational traffic volumes associated with the project may increase and procedures for restoring any damage attributable to the project during the ***operation*** phase; (vi) emergency management measures including measures to control bushfires; f) procedures for the periodic review and update of the ***Operation Environmental Management Plan*** as necessary. The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of ***operation*** of the project or within such period as otherwise agreed by the Director-General. ***Operation*** shall not commence until written approval has been received from the Director-General.	*Section 13 – Noise and Vibration Management Plan* *Section 7 – Landscape and Rehabilitation Management Plan* *Section 6 – Flora and Fauna Management Plan* *Section 9 – Air Quality Management Plan* *Section 10 – Traffic Management Plan* *Section 12 – Emergency Response Plan* *Section 4.11 – OEMP review*
STATEMENT OF COMMITMENTS		
8	Minimise activities that may require night time lighting and, if necessary, use low lux (intensity) lighting designed to be mounted with the light projecting inwards to the Project site to minimise glare.	See comments regarding Condition 2.27
9	If WTG noise impacts are non-compliant with stated criteria used for the assessment due to temperature inversion, atmospheric stability or other reasons, then an 'adaptive management' approach can be implemented to mitigate or remove the impact. This process could include: a) Investigating the nature of the reported impact; b) Identifying exactly what conditions or times lead to undue impacts; c) Consideration of operating WTG's in a reduced 'noise optimised' mode during offending wind directions and at night-time (sector management); d) Turning off WTG's that are identified as causing the undue impact; and e) Providing acoustic upgrades (glazing, façade, masking noise etc) to affected dwellings.	*Section 13 – Noise and Vibration Management Plan*
10	Ensure work activities occur within recommended working hours, according to the EPA, where practicable (i.e. 7.00 am to 6.00 pm, weekdays and 8.00 am to 1.00 pm on Saturdays). Any proposed work outside of these hours will entail close consultation with the affected community.	*Section 13 – Noise and Vibration Management Plan*
11	Prior notification to the affected public and restricted use of exhaust/engine brakes in built up areas for night-time deliveries.	*Section 13 – Noise and Vibration Management Plan*
14	Development of a Weed Management Plan, which provides: a) From soil disturbance and vegetation clearance, placing soil which may contain exotic species at least 50 m from any water source; b) Where a specific weed risk has been identified, all machinery, equipment and vehicles are to be washed down before entering and leaving the Project site; c) Topsoil that is limited in weeds, harvested to salvage the native soil seed bank and then used to reintroduce the seed bank back into disturbed areas; d) All onsite staff and contractors educated on noxious weeds present at the Project site and ways to prevent spread; e) Revegetation with locally native endemic species characteristic of the cleared vegetation type; f) Control of perennial weed grasses within the disturbance zone for 3 to 5 years after construction; and g) Management of stock access during periods of vegetation and soil disturbance in coordination with landowners.	*Section 6 – Flora and Fauna Management Plan* (Weed Management Plan contained within)
15(h)	Bird and bat strike monitoring will be undertaken in accordance with the	*Section 6 – Flora and Fauna Management*

Reference	Description	Addressed in OEMP
	monitoring guidelines provided by the Australian Wind Energy Association (Brett Lane & Associates 2005). If results show that longer term monitoring is required then a monitoring programme will be developed in consultation with DECCW and other departments/agencies as required. Such a programme could include adaptive management whereby significant impacts are dealt with by using an adaptive approach;	*Plan* *Appendix H: Bird and Bat Adaptive Management Plan*
49	Establish a procedure to ensure the ongoing maintenance of the Project site internal access roads during the operation phase. This maintenance would include sedimentation and erosion control structures, where necessary.	*Section 5 – Soil and Water Management Plan*
66	Adherence to all regulations under the NSW Rural Fires Act 1997 and the Snowy Monaro and Bombala Bushfire Risk Management Plans.	*Section 12 – Emergency Response Plan*
67	The Rural Fire Service (RFS) and NSW Fire Brigade will be consulted in regard to the adequacy of bushfire prevention measures to be implemented on-site during construction, operation and decommissioning. These measures would potentially cover hot-work procedures, asset protection zones (APZ's), safety, communication, site access and response protocols in the event of a fire originating in the Project infrastructure, or in the event of an external wildfire threatening the Project or nearby properties.	*Section 12 – Emergency Response Plan*
68	Provide RFS with the locations of individual WTG locations, ancillary infrastructure, construction work schedule, location of additional water supplies for construction, potential landing pads for fire fighting aircrafts and helicopters and access gates for fire fighting services.	*Section 12 – Emergency Response Plan*
70	Education to construction crews and maintenance staff on the topic of bushfire risk management and risks that could be present at the Project.	*Section 12 – Emergency Response Plan*
71	Provision of basic fire fighting equipment at each active site, including fire extinguishers, knapsacks and other equipment suitable for initial response actions with a minimum of one trained person on-site.	*Section 12 – Emergency Response Plan*
72	Maintain provision for mobile telephone and UHF radio communications.	*Section 12 – Emergency Response Plan*
73	The BRWF Substation will be surrounded by a gravel and concrete area, free of vegetation, to provide an APZ.	*Section 12 – Emergency Response Plan*
74	The BRWF Substation facility will be bunded with a capacity exceeding the volume of the transformer oil. The facility will be regularly inspected and maintained to ensure leaks do not present a fire hazard, and to ensure the bunded area is clear (including removing any rainwater).	*Section 5 – Soil and Water Management Plan*
75	Placement and maintenance of APZ will occur around WTG's, transmission line easements and ancillary structures to minimise the spread of fire. Workplace health and safety protocols will be developed to minimise the risk of fire for workers in the control room and amenities.	*Section 12 – Emergency Response Plan*
76	WTG's will be shut down if monitored components reach critical temperatures or if directed to by the RFS in the case of a nearby wildfire being declared (an all-hours contact number would be available to the RFS during the bushfire period).	*Section 12 – Emergency Response Plan*
77	Flammable materials and ignition sources brought onto the Project site will be handled and stored as per manufacturer's instructions.	*Section 5 – Soil and Water Management Plan*
81	Development of a Soil and Water Management Plan (SWMP), to minimise soil disturbance, prevent erosion from surface runoff and to prevent disturbance of water resources in the area. Including: a) All drainage from the Project is in accordance with the POEO Act; b) All outlet structures designed in accordance with DWE guidelines; c) Avoid removal or disruption to naturally occurring drainage stabilisers; d) Installation of water retardation and diversion devices around construction areas, including devices to manage surface runoff from hardstand areas and surfaced access tracks; e) Design appropriate sedimentation basins to catch and treat all water from the Project site and consider utilising existing drainage paths for discharge points; f) Monitor changes to quantity and quality of receiving waters at Nimmitabel Wastewater Treatment Facility (Station No 222017); g) Regular inspection, maintenance and cleaning of water quality and sedimentation control devices; and h) If erosion is detected as a result of inadequate maintenance of drainage control devices, the relevant Environment Officer shall be alerted and remedial action is to occur immediately, to ensure no re-occurrence of the event.	*Section 5 – Soil and Water Management Plan*
90	Provision of skip bins and recycling bins on-site to handle packaging materials and domestic waste.	*Section 14 – Waste Management Plan*
113	Mitigate for any impacts on groundwater as a result of the construction or operation of the wind farm. Ensure that there are no lasting impacts on groundwater following decommissioning.	*Section 5 – Soil and Water Management Plan*

Reference	Description	Addressed in OEMP
COMMONWEALTH APPROVAL		
8	Within three months of every 12 month anniversary of the Commencement of the Action, the person undertaking the action must provide a report to the Department demonstrating compliance with the conditions of this approval over the previous 12 months. This report must include details of how the CEMP required by the conditions of this approval has been implemented. Annual reports must be provided until the Minister is satisfied that the person undertaking the action has complied with all conditions of the approval.	*Section 4.3 – Compliance Management*
10	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	*Section 4.9 – Independent Audit*
14	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	*Section 4.3 – Compliance Management*
ENVIRONMENTAL PROTECTION LICENCE		
L2.1	The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	*Section 14 – Waste Management Plan*
L2.2	The licensee must ensure that all liquid and/or non-liquid waste generated and/or stored on the site is assessed and classified in accordance with Waste Classification Guidelines Part 1: Classifying Waste (DECC, 2008) or any future guideline that may supersede that document.	*Section 14 – Waste Management Plan*
L3.1	Noise generated from the premises must not exceed: a) 35dB(A); or b) the existing background noise level (LA90 (10-minute)), correlated to the integer wind speed at hub height at the wind farm site, by more than 5dB(A), whichever is the greater, for each integer wind speed (measured at hub height) from cut-in to rated power of the wind turbine generator when determined in accordance with the methodology provided in the Environmental Noise Guidelines: Wind Farms (South Australia EPA, 2003).	*Section 13 – Noise and Vibration Management Plan*
L3.2	Notwithstanding Condition L3.1, the noise limit specified under that condition does not apply to any sensitive receiver where a noise agreement is in place between the licensee and the respective landowner(s) in relation to noise impacts and/or noise limits.	*Section 13 – Noise and Vibration Management Plan*
L3.3	To determine compliance with Condition L3.1, 5dB(A) must be applied to measured noise levels where tonality is present. The presence of tonality must be determined using the methodology detailed in Wind turbines – Part 11: Acoustic noise measurement techniques IEC 61400-11:2012(E) or its latest edition.	*Section 13 – Noise and Vibration Management Plan*
L3.4	To determine compliance with Condition L3.1, noise from the premises must be measured at the most affected point within the residential boundary, or at the most affected point within 20 metres of the dwelling, where the dwelling is more than 20 metres from the boundary. Noise levels are determined in accordance with the methodology provided in the Environmental Noise Guidelines: Wind Farms (South Australia EPA, 2003).	*Section 13 – Noise and Vibration Management Plan*
L3.5	The licensee must, within 12 months of the commencement of operation of the wind farm, prepare a Noise Compliance Report which assesses the performance of the wind farm against the operational noise criteria specified in Condition L3.1. The compliance assessment must be undertaken in accordance with the requirements of the Environmental Noise Guidelines: Wind Farms (South Australia EPA, 2003) and the Noise Compliance Report must be submitted to the EPA within one month of the completion of the monitoring.	*Section 13 – Noise and Vibration Management Plan*
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	*Section 14 – Waste Management Plan*
O2.1	All plant and equipment installed at the premises or used in connection with the	All sections

Reference	Description	Addressed in OEMP
	licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	
O3.1	Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	*Section 9 – Air Quality Management Plan*
O4.1	The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.	*Section 12 – Emergency Response Plan*
O5.1	The licensee must store and handle all chemicals on site in accordance with the *Storing and Handling liquids: Environment Protection, Participants Manual: Appendix: Technical Considerations* (DECC, 2007).	*Section 5 – Soil and Water Management Plan*
M1.1	Monitoring Records The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	*Section 4 –* Management Systems
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	*Section 4 –* Management Systems
M2.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	*Section 4.7 – Complaints*
M2.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	*Section 4.7 – Complaints*
M2.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	*Section 4.7 – Complaints*
M2.4	The record must be produced to any authorised officer of the EPA who asks to see them.	*Section 4.7 – Complaints*
M3.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	*Section 4.7 – Complaints*
M3.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	*Section 4.7 – Complaints*
R1.1	R1 Annual Return Documents The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: a) a Statement of Compliance; and b) a Monitoring and Complaints Summary. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	*Section 4 –* Management Systems
R1.10	Monitoring report The licensee must supply with the Annual Return a report, which provides: a) an analysis and interpretation of monitoring results; and b) actions to correct identified adverse trends.	*Section 4 –* Management Systems
R2.1	Notification of environmental harm Notifications must be made by telephoning the Environment Line service on 131 555. *Note*: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	*Section 4.6 – Environmental Incidents*

Reference	Description	Addressed in OEMP
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	*Section 4.6 – Environmental Incidents*

Appendix C: Legal and Regulatory Requirements

Legislation	Regulating Authority	Applicability to the Project	Obligations imposed by the legislation
COMMONWEALTH			
Environment Protection and Biodiversity Conservation Act 1999	DoE	Applicable to environmental impacts on Commonwealth land and impacts on matters of national significance.	Commonwealth approval was granted under section 130(1) and 133 of the EPBC Act. CoA apply.
NEW SOUTH WALES			
ENVIRONMENTAL PLANNING			
Environmental Planning and Assessment Act 1979	Local Council DoPE OEH NSW RMS	The Project has been approved under Part 3A of the EP&A Act.	DoPE CoA need to be complied with for the Project. Any modification that is not consistent with the Approval must be approved as a Modification by the DoPE.
Protection of the Environmental Operations Amendment (Scheduled Activities) Regulation 2013	EPA	Applicable to wind farms in development, approved, under construction or operational after 1st July 2013	Obligation to obtain Environmental Protection Licence (EPL) and adhere to conditions therein
HERITAGE			
Heritage Act 1977	NSW Heritage Council DoPI (Heritage Office)	Project exempt under 75(u) of the EP&A Act from needing an Approval under Part 4 or an excavation permit under Section 139 from the NSW Heritage Office.	None
National Parks and Wildlife Act 1974	DoE OEH	Permit under Section 87 (investigation of Aboriginal objects) from OEH.	Project exempt under 75(u) of the EP&A Act from needing a Section 90 permit. However, personnel will be made aware of responsibilities and procedures under the National Parks and Wildlife Act 1974

Legislation	Regulating Authority	Applicability to the Project	Obligations imposed by the legislation
WASTE MANAGEMENT			
Waste Avoidance and Resource Recovery Act 2001	DoE OEH	To reduce environmental harm and provide for reduction in waste generation in line with ESD principles	Objective of the Act incorporated into OEMP (general principle of Avoid, Recover, Reuse, Dispose)
CONSERVATION			
National Greenhouse and Energy Reporting Act 2007	OEH	Systems for reporting energy consumption and production data, greenhouse emissions, abatement actions	BRWF to determine NGERS reporting requirements for energised facility.
Noxious Weeds Act 1993	OEH	Control noxious weeds on lands under the Projects control, in accordance with relevant control categories (s.13)	Noxious weeds, where identified on the site, must be prevented from spreading and their numbers and distribution reduced (refer to FFMP).
National Parks and Wildlife Act 1974	DoE OEH	Sections 7 and 8 of the NPW Act protect fauna and flora. Native species including flora and fauna, must not be picked up or harmed, except under a relevant license, as detailed in Section 9 of the Act.	No licenses are required, however personnel will be made aware of responsibilities not to harm native species and procedures in the OEMP developed to meet the requirements of the National Parks and Wildlife Act 1974
National Park and Wildlife Regulation 2002	OEH	Ground excavation and vegetation clearance	Where ground is to be excavated or cleared, it will be assessed by an appropriately qualified and experienced ecologist under a the authority of a Scientific License issued under Clause 22 of this regulation
Native Vegetation Act 2003	OEH	The Act is in place to protect native vegetation particularly that of high conservation value, by managing broad scale clearing, revegetation, and rehabilitation of native vegetation.	Approval was granted in accordance with this Act. No clearing of vegetation required for the operation of the Project..
Threatened Species Conservation Act, 1995	DoE OEH	Project approved under Part 3A of the EP&A Act. No licences or approvals required under this Act.	None
Fisheries Management Act 1994	NSW Fisheries	Permit under Section 201 from Department of Primary	No requirement identified

Legislation	Regulating Authority	Applicability to the Project	Obligations imposed by the legislation
		Industries (Dredging and reclamation), 205 (marine vegetation) or 219 (fish passage)	
Water Management Act 2000	DoE OEH NOW	Permits and approvals required for water extraction from natural waterways. Project exempt under 75(u) of the EP&A Act in relation to Water Use approvals for water extracted from a natural waterway. A current embargo on water usage rights within the MacLaughlin River catchment restricts water supply for activities classified as 'Industrial Use'	Works Approval and/or Water Supply Approvals may be required if water is to be extracted from a natural waterway. A replacement licence application has been lodged and approved by the NOW to amend the existing farm dam licence (10SL55662) from the current permitted purposes of pisciculture, stock and domestic use, to include 'Industrial Use'
Water Act 1912	DoE OEH		
POLLUTION			
Protection of the Environmental Operations Amendment (Scheduled Activities) Regulation 2013	EPA OEH	Duty to notify the OEH of any environmental harm	The Owner to notify OEH of any actual or potential environmental harm
Dangerous Goods Act **(WorkCover – storage licence)**	EPA WorkCover	Relates to storage, handling and licensing of storage and/or transport of prescribed quantities of dangerous goods	BRWF to obtain licenses where storage of dangerous goods for operation is in licensable quantities
Occupational Health and Safety Regulation 2001	EPA	Relates to the handling and storage of certain dangerous goods identified in the Regulation.	BRWF to adhere to regulation in the storage of dangerous goods for operation
Pesticides Act 1999	EPA	The use, supply, preparation and possession of pesticides. Pesticides is a generic term that includes herbicides, fungicides, insecticides, timber preservatives, etc.	Use pesticides in an environmentally satisfactory manner. s12 and s13 prohibit the possession and use of an unregistered pesticide without a permit. s14 requires that you read, or have read to you, the label or permit for the pesticide.

Legislation	Regulating Authority	Applicability to the Project	Obligations imposed by the legislation
		Note: inappropriate use of pesticides may lead to prosecution under the Protection of the Environment Operations Act 1997.	s15 requires that you use registered pesticide in accordance with instructions on the label. s16 pesticide container must have approved label attached. s17 prohibits the use or possession of any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. You must comply with pesticide codes of practice.
Pesticides Regulation 2009	EPA	The use, supply, preparation and possession of pesticides and the associated training and record keeping requirements.	An employee must not use a pesticide unless the employee holds a 'prescribed qualification' or a licence under the Act A record must be kept of each occasion a pesticide is used. The record must be made in legible writing in English as soon as possible (but must be within 24 hours). The record must be kept for at least 3 years by the person who made the record. The record must contain the specific information.
TRAFFIC			
Roads Act 1993	RMS Cooma-Monaro Shire Council Bombala Council	Section 138 consent required for erection of a structure, or carrying out of work in, on or over a public road or digging up or disturbance of the surface of the road.	BRWF has prepared Traffic Management Plan in consultation with the RMS, Cooma-Monaro Shire Council and Bombala Council to obtain required approvals. Road Occupancy Licences will be required from Council and/or RMS where public roads are required to be closed or partly closed to enable works to occur.

Appendix D: Management Documents

Document	OEMP Section											
	4 - Mang Sys	5 - SWMP	6 - FFMP	7 - LRMP	8 - CHMP	9 - AQMP	10 - TMP	11 - CIP	12 - ERP	13 - NVMP	14 - WMP	15 - EIP
REGISTERS												
BRWF_R_01 Risk Register	x											
BRWF_R_02 Complaints Register	x						x	x		x	x	x
BRWF_R_03 Fauna Sighting Register	x		x									
BRWF_R_05 Safety Incidents Register							x		x			
BRWF_R_06 Environmental Incident Register	x	x			x	x						
BRWF_R_07 Verification of Competency Register			x									
BRWF_R_08_Training Register	x	x							x			
BRWF_R_09_Corrective Action Register	x											
BRWF_R_10_Inspections Register		x							x			
BRWF_R_11_Rainfall Register		x										
BRWF_R_12_Audit Register		x										
BRWF_R_14_Hazardous Materials Register		x									x	
BRWF_R_15_Equipment Register		x							x			
BRWF_R_16_Waste Disposal Register		x									x	
BRWF_R_20_Media Releases								x				
BRWF_R_21_Compliance Register	x											
TRAINING PACK												
BRWF_TP_01_Site Inductions		x	x		x	x	x				x	
BRWF_TP_02_Information Boards			x									
BRWF_TP_03_Travel Information Pack							x					
PROCEDURES												
BRWF_PR_01_**Incident Reporting**	x											
BRWF_PR_02_**Complaints Procedure**	x											
BRWF_PR_03_Fire Ratings									x			
BRWF_PR_04_Site Attendance									x			
FORMS												
BRWF_F_01_Site Inspection Checklist				x					x		x	
BRWF_F_02_Excavation Check Sheet			x									
POLICIES												
BRWF_P_**02**_Environment Policy									x			
OTHER												
Operations Management Manual	x											
Site Calendar	x							x				
EPL Annual Return	x											

Document	OEMP Section											
	4 - Mang Sys	5 - SWMP	6 - FFMP	7 - LRMP	8 - CHMP	9 - AQMP	10 - TMP	11 - CIP	12 - ERP	13 - NVMP	14 - WMP	15 - EIP
Material Safety Data Sheets (MSDS)		x									x	
Maintenance Management System			x						x			
BRWF_MP_06_Emergency Response Manual									x			

Appendix E: Risk Assessment Methodology

Table 1 – Risk Matrix

		Likelihood				
		Rare	**Unlikely**	**Possible**	**Likely**	**Almost Certain**
Consequence	Severe	Medium	High	High	Extreme	Extreme
	Major	Medium	Medium	High	High	Extreme
	Moderate	Low	Medium	Medium	High	High
	Minor	Low	Low	Medium	Medium	Medium
	Negligible	Low	Low	Low	Low	Medium

Table 2 – Likelihood Ratings

Rating	Likelihood
Rare	The event is unlikely to occur
Unlikely	The event probably won't occur
Possible	The event might occur
Likely	The event will probably occur
Almost Certain	The event is very likely to occur, or will definitely occur

Table 3 – Consequence Ratings

Rating	Financial	Safety	Environment	Compliance	Performance	Reputation
Severe	Cost overrun or financial loss greater than $20M.	Fatality or permanent significant disability, long term impairment or illness significantly affecting the quality of life for an employee, contractor or member of the public.	Permanent impacts to populations of significant flora or fauna (e.g. Threatened), highly significant heritage items, complete removal of habitat of threatened species or significant impairment of ecosystem function.	Claim or action (other than by a Regulator) involving an amount greater than $20 million (including court, defence and compliance costs and loss of revenue OR Regulator action that results in a penalty greater then $5 million and/or imposition of requirements that would cost more than $20 million (including court, defence and compliance costs and loss of revenue.	The forced or externally imposed loss of the entire wind farm for more than one week.	Court, regulator or Government/Parliamentary inquiry concludes improper, corrupt or grossly negligent conduct or an action resulting replacement of directors.
Major	Cost overrun or financial loss between $5 M and $20M.	Long term or permanent disability, impairment or illness not significantly affecting the quality of life for an employee, contractor or member of the public.	Medium to long term (>10 years) physical impacts likely to cause impacts to flora and fauna populations, or direct impacts to flora and fauna populations. Adverse impacts to significant heritage items.	Claim or action (other than by a Regulator) involving an amount between $5 and $20 million (including court, defence and compliance costs and loss of revenue OR Regulator action that results in a penalty between $1 and 5 million and/or imposition of requirements that would cost between $5 and 20 million (including court, defence and compliance costs and loss of revenue.	The forced or externally imposed loss of the entire wind farm for more than one day.	Action by EGCO resulting in one or more executives or senior managers being terminated and/or State, Commonwealth Government or parliamentary inquiry in to BRWF, CWP or EGCO actions or operations. State or Commonwealth regulator conducts formal inquiry into alleged impropriety, corruption etc. Prolonged and negative national media attention.

Rating	Financial	Safety	Environment	Compliance	Performance	Reputation
Moderate	Cost overrun or financial loss between $1 M and $5M.	Hospitalisation with medical intervention of an employee, contractor or member of the public.	Medium term (3-10 years) impacts on populations of native flora and fauna including loss of individuals of threatened species. Significant impacts on the physical environment.	Claim or action (other than by a Regulator) involving an amount between $1M and $5M (including court, defence and compliance costs and loss of revenue OR Regulator action that results in a penalty between $100K and $5M and/or imposition of requirements that would cost between $1M and $5M (including court, defence and compliance costs and loss of revenue.	The forced or externally imposed loss of a collector circuit and associated WTG for more than one week.	Short term negative media attention. State or Commonwealth regulator conducts formal enquiry. Prolonged and negative regional media attention. Moderate damage to reputation with a regulator.
Minor	Cost overrun or financial loss between $100K and $1M.	Injury or illness requiring medical treatment of an employee, contractor or member of the public.	Short term (1-3) years direct impacts on physical environment (water, soil, air) that may impact on flora or fauna. Loss of individuals of common native flora or fauna. May extend outside the work area.	Claim or action (other than by a Regulator) involving an amount between $100K and $1M (including court, defence and compliance costs and loss of revenue OR Regulator action that results in a penalty between $10K and $100K and/or imposition of requirements that would cost between $100K and $1M (including court, defence and compliance costs and losses.	The forced or externally imposed loss of a collector circuit and associated WTG for more than one day.	Formal compliant made to State or Commonwealth regulator. Short term negative regional media attention. Minor damage to reputation with a regulator.
Negligible	Cost overrun or financial loss less than 100K.	Nil to first aid injury, low level short term inconvenience or symptoms for an employee, contractor or member of the public.	Low level direct impacts on the physical environment (water, soil, air) within the work area. Impacts easily remedied. No identifiable impact on flora or fauna.	Claim or action (other than by a Regulator) involving an amount up to $100K (including court, defence and compliance costs and loss of revenue OR Regulator action that results in a warning notice, penalty up to $10K and/or imposition of requirements that would cost up to $100K (including court, defence and compliance costs	The forced or externally imposed loss of a single wind turbine for more than one day.	Negative comment about BRWF, CWPR or EGCO at a regional level. Formal complaint made to BRWF, CWPR or EGCO.

Rating	Financial	Safety	Environment	Compliance	Performance	Reputation
				and loss of revenue.		

Appendix F: Flora and Fauna Mapping

Appendix G: Weed Identification and Treatments

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Target Weed Species							
Bathurst Burr *Xanthium spinosum* NW C4 (BCA)(CMCA) PW (CMCA)		After late spring and summer rains. Young grow quickly in warm weather.	Burrs attach to livestock or clothing and are spread in mud, soil and water.	Chip and/or spot spraying If burrs have already formed, burn the chipped plants. Chemical: MCPA 500 or 2,4-D Ester	Downer EA	Best control from seedling to rosette. Requires higher rate as plant seeds. Best timing in summer.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Scotch Thistle *Onopordum acanthium* NW C4 (BCA)(CMCA) PW (CMCA)		Varies depending on rainfall but often Spring	Wind, water, slashing, contaminated soil or hay and on stock.	Small Infestations: Chip and/or spot spray Large Infestations: Boom spray with selective broad-leaf herbicide, Maintain/establish a vigorous competitive pasture. Chemical: MCPA 500 or 2,4-D Ester	Downer EA	Best control from seedling to rosette. Requires higher rate as plant seeds. Best timing in mid to late winter.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.
Serrated Tussock *Nassella trichotoma* NW C4, PW (BCA)(CMCA)		Plant germination usually takes place in autumn or winter. Flowering stems emerge in spring.	Wind, in the gut of stock, in contaminated feed, in soil, on vehicles and by water.	Effective when herbicide application is combined with physical removal. Dig, spot or boom spray prior to seeding,. For large infestations cultivate and/or spray and direct drill to establish competitive pasture species.	Downer EA	Best control while vegetative, from autumn to early spring.	Soil movement from areas of infestation is to be avoided.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
				Maintain other pasture plants in vigorous condition. Chemicals: Glyphosate or Flupropanate			
St John's Wort *Hypericum perforatum* NW C4, PW (BCA)(CMCA)		Perennial weed, flowering in late spring to summer.	Animals, vehicles, contaminated soil, hay, chaff and underground runners spread by soil disturbances (eg earthworks, cultivation).	Small infestations: Hand dig taking care to remove all of the underground stems and dispose of them carefully, or spot spray. Large infestations: Boom spray and/or cultivate (using tined implements), encourage strong pasture competition. Chemicals: MCPA 500 or 2,4-D Ester	Downer EA	Best control from seedling to rosette. Requires higher rate as plant seeds. Best timing in late spring to summer.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Sweet Briar *Rosa rubiginosa* NW C4 (BCA)(CMCA) PW (CMCA)		Perennial	Birds and foxes Roots at the branch tips where they touch ground and root suckers.	Spray, slashing to reduces tall clumps, Dig out, and and/or introduction of blackberry rust, in wet summers. Chemicals: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	Treat in late spring to autumn.	No specific management requirements
Horehound *Marrubium vulgare* NW C4 (BCA)(CMCA) PW (CMCA)		Perennial	Burrs attach to animals, clothing, car tyres or are spread in mud, soil and water and in animal dung.	Chip, spot spray, or boom spray prior to seeding. Burn plants after chipping or spraying if seed is present. Establish vigorous pasture on bare ground. Chemicals: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	Best control from seedling to rosette. Requires higher rate as plant seeds. Best timing in mid to late winter.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Willows *Salix spp.* NW C5 (BCA)(CMCA) WONS		All year	Wind or water Detached branches taking root.	Hand pull seedlings. Cut and paint or stem inject adult plants and spray smaller plants.	Downer EA	Summer or early Autumn	No specific management requirements
Priority Weed Species							
African Boxthorn *Lycium ferocissimum* NW C4, PW (BCA)(CMCA) PW (CMCA)		Perennial	Birds and foxes	Hand-pull seedlings. Cut and paint, basal bark or spray. Seedling and sucker growth after removal of the parent plants will need follow-up. Chemicals: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	Apply when bushes have good leaf cover, growth and no leaf fall. Only apply chemical to plants less than 2 m tall.	No specific management requirements

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
African Lovegrass *Eragrostis curvula* NW C4, PW (BCA)(CMCA)		Perennial	Slashing of seeding plants, contaminated hay, soil water, vehicles, machinery and in the gut of livestock.	Dig and/or spot spray and destroy seed heads. Maintain/ establish vigorous pasture and/or native grasses. Chemicals: Glyphosphate or Flupropanate	Downer EA	Apply January to June. Only apply chemical to green actively growing plants.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.
Blackberry *Rubus fruticosus* NW C4, PW (BCA)(CMCA)		Perennial	Birds and foxes Roots at the branch tips where they touch ground and root suckers.	Spray, slashing to reduces tall clumps, Dig out, and introduction of blackberry rust, in wet summers. Chemical control: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	Treat in late spring to autumn.	No specific management requirements

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Cape Broom *Genista monspessulana* NW C2 (BCA)(CMCA) PW (BCA)		Spring	Dumping, contaminated soil, or on animals (eg wool of sheep).	Cut and paint and/or spray. Smaller plants can be hand-pulled or dug. Seedling and sucker growth after removal of the parent plants will need follow-up. Chemical control: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	Spring to mid summer prior to pod formation. Apply as a thorough foliage spray.	No specific management requirements
Chilean Needle Grass *Nassells trichotoma* NW C4 (BCA)(CMCA) PW (CMCA)		Perennial	Slashing, seeds attaching to animals and clothing, in soil on machinery and vehicles.	Dig and/or spray. Dug out plants should be burnt. Chemical control: Glyphosphate or Flupropanate	Downer EA	Apply to actively growing plants from Spring to Autumn.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Fireweed *Senecio madagascariensis* NW C4, PW (BCA)(CMCA)		Spring through to summer	Wind and vehicles	Small Infestations: Hand pull (as soon as flowering) and bag the flowers and seed heads for disposal. Large infestations: boom sprayed with selective herbicide. Grazing to reduce seed set. Chemical control: Grazon Extra (Triclopyr, Picloram and Aminopyralid)	Downer EA	In pastures apply with low volume boom spray during autumn/winter when weeds are young and actively growing. Observe withholding period	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.
Nodding Thistle *Carduus nutans* NW C4 (BCA)(CMCA)		Spring	Wind, water, slashing, contaminated soil or hay and on stock.	Small Infestations: Chip and/or spot spray Large Infestations: Boom spray with selective broad-leaf herbicide, Maintain/establish a vigorous competitive	Downer EA	Spray at early rosette stage; re-treatment is required (Often spring)	Soil movement from areas of infestation are to be avoided.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
PW (CMCA)				pasture. Chemical control: MCPA 500 or 2,4-D Ester			
Paterson's Curse *Echium plantagineum* NW C4, PW (BCA)(CMCA)		Spring-Autumn	Slashing, vehicles, livestock, in water and contaminated soils.	Hand chip, spray, establish/ maintain dense vigorous competition and graze strategically to reduce seed set. Chemical control: MCPA 500 or 2,4-D Ester	Downer EA	Apply at early rosette stage	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.
Scotch/English		Perennial	Spring	Cut and paint or	Downer EA	Lower rate	No specific

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
Broom *Cytisus scoparius* NW C4 (BCA)(CMCA) PW (CMCA)				spray. Smaller plants can be hand-pulled or dug. Seedling and sucker growth after removal of the parent plants will need follow-up. Chemical control: Grazon Extra (Triclopyr, Picloram and Aminopyralid)		when actively growing mid-summer to pod formation. Higher rate for autumn-winter treatment.	management requirements
Spiny Burrgrass *Cenchrus incertus* NW C4, PW (CMCA)		Perennial	Burrs cling to animals, clothing, vehicle tyres and machinery. In contaminated hay.	Dig and/or spot spray before seeding. Seed is short-lived in the soil so prevention of seeding for 3 years can eradicate this weed. For dense infestation, cultivation and establishment of a vigorous perennial pasture.	Downer EA	Actively growing plants before seeding. Non-selective.	Areas of infestation are not to be traversed by vehicle. Areas in proximity to vehicle paths are to be fenced off to avoid accidental access.

Weed Species and listing	Image	Growth Season	Dispersal	Control methods	Responsibility	Control Timing	General Management Requirements
				Chemical control: Glyphosate or MSMA			

Appendix H: Bird and Bat Adaptive Management Plan

Appendix I: Stage One Aboriginal Heritage Locales

Appendix J: Noise Contour Maps