



Bodangora Wind Farm

Operational Environmental Management Plan

# 1. Document Control

The Iberdrola Australia Regional Operations Manager - Renewables is responsible for the revision and update of this Operation Environmental Management Plan (OEMP) for Bodangora Wind Farm (BWF). A new revision date is required with any updates or revisions, and all major revisions will be circulated to those on the Email Distribution List once the revision has been approved by the Iberdrola Australia Executive General Manager Operations & Maintenance (EGMO&M).

## 1.1 OEMP Review

This OEMP will be reviewed formally periodically by the Owner's Representative for Bodangora in consultation with the Iberdrola Australia Quality, Health, Safety & Environment (HSE) Manager Operations and Iberdrola Australia, and other stakeholders as required. Review will also take place immediately after any significant incident or change to the activities, products or services or material changes in the operating conditions.

This OEMP has been developed during construction of the wind farm. Therefore, this OEMP is subject to change throughout the life of the BWF as new or updated information about the maintenance and operational phase of the wind farm develop.

Date	Author	Version	Revision Notes (include whether changes are considered minor or significant updates)	Approval
17/11/16	Alex McCormack	Draft 1.0	New document upon future commencement of BWF operations.	
05/12/17	Tim Maddever & Alex McCormack	Draft 2.0	Updated during construction phase of BWF with new information and developments. This version will be reviewed by BWF Environment Representative.	
17/01/18	Alex McCormack	Draft 3.0	Draft version reviewed by GE. No further changes were required.	
16/03/18	Alex McCormack	V1.0	Published first version of the Bodangora OEMP	Igor Brandao
27/08/2018	Alex McCormack	V2.0	Changes made as a result of NSW DPE feedback and comments from Environmental Representative	Igor Brandao
2/11/18	Tim Maddever	V3.0	Changes made as a result of DPE feedback	Claudia Williams
27/04/22	Michael Bullock	V4.0	Annual Review and rebranding. Addition of Post-construction noise monitoring notes. Removal of reference to changeover of CEMP to OEMP.	Matt Dickie
19/7/22	Michael Bullock	V5.0	Update OEMP (Section 9) to summarise key outcomes of post-construction noise monitoring report as a result of DPE feedback.	Matt Dickie
13/11/24	Michael Bullock	V6.0	Review document. Title changes. Formatting changes.	Matt Dickie
20/10/25	Michael Bullock	V7.0	Updates as a result of DPIE feedback.	Matt Dickie

## Distribution List

Company	Position / Role
Iberdrola Australia (Bodangora Wind Farm Pty Limited)	Website – provides details of the current version and instructions for obtaining information about the OEMP. Hard copy available on site.
GE Vernova	Customer Services Manager
Independent Environmental Representative	Principal Environmental Consultant, Arcadis
NSW Department of Planning (cc CPHR, EPA)	Post Approvals, Resource and Energy Assessments, Planning Services
Dubbo Regional Council	Director of Development and Environment
Water NSW	Water Regulation Officer (customer.helpdesk@waternsw.com.au)

## Key Emergency Service Contact Details

Organisation	Telephone Number
All Emergencies (Fire, Ambulance, Police)	000
NSW Rural Fire Service	000
NSW State Emergency Services - Molong NSW	13 25 00
Wellington Hospital – Wellington NSW	02 6840 7200
Swift Street Medical – Wellington NSW	02 6845 2084
Poisons Information Centre	131 126
Wellington Veterinary Hospital – Wellington NSW	02 6845 2872
WIRES Wildlife Rescue	1300 094 737
Water NSW	1800 061 069

## Other Key Environmental Contact Details

Organisation	Telephone Number	To be notified by Bodangora Wind Pty Ltd or GE Lead Service Technician when...
NSW DPE	Sydney 02 9228 6111 Dubbo 02 6841 2180	Any enquiries, requests or non-compliance with approval conditions or any proposed departure from the conditions of Project Approval.
Dubbo Regional Council	02 6801 4000	Major hazardous substance spills or erosion events, especially those that impact upon waterways.
NSW EPA	131 555	Advice in relation to clean-up of spills or leaks or restoration of site. Significant impact on Flora or Fauna.

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## 2. Executive Summary

This Operation Environmental Management Plan (OEMP) has been prepared by Bodangora Wind Farm Pty Ltd (BWFPL), to establish the management framework for environment issues relating to the operation phase of the Bodangora Wind Farm (BWF).

BWFPL will comply with conditions listed within the NSW Minister for Planning's Project Approval issued on 30 August 2013. Details of modifications (to date) to these conditions are as follows:

- Mod 1 – determined October 2015 – increase the blade length from 114m to 130m but to remain within the overall approved tip height of 150m;
- Mod 2 – 5 December 2016 – (i) relocation of substation (ii) relocation of connection feeder (132kV line) and (iii) access track and underground cabling realignment;
- Mod 3 – 22 June 2017 – Minor modification relating to micro siting two turbines and the meteorological masts.
- Mod 4 – 22 December 2017 – Minor modifications relating to micro-siting of access tracks.

In general terms, these conditions are required to (see page 1 of the Project Approval):

- Prevent, minimise, and/or offset adverse environmental impacts;
- Set standards and performance measures for acceptable environmental performance;
- Require regular monitoring and reporting; and
- Provide for the ongoing environmental management of the Project.

This OEMP has been developed in accordance with Schedule F (F19) of the Project Approval conditions. The Project Approval conditions listed in the table below all require some activity, responsibility or awareness of the operational environmental requirements.

Project Condition #	Approval Condition	Proponent's Response (within OEMP)
B1	Terms of Approval	Throughout
B11	Staging	Throughout
B19	Notification to Department	4.12
C6	Bird and Bat Monitoring and Management	6
C7	Biodiversity Offset Package	4.10
C8-C9	Water Quality and Hydrology	5
C11	Hazards and Risk	11
C16 – C17	Bushfire Risk	8
C18 – C20	Visual Amenity - Views	14
C23	Shadow Flicker	16
C25	Night Lighting	17
C26	Design and Landscape Plan	14
C28 – C31	Waste Management	10
D1	Community Consultative Committee	4.13
D2 – D3	Complaints and Enquiries Procedure	4.23
D5	Compliance Tracking	4.14
D6 – D7	Incident Reporting	4.19
D8-D11	Independent Environmental Audit	4.22
E19	Environmental Representative	4.11

Project Condition #	Approval Condition	Proponent's Response (within OEMP)
F1 – F19	Operation Environmental Management	Entire plan

An Environment Protection Licence (EPL) administered by NSW Environment Protection Agency (EPA) under the Protection of the Environment Operations Act (NSW) has been obtained for the operational phase of the project. The licence sets out conditions which will be complied with as is relevant to the operations at BWF.

All persons involved in the operation phase of BWF shall undertake their respective activities in accordance with the relevant requirements of this OEMP, this includes employees, contractors and sub-contractors. Awareness of relevant requirements shall be included within a site specific health, safety and environment induction and / or through other appropriate forums such as toolbox talks.

This OEMP shall be read in conjunction with all related BWF Health, Safety, and Environmental (HSE) documents as well as other associated BWF management plans implemented by Iberdrola Australia or GE Vernova (GE).

The environmental impacts addressed in this OEMP reflect the scope and level of environmental protection and care and authorisations obtained during the operation phase of the project. It formalises the processes and procedures which will ensure compliance with the obligations set out in these documents, and that the appropriate levels of environmental standards are achieved.

### 3. Definitions

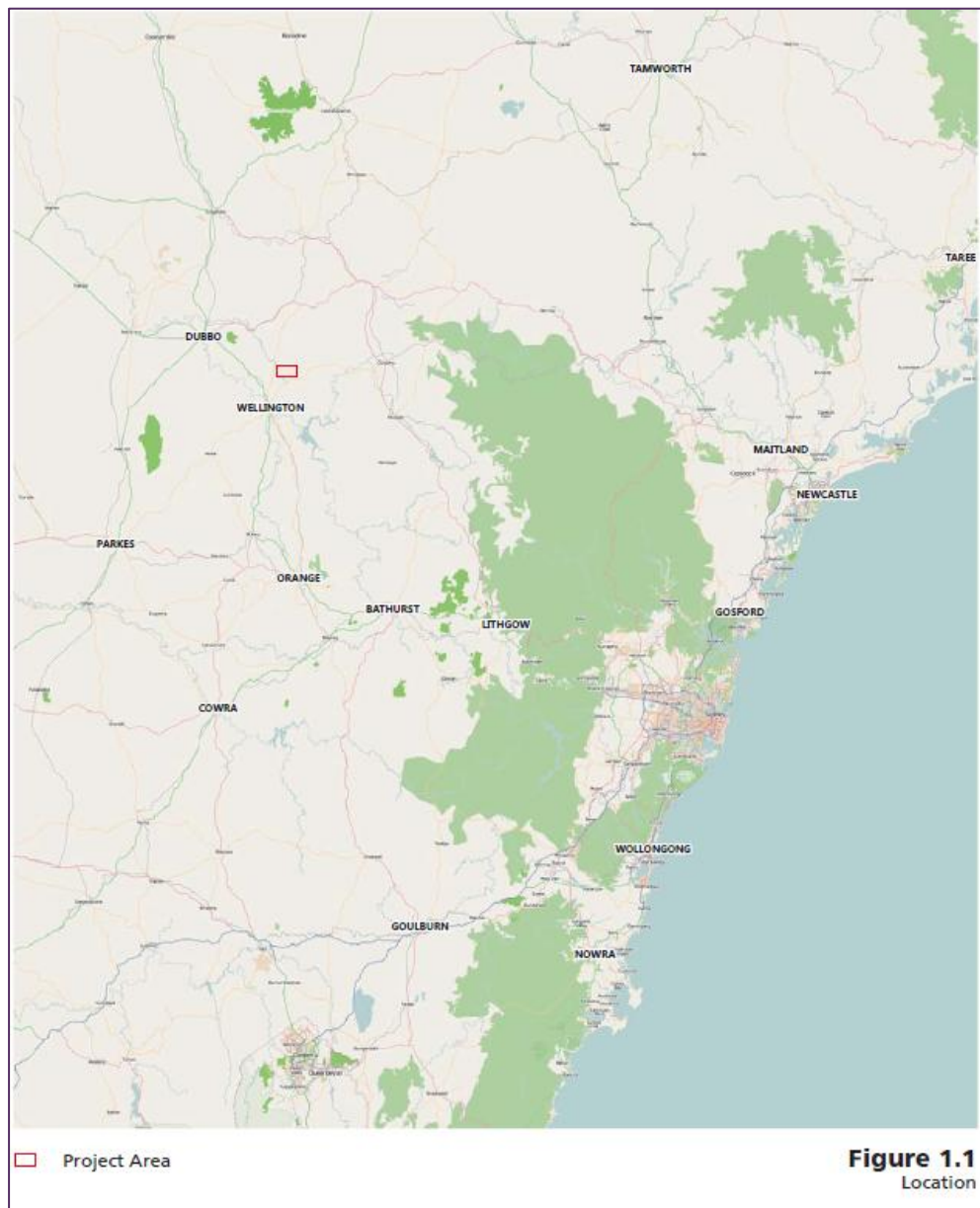
Term	Meaning
BWF	Bodangora Wind Farm.
BWFPL	Bodangora Wind Farm Pty Limited
CEMP	Construction Environmental Management Plan.
Contractor or GE	GE Vernova, the counterparty to the Operation and Maintenance Agreement with BWFPL in respect of BWF
CPHR	<b>Conservation Programs, Heritage &amp; Regulation Group (formally BCS)</b>
DPE or “the Department of Planning” or “the Department”	NSW Department of Planning which can modify its name from time to time, currently the Department of Planning and Environment, however it is commonly known as Department of Planning or “the Department”.
EIS or EA	Environmental Impact Statement or Environmental Assessment.
EPA	NSW Environment Protection Authority.
EPC	Engineer, Procure and Construct (Contract).
EPL	Environment Protection Licence.
ER	Environmental Representative.
ERP	Emergency Response Plan – A document that defines the procedures processes and contact details in the event of an emergency.
GE	GE Vernova, the counterparty to the Operation and Maintenance Agreement with BWFPL in respect of BWF
HSE	Health, Safety and Environment.
Incident (as per conditions of consent)	A set of circumstances that: <ul style="list-style-type: none"> <li>causes or threatens to cause material harm to the environment; and/or</li> <li>breaches or exceeds the limits or performance measures/criteria in this approval</li> </ul>
JHA/SWMS	Job Hazard Analysis or Safe Work Method Statement. <ul style="list-style-type: none"> <li>A document that identifies and ranks the likelihood and severity of any potential risks and determines control measures required to mitigate those risks.</li> </ul>
NSW Water	Formally the Sydney Catchment Authority.
Material harm to the environment (as per conditions of consent)	involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment
OEMP	Operation Environmental Management Plan.
OMS	GE’s Operation, Maintenance and Service Group.
Pollution Incident	An incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
Proponent or BWFPL	Bodangora Wind Farm Pty Ltd.
SEE	Statement of Environmental Effects
SOC	Statement of Commitments.
Site	The area defined for the Bodangora Wind Farm.
SMP	Service Management Plan. <ul style="list-style-type: none"> <li>Reference to this document which sets out the specific HSE and Quality practices, resources, activities and responsibilities as prepared by GE and as required by the Energy Safety, Safety &amp; Standards Office of Fair Trading (NSW).</li> </ul>
Subcontractor	Any company, body or person who is contracted to GE, or BWFPL, for the purpose of supplying goods and/or services.
WTG	Wind Turbine Generator.

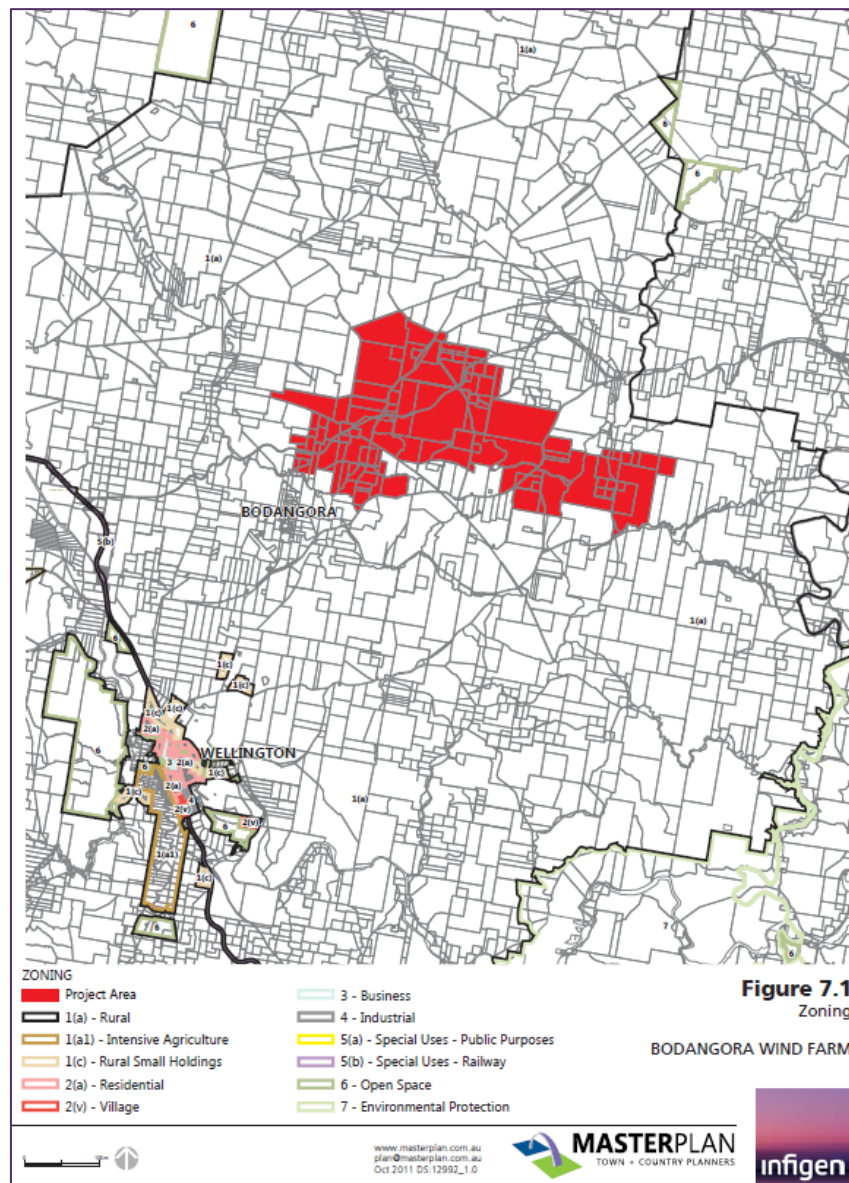
### 4. Introduction

#### 4.1 Background

GE International Inc. (GE) has been contracted to carry out the service and maintenance on the BWF. The BWF is located in Central Western NSW, between 40 and 60 kilometres south-east of Dubbo, and approximately 20 kilometres north-east of the town of Wellington, as identified in the Figures below. The project area, including all project infrastructure elements and grid connection is situated wholly within the Dubbo Regional Council.

The project area spans over an area of approximately 18 kilometres from east to west and 12 kilometres from north to south. The project area comprises the land owned by private land owners. Currently, the primary use of the land is for sheep and cattle grazing. The surrounding locality also contains a number of rural residential dwellings. All dwellings within the project area have a lease or agreement with the proponent for the development. Existing features within the project area include the 132kV Wellington – Beryl transmission line, and the 330kV Wellington – Wollar transmission line.





**Figure 4-1: Area shaded showing location of Bodangora wind farm near the township of Wellington NSW.**

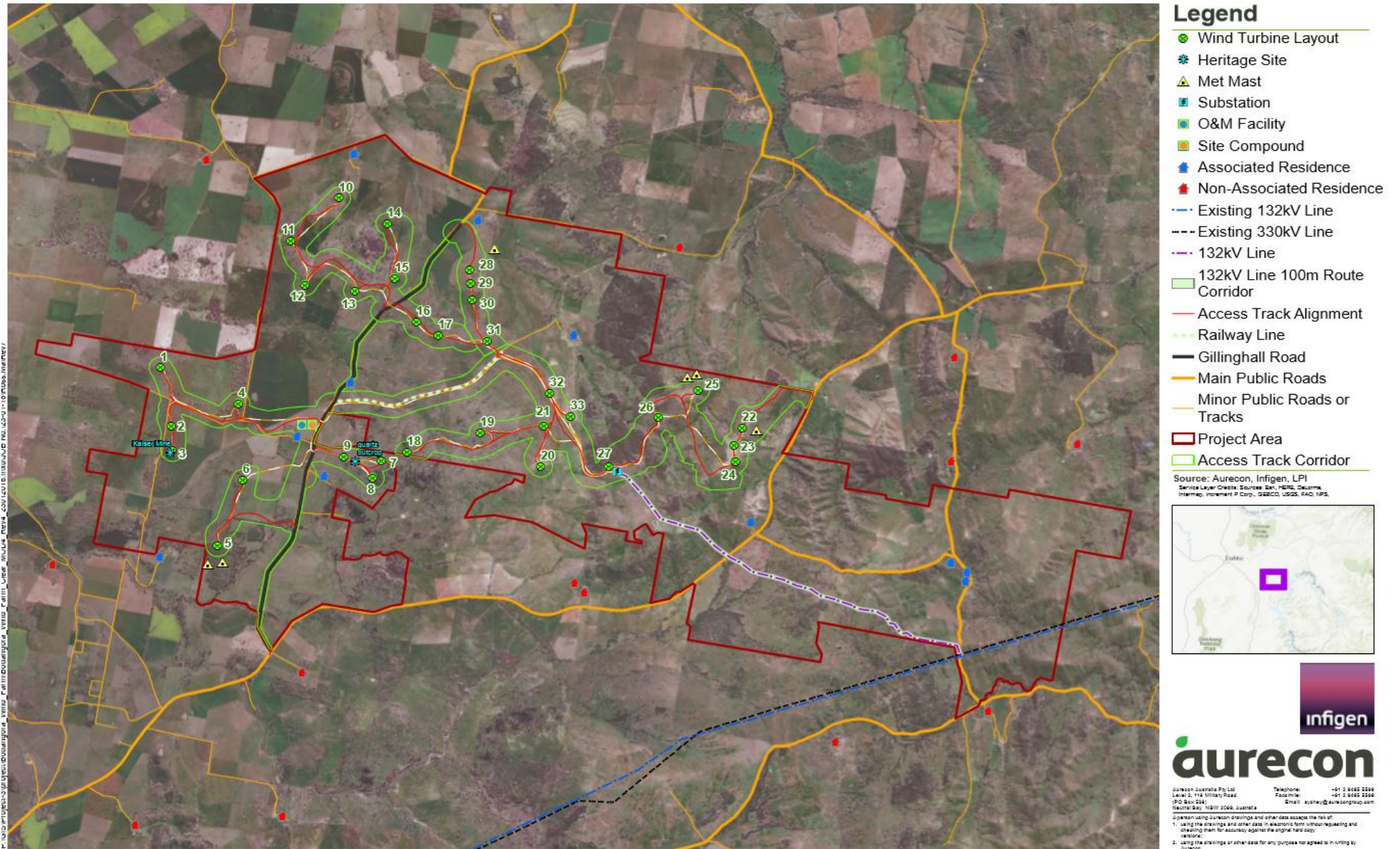
## 4.2 Project Description

The project comprises 33 GE 3.4-130 turbines with 85 m hub height. The site received planning approval in August 2013, subsequently received approval for an amendment allowing a larger turbine rotor in October 2015, and approval soon after for a further amendment relating to the grid connection in December 2016. Micrositing of turbines, the meteorological masts and access tracks were approved in as minor modifications in June 2017 and December 2017. The layout of the site is shown in Figure 4-2 below. The turbines are connected by underground cables to a single 33/132 kV transformer at an on-site substation, which is linked by a new overhead line to a tee connection at the Beryl-Wellington 132 kV line located to the east of the Site.

The key activities to be undertaken during operations of BWF are:

1. Scheduled turbine maintenance;
2. Unscheduled turbine repairs and maintenance;
3. Maintenance and repairs of Balance of Plant (civil, electrical and facility).

Figure 4-2: Bodangora Site Layout Map



### **4.3 Bodangora Wind Pty Ltd**

Any Iberdrola Australia management systems, policies or procedures that are referred to in this document apply equally to BWFPL and BWF for the purposes of this OEMP.

### **4.4 Purpose and Objectives**

The purpose of this OEMP is to:

- Provide a management framework that aims to control potential operational impacts on the environment. It includes practical and achievable performance requirements; mitigation strategies; a system of monitoring, reporting and auditing; and process for implementation of corrective action;
- Ensure all operation staff are made aware of the potential operational impacts on the environment, and the associated management strategies within which they are expected to conduct their activities;
- Provide evidence of compliance with our development conditions of consent, relevant legislation, policies, guidelines and requirements to Local, State and Commonwealth Authorities; and
- Provide stakeholders with the assurance that the operation of the site is being managed in an environmentally acceptable manner.

The objectives of this OEMP are to:

- Provide for the effective management of the environmental concerns and potential adverse environmental effects arising from BWF;
- Assign management responsibilities and to define reporting requirements;
- Identify appropriate impact mitigation measures and management strategies in response to potential adverse environmental effects; and
- Establish a system to test the effectiveness of environmental management actions implementation, by way of audits and inspections.

The scope of the development and its environmental management will be undertaken in accordance with the approval conditions listed within the NSW Minister for Planning's Conditions of Approval (Project Approval) issued on 30 August 2013 and as modified.

#### **Key references that contributed to the contents of this plan are:**

- Project Approval MP 10\_0157 Bodangora Wind Farm Project
- Environmental Assessment May 2012 by Masterplan
- Statement of commitments (SOC) within the Environmental Assessment
- Environmental risk analysis (to be prepared prior to commencement of operations with operations staff)

Details of modifications to these conditions are as follows:

- Mod 1 – determined 13 October 2015 – increase length of turbine blade diameter from 114m to 130m
- Mod 2 – determined 5 December 2016 - relocation of the substation, relocation of the connection feeder (132kV line) and access track and underground cabling realignment.
- Mod 3 – 22 June 2017 – Minor modification relating to micro siting of two wind turbines and the meteorological masts.
- Mod 4 – 22 December 2017 – Minor modification relating to micro siting of access tracks.

#### 4.5 Operational Environment Management Plan Implementation Period.

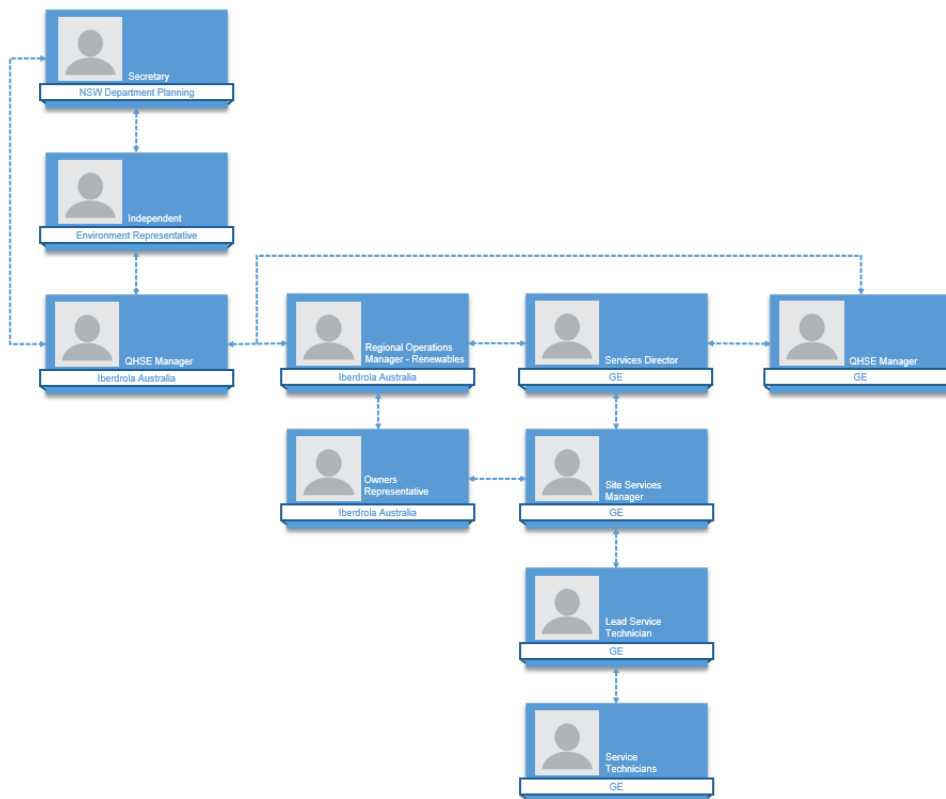
The project Construction Environmental Management Plan was in force for the Bodangora Wind Farm until Practical Completion was achieved for the EPC contract in February 2019. At that time, responsibility for the entirety of operations and maintenance was transferred to GE O&M and the BWF Operational Environment Management Plan (OEMP) took effect until the BWF is decommissioned.

#### 4.6 GE Site Specific Service Environment Management Plan

GE developed and implemented a site-specific environment management plan (EMP), appropriate to the scope of work, which governs environment for operations and maintenance activities, subcontractors and suppliers within their scope and control and influence. GE ensure their EMP is consistent with the requirements of Iberdrola Australia’s OEMP (this document) and describe in detail how they manage all aspects of environment within their influence and control.

#### 4.7 Environmental Management Structure and Responsibility

The Project Approval has been granted for BWFPL with ultimate responsibility for the project implementation resting with BWFPL. GE has been engaged by BWFPL to operate Bodangora on its behalf according to the Project Approval conditions as modified, and to the extent of the contract arrangement. Figure 4-3 below displays the BWF environmental management organisation structure.



**Figure 4-3: BWF Environmental Management Structure.**

All personnel on site have responsibilities and obligations to minimise impacts on the environment, and to work safely and maintain a healthy working environment for themselves, fellow workmates and the public. The responsibilities of key BWFPL personnel include, but are not necessarily limited to, the following:

**Regional Operations Manager - Renewables** It is the responsibility of the Regional Operations Manager - Renewables to ensure that sufficient resources are available to implement, develop and maintain this OEMP throughout the life of the wind farm. This role will ensure actions and delegations have been completed to introduce and manage

systems to meet Iberdrola Australia's project and corporate requirements. The Regional Operations Manager - Renewables is accountable for the environmental performance of the wind farm.

The role of the Regional Operations Manager - Renewables is to:

- Ensure that adequate resources are available for the implementation of this OEMP;
- Assist in setting, defining and communicating the environmental goals and targets;
- Ensure that environmental matters relating to the wind farm are reported to relevant personnel and are included in the agenda of management meetings;
- Define, document and communicate roles, responsibilities and authorities of all personnel involved in the environmental system in order to facilitate effective HSE management;
- Oversee the development, approval, implementation and review of this OEMP;
- Ensure Contractors are fully aware of their environmental obligations prior to entering into construction contracts;
- Implement stop work procedures where they believe a work activity to be an actual or potential cause of pollution to the environment;
- Ensure that key personnel for the wind farm are inducted into this framework.

### **Owners Representative**

The Owners Representative reports to the Operations Manager. The Owners Representative is responsible for the practical day-to-day implementation of this plan. In addition, the Owners Representative will:

- Review incident/hazard reports, minutes of meetings and audit reports;
- Conduct or participate in regular site environment inspections;
- Participate in incident/hazard investigations where appropriate;
- Foster a continuous improvement approach to all HSE matters;
- Plan for audits of the Contractor's use of this and their HSE management systems;
- Liaise closely with Contractors on HSE matters;
- Implement stop work procedures where they believe a work activity to be an actual or potential cause of pollution to the environment;
- When necessary, participate in risk assessment workshops and HSE meetings; and
- Report all environmental incidents and near misses with significant potential to the HSE Manager and Regional Operations Manager - Renewables.

**QHSE Manager Operations** The QHSE Manager Operations supports the Regional Operations Manager - Renewables and Owners Representative. The QHSE Manager Operations is to provide advice and support to assist in the development, review and implementation of this OEMP. In addition, the QHSE Manager Operations will:

- Assist in ensuring that GE's EMP is consistent with this OEMP, conditions of the Project Approval and other approvals, and that it is implemented as planned;
- Support the Regional Operations Manager - Renewables and Owners Representative and provide environmental management advice during the operations phase of the Project;
- Review and monitor that the environmental risk management requirements within this plan are met;
- Review incident/hazard reports, minutes of meetings and audit reports;
- Foster a continuous improvement approach to all HSE matters;
- Plan for audits of the Contractor's use of this and their HSE management systems;
- Implement stop work procedures where they believe a work activity to be an actual or potential cause of pollution to the environment;
- Liaise closely with Contractors on HSE matters;
- Attend or lead the investigation of any environmental incident or near miss as required; and

- Conduct, lead or arrange for regular environmental inspections and audits and provide feedback and recommendations.

### All Personnel

All personnel must carry out their work in a manner consistent with Iberdrola Australia’s Environment Policy. All personnel are responsible for the environmental impacts of their own actions and have a duty to carry out their work in a manner which does not present a risk to the environment. All personnel are required to report any deviation from the conditions anticipated in this OEMP and report environmental incidents and risks to the GE Site Manager or BWF Owners Representative or QHSE Manager Operations, as appropriate.

No personnel may interfere, intentionally or recklessly, with environmental controls at the site. This includes interference by way of practical jokes and sky larking. Any such interference will not be tolerated and may lead to counselling or other actions including and up to removal from the site.

### 4.8 Conditions and Licences

The NSW Department of Planning has provided clear guidance for the project environmental management requirements through the Project Approval Conditions and expects Iberdrola Australia to maintain systems that ensure compliance with these conditions and all associated approvals, permits, licences and agreements.

Project Approval Condition Schedule F19 sets out the requirements for this OEMP. The table below provides the OEMP conditions as per the Project Approval and a summary of how BWFPL has or continues to comply with the requirements. The full Project Approval conditions can be found on the NSW Planning website [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au).

Condition number	Condition requirement summary	Iberdrola Australia compliance
F19	Prior to commencement of operations...the Proponent shall prepare and implement (following approval) an OEMP for the Project. The Plan shall be submitted to the Secretary no later than one month prior to the commencement of operation.	This OEMP was provided to the Secretary prior to operations for approval. (Submitted 4/12/2018 Approved 16/12/2018)
	The Plan shall outline the environmental management practices and procedures that are to be followed during operation and shall be prepared in consultation with relevant agencies and in accordance with the referenced Guidelines (NSW Preparation of Environmental Management Plans, DIPNR 2004).	This OEMP has been prepared and is aligned to the referenced Guideline. See Appendix E for OEMP compliance checklist completed by Iberdrola Australia HSE Manager.
<b>The Plan shall include, but not necessarily be limited to:</b>		
(a)	a description of activities to be undertaken during operation of the Project (including staging and scheduling);	Section Project description
(b)	statutory and other obligations that the Proponent is required to fulfil during operation, including approval / consents, consultations and agreements required from authorities and other stakeholders under key legislation and policies	Appendix B List of Statutory and Other Obligations
(c)	overall environmental policies, guidelines and principles to be applied to the operation of the Project	Section References

Condition number	Condition requirement summary	Iberdrola Australia compliance
(d)	a description of the roles and responsibilities for relevant employees involved in the operation of the Project, including relevant training and induction provisions for ensuring that employees are aware of their environmental and compliance obligations under these Conditions of Approval	Section Management structure and responsibility; Section Training
(e)	an environmental risk analysis to identify the key environmental performance issues associated with the operation phase of the Project	Section Environmental Risk Analysis; Appendix C
(f)	details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts, including those safeguards and mitigation measures detailed in the EA (and any impacts arising from the staging of the construction of the Project)	Throughout the document see sections relating to environmental management of the site
(g)	details of how sector management would be used to ensure that operational noise criteria are not exceeded	Section Noise compliance assessment plan
F19	That the OEMP is Publicly Available upon receipt of Secretary's approval.	Instructions for obtaining a copy of the current version of OEMP will be on Iberdrola Australia's public website <a href="http://www.iberdrola.com.au">www.iberdrola.com.au</a>

**Table 4-4: OEMP Project Approval Compliance**

BWFPL has the responsibility to oversee the environmentally responsible implementation of the project and requires its contractors to conduct all its operations in accordance with the relevant requirements. To ensure compliance, BWFPL and contractors must have:

- Identified the approval and other statutory requirements;
- Allocated responsibilities for management of issues;
- Reviewed the proposed activities in the context of potential impacts;
- Developed suitable environmental management controls to mitigate the project's impacts.

Details regarding the frequency and scope of environmental monitoring and recording, the complaints management process, and the emergency / incident response procedures can be found in the management sub-plans contained within this document.

#### **4.9 Environment Protection Licence**

An application was made to the EPA for an EPL prior to operations handover practical completion at BWF. The EPA have issued an EPL under the Protection of the Environment Operations Act (POEO Act). The licence conditions relate to pollution prevention and monitoring, and cleaner production through recycling and reuse and the implementation of best practice. A copy of the BWF EPL is publicly available on the EPA public register.

#### **4.10 Biodiversity Offset Package.**

The Project Approval Condition C7 required a Biodiversity Offset Package to be prepared and implemented. BWFPL has met its biodiversity offset obligation for the Bodangora Wind Farm development by paying into the NSW Biodiversity

Conservation Fund, as approved by the DPE. The BCF Certificate Number is BCF 012 (Issued 31 October 2018) and is on the project web site.

#### **4.11 Environmental Representative**

The Project Approval Condition of Consent E19 requires the appointment of an experienced Environmental Representative that is independent of the design and construction personnel. An environmental representative was appointed during development. The same Environmental representative was appointed during project construction and will be maintained during operation of the project. Please refer to the Distribution List above for the name and company of the Environmental Representative.

#### **4.12 Notification to Department**

The Project Approval Condition of Consent B19, requires that prior to the commencement of the construction, operation and/or decommissioning of the Project or the cessation of operations, the Proponent must notify the Department in writing of the date of commencement or cessation.

#### **4.13 Community Consultative Committee**

The Project Approval Condition of Consent D1, requires that from the commencement of construction, BWFPL must operate a Community Consultative Committee for the Project to the satisfaction of the Secretary, in accordance with the Community Consultative Committee Guidelines for State Significant Projects (2016) or its latest version.

In accordance with the Guideline, the committee shall determine the frequency, timing and location of the committee meetings during the operational phase of the project in accordance with the Guideline. However, the DPE can determine the frequency of the meetings in consultation with the independent chairperson.

A CCC has been in place during development and construction of the wind farm and has continued to function during the operation of the wind farm.

#### **4.14 Compliance Tracking Program**

The Project Approval Conditions of Consent D5 requires that a Compliance Tracking Program to track compliance with the requirements of the Project Approval be implemented. The Program must be submitted to the DPE Secretary for approval prior to the commencement of construction and operate for the life of the Project. The Secretary shall be provided a copy of any updates made to the document that change the Program and a copy of the updated version made available on the Iberdrola Australia public website.

The approved Compliance Tracking Programme (CTP) is on the project web site. Compliance tracking will continue to take place in accordance with the CTP, with the tracker submitted regularly to the DPE in accordance with the CTP and the Project Approval

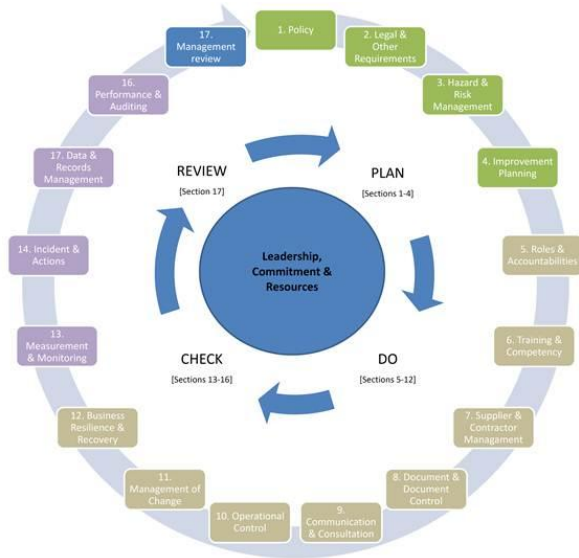
#### **4.15 Health Safety and Environment Management System**

Iberdrola Australia's integrated Health, Safety and Environment (HSE) Management System has been developed to establish and document a framework of requirements, policies, standards, guidelines and management practices for consistent and continuous improvement in health, safety and environmental performance and to help ensure legal compliance.

The HSE Management System is based on the requirements in:

- Standard for Environmental Management Systems; and
- Standard for Occupational Health & Safety Management Systems.

The System is designed to meet legislative compliance and to align with recognized management system principles of Plan, Do, Check, Review:

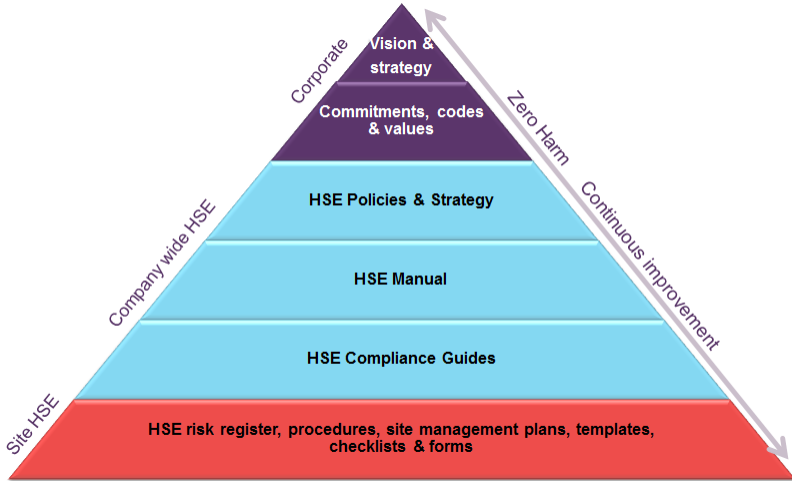


**Figure 4-5: Management System Cycle:**

illustrates the 17 components of Iberdrola Australia’s HSE Management System which complies with the requirements of ISO 45001 and 14001, and is encompassed within the “Plan Do Check Review” model of continuous improvement

**4.16 HSE Compliance Guides**

The Iberdrola Australia HSE Management System Compliance Guides set the minimum requirements for a number of specific site activities. The GE Site Manager is responsible for providing all contractors with the full version of all relevant Iberdrola Australia HSE Management System Compliance Guides as is relevant to the work they are procured to undertake. Each contractor shall be required to ensure that task specific procedures and guidelines are in place to appropriately manage all tasks and activities.



**Figure 4-6: HSEMS Document Structure**

illustrates the hierarchy of documentation found within the hierarchy, commencing with the Iberdrola Australia vision, strategy and commitment material including policies followed by HSEMS Manual and minimum standard Compliance Guides. The lower section of the structure includes site management plans such as this OEMP, forms, templates, checklists and audit tools that are used on site.

#### 4.17 Commitment, Policy & Targets

Iberdrola Australia has established and implemented environment goals and targets for BWF that are consistent with the Iberdrola Australia Environment policy including the commitment to measuring and improving HSE performance. Site specific targets have been set which comprise of lead indicators. These targets will assist in achieving Iberdrola Australia's overall aspirational goal of zero harm, which means managing the site to ensure the environment is not harmed by our activities. Environmental statistics shall be reported on a monthly basis. Goals and targets shall be communicated during relevant site specific HSE inductions.

Iberdrola Australia requires that GE sets environmental goals and targets which are aligned with or in the absence of, are as per the Iberdrola Australia goals and targets as described. Where GE implement their own goals and targets, they must be quantified and measurable and should include both outcome-related goals and Key Performance Indicators (KPIs).

The Owners Representative and QHSE Manager Operations will monitor performance against the designated goals and targets on a regular basis as part of monthly HSE meetings. The Iberdrola Australia targets provided are in the tables below.

Lagging Indicators	Iberdrola Australia's Target
Number of reportable environmental Pollution Incidents (No environmental incidents within the reporting month)	0.0

Leading Indicators	Iberdrola Australia target
Percentage of Iberdrola Australia and OEM environmental Audits Performed Against Schedule (No of Audits Undertaken / Number of Audits Due X 100)	Between 80-90%
Number of environmental hazards reported (Number of hazards recorded within Iberdrola Australia's hazard and incident management system within the reporting month)	as required
Number of HSE monthly meetings held and minutes recorded (excluding months where a Quarterly Business Review meeting is held and HSE is on the agenda) (number of monthly meetings held / number of meetings due x 100)	Between 80-90%

**Table 4-7: Bodangora Environment Targets**

#### 4.18 Environmental Policy

Iberdrola Australia is committed to having a positive impact on the environment. All employees, contractors and visitors are required to comply with the Iberdrola Australia Environment Policy. The Policy is intended to clearly inform all relevant parties that HSE is an integral part of Iberdrola Australia operations and this commitment is further reinforced by approval of the Policy by Iberdrola Australia's Managing Director and Chairman. The Environment Policy can be viewed at the BWF site office.

GE shall have in place an Environmental Policy within its environmental management system, and the commitments within this policy will be communicated to all employees, subcontractors, and stakeholders. This will be achieved through site inductions for all personnel regularly working or visiting the site. Records of personnel who have undertaken induction will be kept on site.

It is obligatory for everyone on site and suppliers to comply with all environmental requirements as outlined in this OEMP.

#### 4.19 Environmental Pollution Incidents

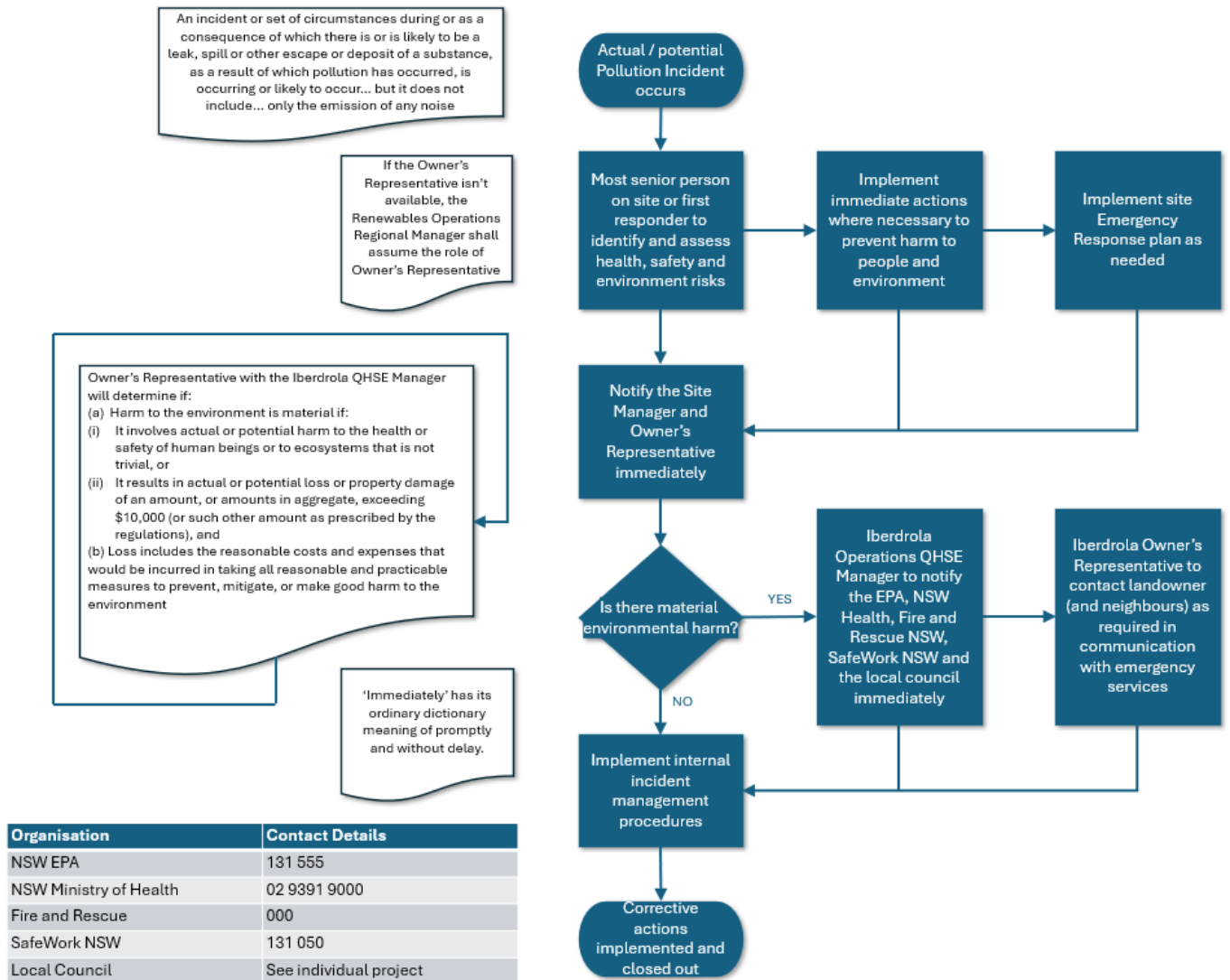


Figure 4-8: Iberdrola Australia Pollution Incident Response Flow Chart.

In accordance with general requirements of the EPL, and in the unlikely event of an incident, Iberdrola Australia shall report pollution incidents *immediately after BWFPL becomes aware of the incident*, to the NSW EPA, NSW DPE, NSW Ministry of Health, Fire and Rescue NSW, SafeWork NSW and the relevant local council/s. 'Immediately' has its ordinary dictionary meaning of promptly and without delay. GE are required to have in place an incident reporting and communication protocol, reviewed by Iberdrola Australia that will be followed in the event of a Pollution Incident. Anyone who identifies a pollution incident will verbally report it to GE site management immediately. GE site management will then verbally notify Iberdrola Australia site management immediately. To ensure accurate information is provided, the Iberdrola Australia QHSE Manager Operations will, with GE, provide notification and all subsequent communication of the incident to environmental regulatory authorities as required. GE site management will also send Iberdrola Australia preliminary incident information. BWF Owners Representative shall be verbally notified of all other environmental incidents within 24 hours.

NSW Water will be notified of any pollution incidents that have occurred in the drinking water catchment (i.e. to the east of the main range) where there are potential impacts on water quality. An Incident Register of all environmental incidents

or potential incidents (near miss) will be maintained by GE. This register will be made available for inspection upon request, by appropriate regulatory authorities and Iberdrola Australia or person/s working on behalf of Iberdrola Australia. GE will ensure that an appropriate level of investigation is undertaken for all environmental incidents relating to the operation of Bodangora. The investigation will be undertaken in a timely manner without delay and a copy provided to Iberdrola Australia upon completion. GE shall implement a system whereby any follow up actions from these incidents can be recorded and status tracked to completion. The Bodangora Emergency Response Plan (ERP) will be referred to as required in the unlikely event of a pollution incident at Bodangora.

In accordance with Condition D7 of the Project Approval, the Department will be notified in writing to [compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au) within 7 days after BWFPL becomes aware of any non-compliance which includes pollution incidents. The notification will be made in accordance with the requirements set out within Condition D7.

#### **4.20 Environmental Risk Register Analysis**

As required by part of the project approval conditions of consent, the OEMP includes an environmental risk analysis to identify the key environmental performance issues associated with the operation phase of the Project

A detailed environmental risk analysis was conducted as part of the project's environmental assessment. The assessment was prepared with reference to the method described in Australian Standard 203:2006 Environmental Risk Management – Principles and Process and the Companion to AS 203:2006. The relevant and applicable outcomes of this analysis have been included in this OEMP as they relate to the operation of the wind farm. See Appendix C for the risk analysis applicable to the operational phase of the project.

The relevant and applicable outcomes of this analysis have informed and been included in this OEMP as they relate to the operation of the wind farm. See Appendix C for the risk analysis applicable to the operational phase of the project.

A risk analysis workshop was held with key representatives from operational staff on site and management to review the risk analysis and make any further necessary additions. The risk analysis is a document that will be formally reviewed on a regular basis and updated (as required) upon new information, changes to legislation, changes to the working environment and / or after an incident. This risk analysis is known as the Site Specific HSE Risk Register.

The Site Specific HSE risk register provides a detailed list of all identified site hazards and the control measures implemented in order to eliminate or minimise the risk of harm to persons. The site specific risk register was developed and is administered by GE, and will ensure that the risk assessment takes into consideration both the likelihood of an environmental hazard, aspect or impact becoming an event or incident and the consequence and severity of such an incident or event and ensures that prior to the implementation of control measures, the proposed measures are reviewed to ensure they do not create a new hazard or impact.

The hierarchy of controls shall be applied so that risks associated with identified hazards are eliminated or controlled to as low as is reasonably practicable. The results of the site-specific risk register will be communicated to everyone during relevant site HSE inductions as they are relevant to the work they are undertaking or sites they are visiting. The risk register is an agenda item on the Monthly site HSE meetings and will be formally reviewed at least annually.

The risk assessment shall be informed by the applicable aspects of the Environmental Risk Analysis (Table 18.4 of the BWF EA).

#### **4.21 Inspections**

GE's site technicians will report all environmental hazards they identify as part of their normal day-to-day operations to GE site management. Six monthly inspections of site activities and environmental performance will be undertaken by

GE and may include Iberdrola Australia personnel using the GE developed inspection checklists as discussed in the Sub Plans. Records of completion shall be maintained by GE and made available upon request by a relevant government authority, Iberdrola Australia, or person/s working on behalf of Iberdrola Australia. Minor issues noted in these inspections will be listed in a Hazard Observation Register with the required actions and completion dates and more serious issues (those requiring more than 7 days to address) shall be recorded in the Corrective Action Register. Both these registers will also include the required actions to be undertaken as well the completion dates. GE shall develop and maintain the Hazard Observation Register and the Corrective Action Register. GE shall implement a system whereby any follow up actions from these inspections can be recorded and status tracked to completion.

Where necessary, GE and Iberdrola Australia may review the level, scope and timing of inspections to ensure continuous improvement through the life of the wind farm.

#### **4.22 Audits**

GE will be required to undertake an annual audit of their site specific EMP for BWF. The results and a results report must be provided to Iberdrola Australia within two weeks of the audit taking place. GE and Iberdrola Australia shall implement a system whereby any follow up actions from these audits can be recorded and status tracked to completion. GE shall provide the results of audits to Iberdrola Australia upon completion of audits and make it available for Iberdrola Australia or person/s working on behalf of Iberdrola Australia upon request. Iberdrola Australia may procure the services of a third party independent auditor to undertake audits of compliance with this OEMP and / or GE EMP. Government authorities such as the Department of Planning and the local council are also able to undertake audits of project compliance with approval conditions and relevant legislation at any time.

#### **Condition D8 Independent Environmental Audit**

Independent Environmental Audit	Within 1 year of the commencement of construction; and Every three years thereafter (unless the Secretary directs otherwise)
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See the conditions of consent D8 to D11 for full details on how the audit is to take place. This audit will be conducted by Iberdrola Australia in accordance with the conditions of consent.

GE and BWFPL will undertake annual audit of compliance with the OEMP and its sub plans and will use the above referenced Hazard Observation Register and Corrective Action Register to record and address any non-conformances.

#### **4.23 Complaints**

Complaints may come from several avenues, for example the complaints line, direct contact with Iberdrola Australia or Iberdrola Australia's contractors, direct to the Owners Representative by phone (the telephone number is displayed on the site notice board) or by personal contact with Iberdrola Australia or GE employees. Any complaints received shall be treated seriously and with respect.

Should any complaints be received by GE, they shall be reported to the BWF Owners Representative immediately for recording in Iberdrola Australia's incident management system. GE shall record the complaint on a GE developed and administered complaints register or system.

GE's and Iberdrola Australia's complaints register/system will record the details of the complaint, action taken to investigate, any actions taken to address the problem, and any recommendations for further action. An updated copy of the complaints register will be included in the monthly report and made available to Iberdrola Australia upon request. GE will ensure a copy of the complaints register is made available to the Environmental Representative (ER) upon request.

Where initial investigations show the complaint is related to GE and is verified, GE shall fully investigate the complaint and undertake all practical measures to immediately modify the activity causing the impacts. GE shall complete and provide an incident report and provide to Iberdrola Australia within 24 hours wherever possible.

For complaints regarding significant matters, these shall be referred to GE's management, the BWF Owners Representative and the ER within 24 hours. Complaint response times shall be in compliance with the requirements within the Iberdrola Australia Energy Complaints Handling Policy.

#### **4.24 Non-Compliance**

The operation of BWF shall be undertaken to avoid instances of non-compliance with this OEMP and the Project Approval requirements.

In the event that a non-compliance involving failure to implement or adhere to the identified requirements of the Project Approval, OEMP or its Sub Plans does occur, the incident will be notified to the BWF Owners Representative immediately. Iberdrola Australia shall manage the non-compliance including undertaking an appropriate investigation into the matter.

In accordance with condition of consent D7, the Department of Planning will be notified in writing within seven days after Iberdrola Australia becomes aware of any non-compliance of the Project Approval.

#### **4.25 Related Documentation**

All persons involved with the operational phase of BWF shall undertake their respective activities in accordance with the relevant requirements of the OEMP.

This OEMP shall also be read in conjunction with the following related documents which exist as separate documents:

- BWF – environment management plan (GE)
- BWF – Service Management Plan (GE)
- BWF – Emergency Response Plan (GE)
- Site Induction Handbook or similar information format (Service) (GE)

The operation will also be carried out in accordance with the following documents:

- BWF – Environmental Assessment (May 2010) – MasterPlan Town and Country Planners;
- BWF – subsequent updates to the Environmental Assessments for Modification 1, 2, 3 and 4;
- The consolidated Conditions of Project Approval.

If there is any inconsistency between the Conditions of Approval and a document listed above, the Conditions of Approval shall prevail to the extent of the inconsistency.

If there is any inconsistency between documents listed above (other than the Conditions of Approval) then the most recent document shall prevail to the extent of the inconsistency.

#### **4.26 Training**

Iberdrola Australia's and key GE Contractor personnel will be inducted to this OEMP. This induction will generally take place at a site "Kick off" meeting, or similar, meeting for the commencement of operations at Bodangora.

## **BWF's Induction & Training**

Appropriate HSE training is given to all employees commensurate with their role, work activities and level of risk. The Induction will be conducted on the commencement of employment, for job transfers, for Contractors and visitors to all sites.

Related training for employees may include the following training courses:

- HSE Responsibilities for Senior Leaders;
- HSE Management and Risk Management systems; and

## **Site Specific Training**

Contractors will refer to their environment management plans, and environmental risk register for the project and conduct a training needs analysis to identify the induction and training requirements for site personnel working or visiting within the site they control or the work they are undertaking. Contractors are responsible for keeping appropriate records of certification and training attendance.

## **Site Specific Induction**

Contractors will ensure that a Site-Specific Induction is conducted for all personnel engaged on site, including visitors. Contractors will maintain records of all inducted persons. Iberdrola Australia will review the induction/s when changes have been made.

As a minimum, Induction and Training must address the following:

- Any sensitive / no-go locations within the Project area;
- The importance of management of spills, leaks, illegal dumping and surface water quality within the Project area to prevent possible impacts to groundwater;
- Any areas that contain remnant vegetation that supports distinct vegetation community types – including any identified as threatened ecological communities and the location of these threatened ecological communities;
- Any threatened fauna species under the Biodiversity Conservation Act 2016 Act where required within the Project area; The Act came into effect on 25 August 2017 and replaces Threatened Species Conservation Act; Processes to be followed in the event of discovery of previously unidentified Aboriginal or Non-Aboriginal artefacts; and
- Incident reporting requirements and methods
- Site emergency procedures.
- Site specific rules and procedures;
- Operation activities, associated risks and controls; and
- Regulatory and Relevant Authority requirements relevant to the work.

### **4.27 Emergency Response Procedures**

Relevant emergency services will be contacted whenever lives are in danger or serious injuries occur (see BWF - Emergency Response Plan and the contact details within this OEMP).

The BWF Emergency Response Plan provides further details regarding safety considerations and the safety of personnel in the event of the emergencies outlined below.

The key aspects considered in the BWF – Emergency Response Plan are:

- Responsibilities for management of the emergencies listed below
- Management of risks associated with hazardous substances, working at heights etc.

- Incident management
- Corrective actions

The ERP has been developed by GE and identifies those major environmental incidents relevant to the site operations and the responses to take in the unlikely event of an incident occurring.

Refer to the BWF - Emergency Response Plan for emergency response arrangements.

## 5. Operation Soil and Water Management Sub Plan

### 5.1 Introduction

This Soil and Water Management Sub Plan comprises part of the OEMP for Bodangora. This sub plan has been developed in response to the Minister for Planning's Project Approval, particularly F19(f).

Minister's Requirement	Location within sub-plan
Condition number F19(f) requires that the OEMP includes management strategies to address potential adverse environmental impacts including mitigation measures detailed in the EA.	Section 5.4
EA Section 14.2.2 Soils: At the conclusion of construction, all temporary tracks and areas disturbed by construction work, including cable routes and hardstand areas surrounding the wind turbines will be reinstated and revegetated	Section 5.4
EA Section 14.2.2 Soils: All temporary control measures will be removed when revegetation has established on formerly disturbed areas, and will be disposed of in a satisfactory manner. Follow up maintenance will be undertaken until the areas are satisfactorily stabilised and restored.	Section 5.4
Condition number C8 requires the project to be constructed and operated to comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters.	Section 5.4

**Table 5-1: Ministers Requirements for soil and water management**

The soils within the project area consist of a mixture of deep alluvial loams, and shallow loams. Soils are often stony and/or sandy, most of the deeper or more productive soils have been extensively cleared of their natural vegetation.

Access tracks have been specifically designed to minimise the grade and include drainage to avoid erosion of the surrounding slopes. Earthworks in these areas have been designed to ensure that the completed formations are stable in the longer term.

Disturbed areas and areas of exposed soil will be rehabilitated. Until this time, erosion and sediment controls will be installed and maintained in accordance with the requirements of the Blue Book (Landcom, 2004) and will be inspected and monitored weekly as detailed in Table 5.3 and mitigation strategies implemented as detailed in Table 5.2.

### 5.2 Key Legislative Requirement and Guidelines

Key legislative requirements relevant to the project's soil and water management include:

Legislation	Brief Description
<i>Protection of the Environmental Operations Act</i>	Includes provisions relating to contamination and pollution of water – Appropriate regulatory authority includes EPA and local Council/s as site is not a "Scheduled Premises".

Legislation	Brief Description
<i>Soil Conservation Act</i>	The Commissioner of Soil Conservation may issue notices in respect of activities that cause erosion or degradation of certain land to conserve soil.
<i>Work Health and Safety Regulation</i>	Relates to the handling and storage of certain Dangerous goods identified in the Regulation.
<i>Local Government Act</i>	Purpose is to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which the local government is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development.

The following table outlines the key environmental guidelines relevant to the project's soil and water management and how these have been addressed within the sub plan:

Guidelines	Brief Description
Guidelines for the Control of Erosion and Sedimentation in Roadworks (1984) NSW Roads and Transport Authority;	Mitigation measures identified in Section 5.4 for the maintenance of tracks to minimise erosion
Guidelines for the Planning, Construction and Maintenance of Tracks (1994) NSW Department of Land and Water Conservation	Mitigation measures identified in Section 5.4 for the maintenance of tracks to minimise erosion
Managing Urban Stormwater: Soils and Construction – Volume 1 (2006), Landcom	Mitigation measures identified in Section 5.4 are in line with these guidelines, and includes considerations such as standards for revegetation.
Managing Urban Stormwater: Soils and Construction – Installation of Services, Vol 2A, Department of Environment and Climate Change NSW	Mitigation measures in Section 5.4 have been identified in line with the guidelines for rehabilitation following installation of services (power lines).
Managing Urban Stormwater: Soils and Construction – Unsealed Roads, Vol 2C, Department of Environment and Climate Change, NSW.	Mitigation strategies in Section 5.4 in line with the maintenance of roads to minimise the erosion and sedimentation potential.
Constructed Wetlands Manual (1998) NSW Department of Land and Water Conservation.	Mitigation measures outlined in Section 5.4 to address site rehabilitation measures

### 5.3 Performance Criteria

The performance criteria for Bodangora's Operation Soil and Water Management Sub Plan are:

1. no erosion and sediment transport within or beyond turbine hardstands, access tracks, electrical cable routes, laydown areas, the substation site, or to the adjacent landscape as a result of these works;
2. no unmanaged transportation of hazardous chemicals beyond designated storage areas;
3. landscaping and revegetation works are to stabilise disturbed landscape. Follow up maintenance will be undertaken until the areas are satisfactorily stabilised and restored.

### 5.4 Potential Impacts and Mitigation Strategies

BWF is not considered a sensitive landscape in respect to soil and water due to substantial grass cover being present for most of the site. These mitigation measures form the Soil and Water Management Strategy for operation of the site, as required by the conditions of consent, the EA, legislation and to align to Iberdrola Australia OEMP requirements for its operating sites.

Potential Impacts	Mitigation Strategies	Responsibility	
		BWF P/L	GE
Soil erosion caused by an increase in velocity and volume of surface water flows due to construction of hard surfaced roads, removal of vegetation, and reshaping of land profile.	<ul style="list-style-type: none"> <li>Retain sediment control measures such as silt fences installed during construction phase until cleared areas are sufficiently revegetated.</li> <li>Ensure all swale drains are sufficiently revegetated to infiltrate collected surface runoff from all impervious and developed areas.</li> <li>The site environmental checklist to be implemented by GE will also monitor runoffs.</li> <li>Ensure that all roads are sufficiently managing water flows so as to minimise the velocity of surface water and prevent erosion to the surrounding landscape.</li> <li>Overflows from water tanks do not cause erosion to the surrounding landscape;</li> <li>establish monitoring and reporting system for inspecting all soil and water management controls;</li> <li>continue maintenance program for all civil works with the objective of reducing the extent of maintenance works required as areas are effectively stabilised (roads);</li> <li>establish emergency response procedures;</li> <li>report all incidents and near misses to Site Management</li> </ul>	✓	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
Reduction of water quality in surface flows, natural watercourses, and manmade water bodies due to erosion of soil from disturbed landscape around project works.	<ul style="list-style-type: none"> <li>minimise the clearance of vegetation and ensure final earthworks are formed to widely disperse water and are promptly revegetated;</li> <li>Retain sediment control measures such as silt fences installed during construction phase until cleared areas are sufficiently revegetated.</li> <li>ensure that all roads are sufficiently managing water flows so as to minimise the velocity of surface water and prevent erosion and subsequent soil transportation;</li> <li>report all incidents and near misses to Site Management</li> </ul>		<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
Contamination of soil and/or water due to hazardous substance spill, leaking from hazardous substance storage, or inadequate storage and removal of rubbish/waste.	<ul style="list-style-type: none"> <li>any hazardous chemical brought to or stored on site must be accompanied by a Safety Data Sheet (SDS) and remain in place until the chemical is no longer required. GE must maintain a register of relevant chemicals and their SDS.</li> <li>a risk assessment incorporating any relevant SDS considerations must be completed prior to commencing any task involving hazardous chemicals</li> <li>only suitably trained persons shall handle or use hazardous chemicals</li> <li>there must be suitable storage of hazardous chemicals with appropriate strategies in place to ensure the risk of pollution incidents is eliminated or mitigated to as low as reasonably practicable including appropriately bunded areas, and secure hazardous substance storage containers which conform to Australian Standards</li> </ul>		<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>

Potential Impacts	Mitigation Strategies	Responsibility	
		BWF P/L	GE
	<ul style="list-style-type: none"> <li>hazardous goods storage containers and areas to be inspected for deterioration monthly</li> <li>hydrocarbon spill kits shall be provided by GE and placed on site to manage any spills that may occur</li> <li>all hazardous chemicals must be disposed of correctly (see Waste Management and Re-Use Sub Plan in this OEMP)</li> <li>report all incidents and near misses to Site Management</li> </ul>		<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>

**Table 5-2: Potential impacts and mitigation strategies associated with soil and water management**

Note: where revegetation is required, significant cover is to be established in 1-2 months and largely continuous cover established in 3-6 months, depending on the season.

## 5.5 Monitoring and Reporting

Routine and event-based site environmental inspections on all soil and water management control measures will be undertaken by GE (see Table 5-3: below) to ensure appropriate mitigation measures and controls are being provided and that they are effectively achieving the aforementioned performance criteria.

Inspection / Audit Description	Frequency	Responsibility	
		BWFP/L	GE
Informal visual checks of soil and water management control measures by site personnel to ensure that control measures provided are effective and are functioning correctly.	Day to Day		✓
Inspections by GE following significant rainfall (i.e. > 20 mm/24 hours, more than 15mm in one hour ). > All active erosion events where sediment is observed travelling >3m beyond roads/hardstands/laydown areas/cable routes will be reported and investigated as an environmental incident.	Within 24 hours of event or observation based		✓
<u>Environment Inspection Checklist</u> will be developed and completed by GE personnel for all areas of site. This will be filed on site and made available to the client upon request.	Every 6 months		✓

**Table 5-3: Inspection and reporting responsibilities for soil and water management.**

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and BWFP/L regularly till such time all corrective actions are closed out.

## 6. Flora and Fauna Management Sub Plan

### 6.1 Introduction

According to the BWF Environmental Assessment (MasterPlan, May 2012), the majority of the project area comprises exotic pasture land used for cropping or grazing, where little native ground cover or native shrubs occur. No threatened plant species have been recorded within 20 kilometres of the project area, or within the project area. Given the highly modified environment within the project area, it is unlikely that any threatened species would occur. It should be noted that site disturbance associated with the project's construction phase will not be continued during the operation phase. Rehabilitation of areas disturbed during the construction phase was completed after construction and monitored to ensure the set performance criteria were met.

## 6.2 Key Legislative Requirement and Relevant Guidelines

Key legislative requirements and guidelines relevant to the flora and fauna management of BWF during its Operation Phase are listed in the table below.

Legislation / Guideline	Brief Description
<i>Environmental Planning and Assessment Act (EP&amp;A Act)</i>	Project Approval Conditions
<i>Environment Protection and Biodiversity Conservation Act (EPBC Act)</i>	The EPBC Act relates to projects likely to have a significant impact on matters of national environmental significance. Expert assessment of species and communities in the vicinity of the project has concluded that the development “is unlikely to have a significant impact on any matters of national environmental significance, and that a referral to the Commonwealth Minister for the Environment [EPBC referral] is not warranted.”
<i>Biodiversity Conservation Act 2016 (BC Act)</i>	The BC Act and the Amendments to the Local Land Services Act commenced on 25 August 2017. The legislation delivers a strategic approach to conservation in NSW whilst supporting improved farm productivity and sustainable development.
<i>Threatened Species Conservation Act (TSC Act) (repealed)</i>	The TSC Act has been repealed and has been replaced by the BC Act on 25 August 2017
<i>National Parks and Wildlife Act 1974 (NPW Act)</i>	Parts of the NPW Act dealing with threatened species and communities, and protected wildlife have been repealed and replaced by the BC Act. Other parts of the Act are still applicable to the protection of Aboriginal places.
<i>Native Vegetation Act (repealed)</i>	The Native Vegetation Act was repealed and has been replaced by the Biodiversity Conservation Act 2016 on 25 August 2017
<i>Biosecurity Act 2015 (repealed the Noxious Weeds Act on 1 July 2017)</i>	The primary object of this Act is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.
<i>Fisheries Management Act 1994 (FM Act)</i>	The FM Act provides for the protection of threatened aquatic species, populations and ecological communities as well as areas of critical habitat.  There are no aquatic habitats on site that support threatened aquatic species.

**Table 6-1: Key legislative requirements and Relevant Guidelines**

## 6.3 Performance Criteria

The Project Approval conditions of consent F5 and F6 Rehabilitation and Revegetation has set the following performance criteria for the BWF OEMP Flora and Fauna Management Sub Plan:

- F5 Disturbance to watercourses and / or associated riparian vegetation shall be rehabilitated to a standard equal to or better than the existing condition in consultation with the Crown Lands and Water (CL&W) 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 F6.
- F6 The Proponent shall implement a revegetation and rehabilitation programme for all areas of the Project footprint which are disturbed during the construction of the Project, 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 Secretary, 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 Secretary) as being well established, in good health and self-sustaining.

#### 6.4 Potential Impacts and Mitigation Strategies

The majority of the turbine sites, access routes, cable routes and the substation site occur on cleared land with a long history of grazing, which minimised the potential for wind farm activities to impact native flora and fauna.

The table below shows the key potential impacts and mitigation strategies identified within the suite of studies undertaken for the various environmental assessments. These are required by the NSW Minister for Planning's Conditions of Approval to be included in this document and will be implemented at all times during the operation of this wind farm facility.

Project Approval Conditions require a separate management plan to be developed for impacts on avifauna, and as such the Bird and Bat Adaptive Management Plan which contains more specific information about the management of potential impacts upon avifauna.

Potential impacts and mitigation strategies are identified in Table below.

Potential Environmental Impacts	Impact Type (Direct/ Indirect)	Mitigation Strategies	Responsibility	
			BWFPL	GE
Further reduction in native flora diversity due to changes to natural cycles caused by the construction and presence of wind farm infrastructure	Direct and Indirect	<ul style="list-style-type: none"> <li>Use plants or seeds endemic to the area in any plantings undertaken.</li> <li>Use species for rehabilitation that have been chosen in consultation with landowners.</li> </ul>		✓
Disturbance to natural movements and behaviours of local native fauna	Direct and Indirect	<ul style="list-style-type: none"> <li>Where any new fencing is required during operations, fencing will allow for native animal movement between remnant vegetation stands. Fencing must not prohibit any existing access to water sources such as dams and natural water courses.</li> </ul>		✓
Disturbance to native fauna habitat	Direct	<ul style="list-style-type: none"> <li>Bund oil storage locations to prevent leaks and spills entering drainage lines. Use appropriate containment facilities for chemical storage to prevent discharge to ground.</li> </ul>		✓
Injury or death to birds and bats caused by operating wind turbine generators.	Direct	<ul style="list-style-type: none"> <li>Use mitigation measures outlined in the Iberdrola Australia Bird and Bat adaptive management plan</li> </ul>	✓	✓

**Table 6-2: - Potential impacts on flora and fauna and mitigation strategies to avoid these impacts**

## 6.5 Weed Management Strategy

### 6.5.1 Introduction

Weed control on the properties within the project site is not the responsibility of the Proponent (BWFPL) or the Contractor (GE). It is, however, the responsibility of GE to ensure that the areas within the project site where works have disturbed the landscape are not infested by weeds but rather quickly and effectively rehabilitated with pasture grasses or native grasses.

### 6.5.2 Declared Noxious Weeds at Site

The table below shows those seven species present within the BWF project site that were declared under the *Noxious Weeds Act* as being noxious weeds, prior to the act being repealed in July 2017. In the event that any noxious weeds in addition to those listed in this table are identified, this list will be updated accordingly and weed management undertaken as necessary.

Scientific Name	Common Name	Noxious Weed Class <sup>1</sup>
<i>Lycium ferocissimum</i>	African Boxthorn	4
<i>Xanthium spinosum</i>	Bathurst Burr	4
<i>Rubus fruticosus</i>	Blackberry	4
<i>Xanthium occidentale</i>	Noogoora Burr	4
<i>Opuntia stricta</i>	Prickly Pear	4
<i>Rosa rubiginosa</i>	Sweet Briar	4
<i>Ailanthus altissima</i>	Tree-of-Heaven	4

**Table 6-3: Noxious weeds identified from the site**

Noxious Weeds are organised into weed control classes based on the spatial extent of their risk to biodiversity and primary production. The table below shows the definitions of the noxious weed class found within the landscape associated with this project.

Class	Description
Class 4, Locally Controlled Weeds	Plants that pose a threat to primary production, the environment or human health, are widely distributed in an area to which the order applies and are likely to spread in the area or to another area.

**Table 6-4: Weed Control Classes**

Under the *Biosecurity Act*, all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

### 6.5.3 Guidelines for the Control of Noxious Weeds

General control methods for weeds are listed within the table below and on <http://weeds.dpi.nsw.gov.au/>. The following noxious weed control methods are presented as a guide only, and any chemical control techniques must be undertaken by an appropriately licensed / experienced operator, in accordance with the guidelines on the product SDS, and in consultation with the landowners. The methods outlined in the table below are guidelines for scattered or light infestations, which is the extent of weed control anticipated for the small regions of ground disturbed during construction and ongoing operation of this project. Should larger infestations occur, expert advice must be sought.

<sup>1</sup> definitions provided in Table 6-4

Scientific Name	Common Name	Control Method	
		Mechanical	Chemical
<i>Lycium ferrocissimum</i>	African Boxthorn	All parts of the plant must be removed and destroyed as broken root segments can sucker and regrow, and fruit can continue ripening on dead branches	Different situations require different methods including foliar spray, basal bark treatment, cut stump treatment, and root application
<i>Xanthium spinosum</i>	Bathurst Burr	Bathurst Burr can be chipped out manually, but care needs to be taken as developing burrs can continue to mature on cut plants. Plants should be destroyed afterwards to ensure seeds do not continue to spread	Herbicides are often the preferred method of control with many options available. Spraying is most effective on actively growing seedlings, but can be used in various situations successfully. It is best to apply chemicals before seeds set to help prevent burrs forming
<i>Rubus fruticosus</i>	Blackberry	Remove small plants with a shovel or mattock and larger plants using earth moving equipment. Remove as much of root system as possible as Blackberry will regrow from any root fragment left in the soil.	Spot spray with a registered herbicide on actively growing plants.
<i>Xanthium occidentale</i>	Noogoora Burr	Hand hoeing or chipping is only economical in small areas or sparsely populated situations. It is very labour intensive.	Noogoora burrs are susceptible to herbicides suited to a range of situations and regulations. Chemicals are most effective if the plants are young and actively growing. Plants under severe moisture or weather stress are difficult to kill.
<i>Opuntia stricta</i>	Prickly Pear	Physical removal appears to be one of the most effective control methods for Prickly Pears, but the spines make manual removal of these species difficult (Parsons & Cuthbertson 2001). Care must also be taken to remove and properly dispose of, usually by burning, all vegetative and fruit material. The root system must also be dug out to prevent regrowth.	Chemical control is not always effective. It is difficult because much of the weed occurs on steep rocky areas. If patches are treated with chemicals, they should be checked for the next 7 years for any regrowth and new plants.
<i>Rosa rubinginosa</i>	Sweet Briar	Removal of plants by machine or hand being careful to remove as much of the plants as possible as regrowth often occurs from root pieces.	Spot spray with a registered herbicide when plants are in full leaf (late spring to autumn).
<i>Ailanthus altissima</i>	Tree-of-Heaven	If possible, Tree-of-heaven is best controlled by manual removal of young seedlings. Seedlings should be pulled	Repeat treatment with herbicide will be necessary for larger trees. Plants too old for manual removal should be

Scientific Name	Common Name	Control Method	
		Mechanical	Chemical
		out of the ground after rain when the soil is loose. This facilitates removal of the entire rooting system, which may otherwise resprout if left in the ground. If left until the taproot develops, total removal of the roots system will be difficult	cut and painted, stem injected, have the basal bark treated in younger plants, or the foliage sprayed in small plants. Do not cut trees down without applying herbicide to the stump or massive suckering will result.

**Table 6-5: Noxious weed control methods**

## 6.6 Monitoring and Reporting

Flora and Fauna related aspects of the project site will be regularly inspected and audited in order to ensure compliance to the Project approval, GE's General Scope of Works, as well as relevant Commonwealth and State legislation. Potential impacts and mitigation strategies will be communicated to site staff and contractors during site inductions.

Inspection / Audit Description	Frequency	Responsibility	
		BWFPL	GE
Monitor rehabilitating areas previously disturbed by wind farm earthworks to ensure a reasonable survival rate as per GE's General Scope of Works. Replant and re-sow as necessary. Survival rate must be to a standard to not hinder the verification as per below.	Weekly		✓
Revegetation plantings are to be verified by an independent and suitably qualified expert as being well established, in good health and self-sustaining.	Once	✓	
Monitor rehabilitated areas previously disturbed by wind farm earthworks to ensure that sediment is not being transported and is smothering adjacent vegetation or entering drainage lines/water bodies.	Weekly		✓
Monitor areas disturbed by wind farm earthworks for enhanced weed growth. Organise eradication of weeds as necessary (See section on Weeds within this OEMP).	Weekly		✓
Inspection Checklist - Environmental Compliance to be completed by GE personnel for all areas of site. This will be filed on site and made available to the client upon request.	Every 6 Months		✓

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and BWFPL regularly till such time all corrective actions are closed out.

## 7. Heritage Management Sub Plan

### 7.1 Introduction

This Heritage Management Sub Plan comprises part of this OEMP for BWF. This sub plan has been developed in response to the pre-construction heritage assessment and Project Approval conditions.

Condition numbers E2 and E3 required the preparation of a Construction Heritage Management Plan as part of the Construction Environmental Management Plan. These conditions relate to places on site that have been identified as having heritage significance or value. While the conditions pertain to construction phase, it is important to be aware of

these areas of Indigenous and European heritage values so they can be managed effectively during the operational phase of the project.

Minister's Requirement	Location within this sub-plan
E2. In undertaking the Project, impacts to heritage, shall to the greatest extent practicable, be avoided and minimised. In particular: <ul style="list-style-type: none"> <li>(a) Clearly identify and avoid the stone procurement artefact area (SU18/L1), and the Kaiser mine, and include methods for restricting access to these sites as part of the Construction Heritage Management Plan required by condition E21(e); and</li> <li>(b) Where impacts as assessed in the EA are unavoidable, works shall be undertaken in accordance with the strategy outlined in the Construction Heritage Management Plan required by condition E21(e).</li> </ul>	Throughout this Sub Plan
E3. Clearly identify the level of construction vehicles required to use the Sandy Hollow to Maryvale Railway line, and the ability of the existing road to accommodate heavy vehicles, a Statement of Heritage Impact is required in accordance with relevant Heritage Council guidelines, in consultation with the Heritage Branch of the CPHR, and to the satisfaction of the Secretary.	Throughout this Sub Plan
Environmental Assessment Requirement	Location within this sub-plan
Ground disturbance impacts associated with the project during operation will be kept to a minimum and to defined areas to ensure minimal impact to unlisted or unrecorded Aboriginal items	Throughout this Sub Plan

This Sub Plan has the following objectives:

- To ensure compliance with statutory requirements relating to the protection of Indigenous and European heritage values;
- To avoid impact of wind farm operations on cultural heritage artefacts;
- To consult with relevant agencies and Indigenous stakeholders should any items of Indigenous heritage be detected during operations;
- To consult with relevant agencies should any items of European heritage be detected during operation.

## 7.2 Background

The project area was traditionally occupied by the Wiradjuri peoples, whom inhabited a widespread area extending from the Great Dividing Range to the Macquarie, Lachlan and the Murrumbidgee rivers. Aboriginal use of this landscape is predicted to have been sparse, of low intensity, and restricted to a limited range of activities such as movement through the country, hunting and gathering forays.

## 7.3 Assessments

The assessment of Indigenous and European heritage issues for the project area has been addressed through a number of investigations including those listed below:

- Proposed BWF European and Aboriginal Cultural Heritage Assessment Report. A report to Bodangora Wind Farm Pty Ltd (NSW Archaeology December 2011).
- BWF Modification 2 submission (Iberdrola Australia05 October 2016) and BWF Modification 4 submission (Iberdrola Australia22 December 2017) found that the modifications would will not result in any impacts or interferences to archaeological or cultural and heritage sites.

## 7.4 Consultation

The assessments listed above were undertaken in conjunction with relevant agencies and Indigenous stakeholders. Consultation was undertaken in accordance with the BCS Aboriginal Cultural Heritage Consultation for Proponents 2010 (NSW DECCW 2010).

The primary outcome from consultation was that three groups registered an interest in the project, whose details were forwarded to the CPHR. A copy of the project details was forwarded to the three parties, but no responses were received pertaining to cultural information relating to the project area. A copy of the draft report by NSW Archaeology was provided to the registered parties for a period of 28 days for review. No responses were returned.

## 7.5 Potential Impacts to the Wind Farm Site

### Access Road

Sections of the Sandy Hollow to Maryvale Railway are currently utilised as a farm road within the project area. The roadway was temporarily utilised for wind farm access during construction and may be used by light vehicles only during operation of the project. Notwithstanding, New South Wales Archaeology have concluded that the proposed impact to the railway/road would be negligible, as it is not expected that there will be any additional impacts beyond those to which the railway line already sustains as a road.

### Overhead Transmission Line

A heritage assessment for the substation relocation was undertaken as part of the BWF Modification 2 submission to the Department of Planning in October 2016. It found that the areas subject to the proposed modifications were included during the Aboriginal cultural heritage surveys conducted for the Project and would not result in any impact or interference to archaeological or cultural and heritage sites.

### Vicinity of Turbine 3

One item of potential historic significance was identified during the field survey for the project, being the Kaiser Mine, located nearby to proposed WTG 3. The Kaiser Mine is located near the project area, but outside of the proposed development site. It is not expected that there will be any direct impact to the Kaiser mine, and any associated impacts can be appropriately mitigated.

## 7.6 Archaeological Significance of Recorded Aboriginal Object Locales

The following table lists the significance of recorded Aboriginal object locales:

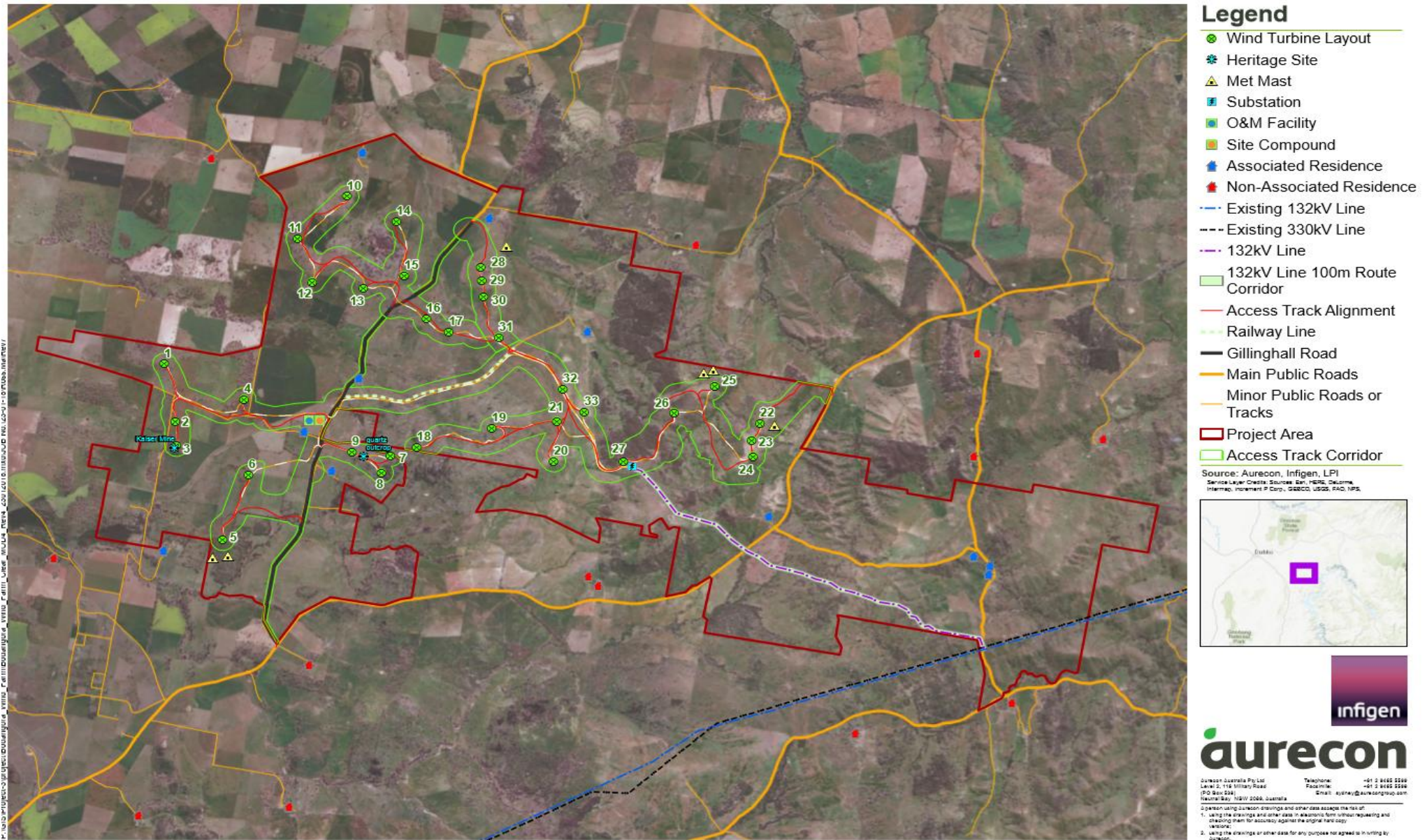
LOCALE	PREDICTED DENSITY	INTEGRITY	SUBSURFACE POTENTIAL AT SITE	SUBSURFACE POTENTIAL AWAY FROM SITE	SIGNIFICANCE	CRITERIA
SU3/L1	Low	Highly disturbed, vehicle track – eroding.	No	No	Low local scientific significance.	Common Aboriginal object and site type. Low educational value. Low aesthetic value. Low research potentiality: predicted low artefact density in majority of Survey Unit.
SU18/L1	-	Undisturbed	Yes	Yes	Moderate local scientific significance.	Reasonably rare Aboriginal object and site type. Low educational value. Low aesthetic value. Moderate research potential.

SU18/L1 is located within the project area and is fenced off with a 25-metre buffer, appropriately mitigating any future impacts to the site. SU3/L1 was assessed to be of low archaeological significance and unmitigated impacts were considered appropriate.



SU18/L1 – close up of a section quartz seam showing numerous Hertzian cone fractures and *battered* areas.

Figure 7-1: Constraints map including heritage site locations



## 7.7 Mitigation Strategies

This section sets out the measures implemented for various parts of the project area to mitigate impacts on Indigenous and European heritage values during operations.

The following key strategies are incorporated in site induction material and all personnel are required to include them in their work method statements and risk management documentation if working near the vicinity.

Action		Timing	Responsibility	
			BWFPL	GE
1	If during operations it is not possible to avoid impact, then requirements within the Project Approval and Environmental Assessment shall be followed as required.	As Required	✓	✓
2	Avoid all areas of Heritage value as identified in this Section. Notify BWFPL immediately if a Heritage item of value is not avoided.	At all times	✓	✓
3	Although it is not expected that any operation activities will impact on any of the identified sensitive sites, in the event that any Aboriginal archaeological material or European Heritage sites or artefacts are encountered, ground activities within 100m will cease immediately to allow an archaeologist to make an assessment of the finds. In addition previously unrecorded Aboriginal or European artefacts or sites will be reported to the NSW CPHR within a reasonable timeframe.	As Required	✓	✓
4	Ground disturbance impacts associated with the project during operation will be kept to a minimum and to defined areas to ensure minimal impact to unlisted or unrecorded Aboriginal items.	At all times	✓	✓

**Table 7-2: Mitigation strategies to avoid impacts for cultural heritage**

## 7.8 Monitoring

Reviews will be performed on work methods to ensure controls are noted, and work will be monitored for evidence that controls are being carried out and as per below.

Inspection / Audit Description	Frequency	Responsibility	
		BWFP/L	GE
<u>Environment Inspection Checklist</u> will include cultural heritage measures and be completed by GE personnel for all areas of site. This will be filed on site and made available to the client upon request.	Every 6 months		✓

**Table 7-3: Inspection and monitoring responsibilities for cultural heritage**

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and Iberdrola Australia regularly till such time all corrective actions are closed out.

## 8. Bushfire Risk Management Sub Plan

### 8.1 Introduction

Condition number C17 of the Project Approval set out requirements with respect to minimising Bushfire Risk on site during the operational life of the project. Condition F1 of the Project Approval requires the preparation of a Bushfire Risk Management Sub Plan as part of the OEMP (this Sub Plan). This plan will be reviewed in consultation with the local NSW Rural Fire Service (RFS). The table below shows the Minister's specific requirements for this sub-plan.

Minister's Requirement		Location within this sub-plan
C17 and F1	Throughout the operational life of the Project, the proponent shall regularly consult with the local RFS about details of 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 8.5 Monitoring and Reporting
Statement of Commitments		Location within this sub-plan
	A Bushfire Risk Management Plan shall be prepared prior to operation commencing in consultation with the NSW Rural Fire Service (RFS), based upon the Planning for Bushfire Protection Guidelines (RFS, 2006). The sub-plan will include the following: details of the bushfire hazards and risks associated with the development; <ul style="list-style-type: none"> <li>Mitigation measures, contingency plans,</li> <li>Procedures and programmes for liaison and regular drills with the RFS; and</li> <li>Procedures for regular fire prevention inspections by the RFS and implementation of any recommendations.</li> </ul>	Section 8.5 Monitoring and Reporting

**Table 8-1: Ministers Requirements for bushfire risk**

### 8.2 Key Guidelines

Guideline	Brief Description
<i>Planning for Bushfire Protection (RFS, 2006)</i>	This document provides the necessary planning considerations when development sites are in close proximity to areas likely to be affected by bushfire events and replaces <i>Planning for Bushfire Protection 2001</i> .
<i>Standards for Asset Protection Zones</i>	This document provides steps required to implement an Asset Protection Zone.
<i>Emergency Management Guidelines for Wind Farms (CFA, V3, 2007)</i>	This document is designed to provide awareness information for County Fire Authority (CFA) members and wind farm operators relating to emergency management at wind farms.

#### **Bushfire Risk Management: Design Components as per the BWF EA**

In accordance with the BWF Environment Assessment Section 15.4 Bushfire Risk, the applicable electrical industry standards in Section 15.3 of the BWF Environment Assessment shall be included in the design of the wind farm.

Furthermore, the following required features of the wind farm specified in Section 15 BWF Environment Assessment shall be included, these are:

- The use of fully enclosed electrical equipment on turbine structures and pad-mount transformers;
- Extensive use of underground cabling between turbines;

- Design of any overhead lines in accordance with industry standards;
- Exclusion of vegetation from within the substation enclosure;
- The use of circuit breakers and fuses to interrupt any electrical fault; and
- The adoption of the lightning protection measures.

### 8.3 Performance Criteria

The performance criteria for this Bushfire Risk Management Sub Plan is focused on preventing fires and being prepared in the event that a bushfire is either ignited or passes through the project site.

The performance criteria include:

- Manage all works that have the potential to cause ignition of fire using the permit to work system - hot works permit;
- Ensure adequate equipment is located sufficiently around the site, in vehicles, offices, and wherever the risk assessment for a task requires;
- Procedures and programs maintained with the RFS including periodic workshops and drills.

### 8.4 Potential Impacts and Mitigation Measures

Potential Environmental Impacts	Mitigation Strategies	Responsibility	
		BWFPL	GE
Ignition of trees, bushes, and / or grasses caused by welding, metal cutting, etc. and escalation of situation into a mobile bushfire.	Hot Works Permits must be obtained for all works which may result in the ignition of a fire. A hot work permit is issued by an authorised person before any hot work (grinding or cutting using angle grinders, cutting or welding works using arc /gas equipment or any activity that generates a flame or spark) is carried out.		✓
	Hot Works Permits must not be issued on Total Fire Ban Days, on days when the Fire Danger Rating is High or above, or on days with high wind present.		✓
	Fire blankets, shields, extinguishers, and any other fire prevention devices identified in the JSA for the task must be present.		✓
	Use of explosives is not permitted during periods of high fire risk.		✓
	Appropriate fire extinguishers must be located around substation, in all vehicles, and in all wind towers.	✓ (BWFPL Vehicles)	✓
	Regular fire prevention inspections by the Rural Fire Service and implementation of any recommendations.		✓
	A 20 metre inner protection area will be incorporated around turbines.		✓
	Suitable buffers between vegetation and installed equipment and working areas will be maintained;		✓
Build-up of dry fuel leading to increased risk of fire.	Ensure paper/cardboard/rags/etc waste receptacles are regularly emptied.		✓
	Ensure there are no areas containing large amounts of dry vegetative fuel (such as leaves, felled trees or shrubs, tall dry grass) adjacent to any work areas of the project site.		✓
	Ongoing vegetation management to ensure pasture in vicinity of site infrastructure is controlled including within the substation enclosure	✓	✓

Potential Environmental Impacts	Mitigation Strategies	Responsibility	
		BWFPL	GE
Ignition source created by electrical short circuit, malfunction, or explosion.	All electrical tools to be tested and tagged monthly.		✓
	Required servicing on all electrical equipment to be carried out as per product manuals and standard procedures.		✓
	Appropriate fire extinguishers located around substation, in all vehicles, and in all wind towers.	✓ (BWFPL Vehicles)	✓
Ignition from lightning strikes	Adoption of lightning protection measures for both turbines and substations		✓
Ignition of bushfire caused by cigarette smoking and disposal of butts.	Smoking permitted only on laydown areas where appropriate disposal units are provided.	✓	✓
	Appropriate fire extinguishers located around substation, in all vehicles, and in all wind towers.	✓ (BWFPL Vehicles)	✓
Ignition of bushfire caused by Catalytic converters on petrol driven vehicles.	Only diesel operated vehicles to be used on un-constructed roads and at all other times where possible.	✓ (BWFPL Vehicles)	✓
	Appropriate fire extinguishers located in all vehicles.	✓ (BWFPL Vehicles)	✓
	Avoid parking in long grass.	✓	✓
	Ensure ongoing maintenance of all vehicles used on site to minimise sparking from exhaust systems	✓ (BWFPL Vehicles)	✓
Inadequate storage of combustible or flammable substances.	All Hazardous Chemicals and Dangerous Goods must be kept in secure storage facilities according to the regulations and designation of the SDS requirements.		✓
Inadequate knowledge of bushfire contingency plan in an emergency situation.	All BWF inductions are to clearly explain the site's bushfire contingency plan and emergency response procedure.	✓ (Iberdrola Australia Visitors)	✓
	Everyone entering any part of the project site must either be accompanied by someone who is inducted to BWF or be inducted to BWF themselves.	✓ (Iberdrola Australia Visitors)	✓
	Liaison with emergency services, site familiarisation tours, and workshops including carrying out contingency plan.		✓
	Clearly display site plan with relevant contact details and mitigation information.		✓
Site personnel being unaware of a bushfire in vicinity of project site.	Establish effective liaison with emergency services.		✓
	Site personnel to check Rural Fire Service website ( <a href="http://www.rfs.nsw.gov.au">www.rfs.nsw.gov.au</a> ) at least twice daily during the fire season (October 1st - March 31st).		✓
	Iberdrola Australia Operations Control Centre (24/7) monitors the daily Fire Danger Ratings for the area and any fires nearby site	✓	

Potential Environmental Impacts	Mitigation Strategies	Responsibility	
		BWFPL	GE
	and notifies the Owners Representative as per the Notification Protocol.		
Site personnel having no knowledge of declared Total Fire Ban Days	Establish effective liaison with emergency services.		✓
	Site personnel to check Rural Fire Service website (www.rfs.nsw.gov.au) at least twice daily during the fire season (October 1st - March 31st) or more frequently as required.		✓
	Hot Works Permits not to be issued on Total Fire Ban Days, on days when the Fire Danger Rating is Very High or above, or on days with high wind present.		✓
Inadequate access to structures by emergency personnel	Access tracks will be suitable for the passage of fire fighting vehicles improving firefighting accessibility to the area of land within the project area.		✓
	Alternative access tracks to installed equipment maintained where existing.		✓

### 8.5 Monitoring and Reporting

Bushfire Risk related aspects of the project site will be regularly inspected and audited in order to ensure compliance to the NSW Minister for Planning's Conditions of Approval as well as Commonwealth and State legislation.

Potential impacts and mitigation strategies will be communicated to site staff and contractors during site inductions.

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
Monitor all work areas for appropriate fire extinguishers, tagged electrical equipment, correctly stored combustible substances, build-up of dry vegetative fuel (such as leaves, felled trees or shrubs, or tall dry grass) or other dry combustible materials (paper, cardboard, rags).	Day to Day		✓
<u>Inspection Checklist - Environmental Compliance</u> to be completed by GE personnel for all areas of site. This will be filed on site and made available to the Proponent upon request.	Every 6 months		✓
Liaison, regular drills, and regular fire prevention inspections by the Rural Fire Service and implementation of any recommendations.	Annually in August/September (prior to the commencement of the bushfire season in October)		✓
Carry out an Independent Environmental Audit as per Project Approval conditions D8-D11	As per timing required within the Project Approval	✓	

### 8.6 Bushfire Contingency Plan

There are three scenarios that could cause an emergency situation affecting all people on the wind farm site:

- a Total Fire Ban is announced by the authorities;
- a bushfire is known to be nearby/approaching the wind farm site;
- a bushfire originates within the wind farm site or is travelling through the site.

The BWF – Emergency Response Plan shall be developed to outline the actions to be taken in these scenarios in order to effectively manage the situation and reduce the risk to all people on the wind farm site.

## 9. Noise Management Plan

### 9.1 Introduction

Conditions number F7-F10 of the Project Approval sets out a number of requirements in relation to operational noise from the BWF.

The table below shows the Minister’s specific requirements for this sub-plan and where they have been addressed:

Minister’s Requirement		Location within this sub-plan
F7	Noise Verification Report	Section 9.2
F8	Operational Noise Criteria – Wind Turbines	Section 9.4/9.5
F9	Operational Noise Criteria – Ancillary Infrastructure	Section 9.4/9.5
F10	Operating Conditions	Section 9.4

### 9.2 Summary

In accordance with the Director-General’s requirements, noise generated from wind turbines was assessed against the South Australian Environment Protection Authority’s Wind Farms – Environmental Noise Guidelines 2003. This included predicted noise from wind turbines, substation noise, modulation, low frequency noise and infrasound.

During the planning phase of the project, noise predictions were carried out during the original development application and two subsequent times due to turbine specification changes. The noise testing carried out was as follows:

1. May 2012 by Sonus on the Vestas 112 (part of original Environmental Assessment submitted for the original development approval);
2. October 2012 by Sonus on the GE 2.75–120 and the GE 3.2-130 (part of Mod 2 application);
3. December 2016 by Sonus on the GE 3.4-120 (due to change in turbine specification and substation location);
4. January 2018 by Sonus – Bodangora Wind Farm Consolidated Environmental Noise Assessment.

All the above studies completed concluded that noise predication levels for non-associated landowners are in compliance with the noise criteria as identified in Section 9.3 below.

At the completion of the commissioning of the Wind Farm a post-construction noise monitoring report was undertaken. The report by Resonate issued September 2019 concludes;

“Noise levels with the wind farm operating have been measured at 10 locations and assessed against the requirements of the applicable Noise Guarantee and the Project Approval. The wind farm noise monitoring results demonstrate that noise levels from Bodangora Wind Farm is compliant with the relevant Project Approval requirements. No special characteristics, such as low frequency noise or tonality, were observed as part of the assessment.

Additional noise monitoring conducted of the Bodangora Wind Farm substation determined that noise levels from the substation easily comply with the Project Approval requirements for substation noise.

This report concludes that Bodangora Wind Farm is operating in compliance with the noise emission requirements of the Noise Guarantee and Project Approval”

As a result of the report finding no changes have been made to the plan or the operations of the Wind Farm.

The landowners of a number of residences have entered into commercial agreements with Iberdrola Australia. Where an agreement exists, suitable noise criteria for each residence has or will be agreed between the developer and the

landowner. GE will provide the relevant wind data and wind turbine operational data as required to support the report and any future testing.

### 9.3 Performance Criteria

#### Operational Noise Criteria – Wind Turbines

As required under Project Approval Condition of Consent F8, BWFPL will ensure that the noise generated by the operation of wind turbines does not exceed the greater of: (d) 35 dB(A); or (e) the existing background noise level for each integer wind speed from cut-in speed to the rated power of the wind turbine generators, by more than 5 dB(A).

Unless otherwise replaced by an equivalent NSW wind farm noise guideline, noise generated by the project will be measured in accordance with the relevant requirements of Sections 3.1 and 3.2 of the South Australian Environment Protection Authority's *Wind Farms Environmental Noise Guidelines 2009*, as modified by the provisions in Appendix 3 of the Project Approval.

However, these criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement

#### Operational Noise Criteria - Ancillary

As per the Project Approval Condition of Consent F9 , BWFPL will ensure that the noise generated by the operation of ancillary infrastructure does not exceed 35 dB(A) LAeq(15 minute) at any non-associated residence.

Noise generated by the project will be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy (as may be updated from time-to-time), as modified by the provision in Appendix 3 of the Project Approval.

However, these criteria do not apply where BWFPL has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Department has been notified in writing of the terms of this agreement.

### 9.4 Potential Impacts, Mitigation Strategy & Operating Conditions

Potential Noise Impact	Item / Audit Description	Frequency	Responsibility	
			BWFPL	GE
BWFPL not meeting the approved noise criteria	Undertake noise monitoring within 3 months of the commissioning of the wind farm, or other timing as may be agreed by the Secretary, to determine whether the project is complying with the relevant conditions of the project approval.	Within 3 months of commissioning		✓
	In terms of non-compliance, follow the procedure discussed in 9.5 and implement the Operation noise mitigation strategy including implementing sector management via a Sector Management Plan	If and as required	✓	
Ensuring BWFPL meets noise criteria under the process defined in F10	Carry out further noise monitoring if required by the Secretary, to the satisfaction of the Secretary	If and as required	✓	

Noise from operation and maintenance services exceeding allowable levels	The mitigation strategy to be implemented to minimise operations and road traffic noise and vibration includes: general prohibition of night time or after hour use of heavy plant equipment or deliveries, except in emergencies or urgent maintenance works. Operation of tools during standard working hours, except in emergencies or urgent maintenance works. Use Work Method Statements (WMS) to allow any work undertaken outside normal working hours. In case of any complaints, follow the procedures as outlined in 9.6.	Ongoing mitigation strategy	✓	
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**Table 9-1: Operating conditions for noise**

**9.5 Noise Reduction / Mitigation Strategy**

Within 3 months of commissioning the wind farm noise compliance monitoring and assessment was undertaken. The results of this assessment will be used to ensure that the project is meeting the operational noise criteria as stated in the Project Approval Conditions of Consent F8. The results will also be provided to DPE within one calendar month of completion of the monitoring and assessment report.

No non-compliance were discovered as a result of this assessment. BWFPL will work in conjunction with GE or a specialist consultant to develop a Noise Reduction / Mitigation strategy if the need arises. This strategy will take into account the various factors that are contributing to the non-compliance, including but not limited to specific turbines contributing to the non-compliance, wind flow patterns, wind directions, meteorological conditions, time of day, etc. In case any wind directions / meteorological conditions results in an exceedance of the noise criteria, then the Sector Management Plan will be created as a result of analysis of the optimum operating conditions that would mitigate these effects. The Noise Reduction / Mitigation Strategy along with the Sector Management Plan will be provided to the Secretary for approval and will be implemented once approved. As a result of implementing the strategy or the Sector Management Plan, if there are any changes to the operating regime this will be captured in the OEMP as a revision and would follow the review process as discussed in section 1.1 of this document. Further monitoring to be carried out to ensure that the implementation measures were successful.

**9.6 Noise and Vibrations Complaints Management**

Complaints will be managed through the same procedure as outlined in section 4.23, with the complaint being recorded in the complaints register. In additions to this, in case of noise and vibration related complaints, the following procedure shall be followed:

1. BWFPL representative to contact the person/s who raised the complaint / issue regarding windfarm noise level and collect additional information regarding the noise, including details about the nature, frequency, tonality, type, time of day, location and weather conditions observed.
2. Following which, the BWFPL will conduct preliminary investigation into the operational modes and local conditions to explore potential issues that could cause higher noise emissions or vibrational noise. If any operational issues are found, the necessary rectifications would be undertaken.
3. If evidence of operational issues is not found, the noise level measured as part of the post commissioning noise monitoring exercises, near the location of the issue is reviewed to ascertain its' potential to have

exceeded the noise criteria. If there is no indication of potential to exceed the noise criteria, the findings of the investigation will be summarised and corresponded to the person/s who raised the complaint.

4. If there is a potential for the noise to have exceeded the noise criteria, BWFPL will continue its investigation and undertake any additional testing as required under the Project Approval Conditions of Consent F10.
5. Following any testing, if the exceedance of noise criteria has been established, the Noise Reduction / Mitigation strategy and if required, Sector Management Plan as discussed in section 9.5 will be created and implemented.

## 10. Waste Management and Re-use Sub Plan

### 10.1 Introduction

Condition number C28 of Project Approval relates to Waste Management but there is no requirement for a Sub Plan as part of the OEMP. However, this sub plan has been developed as per the Statement of Commitments, legislative requirements, Iberdrola Australia's Policies and good industry practice especially in relation to waste minimisation.

The table below shows the Minister's specific requirements for waste and how they have been addressed:

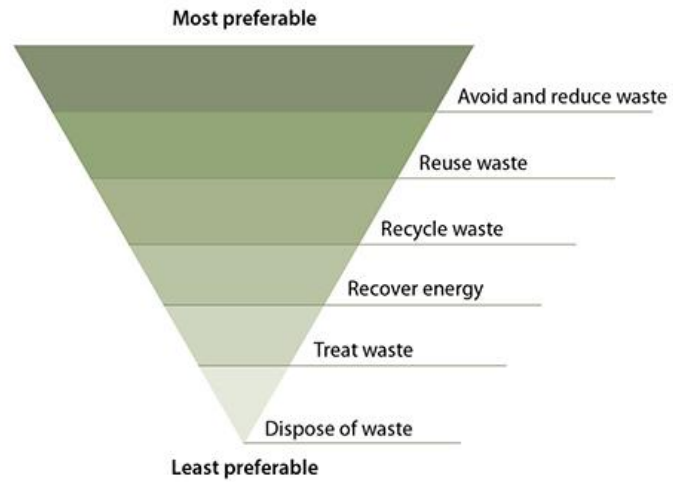
Minister's Requirement	Response
C28 The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	There is no operational need for this to occur nor shall it occur.

### 10.2 Waste Minimisation

#### General

As per the NSW Government's *Waste Reduction and Purchasing Policy / Resource Efficiency Policy*, Iberdrola Australia is committed to the waste minimisation hierarchy principles for all its activities associated with the operation stage of BWF.

This waste management plan aims to minimise waste by maximising reduction, re-use, and recycling of all relevant items, in particular paper products, office equipment and components, vegetation material, and construction and demolition material (as proposed by the NSW Government's Waste Reduction and Purchasing Policy (WRAPP)).



**Figure 10-1: Waste Minimisation Hierarchy Principles** arranged in ascending order from least preferable to most preferable (Source: [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au))

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
No waste generated outside the site is 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.	None	✓	✓
<p><b>Waste Avoidance/Reduction</b></p> <p>Wherever possible the following measures will be implemented on site to avoid/reduce the generation of waste:</p> <ul style="list-style-type: none"> <li>• Plan to source materials in correct quantities and size;</li> <li>• Order pre-cut and/or prefabricated materials wherever possible;</li> <li>• Fabricate materials offsite wherever possible;</li> <li>• Plan to purchase materials in quantities that reduce packaging;</li> <li>• Organise to return packaging to supplier or re-use packing wherever possible;</li> <li>• Minimise the need for re-work through efficient construction planning.</li> </ul>	Day to Day		✓
<p><b>Waste Re-use</b></p> <p>Reuse of materials will be maximised by:</p> <ul style="list-style-type: none"> <li>• Reuse of earthen fill or access track/hardstand capping for rehabilitation or maintenance applications;</li> <li>• Organise to return packaging to supplier or re-use packing wherever possible;</li> <li>• Reuse of felled trees by mulching trees and using material for revegetation applications;</li> <li>• Reuse of any cattle grids that are no longer required in current position during operation phase.</li> </ul>	As required		✓
<p><b>Waste Recycling</b></p> <p>Bins/skips will be located around the site to ensure efficient waste separation for non-recyclable waste, paper and cardboard, glass/recyclable plastics, scrap metal and tins, hydrocarbons / oily rags, timber and concrete.</p> <p>Bins will be clearly labelled, have secure lids which are kept closed, will not be overfilled, and should be emptied at fixed intervals or as soon as full. Any waste oil arising from equipment servicing will be stored in sealed containers in a covered and bunded area until it can be removed off-site to a suitable waste oil facility.</p>	Day to Day		✓
Any waste that is unable to be re-used, re-processed or recycled will be disposed at a facility approved to receive that type of waste. Records kept.	Day to Day		✓

Any green waste associated with the Project shall not be burnt on site during the life of the Project.	Day to Day	✓	✓
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.	Day to Day	✓	✓

### Wastewater Management

When constructed, the BWF project will have an Operation & Maintenance (O&M) office and workshop building which is located within the substation area. Wastewater from the office and workshop buildings will be minimised through the installation of AAA-rated water conservation devices. Sewerage and effluent from the O&M building will be discharged into underground septic and effluent holding tanks respectively. The system shall meet local authority regulatory requirements.

GE will be required to register the septic and effluent system with Dubbo Regional Council. The responsibility for the implementation of any requirements stemming from the approval application will be discussed between Iberdrola Australia and GE at the time. The requirements and guidelines of the local council, Dubbo Regional Council, will also be used during this planning and assessment process.

### Disposal of Wastes

Disposal will be viewed as the last option in the management of waste if avoidance/ re-use or recycling is not practical. Waste materials, which cannot be either re-used or recycled, will be removed from site by a suitably qualified and experienced waste contractor and disposed of to a facility that accepts that category of waste.

The septic and effluent holding tanks will be pumped out into a suitable transport vehicle and removed from site by a suitably qualified contractor and disposed of at a facility that accepts such waste.

A register of waste removed from the site will be maintained by site administration. The following table outlines examples of wastes that may be generated on site and their disposal methods:

Waste Type	Disposal Method
Waste oil, oily rags	Licensed waste transport contractor
Waste skips (general waste)	Licensed waste transport contractor
Recycled waste skips (paper & cardboard)	Licensed waste transport contractor

This register will detail the type of waste removed from site, the quantity, the contractor who removed the waste and the destination for the particular waste.

This data will be recorded on a Waste Register, and will be used by GE to monitor and evaluate the success of the waste management system implemented on the site, and to identify any areas that require further action.



**Figure 10-2: Process by which waste management system** will be monitored and evaluated, and improved where necessary through identification and action in any areas that may require further action.

To further ensure compliance with this management system, the following measures will be carried out:

- Inspect waste receptacles to check that materials are segregated and recycled as appropriate;
- Incorporate the inspection of site waste management practices into regular site environmental audits.

All waste as a result of project construction will be removed from site prior to Practical Completion of the EPC Contractor in accordance with the approved Construction Environmental Management Plan. Any waste generated by the EPC contractor during the defects liability period will be managed in accordance with this OEMP.

### 10.3 Monitoring and Reporting

Waste Management and Re-use related aspects of the project site will be regularly inspected and audited in order to ensure compliance to the Project Approval as well as Commonwealth and State legislation.

Potential impacts and mitigation strategies are provided below and will be communicated to site staff and contractors during site inductions as required.

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
Monitor all work areas to ensure all wastes are being correctly managed, segregated and recycled, and that waste receptacles are being regularly emptied. Ensure that the waste register is kept up to date.	Day to Day		✓
The Operation Environmental Management Plan will require routine inspection to ensure effective maintenance (of the waste water septic system)	Every 6 months as part of Environmental Compliance Inspection Checklist		✓
<u>Inspection Checklist - Environmental Compliance</u> will be completed by GE personnel for all areas of site. This will be filed on site and made available to the Proponent upon request.	Every 6 months		✓

## 11. Fuel and Oil Management Sub-Plan

Section 18 Risk Analysis of the Environmental Assessment (May 2012) found that there was a potential hazard of

*spills or leaks of sewerage, fuel, chemicals or batteries.*

However the mitigated risk level of this event was deemed as *Low*. The mitigation measures in place are provided in the performance criteria below and shall be implemented to help ensure the risk of the hazard does not eventuate.

Section 20 Statement of Commitments of the Environmental Assessment (May 2012) sets out the measures that are to be incorporated within this OEMP. Those relating to this fuel and oil sub-management plan are set out in the performance criteria below. In addition, consideration is given to Condition C11. Dangerous goods, as defined by the Australian Dangerous Goods Code where all shall be stored and handled strictly in accordance with:

(a) all relevant Australian Standards;

(b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and

(c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority, 1997).

In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

EA Risk Analysis and Statement of Commitments	Frequency	Responsibility	
		BWFPL	GE
Regular inspection of the transformers and associated turbine equipment will be carried out to ensure good working and leak free condition	Each scheduled or unscheduled inspection		✓
Procedures for maintenance will be documented and followed by maintenance staff	All times		✓
Hazardous substances will be safely stored in areas with containment in case of leaks.	All times		✓
Procedures for handling and storage of substances will be documented and monitored. A number of hazardous substances have secondary containment measures.	All times		✓
Staff will be trained in emergency response and clean-up procedures.	Before commencing work and then scheduled regular intervals		✓

### 11.1 Monitoring and Reporting

Fuel and oil management practices at the site will be regularly inspected and audited in order to ensure compliance to this OEMP. Monitoring and reporting strategies are provided below and will be communicated to site staff and contractors during site inductions as required.

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
<u>Inspection Checklist - Environmental Compliance</u> will be completed by GE personnel for all areas of site. This will be filed on site and made available to the Proponent upon request.	Every 6 months		✓

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and Iberdrola Australia regularly till such time all corrective actions are closed out.

## 12. Greenhouse and Energy Management Strategy

### 12.1 Introduction

The BWF EA reported that only one third of a wind farm's lifetime emissions occur during the operation of the wind farm, these factors include auxiliary power from the grid when the wind farm is not generating, and emissions associated with vehicles and plant used for operations and maintenance. The EA reported that about two thirds of the life cycle emissions occur due to the manufacture, delivery and construction of parts. The emissions relate to steel production, chemical processes, machining, assembly and transportation (Masterplan, May 2012).

There are no conditions within the Project Approval that relate to Greenhouse and Energy management strategies. However, this sub plan has been developed in accordance with the project's Statement of Commitments to include legislative requirements, Iberdrola Australia's Policies and good industry practice.

### 12.2 Key Strategies

The following key strategies must be implemented into everyday site activities during operation to create a responsible culture among all site personnel that effectively reduces the greenhouse and energy footprint of site operations:

- Efficient usage of vehicle onsite i.e. minimise idle equipment, shutdown when not in active usage, minimise double-handling of material;
- Maintenance of all equipment and vehicles in accordance with manufacturer specification;
- Only energy-saving light bulbs to be used, and AAA-rated plumbing fittings;
- Switch off office lights, air conditioning, and other equipment when not in active usage;
- Recycle all materials whenever possible to minimise waste;
- Utilise local sources or recycled materials where practicable.

### 12.3 Monitoring and Reporting

Potential impacts and mitigation strategies and will be communicated to site staff and contractors during site inductions.

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
Monitor all work areas to ensure that all aspects of this management strategy are being followed.	Day to Day		✓
<u>Inspection Checklist - Environmental Compliance</u> will be completed by GE personnel for all areas of site. This will be filed on site and made available to the Proponent upon request.	Every 6 months		✓

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and BWFPL regularly till such time all corrective actions are closed out.

## 13. Air Quality Management Strategy

### 13.1 Introduction

There are no conditions within the Project Approval that relate to operational Air Quality management strategies. However this sub plan has been developed to include legislative requirements, Iberdrola Australia's Policies and good industry practice.

The key operational activities that have the potential to generate air quality impacts include:

- Operational traffic on site by service personnel (generally using 4WD vans unless otherwise authorised)
- Operational traffic from equipment that may be required on site (i.e. Cranes)
- Operation of the equipment required on site (i.e. Cranes)

The key strategies outlined below are to be implemented to prevent any unlikely air quality impacts.

### 13.2 Key Strategies

The following key strategy must be implemented into everyday site activities during operation:

- Limit vehicle speeds to 40km/hr on unsealed access tracks within the project site to minimise dust generation;
- Utilise dust suppression controls during periods of excessive dust that have potential to impact surrounding residences.

### 13.3 Monitoring and Reporting

Potential impacts and mitigation strategies and will be communicated to site staff and contractors during site inductions.

Item / Audit Description	Frequency	Responsibility	
		BWFPL	GE
Monitor all work areas to ensure that all aspects of this management strategy are being followed.	Day to Day		✓
<u>Inspection Checklist - Environmental Compliance</u> will be completed by GE personnel for all areas of site. This will be filed on site and made available to the Proponent upon request.	Every 6 months		✓

The Hazard Observation and Corrective Action registers will be used to record the findings of the inspections along with any associated corrective actions. These registers will be reviewed by GE and BWFPL regularly till such time all corrective actions are closed out.

## 14. Design and Landscape Sub Plan

### 14.1 Introduction

Condition number C26 requires that a Design and Landscaping Plan be prepared to outline measures to ensure appropriate development and maintenance of landscaping on the site to achieve adequate landscape buffers and address the visual impacts arising from the Project, including turbines, site access roads and associated above ground infrastructure, as far as is feasible and reasonable.

The table below shows the Minister's specific requirements for this sub-plan and where they have been addressed:

Minister's Requirement	Location within this sub-plan
<p>The Plan shall be prepared by a qualified landscape architect and where relevant meet the requirements of Council. The Plan shall include design treatments for the turbines and ancillary infrastructure, including, but not necessarily limited to:</p> <ul style="list-style-type: none"> <li>(a) The landscape screening measures at non-associated residences in close proximity to the Project site and along nearby roadsides to screen potential moderate to significant views of the Project, including an outline of additional measures available for requested landscaping treatments;</li> <li>(b) Landscape elements and built elements, including proposed treatments, finishes and materials of exposed surfaces (including colour specifications);</li> <li>(c) Lighting;</li> <li>(d) A schedule of species to be used in landscaping;</li> <li>(e) Details of the timing and progressive implementation of landscape works; and</li> <li>(f) Procedures and methods to monitor and maintain landscaped areas.</li> </ul> <p>The Plan shall be submitted for the approval of the Secretary prior to the commencement of permanent built works and / or landscaping, unless otherwise agreed by the Secretary. The Plan may be submitted in stages to suit the staged construction program of the Project.</p>	<p>Section 14.2 and <u>Off-Site Landscape Sub Plan</u></p>

## 14.2 Summary

Landscape screening will be undertaken in reference to the BWF EA and in accordance with the Design and Landscaping Plan, which has been approved by the Secretary. The plan for each property participating in this Plan will be documented and agreed before works proceed. The EA provided visual impact measures with relation to the design and construction of the wind farm however this OEMP has included those applicable to the operational phase. The Proponent, Iberdrola Australia, is responsible for delivering the Plan.

Item	Timing
Notification letters delivered to landowners	Prior to operations
Commencement of built works and or / landscaping	TBC
Operational status expected	TBC
Expected latest date that landowners can request to be included in Off-Site Landscape Sub Plan	TBC
Expected latest date that referrals would be made to the Department where agreement on individual plans has not been reached	TBC
Expected completion of plan implementation	TBC
Ongoing maintenance is the responsibility of landowners	N/A

## 15. Television and Radio Interference

Television and radio interference requirements are covered in both the Project Approval conditions of consent, F3 and F4, and the BWF EA including a desktop study report in Attachment L (Lawrence Derrick & Associates, August 2011). The desktop study was undertaken as part of the planning approval process on the likely impact of wind turbines and their supporting towers on broadcasting and radio communications in the area surrounding the wind farm. The study is based on relevant International Telecommunications Union (ITU) documents and on other professional reports on overseas and Australian experience of wind farm impacts on broadcasting services in the vicinity of any wind turbine structures. For Radio communication services sites up to at least 50 km from the site were considered because of the length of point to point paths of up to 100 Km. Interference to MF and FM sound broadcasting is not expected.

The desktop study found:

- That Interference to MF and FM sound broadcasting is not expected.
- Mobile radio and other radio communication services in the area are not expected to be significantly impacted by the wind farm or its operation.
- Analogue TV transmission will have ended before construction commences. Digital TV is not susceptible to visible ghosting degradation where the signal level is above a minimum threshold.
- Overseas experience indicates that EMI produced by the wind farm generators and controls is not a problem with reputable world class wind turbine manufacturers and therefore no electrical noise measurements from the electrical generators are warranted.

The table below shows the Minister's specific requirements, conditions of consent, and commitments made within the EA.

Minister's Requirement / EA Commitments		Responsibility
F4	<p>In the event of a complaint from a receptor located within five kilometres of a wind turbine regarding television / radio transmission during the operation of the Project, the Proponent shall investigate the quality of transmission at the receptor compared with the pre-commissioning assessment 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 measures including:</p> <p>(a) modification to or replacement of receiving antenna;</p> <p>(b) installation and maintenance of a parasitic antenna system;</p> <p>(c) provision of a land line between the affected receptor and an antenna located in an area of favourable reception; and / or</p> <p>(d) other feasible measures.</p> <p>If interference cannot be overcome by the measures outlined in (a) to (d), the Proponent shall negotiate with the impacted landowner(s) about installing and maintaining a satellite receiving antenna. The Proponent shall be responsible for all costs associated with any such mitigation measures.. Note: the minister requirements list the measures that could be implemented. (This is also a requirement of the project's Statement of Commitments).</p>	BWFPL

## 16. Shadow Flicker

Condition C23 of the Project Approval requires that shadow flicker from the Project must not exceed 30 hours / annum at any residence not associated with the Project. The environmental impact statements found that it is expected that the effects of shadow flicker will be negligible to non-existent for the majority of dwellings and local roads in the region. No neighbouring non-associated dwellings will experience shadow flicker given distance from turbines. Should a complaint be received in relation to shadow flicker, the complaint will be taken seriously and processed in accordance with Iberdrola Australia's Complaints Handling Policy.

## 17. Night Lighting

Condition C25 of the Project Approval requires that no external lighting other than low intensity security night lighting is permitted on site unless otherwise agreed or directed by the Secretary, or required by Civil Aviation Safety Authority (CASA). CASA has confirmed that they do not require lighting to be installed.

## 18. Appendix A Reference Documents

Iberdrola Australia and GE both endeavour to achieve best practice for all their work activities and acknowledge the importance of the relevant legislative requirements. These requirements include relevant Act, Regulations, Australian Standards, State and National Codes of Practice, along with Iberdrola Australia's and GE's own procedures and policies.

The processes and procedures incorporated into this OEMP are designed to meet the following documents (but not limited to these):

1. Iberdrola Australia Policies
  - Complaints Handling Policy
  - Environment Policy
2. GE Policies
  - Environmental Policy
3. GE Procedures (as referenced within this document, to be developed)
  - Corrective Action Register
  - Hazardous Substances and Dangerous Goods
  - Job Safety Analysis / Safe Work Method Statement
  - Incident Investigation
  - Incident Reporting
  - Internal Audits
  - Management Review
  - Permits to Work
  - Risk Assessment and Control
4. GE Forms
  - JSA/SWMS
  - Incident Report Form
  - Hot Work Permit
  - Incident Reporting Communication Protocol
  - Vehicle Inspection Checklist
  - Hazard Observation Card
  - Site Induction and Personal Details
  - Safety Toolbox Meeting Minutes
  - Service Safety Inspection
  - Compliance Inspection – Environmental
5. GE Bodangora Wind Farm Plans and Documents
  - Bodangora Wind Farm – Service Management Plan
  - Bodangora Wind Farm – Emergency Response Plan
  - Service HSE Risk Register
  - Bodangora Wind Farm – Audit Schedule
  - Bodangora Wind Farm – Incident Register
  - Bodangora Wind Farm – Hazard Observation Register
  - Bodangora Wind Farm – Corrective Action Register
  - Bodangora Wind Farm – MSDS Register
6. Iberdrola Australia Bodangora Wind Farm Plans and Documents
  - Off-Site Landscape Plan
  - Bird and Bat Adaptive Management Program

## 19. Appendix B – List of Statutory and Other Obligations

Project Approval condition F19 requires that this OEMP includes:

*statutory and other obligations that the Proponent is required to fulfil during operation, including approval / consents, consultations and agreements required from authorities and other stakeholders under key legislation and policies*

### 1. Environmental Legislation

- Biodiversity Conservation Act NSW
- Biosecurity Act NSW
- Catchment Management Authorities Act, 2003 NSW (Repealed by sec 210 (b) of the Local Land Services Act 2013 with effect from 1 January 2014)
- Civil Aviation Safety Regulations NSW
- Environmental Planning and Assessment Act NSW
- Environment Protection and Biodiversity Conservation Act (EPBC Act), Federal
- Fisheries Management Act NSW
- Local Government Act NSW
- National Parks and Wildlife Act, 1974. NSW. (Parts dealing with threatened species and communities, and protected wildlife have been repealed by the Biodiversity Conservation Act NSW). Other parts of the Act are still applicable to the protection of Aboriginal places)
- Native Vegetation Act, 2003 NSW (repealed by the Biodiversity Conservation Act NSW)
- Noxious Weeds Act, 1993 NSW (repealed by the Biosecurity Act NSW)
- Protection of the Environmental Operations Act NSW
- Radio Telecommunications Act, Federal
- Renewable Energy (Electricity) Act, Federal
- Roads Act NSW
- Soil Conservation Act NSW
- State Environmental Planning Policy No. 44 – Koala Habitat Protection NSW
- Surveying and Spatial Information Act NSW
- Threatened Species Conservation Act NSW (repealed by the Biodiversity Conservation Act NSW)
- Water Act NSW
- Water Management Act NSW
- Work Health and Safety Act NSW
- Work Health and Safety Regulation NSW

### 2. Other Required References

- Best practice Guidelines for Implementation of Wind Energy Projects in Australia
- Community Consultative Committee Guideline (DPE 2023)
- Environment Management Plan Guidelines (DCCEEW 2024)
- Bodangora Wind Farm Environment Assessment (MasterPlan, May 2012)
- Project Approval for Bodangora Wind Farm (consolidated conditions of consent)

### 3. Australian Standards

- AS/NZS ISO 9001 – Quality Management Systems
- AS/NZS 4801 – Occupational Health and Safety Management Systems
- AS/NZS ISO 14001 – Environmental Management Systems

- AS3000 – Wiring Rules
  - AS3760 – In Service Safety Inspection and Testing of Electrical Equipment.
4. Approvals and consents
- NSW DPE Project Approval MP 10\_0157 Bodangora Wind Farm Project
  - NSW EPA Environmental Protection Licence
5. Consultation
- Community Consultation Committee
  - NSW EPA
  - NSW CPHR
  - NSW RFS
  - NSW Department Environment and Planning
    - NSW DPHI
    - NSW DCCEEW
  - Project Environment Representative
  - Registered Aboriginal Stakeholders
6. Other stakeholders
- NSW Crown Lands & Water within Department of Industry
  - Dubbo Regional Council
  - Environmental consultants
  - Local community and associated landowners

## 20. Appendix C - Environmental Risk Analysis

Below is the risk analysis applicable to the operations phase prepared for the project

18.1 RISK ASSESSMENT						
The following provides a risk assessment analysis which has been carried out for the Bodangora Wind Farm using the qualitative risk analysis matrix shown in Table 18.3.						
Table 18.4 – Environmental Risk Analysis						
ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
L – Likelihood, C – Consequence						
<b>LAND USE</b>						
Mineral Exploration	Development in an area of significant mineral potential.	C	3	High	Consultation with Department of Industry and Investment, Department of Primary Industries, and all mineral title holders. The wind farm is likely to have minimal effect on underlying mineral resources.	Low
Agriculture	Development will reduce potential for existing primary production land uses.	D	4	Low	Assessment has determined development will not prevent or prejudice the continuation of existing primary production land uses. Development will not result in subdivision (with exception for substation allotment) Additional income for wind farm properties can be reinvested into improved rural production, reducing the potential for further subdivision. Management measures relate to control of weed species, dust management and water as outlined elsewhere.	Low
<b>VISUAL ASPECTS</b>						
Visual impact of turbines	Visual impact of turbines and infrastructure on local community and non-associated land owners. Change to landscape character. Cumulative impact.	C	4	Moderate	Removal of WTG 8, 9, 28 and 47 following land owner consultation, primarily to mitigate views and improve amenity. The visual impact of the project has been assessed in Chapter 8 of this EA. Vegetation screening is proposed to mitigate in areas of high visual sensitivity, with additional screen planted to be undertaken subject to land owner and neighbour requests.	Low
<b>ASPECT</b>						
					The spatial separation of proposed and existing infrastructure in the locality is expected to mitigate cumulative views.	
Visual impact of other infrastructure	Visibility of associated infrastructure including tracks, cabling, transmission lines.	C	4	Moderate	Earthworks will be restored as soon as practical following construction. Cable trenches will be backfilled as soon as possible. Overhead lines are largely located away from roads and minimised. Substation is not visible from any dwellings or public roads.	Low
Shadow Flicker	Five dwellings have been identified which are likely to experience shadow flicker. All are associated land owners. Of these, two dwellings are at risk of experiencing shadow flicker levels beyond guidelines.	D	4	Low	Modelling indicates all five associated dwellings which are likely to experience shadow flicker will experience less than 45 minutes per day. No neighbouring dwellings will experience shadow flicker given distance from turbines.	Low
Blade glint	Sun reflection off blades causing annoyance to local community and distraction to local road users.	C	4	Moderate	Blade surface is designed for low reflectivity with a matte coating to reduce turbine glint. Turbine location at higher altitudes will negate blade glint.	Low
<b>FLORA AND FAUNA</b>						
Avifauna Bird Strike	Potential for avifauna deaths by blade strike, air turbulence and barotrauma.	C	4	Moderate	The flora and fauna assessment has concluded that there is no supportive habitat or topographical features present suitable for birds which would be most likely to collide with turbines. Records of bird heights identified the majority of birds fly below the rotating blade diameter. Measures will be taken to reduce the impact to birds of prey, such as ensuring no turbine has perching places, and dead animals within 200 metres of a turbine are removed as soon as possible.	Low
Vegetation and Habitat	Extent of clearing required for infrastructure. Disturbance to native fauna habitat.	C	4	Moderate	Infrastructure has been located to avoid habitat features, and native vegetation clearance will be minimal as the majority of tower locations and access routes are located over heavily modified grazing land. Large mature trees have been avoided and can be retained.	Low



ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
					<p>Micrositing during final detailed project layout will occur to avoid clearing and identified areas of threatened or significant vegetation. Where clearing is required it will be undertaken in the presence of an ecologist.</p> <p>A flora and fauna management sub-plan will be prepared as part of the CEMP.</p> <p>Weed control measures will be implemented.</p>	
Threatened species	Potential impact of project on threatened species.	C	3	Moderate	<p>The flora and fauna assessment has identified that no threatened plant species identified under State legislation will occur or are likely to occur in the project area. Three threatened species and one threatened community which are identified under State legislation occur.</p> <p>Mitigation measures outlined above will protect against impact to State legislated threatened species.</p> <p>A field survey for the Superb Parrot will be undertaken to determine whether the species is only a winter visitor to the project area and the results reported to Department of Planning and DECCW.</p>	Low
<b>HERITAGE</b>						
Aboriginal Heritage	Potential disturbance of Aboriginal sites or objects.	D	3	Moderate	<p>Comprehensive investigations have been undertaken. A heritage sub-plan will be prepared as part of the CEMP.</p> <p>Track and cabling locations will be micro-sited to avoid sites of known heritage significance.</p> <p>Where a known artefact site has been identified (listed as SU18/L1 in Chapter 10), a conservation strategy will be developed to detail the avoidance of this artefact by design through the diversion of the proposed access road around the artefact.</p> <p>Unrecorded artefacts are likely to be present in low or very low densities only. The predicted impact following the comprehensive investigation is low.</p> <p>Where any additional unrecorded Aboriginal objects are encountered, works shall cease immediately and DECCW will be notified immediately of the find.</p>	Low

ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
					<p>An additional archaeological survey will be conducted in any area proposed for development that has not been previously surveyed.</p> <p>A cultural management protocol will document procedures required for impact avoidance or mitigation, developed in consultation with an archaeologist, the relevant Aboriginal communities and the NSW Office of Environment and Heritage.</p>	
Non-Aboriginal Heritage	Potential disturbance to non-Aboriginal heritage sites	D	3	Moderate	<p>A heritage sub-plan will be prepared as part of the CEMP.</p> <p>None of the survey units or non-Aboriginal heritage items as identified within the project area have been identified to surpass archaeological significance thresholds which would preclude the proposed development.</p> <p>Sections of the Sandy Hollow to Maryvale Railway is currently utilised as a farm road within the project area. This road is proposed for upgrade, however it is not expected that there will be any future impact beyond what is existing. A Statement of Heritage significance has been prepared and is located at Attachment A to <b>Attachment I</b>.</p> <p>The Kaiser Mine will be identified as a restricted area during wind farm construction through the erection of fencing.</p> <p>Where any additional historic items are encountered, works shall cease immediately to allow an assessment of the object by an archaeologist.</p>	Low
<b>NOISE</b>						
Operational noise	Potential for exceedance of operational noise guidelines for nearby sensitive receivers. Impact from modulation, low frequency or infrasound noise. Potential that noise will impact on health	D	4	Moderate	<p>Comprehensive noise modelling of the operational noise aspects of the wind farm has been undertaken. Noise levels of the turbines and substation are predicted to comply with the relevant standards in a 'worst case' scenario.</p> <p>In the event that the turbine noise levels exceed the noise predictions, the noise of the turbines will be reduced through the use of lower noise modes for use under certain operating conditions which produce lower noise levels in accordance with the required standards.</p> <p>Compliance with the stringent guidelines for operational noise will account for the noise of the 'swish' of turbines (modulation) and for low level noise.</p>	Low

ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
	Heavy loads causing degradation to local roads				<p>Measures to ensure the safety of all road users, including the provision of traffic control personnel where required, avoiding sensitive areas such as schools en route, and warning and general signposting on access routes.</p> <p>Restrictions on timing of delivery of large equipment by oversize trucks.</p> <p>A community information and awareness program and a community complaints procedure established.</p> <p>An inspection and maintenance program undertaken to ensure road conditions are maintained. Road access/occupation permits will be obtained as access works are required.</p> <p>Induction of staff to ensure awareness of traffic management requirements.</p>	
Construction on-site impacts	<p>Vehicles driving off-road causing disturbance to natural habitats and causing erosion</p> <p>Degradation of access tracks due to vehicle movements</p>	C	4	Moderate	<p>A Traffic Management Plan will be prepared as a sub-plan to CEMP in consultation with local Councils, including Wellington Council, and the RTA.</p> <p>Construction of tracks near environmentally sensitive areas will be avoided or guided by relevant specialists.</p> <p>Implementation of sediment and erosion control programs.</p> <p>On-site speed restrictions implemented, access limited to defined tracks, and induction of staff to ensure awareness of traffic management requirements.</p> <p>At conclusion of construction, any tracks no longer needed will be restored and revegetated.</p>	Low
Operation impacts	Impact of periodic visits by vehicles	C	5	Low	The likely impact to adjoining land uses and the road network during operation will be small given the expected traffic volumes.	Low
<b>TELECOMMUNICATIONS</b>						
Radio	Possible interference with radio broadcasts and reception	E	4	Low	<p>Comprehensive telecommunications investigation undertaken.</p> <p>Siting of turbines has considered communication impacts and potential issues addressed. Turbine layout is expected to provide adequate clearances. Overseas and local experience demonstrates that radio broadcasts are unlikely to be impacted by wind farm operation.</p>	Low

**BODANGORA WIND FARM ENVIRONMENTAL ASSESSMENT CONCLUSIONS 18-11**

ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
					If there is any additional movement of construction cranes outside of the rotor diameter, then movements will be in accordance with Fresnel clearance requirements for the project.	
Mobile phone reception	Possible interference with mobile phone reception in the area	E	4	Low	<p>It is not likely that turbines will impact cellular mobile coverage. Transitional signal deterioration is unlikely but may occur as the mobile phone moves through the area.</p> <p>In the event of deterioration, investigations would be conducted and steps undertaken to rectify the situation.</p>	Low
Television	<p>Interference to digital television.</p> <p>Interference to analogue television.</p>	D	4	Low	<p>A reduction in service area through reflected signals, or through shadowing is very unlikely.</p> <p>Some interference with analogue television may occur for dwellings particularly to the south of the wind farm however digital only television will be achieved by 30 June 2012 which is prior to the completion of the Bodangora Wind Farm.</p> <p>Where any degraded service is reported than a range of techniques are proposed to be implemented to improve the service at the dwelling at the cost of the proponent, such as the replacement or repositioning of antenna or satellites.</p> <p>Additional consultation will occur with commercial television station operators in the area.</p>	Low
Microwave communication	Potential for interference to point to point microwave communication links	D	4	Low	<p>Impacts to microwave band point to multi-point registrations are located at significant distances from the wind farm.</p> <p>Consultation with owners of microwave band point to multi-point registrations will occur as the operators of these systems will be best placed to determine impact.</p>	Low
<b>GREENHOUSE GAS</b>						
Greenhouse gas emissions	Net generation of greenhouse gases from manufacture, construction, operation and decommissioning	D	4	Low	<p>Within three months of operation, the wind farm will offset any greenhouse emissions.</p> <p>Significant savings to national emissions will be provided in the long term.</p>	Low

**BODANGORA WIND FARM ENVIRONMENTAL ASSESSMENT CONCLUSIONS 18-12**

ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
<b>GENERAL ENVIRONMENTAL MANAGEMENT MEASURES</b>						
Air quality	Dust and minor air emissions may impact local area Vehicle emissions	C	4	Moderate	Works will be implemented as part of the Soil and Erosion Control Plan to mitigate the potential for dust, including wetting exposed soils, gravel capping on access tracks, and rehabilitation as soon as possible.  Local water supplies will be used for dust control and will be balanced on the amount of available water.  All construction vehicles will maintain emission controls.  Given the scale of the project and existing farming activities such as the ploughing of fields, it is expected that dust generated by the construction of the wind farm can be effectively managed and will form only a minor contribution to air emissions in the wider region.	Low
Soil management	Soil erosion as a result of construction Controls inadequate to minimise erosion	C	3	High	Assessment has identified areas with erosion potential. The project design has minimised the extent of soil disturbance, and vegetation clearance has been minimised.  Soil and Water Management Plan to be prepared for the CEMP to outline erosion control measures.  Project component will consist of only a small component of land area.  The majority of construction activity will occur where erosion potential is low and ongoing monitoring and maintenance will occur.	Moderate
Water management	Impact of sediment run-off Excessive use of local water supplies	C	3	High	Upgrading of existing crossings will reduce the impact on site drainage.  Overhead cables will be considered at creek crossings to minimise disturbance and erosion risk. Cable crossings at creeks are to be installed to appropriate guidelines.  Trenches will be open for minimal periods only, and backfilled to preconstruction condition.	Moderate

BODANGORA WIND FARM ENVIRONMENTAL ASSESSMENT CONCLUSIONS 18-13


ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
					Water for the project will be obtained from Wellington Council, and will be negotiated with Council at the time of construction. The expected water usage is not excessive and is required for mitigation measures, such as dust control. Minimal water will be required during the operational phase.	
Hazards	Spills or leaks of sewerage, fuel, chemicals or batteries	C	3		Hazardous substances will be safely stored in areas with containment in case of leaks.  Procedures for handling and storage of substances will be documented and monitored. A number of hazardous substances have secondary containment measures.  Staff will be trained in emergency response and clean-up procedures.	
<b>SAFETY ASPECTS</b>						
Aircraft safety	Turbines may impact upon the safe operation of aircraft in the area for recreational and agricultural purposes	E	2	High	The Wellington Aerodrome is 4.5 kilometres to the south-west of the nearest turbine proposed, and will orientate north-west/south-east, which will orientate the direction of planes away from the proposed turbines.  All relevant stakeholder to the Wellington Aerodrome have been advised of the wind farm. Final as built locations will be provided to relevant stakeholders for inclusion on aviation charts.  The wind farm will be readily apparent to recreation and agricultural air space users, and can be readily avoided.	Low
Physical safety	Risk associated with tower failure, blade separation, and ice throw Vehicle accidents	C	4	Moderate	Construction works to be carried out in accordance with all relevant standards. Turbines will shut down if maximum speed is reached to avoid damage.  Land owners will be advised to avoid turbine locations during the few periods of below freezing temperatures.  Steep sections at or adjacent to access tracks will be identified prior to construction commencing, step access locations will be 'benched' and barriers, warning signs, and/or tapes will be used. Construction will occur during daylight hours only and working conditions will be monitored.	Moderate
Electrical safety	Electrical failure Lightning strike	C	4	Moderate	Development will occur in accordance with all relevant standards.  Lightning protection as a standard feature on all modern turbines.	Low

BODANGORA WIND FARM ENVIRONMENTAL ASSESSMENT CONCLUSIONS 18-14


ASPECT	POTENTIAL IMPACT	L	C	LEVEL OF RISK	PROPOSED MANAGEMENT	MITIGATED RISK
					Protective equipment will be installed to detect faults, and the substation will be protected by surge dividers, lightning masts and an underground earth grid. Fencing will protect access to live electrical equipment.	
Bushfire risk	Ignition of a bushfire through construction and operational activities Bushfire ignition as a result of lightning strike	E	2	High	A Bushfire Risk Management Plan will be prepared in consultation with the NSW Rural Fire Service. Alternative access and egress routes exist for most turbine sites should they be required in an emergency. Contractors will be required to comply with all legislation. Native vegetation may be required for removal where in excess of 100 millimetres high at access tracks and work site locations. A mobile water tank will be kept on-site for fire fighting purposes, and fire fighting tools will be kept at each work station. Work will be limited on high bushfire risk days.	Low
Electric and Magnetic Fields	Health impacts associated with high voltage transmission lines	E	4	Low	Potential impacts have been considered of EMF and project design has avoided proximity of electrical equipment to dwellings. Location of turbines and substations are in areas not frequented by public. Construction and operation will be in accordance with relevant electrical safety codes.	Low
<b>OTHER ASPECTS</b>						
Property values	Potential for wind farm to affect land and property values in surrounding area	C	4	Moderate	Review of available studies suggest that wind farms do not have a measurable impact upon property values.	Low
General Administrative and Consultation Commitments	Development varies from approval and commitments	C	4	Moderate	The proponent has a commitment to all general, specific and consultative measures as outlined within this document, and the draft Statement of Commitments. Legislative requirements for environmental management will be adhered to. Ongoing reporting and monitoring for various aspects is required to the Director-General.	Low

## 21. Appendix D – Project Statement of Commitments – Operations

(CHAPTER 20 OF THE PROJECT EA)

			
Issue	Commitment	Responsible Party	Timing
	<ul style="list-style-type: none"> <li>procedures for regular fire prevention inspections by the RFS and implementation of any recommendations.</li> </ul>		
	<p>Specific mitigation measures during the operation of the wind farm will include the following:</p> <ul style="list-style-type: none"> <li>the property around the wind turbines to a distance of 20 metres shall be maintained as an inner protection area;</li> <li>suitable buffers between vegetation and installed equipment and working areas will be maintained; and</li> <li>alternative access tracks are to be maintained where existing.</li> </ul>	Contractor	During operation
Telecommunications interference	<p>Where degraded FM or TV broadcasting services are reported to the proponent, the following measures will be undertaken until the service is improved to a reasonable quality:</p> <ul style="list-style-type: none"> <li>replacement of the existing antenna system with a higher gain, and more directive model;</li> <li>repositioning of the antenna in height or horizontally on the dwelling;</li> <li>installation of an antenna elsewhere on the property and the provision of a cable to the dwelling;</li> <li>changing the orientation of the existing antenna to receive an alternative station if available;</li> <li>the provision of an alternative satellite service, eg the proposed Viewer Access Satellite Television (VAST) or Austar pay TV service; or</li> <li>the installation of a TV or FM repeater station to provide service to groups of residents in a shadow zone (this is likely to only be justified for higher density population areas and other measures will be utilised first).</li> </ul>	BWFPL	During operation as required
Operating Noise Contingency Strategy	In the event that the commissioned turbine noise exceeds the noise predictions, the noise of turbines will be reduced through the use of lower noise modes for use under certain operating conditions, which produce lower noise levels in accordance with the required standards.	BWFPL	As required
Aviation safety	Where location details are provided prior to construction commencing then the 'as constructed' details will also be provided prior to the completion of turbine erection.	BWFPL	Following construction
Heritage	Ground disturbance impacts associated with the project during operation will be kept to a minimum and to defined areas to ensure minimal impact to unlisted or unrecorded Aboriginal items.	BWFPL	During operation

BODANGARA WIND FARM ENVIRONMENTAL ASSESSMENT DRAFT STATEMENT OF COMMITMENTS 20-38

			
<b>20.4 OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN</b>			
The following measures are for incorporation within the Operational Environmental Management Plan.			
<b>Table 20.14 – Measures for Incorporation into the Operational Environmental Management Plan</b>			
Issue	Commitment	Responsible Party	Timing
Fuel and Oil Management Sub-Plan	<p>The following measures will be undertaken:</p> <ul style="list-style-type: none"> <li>regular inspection of the transformers and associated turbine equipment will be carried out to ensure good working and leak-free condition; and</li> <li>procedures for maintenance will be documented and followed by maintenance staff.</li> </ul>	BWFPL	Ongoing as part of maintenance programme
Waste Management and Re-Use Sub-Plan	<p>A Waste Management and Re-Use Sub-Plan will be prepared for the CEMP to address the management of wastes during operation in accordance with the NSW Government's <i>Waste Reduction and Purchasing Policy</i>. The Sub-Plan will identify the following requirements:</p> <ul style="list-style-type: none"> <li>the application of the waste minimisation hierarchy principles of avoid/reduce/reuse/recycle/dispose;</li> <li>specific details for the handling, storage and disposal of wastes, including contaminated materials, glass, metals and plastics, hydrocarbons (lubricants and fuels) and sanitary wastes;</li> <li>any waste material that is unable to be re-used, re-processed or recycled must be disposed at a facility approved to receive that type of waste; and</li> <li>any waste oil arising from equipment servicing will be stored in sealed containers in a covered and bunded area until it can be removed off-site to a suitable waste oil facility.</li> </ul>	BWFPL	Prior to operation commencing
Greenhouse and Energy Management Strategy	A Greenhouse and Energy Management Strategy will be prepared prior to construction commencing, to ensure the use of non-renewable resources during operation is minimised.	BWFPL	Prior to operation commencing
Bushfire Risk Management Sub-Plan	<p>A Bushfire Risk Management Sub-Plan will be prepared prior to operation commencing, in consultation with the NSW Rural Fire Service (RFS), based upon the <i>Planning for Bushfire Protection Guidelines</i> (RFS, 2006). The Sub-Plan will include the following:</p> <ul style="list-style-type: none"> <li>details of the bushfire hazards and risks associated with the development;</li> <li>mitigation measures, contingency plans;</li> <li>procedures and programmes for liaison and regular drills with the RFS; and</li> </ul>	BWFPL	Prior to operation commencing

BODANGARA WIND FARM ENVIRONMENTAL ASSESSMENT DRAFT STATEMENT OF COMMITMENTS 20-37

## 22. Appendix E – OEMP Content Checklist

The following checklist has been extracted from the Department's *Guideline for the Preparation of Environmental Management Plans*. It shows that this OEMP has been checked against the content checklist to include the sections and information required by the Guideline.

Environmental Management Plan Guideline

Does Your EMP Contain	Yes	No
<b>Background (EMP Guideline Section 4.3.1)</b>		
Introduction	✓ AM	
Project Description	✓ AM	
EMP Context	✓ AM	
EMP Objectives	✓ AM	
Environmental Policy	✓ AM	
<b>Environmental Management (EMP Guideline Section 4.3.2)</b>		
Environmental Management Structure & Responsibility	✓ AM	
Approval and Licensing Requirements	✓ AM	
Reporting	✓ AM	
Environmental Training	✓ AM	
Emergency Contacts and Response	✓ AM	
<b>Implementation (EMP Guideline Section 4.3.3)</b>		
Risk Assessment	✓ AM	
Environmental Management Activities and Controls	✓ AM	
Environmental Control Plans or Maps	✓ AM	
Environmental Schedules	✓ AM	
<b>Monitoring and Review (EMP Guideline Section 4.3.4)</b>		
Environmental Monitoring	✓ AM	
Environmental Auditing	✓ AM	
Corrective Action	✓ AM	
EMP Review	✓ AM	

Note: This checklist highlights the main components of an EMP. It is not an EMP template.

### EMP CONTENT CHECKLIST