

Bango Wind Farm

Southern Tablelands, New South Wales

Pollution Incident Response

Management Plan

EPL 21826

Lachlan Valley Way

YASS NSW 2582

Commencement Date

12.07.2019

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1. Introduction

The Bango Wind Farm (the Project) is an approved renewable energy project located approximately 25 km north of Yass and approximately 25km south of Boorowa. The Project consists of up to 46 wind turbines each with a maximum height of 200m from foundation to the uppermost blade tip. The Project will also comprise access roads, internal electrical reticulation, temporary construction compounds, rock crushing facilities, concrete batching plant(s), a substation, an operations and maintenance facility, approximately 15 km of overhead transmission line and a switching station.

The Project will have a generation capacity of approximately 240 MW and will connect to the existing 132kV TransGrid transmission line oriented north-south east of the substation site. The Project will be constructed primarily on freehold land, as well as Crown and Council land across two Local Government Areas (LGAs) Yass Valley Council (YVC) and Hilltops Council (HTC). Land to be used for the Project is secured under lease and license arrangements. The Project will be constructed and operated by Bango Ridge Wind Farm Pty Ltd (BWF) with transmission infrastructure owned and operated by the network service provider.

Construction will commence in August 2019. Planning approval for Project is contained within compliance with the Development Consent (SSD-6686) and EPBC Approval 2013-6810. An Environmental Protection Licence EPL 21826 was granted on 27 April 2018.

This Pollution Incident Response Management Plan (PIRMP) has been prepared as part of EPL 21286 and is designed to be a tool for project personnel to respond in a practised and well-planned manner in the event of a pollution incident at the Project.

The PIRMP will be used to manage the impact of a pollution incident to employees, neighbours, the wider community and the environment both on and off site.

The PIRMP ensures comprehensive and timely communication about a pollution incident to all personnel present at the Project, immediate neighbours, the Environmental Protection Authority (EPA) and other relevant agencies such as:

- Department of Planning and Environment;
- Yass Valley Council;
- Hilltops Council;
- Ministry of Health;
- WorkCover Authority of NSW; and
- Fire and Rescue NSW.

The PIRMP minimises the risk of a pollution incident by firstly identifying the risks, putting measures in place to reduce the likelihood of an incident occurrence and finally planning and practising the response to a pollution incident.

This PIRMP forms part of the overarching Environmental Management Strategy for the project

and is to be read in conjunction with the Construction Environmental Management Plan for the project.

The PIRMP does not detail the procedure for treatment of injured persons or remediation of the environment following a pollution incident. These are covered in the Emergency Management Plan for the Bango Wind Farm prepared by the Engineering Procurement and Construction (EPC) contractor.

2. Scope of the Project

The scope of works to be performed by the Balance of Plant Contractor during the project includes design and construction of 46 wind turbine generators (WTG's) including:

- Site entries and internal access track network;
- Hardstands and foundations;
- Electrical reticulation and ancillary facilities;
- Operations and Maintenance facility;
- Auxiliary works such as met mast connections, local public road works, etc;
- WTG design, manufacture and delivery to site;
- WTG erection, including mechanical and electrical installation.

The scope of works to be performed by the Grid Connector Contractor includes:

- Construction of 33/132kV Substation;
- 132kV Transmission line between the Substation and NSP connection.

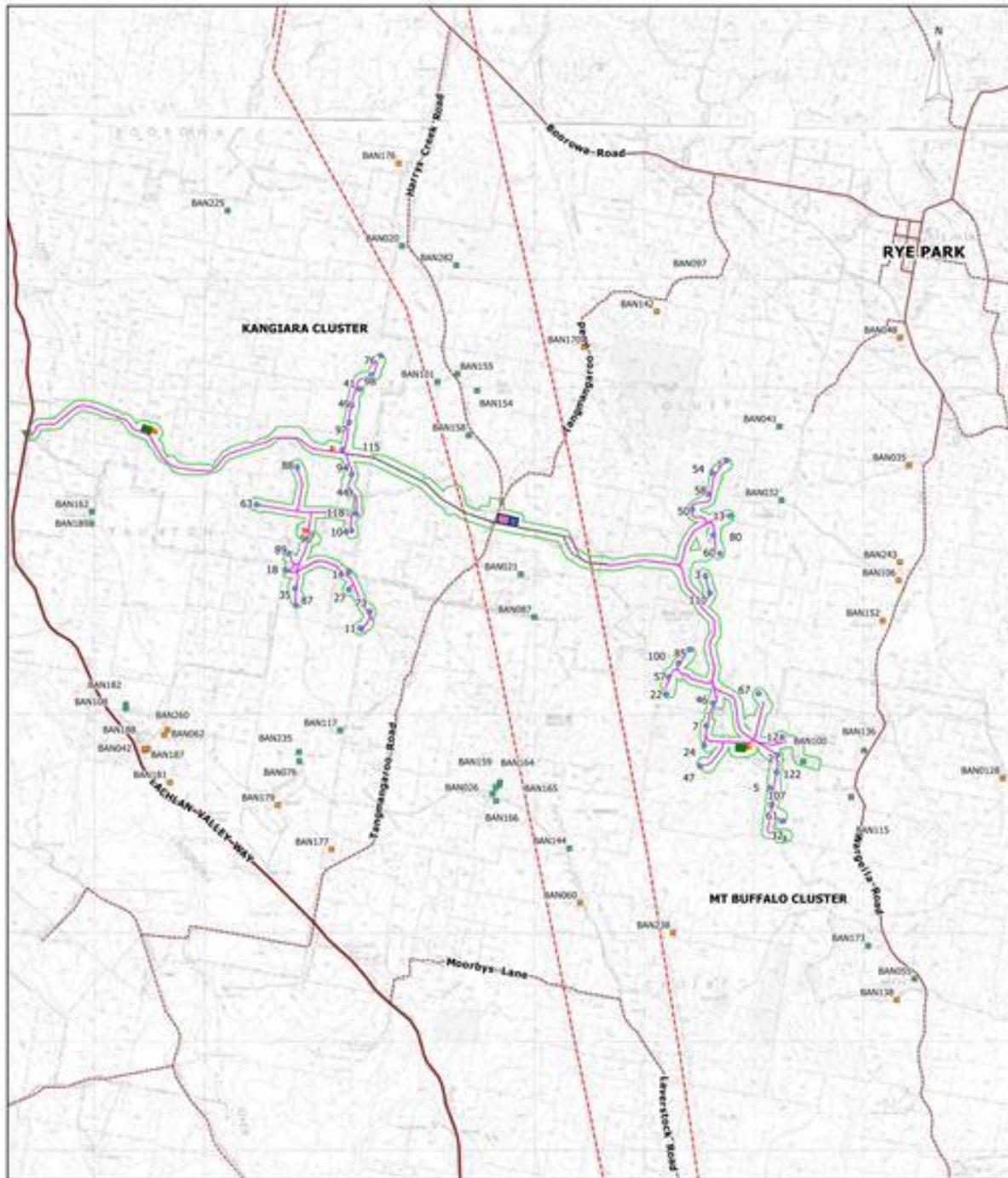
The project is located on the premises are shown in Table 1 Lot and DP for Premises.

Table 1 Schedule of affected Land

Lot	DP	Lot	DP
1	83173	220	754135
13	113987	222	754135
5	240710	228	754135
1	625285	233	754135
2	625285	238	754135
1	625384	271	754135
2	625384	281	754135
3	625384	299	754135
1	742223	300	754135
31	754109	301	754135
48	754109	317	754135
115	754109	318	754135
139	754109	319	754135
242	754109	156	754143
263	754109	167	754143
268	754109	183	754143
279	754109	212	754143
287	754109	216	754143
297	754109	224	754143
309	754109	234	754143
87	754135	256	754143
88	754135	276	754143
162	754135	2 DP	802580
163	754135	2 DP	1048648
169	754135	2 DP	1187122
202	754135	3 DP	1187122
213	754135		

The land affected by EPL 21286 is shown in Figure 1 Location of Bango Wind Farm.

Figure 1 Project Infrastructure



LEGEND		COMPANY		
Wind Farm * WTC ▽ Main Site Access Option — Indicative Access Track — Overhead Transmission Line ○ Study Area Residences ■ Associated Residence ■ Non-Associated Residence		Construction Facilities ■ Construction Compound Option ■ Concrete Batching Plant Option ■ Rock Crushing Facility Option ■ Collector Substation Option ■ Switching Station Option Existing Infrastructure - - - - Unsealed Road — Sealed Road - - - - 132 kV Transmission Line		
		BANGO WIND FARM PTY LTD		
		FINAL LAYOUT PLAN		
DATE	SCALE	DWG NO	REV	VER
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3. Legal Requirements

The *Protection of the Environment Legislation Amendment Act 2011* introduced changes designed to improve the way pollution incidents are reported and managed in NSW. The changes apply to the holders of Environmental Protection Licences.

The requirements for PIRMP are set out in Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act 1997) and the *Protection of the Environment Operations (General) Regulation 2009*. In summary these provisions require that:

- all holders of an Environment Protection Licence prepare, implement and test a PIRMP;
- the plan includes the information detailed in the POEO Act 1997 (section 153C). These requirements are reproduced in Table 1;
- the plan must be kept at the premises to which the Environment Protection Licence relates.

Table 2 Requirements for a PIRMP, Section 153C (d) Protection of the Environment Operations Act 1997

Clause Number	Requirement	Section in this Plan
98 C (1) a	A description of the hazards to human health or the environment associated with the activity to which the licence relates	Appendix 1
98 C (1) b	The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood	Appendix 1
98 C (1) c	Details of the pre-emptive action to be taken to minimise or prevent any risk of harm to human health or the environment arising out of the relevant activity.	Section 6.1
98 C (1) d	An inventory of potential pollutants on the premises or used to carry out the relevant activity	Section 7

Clause Number	Requirement	Section in this Plan
98 C (1) e	The maximum quantity of any pollutant that is likely to be stored or held at particular locations including underground tanks at or on the premises to which the licence relates	Section 7
98 C (1) f	A description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident	Section 8
98 C (1) g	<p>The names positions and 24 hour contact details of those key individuals who;</p> <ul style="list-style-type: none"> • Are responsible for activating the plan • Are authorized to notify relevant Authorities under section 148 of the Act • Are responsible for managing the response to the pollution incident 	Section 13.1
98 C (1) h	Contact details of each relevant authority referred to in section 148 of the act.	Section 13.2
98 C (1) i	Details of the mechanisms for providing early warnings and regular updates to the owners and occupiers of the premises in the vicinity of the premises to which the licence relates	Section 13.3
98 C (1) j	The arrangements for minimizing the risk of harm to any persons who are present where the scheduled activity is being undertaken	Section 14
98 C (1) k	A detailed map showing the location of the premises to which the licence relates, the surrounding area that is likely to be affected by a pollution	Figure 1 to 5

Clause Number	Requirement	Section in this Plan
	incident, the location of pollutants on the premises, and the location of stormwater drains on the premises,	
98 C (1) l	A description of how any identified risk of harm to human health will be reduced, including as a minimum, means of early warnings, updates and the action to be taken during or immediately following a pollution incident to reduce the risk,	Appendix 1 and Section 6.1
98 C (1) m	The nature and objectives of any staff training program in relation to the plan,	Section 14
98 C (1) n	The dates on which the plan has been tested and the name of the person who carried out the test,	Table 16
98 C (1) o	The dates on which the plan is updated,	Table of Revisions
98 C (1) p	The manner in which the plan is to be tested and maintained,	Section 16
Other Requirements of the plan		
	<p>Availability of the plan. The plan is to be available to an authorized officer on request and on the premises to which the licence relates or where the activities take place and to any person who is responsible for implementing the plan</p> <p>The plan is to be made publicly available within 14 days of its preparation in a prominent location on a publicly accessible website of the person who is required to prepare the plan</p>	Section 15
	Testing of the plan is to be carried out in such a manner as to ensure information included in the plan is accurate and up to	Section 16

Clause Number	Requirement	Section in this Plan
	<p>date and the plan is capable of being implemented in a workable and effective manner.</p> <p>The test is to be carried out at least once every 12 months and within one month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of an incident, whether information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.</p>	

4. Definition of Pollution Incident

The POEO Act 1997 defines a pollution incident as:

“...pollution incident means 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.”

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.”

The EPC is responsible for the design and construction of the Bango Wind Farm. The long-term operation will be undertaken by CWP Renewables.

The most likely environmental incidents that may be encountered include:

- Water pollution from construction activities,
- Hydrocarbon spill that reaches natural watercourse. This could occur through:
 - Spillages when refuelling machinery
 - Leakage from diesel storage
 - Motor vehicle accident on site
 - Spillage from machinery breakdowns
- Air pollution from unusual vehicle emissions.
- Chemical spill

This Plan considers both air and water-based pollution incident impacts. The site is managed in accordance with an Environmental Management System, Construction Environmental Management Plan which included management practices to effectively minimise the likelihood and impact of a pollution incident. However, pollution incidents may occur despite the best design and management methods being in place. Such accidental events are also covered in the Plan using incident response methods.

5. Duty to Notify

5.1. Requirement

The holder of an Environment Protection Licence is required to notify the relevant authorities if there is a risk of “material harm to the environment”.

Harm to the environment is material if:

1. It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
2. It results in actual or potential loss of property damage of an amount or amounts in aggregate exceeding \$10,000 (or such other amount as is prescribed by the regulations); and
3. 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.

Harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.

Licence holders are required to report pollution incidents **immediately** (this means without delay) to **all** of the appropriate regulatory authorities.

These appropriate regulatory authorities are the:

- Environment Protection Authority;
- Department of Planning and Environment;
- Ministry of Health;
- WorkCover NSW;
- Yass Valley Council;
- Hilltops Council;
- Fire and Rescue NSW.

Failure to notify in accordance with the Act carries a maximum penalty of \$2 million.

6. Pre – emptive Actions Taken

Construction of the BWF is carried out in accordance with SSD 6686, Environmental Management Strategy, Biodiversity Management Plan Construction Environmental Management Plan. These documents provide the principal reference for Site environmental management during construction.

Air

- Maintain compacted surface on site roads;
- Stabilise and rehabilitate all disturbed areas to prevent or minimise dust generation;
- Apply dust control measures during construction as required;
- Ensure vehicle speeds are below site speed limit during increased dust risk; and
- Ensure all vehicles are properly maintained to minimise emissions.

Water

- Rehabilitate all construction works;
- Monitoring rehabilitation during construction to identify and rectify erosion and drainage issues;
- Regular equipment inspections and maintenance to detect and correct any potential oil or fuel leaks;
- Ensure procedures for safely handling oil, fuel and chemicals on site are in place;
- Store all hazardous liquids in suitable containment areas;
- Provision of suitable spill control equipment;
- Provision of training in containment and recovery procedures; and
- Monitoring of all systems over time to ensure effectiveness.

Noise

- Compliance with approved working hours
- Layout design to achieve compliance
- Noise compliance assessments for operating wind farm
- Reporting of noise compliance results and any mitigation
- Complaint investigation and responses
- Operational controls to ensure noise compliance

Waste management and soil contamination

- Separation of wastes
- Storage and handling procedures – covered waste storage skips or bins
- Waste classification where required
- Appropriate and compliant disposal of wastes

- Testing, storage and treatment or disposal of contaminated soil

Environmental Management

- Ensure all hazards have been identified and are included in the Site Risk Register
- Ensure all hazards are appropriately addressed by suitable control measures (risks acceptable)
- Ensure that the management system provides regular inspections of the effectiveness of controls
- Maintain hazardous substances register on site and SDS for all listed items
- Reporting as required.
- Controls are outlined in the EMS and CEMP which address the hazards described in this PIRMP.
- Testing of the PIRMP within every 12 month period.

7. Inventory of Potential Pollutants

Civil construction by its nature has a limited list of typical pollution types which are required to be considered under the PIRMP. This list covers the main types of waste which could cause potential incidents found within the Project site a summary of potential pollutants is provided in Table 3.

Sediment laden water: Sediment generation is the primary source of pollution potential on site. Sediment ponds are located at the northern boundary of the site, diversion banks are installed to minimise run-on water to the active mining area and an active erosion and sediment control plan is in place.

Waste Oil: All Waste Oil generated shall be stored in drums in the oil store / bunded area prior to transport off site for disposal.

Diesel Oil: Diesel is used on site to power the construction equipment and machinery. A limited amount will be stored on site in a double bunded Trans tank at the site compound. Additional fuel will be sourced from either Mudgee or Bathurst via a commercial tanker.

Table 3 List of Typical Main Pollutants in the Bango Wind Farm Project

Description	Comments
Air Based Emissions	
Dust	From machinery driving on haul roads and crushing of materials
Fire	Fire is not considered an environmental incident, but the smoke from the fire can be and can affect neighbours.
Noise	Emitted by plant and equipment.
Odour	Odour is not a major problem the Project site.
Spill type emissions	
Class 3 flammable liquids e.g. Fuels including petrol-based fuels and. Combustible Liquids (C1 & C2) Lubricants and hydraulic oils and other	For plant and equipment operations.
Other dangerous Goods classes e.g. <ul style="list-style-type: none"> • Compressed gases • Corrosive substances • Oxidizing substances • Toxics • Other dangerous goods 	Used for a variety of purposes on site, Usually in small quantities

Insulating Oil	Stored in suitable containers Used in accordance with MDS
Hydraulic Oil	Stored in suitable containers Used in accordance with MDS
Cleaning agents	Stored in suitable containers Used in accordance with MDS
Sewage effluent	Pumped out of tanks
Coolant	Stored in suitable containers Used in accordance with MDS
Other emissions	
Wastes	Storage of wastes and wastes containing chemicals
Treated packaging	Removed from site

8. Inventory of Safety Equipment

The tables below provide an inventory of the safety equipment and other devices available on site to minimise the risks to human health, the environment and to contain/control a pollution incident at BWF.

8.1. Construction phase

Table 4 Pollution control equipment available

Product	Location	Purpose
Spill Kits	Compound Mobile fuel trucks Hardstands during pours / erection	Control of minor spills
MSDS	Compound	Provide data on chemicals
Drip trays	Fuel trucks	Control spillage when refuelling
Bunded containers	Works sites Compound	Used to store containers of chemicals, fuels and the like
First Aid Kits	Compound All vehicles	For administering first aid
Fire Extinguishers	Compound All vehicles	Control of any minor fire

8.2. Installed pollution control measures

The following measures will be used to prevent pollution to the environment when storing and handling various chemicals and substances:

Table 5 Pollution control measures during operations

Product	Storage technique
Diesel Fuel	Mobile tanker delivering fuel to site.
Lubricants	Storage in dedicated cabinets / containers at Compound during construction and at Operations and Maintenance Facility during operations Transport around site in dedicated containers
Coolants	Storage in dedicated cabinets / containers at Compound during

	<p>construction and at Operations and Maintenance Facility during operations</p> <p>Transport around site in dedicated containers</p>
Solvents	<p>Storage in dedicated cabinets / containers at Compound during construction and at Operations and Maintenance Facility during operations</p> <p>Transport around site in dedicated containers</p>
Paint	<p>Stored in original container</p>
LPG	<p>Certified storage vessels to Australian codes and standards</p>
Herbicides	<p>Transport around site in dedicated containers</p> <p>Application by qualified operators</p> <p>Application in accordance with label.</p>
Soil	<p>Installation of erosion and sediment control measures</p>

9. Actions to be taken before, during and immediately after a pollution incident

9.1. Actions to minimise a pollution incident

The following actions have been undertaken or are ongoing and aim to minimise an event from which a pollution incident may result:

- A Pollution Incident Risk Assessment has been undertaken and is included in Appendix 1. This assessment was used by Bango Wind Farm Pty Ltd to identify the risks associated with activity, put management measures in place to reduce the likelihood of any significant risks occurring and therefore minimise the likelihood of a pollution incident.
- Regular inspection of the integrity of chemical bundling, pipelines, containers and workshop areas Bango Wind Farm Pty Ltd to identify any potential for an incident due to wear and tear or physical damage on a regular basis. This combined with regular maintenance helps to minimise the likelihood of an incident.
- Staff Training in the storage and handling of liquids, clean-up of spills and emergency procedures helps to minimise the likelihood of an incident occurrence and prevents a small issue escalating into an incident.
- Bango Wind Farm Pty Ltd operates using a comprehensive Environmental Management System and Safety Plan. These plans help to ensure that Bango Wind Farm Pty Ltd operations are undertaken with full consideration and management of the risks involved and ensures that we operate in a planned, practiced way using correct standards and procedures.

9.2. Actions to be taken during a pollution incident

In the event of a pollution incident the following actions will be taken:

- Ensure Personal Safety.
- Assess the necessity for evacuation. If evacuation is required, then evacuation will be undertaken in accordance with Bango Wind Farm Pty Ltd Evacuation Procedure.
- Undertake emergency response other than evacuation.
- Contact the Appropriate Regulatory Authorities (ARA).
- Take direction from ARA if provided.
- If safe and possible to do so, undertake immediate measures to prevent further impacts from the pollution incident.
- If required seek assistance from specialist consultants.

9.3. Ensure Personnel Safety

If a pollution incident occurs the first priority is to ensure personnel safety, visually assess the situation and if there is significant risk to human health, undertake proceedings to evacuate the site.

If evacuation is not required, the area shall be isolated and segregated to prevent personnel coming in contact with the incident. Barriers are to be erected, and other isolation measures implemented where available. If possible, isolate the release by turning off valves safely.

The area supervisor is to be informed so that senior management can also be advised. Two-way radio will be used for communication on site during construction and operations. This method of communication will be used to alert personnel working on site of the occurrence of a pollution incident. It is a fast and effective way to communicate so that personnel can ensure their personal safety.

10. Notification of Authorities

Immediately after The Contractor's Site Manager is aware of a pollution incident a "Bango Wind Farm Pty Ltd Key Contact" will notify all authorities listed in section 12 of this plan.

The following protocol will be followed for notification of pollution incidents:

10.1. Protocol

1. Call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, NSW Police and NSW Ambulance Service. These are the first responders and responsible for controlling and containing incidents.
2. If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order:
 - a. The EPA;
 - b. Department of Planning and Environment;
 - c. The Ministry of Health (via the local Public Health Unit);
 - d. WorkCover NSW;
 - e. Yass Valley Council;
 - f. Hilltops Council; and
 - g. Fire and Rescue NSW

The information that is required to be notified is as follows:

- a) The time, date, nature, duration and location of the incident,
- b) The location of the place where pollution is occurring or likely to occur,
- c) The nature, the estimated quantity or volume and the concentration of any pollutants involved, if known,
- d) The circumstances in which the incident occurred (including the cause of the incident),
- e) The action taken and proposed to be taken to deal with the incident and any resulting pollution or threatening pollution, if known,
- f) Any other information prescribed by regulations.

Notification is required **immediately**. Any information required that is not known at the time of the incident can be notified when it becomes known.

10.2. Consultation of the MSDS

If the pollution incident involves the use of a product for which an MSDS is available then upon notification of a pollution incident, the MSDS shall be consulted to obtain information to help in the management of the incident which may include recovering the product and performing the clean-up. In certain instances, specialised outside help may be needed. The MSDS will also provide information on the appropriate PPE to be worn if it is decided to approach the release.

10.3. Notification of Neighbours

Neighbours will be contacted directly via the phone in the event of a pollution incident, if there is risk of harm to their safety.

11. Actions following a pollution incident

11.1. Clean up and Recovery

Following a pollution incident key personnel will develop a clean-up and recovery plan. It may be possible to undertake this, using resources on site or depending on the situation may require the engagement of emergency services or professional clean-up crews with breathing apparatus and sophisticated recovery plant.

11.2. Incident Report

During construction the Contractor's Site Manager for the Balance of Plant and TransGrid for the Sub-Station will undertake a comprehensive investigation of any pollution incident event and complete and Incident Report (template in Appendix 2). Within 7 days of the incident this report will be issued to authorities. During operations this will be undertaken by the Facility Manager.

12. Contact Details

12.1. Bango Wind Farm key contacts

The people listed in Table 5 are responsible for activating this plan, are authorised to notify the appropriate regulatory authorities and are responsible for managing the response to a pollution incident in accordance with this plan.

Table 6 Bango Wind Farm Key Contacts

KEY CONTACT	POSITION	CONTACT DETAILS (24Hrs)
Malcolm Moore	CWP Site Representative	0417 454 679
Patric Millar	CWP Environmental	0406 640 593
	EPC Project Manager	
	EPC Site Manager	
	EPC Environmental	
	TransGrid Project Manager	
	TransGrid Safety Manager	
	TransGrid Environmental	

12.2. Appropriate regulatory authorities

The table below provides contact information for the appropriate regulatory authorities. All Appropriate Regulatory Authorities are to be contacted in the event of a pollution incident and are contained in Table 7.

13. Training

The following training will be undertaken to ensure that the PIRMP is well understood and that all staff are familiar with the requirements of the plan and the key steps to manage a pollution incident:

- The requirements of the PIRMP will be included as part of the Site Induction process for all staff working on the Project regardless of their employer.
- All site personnel will be tool boxed on the requirements of the PIRMP and what their obligations are.

14. Access to the PIRMP

This plan will be kept on the premise to which the EPL relates. It will be kept in hard copy with the EPL at the compound offices of the Project and at the substation compound offices. Following construction, a copy will be placed in the Operations and Maintenance Building. A copy of the PIRMP and EPL will be placed on the Project's web page and associated digital presences.

The PIRMP will be accessible to anyone who has the legal authority to view in accordance with the provisions of the POEA.

15. Testing the PIRMP

The PIRMP will be tested annually, with the first test being undertaken within the first 6 months of construction and annually thereafter.

Testing of the PIRMP will include:

- A desktop review of the plan to ensure that the information is accurate and up to date.
- A drill exercise to simulate one of the potential incidents identified within the risk assessment in Appendix 1.

As it is a requirement of the legislation, this plan will also be tested within one month of any pollution incident occurring on site.

Table 9 Register for Testing the PIRMP

Date of Test	People Involved	Comments/Outcomes	Modification to PIRMP

Appendix 1

Pollution Incident Risk Assessment

A risk assessment was undertaken on site with the EPC Contractor. The primary objectives of the risk assessment were to:

- Use the risk assessment to identify key environmental issues to be addressed in the PIRMP.
- Use a risk assessment as input into the preparation of control measures for wind farm construction and operation;
- Prioritise identified environmental risks through a risk ranking process;
- Identify recommended actions to minimise or reduce risk; and
- Document the process and the results

The review process was based on the framework detailed in ISO 31000:2009 Risk Management - Principles and guidelines. The main tasks in the process were:

1. Context – Scope, Background “What is the study area and why are we doing this?”
2. Identify – Brainstorming, Modified Hazard and Operability Study (HAZOP), etc.
3. Analyse – Available data – “How big is the problem?”
4. Assess – Priority setting – “What are the Critical Issues?”
5. Assess – Risk Ranking – “What is the combination of consequence and likelihood?”
6. Treat – Control analysis – “A solution.”
7. Monitor & Review – Action items and inclusion of Risks and Treatment Strategies in Risk Management plans.

Three identified risks were then assigned a probability and a consequence rating according to the ratings outlined in Table A1 – Probability Considerations and Table A2 – Consequence Ratings. These probability and consequence considerations were then assigned a risk in accordance with Table A3 – Risk Ranking Table.

Table A1 – Probability Considerations

Likelihood (L)		
A	Almost certain	Happens often
B	Likely	Could easily happen
C	Possible	Could happen and has occurred elsewhere
D	Unlikely	Hasn't happened yet but could
E	Rare	Conceivable, but only in extreme circumstances

Table A2 – Consequence Ratings

Consequence (C)		
1	Extreme environmental harm	Widespread catastrophic impact on environmental values of an area
2	Major environmental harm	Widespread substantial impact on environmental values of an area
3	Serious environmental	Widespread and considerable impact on

	harm	environmental values of an area
4	Material environmental harm	Localised and considerable impact on environmental values of an area
5	Minimal environmental harm	Minor impact on environmental values of an area

Table A3 – Risk Ranking Table

	Probability				
	A	B	C	D	E
1	1 (H)	2 (H)	4 (H)	7 (M)	11 (M)
2	3 (H)	5 (H)	8 (M)	12 (M)	16 (L)
3	6 (H)	9 (M)	13 (M)	17 (L)	20 (L)
4	10 (M)	14 (M)	18 (L)	21 (L)	23 (L)
5	15 (M)	19 (L)	22 (L)	24 (L)	25 (L)

	Intolerable
	As low as reasonably practical
	Tolerable

A risk assessment was undertaken on site with the EPC Contractor.

SWF - Risk Management – Examples of Pollution Incident Risks (Relevant items to be added to Site HSE Risk Register as necessary)						
Work step or facility	Hazards	Risk	Risk Score	Mitigation Strategies (Control Measures)	Residual Risk Score	Control Measure Responsibility
Construction of BWF						
Civil works	Soil erosion	Erosion and sedimentation	Medium	Preparation of Erosion and Sediment Control Plans Ongoing monitoring and rectification works by BOP Contractor to fulfil rehabilitation requirements	Low	EPC Manager
Civil works	Air emission	Reduction in air quality	Medium	Implementation of dust management strategies Visual inspections of plant and equipment for excessive emissions (smoke) No burning of vegetation on site	Low	EPC Manager
Civil works	Water Pollution	Reduction in water quality	Medium	Preparation of Erosion and Sediment Control Plans Ongoing monitoring and rectification works by BOP Contractor to fulfil rehabilitation requirements	Low	EPC Manager
Civil works	Fuel spill	Reduction in water quality	Medium	Low volumes of oil, Inspections to detect leakage, Spill oil recovery, Maintenance of plant and equipment	Low	EPC Manager
Civil works	Concrete spill	Reduction in water quality	Medium	Preparation of Erosion and Sediment Control Plans Ongoing monitoring and rectification works by BOP Contractor to fulfil rehabilitation requirements	Low	EPC Manager
Civil and WTG Installation	Onsite sewage spill	Reduction in water quality	Medium	Septic system approved by Council for operations. Checks on operation of systems. Fencing out of disposal areas	Low	EPC Manager
Transport	Fuel Spill	Reduction in water quality	Medium	Classification, designated storage areas, Bunding, spill control procedure,	Low	EPC Manager

				Spill control equipment		
Transport	Structural damage to road / culvert resulting in water pollution	Reduction in water quality	Medium	Drive to road conditions; Ensure roads fit for purpose; Preventative maintenance on culverts; Guideposts and signage;	Low	EPC Manager
WTG Installation	Packaging	Increased pollution on site	Low	Reduce waste, Classify waste Store waste in closed bins or cover to minimise chance of being blown around site	Low	
WTG Installation	Coolant spill	Reduction in water quality	Medium	Classification, designated storage areas, Bunding, Spill control procedure, Spill control equipment	Low	TG Manager
WTG Installation	Fuel spill	Reduction in water quality	Medium	Classification, designated storage areas, Bunding, spill control procedure, Spill control equipment	Low	TG Manager
Site Rehabilitation	Inadequate stabilisation / vegetation coverage	Erosion and sedimentation	Medium	BMP Section 4.6 Site Rehabilitation. Ongoing monitoring and rectification work by BOP Contractor to fulfil rehabilitation requirements Condition 41 Schedule 3 of Conditions of Approval.	Low	EPC Manager
Site Rehabilitation	Weeds	Weed infestations	Medium	BMP Section 4.8 Weed Control. Ongoing monitoring and rectification work by BOP Contractor to fulfil rehabilitation requirements Condition 41 Schedule 3 of Conditions of Approval.	Low	EPC Manager
Construction of substation						
Site Rehabilitation	Inadequate stabilisation	Erosion and sedimentation	Medium	TG CEMP Section 6.4 Site Rehabilitation.	Low	TG Manager

	/ vegetation coverage			Ongoing monitoring and rectification work by TG Contractor to fulfil rehabilitation requirements and fulfil Condition 41 of Schedule 3 of Conditions of Approval.		
Site Rehabilitation	Weeds	Weed infestations	Medium	TG CEMP Section 6.4, Site Rehabilitation. Ongoing monitoring and rectification work by TG Contractor to fulfil rehabilitation requirements and fulfil Condition 41 Schedule 3 of Conditions of Approval.	Low	TG Manager
Erosion of disturbed ground	Soil erosion and sediment transfer / weeds	Intense rain event	Medium	TG CEMP Section 6.4 Effective erosion and sediment control. Stabilised all disturbed areas. Rehabilitation Programme. Routine weed management	Low	TG Manager
Material storage	Fuel, oil, chemicals	Soil contamination	Medium	Classification, Storage in designated storage areas, Bunding, Adoption of spill control procedure, Access to spill control equipment	Low	TG Manager
Waste Management	Oil, chemicals, rags, plastics, steel, wood, other	Soil contamination, amenity, visual	Medium	Classification, designated waste areas, labelling, recycling, appropriate/legal disposal	Low	TG Manager
Operation of substation						
Large transformer 33kV/132kV	Loss of large oil volume	Soil or water pollution	Medium	Design includes location within substantive concrete bund and inground oil/water separator. Regular inspection and maintenance	Low	TransGrid

Oil Water Separator	Ineffective operation	Oil discharge to soil and waters	Low	Regular inspection and maintenance, Keep clean	Low	TransGrid
Transformer Oil Cleaning	Leakage / Loss of oil volume	Soil or water pollution	Medium	Established maintenance procedure undertaken by specialist contractors. Adequate controls put in place during activity.	Low	TransGrid
Hazardous substance storage	Storage of waste oil and chemicals	Spillage to soil and waters	Low	Storage of relatively small amounts of hazardous substances, oil and chemicals.	Low	TransGrid
Sewage system on-site	Leakage to waters	Failure of pipework	Low	Septic system approved by Council for operations. Checks on operation of systems.	Low	TransGrid
Small plant equipment / auxiliary generator	Refuelling, servicing, wastes	Spillage of fuel or oil	Low	Fuel and oil handling procedures, Spill response equipment on hand. Auxiliary/backup generator is banded.	Low	TransGrid
Waste	Inappropriate disposal	Pollution, Fines, penalties	Medium	Minimal waste during operations. Clearly defined waste handling processes, Separation of wastes, Use of waste licensed contractor	Low	TransGrid
Operation of and Maintenance of Wind Farm						
Turbine Coolant system (320L per turbine)	Loss of chemical from coolers	Soil or water pollution	Medium	Use of Biodegradable coolant, Regular inspections and maintenance. Procedure for top-up of coolant to avoid spills	Low	Site Operations Manager
Turbine oil and grease systems	Leak or Spill of oil or grease	Contaminate soil or water	Low	Low volumes of oil, Inspections to detect leakage, Spill recovery procedure Maintenance of plant	Low	Site Operations Manager

and servicing						
Erosion of disturbed ground	Soil erosion and sediment transfer / weeds	Intense rain event	Medium	Effective erosion and sediment control. Stabilised all disturbed areas. Rehabilitation Programme. Routine weed management	Low	Site Operations Manager
Material storage	Fuel, oil, chemicals	Soil contamination	Medium	Classification, designated storage areas, Bunding, Adoption of spill control procedure, Access to spill control equipment	Low	Site Manager
Waste Management	Oil, chemicals, rags, plastics, steel, wood, other	Soil contamination, amenity, visual	Medium	Classification, Designated waste areas, Labelling, Recycling, Appropriate/legal disposal	Low	Site Manager
Various	Bushfire	Impact from bushfire	Medium	Bushfire Risk Management Plan, Fire-fighting equipment on-hand (especially for hot works)	Low-Med	Site Operations Manager
Wind farm infrastructure	Equipment Fire	Ignition of bushfire. Harm to life & property	Medium	Bushfire Risk Management Plan, Control ignition source, Sensors and automated shutdown systems on turbines, Fire-fighting equipment on-hand (especially for hot works)	Low	Site Operations Manager
Vehicle movements	Air borne dust	Roads poorly maintained	Medium	Maintain road surfaces to limit dust generation when vehicles use road. Deploy water cart as required. Reduce vehicle speeds. Consider application of surfactants.	Low	Site Operations Manager

Access track maintenance	Erosion of tracks and adjacent land	Sediment transfer	Medium	Higher risk on steeper slopes and erodible soils. Ensure drains are lined to reduce flow velocity and prevent scouring of drain. Stabilise batters. Rehabilitation Programme. Flocculate sediment basins	Low	Site Operations Manager
Turbine coolant storage (O&M) and other chemical storage	Damage to storage container	Spillage of coolant	Low	Stored in appropriate manner on designated bunding adjacent to storage shed at O&M Compound	Lo	Site Operations Manager
Herbicide use on disturbed area	Inappropriate use/application	Spills, penalties	Low	Handling procedures, Contractor applying herbicides to be appropriately trained and certified. Review weather forecast prior to application.	Low	Site Operations Manager

Appendix 2

Incident Report – Template

Incident Report

Date Report Raised			
Raised By			
Date of Incident			
Description of Incident			
Corrective Action	Completed By	Due Date	
Preventative action	Completed By	Due Date	
Incident Report Closed out By:	Signed by Issuer		
Comments	Date		