Crookwell 3 Development Pty Ltd

GPG Australia Pty Ltd

Environmental Management Strategy

Crookwell 3 Wind Farm

13 May 2021

Project No.: 0578567

The business of sustainability

ERM

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Signature Page

13 May 2021

Environmental Management Strategy

Crookwell 3 Wind Farm

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Acronyms and Abbreviations

ACHMP	Aboriginal Cultural Heritage Management Plan
BMP	Biodiversity Management Plan
BBAMP	Bird and Bat Adaptive Management Plan
CASA	Civil Aviation Safety Authority
CCC	Community Consultative Committee
CEMP	Construction Environmental Management Plan
CNMP	Construction Noise Management Plan
CoC	Conditions of Consent
Crookwell 3	Crookwell 3 Wind Farm
Cth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment (Cth)
DA	Development Application
The Department / DPIE	NSW Department of Planning, Industry and Environment
DPI	NSW Department of Planning and Infrastructure (former)
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EWMS	Environmental work method statements
EPA	NSW Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
EPC	Engineering Procurement and Construction contractor
EPL	Environmental Protection Licence
ERM	Environmental Resources Management Australia Pty Ltd
ERP	Emergency Response Plan
ERSED	Erosion and Sediment
FRNSW	Fire and Rescue NSW
F&FMP	Flora and Fauna Management Plan
GPG	Global Power Generation Australia Pty Ltd
Ha	Hectares
HMP	Heritage Management Plan
JHA	Job hazard analysis
LLS Act	Local Land Services Act 2013
LVIA	Landscape and Visual Assessment Report
Minister for the Environment	Australian Government Minister for the Environment
MNES	Matter of National Environmental Significance
MRET	Mandatory renewable energy targets
MW	Megawatt
NPW Act	National Parks and Wildlife Act 1974

NorBE	Neutral or beneficial effect
NSW	New South Wales
OEMP	Operation Environmental Management Plan
OOHW	Out-of-hours work
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
The Project	The Crookwell 3 Wind Farm which includes the installation, operation, maintenance and decommissioning of a wind farm of up to 16 turbines and associated infrastructure
The Proponent	Global Power Generation Australia Pty Ltd
PQAEMR	Project Quality and Environmental Management Representative
REE Act	Renewable Energy (Electricity) Act 2000
QEM	Quality & Environmental Manager
REP	Regional Environmental Plan
RF Act	Rural Fires Act 1997
RtS	Response to Submissions
RFS	NSW Rural Fire Service
SEAR's	Secretary's Environmental Assessment Requirements
S&ECP	Sediment and Erosion Control Plan
SEPP	State Environmental Planning Policy
SoC	Statement of Commitments
SSD	State Significant Development
SCA	Sydney Catchment Authority (superseded by WaterNSW)
TCP	Traffic Control Plan
TMP	Transport / Traffic Management Plan
WM Act	Water Management Act 2000 (NSW)

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by Crookwell 3 Development Pty Ltd, a division of Global Power Generation Australia Pty Ltd (GPG / the Proponent) to prepare an Environmental Management Strategy (EMS) for the Crookwell 3 Wind Farm (Crookwell 3).

Crookwell 3 includes the installation, operation, maintenance and decommissioning of a wind farm of up to 16 turbines and associated infrastructure (the 'Project'). The Project is located approximately 17 kilometres (km) south east of Crookwell and 25 km north west of Goulburn in the Southern Tablelands of NSW, and covers an area of approximately 1,500 hectares (ha). A Project Area plan is provided in *Figure 1-1*.

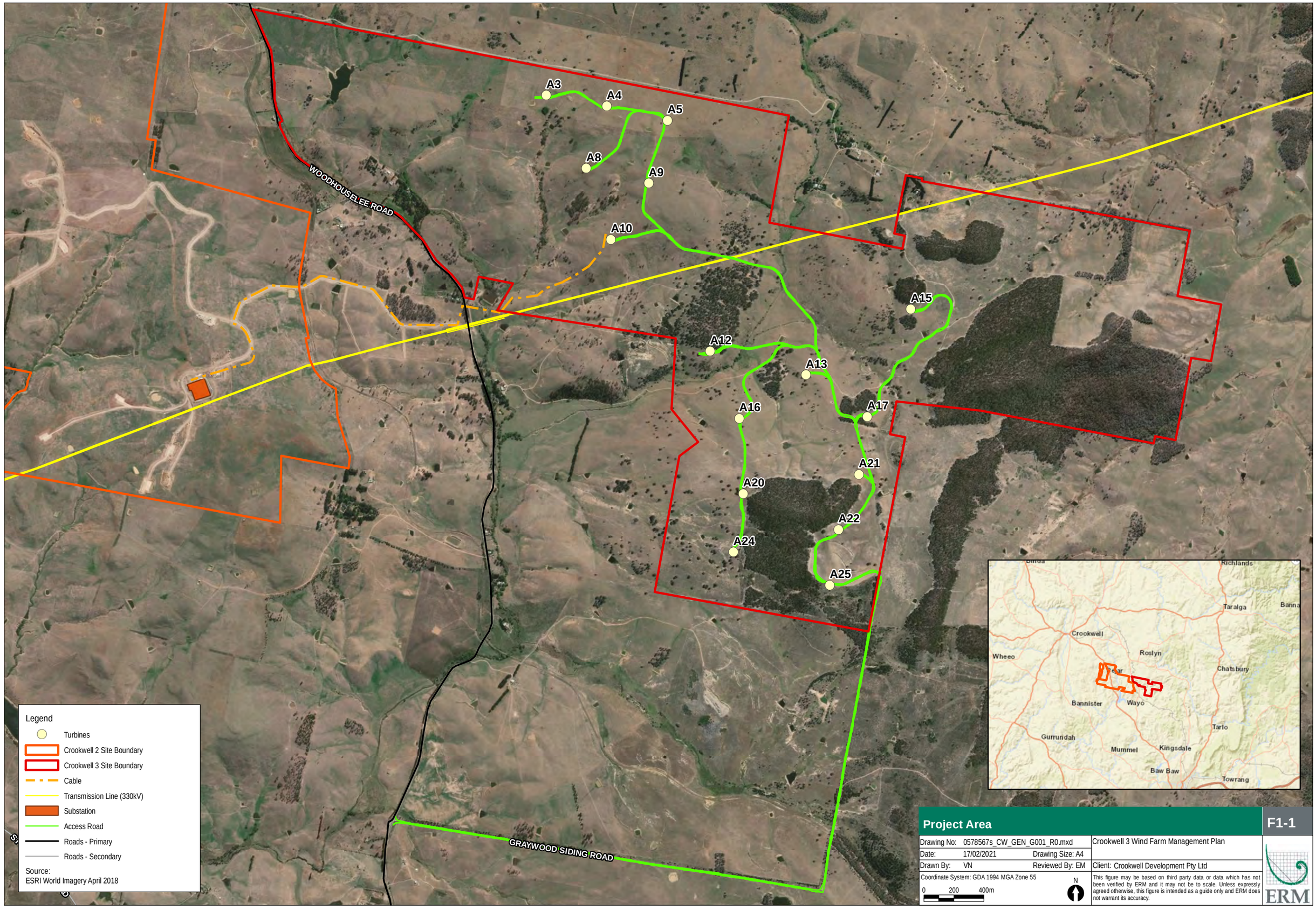
The Environmental Impact Statement (EIS) for Crookwell 3, a State Significant Development (SSD 6695) was placed on public exhibition in November 2012, and a Response to Submissions Report (RtS) was submitted in February 2014.

SSD 6695 was approved by the NSW Land and Environment Court on 14 October 2020 (Appeal No. 2020/123021) under the *Environmental Planning and Assessment Act 1979* (EP&A Act), subject to a number of conditions.

1.1 Plan Purpose and Scope

This EMS has been prepared to:

- satisfy the requirements of Schedule 4, Condition 1 of the Development Consent for Crookwell 3. An EMS is required to be prepared prior to the commencement of construction and is subject to the approval of the Secretary of the Department of Planning, Industry and Environment (DPIE); and
- provide the framework for the implementation of the management measures and commitments made in development application SSD 6695.



Project Area

F1-1

Drawing No:	0578567s_CW_GEN_G001_R0.mxd		Crookwell 3 Wind Farm Management Plan
Date:	17/02/2021	Drawing Size: A4	
Drawn By:	VN	Reviewed By: EM	Client: Crookwell Development Pty Ltd

Coordinate System: GDA 1994 MGA Zone 55

0 200 400m

N

ERM

1.2 Conditions of Consent

Conditions of consent (CoC) for SDD 6695 relevant to this EMS and where the requirements have been addressed are detailed in *Table 1-1*.

Table 1-1 Relevant Conditions of Consent and Reference Location

SSD 6695	Condition of Consent	Reference Location
Schedule 4, Condition 1 **Environmental Management Strategy**	Prior to the commencement of construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	Whole document
	(a) provide the strategic framework for environmental management of the development;	Section 2
	(b) identify the statutory approvals that apply to the development;	Section 3
	(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 4.1
	d) describe the procedures that would be implemented to: ■ keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Section 4.3
	■ receive, handle, respond to, and record complaints	Section 4.4
	■ resolve any disputes that may arise;	Section 4.4
	■ respond to any non-compliance;	Section 5.2
	■ respond to emergencies; and	Section 4.6, Section 5
	(e) include: ■ copies of (or reference to) any strategies, plans and programs approved under the conditions of this consent; and	Section 3.5
	■ a clear plan depicting all the monitoring to be carried out in relation to the development, including a table summarising all the monitoring and reporting obligations under the conditions of this consent.	Section 5.1
Schedule 4, Condition 2 **Revision of Strategies, Plans and Programs**	Within 3 months of the submission of: (a) an incident report under condition 4 below; (b) an independent environmental audit report under condition 6 below; or (c) any modification to the conditions of this consent (unless the conditions require otherwise), the Applicant must review and, if necessary, revise the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval.	Section 6

SSD 6695	Condition of Consent	Reference Location
Schedule 4, Condition 3 **Community Consultative Committee**	The Applicant must operate a Community Consultative Committee for the development to the satisfaction of the Secretary and in accordance with the Community Consultative Committee Guidelines for State Significant Project (2016), or its latest version.	Section 4.3
Schedule 4, Condition 4 **Community Consultative Committee**	With the Secretary's approval, the CCC required under condition 3 of Schedule 4 may be operated jointly with the Crookwell 2 Wind Farm CCC.	Section 4.3
Schedule 4, Condition 5 **Notification of Department**	Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase.	Section 4.3
Schedule 4, Condition 6 **Notification of Department**	If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.	Section 4.3
Schedule 4, Condition 7 **Final Layout Plans**	Prior to commencing construction, the Applicant must submit detailed plans of the final layout of the development to the Department via the Major Projects website, including details on the siting of wind turbines and ancillary infrastructure, via the Major Projects website.	Section 4.3
Schedule 4, Condition 8 **Work as Executed Plans**	Prior to commencing operations, or following the upgrades of any wind turbines or ancillary infrastructure, the Applicant must submit work as executed plans of the development to the Department via the Major Projects website.	Section 4.3
Schedule 4, Condition 9 **Incident Notification**	The Department must be notified in writing via the Major Projects website portal immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident.	Section 4.3, Section 5.3
Schedule 4, Condition 10 **Non-Compliance Notification**	The Department must be notified via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance with the conditions of this consent. The notification must identify the development and the application number for it, set out the condition of consent that the development is noncompliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been done, or will be, undertaken to address the non- compliance.	Section 4.3, Section 5.2

SSD 6695	Condition of Consent	Reference Location
Schedule 4, Condition 11 **Internal Environmental Audit**	Within 6 months of the commencement of construction, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. The audits must: (a) be prepared in accordance with the relevant Independent Audit Post Approval requirements (DPIE 2020); (b) be led and conducted by a suitably qualified, experienced and independent expert/s whose appointment has been endorsed by the Secretary; (c) be carried out in consultation with the relevant agencies; (d) assess whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and (e) if directed by the Secretary, assess whether the performance of any noise mitigation measures implemented, including sector management and sound management mode, ensure compliance with the noise criteria in this consent; and (f) recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under this consent. Within 3 months of commencing an Independent Environmental Audit, or unless otherwise agreed by the Secretary, a copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations of the Independent Environmental Audit must be implemented to the satisfaction of the Secretary.	Section 5.5
Schedule 4, Condition 12 **Access to Information**	The Applicant must: (a) make the following information publicly available on its website as relevant to the stage of the development: ■ the EIS; ■ the final layout plans for the development; ■ current statutory approvals for the development; ■ approved strategies, plans or programs required under the conditions of this consent; ■ the proposed staging plans for the development if the construction, operation and/or decommissioning of the development is to be staged; ■ a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; ■ a complaints register, which is to be updated on a monthly basis; ■ minutes of CCC meetings; ■ the annual Statement of Compliance with the EPL; ■ any independent environmental audit, and the Applicant's response to the recommendations in any audit; and ■ any other matter required by the Secretary; and (b) keep this information up to date.	Section 4.3

SSD 6695	Condition of Consent	Reference Location
Schedule 3, Condition 14 **Noise Management Plan**	Prior to commissioning of the turbines, the Proponent must prepare a Noise Management Plan to manage noise emissions from the operation of the development, to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the measures described in the Noise Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 18 **Stormwater Management Plan**	Prior to commencing construction, the Applicant must prepare a Stormwater Management Plan in consultation with WaterNSW and to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the measures described in the Stormwater Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 23 **Biodiversity Management Plan**	Prior to the commencement of construction, the Applicant must prepare a Biodiversity Management Plan for the development to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the Biodiversity Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 24 **Bird and Bat Adaptive Management Plan**	Prior to the commissioning of any wind turbines, the Applicant must update the Crookwell 2 Wind Farm Bird and Bat Adaptive Management Plan to include the development in consultation with the Biodiversity Conservation Division within the Department, and to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the updated Crookwell 2 Wind Farm Bird and Bat Adaptive Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 29 **Heritage Management Plan**	Prior to the commencement of construction, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the Heritage Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 35 **Traffic Management Plan**	Prior to the commencement of construction, the Applicant must prepare a Traffic Management Plan for the development in consultation with the relevant roads authority, and to the satisfaction of the Secretary. Following the Secretary's approval, the Applicant must implement the Traffic Management Plan.	Separate Proponent prepared plan
Schedule 3, Condition 40 **Emergency Management Plan**	Prior to commencing construction, the Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development, to the satisfaction of Fire and Rescue NSW (FRNSW) and the NSW Rural Fire Service (RFS). The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry points at all times.	Separate Proponent prepared plan

1.3 Development Application Commitments

A Statement of Commitments (SoC) was provided in Chapter 24 of the Crookwell 3 EIS. The SoC seek to ensure that further specific details are provided on certain aspects of the wind farm, and that relevant standards are met throughout the construction, operation and decommissioning phases. The Crookwell 3 Preferred Project and Response to Submissions Report (RtS) included a revised SoC to accommodate additional mitigation tasks and to also incorporate the comments provided by government agencies as part of the public exhibition submission process.

Table 1-2 below presents the revised SoC from the RtS which are relevant to this plan and where the commitment will be addressed.

Table 1-2 Development application commitments relevant to EMS and EMS reference location

Sector	Commitment	Where addressed
Pre-construction compliance	Submit a **Pre-Construction Compliance Report** for each stage of the project to the Director-General* at least two (2) weeks prior to the commencement of construction of that stage (or such later time agreed to by the Director-General). The Pre-Construction Compliance Report will include details of the compliance with all Pre-Construction conditions of approval that are relevant for the specific stage(s) of the project.	Engineering, Procurement and Construction contract (EPC) prepared plan
	Prepare a **Construction Environmental Management Plan (CEMP)** for each stage of the project, in consultation with Sydney Catchment Authority** (SCA), and submit it as a draft for approval to the Director-General at least two (2) weeks prior to the commencement of construction of that stage (or such later time agreed to by the Director-General). The CEMP will address the construction impacts of the relevant stage of the project including the specific matters set out below. The proponent will implement the CEMP for each stage of the project, as approved by the Director-General.	EPC prepared plan
Pre operational compliance	Prepare and implement an **Operation Environmental Management Plan (OEMP)** in consultation with SCA and submit it as a draft for approval to the Director-General at least one (1) month prior to the commencement of operation (or such later time agreed to by the Director-General). The OEMP will address the operational impacts of the project including the specific matters set out below. The proponent will implement the OEMP as approved by the Director-General.	EPC prepared plan
Noise	When the turbine model is known, a **Noise Management Plan** will be prepared and implemented as part of the OEMP to ensure that if the selected turbine does not comply under the predictive noise modelling, mitigation will be undertaken so that SA EPA Guideline standards are met. The Noise Management Plan will include provisions for reasonable response time to alleged noise complaints and mitigation work.	EPC prepared plan
	Prepare and implement a detailed **Construction Noise Management Plan (CNMP)** prior to commencement of construction activities.	EPC prepared plan
	A collaborative **Noise Impact Mitigation Strategy** will be employed in order to address the cumulative noise impacts arising from the Crookwell 1, Crookwell 2 and Crookwell 3 Wind Farms.	EPC prepared plan
Air Quality	Minimise potential air quality impacts on local amenities during the construction phase by implementing control measures as part of the **Air Quality Management Plan** in the CEMP, which includes the use of water spraying for dust suppression.	EPC prepared plan
Flora and Fauna	A **Vegetation/Ecological Restoration Plan** will be developed as part of the CEMP and will address the post-construction works to be undertaken to rehabilitate the areas that are disturbed as part of the construction works once construction is finalised.	EPC prepared plan
	A **Riparian Vegetation Management Plan** will be developed as part of the CEMP and will address the issues associated with the proposed creek crossings where any native vegetation is proposed to be disturbed.	EPC prepared plan

* The title of 'Director-General' has been superseded by 'Secretary' since the development application.
** Sydney Catchment Authority has been superseded by WaterNSW since the development application.

Sector	Commitment	Where addressed
	A **Weed Management Plan** will be prepared as part of the CEMP that will contain mechanisms to prevent the spread of weeds and animals.	EPC prepared plan
	Prepare a **Bird and Bat Adaptive Management Plan (BBAMP)** in consultation with OEH that will use baseline survey data collected in accordance with Before – After – Control – Impact (BACI) experimental assessment guideline. The BBAMP will incorporate baseline population data over all seasons. The BBAMP will form part of F&FMP.	EPC prepared plan
	Prepare and implement a **Flora and Fauna Management Plan (F&FMP)** to minimise the potential impacts during the construction of the Project and outline the roles and responsibilities of those involved in the implementation of the control measures.	EPC prepared plan
Transport	A detailed **Transport / Traffic Management Plan** will be developed as part of the CEMP to include the finalised transport details and include management and mitigation measures for the project. This will be prepared before the construction phase of each stage of the project and will form the foundations for all traffic related activities.	EPC prepared plan
	Prepare the **Traffic Control Plan (TCP)** for the transport route through Goulburn in consultation with Goulburn Mulwaree Council officers. The TCP will then form part of the overall Construction TMP.	EPC prepared plan
Fire	As part of the OEMP, a **Bushfire Risk Management Plan** will be developed based on the guidelines 'Planning for Bushfire Protection' (RFS, 2001).	EPC prepared plan
Heritage	An **Aboriginal Cultural Heritage Management Plan (ACHM)** will be prepared in collaboration with the Pejar Local Aboriginal Land Council and other registered aboriginal parties. Include ERM SCHR recommendations in the ACHMP.	EPC prepared plan
Land Resources and Geotechnical	The **Sediment and Erosion Control Plan (S&ECP),** will be prepared as part of the CEMP and will detail the measures and techniques to preserve soil resources.	EPC prepared plan
Hydrology	A **Water Management Plan** will be developed for the site as part of the CEMP and the OEMP. These will control risks to water quality associated with construction and operation and	EPC prepared plan
	A **Hydrocarbon & Hazardous Substances Management Plan** will be developed as a sub- plan of the CEMP to protect the quality of surface water and groundwater.	EPC prepared plan

1.4 Relevant Previous Studies

Previous studies relevant to this EMS are described below in *Table 1-3*.

Table 1-3 Relevant Previous Studies to Project

Document Name	Date	Author(s)	Document Purpose	Summary
Crookwell 3 Wind Farm Environmental Assessment	July 2012	Tract Consultants Pty Ltd	Primary development application (DA) and environmental impact assessment document (EIA).	Contains detailed Project description, EIA, environmental management and mitigation measures, and SoC.

Document Name	Date	Author(s)	Document Purpose	Summary
Proposed Crookwell 3 Wind Farm Development: Independent Expert Review (REF: 918-Z-02)	August 2013	O'Hanlon Design Pty Ltd	(Former) NSW Department of Planning and Infrastructure (DPI) engaged a consultant to review and comment on the quality and accuracy of the Landscape and Visual Assessment Report (LVIA) for the Project, provided as part of the EIA.	Made several recommendations where the current EIA and the LVIA require modification to comply with the Director General's Requirements.
Crookwell 3 Windfarm Preferred Project and Response to Submissions Report	March 2014	Crookwell Development Pty Ltd in collaboration with: ■ Anderson Environmental Consultant Pty Ltd; ■ ERM; ■ Green Bean Design; ■ SLR Consulting Australia Pty Ltd; ■ Tract Consultants Pty Ltd	Response to the submissions received following the public exhibition of the EIS. Revised to include responses to the additional comments from several agencies and changes to the Project.	Contains detailed response to all public and Government agency submissions, changes to the Project and a revised SoC.
Crookwell 3 Wind Farm Addendum Environmental Impact Statement	September 2016	Mecone Pty Ltd	Addendum to the development application SSD 6695.	Updates the description of the project contained in the EA Report and the RtS report and to assess the impact of the changes made to the project.

2. ENVIRONMENTAL MANAGEMENT FRAMEWORK

2.1 Environmental Policy and Commitment

GPG is committed to environmentally responsible operations and good corporate principles. All Project activities will be undertaken in accordance with the relevant principles of the GPG Environmental Policy (Policy). The Policy will be communicated to all staff and contractors during induction and will be made available on the Project website. The Policy is periodically reviewed and updated against environmental performance and industry practice.

The most current Policy (ref NG.00010) highlights a commitment to working in four strategic environmental areas:

- Environmental governance and management;
- Climate change and energy transition;
- Circular economy and eco-efficiency; and
- Natural capital and biodiversity.

The Policy outlines basic principles for action against these four environmental areas, as well as outlining responsibilities, a relationship model, reporting and monitoring requirements, and environmental indicators for internal and external reporting.

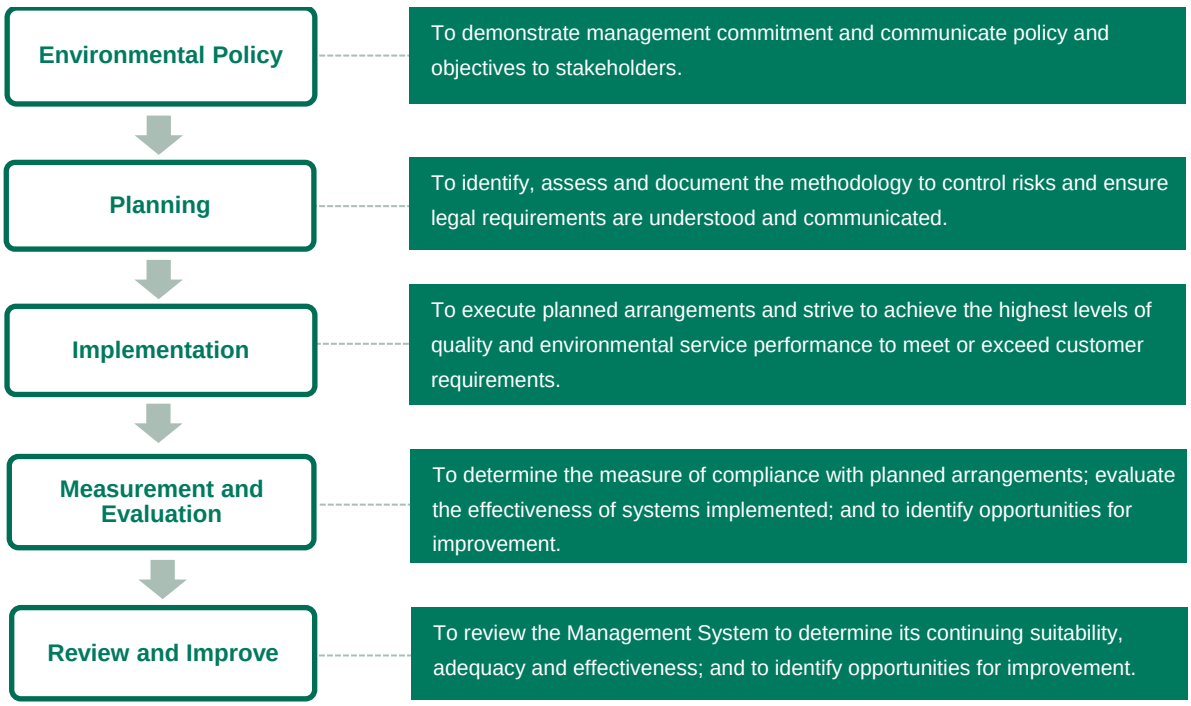
The Policy is provided in Appendix A.

2.2 Environmental Management System

The Environmental Management System provides a strategic framework for the environmental management of the Project. The system outlines GPG's commitment to integrate responsible environmental management into all its activities to ensure the required corporate, contractual and legislative standards are met and environmental disturbance is minimised.

Figure 2-1 below provides an overview of the structure of the Environmental Management System.

Figure 2-1 – Structure of Environmental Management System



3. STATUTORY APPROVALS

3.1 Identification of Environmental Aspects and Impacts

Environmental aspects and impacts were identified in the Development Application (SSD 6695) which formed the basis of the Development Consent.

The relevant environmental aspects for the Project are:

- economic and social impacts;
- visual impacts;
- noise;
- health;
- blade throw;
- shadow flicker;
- biodiversity;
- aviation;
- transport;
- telecommunications;
- fire;
- heritage;
- geotechnical;
- hydrology; and
- cumulative impacts.

3.2 Relevant Legislation and Statutory Approvals

The Project is classified as State Significant Development under Clause 4.36 of the EP&A Act as it triggers the criteria in Clause 20 of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011, being development for the purpose of electricity generating works using wind power that has a capital investment value of more than $30 million. The relevant statutory requirements and approvals related to the Project are detailed in *Table 3-1*.

Table 3-1 Summary of Relevant Legislation Requirements and Approvals

Legislation	Legislation Requirement	Approvals/Permits/Licences
Commonwealth Instruments		
Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The EPBC Act requires referral to the Australian Government Minister for the Environment (Minister for the Environment) of any "action" that has, will have, or is likely to have a significant impact on: ■ the eight (8) Matter of National Environmental Significance (MNES); ■ the environment of Commonwealth land (even if the action is taken outside Commonwealth land); ■ the environment of a Commonwealth Heritage Place outside the Australian jurisdiction; and ■ the environment anywhere in the world (if the action is undertaken by the Commonwealth). Once a referral is made, the Minister for the Environment determines whether the action requires assessment and approval under the EPBC Act.	Nil. The Project will not: ■ be carried out on or in the vicinity of Commonwealth land and so will not have a significant impact on Commonwealth land; or ■ be undertaken by the Commonwealth. ■ The Project is unlikely to have a significant impact on MNES.
Renewable Energy (Electricity) Act 2000	The REE Act sets up the statutory framework for mandatory renewable energy targets and energy trading scheme. The objects of the REE Act are: (a) to encourage the additional generation of electricity from renewable sources; and (b) to reduce emissions of greenhouse gases in the electricity sector; and (c) to ensure that renewable energy sources are ecologically sustainable.	The Project will be accredited as a Renewable Energy Generator to create Renewable Energy Certificates.

Legislation	Legislation Requirement	Approvals/Permits/Licences
Civil Aviation Safety Regulations 1998	The Civil Aviation Safety Regulations 1998 (made under the Civil Aviation Act 1988) require that the Civil Aviation Safety Authority (CASA) be informed of proposals to build a structure greater than 110 metres above Australian Datum. This is required to allow assessment of whether the structure may represent a hazard to aircraft, and to provide any associated requirements including any requirements for markings or lighting.	**Notification of Aviation Authorities** CoC 36 (SSD 6695) requires that prior to the construction of any wind turbine or wind monitoring mast, the following information be provided to CASA (in addition to Airservices Australia, and the RAAF): (a) co-ordinates in latitude and longitude of each wind turbine and mast; (b) the final height of each wind turbine and mast in Australian Height Datum; (c) ground level at the base of each wind turbine and mast in Australian Height Datum; (d) confirmation of compliance with any OLS; and (e) details of any proposed aviation hazard lighting. **Lighting** CoC 6 (SSD 6695) requires the following: (a) minimise the off-site lighting impacts of the development; (b) ensure that any aviation hazard lighting complies with CASA's requirements; (c) ensure that all external lighting associated with the development (apart from any aviation hazard lighting): ■ is installed as low intensity lighting (except where required for safety or emergency purposes); ■ does not shine above the horizontal; ■ uses best management practice for bat deterrence; and complies with Australian Standard AS 4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version.
NSW State Instruments		
Environmental Planning and Assessment Act 1979 (EP&A Act)	The Project is classified as State Significant Development under Clause 4.36 of the EP&A Act as it triggers the criteria in Clause 20 of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011, being development for the purpose of electricity generating works using wind power that has a capital investment value if more than $30 million.	The Project triggers the criteria in Clause 20 of Schedule 1 as it has an estimated capital investment value of $120 million.

Legislation	Legislation Requirement	Approvals/Permits/Licences
Protection of the Environment Operations Act 1997 (POEO Act)	The POEO Act is the primary waste and pollution control legislation in NSW. Under the POEO Act, EPLs are required to authorise and regulate certain activities relating to air pollution, water pollution, noise pollution and waste management. A Pollution Incident Response Management Plan is also required as part of any EPL. Duty to notify the EPA of any actual or potential environmental harm.	The Project requires an Environment Protection Licence (EPL) as it is for the Schedule Activity of 'Electricity Generation – electricity works – wind farms'. A Pollution Incident Response Management Plan will be prepared as required by the EPL. In accordance with Section 4.42 of the EP&A Act, an EPL cannot be refused if it is necessary for carrying out SSD that is authorised by a development consent and is to be substantially consistent with the consent. The EPL licence holder is to notify the EPA of any actual or potential material environmental harm.
National Parks and Wildlife Act 1974	The NPW Act governs the establishment, preservation and management of national parks, historic sites and certain other areas. The NPW Act also provides the basis for the legal protection and management of threatened native flora and fauna and Aboriginal sites within NSW.	Nil. SSD projects do not require separate Aboriginal heritage impact permits under the NPW Act in accordance with Section 4.41 of the EP&A Act. Note: the requirements of CoC 25 – 29 relate to the protection of heritage items and the preparation of a Heritage Management Plan.
Biodiversity Conservation Act 2016 (BC Act) *(Threatened Species Conservation Act 1995, now repealed)*	The BC Act came into effect on 25 August 2017. The BC Act replaced the *NSW Threatened Species Conservation Act 1995*, the *NSW Nature Conservation Trust Act 2001* and parts of the *NSW National Parks and Wildlife Act 1974*. The BC Act establishes mechanisms for: ■ the management and protection of listed threatened species of native flora and fauna (excluding fish and marine vegetation) and threatened ecological communities (TECs); ■ the listing of threatened species, TECs and key threatening processes; ■ the development and implementation of recovery and threat abatement plans; ■ the declaration of critical habitat. ■ the consideration and assessment of threatened species impacts in development assessment process; and Biodiversity Offsets Scheme, including the Biodiversity Values Map and method to identify serious and irreversible impacts (SAII).	The Project assessed impact on biodiversity. The CoC require the preparation of a Biodiversity Management Plan and Bird and Bat Adaptive Management, as well as placing limitations on clearing and habitat and requirements for biodiversity offsetting.
Biosecurity Act 2015	The Biosecurity Act 2015 repealed the Noxious Weeds Act 1993 and provides 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.	Weed management will be undertaken in accordance with the provisions of the Biosecurity Act 2015.

Legislation	Legislation Requirement	Approvals/Permits/Licences
Water Management Act 2000 (WM Act)	The WM Act defines permits and approvals required for water extraction from natural waterways. Controlled Activity permits are also required for works within sensitive waterway environments	SSD projects do not require a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000, in accordance with Section 4.41 of the EP&A Act. Water would be required for the production and construction of concrete footings for the turbines and other minor works. In addition, water may be used on internal roads or access tracks to assist with dust containment. As result of the above, a Water Access Licence will be obtained. On 14 June 2011, an application for groundwater licence was submitted to NSW Office of Water for consideration as a backup provision in the event the surface water in the on-site dams is not sufficient for both agriculture activity and wind farm construction during the drier months of the year.
Local Land Services Act 2013 (LLS Act)	Provides the framework for clearing of native vegetation that does not require development consent on rural land in NSW. It is an offence under section 60N of the LLS Act for a person to clear native vegetation in a regulated rural area, unless the person establishes any of the following defences: a) that the clearing is for an allowable activity authorised under Division 4 and Schedule 5A, b) that the clearing is authorised by a land management (native vegetation) code under Division 5, c) that the clearing is authorised by an approval of the Panel under Division 6, d) that the clearing is authorised under section 60O (Clearing authorised under other legislation, etc.).	Clearing of vegetation for the purpose of the Project as authorised under this Act does not require approval under Division 6 of Part 5A of the LLS Act.
Heritage Act 1977	The Heritage Act protects the cultural and natural history of NSW with emphasis on historic (European) heritage items, including places, buildings, works, relics, moveable objects or precincts with significance to the State or a local area. It provides blanket protection for surface and sub-surface relics and for heritage items of state significance listed on the State Heritage Register. The Act defers to local planning instruments under the EP&A Act for the protection of items of local significance.	The Project will not impact on any non-indigenous heritage item and thus does not require any approval / permits / licenses.

Legislation	Legislation Requirement	Approvals/Permits/Licences
Roads Act 1993	The Roads Act addresses authorities, function and regulation of activities relating to the use and type of roads. Approval under section 138 of the Roads Act is required to impact or carry out work on or over a public road.	The Project would require upgrade works to public roads to enable access to wind farm access roads for construction vehicles. Thus, approvals will be required under section 138 of the Roads Act from the appropriate roads authorities for the proposed upgrade works. In accordance with Section 4.42 of the EP&A Act, a section 138 approval cannot be refused if it is necessary for carrying out SSD that is authorised by a development consent and is to be substantially consistent with the consent. A Transport / Traffic Management Plan will be prepared as part of the CEMP prepared in consultation with relevant authorities which will address requirement for consent.
Crown Land Management Act 2016	Crown Land Management Act 2016 replaced the Crown Lands Act 1989. Part 5 of the Crown Land Management Act provides for circumstances where Crown Land may be leased or sold and where licenses over Crown Land may be granted. There is a network of Crown public roads in the area, and electrical cables may be installed under such roads to connect the turbines to the substation in Crookwell 2.	As outlined above, consents will be applied for under section 138 of the Roads Act 1993 as relevant. In the event that the proponent determines to obtain, or DPIE-Crown Lands NSW Crown Lands requires that the proponent obtain a formal easement or similar interest in the land will be obtained under the Crown Land Management Act 2016.
Rural Fires Act 1997 (RF Act)	The main objectives of the RF Act are to: ■ prevent, mitigate and suppress bush and other fires in NSW; ■ co-ordinate bush firefighting and bushfire prevention throughout the State; ■ protect people from injury or death and property from damage as a result of bushfires; and protect the environment.	A Section 100B bushfire safety authority is not required as the development does not involve subdivision for residential or rural residential development. Bushfire risk considerations for the Project will be addressed in an Emergency Management Plan required by CoC Schedule 4, Condition 40.
State Environmental Planning Policies (SEPPs)		
State Environmental Planning Policy (SEPP) Koala Habitat Protection 2020 (Koala Habitat Protection SEPP)	The State Environmental Planning Policy (SEPP) Koala Habitat Protection 2020 commenced on 30 November 2020 and replaced the Koala Habitat Protection SEPP 2019. The Koala Habitat Protection SEPP 2020 replicates the objectives and provisions of the former SEPP 44 – Koala Habitat Protection (SEPP 44) which was in force from 1995 through to 2019. The policy intent of SEPP 44 has been retained and aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline.	Nil. The site does not include any core Koala habitat and no plan of management is required.

3.3 Statutory Approvals Register

A compliance register will be maintained and will be made readily accessible for all staff and contractors to ensure compliance with the applicable statutory approvals.

At a minimum, the register will include the following approval related documentation:

- Crookwell 3 EIS and Amended EIS;
- RtS; and
- Development Consent SSD 6695.

3.4 Environmental Objectives and Targets

Environmental objectives and targets have been prepared for this EMS. The environmental objectives and targets will be subject to regular review throughout construction to mitigate and manage risk and to ensure full compliance with the CoC.

The environmental objectives and targets aim to capture:

- environmental risks where the adequacy of mitigations is identified to be 'Satisfactory' or lesser;
- total number of non-conformances;
- total number of internal and external complaints;
- implementation of the EMS;
- staff training;
- assessment of the environmental competency of relevant staff; and
- outputs of consultation with relevant internal stakeholders and, as necessary, the Environmental Representative, and external regulatory bodies.

Table 3-2 Environmental Objectives and Targets

Item	Objective	Target	Documentation
Environmental compliance	Construction to be undertaken in accordance with the CoC.	100% compliance with CoC.	■ Internal and external independent audit reports; ■ Weekly site inspections; ■ Compliance Tracking Program; ■ Periodic compliance reporting to the Secretary as required by SSD 6695.
	Construction to be undertaken in accordance with the EPL.	100% compliance with EPL.	As above and Annual Report
Legal compliance	Compliance with all environmental legislative requirements.	100% compliance. Zero reportable incidents.	■ Compliance Tracking Program;

Item	Objective	Target	Documentation
Good environmental practice	Effective implementation of EMS, CEMP and sub-plans.	100% compliance with mitigation measures, monitoring and reporting requirements. Zero reportable incidents. Prompt investigation and implementation of corrective actions.	■ Weekly site inspections; ■ Compliance tracking register; ■ Regular reviews of relevant plans, as relevant.
Environmental complaints	Minimise environmental complaints and respond to all in a timely and appropriate manner	100% compliance with complaints response timeframes. 100% compliance with complaints investigation and close-out.	■ Environmental work method statements (EWMS) process to address potential community impacts; ■ Complaints register; ■ CCC Meeting minutes.
Incidents	Prevent potential of actual material harm to the environment and appropriately manage all environmental incidents.	Zero reportable environmental incidents. 100% compliance with incident reporting, investigation, implementation of corrective actions and close out requirements.	■ Incident notification forms; ■ Incident tracking register or program.
Non-conformances	Minimise, avoid and appropriately manage all environmental non-conformances.	Full implementation of compliance tracking program. 100% compliance with timeframes for investigation and implementation of corrective actions.	■ Weekly inspection records; ■ Internal and external independent audit records; ■ Conformance Tracking Program register.
Audits and inspections	Undertake meaningful environmental inspections and audits in a timely manner	100% compliance with timeframes and coverage of inspections and audits. 100% completion of follow-up actions to address identified issues.	■ Internal and external independent audit records. ■ Corrective actions register or program records.
Environmental training and inductions	All staff to be aware of their environmental obligations and be competent in relation to their environmental responsibilities.	All staff to be appropriately inducted prior to commencing works on-site and have relevant competencies.	■ Induction records; ■ Training and pre-start meeting records.

3.5 Environmental Management Plans and Programs

The CoC for SSD 6695 require several environmental management plans be prepared to address specific environmental aspect or impacts under the framework of the EMS.

Prior to the commencement of construction, the EPC will prepare the management plans or programs listed below in *Table 3-3*.

Table 3-3 Environmental Management Plans and Programs

Plan type	SoC Requirement	CoC Requirement
Pre-Construction Compliance Report	x	
Construction Environmental Management Plan	x	
Operation Environmental Management Plan	x	
Noise Management Plan	x	x
Construction Noise Management Plan	x	
Noise Impact Mitigation Strategy	x	
Air Quality Management Plan	x	
Vegetation/Ecological Restoration Plan	x	
Riparian Vegetation Management Plan	x	
Weed Management Plan	x	
Bird and Bat Adaptive Management Plan	x	x
Biodiversity Management Plan (referred to as Flora and Fauna Management Plan in SoC)	x	x
Transport / Traffic Management Plan	x	x
Traffic Control Plan	x	
Bushfire Risk Management Plan	x	
Aboriginal Cultural Heritage Management Plan	x	
Heritage Management Plan		x
Sediment and Erosion Control Plan	x	
Water Management Plan	x	
Hydrocarbon & Hazardous Substances Management Plan	x	
Stormwater Management Plan		x
Emergency Plan		x

4. IMPLEMENTATION AND OPERATION

4.1 Structure and Responsibility

It is the responsibility of all Project staff members and contractors to adhere to the requirements outlined in this EMS for compliance with the CoC. Specific responsibilities for administering, implementing, monitoring and reporting are detailed in *Table 4-1*.

Table 4-1 Roles and Responsibilities

Role	Responsibility
Project Manager	The Project Manager has overall authority in the determination of all matters affecting the implementation and operation of environmental practices on the Project. The Project Manager reports to the Civil Engineering Manager and is responsible for: ■ identifying resources and equipment for environmental purposes; ■ ensuring training is provided to improve awareness of environmental issues and responsibilities; ■ review of the Project risk register, on a quarterly basis, with other members of the project senior management team, the Superintendent, Senior Engineer(s) and Safety Advisor; ■ incorporating environmental management aspects in Project planning; ■ has the authority to shut down site activities or implement control measures as required in the event of environmental emergency; ■ is available as an emergency contact 24 hours a day; ■ ensures that any work outside normal hours is approved, and community consultation undertaken; ■ controlling further construction activities until environmental deficiencies are rectified; ■ participates as head of the Project's senior management team in the quarterly risk review of the Project risk register, including environmental risks and emergency response requirements; ■ ensuring Project operations are performed in accordance with legal and other requirements; ■ approving for implementation, process procedures developed by Project engineers, which include information, instructions and controls for environmental aspects and risks, related to activities managed by the Contractor and carried out by staff and subcontractors; and ■ reviewing the effectiveness of the system for continual improvement.
Quality & Environmental Manager (QEM) / Coordinator (Corporate)	■ development of the Project QA and/or Environmental Management Plans in conjunction with the EPC, as relevant ; ■ auditing the Quality and Environment Systems; and ■ providing support to the PQEMR for the duration of the Project.
Project Quality and Environmental Management Representative (PQAEMR)	The PQEMR has a functional reporting link to the QEM and is responsible for the following: ■ advising on environmental matters and conditions of approval; ■ monitoring and reporting on environmental system performance including the implementation of the EMS, CEMP and related sub plans; ■ consulting with the Project Manager on environmental matters; ■ conducting / assisting with site inspections and audits; ■ liaising with employees on environmental matters; ■ ensuring the EMS, CEMP and associated plans are implemented to meet the requirements for the Project; ■ assigning Project staff to perform verification duties; ■ ensuring non-conformances and environmental incidents are identified, reported and suitable corrective actions are determined and completed;

Role	Responsibility
	■ reviewing inspection reports and ensuring any actions required are executed; ■ facilitating environmental induction and toolbox talks for all site personnel; ■ ensuring subcontractors fulfil their quality and environmental obligations; ■ holding specific authority to stop work on any activity where PQEMR deems it necessary to prevent environmental non-conformances; ■ attending meetings to discuss environmental issues; ■ assisting with the updating of Project plans; ■ liaising with environmental representatives, government authorities & community groups; ■ gathering, analysing and disseminating information on environmental legislation and other requirements relevant to the Project. This information is presented to site staff and Corporate management; and ■ the PQEMR's position description can be obtained via the company and will be kept on file in the site office.
Safety Advisor	■ has the authority to approve Job Hazard Analyses (JHA), ensuring they include appropriate activities' risks, hazard ranking, description of controls; ■ is responsible for delivery of the site induction programs encompassing awareness of environmental and other stakeholder issues on site, to the EPC site personnel, subcontractors and visitors as required; ■ participates as part of the Project's senior management team in the quarterly risk review of the site risk register, including environmental risks and emergency response requirements; ■ develops and keeps updating, the site's training needs register; and ■ receives and assesses with the PQEMR, information on goods used on site and related material data sheets (MSDS).
Engineers	■ develop contract documents describing how works is to be carried out, quality requirements and incorporate information on environmental requirements, necessary controls, maintenance to achieve program and manage risks; ■ responsible for selecting plant, equipment, materials used for on site activities, taking into consideration process activities, environmental, safety and quality issues; ■ develop Job Hazard Analyses and other management plans to plan and coordinate activities in their sequence; ■ plan and update project activities, under direction of the Project Manager, Superintendent and Senior Engineer; ■ assess contractor supplied activity specific management plans where the subcontractor is certified, rather than implement the EPC requirements; and ■ assess subcontractor performance including management of activity related environmental issues.
Superintendent	■ has the authority to shut down site activities or implement control measures as required in the event of environmental emergency; ■ is available as an emergency contact 24 hours a day; ■ is responsible for operational management on site, including the coordination of activities and processes, including implementation of environmental requirements; ■ is responsible for authorising Job Hazard analyses and ensuring they cover the management of environmental aspects and risks; and ■ participates as part of the Project's senior management team in the quarterly risk review of the site risk register, including environmental risks and emergency response requirements.

Role	Responsibility
Supervisors	■ implement the CEMP on the Project site including the relevant control measures as outlined in the Environmental Management Sub-Plans; ■ utilise appropriate resources for the implementation of the Environmental Management Sub-Plans; ■ complete daily checks of specific works areas including plant, fuelling, servicing, dust and noise. Daily inspections shall be documented in the relevant Supervisors Daily Diaries; ■ identify areas of non-conformance with CEMP requirements; ■ report to the immediate manager on environmental issues, breaches, etc; ■ ensure that site personnel and contractors are aware of their environmental obligations, are implementing environmental controls on site as directed and described in contractual documents and procedures issued to them in advance; ■ take action to resolve and document non-conformance; ■ ensure that any JHAs's effectively manage environmental risks associated with work activities; and ■ liaise and direct with subcontractors to ensure environmental requirements are implemented as defined in their scope of work and contract documents.
EPC Project Manager	■ overall responsibility for all contractors and subcontractors involved in the Project; ■ development and maintenance of Project Risk Management Plan for construction; ■ ensure adequate resources are available for all contractors and subcontractors to deliver the Project in compliance with the EMS and other relevant documents; ■ ensure all contractors and subcontractors are inducted prior to commencing work; ■ implement work practices that reduce the risk of environmental harm; ■ facilitate arrangements for support to independent performance audits by suitably qualified and experienced persons and signing off on findings and corrective actions of internal and independent audits; ■ ensure information is appropriately shared between all site personnel; and ■ support and attend Community Consultative Committee (CCC) meetings at the request of the Project Manager.
EPC Environment Officer	■ obtain the relevant licences and approvals for construction; review of planned works and controls, notify contractors of unsatisfactory controls and required corrective action; ■ assist in preparation of environmental induction training materials in accordance with the EMS and associated plans; ■ mange environmental incidents in accordance with EMS; and ■ delivery of the management plans and programs identified in EMS, including conducting or arranging for required environmental monitoring.
All Personnel and Subcontractors	■ comply with all legal and contractual requirements; ■ comply with management / supervisory directions; ■ promptly report to management on any non-conformance and/or breaches of the system; ■ undergo induction and training in environmental awareness as directed by management; and ■ must be aware of environmental risks associated with work activities as identified on JHA's for those activities.

4.2 Training, Awareness and Competence

All employees, contractors and sub-contractors undertaking work onsite with potential to interact with the environment shall receive training that may be tailored to the nature of their works. Acceptance of environmental obligations will form a requirement of undertaking work onsite for contractors, subcontractors and their personnel.

Training will be undertaken in the following forms:

- Project site induction;
- daily toolbox talks; and
- environmental training.

4.2.1 Site Induction

Prior to working on site, construction personnel and sub-contractors will undertake an environmental induction. The induction will address a range of issues, including, but not limited to:

- the EMS, CEMP and related sub plans;
- Co Consent, EPL and any other relevant requirements;
- legal and regulatory requirements including duty of care and potential consequences of infringements;
- environmental responsibilities including incident reporting;
- identification of sensitive areas including threatened species habitat, waterways, heritage, weeds and noise sensitive locations;
- identification of boundaries for vegetation clearing and heritage sites to be avoided;
- designated locations and procedures for washing, refuelling and maintenance areas for vehicles, plant and equipment;
- emergency plans and incident management including the use of spill kits and unexpected find protocols;
- reporting processes for environmental harm or environmental incidents;
- roles and responsibilities in achieving conformance with environmental policies and requirements, including emergency preparedness and response requirements;
- procedures for responding to community enquiries and/or complaints; and
- identification and management of non-conformances with relevant statutory requirements and this EMS.

A visitor induction will be developed and given for people attending the site, but not engaged in daily work activities. This could include members of the media, politicians, delivery drivers, staff, consultants and invited guests visiting the Proponent or EPC.

4.2.2 Daily Toolbox Talks and Environmental Training

Daily toolbox talks will help to ensure that relevant information for current activities is communicated to the workforce and that feedback can be provided on issues of interest or concern. Toolbox attendance is mandatory for all employees, contractors and sub-contractors.

Environmental input to toolbox talks and specific environmental training will generally be facilitated by the PQAEMR, and delivered by the Safety Advisor. Training topics are to be delivered to provide refresher information on the environmental induction topics and associated environmental procedures. In the event of environmental near misses, incidents, or changes to procedures that could result in changed levels of environmental risks, daily toolbox talks or environmental training sessions may be used to deliver updates.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. This training will include all objectives and required mitigation measures contained in the CEMP and sub-plans.

Environmental training topics likely to be required include:

- vehicle hygiene and pest plant/weed management protocols;
- work methods and efficient use of plant and materials;
- waste management, minimisation and recycling;
- noise and vibration minimisation;
- flora and fauna protection and management;
- dust control;
- protecting waterways and riparian zones;
- wastewater control;
- identification/protection of indigenous/non-indigenous heritage items;
- clearing and grubbing procedures;
- concrete washout procedures;
- sediment basin management;
- spill response procedures;
- emergency response procedures;
- wet weather procedures and inspections;
- legislation updates; and
- landowner and community engagement to convey key messages on the project, manage landowner interactions and allow any issues to be raised.

4.2.3 Records

Records of induction and training will be kept including the topic of the training carried out, dates, participant names and trainer details. Inductees/attendees will be required to sign-off that they have been informed of the environmental issues and that they understand their responsibilities.

Copies of these records will be forwarded to the PQAEMR for their records.

4.3 Communication

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

4.3.1 Internal Communication

Communication between all employees, contractors and sub-contractors is classified as internal communication. Examples of internal communication include emails, phone calls, meetings, inductions and environmental training, and internal reporting.

4.3.1.1 Project Correspondence and Filing Procedure

A filing index and correspondence register system will be maintained during the life of the Project, which is appropriate to control all correspondence and project records. The Document Controller (generally the Assistant Project Manager), in liaison with the Project Manager will maintain a softcopy project filing system to ensure that records are indexed and stored in a manner to facilitate easy retrieval of information.

4.3.2 External Communication

External communication is between the Project team and external stakeholders.

External stakeholders have the opportunity to communicate to the Project team using a dedicated email address, website and a free call 1800 number which will be available and responded to for the life of the Project.

The PQAEMR will be the primary point for liaison with environmental representatives, government authorities, community groups, and other external stakeholders throughout construction. The primary contact during the operations phase of the Project will be determined prior to the commencement of that stage.

4.3.2.1 Notifications

Notifications commitments are detailed below in *Table 4-2*. As stated above, the PQAEMR will be the primary point for liaison with government authorities.

Table 4-2 Notification Commitments

Notification	Commitment
Notification of Department	Prior to commencing the construction, operations, upgrading or decommissioning of the Project or the cessation of operations, the Proponent will notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of the phases of the Project are to be staged, the Proponent will further notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.
Final Layout Plans	Prior to commencing construction, the Proponent will submit detailed plans of the final layout of the Project to the Department via the Major Projects website, including details on the siting of wind turbines and ancillary infrastructure, via the Major Projects website.
Work as Executed Plans	Prior to commencing operations, or following the upgrades of any wind turbines or ancillary infrastructure, the Proponent will submit work as executed plans of the Project to the Department via the Major Projects website.
Incident Notification	The Department will be notified in writing via the Major Projects website portal immediately after the Proponent becomes aware of an incident. The notification will identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident.
Non-Compliance Notification	The Department will be notified via the Major Projects website portal within 7 days after the Proponent becomes aware of any non-compliance with the CoC. The notification will identify the development and the application number for it, set out the CoC that the development is noncompliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been done, or will be, undertaken to address the non-compliance.

4.3.2.2 Access to Information

The SoC includes the preparation and implementation of a Community Consultation and Engagement Program, with a principal aim of providing the community with factual information about the Project.

Further, Schedule 4, Condition 12 of the CoC details the Project requirements for access to information. Accordingly, the Project website will be regularly updated with the Project status and up to date documentation. The documents, which will be made publically available, include:

- the EIS;
- the final layout plans;
- current statutory approvals;
- approved strategies, plans or programs required under the CoC;
- the proposed staging plans for the Project if the construction, operation and/or decommissioning of the Project is to be staged;
- a comprehensive summary of monitoring results reported in accordance with the various plans and programs approved under the CoC;
- a complaints register (updated on a monthly basis);
- minutes of CCC meetings;
- the EPL Annual Return ;
- any independent environmental audit, and the Proponents response to the recommendations in any audit; and
- any other matter required by the Secretary.

These documents will keep the local community and relevant agencies informed about the operation and environmental performance of the development, which will be supported by a regular newsletter also to be made available on the Project website.

4.3.2.3 Community Consultative Committee

As required by Condition 3 of Schedule 4 of the CoC, the Proponent commits to operating a Community Consultative Committee (CCC) in accordance with the *Community Consultative Committee Guidelines for State Significant Project (2016)*, or its latest version.

The purpose of the CCC is to provide a forum for regular, open discussion between representatives of GPG, the community, Council and other stakeholders about issues relating to the development of the wind farm. The CCC also provides a forum for ongoing communication with the community during the construction, operation and decommissioning phases of the Project.

The Secretary has approved the CCC to be operated jointly with the Crookwell 2 Wind Farm CCC, and from late-March 2021, the Proponent will operate the CCC in this capacity.

4.4 Complaints Management and Dispute Resolution

4.4.1 Complaints Management

The Project has implemented the following opportunities for complaint registration which will be maintained for the life of the project:

- a free call 1800 number which complaints and enquiries about the project may be registered: 1800 457 181;
- a postal address to which written complaints and enquires may be sent:

  Crookwell 3 Development Pty Ltd

  ABN 70 631 831 297

  ACN: 631 831 297

  Suite 4, Level 3, 24 Marcus Clarke Street, Canberra ACT 2600;
- an email address to which electronic complaints and enquiries may be transmitted: info@globalpower-generation.com.au .

The 1800 number, the postal and email addresses shall also be published in newspaper(s) circulating in the local area prior to the commencement of construction and prior to the commencement of operation. This information is also provided on the Project website.

Complaints from any source must be registered in accordance with the 'Complaints Management Plan' and using a Community Complaint Form. Each complaint will be investigated by the PQEMR in consultation with the Project Manager.

All complaints will be responded to within 24 hours. Initial contact with the complainant will either outline actions taken to resolve the complainant or a holding statement while the complaint is being investigated. Depending on the nature and complexity of the complaint, resolution may take additional time.

A Complaints Register will be maintained through the life of project, and will record the following:

- Date and time of complaint/enquiry;
- Mode of communication (i.e. telephone, mail, meeting, email etc.);
- Name, address, contact telephone number of complainant/enquirer (if possible, and permitted by the complainant/enquirer);
- Nature of the complaint and enquiry;
- Actions taken in response including timeframes for implementing the action;
- If no action was taken, the justification for why not; and
- When and how the complainant/enquirer was notified of the outcome or provided an answer.

The complaints register will be made publically available on the project website and will be updated on a monthly basis.

4.4.2 Dispute Resolution

The Project complaints handling process is designed to avoid disputes arising following the receipt of a complaint. As per Section 4.4.1, all complaints will be responded to within 24 hours. The records of the complaint will be maintained for at least four (4) years following the date of the complaint. In event that a complaint is unable to be resolved satisfactorily, either party may refer the dispute to an independent dispute resolution process, such as through the National Wind Farm Commissioner.

The National Wind Farm Commissioner is an independent role appointed by the Australian Government, reporting to the Minister for Energy and Emissions Reduction. A role of the

Commissioner is to receive and refer complaints from concerned community residents about wind farms. The Proponents website includes the following statement: *If you wish to proceed with making a complaint to the Office of the National Wind Farm Commissioner please visit https://www.nwfc.gov.au/*.

4.5 Document Control

The following documents, as a minimum, shall be subject to document control:

- Group Procedures & Forms;
- Standards/Codes/Acts/Regulations;
- Project Plans;
- Project Procedures and Forms; and
- Drawings.

Where changes are required to project documentation, the Project Manager or delegate shall coordinate all amendments/revisions to the documents and implement the necessary changes required.

Unless otherwise specified by the Project Manager contract/shop drawings are to be transmitted to external parties using a Document Transmittal. All other documents may be transmitted using suitable correspondence. Transmittal records shall be maintained.

This procedure is generally in accordance with the ISO 9001/2015 Standard of Quality Management, where applicable.

4.6 Emergency Preparedness and Response

An Emergency Response Plan (ERP) shall be prepared by a Safety Representative prior to the commencement of construction. The ERP will be adapted for the operations phase and will form a component of the Safety Management System required by Schedule 3, Condition 41 of the CoC (noting an Emergency Plan for bushfire management is to be prepared in accordance with Condition 40 of the CoC).

The ERP provides the emergency preparedness and evacuation process to be followed by all staff and contractors of the Project to manage environmental emergencies, should they occur. It will also assist external services by providing them with access to emergency contact details as well as providing an overview of how emergencies are managed and controls implemented onsite, including maps to muster points and the nearest emergency facilities.

All staff will be trained in emergency preparedness and response. Higher risk activities will involve a higher degree of preparedness and training. The ERP applies to work during the construction phase of the Project until handover for the operation and maintenance phase.

5. ENVIRONMENTAL MONITORING, CORRECTIVE ACTION AND AUDITS

5.1 Environmental Monitoring

Environmental monitoring will be used to measure performance of the EMS and compliance with relevant statutory requirements. Environmental monitoring checklists will be developed, and environmental inspections will include evaluation of performance against objectives and targets identified in the environmental management plans and programs.

All site inspection and monitoring records are to be retained onsite for the duration of construction works, including site rehabilitation and also noting the retention periods for EPL monitoring data.

The PQAEMR and Supervisors will undertake a range of daily, weekly and monthly inspections and monitoring activities as outlined below in *Table 5-1*.

Table 5-1 Environmental Performance Monitoring Schedule

Inspection	Objectives	Responsibility	Output	Timing
Site inspection	Review of weather, fire danger, dust generation	PQAEMR and Supervisors	Daily Environmental Checklist; and Incident Records.	Daily and post significant rainfall across all major works in progress.
Site inspection	Review status of all controls and general environmental performance.	PQAEMR and Supervisors	Weekly Environmental Checklist; and Incident Records.	Weekly and post significant rainfall across all major works in progress.
Noise and Vibration	Undertake noise and vibration monitoring to ensure compliance with Management Levels (Criteria) and mitigation and management measures in CNMP.	PQAEMR and Supervisors	Noise and Vibration Planning.	Weekly.
			Noise and Vibration checks.	Weekly if potential for impacts
			Equipment Noise Testing.	When potentially intrusive equipment is introduced to the project or to confirm noise is inaudible at non associate residences.
			Attended Noise Measurements.	Quarterly or, if complaints arise or, as needed for OOHW.
			Unattended Noise Monitoring at impact assessment locations.	As needed.
			Vibration Monitoring.	As needed or where vibration generating works are planned to occur within 100 m of a dwelling.
			Blast Monitoring.	Every blast.

Inspection	Objectives	Responsibility	Output	Timing
Traffic and Access	Review status of traffic and access controls for Project to ensure compliance with standard industry guidelines and mitigation and management measures in TMP and TCP.	Site Construction Manager	Pre-start and pre-closedown inspections of traffic control devices and signage and the condition of local access roads.	Daily. When oversize or over mass movements
			Inspections of traffic control devices, signage and road condition.	Weekly and nightly during any night time work.
			Visual inspections to assess vehicle movement and traffic flows to and from the Project site and weed transfer on tyres.	Daily.
Soil and Water Quality	Review status of ERSED controls for Project to ensure compliance with standard industry guidelines and mitigation and management measures in S&ECP.	PQAEMR and Supervisors	Inspection of ERSED controls for haul roads, cut off and diversion drains, stream crossings (if required), pad sites and stockpiles.	Weekly in dry weather. Within 24 hours of significant rainfall events (nominated as >20 mm in any 24-hour period).
Heritage	Inspect sensitive areas and activities with the potential to impact Aboriginal and non-Aboriginal heritage to ensure compliance with standard industry guidelines and mitigation and management measures in HMP and ACHMP.	PQAEMR and Supervisors	Site and activity specific EWMS. Weekly Environmental Checklist. Incident Records.	Weekly and during any ground break activities in proximity to PADs or registered sites.
Flora and Fauna	No impact on vegetation beyond designated work areas.	PQAEMR and Supervisors	Site and activity specific EWMS. Incident Records. Implementation of Flora and Fauna Inspection Checklist in BMP.	Daily, weekly and monthly inspection requirements.
Complaints and enquiries	Ensure all complaints and enquiries are managed / responded in line with protocol	PQAEMR and Supervisors	Complaints received. Enquiries received	Within 24 hours of receipt.

5.2 Non-Compliances, Corrective and Preventative Actions

Non-compliance may be identified through routine Weekly Site Inspections, impromptu site inspections, via the EMS / CEMP Review or Audit process or be incident based.

Environmental non-conformance includes:

- non-compliance with environmental management controls or mitigation measures;
- environmental incidents not threatening material harm to the environment;
- non-compliance with CoC; and
- environmental emergencies threatening material harm to the environment.

Corrective actions may be triggered by any of the above and will include immediate steps taken to control event, investigation and development additional controls to prevent re-occurrence. Corrective actions will developed in consultation with relevant stakeholders and will be assigned to the appropriate staff for close out. All corrective actions will be tracked through to completion through the non-conformance tracking register.

Non-compliances will also trigger regulatory reporting as required Schedule 4, Condition 10 of the CoC. Accordingly, the Department will be notified via the Major Projects website portal within 7 days after the Proponent becomes aware of any non-compliance with the Development Consent. The notification will:

- identify the development and the application number;
- set out the CoC that the development is noncompliant with;
- describe the non-compliance and the reasons for the non-compliance (if known); and
- outline what actions have been done, or will be, undertaken to address the non-compliance.

As required by the SoC (refer to *Table 1-2*), a Pre-Construction Compliance Report will be submitted for each stage of the Project to the Secretary of DPIE at least two (2) weeks prior to the commencement of construction of that stage. The Pre-Construction Compliance Report will include details of the compliance with all Pre-Construction CoC that are relevant for the specific stage(s) of the Project.

5.3 Incident Management

For the purposes of this EMS, an incident is defined as a set of circumstances that:

- causes or threatens to cause material harm to the environment; and/or
- breaches or exceed the limits or performance measures/criteria in the CoC.

All environmental incidents will be recorded and reported internally to aid in the prevention of further occurrences. Environmental incidents will also trigger regulatory reporting as required Schedule 4, Condition 9 of the CoC. The PQAEMR will notify the Department in writing via the Major Projects website portal immediately after the Proponent becomes aware of an incident. The notification will identify the development (including the development application number and the name of the development), and will set out the location and nature of the incident.

The Project Manager and the Superintendent have the authority to shut down site activities or implement control measures as required in the event of environmental emergency, and they are available as an emergency contact 24 hours a day.

The PQAEMR hold specific authority to stop work on any activity where PQEMR deems it necessary to prevent environmental non-conformances. The PQAEMR must ensure non-conformances and environmental incidents are identified, reported and suitable corrective actions are determined and completed.

Typically, environmental incidents will be immediately notified verbally and in writing to the Project Manager within one (1) hour of incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and to put in place suitable controls. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

The EPA will be notified of any environmental incidents or pollution incidents in or around the site via the EPA Environment Line (telephone 13 15 55) in accordance with Part 5.7 of the POEO Act. Immediate notification (and without delay) will be undertaken of any incident which causes actual or potential harm to the health or safety of human beings or ecosystems which is not trivial; or if actual or potential loss or property damage (including clean-up costs) associated with a pollution incident that exceeds $10,000, to the following organisations:

- EPA (via the EPA pollution line 131 555);
- Ministry of Health (via the Public Health Unit);
- WorkCover Authority;
- Local Authority (i.e. council);
- Fire and Rescue NSW; and
- Secretary of the Department of Planning, Industry and Environment.

These agencies will be notified within 24 hours of the Proponent becoming aware of any incident with actual or potential significant off-site impacts on people or the biophysical environment. Full written details of the incident will be provided within seven days of the date on which the incident occurred.

Where an incident involves an Aboriginal site, relevant Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

The Project Manager will maintain all records relating to environmental incidents.

5.4 Incident Register

All environmental incidents and responsive actions will be recorded in an Incident Register and reported at project management meetings. The incident register will include details such as the date and time of the incident, persons involved, a recount of the incident, vehicle details (if necessary), remedial action, and status. All incidents must be closed out to the satisfaction of the PQEMR and the Project Manager.

An incident report will be completed for any incident which results in a non-compliance with the CoC, the EMS or any subsequently created management plans, procedures or programs.

5.5 Audits

The PQAEMR will conduct or arrange for an experienced person to conduct internal audits of the project environmental performance. During construction, these internal audits will occur every three (3) months except where an external audit is scheduled within approximate time that the internal audit would occur. The first internal audit will occur one (1) month after site works commence. The scope of the internal audits will focus on compliance with the CoC and EPL and the effectiveness of the EMS / CEMP and sub plans and performance outcomes.

As required by Schedule 4, Condition 11 of the CoC, within 6 months of the commencement of construction, and every three (3) years thereafter, an Independent Environmental Audit will be prepared for the Project by a suitably qualified, experienced and independent expert/s whose appointment has been endorsed by the Secretary. The Proponent will commission and pay the full cost of the Independent Environmental Audit. The Independent Environmental Audits will further:

- be prepared in accordance with the relevant Independent Audit Post Approval requirements (DPIE 2020);

- be carried out in consultation with the relevant agencies;
- assess whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and
- if directed by the Secretary, assess whether the performance of any noise mitigation measures implemented, including sector management and sound management mode, ensure compliance with the noise criteria in this consent; and
- recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under this consent.

Within three (3) months of commencing an Independent Environmental Audit, or unless otherwise agreed by the Secretary, a copy of the audit report will be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations.

The recommendations of the Independent Environmental Audit will be implemented to the satisfaction of the Secretary.

6. REVIEW

The EMS is a working document that requires review and, when required, amendment during the life of the Project. An internal review of the Project EMS by will occur every six (6) months to assess performance.

The PQAEMR will further review and, if necessary, revise the strategies, plans, and programs required to the satisfaction of the Secretary within three (3) months of the submission of:

- an incident report;
- an independent environmental audit; and
- any modification to the CoC (unless the conditions require otherwise).

Where this review leads to revisions in the EMS, the revised EMS shall be submitted to the Secretary for approval within 4 weeks of the review.

Additional formal reviews will occur following any major design changes in construction or operations.

APPENDIX A ENVIRONMENTAL POLICY NG.00010

Global environmental policy

NG.00010

Table of Contents

1. Purpose

Regulate and establish guidelines that must govern the implementation of all group activities concerning environmental management in order to fulfil the commitments acquired in the Corporate Responsibility Policy, in line with the Paris Agreement and the UN Sustainable Development Objectives.

2. Scope

It applies to all group companies in which Naturgy holds a majority share and to those companies or entities for whose operation and/or management the Group is responsible.

3. Commitment to the environment

As established in the Corporate Responsibility Policy, Naturgy is committed to boosting sustainable development within the company, assuring the supply of competitive, safe energy and with the utmost respect for the environment.

Given its potential to contribute to environmental protection, Naturgy voluntarily assumes the commitment to be a key player in the energy transition towards a low-carbon and digital circular economy model.

Naturgy is committed to working in four strategic environmental areas:

- Environmental governance and management
- Climate change and energy transition
- Circular economy and eco-efficiency
- Natural capital and biodiversity

Naturgy's **basic principles** for action in these areas are:

Environmental governance and management

1. Guarantee compliance with the environmental legislation and the more demanding voluntary requirements; anticipating, insofar as possible, the adaptation to the new regulations.
2. Prevent pollution and reduce environmental impacts along the value chain, encouraging employees, partner companies and interested parties to get involved.
3. Integrate the environment into risk and opportunity management, as well as into the mergers and acquisitions of assets by conducting the environmental *due diligences*.
4. Establish objectives that promote continuous improvement in environmental performance.
5. Have an environmental management system that is externally audited and certified according to the criteria of the Global Policy of the Integrated Management System.
6. Encourage transparency, in line with the international reporting standards, to facilitate communication with our stakeholders.

7. Support the distribution of knowledge and raising of awareness about energy and the environment, and foster a constructive dialogue with the Public Administrations, NGOs, universities, customers and other stakeholders.

Climate change and energy transition

8. Promote renewable energies, natural gas, and energy efficiency and savings, as key elements towards a low-carbon model.
9. Offer solutions for towns and cities, as well as land and sea transport, that reduce emissions and improve air quality.
10. Innovate in business models and technologies that help reduce greenhouse gas emissions.
11. Support the international climate change negotiations and market mechanisms that foster the development of the most appropriate technologies at each stage of the energy transition.

Circular economy and eco-efficiency

12. Boost the circular economy via the efficient use of resources (energy, water, etc.) and waste management to reduce environmental impacts on the environment.
13. Foster renewable gas as a storage and energy carrier that facilitates the transition to a circular economy and low-carbon model.

Natural capital and biodiversity

14. Respect natural capital, biodiversity and cultural heritage in environments where the group performs its activity.
15. Progress towards No Net Loss of biodiversity, with a preventive approach (impact mitigation hierarchy), implementing best practices and promoting the creation of natural capital.

4. Responsibilities

The following responsibilities are defined:

Corporate Resources, by means of a unit in charge of the **environment,** will be responsible as follows:

- Establish the policy, strategic areas, environmental indicators, global management tools, methods and indicators, in coordination with Businesses.
- Define, in coordination with Businesses, the environmental and climate change guidelines that the units must consider in the risk and opportunity assessment.
- Monitor the correct roll-out of the annual audit and action plan of the Business Units for compliance with the environment objectives.
- Supply the Business units with a centralised and efficient system for recording, monitoring and reporting indicators in key processes; acting as single agent in their design and progress.
- Centralise the reporting of the environmental indicators for their presentation to the company's governing bodies.

- Report to the sustainability indices, analysts and investors about environmental matters.
- Coordinate the constitution and development of the Environment, Health & Safety Committees (hereinafter EHS)[1] of Senior Management and Operations and of the Competence Centres.
- Encourage environmental and social innovation, the exchange of good practices and an inter-disciplinary approach between the Business Units.

The **Business** Units are responsible as follows:

- Guarantee the implementation of this Policy, using the global methods and tools of environmental management.
- Ensure the correct implementation of activities and processes concerning the environment, supplying the technical, human and financial resources.
- Maintain the environmental management system and establish and execute the audit plan.
- Define the actions for fulfilling the environmental objectives, assigning the necessary resources.
- Integrate the environment into risk and opportunity management systems, with special attention to climate change and energy transition.
- Conduct the environmental and social studies that are necessary to minimise the negative impacts of the life cycle of the facilities, from their design to their dismantling.
- Provide the environmental data necessary for reporting indicators to the company's governing bodies, to questionnaires for sustainability indices, as well as for analysts and investors, guaranteeing their quality and consistency, analysing their progress and implementing the measures that are necessary for improving environmental performance.
- Form an active part of the EHS Committees of Senior Management and Operations and providing qualified resources for the Competence Centres to function.
- Identify and guarantee the necessary training on the environment.
- Integrate environmental criteria in the supply chain.

The Service areas will assume the responsibilities attributed to the Business Units according to their competences.

5. Relationship model

The priority objectives of the **EHS Senior Management Committee** include guaranteeing an optimal performance and an adequate level of implementation and improvement of the Commitment towards the environment in all of the Businesses.

An ordinary annual meeting will be held, convened by Corporate Resources, which will be attended by the Executive Chairman, the first organisational level of the Businesses and the corporate managers of the function.

[1] The EHS Committees are those set forth in the Global Health and Safety Policy (NG.00003).

In said meeting, in the area of the environment, the following will be discussed as a priority:

- Review of the effective application of the Environmental Policy in the Businesses, including the lines of action that are currently underway and the strategies to adapt to the new trends.
- Setting and monitoring of the environmental performance indicators and objectives.
- Approval and verification of the extent of implementation of action plans derived from accidents with special environmental relevance.

Whenever an accident with special environmental relevance occurs, and notwithstanding the provisions in the Crisis Management policy and procedures, an extraordinary meeting will be held that is attended by the first organisational level of the Businesses, in which the manager of the operational unit in which the event occurred will present the findings of the accident investigation and the action plan that has been proposed to prevent it from reoccurring.

To attain the objectives and guarantee the inter-disciplinary nature of the actions, it will be supported by an **EHS Operational Committee** that comprises representatives of all the Businesses.

The principal functions of this Committee include the following:

- Detailed monitoring of the plans and determination of the detailed actions that allow this Policy to be correctly implemented in the Businesses.
- New trends and strategies for adaptation of the Businesses.
- Preparation and distribution of lessons learned concerning the environment, snapshot of good practices and their implementation in other Businesses.
- Monitoring of the environmental indicators and objectives.

Competence Centres will be set up to encourage an inter-disciplinary approach, efficiency, transformation and innovation in environmental management. They will comprise multi-disciplinary teams that will take responsibility for monitoring inter-disciplinary processes, such as:

- Environmental management and governance
- Climate change and energy transition
- Circular economy and eco-efficiency
- Natural capital and biodiversity

These centres will be dynamic, they will be adapted to specific needs and have set objectives, deadlines and dedicated resources.

6. Reporting and monitoring

The environmental reporting and monitoring indicators for the Board of Directors, sustainability indices and rating agencies are described in Appendices 01 and 02.

The monitoring of this Policy's indicators does not exclude the monitoring and control of any other indicators defined in the internal regulations for monitoring the activity.

7. List of Appendices

Appendix 01: “Environmental indicators for reporting to the Board of Directors”

Appendix 02: “Environmental indicators for external reporting”

8. Approval

The Global Management Policy has been approved by the Chief Corporate Officer.

Appendix 01 – Environmental indicators for internal reporting

The environmental indicators that are reported to the Board of Directors, as well as the frequency of their reporting, are listed below.

Indicator	Reporting frequency
Exceedance of environmental allowances (#).	Monthly

Listed below are other environmental indicators for internal monitoring, as well as their reporting frequency.

Indicator	Reporting frequency
Exceedance of environmental allowances (#).	Monthly
Industrial EBITDA percentage certified in ISO 14001 (%).	Semi-annually
Environmental releases (emissions, accidental discharges and spills) notified to the Authorities (#).	Semi-annually
Percentage of mix generated from renewables, measured in installed capacity over the entire Group (%).	Semi-annually
Absolute greenhouse gas (GHG) emissions scope 1 and 2[2] (Mt CO2 eq).	Semi-annually
Specific CO2 emissions in electricity generation (gr CO2/kWh).	Semi-annually
Carbon intensity (direct t CO2 eq/million € of net revenue amount)	Semi-annually
Percentage of waste recovered out of total waste produced (%).	Annually

The frequencies at which each of the monthly indicators must be reported are:

- YTD current year (accumulated for current year up to the month concerned).
- YTD previous year (accumulated for the previous year up to the month concerned).
- 12M (accumulated for the last 12 months, included in the report)

In the case of half-yearly indicators, the reporting periods are:

- Current half-year period (accumulated for the half-year period that encompasses the reporting period)
- Previous half-year period (accumulated for the half-year period prior to the reporting period)
- YTD current year (accumulated for current year up to the month concerned).
- YTD previous year (accumulated for the previous year up to the month concerned).

[2] Scope 1 are direct emissions of GHG emissions generated in Naturgy's facilities. Scope 2 are the emissions associated with the use of electricity consumed by Naturgy and not generated by the company.

Appendix 02 – Environmental indicators for external reporting

The environmental indicators reported externally are listed below, as well as via public reports (Corporate Responsibility Report, Integrated Management Report, etc.) or via questionnaires for sustainability indices and rating agencies, such as the Dow Jones Sustainability Index (DJSI), CDP, FTSE, Sustainalytics, Vigeo, MSCI, etc. The list is not exhaustive and is likely to change according to the requirements of said indices.

Governance and environmental management area
Industrial EBITDA covered by an environmental management system
Workers covered by an environmental management system
Locations/facilities covered by an environmental management system
Activities certified by EMAS
Generating capacity certified under ISO 14001
Environmental footprint (aggregation of the atmospheric, waste, climate change, water, biodiversity and resources footprints)
Environmental incidents and accidents, differentiating whether or not they were reported to the authorities
Nuclear accidents in the INES scale
Legal exceedances, differentiating whether or not they were reported to the authorities
Environmental fines, claims and complaints.
Breakdown of environmental costs, expenses and investments.
Resources dedicated to environmental risk prevention
Quantity of provisions and guarantees for environmental risks
Objectives for the reduction of atmospheric risk, noise, liquid discharges and waste.
Non-conformities and management status (resolved, in process, etc.)
Environmental staff training
Climate change and energy transition: GHG emissions
GHG emissions by type, activity, country, technology and facility, scopes 1, 2 and 3
CO2 emission factor
Methane emissions in transport and gas distribution, itemising leaks
SF6 emissions
GHG emissions prevented by substitution with more carbon-intensive fuels
GHG emissions prevented by energy efficient projects
Financially assessed energy transition and climate change risks and opportunities
Initiatives and projects to mitigate climate change, indicating CAPEX and OPEX
R&D&i initiatives and projects to mitigate climate change, indicating CAPEX and OPEX
GHG emissions from the supply chain
Climate change and energy transition area: non-GHG atmospheric emissions
Absolute and relative SO2 emissions
Absolute and relative NOx emissions
Absolute and relative total particle emissions
Absolute and relative mercury emissions
Circular economy and eco-efficiency area: waste
Generated hazardous waste (includes waste with hydrocarbons, fuel and oil sludge, used oils, earth contaminated with hydrocarbons, electrical and electronic waste, etc.)

Quantity and percentage of managed hazardous waste categorised according to final destination: (reuse, recycling, composting and recovery, including energy recovery) or elimination (incineration, landfill)
Generated non-hazardous waste (earth and rubble, ash, mud, plaster, slag, scrap, plant refuse, etc.)
Quantity and percentage of managed non-hazardous waste categorised according to final destination: (reuse, recycling, composting and recovery, including energy recovery) or elimination (incineration, landfill)
Amount of waste sold for reuse by type (ash, coal washing sludge, slag, fuel and oil sludge, etc.)
Circular economy and eco-efficiency area: water
Water collection by source type (sea, surface, underground, residual, reused, mains supply, others)
Water consumption by use (cooling, water-steam cycle, auxiliary services, processing, others)
Liquid discharges by destination (sea, river, aquifer recharge, public sewer system, others)
Circular economy and eco-efficiency area: resources and efficiency
Consumption of non-renewable fuels (coal by type, gas, nuclear fuel, petroleum derivatives, etc.)
Electricity acquired for consumption, broken down according to its origin (renewable or not renewable)
Purchases and sales of steam, heat, cooling and other energies, differentiating according to their renewable or non-renewable origin
Consumption of energy outside the organisation: end use of marketed natural gas, extracted coal, etc.
Energy consumption intensity ratios within the organisation
Fuel and emissions savings in energy-efficiency initiatives
Expected investments for improving the efficiency of the thermal power plants and reducing the atmospheric emissions using technology
Energy losses in transport and electricity distribution by country
Initiatives and projects for improving eco-efficiency, reducing waste, increasing its reuse or recovery, etc.
Natural capital and biodiversity
Identification and quantification of the surface area of facilities and networks within or adjacent to protected natural spaces
Identification of endangered species or those at risk of extinction in areas affected by the operations
Initiatives to improve biodiversity throughout the life cycle of the facilities (construction, operation and dismantling)

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