Tallawarra B Power Station

Operational Environmental Management Plan

EnergyAustralia Tallawarra Pty Ltd

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Document control record

Document prepared by:

Aurecon Australasia Pty Ltd
ABN 54 005 139 873
Level 11, 73 Miller Street
North Sydney 2060 Australia
PO Box 1319
North Sydney NSW 2059
Australia

T +61 2 9465 5599
F +61 2 9465 5598
E sydney@aurecongroup.com
W aurecongroup.com

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Author		Approver	
Name	Kieran Metcalfe	Name	Amanda Jones
Title	Associate, Environment and Planning	Title	Environmental Planning & Assurance Specialist

Glossary

Abbreviation	Meaning
COA	Condition of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
EA	Environmental Assessment (SKM, 2009)
EMS	Environmental Management System
EP&A Act	*Environment Planning and Assessment Act 1979*
EPL	Environment protection licence
EWMS	Environmental Work Method Statement
HSSE	Health, safety, security and environment
HSE Specialist	Health, Safety and Environment Specialist
MEL	Minimum Environmental Load
Mod-1	Modification 1 to Major Project MP07-0124
Mod-2	Modification 2 to Major Project MP07-0124
NSW EPA	NSW Environment Protection Authority
OEMP	Operational environmental management plan
ONR	Operational Noise Review
Project Approval	Project Approval for Tallawarra B Power Station (MP07_0124-Mod-2)
PVMP	Plume Validation Monitoring Program
the project	Tallawarra B power station
the Secretary	Secretary of the Department of Planning and Environment
Unit 1	Operation areas associated with Tallawarra A
Unit 2	Operation areas associated with Tallawarra B
WSAC	Water sprayed air cooler

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1 Introduction

1.1 Site history

EnergyAustralia originally purchased the Tallawarra power station site to redevelop it for power generation. The 16ha site is located at Yallah Bay Road, Yallah, approximately 13 kilometres south of Wollongong, New South Wales. The site is located on the western foreshore bank of Lake Illawarra and on the lower southern slopes of Mount Brown, which rises to about 130m. The project is positioned in a historically disturbed location on the foundations of a former coal fired power station, which was decommissioned in 1989. The project land is owned by EnergyAustralia. The Tallawarra A power station commenced operation in January 2009.

Construction of the Tallawarra B power station commenced in March 2022 with operations commencing in October 2023. Once operational, the Tallawarra power station will be considered as one power station with two operational units. Tallawarra A as Unit 1 and Tallawarra B as Unit 2.

Table 1-1 below provides a historical timeline of significant events at the Tallawarra power station site, along with associated environmental impacts and controls.

Table 1-1: History of Tallawarra power station site

Significant historical dates	Description	Significant environmental impact / control
1954-1989	320MW Tallawarra coal fired power station.	-
1989-1999	Decommissioned site and majority of buildings demolished to ground level.	▪ Environment Impact Assessment completed in 1998; ▪ Pacific Power was granted development consent by Wollongong Council
2003	Pacific Power sold site to TXU (later rebranded to EnergyAustralia).	-
2006-2009	EnergyAustralia commences construction of the Tallawarra A power station.	▪ Construction Environmental Management Plan developed 2008; ▪ Site management plans developed for Asbestos, Water Quality, Air/Storm Water, Fish, Prawn and Jellyfish; ▪ Environment Protection Licence 555 issued.
2008	Tallawarra B power station project was declared as Critical State Significant Infrastructure (CSSI) by the then Minister for Planning.	-
2010	Tallawarra B power station project (MP07-0124) was granted approval by the then Minister for Planning.	-
2009-2012	Tallawarra A power station in operation	▪ Environmental Management Plan developed; ▪ ISO 14001 Certification obtained in 2012; and ▪ Expansion of Environmental Performance Program.
2012-2017	ISO Certification	ISO certification maintained by Tallawarra power station.
2016	Modification to Tallawarra B project approval (Mod-1)	Approval to extend the project's approval lapse date by five years to 21 December 2020.
2017	ISO Certification	Enterprise obtained ISO certification. Tallawarra Quality Management System integrated with Enterprise system.

Significant historical dates	Description	Significant environmental impact / control
2020	Modification to Tallawarra B project approval (Mod-2).	Approval to extend the project's approval lapse date by a further two years to December 2022 and amended several conditions of approval, including allowing for a single open cycle gas turbine to be used for the project.
2022	Construction of Tallawarra B power station begins.	-

1.2 Scope of the OEMP

In accordance with condition 1.1, EnergyAustralia will carry out the project:

- In accordance with the Project Approval as modified (PA) (07_0124); and
- In accordance with written direction of the secretary.

In accordance with condition 1.2 EnergyAustralia shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:

- any documents that are submitted in accordance with this approval; and
- the implementation of any actions or measures contained in these documents.

The scope of the OEMP covers the operations of Tallawarra Power Station Unit 2. The OEMP has been prepared to address:

- Project Approval as modified (PA 07_0124),
- Relevant clauses of the Environment Protection Licence 555 (EPL 555); and
- Relevant legislation, guidelines and Australian Standards.

The existing Environmental Management System (EMS) has been established for the operation of Unit 1. The EMS covers the environmental requirements of the development consent NO. D98/784. The existing EMS will also cover Unit 2 and this OEMP. Refer to Figure 3-1.

1.3 Objectives of the OEMP

The purpose of this OEMP is to provide a structured approach to the management of environmental issues during operation of Unit 2. In particular, this OEMP:

- Provides an operational framework to conduct operational activities in a manner that reduce, avoid or offset potential environmental, social, biological and physical consequences of operational activities,
- Highlights and manages potential environmental impacts identified at the planning stage,
- Ensures EnergyAustralia and its associated contractors are fully aware of their environmental responsibilities and are proactive in their approach to environmental management,
- Complies with relevant legislation; and
- Strives for continuous improvement in aspects of the project to enable new technologies and innovations to be implemented where practicable and feasible.

1.4 Structure of the OEMP

The OEMP has been prepared to be consistent with the *Environmental Management Plan Guideline* (DPIE, 2020). The conditions of PA 07_0124 that are relevant to the OEMP are provided in Appendix A. The PA 07_0124 applies to Unit 2 operational areas.

Section 1 describes the project background, purpose and structure of the OEMP,

Section 2 describes the overview of the project description,

Section 3 establishes the environmental management framework,

Section 4 describes the community consultation program; and

Section 5 establishes the sub-plans and outlines the environment monitoring and management detail for the project will be managed.

This OEMP will be submitted for the approval of the Secretary of the Department of Planning and Environment (the Secretary) no later than one month prior to the commencement of operation of Unit 2 power station, or within such period otherwise agreed by the Secretary. Operation will not commence until written approval has been received from the Secretary.

2 Project Description

2.1 Overview of the Project

The Tallawarra B project includes construction and operation of a gas fired power station and associated infrastructure, known as the Tallawarra Stage B Gas Turbine Power Station Project. The project was declared as Critical State Significant Infrastructure (CSSI) by the Minister for Planning on 26 February 2008 in accordance with section 5.13 of the *Environment Planning and Assessment Act 1979* (EP&A Act). The project approval (PA) 07-0124) was granted approval by the then Minister for Planning on 21 December 2010.

An approval modification (Mod-1) for extension of the lapse date was approved March 2016, which extended the PA lapse date by five years to 21 December 2020. A second approval modification (Mod-2) was approved by the Department of Planning, Industry and Environment (DPIE) in December 2020. Mod-2 extended the PA lapse date by a further two years to December 2022 and amended several conditions of approval, including allowing for an open cycle gas turbine to be constructed and operated.

Tallawarra is a gas fired power station that comprises of two units, Tallawarra A (Unit 1) and Tallawarra B (Unit 2). Unit 1 commenced operation in 2009 and is not included as part of this OEMP. Unit 2 is immediately adjacent to Unit 1 and operation is anticipated to commence in late-2023.

Unit 2 comprises of the following key elements:

- a single-unit gas turbine with a total nominal output of up to 400 megawatts (MW) Emergency diesel generator;
- High voltage switchyard (extension) comprising high voltage connection to the unit transformers and switchgear;
- Transmission line connection to the existing 132kV network;
- Connecting gas pipelines, gas metering and pressure reduction station;
- Potable/fire water tank;
- Demineralised water tank;
- Electrical module; and
- Emergency diesel generator.

2.2 Site locations and map

Figure 2-1 shows the extent of Tallawarra land boundary while Figure 2-2 shows the location and boundaries of Tallawarra A and Tallawarra B units within the context of Tallawarra Power Station.

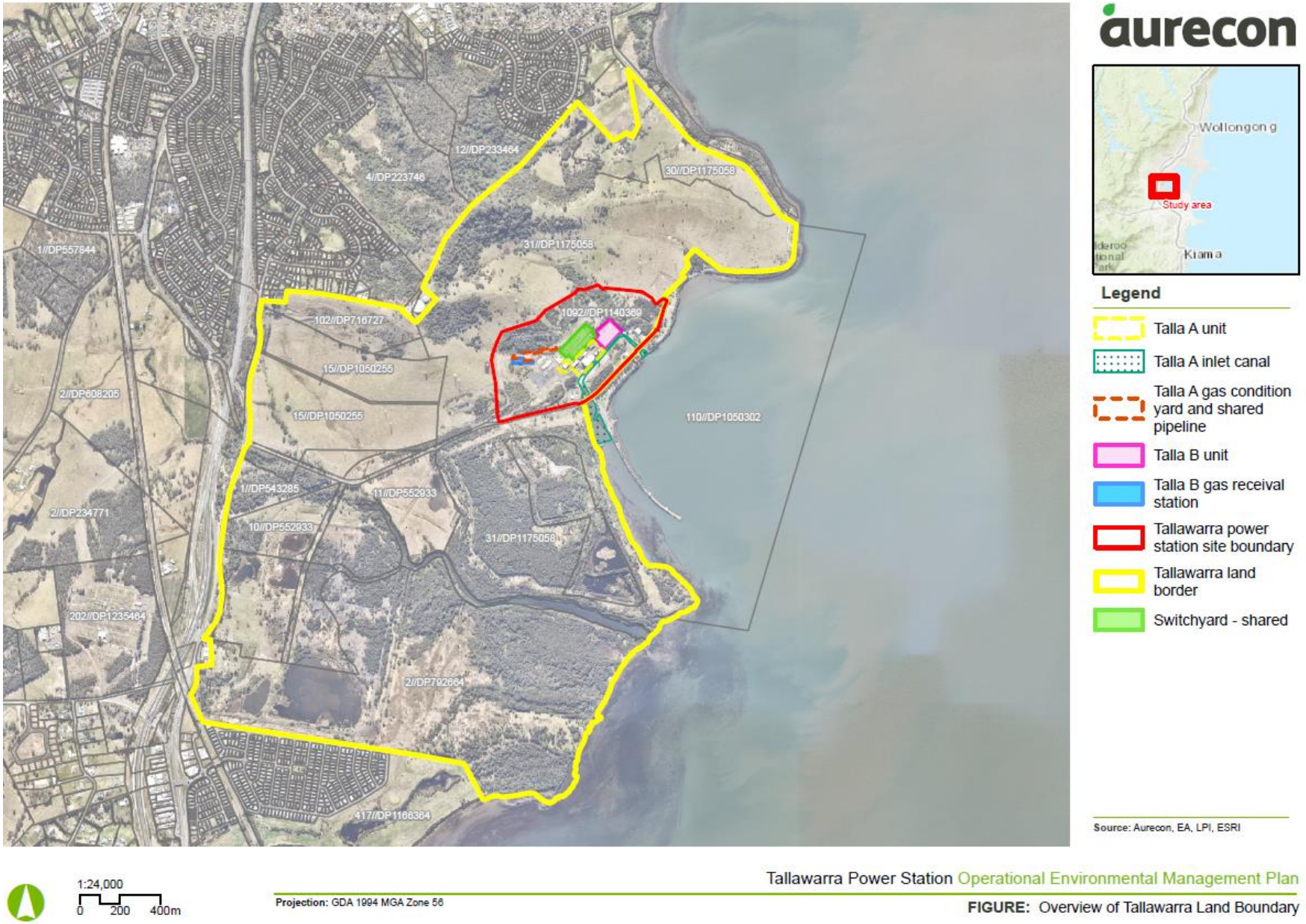


Figure 2-1: Overview of Tallawarra Land

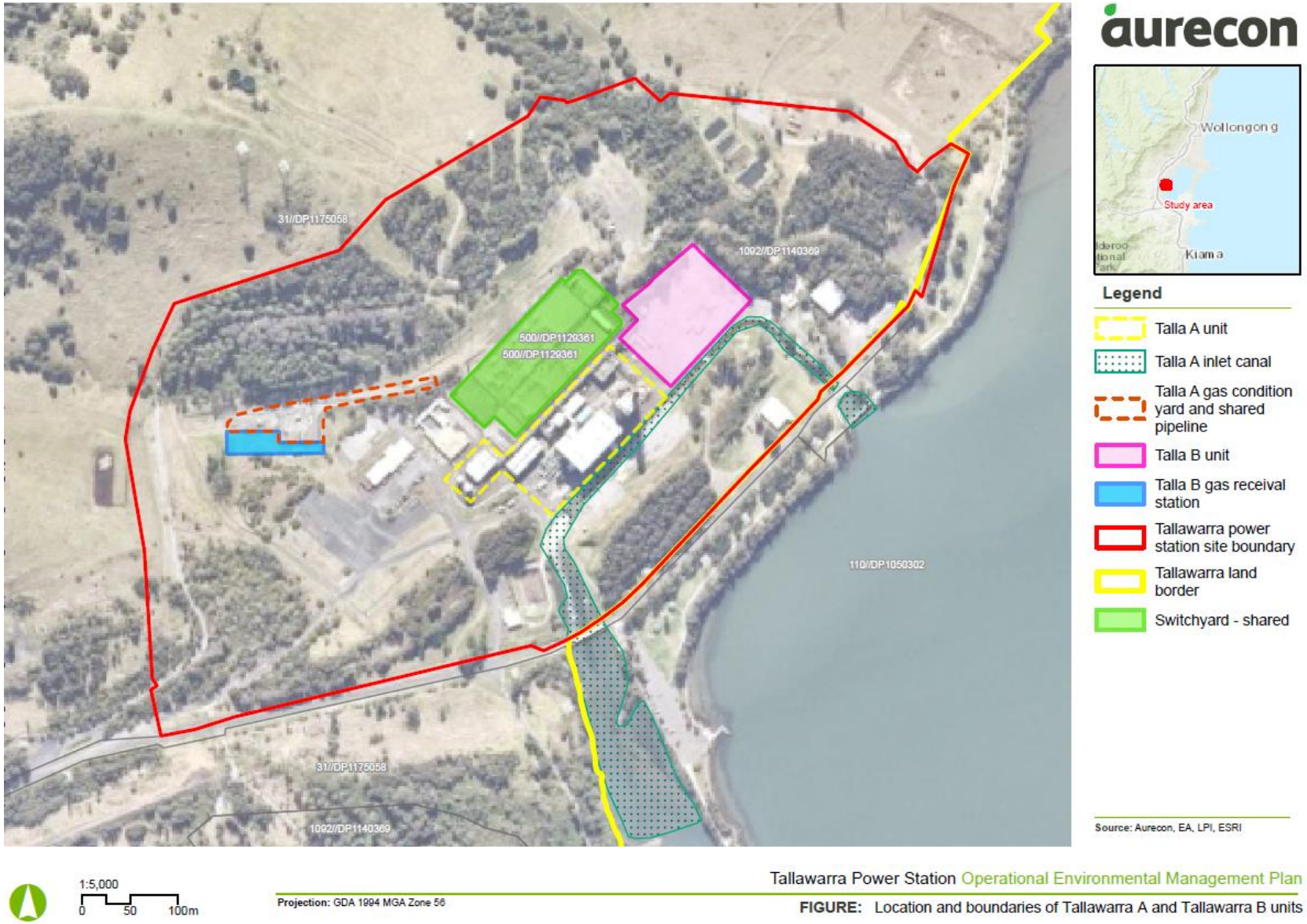


Figure 2-2: Tallawarra Power Station

3 Environment Management Framework

3.1 Environmental policy

This OEMP reflects the principles of EnergyAustralia's corporate ISO14001 Environmental Management System. The Environmental Management System is be based on the Plan, Do, Monitor and Review philosophy. EnergyAustralia's Health, Safety, Security and Environmental (HSSE) Policy prepared as part of their corporate Environmental Management System includes a commitment to manage its activities in such a way that reduces their environmental impact.

See Appendix B for a copy of the EnergyAustralia HSSE Policy.

3.2 Relationship to an existing environment management system

EnergyAustralia works under an Environmental Management System (EMS). The EMS is certified to ISO14001 and is integrated into the operations of Unit 1. This OEMP for Unit 2 will be integrated into the existing EMS, refer to Figure 3-1 for a detailed overview of the existing EMS and how it has been incorporated to manage and reduce environmental impacts.

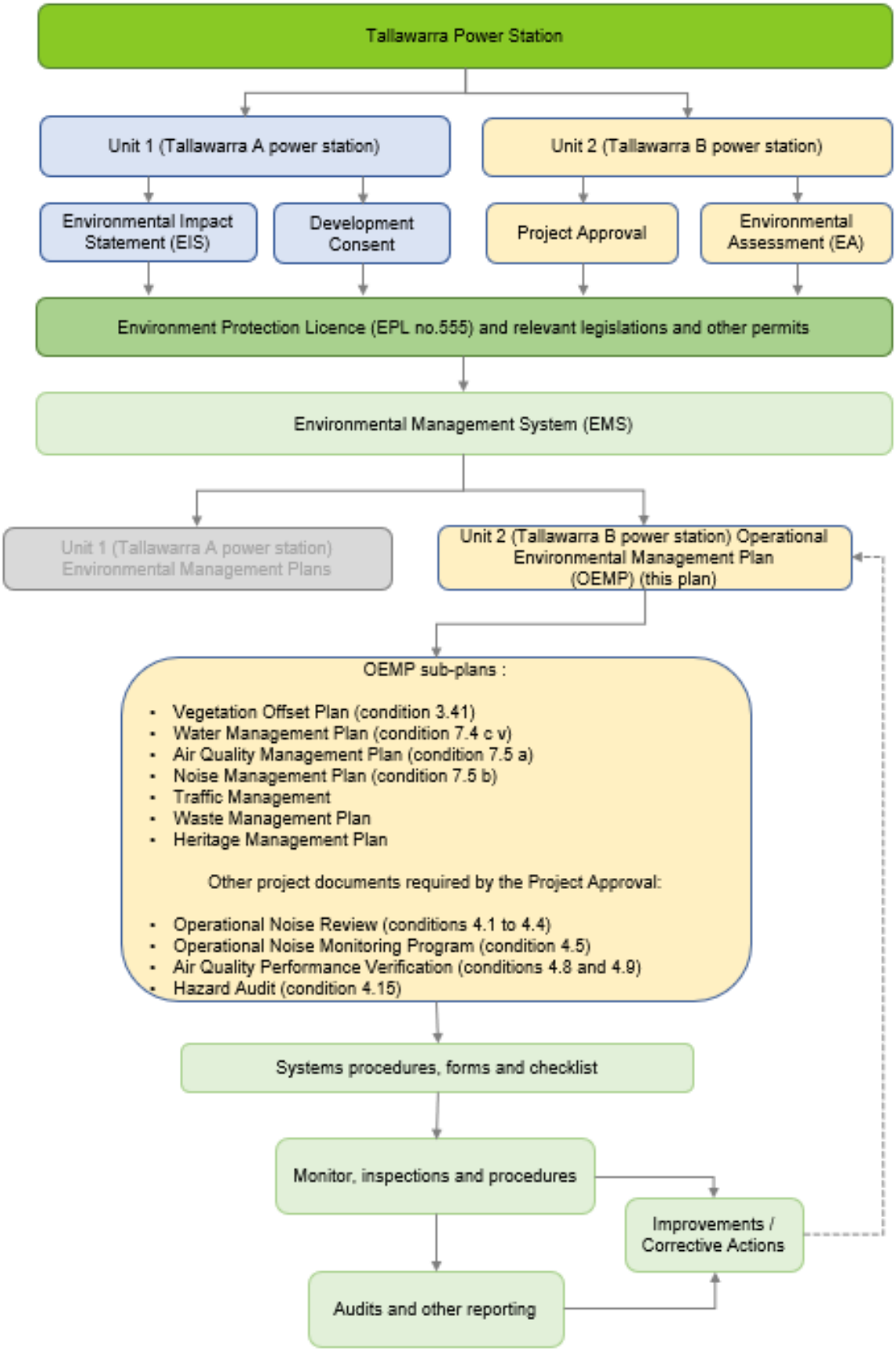


Figure 3-1: Environmental management system structure

3.3 Roles and responsibilities

The roles and responsibilities section provides the organisational structure outlining the key personnel involved in the environmental management of the project. Table 3-1 includes the positions title/role and responsibility for the project.

Table 3-1: Roles and responsibilities

Role	Responsibilities
Asset Leader	The environmental responsibilities of the Asset Leader include: ■ ensure adequate resources are assigned to the site; ■ overall site responsibility for Health, Safety, Security and Environmental Compliance; ■ day to day management of the site; ■ ensures that environmental incidents requiring investigation are followed up and measures are effective; ■ liaison with EnergyAustralia and government authorities as required; and ■ ensure Leaders are completing training scheduling as per the Training Report received from the Business Operations Coordinator.
Site Leaders	The environmental responsibilities for Site Leader include: ■ ensure employees and contractors are provided with, and understand the known hazards associated with work, safety and the environmental requirements and the scope of work; ■ ensure there is compliance with statutory requirements, EPA Licence and conditions of Project Approval; ■ ensure employees are completing relevant environmental training as per the training matrix; ■ oversees environmental and operational activities and provides direction; and ■ ensuring environmental risk management is incorporated into work processes.
Health, Safety and Environment Specialist (HSE Specialist)	The environmental responsibilities of the HSE Specialist include: ■ review the OEMP annually, or as otherwise agreed with DPE; ■ ensure that environmental obligations are met and prepare reports on compliance, including the annual compliance report; ■ obtain relevant environmental licences, permits and approvals; ■ manage environmental consultants and contractors; ■ consultation with regulatory agencies; ■ liaise with government agencies and relevant stakeholders; ■ supports the investigation of environmental incidents and near misses; and ■ maintain environmental documents.
All employees / subcontractors	The environmental responsibility of all employees and subcontractors include: ■ comply with HSSE procedures, including adopted procedures from approved environmental management systems; ■ conduct safe work observations; ■ report safety and environmental incidents; ■ comply with the requirements of the EMS the OEMP and sub-plans; ■ prepare activity specific Environmental Work Method Statement (EWMS) that comply with the Environmental Management Strategy and OEMP; ■ undertake activities in accordance with approved EWMS; and ■ maintain environmental records.

3.4 Legal compliance requirements

Legislation relevant to this OEMP and how it applies to the project is detailed in Appendix C.

The licenses and permits relevant to the project include:

- EnergyAustralia holds an EPL no.555 under Section 58(5) of the *Protection of the Environment Operations Act 1997* for the project site. The EPL covers the operational licence requirements for Tallawarra Power Station (Unit 1 and Unit 2); and
- license for the storage, transport and use of dangerous goods (required under the *Dangerous Goods Act 1974* and Dangerous Good Regulation 1999).

Copies of all relevant environmental licences and permits will be kept on-site.

Some licences or permits that may be held by subcontractors or external parties engaged by EnergyAustralia have not been specifically listed within the summary. Examples may include but not limited to:

- Licences for transporting certain waste types,
- An asbestos removal licence (Class A or Class B licence);
- Drivers of dangerous goods vehicles to hold a dangerous goods licence; or
- Licensed ecologists for threatened species handling.

3.5 Standard and guidelines

The OEMP has been prepared in accordance with the standard and guidelines listed, which include:

- ISO 14001 Environmental Management Systems – Requirements with Guidance for Use,
- NSW Department of Planning, Industry and Environment, 2020, *Compliance Reporting Post Approval Requirements*;
- NSW Department of Planning, Industry and Environment, 2020, *Post Approval Guidance Environmental Management Plan Guideline – Guideline for Infrastructure Projects*; and
- NSW Department of Planning, Industry and Environment, 2020, *Independent Audit Post Approval Requirements*.

3.6 Training and awareness

EnergyAustralia training for employees and subcontractors are outlined in the Business Management Manual. The business manual covers training, awareness and competency for environmental risks, impacts and controls. The manual confirms employees and contractors are adequately trained and can competently fulfil their responsibilities.

EnergyAustralia have site bulletins that are used to communicate safety and workplace information about specific work occurring onsite. The site bulletins address key features of the work, such as work start and completion date, location and site supervisor contact number. They may also include reference to exclusions zones, road closures and alternate routes. The site bulletins are displayed on notice boards around the power station.

3.7 Environmental risk assessment

EnergyAustralia has a risk assessment process in place to identify and analyse the environmental risks associated with the project. In addition, EnergyAustralia encourages all personnel take the action necessary to prevent harm to people, the environment or property.

EnergyAustralia has a risk register that documents the environmental aspects relating to the activities, products and services of the Tallawarra Power Station. The register should be reviewed at least annually. A review of the register should be triggered in response to a:

- significant Incident;
- new or modified process; and
- relevant Legislative/Licence/permit change.

Figure 3-2 and Figure 3-3 below provides an overview of the risk assessment process that EnergyAustralia will implement.

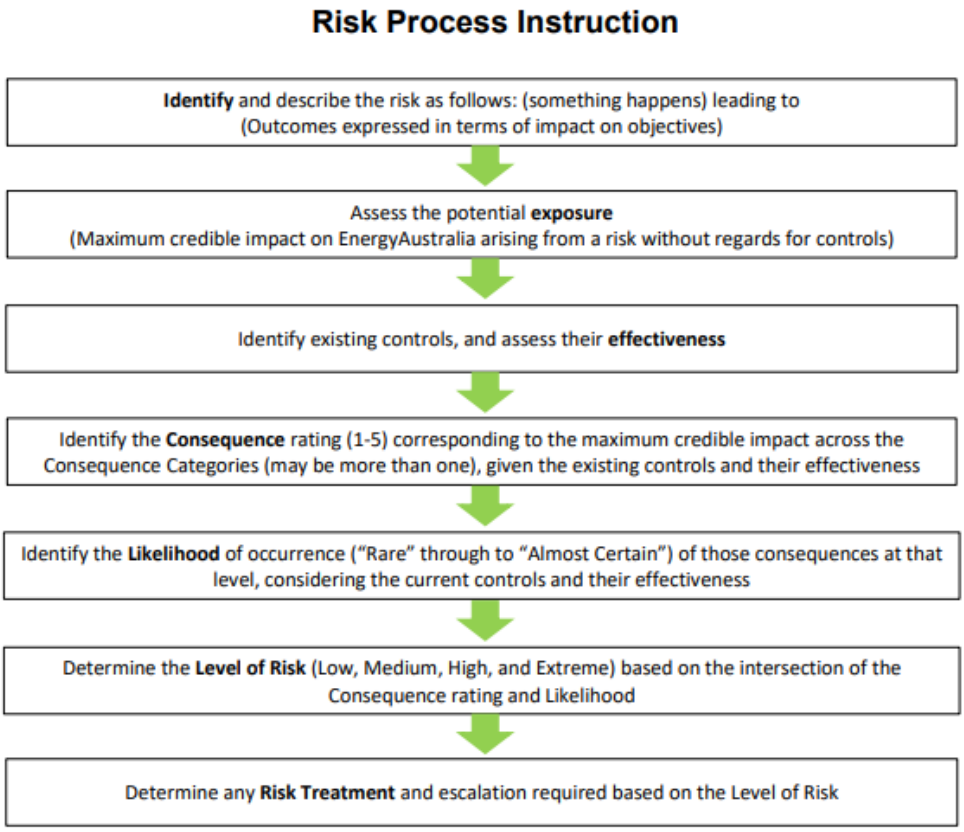


Figure 3-2: Risk Process Instruction

Consequence	Likelihood				
	A. Rare	B. Unlikely	C. Possible	D. Likely	E. Almost Certain
5. Critical	Medium	High	High	Extreme	Extreme
4. Major	Medium	Medium	High	High	Extreme
3. Moderate	Low	Medium	Medium	High	High
2. Minor	Low	Low	Low	Medium	Medium
1. Insignificant	Low	Low	Low	Low	Low

Level	Qualitative Measure	Frequency	Probability
E. Almost Certain	Already happened or is expected to occur in most circumstances	Once per month or more	90% or greater chance of occurrence
D. Likely	May probably occur in most circumstances	Once per year up to once per month	66% up to 90% chance of occurrence
C. Possible	Not unusual and might occur in the foreseeable future	Once in 3 years up to once per year	33% up to 66% chance of occurrence
B. Unlikely	Could occur at some time but unlikely in the foreseeable future	Once in 10 years up to once in 3 years	10% up to 33% chance of occurrence
A. Rare	Is expected to occur only in exceptional or extreme circumstances	Less than once in 10 years	Less than 10% chance of occurrence

Figure 3-3: Risk Assessment Consequence and Likelihood table

Environmental mitigation, control and contingency measures will be put in place to minimise risk as a result of the above risk assessment process.

3.8 Environmental management measures

The sub plans contain measures to avoid and/or control the environmental impacts associated with the project. The controls provided in the sub plans would be used, where relevant, to:

- Control the occurrence of the identified environmental impacts,
- Protect the environment from harm;
- Satisfy the environmental requirements of the project and relevant agencies; and
- Comply with relevant environmental laws and regulations.

A range of monitoring, measurement and reporting activities are required to be undertaken throughout the Project. Environmental monitoring will be undertaken to manage risks.

To comply with condition 2.5, only biocides and antifouling chemicals assessed in the documents referred to in condition 1.1c), or otherwise approved by the EPA, and permitted, registered or approved for use by the Australian Pesticides and Veterinary Medicines Association, shall be used in the operation of the power station.

To comply with condition 3.29 EnergyAustralia shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:

a) all relevant Australian Standards;

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

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

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

EnergyAustralia will ensure all external lighting associated with the project is mounted, screened, and directed in such a manner so as not to create a nuisance to the surrounding environment, properties and roadway. The lighting shall be the minimum level of illumination necessary and shall comply with *Australian Standard AS4282 1997 – Control of the Obtrusive Effects of Outdoor Lighting*..

3.9 Independent environmental audit

Independent audits carried out by EnergyAustralia will be conducted in accordance with the Departments Independent Audit Post Approval Requirements (May 2020) as required by Condition 5.9. EnergyAustralia will follow the process as it did in 2021 and will seek agreement from the Secretary in writing prior to the commencement of an independent audit. The independent auditing team as agreed to in writing by the secretary is included in Appendix F.

3.10 Site inspections

EnergyAustralia EMS includes various site inspections that are outlined in our management plans and work order system. The intention of these inspections are to ensure any issues, defective maintenance or preventative maintenance are responded to in a timely manner. Additionally, this is to ensure there is a feedback loop for continuous environmental improvement.

3.11 Environmental incident management

The notification and reporting process for environmental incidents is to be undertaken in accordance with:

- Conditions of Approval incident reporting requirements,
- EPL 555 requirements,
- EnergyAustralia Emergency Response Plan; and
- EnergyAustralia Pollution Incidents Response Management Plan.

3.11.1 Non-compliances and corrective actions

Environmental incidents will be documented, investigations conducted, and action plans established to prevent a reoccurrence of the event. An environmental investigation will follow the incident investigation procedures identified in the EnergyAustralia Emergency Response Plan and will include the following basic elements:

- Identifying the cause, extent and responsibility of the incident,
- Identifying and implementing the necessary corrective action,
- Identifying the personnel responsible for carrying out the corrective action,
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident,
- Recording any changes in written procedures required; and
- A plan to address relevant public authorities consultation requirements that result from the incident notification when required.

Project non-compliance notification requirements in accordance with the Project Approval are detailed within conditions 5.2 to 5.4 as follows:

- Condition 5.2 - The Secretary will be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance.
- Condition 5.3 - A non-compliance notification will identify the development and the application number for it, set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
- Condition 5.4 - A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

The above requirements would be implemented in relation to notification associated with project non-compliances.

3.11.2 Incident notification and reporting

In accordance with condition 5.1 of the Project Approval, the Secretary will be notified in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. The notification will identify the development (including the application number and the name of the development) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 1 of the Project Approval.

Written incident notification requirements as detailed within the Project Approval are provided below.

Table 3-2 Incident notification and reporting requirements

Type	Details	Report	Frequency
Initial Written Incident Notification	Initial written incident notification requirements will be followed by EnergyAustralia as soon as they become aware of an incident.	Written notification via the Major Projects website which identifies the development (including the application number and the name of the development) and sets out the location and nature of the incident.	Immediately after the becoming aware of an incident

Type	Details	Report	Frequency
Written Incident Notification	Further written incident notification requirements will be followed by EnergyAustralia Seven days after becoming aware of the incident.	Written notification of an incident will: ■ identify the development and application number; ■ provide details of the incident (date, time, location, nature of the incident, a brief description of what occurred and why it is classified as an incident); ■ identify how the incident was detected; ■ identify when the proponent became aware of the incident; ■ identify any actual or potential non-compliance with conditions of approval; ■ describe what immediate steps were taken in relation to the incident; ■ identify further action(s) that will be taken in relation to the incident; and ■ identify a project contact for further communication regarding the incident.	Seven days after becoming aware of the incident
Incident Report	EnergyAustralia will provide the Secretary and any relevant public authorities (as determined by the Secretary) with a detailed report on the incident, and such further reports as may be requested.	The incident report will include: ■ a summary of the incident; ■ outcomes of an incident investigation, including identification of the cause of the incident; ■ details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and ■ details of any communication with other stakeholders regarding the incident.	Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Secretary

3.11.3 Emergency preparedness

EnergyAustralia has an established Emergency Response Plan and a Pollution Incidents Response Management Plan (PIRMP). These plans will be followed in case of an emergency. The emergency phoneline (02 4231 0810) is included in the induction and in the event of an emergency it can be dialled to alert the emergency response team.

The immediate actions in the event of an emergency are described in the Emergency Response Plan. When the Site Evacuation Alarm is actuated, an audible intermittent siren is heard around the plant. Red flashing beacons are located in high noise areas and on the roof of the Turbine Hall Building. All employees and contractors on sites are required to follow the actions below when the evacuation alarm is activated.

- STOP WORK,
- MAKE the workplace safe, if possible,
- ASSIST any injured persons where possible,
- SHUTDOWN all possible sources of ignition, electrical tools;
- PROCEED on foot to the Muster Point (with your visitors if applicable); and
- REPORT to the Muster Point Controller.

The primary Muster Point for On-shift EnergyAustralia Power Plant Technicians is the Operations Control Room.

3.12 Review and lodgement process

The OEMP will be regularly reviewed as part of the continual improvement process to make sure it remains current and relevant to the project. This review will be completed annually. EnergyAustralia will review, and where necessary, revise the document based on certain triggers being activated prompting a review.

In accordance with CoA 7.7, these triggers include reviewing the OEMP within 3 months, unless the Secretary agrees otherwise, of:

- The submission of an incident report under condition 5.1 of the Project Approval,
- The submission of an Independent Environmental Audit report under condition 5.11 of Project Approval,
- The approval of any modification to the conditions of Project Approval; or
- A direction from the Secretary under condition 1.3 of Project Approval.

EnergyAustralia will review and, if necessary, revise the studies, strategies or plans required under the CoA to the satisfaction of the Secretary. Where this review leads to revisions in any document, within 4 weeks of the review the revised document will be submitted to the Secretary for approval, unless otherwise agreed with the Secretary.

In accordance with condition 7.8 of the Project Approval, to ensure the studies, strategies and plans for the project are updated on a regular basis and incorporate any required measures to improve the environmental performance of the project, EnergyAustralia may submit revised studies, strategies or plans required for the project under the conditions of approval at any time.

EnergyAustralia workorder management system Maximo will be used to meet the specific timeframes and conditions of approval. The due dates and frequency are entered into Maximo as a preventative maintenance task (PM). The PM is set up to trigger a reminder 90 days prior to the due date. This prompts the responsible person to manage and meet the conditions of approval during operation.

4 Community and Stakeholder Engagement

4.1 Community consultation program

A Community Consultation Program (CCP) has been prepared to meet the CoA 6.5. The CCP will be implemented throughout the construction phase of the project and for at least the first 12 months of operation. The CCP includes:

- The general types of information on the timing, progress, construction, operation and environmental management of the project,
- The means by which the information would be provided to the community (for example, presented at regular meetings, published in regular newsletters etc),
- The spatial extent of the community to be consulted; and
- A mechanism through which the community can provide feedback to the Proponent in relation to the environmental management and impacts of the development.

4.2 Community Complaints and Access to Information

To comply with condition 6.2 of the Project Approval, EnergyAustralia will ensure that the following are available for community complaints for the life of the power station:

- A telephone number on which complaints about construction and operational activities at the site may be registered; 1800 574 947.
- A postal address to which written complaints may be sent; EnergyAustralia, Level 19, Two Melbourne Quarter, 697 Collins Street, Docklands VIC 3008
- An email address to which electronic complaints may be transmitted; **Tallawarra.Community@energyaustralia.com.au**.

Energy Australia has listed the community contact details to satisfy condition 6.2 on the webpage, The information is displayed on a sign at the entrance of the site and on the EnergyAustralia webpage. EnergyAustralia will publish the contact information in the newspaper circulating to the local area prior to commencement of operation.

Subject to confidentiality, EnergyAustralia will make all documents required under condition 6.4 of this approval available for public inspection upon request. EA will make sure the information is kept up to date, to the satisfaction of the Secretary.

4.3 Complaints Register

EnergyAustralia shall record details of all complaints received through the means listed in Section 4.2 above in an up-to-date Complaints Register. The Register will be provided to the Secretary upon request and record but not necessarily be limited to:

- the date and time of the complaint;
- the means by which the complaint was made (telephone, mail or email);
- any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
- the nature of the complaint;
- any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

5 Environmental Monitoring Plans

Environmental monitoring is designed to comply with regulatory requirements and the Project Approval and provide an ongoing analysis of the condition of the environment during operation. Monitoring results will be used to measure the effectiveness controls implemented on the site. Environmental monitoring is designed to assess potential impacts on the surrounding environment related to the project.

Specific monitoring requirements for weeds, soils and sediment, water, air and noise are outlined in the sub-plans of this OEMP (Section 5). It can be noted that operational noise criteria detailed within this OEMP applies cumulative to both Units 1 and 2.

5.1 Environmental sub plans

The following sub-plans are included in subsequent sections:

- Plume Validation Monitoring Program,
- Weeds management,
- Vegetation offset plan (included in Appendix D),
- Soil erosion and sediment management,
- Water Management Plan,
- Air Quality Management Plan;
- Noise Management Plan;
- Traffic Management Plan;
- Waste Management Plan; and
- Heritage Management Plan

5.2 Plume validation monitoring program

A Plume Validation Monitoring Program (PVMP) is required to address the requirement of Project Approval condition 1.6. Condition 1.6 requires a report to be submitted to the Planning Secretary to demonstrate that operation of an open cycle gas turbine plant will not have an adverse impact on aviation safety prior to the commencement of Unit 2 operation. In September 2021 and again in May 2023, DPE advised that the PVMP was to be approved by the Planning Secretary prior to operations. The PVMP will ensure that the monitoring location and monitoring data required is incorporated into the design and construction of the exhaust stacks and the plume dispersion devices.

A PVMP is currently being prepared separately to this OEMP. The project will consult with Shellharbour City Council while preparing the PVMP. The PVMP will be included as an appendix to this OEMP once submitted and approved by the Planning Secretary.

Prior to the report being submitted to the Secretary, the report will be agreed to by CASA. The latest correspondence from DPE has been included in Appendix I. EA will provide the remaining information as outlined in the letter dated 12 May 2023 and to the satisfaction of the Secretary.

5.3 Weeds management

Project Approval condition 7.4 c) iii) requires ongoing measures to monitor and manage weeds. The Project conducts a weed control program annually across the power station and the surrounding lands in line with *Biosecurity Act 2015* and South East Regional Strategic Weed Management Plan 2023-, governing the priorities in the region. The program is undertaken by the Illawarra District Weeds Authority (IDWA), that forms part of an ongoing weed control action plan to eradicate and/or contain State listed and local priority weeds that are considered to pose a significant biosecurity risk.

The IDWA provided a property inspection report for each inspection complete that outlines the actions required that EnergyAustralia must do to comply with the legislation. EnergyAustralia will use the IDWA inspection report as their action response plan as their ongoing measure to monitor and manage weeds at the power station as identified in Table 5-1.

The control of general weeds in areas such as fire protection zones, power station easements, lands surrounding the power station and areas targeted for vegetation controls which impact site safety are outlined in Figure 5-1: Weed Management Zones.

Table 5-1 Environmental management measures relevant to weeds

ID	Management measure	Where applicable	Responsibility	Source Document
General				
WE1	Annual Inspection of the Weed management Zones. EA will address any comments from IDWA Inspection report and satisfy the actions as required by the *Biosecurity Act 2015.*	Tallawarra Power Station	IDWA	Project Approval condition 7.4 c) iii

Figure 5-1: Weed Management Zones

5.4 Soil erosion and sediment management

The proposed long term operation activities are unlikely to require significant ground disturbance works and the ground is likely to remain undisturbed and relatively stable after rehabilitation activities. However, if in the unlikely event, significant ground disturbance is required, then controls are to be implemented as per the 'Blue Book' (*Managing Urban Stormwater: Soils and construction - Volume 1* (4th edition)) (NSW Government 2004).

Assessment of the vegetation offset site identified that soils are relatively stable with no significant erosion present. The proposed long-stem planting method does not require extensive ripping or disturbance of soil except at each individual planting point. Furthermore, the retention of groundcover in between each planting row will allow for sediment capture, as such sediment and erosion issues are expected to be minimal. Therefore, the implementation of erosion and sediment control features is not required and may lead to additional unnecessary disturbance if installed, provided that significantly soil disturbance does not occur.

If significant ground disturbance from vehicle tracks/augur holes or drainage line crossings significantly disturbs the soil, then sediment controls are to be implemented as per the 'Blue Book'.

5.5 Water Management Plan

5.5.1 Introduction

A Water Management Plan (WMP) has been prepared to address Project Approval condition 7.4 c) v. The purpose of this WMP is to provide a structured approach to the management of water impacts during operation of Unit 2. This plan defines the environmental management principles, processes, procedures, systems and tools to ensure effective environmental management of the site. The WMP will ensure that potential water quality impacts are minimised during the operation of the site.

5.5.2 Objectives

This plan outlines the objectives regarding water quality to achieve a discharge of clean storm water and treated water to the wetlands and Lake Illawarra. Table 5-2 outlines the objectives, targets and measurement tools to achieve minimal impact to Lake Illawarra.

Table 5-2 Water monitoring objective and targets

Aspect	Objectives	Targets	Measurement tools
Water quality	To comply with conditions of approval and legislative requirements and ensure that water discharged offsite from operational activities does not cause environmental harm.	No sediment impacts to the surrounding environment and waterways as a result of the activities. No off-site water quality impacts as a result of inadequate onsite controls.	Audits, compliance reporting, monitoring results, site inspections and management reviews.

5.5.3 Water streams

Tallawarra Power Station uses a total water cycle approach for the management of water within the boundaries of the site. The approach incorporates the following water management system:

- Water supply (raw water and potable water);
- Water treatment (demineralised water);
- Potentially contaminated (reject water and oily water) water system; and
- Stormwater system.

The current configuration of the Unit 2 water management system is shown in **Figure 5-2**

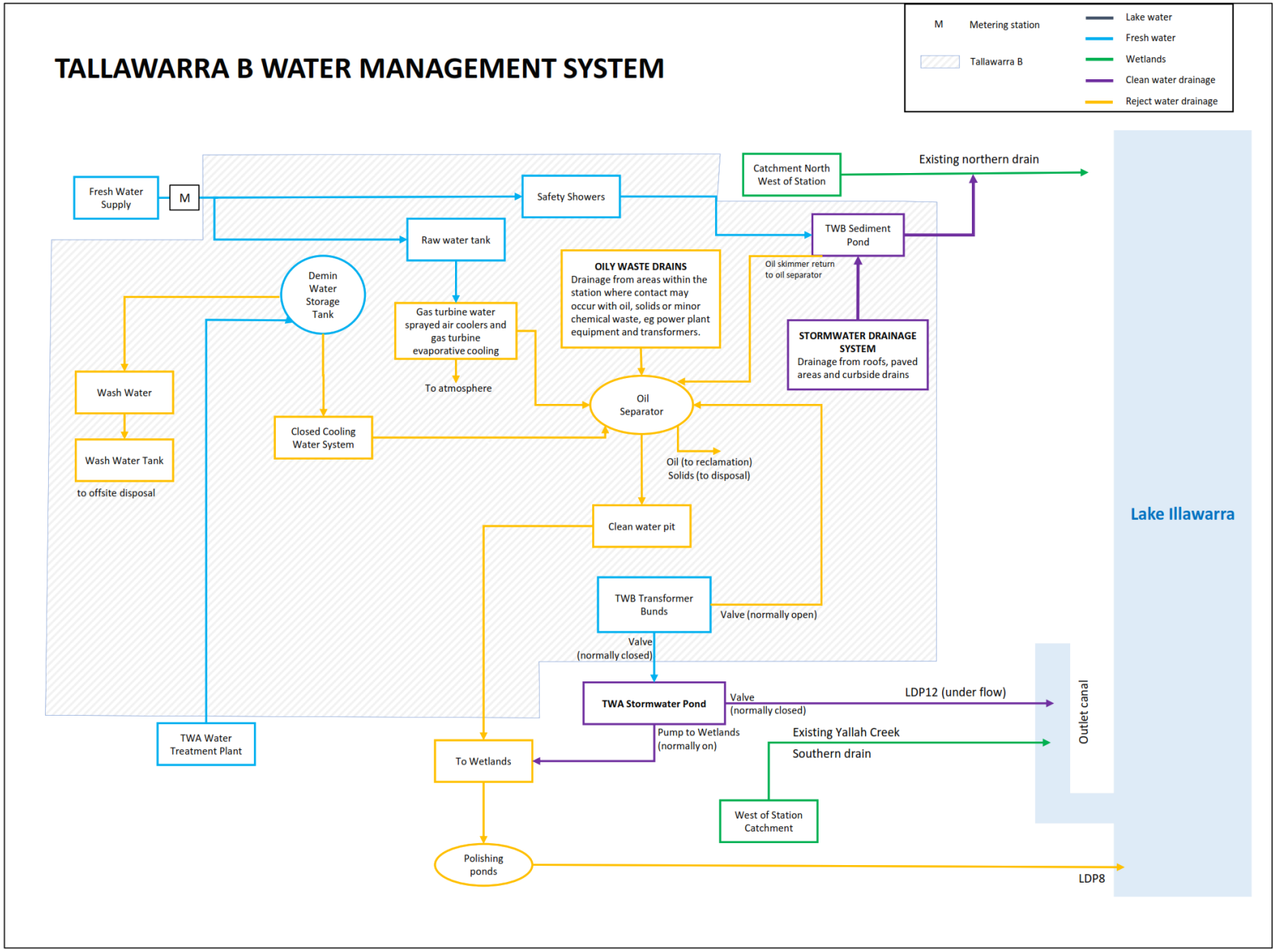


Figure 5-2: Tallawarra B (Unit 2) Water Management System

5.5.4 Water supply (raw water and potable water)

Fresh water will be sourced from the existing Sydney Water supply system and used for power generation, ancillary services and domestic use. It is estimated that 225kL of freshwater per day will be consumed by Unit 2. Potable water will be distributed as service water, by a duty / standby pump arrangement, to the various consumers in the Plant, which include:

- Evaporative inlet air cooling water make-up,
- Water sprayed air cooler (WSAC),
- Water Bath Heaters supply; and
- Safety showers.

5.5.5 Stormwater

The topography of the existing site condition is relatively flat and uniformly graded from one corner to another diagonal corner. The stormwater system is designed to manage the AEP 5% storm event. The surface water management will be maintained at pre-construction levels using surface water management techniques and to ensure there are no adverse effects for adjoining land... The drainage system will utilise the internal road network (road pavement together with concrete kerb) as surface stormwater collection and allow close interval kerb side openings to let the collected stormwater flow into a road side drain. The kerb side openings where required will be designed to allow collected surface runoff to be drained into the drains as quickly as possible to avoid excessive water covering the road pavement.

The stormwater runoff shall be deemed to be free from hydrocarbon and chemical contamination. Stormwater that falls in bunded areas may be contaminated with hydrocarbons and will drain to the oily water treatment system. Stormwater drainage should go through the sediment pond except for flows from outside the development boundaries which are directed to flow around the site and back to the natural course downstream. The TWB sediment pond water will be discharged into the existing northern drain. An oil skimmer is installed at the TWB sediment pond and will divert detected oily water at the pond to the oil separator for treatment.

5.5.6 Wastewater, reject water and oily water management

Wastewater from pits and bunded areas that could be contaminated with oil, solids and chemicals, will be captured and sent to the oily water separator. An estimated volume of 24 kL/day of waste water could be produced. The predominant source originates from the Gas Turbine evaporative cooler. The drain systems on site will be segregated so the potentially contaminated water will be managed separately to stormwater. The oily water treatment will separate the oil from water and the oil will be transferred to a waste oil tank for pump out and removal from site. The treated water will be transferred to the wetlands and polishing pond system.

In the event of a transformer fire and the deluge system is activated, water from the transformer bunded areas, operators must operate three valves that will divert the water from the oily water separator and isolate the water at the TWA stormwater pond. If these valves are not operated, the water will overflow from the bunds and flow to the TWB retention pond and enter Lake Illawarra. TWA stormwater pond has the volume capacity to capture the water produced in the event of a transformer fire.

Washdown wastewater from the gas turbine will contain a mix of water detergent and oils. The wash wastewater is unable to be directed to the oily water treatment system due to the presence of detergents. The water is collected and directed to the dedicated wash water tanks.

The following dot points outline the process of managing reject water:

- Any oil and floating solids at the sedimentation pond will be skimmed off and sludge pumped out and appropriately deposited off site.
- Treated reject wastewater will be pumped to the water treatment wetland and polishing pond system, before discharging into Lake Illawarra near Wollingurry Point (EPL licence discharge point LDP8).

- Oil booms from the oil spill response kit will be implemented at the end of the outfall canal to collect oil and debris, as a further safeguard in the extremely unlikely event of an oil spill into the outfall canal. This measure is in line with the PIRMP.

5.5.7 Wetlands and polishing pond system

Treated process water from the power station will be directed to the wetland. The wetland is designed to treat an average of 41 kL/day. The wetland has been constructed with a clay lining to minimise seepage into the local groundwater. The purpose of the wetland and pond is to allow silt, nutrients and trace elements in the water flow to reduce to an acceptable level. Any overflow from the settling basins would enter Lake Illawarra at EPL LDP8 and will be managed in accordance with EPL555.The western catchment of the wetlands flows to ducks creek and the catchment north of the station flows to the existing northern drain. These catchments do not flow through to LDP8.

5.5.8 Unplanned water discharges

Stormwater runoff from the site is designed to enter the TWB retention pond and discharge to the existing northern drain. During heavy periods of rain, stormwater will continue to flow to the TWB retention pond. Unplanned water discharges will result in excessive water flooding and the unplanned water discharge through TWA stormwater pond and overflow is allowed to discharge from site at EPL identification point 12. This is activated by an underflow weir at the sediment stormwater retention pond south east corner that feeds into the outlet canal (Lake Illawarra). The discharge at EPL identification point 12 is associated with events where the volume and quality of the discharge is a function of the wet weather event. The unplanned discharge will be managed in accordance with EPL 555 requirements.

5.5.9 Flooding emergency response procedure

Section 5.5.5 addressed the stormwater AEP event. To prevent damage to builds, infrastructure and equipment, the following freeboards are installed:

- For the critical AEP 1% storm event, a 150mm freeboard shall be provided to all equipment bases (top of skid) or building floor levels (whichever is lower). The 150mm is measured from probable maximum flood (PMF) level which has been determined at 3.24m AHD.
- For the critical AEP 1% storm event there shall be no inundation of equipment or building floor level whichever is lower) of 3.39m AHD (3.24m + 0.15m).

In the event of a flooding emergency, the Emergency Response Plan will be followed. Refer to Section 3.11.3 for further details on emergency preparedness.

5.5.10 Environment measures

A range of environmental requirements will be implemented to manage water quality impacts. Specific water quality related measures are outlined in Table 5-3.

Table 5-3 Environmental management measures relevant to water

ID	Management measure	Where applicable	Responsibility	Source Document
General				
W1	EnergyAustralia will comply with section 120 of the *Protection of the Environment Operations Act 1997* which prohibits the pollution of waters, unless where permitted in the Environment Protection Licence 555	Tallawarra Power Station	HSE Specialist	Project Approval condition 3.30 EPL 555
Stormwater management scheme				
W2	During heavy periods of rain, wet weather stormwater overflow is allowed to discharge from site at EPL identification point 12.	Tallawarra Power Station	HSE Specialist	EPL 555
W3	TWB settling basin will be used to remove coarse material from runoff water and minimise further sedimentation in Lake Illawarra.	Unit 2	HSE Specialist	Statement of Commitment no.4
W4	Runoff water quality (captured that report to the oil water separator) will be improved through the use of specially designed traps which will remove oil and grit from runoff water. This will enable recycling of the captured oil, and offsite disposal of the solids. The continued use of the existing constructed wetlands will further improve water quality through removal of excess nutrients and toxicants.	Unit 2	HSE Specialist	Statement of Commitment no.3
W5	Oil and grit traps will be used to capture stormwater runoff to improve water quality. Captured oil will be recycled, while captured solids will be taken offsite for disposal.	Unit 2	HSE Specialist	Statement of Commitment no.3
W6	An oil skimmer has been installed for the sediment pond. Oil spill response kits have been placed at the outfall canal.	Unit 2	HSE Specialist	Statement of Commitment no.5
Miscellaneous				
W7	Subject to any future development of Tallawarra Lands and the availability of sewer EnergyAustralia intend to connect to this system.	Tallawarra Power Station	HSE Specialist	Statement of Commitment no.6

5.6 Air Quality Management Plan

5.6.1 Introduction

An Air Quality Management Plan (AQMP) has been prepared to address Project Approval condition 7.5. The purpose of this AQMP is to provide an approach to manage air quality impacts during operation of the Unit 2. This plan defines the environmental management principles, processes, procedures, systems and tools for effective environmental management of the site. EnergyAustralia will ensure the stacks associated with the project be marked and lit in accordance with the requirements of the CASA.

Where aviation hazard lighting is recommended by CASA and/or AirServices Australia, all reasonable and feasible attempts shall be made to ensure that this lighting is designed and directed so as not to create a nuisance to the surrounding environment, properties and roadway.

5.6.2 Key air quality impacts

This plan outlines the appropriate controls are in place to avoid and/or minimise the following key potential aspects during the operational phase of the project include:

- Dust generation;
- Odour;
- Discharge to air;
- Mass emission limits; and
- Aviation safety.

Table 5-4 Air quality objectives and targets

Aspect	Objectives	Targets	Measurement tools
Air quality	To comply with conditions of approval and legislative requirements and ensure that air quality from construction activities does not cause an environmental nuisance to sensitive receivers	No visual emissions of dust produced as a result of operational activities. Compliance with conditions of approval relating to air emission limits. No valid air quality complaints resulting from operational activities.	Audits, compliance reporting, monitoring results, complaints register, management reviews.

5.6.3 Greenhouse gas emissions

This plan outlines the appropriate controls are in place to avoid and/or minimise the following key potential aspects that could result in adverse impacts to air quality during the operational phase of the project include:

- Natural gas extraction,
- Combustion of natural gas at the power stations; and
- Operation of vehicles and plant emissions.

Table 5-5 below identifies the major sources of particulate and gaseous air pollutants along with emission scenarios and quantities of the emissions as required by condition 7.5 a i. These quantities were used as the input data for the air quality assessment undertaken by Katestone Environmental Pty Ltd (Katestone) (2020).

Table 5-5: Major particulate and gaseous air pollutant source (Source: Table 11 of Katestone, 2020)

Pollutant	Emission scenario	Quantity
Emission concentrations		
NO_X	Maximum Load (100% Load)	50 mg/Nm3 (dry, 15% O2)
	Minimum Environmental Load (MEL)	50 mg/Nm3 (dry, 15% O2)
PM	100% Load	5 mg/Nm3 (dry, 15% O2)
	MEL	5 mg/Nm3 (dry, 15% O2)
Emission rates (total)		
NO_x	100% Load	35.8 g/s
	MEL	18.2 g/s
$PM_{2.5}$	100% Load	3.6 g/s
	MEL	1.8 g/s
PM_{10}	100% Load	3.6 g/s
	MEL	1.8 g/s

The potential for impacts on air quality will depend on a number of factors including plant type, fuel quality and ambient conditions. Primarily impacts will be dependent on the nature, extent and magnitude of operational activities and their interaction with the natural environment. The potential impacts to air quality during the operational phase of the project may include:

- Direct release of greenhouse gas emissions into the environment; and
- Health and safety impacts.

Katestone (2020) has considered the greenhouse gas impacts of the Project for Mod-2. It concluded that annual greenhouse gas emissions from the modified proposal are anticipated to be lower by 20% when compared to the two E-Class open cycle gas turbine in the original EIS.

5.6.4 Air Emissions and EPL 555 monitoring points

Discharge Limit

During operation of Unit 2, EnergyAustralia will ensure there are no exceedances in discharge limit at the applicable areas identified in Table 5-7.

EPL555 Identification Points (EPA ID)

Table 5-6 outlines the type and description of each monitoring point under EPL 555. Figure 5-3 illustrates the location of EPA ID 13 (Unit 2 Stack) point at the site.

Table 5-6 Environment Protection Licence 555 Identification points

EPA ID No.	**Type of Monitoring Point**	**Description**
1	Discharge to utilisation area	Spray irrigation area
2	Effluent quality monitoring	Treated sewage sampling port in effluent line from the effluent collection pout to the utilisation area
3	Volume monitoring	Treated sewage volume monitoring via magnetic flow meter
4	Ambient water monitoring	Inlet waters to the Power Station
5	Discharge to waters, discharge quality monitoring	Cooling water discharge into the outlet canal downstream of the attemperation mixing zone
6	Ambient water monitoring	The waters of Lake Illawarra at the seagrass beds south of Wollingurry point.
7	Ambient water monitoring	The waters of Lake Illawarra at Koonawarra Bay
8	Discharge quality monitoring	Drain leading from the water treatment wetland just upstream of the discharge at Wollingurry Point
9	Discharge to air. Air emissions monitoring	Tallawarra Power Station Unit 1 Stack
11	Weather monitoring	Weather station
12	Wet weather discharge	Outlet pipe from the southeast corner of the Unit 1 (TWA) stormwater basin
13	Discharge to air. Air emissions monitoring	Tallawarra Power Station Unit 2 Stack

Figure 5-3: Air quality monitoring locations and associated EPA identification numbers

The discharge limit only applies to the normal operation of a turbine and does not apply during the start-up and shutdown period. The limit continues to apply to other turbines if they are operational during these periods.

Start-up period is defined as the period which the plant is being brought up to normal operation following a period of inactivity. While shutdown period is defined as the period the plant is being taken out of service from normal operation to inactivity.

Table 5-7: Maximum allowable discharge concentration limits

Pollutant	Unit of measure	100% limit	Reference conditions	Averaging Period	Where applicable
Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent	ppm	25	Dry, 273°K, 101.3 kPa, 15% O_2	1-hour	EPA identification number 1 (according to Project Approval). EPA Identification no. 13 (according to EPL555)

Mass limit

EnergyAustralia will ensure the total cumulative load from the combined discharges of the Unit 1 and Unit 2 does not exceed the limits identified in Table 5-8. The mass limit will also apply to emissions during start-up and shut-down periods.

Table 5-8: Maximum allowable mass limits

Assessable Pollutant	Load limit (tonnes per annum)
Nitrogen oxides	900

5.6.5 Air emissions management and controls

GT Model Based Control (MBC) is a control designed to improve the performance and operational flexibility of the gas turbine. The MBC uses real time modelling to calculate and maintain necessary boundary margins across the operational range of the Unit. MBC looks at the difference between target and measured feedback on key parameters with the use of logic, boundaries and sequence commands. An example of the MBC process is the start-up process of the Unit. When the Operator selects the 'STARTUP' on the control system, logic is activated, and the system continuously checks the plant boundaries throughout the start-up process. Certain boundary conditions must be satisfied otherwise the unit will not start. Therefore, the process for maximising the efficiency of the start-up (and shutdown) process is automated through the MBC.

The MBC is also used for combustion dynamics actually measures the dynamic boundaries in real time and feed the outputs to the MBC which then adjusts the combustion process to maintain the highest generating efficiency. The automated logic in the MBC provides pro-active measures in responding and reducing elevated emissions from the project.

The use of an automated control system to maximise efficiency in start-up and shut down processes, minimise greenhouse gas emissions per electricity generated and minimise gaseous and particulate emissions during the project will satisfy the conditions 7.5 a) I to 7.5 a) v. This technology has improved the performance of the turbine up to:

- a 50% reduction in start-up time and fuel consumption, significantly reduced start time variation and
- a 50% reduction in start-up emissions.

The OEM operation and maintenance manual defines maintenance activities to achieve efficient and reliable operation. EnergyAustralia will follow the regular maintenance regime to maintain plant and equipment to minimise the potential for leaks and fugitive emissions. . EnergyAustralia will follow the OEM manual and maintenance activities to

- maximise generating efficiency per unit of electricity generated;
- minimise potential elevated air quality impacts for gaseous, particulate and fugitive emissions; and
- maintain efficient operation of the plant during start up and shut down periods.

The gas turbine has dry low NOx burners that have been designed for low NOx emissions to meet the discharge limit of 25 ppm. A continuous emissions monitoring system (CEMS) has been installed to monitor NOx emissions on a continuous basis. Further air quality controls are listed in Table 5-10.

Should an incident, process upset or other initiating factor lead to elevated air quality impacts, EnergyAustralia will follow the incident response and investigation procedure as outlined in section 3.9.

5.6.6 Review of Air Quality data

The NOx monitoring data collected by the CEMS will be reviewed monthly and published on EnergyAustralia website as required by EPL555. The monitoring data will be regularly (at least once per year) reviewed that compares the monitoring results against the predictions made in the Environment Assessment document listed under condition 1.1c.

5.6.7 Air quality monitoring

EnergyAustralia will undertake environmental monitoring of air quality as identified in Table 5-9.

Table 5-9 Air Quality Monitoring Plan

Monitoring requirement	Location	Parameters (Unit of measure)	Frequency	Methodology	Reporting	Responsibility	CoA Reference
Air Quality Monitoring Plan	Unit 2 stack (EPA ID 13)	▪ Nitrogen Dioxide NO_2) or Nitic oxide (NO) or both, as NO_2 equivalent (ppm) ▪ Moisture (%) ▪ Oxygen (%) ▪ Temperature (°C) ▪ Velocity (m/s) ▪ Volumetric flow rate (m^3/s)	Continuous monitoring	Air monitoring will be undertaken: ▪ In accordance with Approved Methods for the *Sampling and Analysis of Air Pollutants in NSW* (EPA, 2022), or its latest version. ▪ Under maximum load as required by condition 4.7	Annual Compliance report to DPIE Annual Return report to NSW EPA.	Specialist stack testing consultant on behalf of Tallawarra	Condition 4.7 and 7.5

Air Quality Performance Monitoring Verification	Unit 2 stack	▪ Nitrogen Dioxide NO_2) or Nitic oxide (NO) or both, as NO_2 equivalent ▪ Moisture ▪ Oxygen ▪ Temperature ▪ Velocity ▪ Volumetric flow rate	One off performance verification monitoring. Within six months of the commencement of operation of the project, or as may be agreed or directed by the Secretary, and during a period in which the project is operating at both maximum design loads and under normal operating conditions.	▪ The assessment shall be undertaken strictly in accordance with the methods outlined in Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2017), or its latest version and shall include: ▪ a comparison of the results of the above air quality impact assessment and the predicted air quality impacts detailed in the Air Quality Assessment, Tallawarra B Permit Modification: Air Quality Assessment, EnergyAustralia, Katestone, dated June 2020; ▪ a comparison of the results of the air quality impact assessment and the impact assessment criteria detailed in *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2017), or its latest version; and	A report providing the results of the program shall be submitted to the Secretary and EPA within two months of completion of the testing program required under 4.8a) for both operating scenarios.	HSE specialist and stack testing consultant	Condition 4.8 and 4.9

Monitoring requirement	Location	Parameters (Unit of measure)	Frequency	Methodology	Reporting	Responsibility	CoA Reference
				▪ details of any entries in the Complaints Register relating to air quality impacts.			
Weather monitoring	Weather station	▪ Rainfall (mm) ▪ Wind speed @ 10 metres (m/s) ▪ Wind direction @ 10 metres (°) ▪ Temperature @ 2 metres (°C) ▪ Temperature @ 10 metres (°C) ▪ Sigma theta @ 10 metres (deg) ▪ Solar radiation (W/m^2) ▪ Additional requirements ▪ Siting ▪ Measurement	Continuous	Weather monitoring will be undertaken: In accordance with EPA *Ambient air monitoring guidance note* (EPA, 2022), or its latest version To the data averaging periods as required by the condition.	Annual Compliance report to DPIE Annual Return report to NSW EPA.	HSE Specialist	Condition 4.14

5.6.8 Environmental management measures

A range of environmental requirements and mitigation measures are identified in the Project Approval, Development Consent, EPL 555 and the EA will be implemented to minimise or manage air quality impacts.

Specific air quality related safeguards and management measures to address impacts associated with Tallawarra power station are outlined in Table 5-10.

Table 5-10 Environmental management measures relevant to air quality

ID	Management measure	Where applicable	Responsibility	Source Document
General				
AQ1	The gas turbines will only operate on natural gas.	Tallawarra Power Station	Plant operator	EPL 555
Dust				
AQ2	Practicable dust management measures will be implemented, including cessation of relevant works where appropriate, such that emission of visible dust, including wind-blown and traffic-generated dust, is minimised during all operational activities.	Tallawarra Power Station	HSE Specialist	Project Approval Condition 3.19 EPL 555
Emissions				
AQ3	No exceedances to discharge limit for the pollutant parameters at the applicable areas as identified in Table 5-7.	Tallawarra Power Station	Plant operator	Project Approval Condition 3.24
AQ4	The total cumulative load from the combined discharges of the Unit 1 and 2 power stations does not exceed the following limits: ▪ Nitrogen oxides – 900 tonnes/year	Tallawarra Power Station	Plant operator	Project Approval Condition 3.25 EPL 555
AQ5	A continuous NOx monitoring system will be installed on site to determine the annual NOx load.	Unit 2	HSE Specialist	Project Approval condition 7.5 Statement of commitment no.3
Odour				
AQ6	Any offensive odour, as defined under section 129 of the *Protection of the Environment Operations Act 1997*, will not be emitted beyond the project site boundary. Site inspections shall identify if offensive odour has a potential presence onsite. The HSE team will be notified.	Tallawarra Power Station	HSE Specialist	Project Approval condition 3.20 EPL 555
Monitoring				
AQ7	The weather monitoring station will be installed at the location labelled as EPA identification number 11. Weather monitoring station will monitor for rainfall, wind speed, temperature, sigma, solar radiation and other parameters outlined in Table 5-9.	Tallawarra Power Station	HSE Specialist	Project Approval condition 4.14

ID	Management measure	Where applicable	Responsibility	Source Document
AQ8	An air quality performance verification program for Unit 2 will be undertaken to confirm the air emission performance and to compare against the relevant criteria limits within six months of the commencement of operation of the project and during the operation at both maximum design loads and under normal operating conditions.	Unit 2	HSE Specialist	Project Approval condition 4.8
AQ9	National Greenhouse and Energy Reporting will be undertaken and report on the ongoing monitoring of greenhouse gas emissions.	Unit 2	HSE Specialist	EPL 555 Statement of commitment no.6 and 7
AQ10	Annual monitoring results from the operating emission load of Unit 1 and 2 power station will be used to determine if emission offset is required. If the need for emission offset is required, the specific details of the relevant activities would be approved in accordance with the relevant sections of the *Protection of the Environment Operations Act 1997* (POEO Act).	Tallawarra Power Station	HSE Specialist Plant operator	Statement of commitment no.4
AQ11	As required by the Air Quality Performance Verification, In the event that results of the air dispersion modelling (as required under condition 4.8) indicates that the operation of the project, under maximum design loads or normal operating conditions, will lead to: a) greater point source emissions of air pollutants than permitted under Table 5-7; or b) greater ground-level concentrations of air pollutants than the impact assessment criteria detailed in Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA 2017); then EnergyAustralia shall provide details of remedial measures to be implemented to reduce point source emissions and/ or ground-level concentrations of air pollutants to no greater than permitted under the Project Approval as modified. Details of the remedial measures and a timetable for implementation shall be submitted to the EPA for approval within such period as the EPA may require, unless agreed otherwise by Secretary.	Unit 2	HSE Specialist	Project Approval condition 4.9

5.7 Noise Management Plan

5.7.1 Introduction

An operational noise management plan (NMP) has been prepared to address Project Approval condition 7.5. The purpose of this NMP is to manage the cumulative noise contribution from operating Unit 1 and Unit 2 to the ensure the background acoustic environment noise limits is not exceeded.

The definition for day, evening and night periods, throughout this plan, are to be taken as the following:

- Day: 7:00am to 6:00pm Mondays to Saturdays; 8:00am to 6:00pm Sundays and public holidays.
- Evening: 6:00pm to 10:00pm on any day.
- Night: 10:00pm to 7:00am Mondays to Saturdays; 10:00pm to 8:00am Sundays and public holidays.

5.7.2 Key potential noise impacts

Key aspects during the operational phase of the project include:

- Individual operation of Unit 1 or Unit 2,
- Cumulatively operation of the Unit 1 and Unit 2;
- Start up and shutdown of either Unit 1 or Unit 2; and
- Changes to local meteorological conditions which may exacerbate noise impacts.

Operational activities that will be carried out during operation of the plant that may influence noise include:

- Gas pipeline venting
- Operation of gas control valves during startup and shutdown

5.7.3 Objectives and targets

Table 5-11 contains the environmental objectives and targets relevant to noise management. These objectives and targets have been developed with the compliance requirements, contractual obligations, risks and opportunities taken into consideration.

Table 5-11 Noise Objectives and Targets

Aspect	Objectives	Targets	Measurement tools
Noise	Comply with conditions of approval and to ensure that noise from operational activities does not cause environmental nuisance to sensitive receivers.	No valid noise complaints resulting from operational activities. Compliance with all conditions of approval relating to noise limits and noise management measures.	Audits, compliance reporting, monitoring results, complaints register, management reviews.
Complaints	Noise complaints are investigated and responded to appropriately.	To ensure all noise, vibration complaints are investigated and responded to appropriately	Audits, compliance reporting, monitoring results, complaints register, management reviews.

5.7.4 Operational Noise criteria

EnergyAustralia have prepared and will implement the noise monitoring program to assess compliance against the operational noise criteria stipulated in Table 5-12 and Table 5-13. The noise monitoring program shall be prepared in consultation with, and to the satisfaction of, the EPA. Noise monitoring is to be consistent with the guidelines provided in the Noise Policy for Industry (NSW EPA, 2017). These criteria apply to cumulative noise generation from both Units 1 and 2. The location of these monitoring points is

illustrated in

Figure 5-4.

The weather station as identified in Figure 5-3 of the Air Quality Management Plan will record data and be used for determining meteorological conditions during noise monitoring. The noise limits set out in Table 5-12 and Table 5-13do not apply under: wind speeds greater than 3 metres per second (measured at 10 metres above ground level); or under stability category G temperature inversion conditions; or under stability category F temperature inversion conditions and wind speeds greater than 2 metres per second at 10 metres above the ground.

The stability category temperature inversion conditions will be determined by the sigma-theta method outlined in the Noise *Policy for Industry* (NSW EPA, 2017).

Table 5-12 Maximum Allowable Noise Limits Outside the Tallawarra Lands (CoA Table 1)

Location	Description	Day	Evening	Night	
		$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{Amax}
Locality T2 (A)	Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, in Koonawarra	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)
Locality T4 (B)	Any residence on Wyndarra Way and Malonga Place in Koonawarra	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)
Locality ML#9 (C)	Any residence on The Boulevarde, Park Crescent, Horsley Road and Newton Crescent in Oak Flats	38 dB(A)	38 dB(A)	38 dB(A)	45 dB(A)
Locality ML#10 (D)	Any residence on Reddall Parade and Henricks Parade in Mt Warrigal	38 dB(A)	38 dB(A)	38 dB(A)	45 dB(A)
Locality ML#11 (E)	Any residence in Haywards Bay	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)

Notes: For the purpose of this table, ‘residence’ is defined as any residential dwelling existing at the date of this approval and any residential dwelling, once constructed, on land zoned R2 – Low Density Residential under the Wollongong Local Environmental Plan 2009 at the identified locality.

Table 5-13 Noise Limits for Tallawarra Lands Residential Areas (CoA Table 2)

Locations	Day	Evening	Night	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{Amax}
Most affected residence – proposed northern residential area	If the *Noise Policy for Industry* (NSW EPA, 2017) Modification Factors for Low Frequency Noise apply 40 dB(A), otherwise 38 dB(A)	If the *Noise Policy for Industry* (NSW EPA, 2017) Modification Factors for Low Frequency Noise apply 40 dB(A), otherwise 38 dB(A)	If the *Noise Policy for Industry* (NSW EPA, 2017) Modification Factors for Low Frequency Noise apply 40 dB(A), otherwise 38 dB(A)	50 dB(A)
Most affected residence – proposed central residential area	40 dB(A)	40 dB(A)	40 dB(A)	50 dB(A)
Most affected residence – proposed south-western residential area	41 dB(A)	41 dB(A	41 dB(A	51 dB(A

Notes: For the purpose of this table, 'residence' is defined as any residential dwelling once constructed, either prior to or post construction and operation of the power station, on land zoned R2 – Low Density Residential or R5 – Large Lot Residential under the Wollongong Local Environmental Plan 2009 within the proposed residential areas.

In instances where Modification Factors for Low Frequency Noise apply, noise monitoring is to include an assessment of modifying factors in accordance with Fact Sheet C of the Noise Policy for Industry 2017. This is where noise is assessed for annoying characteristics such as tonal, low frequency or intermittent noise and a penalty may be added to the measured noise level.

Figure 5-4: Noise Monitoring Locations

5.7.5 Operational Noise review

In agreement with DPE (letter dated May 2023) EA agreed to undertake the Operational Noise Review (ONR) during the commissioning phase of the project, bringing forward the schedule of this activity (stated as within 90 days of commencement of operation in condition 4.1). The ONR methodology and reporting will be undertaken as per condition 4.1 and has been prepared in consultation and to the satisfaction of the EPA. The report will be submitted to the Secretary and the EPA within 90 days of completion of the monitoring. The report shall include, but not necessarily be limited to:

- a description of the methodologies for noise monitoring, including the location of monitoring sites and frequency of monitoring, documentation of the operational noise levels at the locations defined in Table 1 and Table 2 of this approval as ascertained by the noise monitoring program;
- an assessment of the noise performance of the project against the noise limits specified in Table 1 and Table 2 of this approval and the predicted noise levels as detailed in the report referred to under condition 1.1c) of this approval;
- details of the meteorological conditions prevailing during the monitoring; and
- details of any entries in the Complaints Register (condition 6.3) relating to noise impacts.

Once the operational noise levels have been confirmed, EnergyAustralia will notify landowners that are entitled to 'at-receiver' noise treatment and/or land acquisition rights. Confirmation of operational noise levels for the purpose of at-receiver' noise treatment and/or land acquisition rights means:

- the completion of the operational noise review; and
- implementation of any source controls required in the non-compliance report, where required; and
- monitoring of operational noise levels following the implementation of any source controls, where required.

5.7.6 Non-compliance report

Where Operational Noise Monitoring or ONR identifies any non-compliance with the noise criteria a non-compliance report will be prepared and submit to the Secretary for approval. The non-compliance report will include the following:

- an assessment of all reasonable and feasible physical and other mitigation measures for reducing noise at the source;
- identification of the preferred measure(s) for reducing noise at the source;
- evidence that the NSW EPA is satisfied that the proposed noise mitigation measures are acceptable; and
- location, type, timing and responsibility for implementation of the noise mitigation measure(s).

The non-compliance report will be prepared and submitted to the Secretary within 90 days of undertaking the noise monitoring which has identified the exceedances of the operational noise criteria, unless otherwise agreed to by the Secretary. EnergyAustralia will implement all reasonable and feasible mitigations measures in accordance with the requirements of the Secretary.

5.7.7 At- receiver noise criteria

Relevant additional noise mitigation criteria outside the Tallawarra Lands, as identified within Table 3 of the Project Approval as modified, is detailed within Table 5-14 below. Additional noise mitigation criteria for Tallawarra Lands residential areas, as identified within Table 4 of the Project Approval as modified, is detailed within Table 5-15 below.

Table 5-14: Additional Noise Mitigation Criteria Outside the Tallawarra Lands (CoA Table 3)

Locations	Description	Day	Evening	Night
		$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Locality T2 (A)	Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, in Koonawarra	40 dB(A)	40 dB(A)	40 dB(A)
Locality T4 (B)	Any residence on Wyndarra Way and Malonga Place in Koonawarra	41 dB(A)	41 dB(A)	41 dB(A)
Locality ML#9 (C)	Any residence on The Boulevarde, Park Crescent, Horsley Road and Newton Crescent in Oak Flats	41 dB(A)	41 dB(A)	41 dB(A)
Locality ML#10 (D)	Any residence on Reddall Parade and Henricks Parade in Mt Warrigal	40 dB(A)	40 dB(A)	40 dB(A)
Locality ML#11 (E)	Any residence in Haywards Bay	47 dB(A)	47 dB(A)	47 dB(A)

Table 5-15: Additional Noise Mitigation Criteria for Tallawarra Lands Residential Area (CoA Table 4)

Locations	Day	Evening	Night
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Most affected residence – proposed northern residential area	43 dB(A)	43 dB(A)	43 dB(A)
Most affected residence – proposed central residential area	43 dB(A)	43 dB(A)	43 dB(A)
Most affected residence – proposed south-western residential area	44 dB(A)	44 dB(A)	44 dB(A)

5.7.8 Additional noise mitigation measures

If the at-receiver noise limits in Table 5-16 and Table 5-17 are still exceeded even after the implementation of reasonable and feasible measures and a written request from the landowner is received. EnergyAustralia will investigate reasonable and feasible at-receiver noise mitigation measures will be implemented in consultation with the landowner, to ensure the operational noise limits as specified in condition 3.5 are not exceeded. Noise mitigation measures may include:

- double glazing,
- insulation,
- air conditioning and or
- other building acoustic treatments at any residence on the land,

EnergyAustralia shall make a binding written offer to the landowner regarding the mitigation options that can be implemented at the property. If within three months of receiving this request from the landowner and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution, whose decision shall be final. If the landowner refuses to accept the Proponent's offer within six months of the date of offer, the Proponent's obligations to provide additional mitigation measures at the property or land shall cease, unless otherwise agreed by the Secretary.

Any landowner that has agreed to, or property that has been the subject of, the application if additional noise mitigation measures under condition 3.7 of this approval waives the right to land acquisition, per condition 3.13, unless otherwise agreed by the Secretary. If an agreement exists between the landowner and EnergyAustralia, CoA 3.7 to 3.10 do not apply if a negotiated agreement consistent with the requirements of Noise Policy for Industry (NSW EPA, 2017) exists between the Proponent and the landowner.

5.7.9 Land acquisition noise criteria

Relevant land acquisition criteria for residential receivers outside the Tallawarra Lands, as identified within Table 5 of the Project Approval as modified, is detailed within **Table 5-16** below. Relevant land acquisition criteria for Tallawarra Lands residential areas, as identified within Table 6 of the Project Approval as modified, is detailed within **Table 5-17** below.

Table 5-16: Land acquisition criteria for residential receivers outside the Tallawarra lands (CoA Table 5)

Locations	Description	Day	Evening	Night
		$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Locality T2 (A)	Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, in Koonawarra	43 dB(A)	43 dB(A)	43 dB(A)
Locality T4 (B)	Any residence on Wyndarra Way and Malonga Place in Koonawarra	44 dB(A)	44 dB(A)	44 dB(A)
Locality ML#9 (C)	Any residence on The Boulevarde, Park Crescent, Horsley Road and Newton Crescent in Oak Flats	44 dB(A)	44 dB(A)	44 dB(A)
Locality ML#10 (D)	Any residence on Reddall Parade and Henricks Parade in Mt Warrigal	43 dB(A	43 dB(A	43 dB(A
Locality ML#11 (E)	Any residence in Haywards Bay	50 dB(A)	50 dB(A)	50 dB(A)

Table 5-17: Land Acquisition Criteria for Tallawarra Lands Residential Areas (CoA Table 6)

Locations	Day	Evening	Night
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Most affected residence – proposed northern residential area	46 dB(A)	46 dB(A)	46 dB(A)
Most affected residence – proposed central residential area	46 dB(A)	46 dB(A)	46 dB(A)
Most affected residence – proposed south-western residential area	47 dB(A)	47 dB(A)	47 dB(A)

5.7.10 Land acquisition

EnergyAustralia will provide written notification to all landowners that are entitled to land acquisition rights within 21 days of determining the landholdings to which land acquisition rights apply.

Landowner/property is not eligible for land acquisition in the following scenarios:

- In accordance with condition 3.13 of the Project Approval, if a landowner that has agreed to, or property that has been the subject of, the application of at-receiver noise treatment.
- In accordance with condition 3.16 of the Project Approval, if a landowner has already agreed to an offer of acquisition, or an offer of acquisition has been previously made and refused by the landowner, then the obligations to re-consider the landowner's request or property will cease, unless otherwise agreed by the Secretary.
- In accordance with condition 3.17 of the Project Approval, if a negotiated agreement that is consistent with the requirements of *Noise Policy for Industry* (NSW EPA, 2017) exists between the relevant landowner and EnergyAustralia.

EnergyAustralia will only acquire the land from the affected landowner upon receiving a written notification from the landowner requesting for acquisition of the land. Noting that the acquisition request can only be made within two years of the date of that landowner was notified of his/her acquisition rights.

5.7.11 Land acquisition binding offer

EnergyAustralia will make a binding written offer to the affected landowner with acquisition rights within three months of receiving the written acquisition request from the landowner. The binding offer will include the following:

- the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project subjected within the Project Approval, having regard to the following:
  - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request,
  - presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date;
- the reasonable costs associated with, including but not limited to:
  - relocating within the Wollongong or Shellharbour local government areas,
  - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and
- reasonable compensation for any disturbance caused by the land acquisition process.

If, at the end of the binding offer period, the landowner and EnergyAustralia cannot come to an agreement on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution. Refer to Section 5.7.12 for the resolution of land acquisition if the matter is referred to the Secretary.

5.7.12 Land acquisition matter referred to the Secretary

After which the Secretary will make a request to the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, to consider submissions from the landowner and EnergyAustralia and determine a fair and reasonable acquisition price for the land, and/or terms upon which the land is to be acquired.

In accordance with condition 3.15, EnergyAustralia will bear the costs of any valuation or survey assessment requested by the independent valuer, or the Secretary and the costs of determination referred to above.

Within 14 days of receiving the independent valuer's determination, EnergyAustralia will make a written offer to purchase the land at a price not less than the independent valuer's determination. If the landowner refuses to accept this offer within six months of the date of the Proponent's offer, the Proponent's obligations to acquire the land shall cease, unless otherwise agreed by the Secretary.

5.7.13 Monitoring

This section provides the requirements for the ongoing noise program and operational noise review in accordance with the project approval conditions. For the purpose of ongoing noise monitoring and condition 4.3, noise from the project will be measured:

- at the most affected point within the residential boundary or at the most affected point within 30m of the dwelling where the dwelling is more than 30 m from the boundary;
- at one metre from the dwelling facade to determine compliance with the L_{Amax} noise limits outlined in Table 5-12 and Table 5-13; and
- in the case of the proposed residential areas within the Tallawarra lands, measured at the most affected point within each residential area.

Notwithstanding, should direct measurement of noise from the project be impractical, EnergyAustralia may undertake an alternative noise assessment method which is deemed acceptable by the EPA (refer to *Noise*

Policy for Industry (NSW EPA, 2017)). Details of the proposed alternative noise assessment method must be submitted to the Secretary prior to undertaking the alternative noise assessment method.

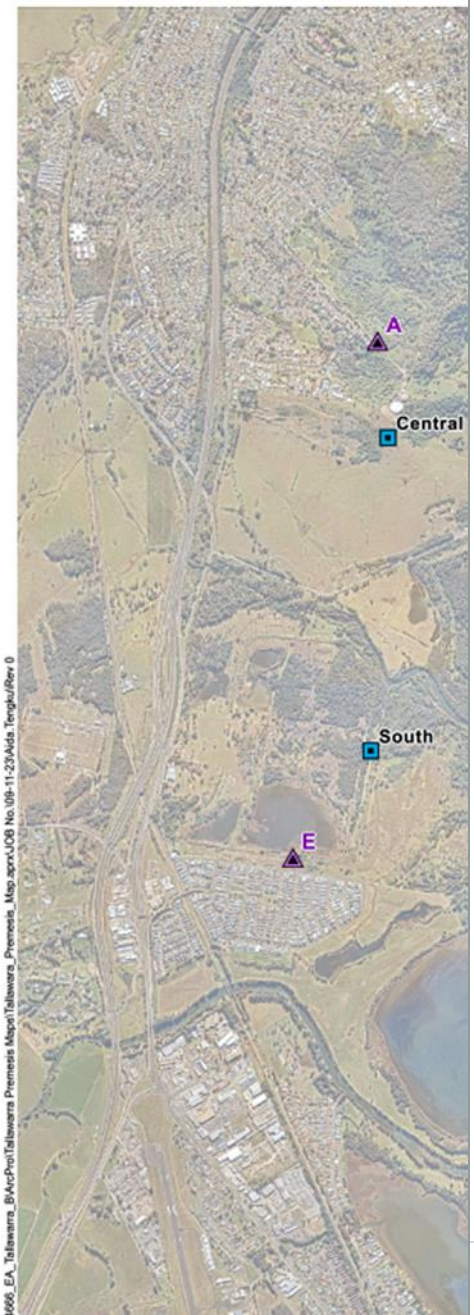
The noise monitoring program is provided below in Table 5-18.

Table 5-18 Noise Monitoring program

Potential Impact	Location	Parameters	Frequency	Methodology	Reporting	Responsibility	CoA and OEMP Reference

Operational Noise Review	T2 (A) Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, in Koonawarra T4 (B) Any residence on Wyndarra Way and Malonga Place in Koonawarra ML#9 (C) Any residence on The Boulevarde, Park Crescent, Horsley Road and Newton Crescent in Oak Flats ML#10 (D) Any residence on Reddall Parade and Henricks Parade in Mt Warrigal ML#11 (E) Any residence in Haywards Bay (North) Most affected residence – proposed northern residential area (Central) Most affected residence – proposed central residential area (South) Most affected residence – proposed south-western residential area	▪ Laeq, ▪ LA10, ▪ LA90; and ▪ LAMax. Noise levels shall not exceed criterion stipulated in Table 5-12 and Table 5-13	A one off survey under design loads and normal operating conditions, within 90 days of the commencement of operation of the project. Operational Noise Review may be undertaken during the commissioning phase of the project. In the event this occurs, this will be undertaken as part of Project Approval condition 4.1 requirement.	Noise monitoring will be undertaken: ▪ in accordance with the *Noise Policy for Industry* (NSW EPA, 2017); ▪ via attended noise monitoring at the locations identified in Table 5-12 and Table	Operational Noise Review report submitted to the Secretary and the EPA within 90 days of completion of the monitoring.	Specialist acoustic consultant on behalf of EnergyAustralia	4.1 4.2 and 4.3

				5-13 and as illustrated within			


A
Central
South
E

Potential Impact	Location	Parameters	Frequency	Methodology	Reporting	Responsibility	CoA and OEMP Reference
				▪ Figure 5-4; ▪ attended noise monitoring will be undertaken for 15 minutes per location. ▪ Monitoring is undertaken at each of the locations for day, evening and night periods; and ▪ In instances where Modification Factors for Low Frequency Noise apply, noise monitoring is to include an assessment of modifying factors in accordance with Fact Sheet C of the Noise Policy for Industry 2017. This is where noise is assessed for annoying characteristics such as tonal, low frequency or intermittent noise and a penalty of 5 dB will be added.			

Potential Impact	Location	Parameters	Frequency	Methodology	Reporting	Responsibility	CoA and OEMP Reference
Ongoing Operational Noise Monitoring	T2 (A) Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, in Koonawarra T4 (B) Any residence on Wyndarra Way and Malonga Place in Koonawarra ML#9 (C) Any residence on The Boulevarde, Park Crescent, Horsley Road and Newton Crescent in Oak Flats ML#10 (D) Any residence on Reddall Parade and Henricks Parade in Mt Warrigal ML#11 (E) Any residence in Haywards Bay (North) Most affected residence – proposed northern residential area (Central) Most affected residence – proposed central residential area (South) Most affected residence – proposed south-western residential area	▪ Laeq, ▪ LA10, ▪ LA90; and ▪ LAMax. Noise levels shall not exceed criterion stipulated in Table 5-12 and Table 5-13 attended noise monitoring will be undertaken for 15 minutes per location. Monitoring is undertaken at each of the locations for day, evening and night periods	▪ Annual basis throughout the life of the project, and ▪ Or following an exceedance of noise limits in Table 5-12 and Table 5-13; and ▪ or in response to a noise complaint.	Noise monitoring will: ▪ be undertaken in accordance with the *Noise Policy for Industry* (NSW EPA, 2017); ▪ be undertaken via attended noise monitoring at the locations identified in Table 5-12 and Table 5-13 and as illustrated within Table 5-4. ▪ attended noise monitoring will be undertaken for 15 minutes per location. ▪ Monitoring is undertaken at each of the locations for day, evening and night periods ▪ include monitoring of operations that have the potential to cause offensive noise including, but not limited to, safety valve operation, blowdown operation and the operation of circuit breakers during the day, evening and night time periods; ▪ include monitoring of the effectiveness of any noise mitigation measures implemented under condition 3.6 of the Project Approval; and ▪ In instances where Modification Factors for Low Frequency Noise apply, noise monitoring is to include an assessment of modifying factors in accordance with Fact Sheet C of the Noise Policy for Industry 2017. This is where noise is assessed for annoying characteristics such as tonal, low frequency or intermittent noise and a penalty of 5 dB will be added..	Reports will be. Submitted to the Secretary and EPA within 28 days of completing the noise event. Reports will be required ▪ Annually ▪ In the event of an exceedance during the ongoing noise review; ▪ In response to a noise complaint; and/or ▪ Additional monitoring as deemed necessary by the Secretary	Specialist acoustic consultant on behalf of EnergyAustralia	4.5 4.6

5.7.14 Noise Management – Exceedance Protocol

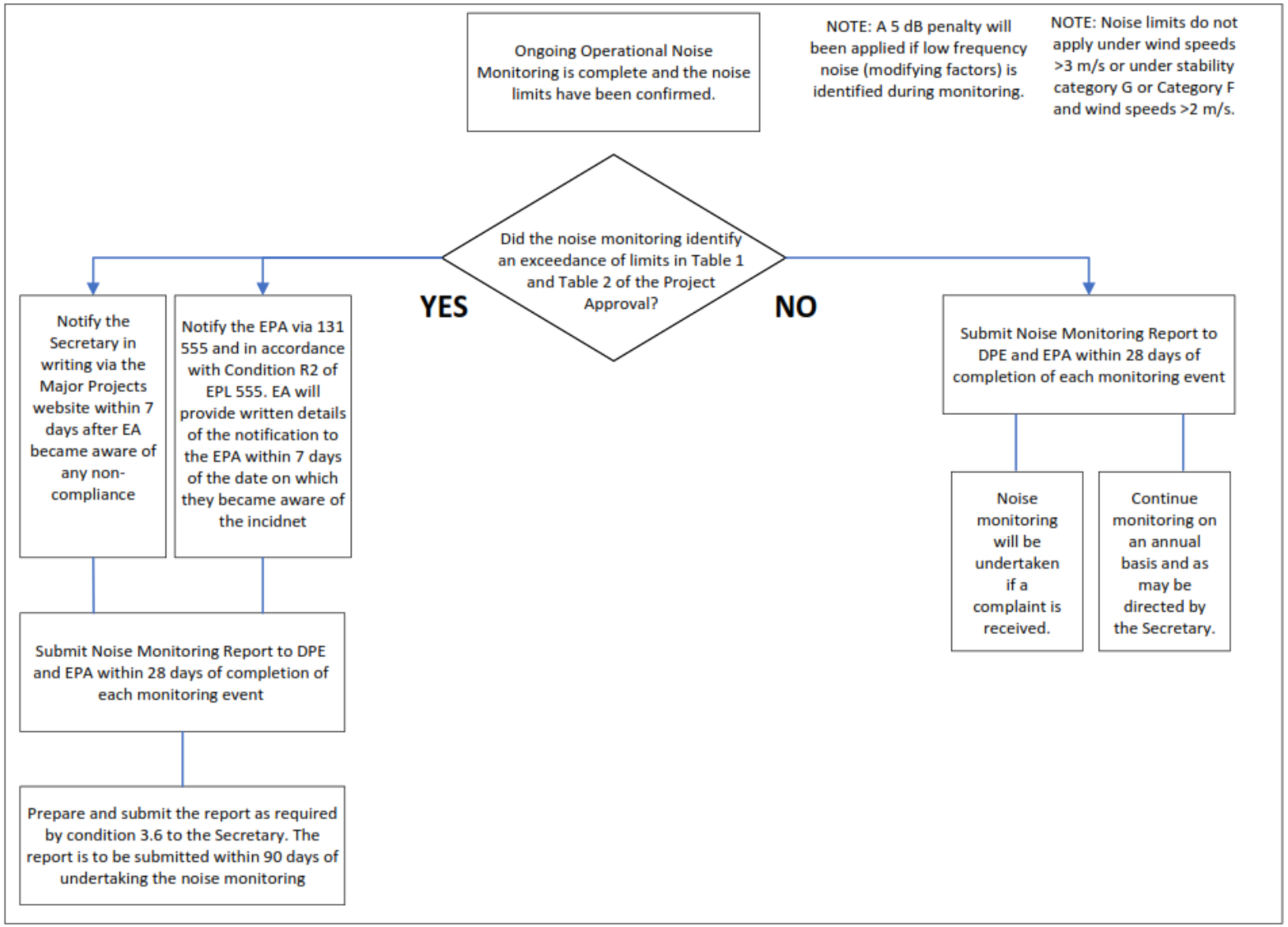


Figure 5-5 - Noise Exceedance Protocol

5.7.15 Noise reporting

Table 5-19 Noise Reporting Requirements

Item	Reporting requirements	Responsibility	Timing
1	Operational noise review will be completed within 90 days of the commencement of operation of Unit 2. The Operational Noise Review will confirm the noise emission performance of the project. The Review shall be prepared in consultation with, and to the satisfaction of, the EPA.	HSE Specialist	A one-off survey, within 90 days of the commencement of operation of the project.
2	An annual report detailing the results of the operational noise monitoring will be prepared and submitted to the Secretary and the EPA within 28 days of completion of each noise monitoring event.	HSE Specialist	Annually
3	In accordance with condition 5.2 of the Project Approval as modified, the Secretary must be notified in writing via the Major Projects website within seven days after EnergyAustralia becomes aware of any non-compliance. Develop a non-compliance report and submit the report to the Secretary for approval in the event the result of the noise monitoring (including the Operational Noise Review) indicates the operational noise level exceeds the operational noise limits in accordance with condition 3.6 of the Project Approval as modified.	HSE Specialist	Notification within seven days after becoming aware of any non-compliance. A non-compliance report submitted within 90 days of undertaking the noise monitoring which has identified an exceedance, unless otherwise agreed to by the Secretary.
4	Written notification within 21 days to all landowners that are entitled and to which rights apply. This is applicable to: • at-receive noise treatment; and • land acquisition. Also refer to non-compliance requirements within Item 3 above in relation to exceedances of applicable noise limits.	HSE Specialist	Within 21 days of determining the landholdings to which the ‘at-receiver’ noise treatment rights apply. Also refer to non-compliance requirements within Item 3 above in relation to exceedances of applicable noise limits.
5	A binding written offer will be made to the affected landowners regarding the at-receiver noise treatment, or land acquisition options that can be implemented at the property.	HSE Specialist	As required

5.7.16 Environmental management measures

A range of environmental requirements and mitigation measures are identified in the Project Approval, Development Consent, EPL 555 and the EA will be implemented to minimise or manage water quality impacts.

Specific noise related safeguards and management measures to address impacts associated with Tallawarra power station are outlined in Table 5-20.

Table 5-20 Environmental management measures relevant to noise

ID	Management measure	Where applicable	Responsibility	Source Document
General				
NV1	The project noise goals, developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B CCGT plant.	Tallawarra Power Station	Plant operators	Statement of Commitment no.3
NV2	Any future development within the Tallawarra lands area will need to consider the operational noise emissions of the plant and implement design measures to minimise the impact of such emissions. Operational noise emissions monitoring will be undertaken during the operation phase to confirm current assumptions prior to the development of the proposed residential areas.	Any future development within Tallawarra lands area	Designers (of future development within Tallawarra lands area)	Statement of Commitment no.2
NV3	The start-up and shut down activities will be managed through the Tallawarra A *Operational Environmental Noise Management Plan* (Ref 7142037-02-01 Rev 2).	Tallawarra Power Station	Plant operators	Statement of Commitment no.3
Ongoing noise monitoring				
NV4	Tallawarra A and B power stations will be operated and maintained to ensure that the total cumulative noise emission from the combined operation of both power stations to the background acoustic environment does not exceed the noise criteria specified in Table 5-12 and Table 5-13	Tallawarra Power Station	HSE Specialist	Project Approval condition 3.5
NV5	Noise emissions from the operation of Tallawarra A and B power station must not exceed the noise criteria at the specific locations identified in Table 5-12 and Table 5-13	Tallawarra Power Station	HSE Specialist	EPL 555
NV6	Ongoing operational noise monitoring at the specified location in Section 5.7.4 will be undertaken to determine ongoing compliance against the respective operational noise criteria.	Tallawarra Power Station	HSE Specialist	Project Approval condition 4.6 EPL 555
NV7	Ongoing operational noise monitoring will be undertaken on an annual basis or when directed by the Secretary. The requirements for further ongoing annual noise monitoring will be determined by the Secretary based on the results collected.	Tallawarra Power Station	HSE Specialist	Project Approval condition 4.6
Operational noise review				
NV8	Within 90 days of the commencement of operation of Tallawarra B power station, unless otherwise agreed by the Secretary, EnergyAustralia will undertake an Operational Noise Review (ONR) to confirm the noise emission performance of the project.	Unit 2	HSE Specialist	Project Approval condition 4.1

NV9	The ONR is to be taken during the period when the power station is operating under design loads and normal operating conditions and be prepared in consultation and to the satisfaction of the EPA.	Unit 2	HSE Specialist	Project Approval condition 4.1
NV10	Once the operational noise levels have been confirmed, EnergyAustralia will notify landowners that are entitled to 'at-receiver' noise treatment and/or land acquisition rights (Refer to Section 7.4 and 7.5 for further details).	Unit 2	HSE Specialist	Project Approval condition 3.12 and 3.18
Reporting				
NV11	A report detailing the results of the operational noise monitoring will be prepared and submitted to the Secretary and the EPA within 28 days of completion of each noise monitoring event.	Tallawarra Power Station	HSE Specialist	Project Approval condition 4.5
NV12	Operational Noise Review report will be prepared detailing the result of the ONR. The report will be submitted to the Secretary and the EPA within 90 days of completion of the monitoring	Unit 2	HSE Specialist	Project Approval condition 4.4
NV13	A non-compliance report and submit the report to the Secretary for approval in the event result of the noise monitoring (including the Operational Noise Review) indicates the operational noise level exceeds the operational noise limits specified Table 5-12 and Table 5-13	Unit 2	HSE Specialist	Project Approval condition 3.6
Noise treatment at-receiver				
NV14	EnergyAustralia will provide written notification to all landowners that are entitled to 'at-receiver' noise treatment within 21 days of determining the landholdings to which 'at-receiver' noise treatment rights apply.	Unit 2	HSE Specialist	Project Approval condition 3.12
NV15	Upon receiving a written notification from the affected landowner unless that landowner has acquisition rights and have requested acquisition, EnergyAustralia will investigate and implement, in consultation with the landowner, reasonable and feasible at-receiver noise treatment if the noise generated by the combined operation of the Tallawarra A and B power stations exceeds the noise criteria specified Table 3 and 4 of the Project Approval at the specified locations even after the implementation of all reasonable and feasible at-source noise management identified in the operational noise monitoring report.	Unit 2	HSE Specialist	Project Approval condition 3.7
NV16	A binding written offer will be made to the affected landowner regarding the at-receiver noise treatment options that can be implemented at the property.	Unit 2	HSE Specialist	Project Approval condition 3.9
NV17	EnergyAustralia will bear the costs of the selected at-receiver noise treatment, including cost of implementation at an affected property or land.	Unit 2	HSE Specialist	Project Approval condition 3.8
NV18	If within three months of receiving the at-receiver noise treatment request from the affected landowner, EnergyAustralia and the affected landowner cannot agree on the treatment to be implemented or cannot agree on the implementation of these selected treatment, then either party may refer the matter to the Secretary for resolution. The Secretary's decision on the matter will be final.	Unit 2	HSE Specialist	Project Approval condition 3.9
Land acquisition				
NV19	EnergyAustralia will provide written notification to all landowners that are entitled to land acquisition rights within 21 days of determining the landholdings to which land acquisition rights apply	Unit 2	HSE Specialist	Project Approval condition 3.18
NV20	Upon receiving a written notification from the affected landowner requesting for acquisition of the land, EnergyAustralia will acquire the land from the affected landowner if the noise generated by the combined operation of the Tallawarra A and B power stations exceeds the noise criteria specified in Table 5 and 6 of	Unit 2	HSE Specialist	Project Approval condition 3.13

	the Project Approval at the specified locations even after the implementation of all reasonable and feasible at-source noise mitigation identified in the operational noise monitoring report.			
NV21	A binding written offer will be made to the affected landowner with acquisition rights within three months of receiving the written acquisition request from the landowner.	Unit 2	HSE Specialist	Project Approval condition 3.14
NV22	If, at the end of the binding offer period, the landowner and EnergyAustralia cannot come to an agreement on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.	Unit 2	HSE Specialist	Project Approval condition 3.14

5.8 Traffic Management

Access to site is through the existing main access security gate, from Yallah Bay Road off the Princes Highway, Wollongong. There is sufficient designated parking areas available for all workers. No new facilities or parking areas are required to be constructed.

There may be a temporary increase in the number of heavy and light vehicles accessing the site during maintenance plant outage periods. No vehicles will be permitted to park at the public access foreshore parking.

5.9 Waste Management Plan

5.9.1 Introduction

A waste management plan has been prepared to satisfy Conditions of Approval 3.58 to 3.61. The purpose of the Waste Management Plan is to provide a structured approach to minimising waste generated and maximise reuse and recycling.

Key objectives include:

- Promote ecologically sustainable development through maximising efficient use, re-use, recovery, and
- recycling, of resources
- Separation of waste into classification groups (with specific attention to Non-hazardous and Hazardous
- categories)
- Dispose of all waste in line with classification and legal requirements

EnergyAustralia will prioritise the treatment, reuse and/or recycling on the project site of any waste oils, excavated soils, vegetation, slurries, sludges or other solid and liquid waste materials associated with the project, minimise the need for treatment or disposal of those materials outside the power station. The waste will be tracked and reported via EnergyAustralia's parent company Group Operations Information System (GOIS). GOIS provides tracking metrics and flags any variances which requires an explanation of the change. EA will use the GOIS system to track waste management onsite.

5.9.2 Classifying Waste

EnergyAustralia shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (EPA, 2009), or any superseding document.

Classifying waste (NSW EPA, 2014), classifies six types of waste:

1. Special
2. Liquid
3. Hazardous
4. Restricted solid
5. General solid (putrescible)
6. General solid (non-putrescible).

The 6-step process for classifying waste is outlined in

Table 5-21. Complete definitions and regulations can be found in Waste Classification Guidelines Part 1: Classifying waste (NSW EPA, 2014).

Table 5-21 Six-step process for waste classification (NSW EPA, 2014)

Step	Process	Detail / Examples
1	Is it 'special waste'?	Special waste means any of the following: ■ Clinical and related waste, ■ Asbestos waste, ■ Waste tyres, or ■ Anything classified as special waste under an EPA gazettal notice.
2	Is it 'liquid waste'?	Liquid waste means any waste (other than special waste) that: ■ Has an angle of repose of less than 5 degrees above horizontal, ■ Becomes free flowing at or below 60 degrees Celsius or when it is transported, ■ Is generally not capable of being picked up by a spade or shovel, or ■ Is classified as liquid waste under an EPA gazettal notice.
3	Is the waste 'pre-classified'?	Pre-classified wastes are categorised as follows: ■ Hazardous waste, ■ Restricted solid waste, ■ General solid waste (putrescible), and ■ General solid waste (non-putrescible) (including building and demolition waste, garden waste, virgin excavated natural material and wood waste).
4	Is the waste 'hazardous'?	Hazardous wastes means any of the following: ■ Explosives ■ Gases ■ Flammable solids ■ Substances liable to spontaneous combustion ■ Substances which when in contact with water emit flammable gases ■ Oxidising agents and organic peroxide ■ Toxic substances ■ Corrosive substances
5	Undertake a chemical assessment	If a waste has not been classified under steps 1 - 4, it must be classified as 'hazardous waste' if it is a dangerous good under any of the classes or divisions of the *Transport of Dangerous Goods Code*.
6	Is the solid waste 'putrescible' or 'non putrescible'?	If chemical assessment shows waste as solid, further assessment is required to determine whether it is putrescible or non-putrescible. If this assessment does not take place, the waste must be classified as solid (putrescible).

5.9.3 Waste hierarchy

EnergyAustralia shall follow the EPA waste hierarchy when managing waste from its operations. The waste hierarchy is summarised in Table 5-22. EA shall, to the extent that is reasonable and feasible, maximise the treatment, reuse and/or recycling on the project site of any waste oils, excavated soils, vegetation, slurries, sludges or other solid and liquid waste materials associated with the project, to minimise the need for treatment or disposal of those materials outside the power station.

Table 5-22 Waste Hierarchy

Ranking	Waste hierarchy	Description
1	Avoiding and reduce waste	The most preferred approach, it preserves resources, avoids the use of additional resources to manage waste that would have been generated, and aims to eliminate disposal costs.
2	Reuse material	Without further processing, avoids the costs of energy and other resources required for recycling.
3	Recycling	Processing waste materials to make the same, or different product. Recycling keeps materials in the productive economy and benefits the environment by decreasing the need for new materials and waste absorption.
4	Recover energy	Recover the energy from the material and feed it back into the economy where this is acceptable to the community.
5	Treat waste	If materials are inappropriate to reuse, recycle or recover, then treatment and stabilization will minimize their environmental or health impacts.
6	Disposal of waste	Some types of wastes, such as hazardous chemicals or asbestos, cannot be safely recycled and proper disposal is the most appropriate management option.

5.9.4 Handling, storage and disposal of waste

Waste material will be stored and handled in line with the relevant legislation and guidelines. EA shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.

When waste cannot be avoided, reused, recycled, or recovered, it must be disposed of correctly. All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials. When waste is generated onsite and disposed of offsite, the waste will be:

- Separated into waste classifications;
- Transported by a licensed contractor; and
- Transported to an EPA approved waste management site that is lawfully permitted to accept the materials, a licensed recycling facility, or licensed landfill facility.

5.10 Heritage Management Plan

The purpose of the heritage management plan is to provide a structure approach to managing heritage artefacts and details the actions required when an unexpected item is found.

5.10.1 Archaeological sensitive areas

Niche Environment and Heritage has undertaken an Aboriginal heritage due diligence assessment (AHDDA) in 2021 for the area within and near Unit 2. The assessment recommended different management measures based on three tiers of low, moderate and high archaeological sensitive areas.

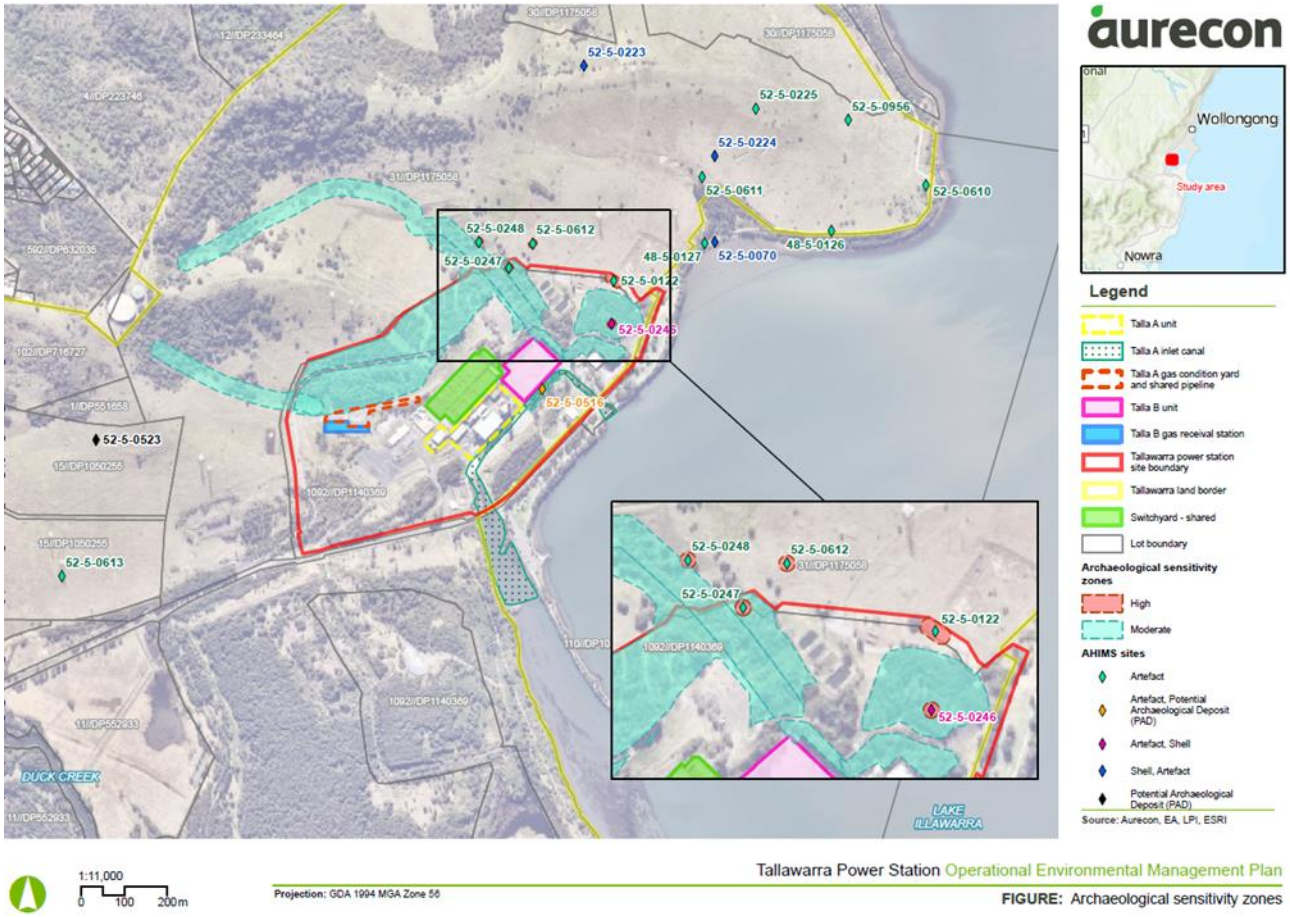
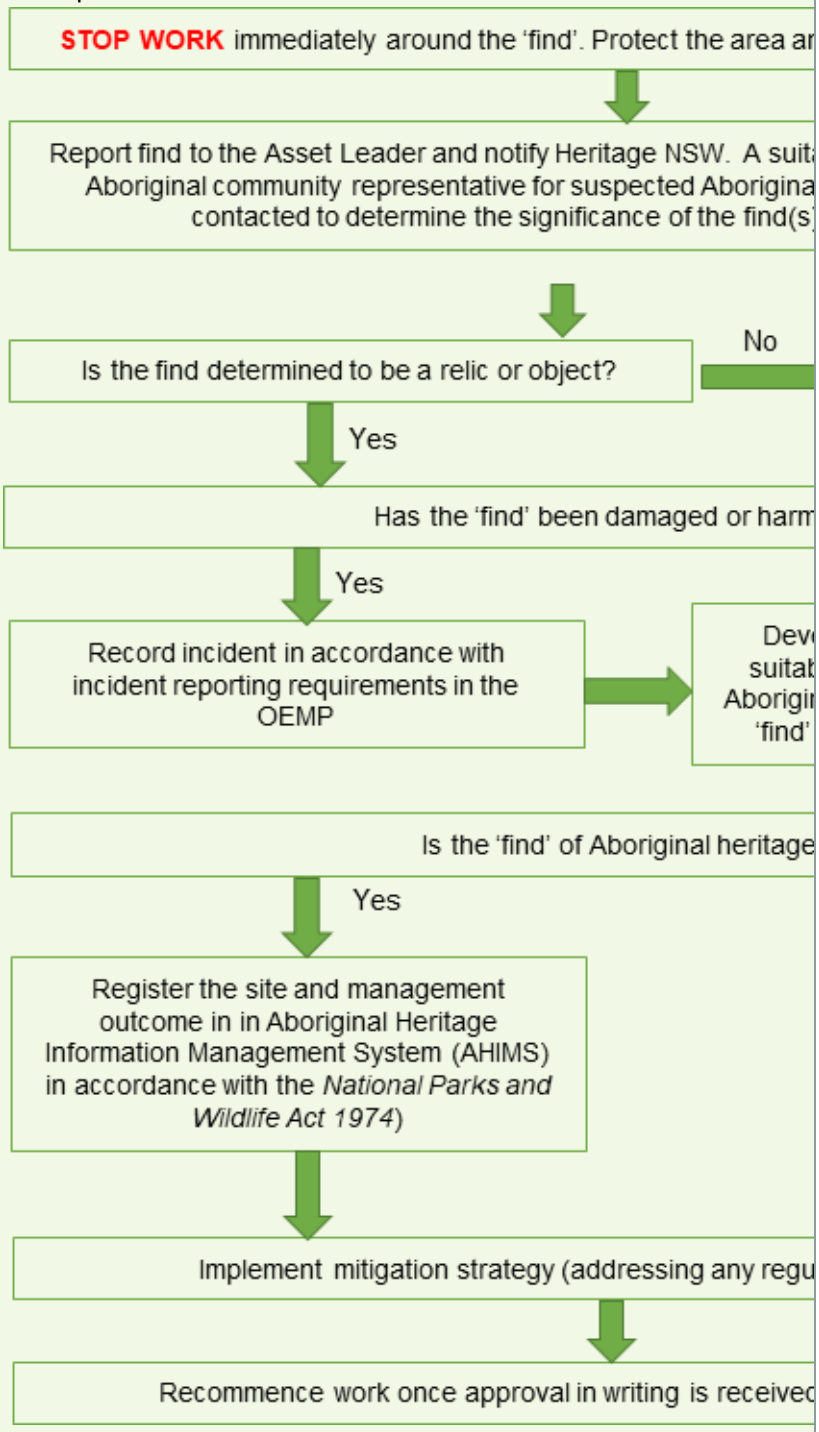


Figure 5-6: A shows the areas marked low, moderate and high archaeological sensitivity identified within the AHDDA (Niche, 2021). Table 5-23 outlines the management measures to be implemented at the respective archaeological sensitive areas during operation. If ground disturbance is required, a formal ground disturbance permit is required for any work being undertaken regardless of the archaeological sensitive area ranking.

Table 5-23 Archaeological sensitive areas

Archaeological sensitive area	Description	Management measure
Low	The majority of the Project area is described as having low archaeological sensitivity (Niche 2021). Areas that have been previously disturbed generally have low Aboriginal cultural heritage potential archaeological sensitivity.	▪ The areas depicted as low archaeological sensitivity may proceed with caution without the need for further investigation. ▪ Should earthworks be undertaken outside the works areas assessed in AHDDA, further impact assessment will be undertaken prior to working in those areas. ▪ The relevant unexpected heritage procedures will be followed in the unlikely event that Aboriginal objects and/or features is encountered,

		or suspected human remains are encountered. Refer to Section 5.3.
Moderate	Undisturbed or moderately disturbed Project areas located generally north of the switchyard and generally to the east of the Project area, including within the Yallah Creek riparian areas are considered to have moderate archaeological sensitivity (Niche, 2021)	▪ Surface works involving direct replacement/upgrade of existing utilities may proceed with caution without further investigation. ▪ Any new ground disturbance, including disturbance beyond the depth of current subsurface utilities, will require further investigation and assessment in the form of an Aboriginal Cultural Heritage Assessment (ACHA). ▪ If the removal or upgrade of any existing utilities requires any additional ground disturbance outside the footprint of the existing utilities, this constitutes new ground disturbance and will require further assessment in the form of an ACHA. ▪ The relevant unexpected heritage procedures will be followed in the unlikely event that Aboriginal objects and/or features is encountered,

		or suspected human remains are encountered. Refer to  ▪ Figure 5-7
High	Areas close to existing known AHIMS sites are identified as having high archaeological sensitivity (Niche, 2021).	▪ **No works should take place without further assessment in the form of an ACHA.**

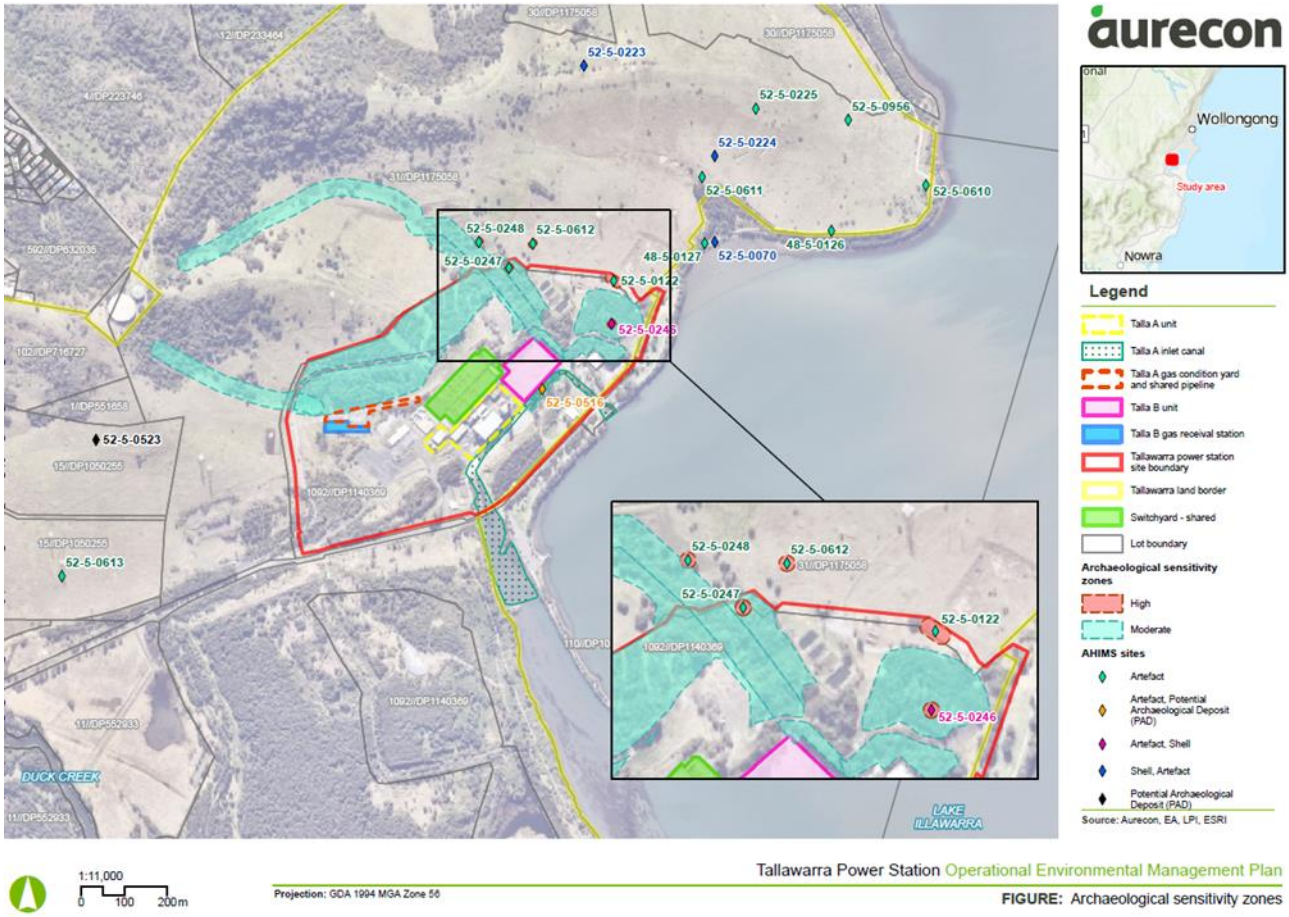


Figure 5-6: Archaeological sensitive zones

5.10.2 Unexpected heritage finds procedure

In accordance with Condition of Approval 3.55, if suspected Aboriginal cultural heritage item is uncovered, the steps in

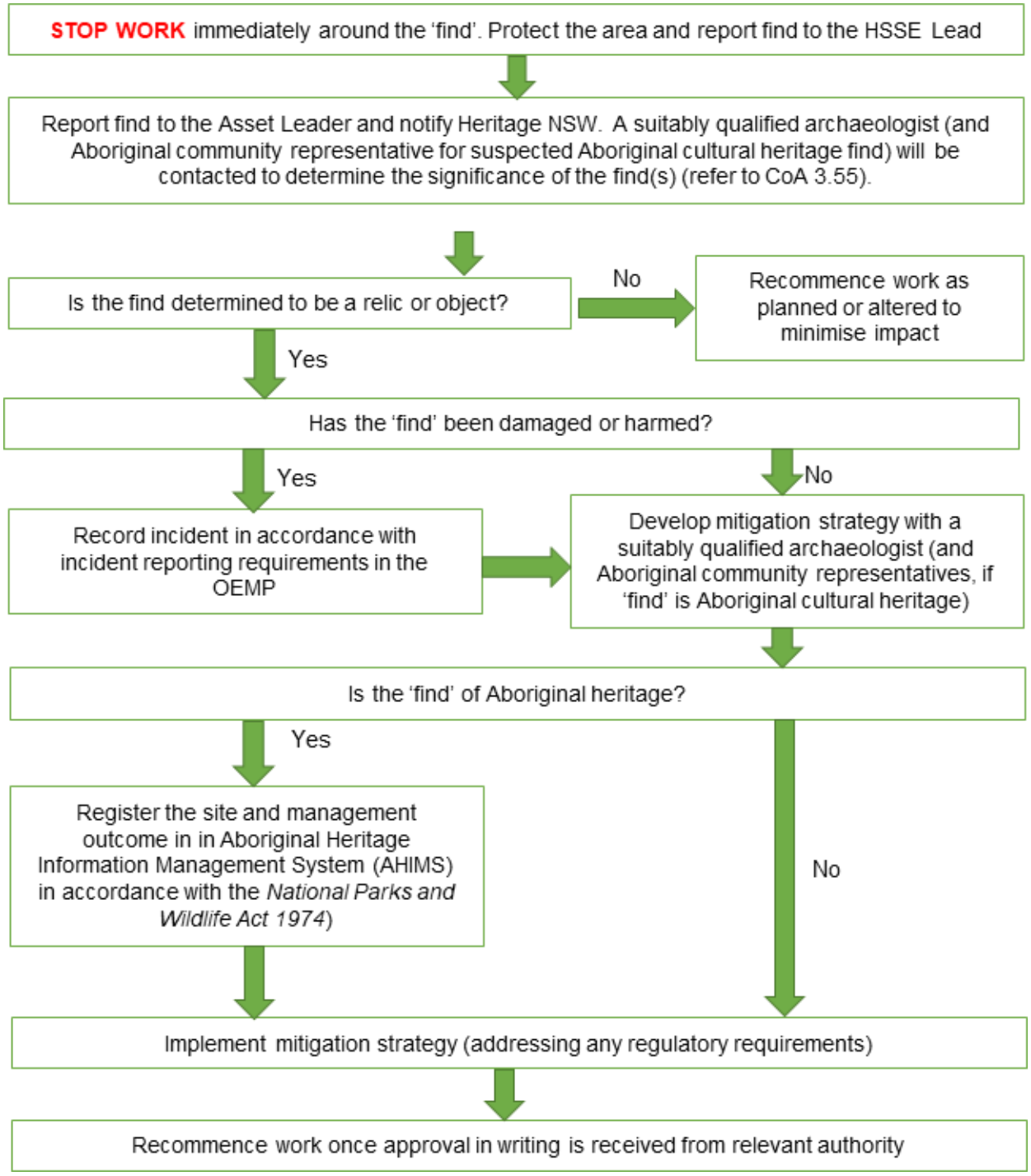
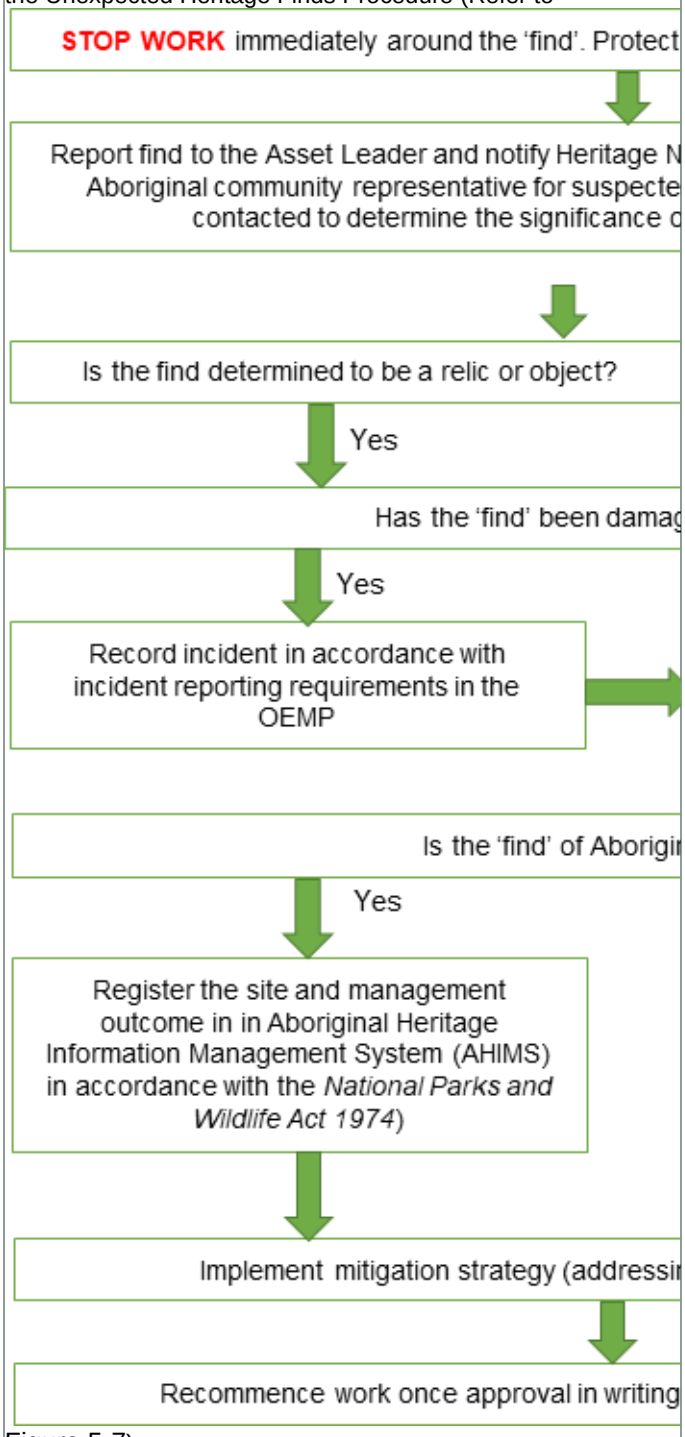
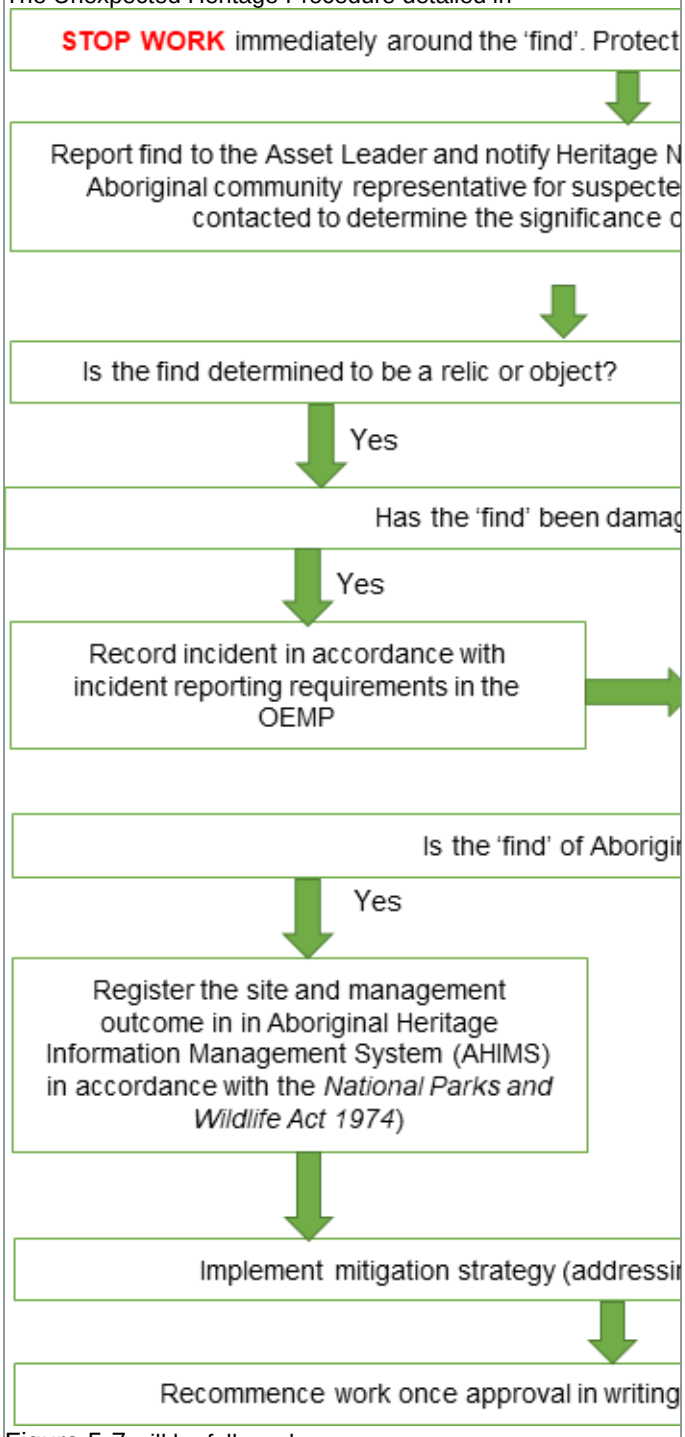


Figure 5-7 must be followed. Figure 5-8 also must be followed if suspected non-Aboriginal cultural heritage item is uncovered.

Table 5-24 Unexpected finds

ID	Management measure	Where applicable	Responsibility	Source Document
General				
1.	Consultation with the relevant local Aboriginal community groups, government agencies and/or stakeholders, including Local Aboriginal Land Council, will be undertaken if any activities which impacts or has the potential to impact Aboriginal and/or non-Aboriginal heritage sites or objects.	Tallawarra Power Station	HSE Specialist	Statement of Commitments no.1
2.	No works should take place within the areas depicted as high archaeological sensitivity in Figure 52 without further assessment in the form of an Aboriginal Cultural Heritage Assessment (ACHA).	Tallawarra Power Station	HSE Specialist	Aboriginal Objects Due Diligence Assessment (Niche Environment and Heritage, 2021)
3.	Within the areas depicted as moderate archaeological sensitivity in Figure 52, any new ground disturbance, including disturbance beyond the depth of current subsurface utilities, will require further assessment in the form of an ACHA.	Tallawarra Power Station	HSE Specialist	Aboriginal Objects Due Diligence Assessment (Niche Environment and Heritage, 2021)
4.	All operational personnel will be inducted on the existing Aboriginal heritage features and site, as well as the potential to find previously unrecorded Aboriginal cultural heritage items,	Tallawarra Power Station	HSE Specialist	Good practice

	the Unexpected Heritage Finds Procedure (Refer to  Figure 5-7)			
Unexpected finds				
10.	If at any time during operation, any potential Aboriginal or non-Aboriginal heritage objects or human remains is uncovered. Stop all works in the immediate vicinity of the finds and notify the Site Supervisor and HSE Specialist.	Tallawarra Power Station	All personnel	Project Approval condition 3.55

	The Unexpected Heritage Procedure detailed in  Figure 5-7 will be followed.			

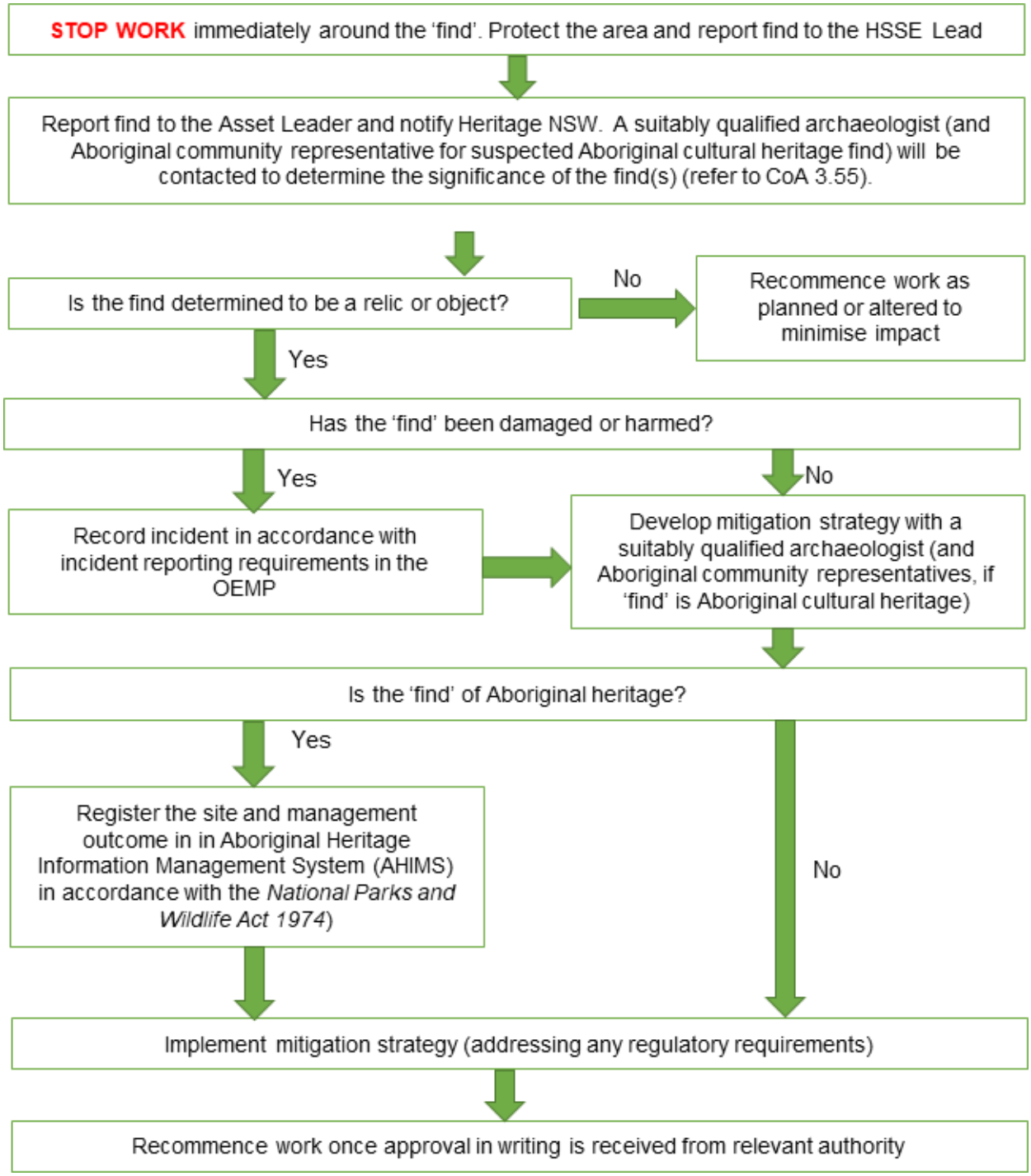


Figure 5-7: Unexpected heritage finds procedure - suspected Aboriginal and non-Aboriginal cultural heritage items

5.10.3 Discovery of suspected human remains procedure

If suspected human remains are uncovered during the project, the steps in Figure 5-8 must be actioned.

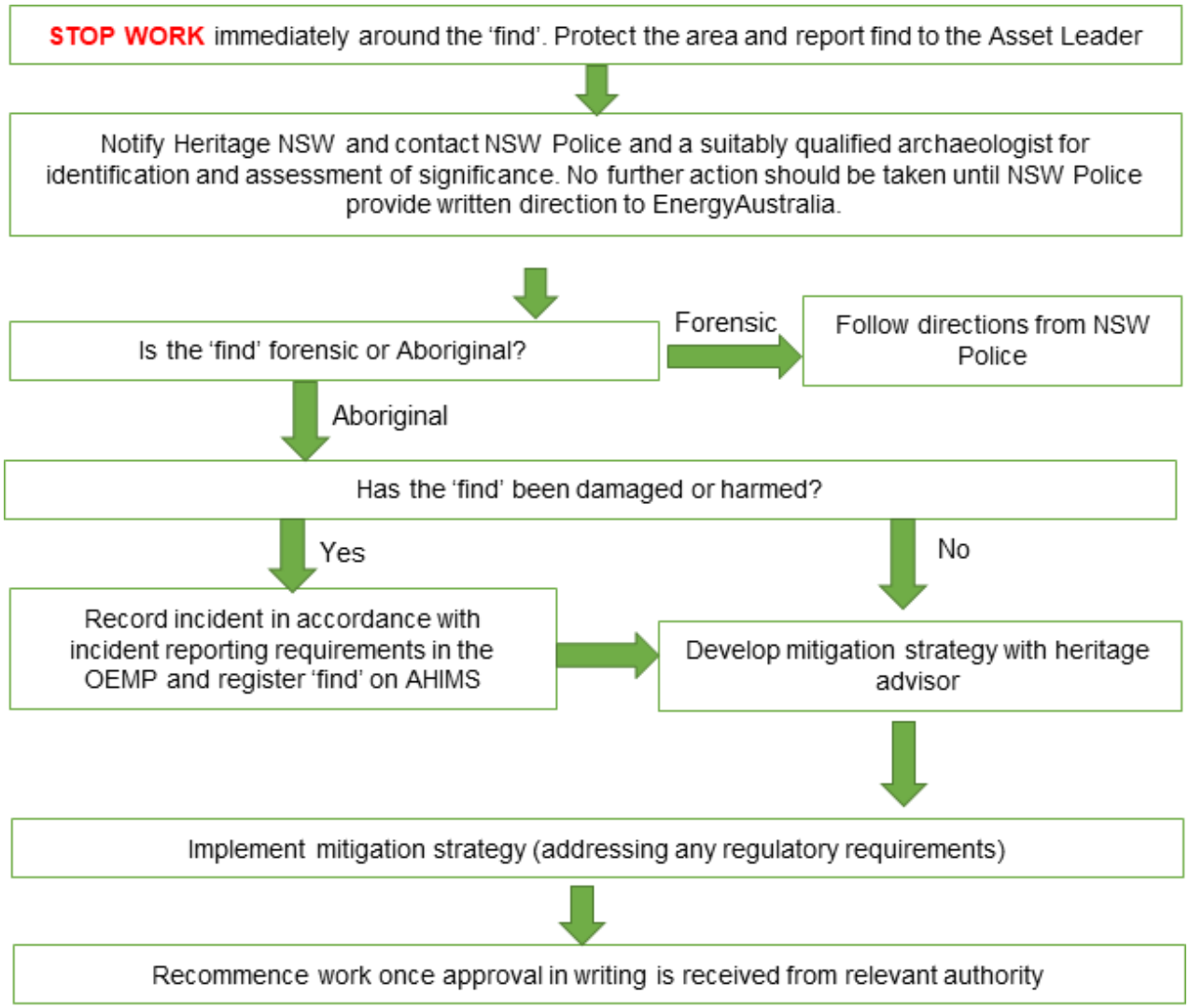


Figure 5-8: Discovery of suspected human remains procedure

6 Compliance Reporting and Auditing

6.1 Reporting and Auditing Requirements and Actions

EnergyAustralia will complete the compliance reporting and auditing requirements as listed in Table 6-1.

Table 6-1 Compliance Reporting and Auditing

Type	Details	Frequency	Responsibility	Receipt	CoA
Compliance Report	Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Requirements outlined in the Compliance Reporting Post Approval Requirements (2020). An electronic copy of the relevant Compliance Report must be submitted to the Department via the Major Projects portal.	At intervals, no greater than 52 weeks from the date of commencement of operation (annually)	HSE Specialist	DPE	5.5 5.6 4.7 4.5
Publish Compliance report to the EA website	Must make each Compliance Report publicly available within 60 days of submitting it to the Secretary, unless otherwise agreed by the Secretary.	Within 60 days of submitting it to the Secretary, unless otherwise agreed to by the Secretary	HSE Specialist	EnergyAustralia website	5.7
Cease submitting an operation compliance report	Notwithstanding the requirements of the Compliance Reporting Post Approval Requirements (2020), the Secretary may approve a request for ongoing annual operational compliance reports to be ceased, where it has been demonstrated to the Secretary's satisfaction that an operational compliance report has demonstrated operational compliance.	EA will only cease an operation compliance report if approved by the Secretary.	HSE Specialist	n/a	5.8
Air Quality Performance Verification Report	Air quality performance report detailing the air emission performance of Unit 2 power station and comparison against the relevant criteria limits.	within six months of the commencement of operation of the project; at both maximum design loads and under normal operating conditions	HSE Specialist Air Quality consultant	DPE EPA NSW	4.8 4.9
Hazard Audit	Commission an independent, qualified person or team to undertake a comprehensive Hazard Audit of the project. Hazard Audits shall be carried out in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 5 - Hazard Audit Guidelines.	Twelve months after the commencement of operation of the project, or within such period otherwise agreed by the Secretary.	HSE Specialist Independent hazard auditor	DPE	4.15
		Further Hazard Audits shall be undertaken every three years thereafter.	HSE Specialist Independent hazard auditor	DPE	4.15

Independent environmental audit	Assess compliance with the OEMP, the Project Approval and any relevant legal and other requirements. EA will seek agreement from the Secretary in writing prior to the commencement of an independent audit. This will be completed prior to each IEA undertaken.	Within 26 weeks of the commencement of operation; and At intervals, no greater than 3 years or as otherwise agreed by the Secretary.	HSE Specialist	DPE	5.9 5.10
Submission of independent environmental audit report	Review and respond to each Independent Audit Report and submit the response to the audit findings to the Secretary.	Within 2 months of undertaking the independent audit site inspection, or unless otherwise agreed by the Secretary	HSE Specialist Independent auditor	DPE	5.12 a 5.12b 5.13
Initial and subsequent audit dates changes	The Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the Compliance Reporting Post Approval Requirements (2020), upon giving at least 4 weeks' notice (or timing) to EnergyAustralia of the date upon which the audit must be commenced.	As required by notification of the Secretary	HSE Specialist	DPE	5.11
Publish Independent Audit report to the EA website	Must make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Secretary, unless otherwise agreed by the Secretary	Within 60 days of submitting it to the Secretary, unless otherwise agreed to by the Secretary	HSE Specialist	EnergyAustralia website	5.12 c
Cease undertaking environmental audit reports	Notwithstanding the requirements of the Independent Audit Post Approvals Requirements (2020), the Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Secretary's satisfaction that independent operational audits have demonstrated operational compliance.	EA will only cease ongoing independent operational audits if approved by the Secretary	HSE Specialist	n/a	5.14
National Greenhouse Energy Reporting (NGERs)	The National Greenhouse and Energy Reporting Act 2007 (NGER Act) introduced a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production and energy consumption.	Annual	HSE Specialist	EPA NSW	-----

National Pollutant Inventory (NPi)	The National Pollutant Inventory (NPI) is tracking pollution across Australia. The NPI contains data on 93 substances that have been identified as important due to their possible effect on human health and the environment.	Annual	HSE Specialist	EPA NSW	-----
Annual Return	Details the results of all monitoring undertaken in the licensing period of the applicable EPL.	Annual	HSE Specialist	EPA NSW	-----

Appendices

Appendix A: Cross reference of Conditions of Approval

Appendix B: EnergyAustralia HSSE Policy

Appendix C: Legal compliance table

Appendix D: Vegetation Offset Plan

Appendix E: Environmental Representative Approval

Appendix F: Independent Audit

Appendix G: Project Approval

Appendix H: Agency Review Comments

Appendix I: DPE Letter – Aviation Impact Assessment

Appendix A: Cross reference of relevant compliance requirements

Table A- 1: Conditions of the Project Approval relevant to this OEMP and sub-plans

Condition number	Condition requirement	Where addressed
1.1	The project may only be carried out:	
	a) in compliance with the conditions of this approval granted with respect to the Tallawarra Stage B Gas Turbine Power Station Project (07_0124);	Section 1.2
	b) in accordance with all written directions of the Secretary; and	Section 1.2
	c) generally in accordance with the EA.	Section 1.2
1.3	The Proponent shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:	
	a) any documents that are submitted in accordance with this approval; and	Section 1.2
	b) the implementation of any actions or measures contained in these documents.	Section 1.2
1.5	The project shall comprise a single-unit gas turbine power plant with a total nominal output of up to 400 megawatts operating in open cycle mode or a single unit gas turbine plant with a nominal output of 400 megawatts operating in combined cycle mode.	Section 2.1
1.6	Nothing in this approval permits the construction and operation of an open cycle gas turbine plant, unless the Proponent has submitted a report to the Secretary which demonstrates that operation of an open cycle gas turbine plant will not have an adverse impact on aviation safety. This report must be prepared in consultation with Shellharbour City Council, and its conclusions and recommendations must have been agreed to by the CASA prior to submission to the Secretary. The report must be approved by the Secretary before commencement of construction of an open cycle plant.	Section 5.2

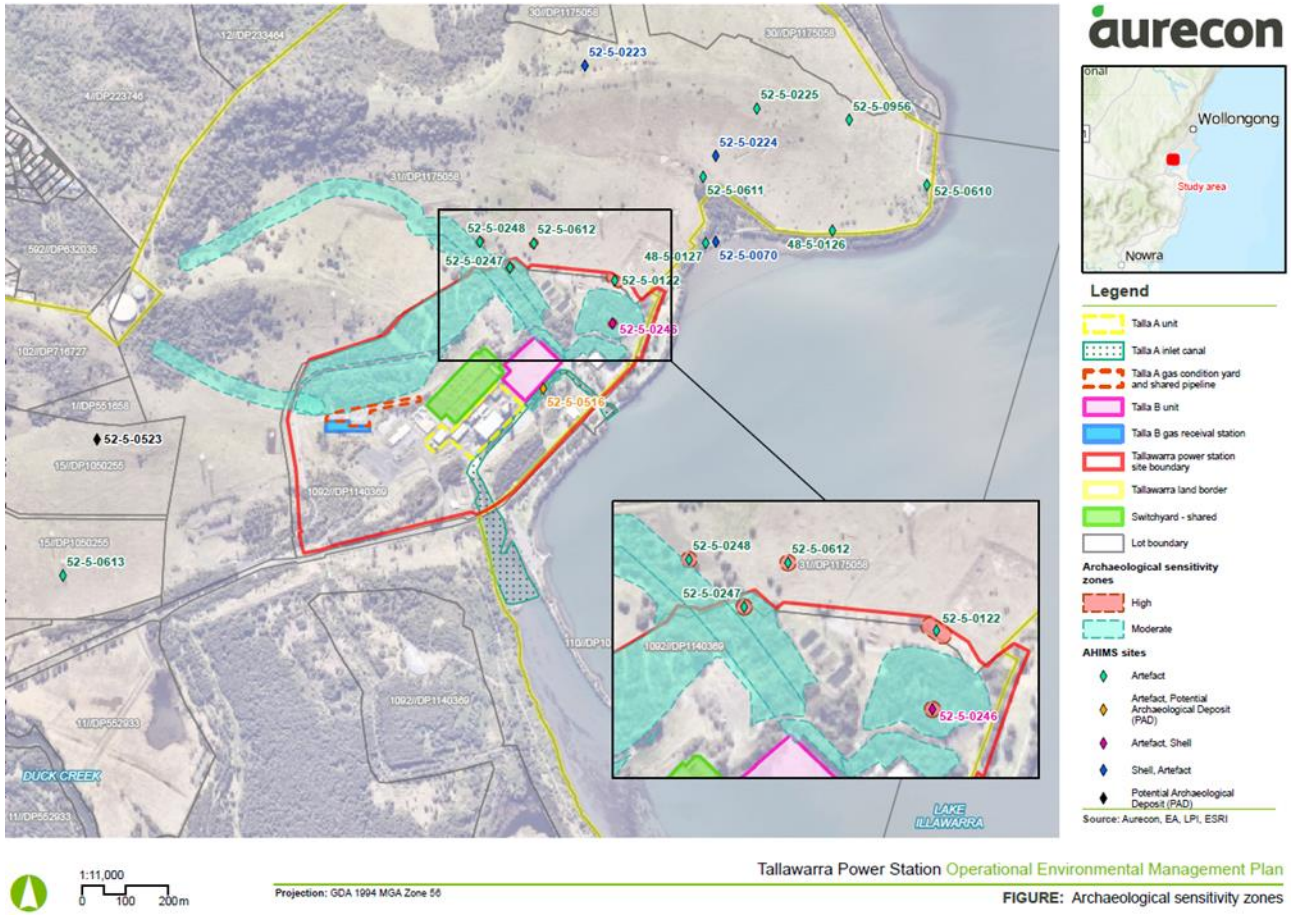
Condition number	Condition requirement	Where addressed
1.7	The Proponent shall ensure that all licences, permits and approvals are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals. The Proponent shall ensure that a copy of this approval and all relevant environmental approvals are available on the site at all times during the life of the project.	Section 1.2, Section 3.4, Section 3.7 and Table 3-1
2.1	Natural gas is the only fuel approved for firing of the burner/turbine.	Table A-2
2.4	The Tallawarra Stage B combined cycle gas turbine power station shall not operate in cold start cycle at the same time as the Tallawarra Stage A combined cycle gas turbine power station, unless otherwise agreed to by the EPA and approved by the Secretary. A cold start is defined as the first 120 minutes following of power station operation after a period of more than 36 hours shut down.	Table A-2
2.5	Only biocides and antifouling chemicals assessed in the documents referred to in condition 1.1c), or otherwise approved by the EPA, and permitted, registered or approved for use by the Australian Pesticides and Veterinary Medicines Association, shall be used in the operation of the power station.	Section 3.8
3.19	The Proponent shall construct and operate the project in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust. All activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Proponent shall identify and implement all practicable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.	QA2 in Table 5-10

<table>
<tr><th>Condition number</th><th>Condition requirement</th><th>Where addressed</th></tr>
<tr><td>3.20</td><td>The Proponent shall not permit any offensive odour, as defined under section 129 of the Protection of the Environment Operations Act 1997, to be emitted beyond the boundary of the site.</td><td>QA6 in Table 5-10</td></tr>
<tr><td>3.22</td><td>For the purpose of this approval, air discharge/monitoring points are identified in Table 7.
Table 7 - Identification of Air Monitoring and Air Discharge Points<table><tr><th>EPA Identification Number</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Description of Location</th></tr><tr><td>1</td><td>Air emissions monitoring</td><td>Discharge to air</td><td>Stack Serving the Open Cycle Plant Turbine</td></tr><tr><td>2</td><td>Air emissions monitoring</td><td>Discharge to air</td><td>Stack Serving the Combined Cycle Plant Turbine</td></tr></table></td><td>Table 5-7</td></tr>
<tr><td>3.23</td><td>The Proponent shall ensure that the design and construction of the project includes sampling positions that comply with TM-1 as set out in Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2016), or its latest version.</td><td>Table 5-9</td></tr>
<tr><td>3.24</td><td>The Proponent shall design, construct, operate and maintain the project to ensure that for each turbine stack discharge/monitoring point identified in Table 7, the concentration of each pollutant listed in Table 8 is not exceeded at that point. The condition only applies to the normal operation of a turbine and, to avoid any doubt, does not apply during the start-up and shut-down period for a turbine. The condition continues to apply to other turbines if they are operational during these periods.
Table 8 – Maximum Allowable Discharge Concentration Limits (Air)<table><tr><th>Pollutant</th><th>Unit of measure</th><th>100 percentile limit</th><th>Reference conditions</th><th>Averaging Period</th></tr><tr><td>Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent</td><td>ppm</td><td>25</td><td>Dry, 273 K, 101.3 kPa, 15% O_2</td><td>1-hour</td></tr></table></td><td>Section 5.6.4
Table 5-7</td></tr>
</table>

Condition number	Condition requirement	Where addressed
3.25	The Proponent shall design, construct, operate and maintain the project to ensure that the total cumulative load of nitrogen dioxide or nitric oxide, or both as nitrogen dioxide, from the combined discharges from the Tallawarra Stage A and Tallawarra Stage B power stations does not exceed 900 tonnes per annum. This mass limit also applies to emissions during start-up and shut-down periods.	Section 5.6.4 Table 5-8
3.26	The stacks associated with the project must be marked and lit in accordance with the requirements of the CASA.	Section 5.6.1
3.29	The Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:	
	a) all relevant Australian Standards;	Section 3.8
	b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and	Section 3.8
	c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority, 1997).	Section 3.8
	In the event of an inconsistency between the requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.	Section 3.8
3.30	Except as may be provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997 which prohibits the pollution of waters.	Table 5-3

Condition number	Condition requirement	Where addressed
3.37	The project shall be designed, and employ surface water management techniques, such that existing runoff volumes along drainage lines from the site are maintained at pre-construction levels and there are no adverse effects to adjoining land as a result of flooding and runoff.	Section 5.5.5
3.42	The Proponent shall establish a riparian zone consisting of local native plant species adjacent to Yallah Creek within the power station site boundary. The width of the riparian zone is to be a minimum of 50 metres on both sides of the creek, where practicable. All works and disturbance areas associated with the construction and operation of the project must be located outside of the riparian zone, including new transmission line poles.	Table A-1 Vegetation Offset Plan in Appendix D
3.43	The Proponent shall monitor and maintain the riparian zone along Yallah Creek (referred to in condition 3.42) throughout the life of the project.	Table A-1 Vegetation Offset Plan in Appendix D
3.52	The Proponent shall ensure that all external lighting associated with the project is mounted, screened, and directed in such a manner so as not to create a nuisance to the surrounding environment, properties and roadway. The lighting shall be the minimum level of illumination necessary and shall comply with *Australian Standard AS4282 1997 – Control of the Obtrusive Effects of Outdoor Lighting*.	Section 3.8
3.53	Where aviation hazard lighting is recommended by CASA and/or AirServices Australia, all reasonable and feasible attempts shall be made to ensure that this lighting is designed and directed so as not to create a nuisance to the surrounding environment, properties and roadway.	Section 5.6.1

Condition number	Condition requirement	Where addressed
3.54	The Proponent shall take all reasonable and feasible measures to avoid the sites known as Yallah Gully 1 (National Parks and Wildlife Services Site ID 52-5-0248), Yallah Gully 2 (National Parks and Wildlife Services Site ID 52-5-0247), Yallah Gully 3 (National Parks and Wildlife Services Site ID 52-5-0246) and Yallah Site 2 (National Parks and Wildlife Services Site ID 52-5-0122) during the construction of the project, and develop site-specific mitigation measures to ensure that they are not impacted by construction or operation of the power station and any associated infrastructure. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and Heritage NSW.	Section 5.10 Table 5-23

Condition number	Condition requirement	Where addressed
3.55	If during the course of construction or operation of the project the Proponent uncovers any previously unidentified Aboriginal cultural objects, all works likely to affect the object(s) shall cease in the immediate area to prevent any further impact to the find(s) and Heritage NSW informed. A suitably qualified archaeologist and Aboriginal community representatives shall be contacted to determine the significance of the find(s) and appropriate management measures. The Proponent shall register the site and management outcome in the Aboriginal Heritage Information Management System (AHIMS) in accordance with the National Parks and Wildlife Act 1974. Works are not to resume until approval in writing is received from Heritage NSW.	 Figure 5-6 Figure 5-7
3.58	All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.	Section 5.9 Section 5.9.4

Condition number	Condition requirement	Where addressed
3.59	The Proponent shall, to the extent that is reasonable and feasible, maximise the treatment, reuse and/or recycling on the project site of any waste oils, excavated soils, vegetation, slurries, sludges or other solid and liquid waste materials associated with the project, to minimise the need for treatment or disposal of those materials outside the power station.	Section 5.9.1
3.60	The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	Section 5.9.4
3.61	The Proponent shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (EPA, 2009), or any superseding document.	Section 5.9.2

<table>
<tr><th>Condition number</th><th>Condition requirement</th><th>Where addressed</th></tr>
<tr><td>4.7</td><td>The Proponent must monitor (by sampling and obtaining results by analysis) the pollutant concentrations or parameters specified in Table 10 at each of the turbine stack monitoring/discharge points described in Table 7 during operation. Monitoring must be undertaken during maximum load, using the specified sampling method, units of measure, and sample at the frequency in Table 10, unless otherwise agreed to by the EPA.

Table 10 – Periodic Pollutant/Parameter Monitoring (Air)
<table><tr><th>Pollutant/Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent</td><td>ppm</td><td>Continuous</td><td>CEM-2 and US EPA Procedure 1</td></tr><tr><td>Moisture</td><td>%</td><td>Continuous</td><td>Special Method 1 and US EPA Procedure 1</td></tr><tr><td>Oxygen</td><td>%</td><td>Continuous</td><td>CEM-3 and US EPA Procedure 1</td></tr><tr><td>Temperature</td><td>°C</td><td>Continuous</td><td>TM-2 and US EPA Procedure 1</td></tr><tr><td>Velocity</td><td>m/s</td><td>Continuous</td><td>CEM-6 and US EPA Procedure 1</td></tr><tr><td>Volumetric flow rate</td><td>m^3/s</td><td>Continuous</td><td>CEM-6 and US EPA Procedure 1</td></tr><tr><td>Selection of sampling positions</td><td>-</td><td>-</td><td>TM-1</td></tr></table>
Note: For the purpose of the Table above, Special Method 1 means any moisture monitoring method approved in writing by the EPA and US EPA Procedure 1. The sampling methods are those specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2016), or its latest version.</td><td>Table 5-9</td></tr>
<tr><td>4.8</td><td>Within six months of the commencement of operation of the project, or as may be agreed or directed by the Secretary, and during a period in which the project is operating at both maximum design loads and under normal operating conditions, the Proponent shall undertake a program to confirm the air emission performance of the project. The program shall include, but not necessarily be limited to:</td><td>Table 5-9</td></tr>
<tr><td></td><td>a) point source emission sampling and analysis subject to the requirements listed under condition 4.7 to determine compliance with the stack discharge concentration limits identified in condition 3.24;</td><td>Table 5-9</td></tr>
</table>

Condition number	Condition requirement	Where addressed
	b) a comprehensive air quality impact assessment, using actual air emission data collected under a). The assessment shall be undertaken strictly in accordance with the methods outlined in Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2017), or its latest version	Table 5-9
	c) a comparison of the results of the air quality impact assessment required under b) above, and the predicted air quality impacts detailed in the Air Quality Assessment, Tallawarra B Permit Modification: Air Quality Assessment, EnergyAustralia, Katestone, dated June 2020;	Table 5-9
	d) a comparison of the results of the air quality impact assessment required under b) above, and the impact assessment criteria detailed in Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2017), or its latest version; and	Table 5-9
	e) details of any entries in the Complaints Register (condition 6.3 of this approval) relating to air quality impacts.	Table 5-9
	A report providing the results of the program shall be submitted to the Secretary and EPA within two months of completion of the testing program required under 4.8a) for both operating scenarios.	Table 5-9
4.9	In the event that results of the air dispersion modelling indicates that the operation of the project, under maximum design loads or normal operating conditions, will lead to:	
	a) greater point source emissions of air pollutants than permitted under Condition 3.24 of this approval; or	Table 5-10 AQ11

Condition number	Condition requirement	Where addressed
	b) greater ground-level concentrations of air pollutants than the impact assessment criteria detailed in Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA 2017);	Table 5-10 AQ11
	then the Proponent shall provide details of remedial measures to be implemented to reduce point source emissions and/ or ground-level concentrations of air pollutants to no greater than permitted under this approval. Details of the remedial measures and a timetable for implementation shall be submitted to the EPA for approval within such period as the EPA may require, unless agreed otherwise by Secretary.	Table 5-10 AQ11
4.10	In the event that a combined cycle plant is constructed, the Proponent shall continuously monitor with a probe both the water temperature into the power station and the temperature of the combined cooling water discharge from the Tallawarra Stage A and B plants into the outlet canal, downstream of the attemperation mixing zone.	n/a plant is open cycle
4.11	In the event that a combined cycle plant is constructed, the Proponent shall continuously monitor the flow at the inlet waters to the power station and the flow of water discharged from the Tallawarra Stage A and B plants into the outlet canal, downstream of the attemperation mixing zone.	n/a plant is open cycle
4.12	In the event that a combined cycle plant is constructed, the Proponent shall monitor any relevant “assessable pollutants” as specified under the Load Based Licensing Scheme (under the Protection of the Environment Operations (General) Regulation 2009) in the combined cooling water discharge from the Tallawarra Stage A and B plants into the outlet canal, downstream of the attemperation mixing zone.	n/a plant is open cycle

<table>
<tr><th>Condition number</th><th>Condition requirement</th><th>Where addressed</th></tr>
<tr><td>4.13</td><td>In the event that a combined cycle plant is constructed, the Proponent shall monitor the pollutants specified in Table 11 in the blowdown discharge from the cooling tower system. Monitoring shall be undertaken on a daily basis for the first 30 days of post commissioning operations with the frequency of monitoring to be reviewed and specified by the Secretary following review of the monitoring results for the 30 day period. Daily monitoring is to continue until otherwise approved by the Secretary.
Note: Table 11 can be found in Project Approval 07_0124.</td><td>n/a plant is open cycle</td></tr>
<tr><td>4.14</td><td>The Proponent shall monitor the weather parameters in Table 12 on site in accordance with the specified sampling methods, units of measure, averaging periods and frequency.
Table 12 - Weather Monitoring
<table>
<tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Averaging Period</th><th>Sampling Method</th></tr>
<tr><td>Rainfall</td><td>mm</td><td>Continuous</td><td>1 hour</td><td>AM-4</td></tr>
<tr><td>Wind speed @ 10 metres</td><td>m/s</td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr>
<tr><td>Wind direction @ 10 metres</td><td></td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr>
<tr><td>Temperature @ 2 metres</td><td>°C</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr>
<tr><td>Temperature @ 10 metres</td><td>°C</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr>
<tr><td>Sigma theta @ 10 metres</td><td></td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr>
<tr><td>Solar radiation</td><td>W/m²</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr>
<tr><td>Additional requirements
- Siting
- Measurement</td><td></td><td></td><td></td><td>
AM-1 & AM-4
AM-2 & AM-4</td></tr>
</table></td><td>Table 5-9</td></tr>
<tr><td>4.15</td><td>HAZARD AUDIT - Twelve months after the commencement of operation of the project, or within such period otherwise agreed by the Secretary, the Proponent shall commission an independent, qualified person or team to undertake a comprehensive Hazard Audit of the project. Further Hazard Audits shall be undertaken every three years thereafter. Hazard Audits shall be carried out in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 5 - Hazard Audit Guidelines.</td><td>Table 6-1</td></tr>
</table>

Condition number	Condition requirement	Where addressed
5.1	INCIDENT NOTIFICATION, REPORTING AND RESPONSE - The Secretary must be notified in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 1.	Section 3.11.2 Table 3-2
5.2	NON-COMPLIANCE NOTIFICATION - The Secretary must be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance.	Section 3.11.1
5.3	A non-compliance notification must identify the development and the application number for it, set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	Section 3.11.1
5.4	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Section 3.11.1
5.5	COMPLIANCE REPORTING - Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Requirements outlined in the Compliance Reporting Post Approval Requirements (2020).	Table 6-1
5.6	Compliance Reports must be submitted to the Department in accordance with the timeframes set out in the Compliance Reporting Post Approval Requirements (2020), unless otherwise agreed to by the Secretary.	Table 6-1

Condition number	Condition requirement	Where addressed
5.7	The Proponent must make each Compliance Report publicly available within 60 days of submitting it to the Secretary, unless otherwise agreed by the Secretary.	Table 6-1
5.8	Notwithstanding the requirements of the Compliance Reporting Post Approval Requirements (2020), the Secretary may approve a request for ongoing annual operational compliance reports to be ceased, where it has been demonstrated to the Secretary's satisfaction that an operational compliance report has demonstrated operational compliance.	Table 6-1
5.9	Independent Audits of the project must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).	Table 6-1 Section 3.9
5.10	Proposed independent auditors must be agreed to in writing by the Secretary prior to the commencement of an Independent Audit.	Table 6-1 Section 3.9
5.11	The Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the Compliance Reporting Post Approval Requirements (2020), upon giving at least 4 weeks' notice (or timing) to the Proponent of the date upon which the audit must be commenced.	Table 6-1
5.12	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Proponent must:	Table 6-1
	a) review and respond to each Independent Audit Report prepared under condition 5.11 or condition 5.13 of this approval where notice is given by the Secretary;	Table 6-1
	b) submit the response to the Secretary; and	Table 6-1
	c) make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Secretary, unless otherwise agreed by the Secretary.	Table 6-1

Condition number	Condition requirement	Where addressed
5.13	Independent Audit Reports and the Proponent's response to audit findings must be submitted to the Secretary within 2 months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020), unless otherwise agreed by the Secretary.	Table 6-1
5.14	Notwithstanding the requirements of the Independent Audit Post Approvals Requirements (2020), the Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Secretary's satisfaction that independent operational audits have demonstrated operational compliance.	Table 6-1
6.1	Subject to confidentiality, the Proponent shall make all documents required under condition 6.4 of this approval available for public inspection on request.	Section 4.2
6.2	Prior to the commencement of construction of the project, the Proponent shall ensure that the following are available for community complaints for the life of the project (i.e. construction and operation):	Section 4.2
	a) a telephone number on which complaints about construction and operational activities at the site may be registered; b) a postal address to which written complaints may be sent; and c) an email address to which electronic complaints may be transmitted.	Section 4.2

Condition number	Condition requirement	Where addressed
	The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public, and which clearly indicates the purpose of the sign. The telephone number, postal address and email address shall be published in a newspaper circulating in the local area prior to the commencement of construction of the project and prior to the commencement of operation. The details shall also be provided on the website required by condition 6.4 of this approval.	Section 4.2
6.3	The Proponent shall record details of all complaints received through the means listed under condition 6.2 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:	Section 4.2
	a) the date and time of the complaint; b) the means by which the complaint was made (telephone, mail or email); c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect; d) the nature of the complaint; e) any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken. The Complaints Register shall be made available for inspection by the Secretary upon request. The Complaints Register for the project may be incorporated into an existing complaints handling system managed by the Proponent if it is demonstrated to meet the requirements of condition 6.3.	Section 4.2

Condition number	Condition requirement	Where addressed
6.4	Before the commencement of construction until the completion of all rehabilitation required under this approval, the Proponent must:	Section 4.2
	a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this approval) publicly available on its website: • the EIS; • all current statutory approvals for the project; • all approved strategies, plans and programs required under the conditions of this approval; • the proposed staging plans for the project if the construction, operation or decommissioning of the project is to be staged; • regular reporting on the environmental performance of the project in accordance with the reporting requirements in any plans or programs approved under the conditions of this approval; • a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; • a summary of the current phase and progress of the project; • contact details to enquire about the development or to make a complaint; • a complaints register, updated monthly; • the Annual Reviews of the project; • audit reports prepared as part of any Independent Environmental Audit of the project and the Proponent's response to the recommendations in any audit report; • any other matter required by the Secretary; and	Section 4.2
	b) keep such information up to date, to the satisfaction of the Secretary.	Section 4.2

Condition number	Condition requirement	Where addressed
6.5	At least one month prior to the commencement of construction of the project, or within such a period otherwise agreed by the Secretary, the Proponent shall prepare and implement a Community Consultation Program. The program shall be ongoing throughout the construction phase of the project and for at least the first 12 months of operation. The program shall include, but not necessarily be limited to:	Section 4.1
	a) the general types of information on the timing, progress, construction, operation and environmental management of the project; b) the means by which the information would be provided to the community (for example, presented at regular meetings, published in regular newsletters etc); c) the spatial extent of the community to be consulted; and d) a mechanism through which the community can provide feedback to the Proponent in relation to the environmental management and impacts of the development.	Section 4.1
	The Program shall be submitted for the approval of the Secretary, prior to the commencement of construction of the development.	N/A
7.4	The Proponent shall prepare an **Operation Environmental Management Plan** (OEMP) to detail an environmental management framework and the practices and procedures to be followed during operation of the project.	This document
	The Plan shall be consistent with Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004), or its latest version, and shall include, but not necessarily be limited to:	Section 3.5

Condition number	Condition requirement	Where addressed
	a) identification of all relevant statutory and other obligations that the Proponent is required to fulfil in relation to operation of the project, including all relevant approvals, licences, and permits;	This table A-1 Section 3.4 Section 3.5
	b) overall environmental policies, guidelines and principles to be applied to the operation of the project;	Section 3.1, App B and Section 3.4
	c) relevant standards to be applied to the project and details of how the environmental performance of the operation of the project will be monitored and managed to meet the standards. Environmental performance issues shall include, but not be limited to –	Section 3.5
	i) measures to monitor and maintain offset measures implemented in accordance with condition 3.41 of this approval,	Appendix D
	ii) methods to monitor and maintain revegetated areas (including riparian areas) during the establishment phase and long term,	Appendix D
	iii) ongoing measures to monitor and control the spread of weeds,	Section 5.3
	iv) ongoing measures to control soil erosion and sedimentation;	Section 5.4
	v) water management plan, prepared in consultation with the EPA, identifying clean water and dirty water (i.e. waste water streams) areas on site maps, waste water volumes, sources and pollutants, and details of the water management measures to be implemented to manage the specific pollutant streams and clean water runoff,	Section 5.5
	vi) procedures for planned and unplanned water discharges from the site, and	Section 5.5.8
	vii) emergency response procedures in the event of flooding	Section 5.5.9

Condition number	Condition requirement	Where addressed
	d) a description of the roles and responsibilities for all relevant employees involved in the operation of the project;	Table 3-1
	e) a means by which environmental performance can be periodically reviewed and improved, where appropriate and what actions will be taken to address identified potential adverse environmental impacts;	Section 3.10 Section 3.12
	f) Removed;	-
	g) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval; and	Section 5
	h) the environmental monitoring requirements outlined under conditions 4.5 to 4.14 of this approval, inclusive.	Table 5-9 Table 5-10
	The Plan shall be submitted for the approval of the Secretary no later than one month prior to the commencement of operation of the project, or within such period otherwise agreed by the Secretary. Operation shall not commence until written approval has been received from the Secretary. The Proponent must implement the approved OEMP for the project.	Section 1.4
7.5	As part of the OEMP for the project, required under condition 7.4 of this approval, the Proponent shall prepare and implement the following Management Plans:	
	a) an **Air Quality Management Plan** in consultation with the EPA to outline measures to manage impacts from the project on local and regional air quality. The Plan shall include, but not necessarily be limited to -	Appendix H

Condition number	Condition requirement	Where addressed
	i) identification of all major sources of particulate and gaseous air pollutants that may be emitted from the project, being both point-source and diffuse emissions, including identification of the major components and quantities of these emissions,	Section 5.6.3 and Table 5-3
	ii) monitoring for gaseous and particulate emissions from the project,	Table 5-9
	iii) procedures for the minimisation of gaseous and particulate emissions from the project, including pro-active and reactive management and response mechanisms, with specific reference to measures to be implemented and actions to be taken to minimise and prevent potential elevated air quality impacts on surrounding land uses as a consequence of meteorological conditions, upsets within the project, or the mode of operation of the project at any time,	Section 5.6.5 Table 5-10
	iv) specific procedures for the management of generating efficiency and the minimisation of greenhouse gas emissions per unit of electricity generated,	Section 5.6.5 Table 5-10
	v) procedures aimed at maximising the efficiency of the start-up and shut-down cycles for the project,	Section 5.6.5
	vi) provision for regular review of air quality monitoring data, with comparison of results against the predictions made in the document listed under condition 1.1c) of this approval,	Section 5.6.5 Table 5-9
	vii) plans for regular maintenance of process equipment to minimise the potential for leaks and fugitive emissions, and	Section 5.6.5
	viii) a contingency plan should an incident, process upset or other initiating factor lead to elevated air quality impacts, whether above normal operating conditions or environmental performance goals/ limits; and	Section 5.6.5 Table 5-10

Condition number	Condition requirement	Where addressed
	b) a **Noise Management Plan** in consultation with the EPA to detail measures to mitigate and manage noise during operation of the project. The Plan shall include, but not necessarily be limited to -	
	i) identification of the noise limits specified under this approval,	Table 5-12 Table 5-14 Table 5-15 Table 5-16 Table 5-17
	ii) identification of operational activities that will be carried out and the associated noise sources,	Section 5.7.2
	iii) details of all management methods, procedures and mitigation measures that will be implemented to control individual and overall noise emissions from the site during operation,	Section 5.7.16
	iv) procedures for periodic consideration of noise impacts against the noise limits specified under this approval,	Section 5.7.14
	v) noise monitoring and reporting procedures, and	Table 5-19
	vi) procedures to generate suitable documentation for annual environmental auditing, that demonstrates that the noise limits specified under this approval are being met.	Section 5.7.13 and Section 5.7.15

Condition number	Condition requirement	Where addressed
7.7	Within 3 months, unless the Secretary agrees otherwise, of: a) the submission of an incident report under condition 5.1 of this approval; b) the submission of an Independent Environmental Audit report under condition 5.11 of this approval; c) the approval of any modification to the conditions of this approval; or d) a direction from the Secretary under condition 1.3 of this approval; the Proponent must review and, if necessary, revise the studies, strategies or plans required under the conditions of approval 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, unless otherwise agreed with the Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.*	Section 3.12

Condition number	Condition requirement	Where addressed
7.8	To ensure the studies, strategies and plans for the project are updated on a regular basis and incorporate any required measures to improve the environmental performance of the project, the Proponent may submit revised studies, strategies or plans required for the project under the conditions of approval at any time. With the agreement of the Secretary, the Proponent may also submit any study, strategy or plan required under the conditions of this approval on a staged basis. The Secretary may approve a revised strategy or plan required under the conditions of approval, or the stage submission of these documents, at any time. With the approval of the Secretary, the Proponent may prepare the revised or staged strategy or plan without undertaking consultation with all parties nominated under the applicable condition in this approval. *Notes:* • *While any study, strategy or plan may be submitted on a progressive basis, the Proponent must ensure that the existing operations on site are covered by suitable studies, strategies or plans at all times.* • *If the submission of any study, strategy or plan is to be staged, then the relevant study, strategy or plan must clearly describe the specific stage to which the study, strategy or plan applies, the relationship of this stage to any future stages, and the trigger for updating the study, strategy or plan.*	Section 3.12

Condition number	Condition requirement	Where addressed
1 Appendix 1	A written incident notification addressing the requirements set out below must be submitted to the Secretary via the Major Projects website within seven days after the Proponent becomes aware of an incident. Notification is required to be given under this condition even if the Proponent fails to give the notification required under condition 5.1 or, having given such notification, subsequently forms the view that an incident has not occurred.	Table 3-2
2 Appendix 1	Written notification of an incident must: a) identify the development and application number; b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident); c) identify how the incident was detected; d) identify when the Proponent became aware of the incident; e) identify any actual or potential non-compliance with conditions of approval; f) describe what immediate steps were taken in relation to the incident; g) identify further action(s) that will be taken in relation to the incident; and h) identify a project contact for further communication regarding the incident.	Table 3-2
3 Appendix 1	Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Secretary, the Proponent must provide the Secretary and any relevant public authorities (as determined by the Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.	Table 3-2

Condition number	Condition requirement	Where addressed
4 Appendix 1	The Incident Report must include: a) a summary of the incident; b) outcomes of an incident investigation, including identification of the cause of the incident; c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and d) details of any communication with other stakeholders regarding the incident.	Table 3-2

Table A- 2: Statement of Commitment (Source: Sinclair Knight Merz, July 2009)

Statement of Commitment	Where addressed
Environmental Management	
An operational environmental management plan (OEMP) will be prepared and implemented to guide operational activities. The OEMP will cover the following areas: ■ environmental management; ■ air and greenhouse; ■ noise; ■ hazard and risk; ■ water; ■ heritage; ■ ecology; ■ landscape and visual; ■ traffic and transport; ■ waste management; and ■ emergency response. Any plans and strategies contained in the OEMP will be developed in consultation with the relevant agencies.	This Plan. An OEMP have been prepared and will be developed in consultation the relevant agencies. Aspects of water, air and greenhouse, heritage, noise, traffic, and waste are addressed through the sub-plans in sections 5.5, 5.6, 5.7, 5.8, 5.9 and 5.10 respectively. All other aspects are addressed through EnergyAustralia's Environmental Management System as shown in Figure 3-1
The OEMP will require that regular monitoring and periodic performance reviews be undertaken of key performance criteria for noise during the operation of the site. Performance reviews will be undertaken against noise performance parameters established in the OEMP. The examination and interpretation of the results of such reviews will be undertaken by a suitably qualified professional and any agreed actions implemented within a reasonable timeframe.	Addressed in Section 5.7. Noise Management Plan.
The plant's hours of operation will be 24 hours 7 days per week.	Noted. Tallawarra Power Station can operate 24 hours 7 days a week
The site will preferentially use natural gas fuel for firing the power station turbines. Diesel fuel (OCGT only) shall only be used to manage fuel capacity or network system constraints, in the event of failure of existing major electricity generating facilities, failure of natural gas supplies, a State or regional system shutdown situation; if cessation of operation would otherwise lead to a loss or reduction in electricity necessary to maintain the required network supply security/reliability or at the direction of the National Electricity Market Operator.	The OCGT will not run on diesel fuel.
The Tallawarra Stage B project will not result in any permanent reduction or alteration of the existing foreshore access arrangements in the vicinity of the site	Noted. Foreshore access has not been impacted.
Air and Greenhouse	
The air and greenhouse proposal for the Stage B OCGT plant will be designed and implemented to ensure that the NSW DECC criteria for each pollutant identified in Tables 7-1 and 7-2 are not exceeded. As is the case with Tallawarra A (Tallawarra A Air Quality Management Plan), in the event of exceedances, DECC will be notified and remedial action undertaken.	No exceedances to the discharge limit identified in Table 5-4
In order to determine the annual NOx load, TRUenergy propose to install and operate a continuous NOx monitoring system at the site.	NO_x monitoring system is installed.

Statement of Commitment	Where addressed
The need or otherwise for offsets will be determined based on the annual monitoring results. Additionally, the need or otherwise will also be determined by; the actual operating data from Tallawarra A, the predicted operating data from Tallawarra B and finally by the actual operating data from Tallawarra B.	Annual monitoring of operational emission will be monitored.
TRUenergy has committed to avoid simultaneous cold starts of both Tallawarra A and Tallawarra B CCGTs as a potential exceedance of air emission parameters is indicated from the modelling of this operational scenario with currently available data. TRUenergy reserves the right to remodel and seek the ability to carry out this scenario in the event that improved emissions data becomes available.	Not applicable. CCGT is not proposed for Tallawarra B.
Ongoing monitoring of greenhouse gas emissions will be undertaken and reported in the proponent's Annual Environmental Report.	Noted. Greenhouse gas emissions will be reported in the National Greenhouse and Energy Reporting.
The proponent will continue to meet its requirements under the 'Greenhouse Challenge Plus Program' by maintaining its emissions inventory reporting and continuing development and implementation of action plans to achieve cost effective abatement.	
Noise	
The project noise goals listed in Table 7-17 (of the EA), developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B OCGT plant.	Addressed in Table 5-18 and Table 5-19
Any future development within the Tallawarra Lands area will need to consider the operational noise emissions of the plant and implement design measures to minimise the impact of such emissions. Operational noise emissions monitoring will be undertaken during the operation phase to confirm current assumptions prior to the development of the proposed residential areas.	Addressed in Table 5-20
The start up and shut down activities will be managed through the Operational Environmental Noise Management Plan developed for Tallawarra A, Ref 7142- 037-02-01 Rev 2.	Addressed in Table 5-20
Water	
The existing comprehensive routine monitoring program (as required for Tallawarra Stage A) will be used to monitor the water quality in Lake Illawarra.	Noted. Water monitoring routine for Tallawarra Stage A (Unit 1) will be followed.
The use of treated sewage effluent by the proponent for spray irrigation at the site will be managed in accordance with the existing environment protection licence conditions.	Noted. Treated sewage effluent will be managed in accordance with EPL 555.
Runoff water quality will be improved through the use of specially designed traps which will remove oil and grit from runoff water. This will enable recycling of the captured oil, and offsite disposal of the solids. The continued use of the existing constructed wetlands will further improve runoff water quality through removal of excess nutrients and toxicants.	Noted. Oil and grit traps will be used to capture stormwater runoff to improve water quality
Settling basins will be used to remove course material from runoff water and minimise further sedimentation in Lake Illawarra. The settling basins provided for Tallawarra Stage A may need to be enlarged or duplicated to cater for the increased runoff.	Sedimentation pond has been built to capture the runoff water. This pond will discharge to the existing northern drain.
The oil skimmer booms that are in place for the Tallawarra Stage A plant will be used on the outlet canal to provide extra protection in the event of an oil spill.	Oil boom were not installed for Tallawarra Stage A. Oil skimmer is installed for the sediment ponds and oil spill kits are located at the outfall canal.
Subject to any future development of Tallawarra Lands and the availability of sewer TRUenergy intent to connect to this system	Noted

Statement of Commitment	Where addressed
Ecology	
Monitoring of the revegetated areas will be undertaken to ensure they are functioning as designed.	Addressed in Section 5.3
Aboriginal Heritage	
Any identified or potential Aboriginal heritage sites remaining on the proponent's site will be protected in consultation with the relevant Local aboriginal Land Council (LALC)	Addressed in 5.10 Heritage Management Plan.
Visual Amenity	
The existing landscape planting for Tallawarra Stage A will be enhanced at key locations around the site.	Noted.
The existing earth mound to the east of the site will be elevated to screen the proposed power stations.	Noted.
Native vegetation will be planted on the mound. Vegetation will be retained on the north side of the site and planting will be maximised to reduce views of the site from the Tallawarra Lands area.	Noted.
Waste	
Waste management will be a component of the Operational EMP for the operational phase of the facility. It will ensure that initiatives for the sustainable management of waste are given consideration, including: • recycling facilities being provided to encourage the separation and recycling of all paper, aluminium, glass, and plastic products used during the operation of the site; and • domestic waste l being collected regularly and disposed of at licensed facilities as appropriate.	Addressed in 5.9 Waste Management Plan,
Where required, any asbestos, contaminated soil and spoil generated from the power station site and the previous power station foundations (subsurface) will be retained and contained on site in the existing DECC approved site asbestos repository established as part of the Tallawarra A approval.	Noted.

Appendix B: EnergyAustralia HSSE Policy

Health, Safety, Security and Environment Policy

EnergyAustralia[1] is one of Australia's largest energy companies, operating as both an energy retailer and energy generator.

EnergyAustralia is committed to providing a safe, healthy and secure work environment for all people at our workplaces, and those affected by our operations and to meet all of its environmental obligations. EnergyAustralia is also committed to the principles of sustainable development and environmental stewardship – the value of balancing our responsibility to meet the needs of our customers with the environmental, social and economic needs of our people, communities and other stakeholders.

We will sustain our commitment to our Health, Safety, Security and Environment (HSSE) performance through a proactive and systematic identification of hazards and management of risks to as low as reasonably practicable (ALARP). Through the application of ALARP risk management we continually seek to eliminate all potential sources of workplace incidents, injuries and ill health.

This policy applies to all of EnergyAustralia's workers, including employees and contractors. We will work together to manage our operations and associated activities in a safe, secure and sustainable manner. HSSE performance is the responsibility of all workers.

EnergyAustralia will:

- Commit to leading and accelerating the clean energy transformation for all;
- Comply with all applicable HSSE laws, regulations and other obligations;
- Minimise adverse impacts of our operations on the environment and community, including the prevention of pollution;
- Continue to identify and report hazards and risks and seek to eliminate them from our operations and activities;
- Establish, monitor and report on HSSE targets, objectives and performance;
- Ensure that knowledge and learnings related to HSSE performance are shared within the workplace, community and industry;
- Consult with our workers and those with whom we share HSSE duties to identify hazards and improve safe work practices;
- Promote and support initiatives to improve HSSE performance and ensure that continuous improvement is built into how we work;
- Provide sufficient resources, including supervision, training, instruction and information, to support all activities and ensure that HSSE risks are well understood and mitigated;
- Support and implement an HSSE Management System, including worker participation;
- Encourage behaviours which demonstrate a commitment to HSSE; and
- Empower all workers to protect themselves and others from injury.

Mark Collette
Managing Director, EnergyAustralia **Feb 2022**

[1] For the purpose of this policy, EnergyAustralia includes EnergyAustralia Holdings Limited, its wholly owned subsidiaries and controlled entities. This policy is reviewed every two years, or when business strategy, structure, practices, or legislation changes, whichever occurs first.

Appendix C: Legal compliance table

Table A- 3: Legislation relevant to this OEMP and sub-plans

Legislation	Details and obligations	Application to the project	Approvals/ permit/ license required
Environmental Planning and Assessment Act 1979 and Regulation	Approval of the Minister required to carry out critical State significant infrastructure (CSSI). Comply with the conditions of the Infrastructure Approval and generally in accordance with the revised mitigation measures from the Response to DPIE Request for Information.	The project was declared a Major Project under section 75B(1)(a) of the *Environmental Planning and Assessment Act 1979*, because it is development of a kind described in clause 24 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*. Tallawarra B power station project (MP07-0124) was granted approval on 21 December 2010 by the then Minister for Planning. On 20 November 2018, the project was made a critical State significant infrastructure (SSI) project by order under Clause 5 of Schedule 2 to the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*.	Planning Approval S07/01422
Protection of the Environment Operations Act 1997, and Amendment Act 2011 and 2014	Sets the statutory framework for managing environment quality in NSW with the objective of protecting, restoring and enhancing the quality of the NSW environment. Environment Protection Licences may be issued by the NSW EPA to regulate and authorise discharges to the environment for scheduled activities.	Under Schedule 1, 17 Electricity Generation of the POEO Act, the Project is considered a scheduled activity. Therefore, the Project requires an Environment Protection Licence (EPL) to operate under section 48 of the POEO Act.	Environment Protection Licence (EPL) has been obtained, licence #555. Operational requirements in the EPL must be complied with. The EPL would need to be modified prior to operation of the project.
Water Management Act 2000	Consolidates the *Water Act 1912* and the *Rivers and Foreshores Improvement Act*. The Act aims to provide sustainable and integrated management of the water sources of the State for the benefit of both present and future generations	The Project would not result in an increase in water demand, the volume of earthworks or drainage pathways that are already been approved. There would be no change in water management practices or to the risk of flooding during construction and operation.	Implementation of OEMP
Heritage Act 1977	Provides protection for the heritage items.	No known non-indigenous heritage items exist within the corridor. If unknown heritage items are discovered, the Unexpected Heritage Finds & Human Remains Procedure should be followed	Implementation of Tallawarra Heritage Management Plan
National Parks and Wildlife Act 1974 and Amendment Act 2001	Consolidates and amends the law relating to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects.	Several Aboriginal heritage artefacts are located within the area surrounding Tallawarra power station site.	Implementation of Tallawarra Heritage Management Plan

Legislation	Details and obligations	Application to the project	Approvals/ permit/ license required
Biodiversity Conservation Act 2016	Aims to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.	The BC Act is not directly applicable to the operational phase of the project. The approach to flora and fauna management and offsetting assumes that BAM / Biodiversity Conservation Act 2016 compliance is not required (as per EnergyAustralia legal advice)	Not applicable
Fisheries Management Act 1994	The objects of this Act include: (a) to conserve fish stocks and key fish habitats; (b) to conserve threatened species, populations and ecological communities of fish and marine vegetation; and (c) to promote ecologically sustainable development, including the conservation of biological diversity.	Under the approved project a permit is not required to carry out any activity in the vicinity of a water course. Consultation is required if damage is to occur to meet the requirements of the permit process.	Permit is not required. Monitor project changes for potential impacts to key fish habitat.
Pesticides Act 1999	Regulates and provides for the control and use of pesticides	Records will be kept of any use of pesticides on the project.	Implementation of OEMP
Biosecurity Act 2015	This Act provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by a biosecurity matter. Under Part 3 of the Act, all persons are required to minimise biosecurity risks including through the control of noxious weeds on their land.	The location and extent of weeds within the study area has been surveyed through the Tallawarra Stage B Gas Turbine Power Station – Ecological Advice (EnergyAustralia 2021). Section 5.2 will prescribe the control measures to control weeds.	Implementation of OEMP
Contaminated Land Management Act 1997	Establishes processes for investigating and (where appropriate) remediating land areas where contamination presents a significant risk of harm to human health or some other aspect of the environment. The Act also sets out the role of OEH in the assessment of contamination and the supervision of the investigation, remediation and management of contaminated sites, and provides for the accreditation of site auditors.	This legislation regulates the investigation and remediation required. ▪ Where asbestos is identified, it is addressed according to the Tallawarra Asbestos Management Plan. ▪ Where other potential contamination is identified (i.e. PFAS).	Implementation of Tallawarra Asbestos Management Plan
Rural Fires Act 1997	Establishes the NSW Rural Fire Service and define its functions and to make provision for the prevention, mitigation and suppression of rural fires.	Approval will be sought from the Rural Fire Service prior to any burning, or any other activity that could cause a rural fire.	Consider if licence is required prior to undertaking burning activities
Dangerous Goods Act 1974 and Dangerous Goods Regulation 1999	Outlines requirements for the storage, transport and use of dangerous goods as prescribed by the Dangerous Goods Regulation 1999. Licenses sought from WorkCover.	Licenses required for the storage, transport, and use of prescribed goods, where relevant thresholds are exceeded	Consider if licence is required during transportation of dangerous goods.

Appendix D: Vegetation Offset Plan

Appendix E: Environmental Representative Approval

Planning, Industry & Environment

Mr Paul Farnworth
Project Director
EnergyAustralia Pty Ltd
697 Collins Street
Docklands, VICTORIA, 3008

18/12/2020

Dear Mr Farnworth

Tallawarra B Power Station (MP07_0124)
Environmental Representative

I refer to your request (MP07_0124-PA-1) for the Planning Secretary's approval of a suitably qualified and experienced person to undertake the role of Environmental Representative for the Tallawarra B Power Station (MP07_0124).

Energy Australia has nominated Tony Hobbs as the Environmental Representative and Susannah Price as an alternate Environmental Representative, should Tony not be available.

The Department has reviewed the nominations and information provided and is satisfied that these experts are suitably qualified and experienced. Consequently, I can advise that the Planning Secretary approves the appointment of Tony Hobbs as the Environmental Representative for the Tallawarra B Power Station, with Susannah Price as nominated alternate.

If you wish to discuss the matter further, please contact Wayne Jones on 6575 3406.

Yours sincerely

Stephen O'Donoghue
Director
Resource Assessments
As nominee of the Planning Secretary

Appendix F: Independent Audit

Planning, Industry & Environment

Ms Amanda Jones
Level 19, Two Melbourne Quarter
697 Collins Street
Melbourne Victoria 3008
26/02/2021

Dear Ms Jones

Tallawarra B Power Station (MP07_0124)
Independent Environmental Audit

I refer to your letter of 19 February 2021 seeking approval of the audit team for the upcoming Independent Environmental Audit of Tallawarra B Power Station (the project), in accordance with Schedule 2, Condition 5.10 of project approval MP07_0124, as modified (the approval).

Having considered the qualifications and experience of the proposed audit team, the Secretary endorses the appointment of:

- Ms Shireen Baguley – Lead Auditor;
- Mr Steven Molino – Alternative Lead Auditor;
- Ms Rebecca O'Rourke – Assistant Auditor;
- Ms Jenni Kremer – Alternative Assistant Auditor,

to undertake the audit in accordance with Schedule 2, Condition 5.9 of the approval. This approval is conditional on the audit team being independent of the project.

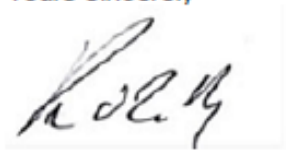
Please ensure this correspondence is appended to the Independent Audit Report.

The audit is to be conducted in accordance with the Department's Independent Audit Post Approval Requirements (May 2020). A copy of the requirements can be located at https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Compliance-policy-and-guidelines/Independent-audit-post-approval-requirements. Auditors may wish to have regard to AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing.

The Audit report, including the response to any recommendations contained in the Audit report and a timetable to implement the recommendations is to be submitted to the Secretary, with the Audit report.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au

Yours sincerely



Katrina O'Reilly
Team Leader - Compliance
Compliance
As nominee of the Planning Secretary

Appendix G: Project Approval

Appendix H: Evidence of agency consultation

From: Tylah Batistuzo-Hale <tylah.batistuzo-hale@epa.nsw.gov.au>
Sent: Wednesday, 5 July 2023 10:30 AM
To: [redacted]@energyaustralia.com.au>
Cc: [redacted]@aurecongroup.com>; Greg Newman <Greg.Newman@epa.nsw.gov.au>
Subject: EPA Comments on Draft Operational Environmental Management Plan - Energy Australia - Tallawarra Power Station - EPL 555

Good morning [redacted]

The New South Wales Environment Protection Authority (EPA) have reviewed the proposed Operational Environmental Management Plan (OEMP) for Environment Protection Licence (EPL) 555, prepared by Aurecon on behalf of EnergyAustralia.

EnergyAustralia has consulted the EPA on the development of an OEMP, as per Items 7.5 (a), 7.5 (b) and 7.4 (c) (v) of the Project Planning Ministers Conditions of Approval, in addition to Condition E6.1 of EPL 555.

The EPA have assessed the proposed Noise Management Plan (Section 5.7 of the OEMP) and believe that the scope of the proposed Operational Noise Review appears reasonable. In order to definitively state that the proposed Operational Noise Review satisfies Condition 4.1-4.4 of the Project Approval (Application No. 07_0124), the EPA must first review the report generated upon its completion, in line with section 5.7.5 of the OEMP.

The EPA are in agreement with EnergyAustralia's proposed OEMP and offer no further comments.

Please consider this email EPA's formal response, thus satisfying the Minister's Conditions of Approval and Condition E6.1 of EPL 555.

Warm regards,

Tylah Batistuzo-Hale
Operations Officer
Regulatory Operations
NSW Environment Protection Authority
M 0484 667 749

Appendix I: DPE Letter – Aviation Impact Assessment

Department of Planning and Environment

Mr Ian Black
Tallawarra B Project Director
EnergyAustralia Pty Ltd (EnergyAustralia)

12 May 2023

Subject: Tallawarra B Power Station Project - Aviation Impact Assessment

Dear Mr Black

I refer to the following additional information provided by EnergyAustralia to the Department of Planning and Environment (the Department) based on the Tallawarra B Power Station Project (the project) final design (Version 3B) and satisfy condition 1.6 of the project approval:

- updated computational fluid dynamic (CFD) plume modelling for the project's Version 3B design (by Stacey Agnew Pty Ltd, dated 7 March 2023);
- independent expert review report to verify and validate the Version 3B CFD plume modelling (by Mr David Featherston, GHD Pty Ltd, dated 4 April 2023); and
- review of protection surfaces of the project's Aviation Impact Assessment (by Aviation Projects, dated 29 March 2023).

The Department has carefully reviewed the above listed information and notes that the Version 3V plume modelling report and the independent expert review report concluded that project would be able to meet CASA's requirements, as the Version 3B assessment was undertaken in accordance with:

- CASA's latest Advisory Circular (AC) 139.E-02v1.0, dated March 2023, including requirements set out in section 2.5 of the AC for commissioning of an independent review of the plume study for a stack design involving engineering modifications aimed to reduce the impact of the plume rise, such as any CFD modelling undertaken for the assessment; and
- CASA's previous advice (dated 29 March 2021) that a critical plume velocity (CPV) lower than 6.1 m/s by 700 feet above mean sea level (ft AMSL) would be required to be met to achieve an acceptable level of safety for aviation, accepting half of the maximum reported CFD vertical velocity at a horizontal plane is a reasonable and acceptable method for deriving the CPV.

CASA also provided advice (dated 30 March 2023 and 27 August 2021) (**Attachment A**) advising that an independent review should be commissioned. The Department notes that GHD has provided an independent review on the CFD modelling. If CASA provide any further advice we will provide this to EnergyAustralia.

Consistent with the Department's conditional approval of the Aviation Impact Assessment for the project (dated 17 September 2021), the Department considers that the project's Version 3B design satisfies condition 1.6 of the project approval, subject to EnergyAustralia providing the following information prior to operations, to the satisfaction of the Planning Secretary:

- a report confirming that all the mitigation measures and the inclusion of a plume symbol on aeronautical charts have been or would be implemented (noting that some measures can only be implemented after operations have commenced), as listed in Section 10 of the Aviation Impact Assessment (by Aviation Projects, dated 13 February 2020); and the supplementary review of protection surfaces;
- evidence of the performance guarantee test demonstrating that the plant achieves compliance with the CPV as outlined in the plume rise performance guarantee; and
- submission of an ongoing Plume Validation Monitoring Program to be implemented during operations, incorporating a trigger-action-response plan.

The Department also advises that this advice is in relation to condition 1.6 of the project approval only and does not constitute approval or amendment of any other conditions, including noise and air quality operational requirements or limits. EnergyAustralia must comply with the conditions of approval.

If you have any questions, please contact Mandana Mazaheri at Mandana.Mazaheri@planning.nsw.gov.au.

Yours sincerely

Stephen O'Donoghue
Director
Resource Assessments

Document prepared by

Aurecon Australasia Pty Ltd
ABN 54 005 139 873

Level 11, 73 Miller Street
North Sydney 2060 Australia

PO Box 1319
North Sydney NSW 2059
Australia

T +61 2 9465 5599
F +61 2 9465 5598
E sydney@aurecongroup.com
W aurecongroup.com