Tallawarra-B Power Station

Environmental Management Strategy

EnergyAustralia Tallawarra Pty Ltd

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LIGHT THE WAY

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Glossary

Abbreviation	Meaning
ACHMP	Aboriginal cultural heritage management plan
CASA	Civil Aviation Safety Authority
CCGT	Combined cycle gas turbine
CEMP	Construction environmental management plan
CLG	Community Liaison Group
CoA	Conditions of Approval to Major Project MP07-0124
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning, Industry and Environment
EA	Environmental Assessment (SKM, 2009)
EMS	Environmental management strategy
EP&A Act	*Environment Planning and Assessment Act 1979*
EPA	NSW Environment Protection Agency
EPC	Engineering, procurement and construction
EPL	Environment protection licence
ER	Environmental representative
EWMS	Environmental work method statements
FFMP	Flora and fauna management plan
FID	Final investment decision
GECL	GE Clough, engineering, procurement and construction contractor
HSSE	Health, safety, security and environment
I&C	Instrumentation and control
KV	Kilovolts
KPI	Key performance indicators
Mod-1	Modification 1 to Major Project MP07-0124
Mod-2	Modification 2 to Major Project MP07-0124
MW	Megawatts
NAQMP	Noise and air quality management plan
OCGT	Open cycle gas turbine
OE	Owners engineer
OEMP	Operational environmental management plan
O&M	Operation and maintenance
PIRMP	Pollution Incident Response Management Plan
SoC	Statement of Commitments within the Environmental Assessment and Submissions Report (SKM, 2009/2010)
SWMP	Soil and water management plan
TMP	Traffic management plan

Abbreviation	Meaning
WMP	Waste management plan

1 Introduction

1.1 Project overview

The Tallawarra B Power Station (the project) (MP07-0124) The project involves the construction and operation of an open cycle gas turbine (OCGT) power station and associated infrastructure. The project will be constructed adjacent to the existing Tallawarra A combined cycle gas turbine power station.

The project was granted approval by the then Minister for Planning on 21 December 2010. 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). CSSI projects are projects declared by the Minister for Planning to be of high priority and essential to NSW for economic, social or environmental reasons. Energy security is a recognised critical issue for the State.

The Project retained its CSSI status when it transitioned to SSI in November 2018 in accordance with Schedule 2 clause 5(7) of the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017. The approval modification (Mod-1) for extension of the lapse date was approved by the Executive Director on 6 April 2016, which extended the Project Approval lapse date by five years to 21 December 2020. The consolidated project approval (Mod-2) extended the Project Approval lapse date by two years to December 2022 and an amendment of condition of approval 1.5 for a single OCGT to be used for the Project

Accordingly, EnergyAustralia intends to construct and operate an OCGT on the site.

The project will use some existing infrastructure associated with the Tallawarra A Power Station. Natural gas for fuel to the project will be supplied from an extension to the existing lateral gas line at the Tallawarra A Power Station. The project will generate electricity at a voltage in the range of 11-22kV which will be stepped up to 132kV by a transformer. The project will require construction of a new transmission line and new switch bay adjacent to the existing switchyard.

Construction of the project would require the temporary establishment of construction ancillary areas adjacent to the project site. This will include the use of some land associated with the Tallawarra A power station. Following construction, disturbed area will be rehabilitated, and landscaping will be established.

EnergyAustralia will operate the project following construction and commissioning.

1.2 Purpose and objectives

The Tallawarra B Power Station Environmental Management Strategy (EMS) provides the strategic environmental management framework for the construction and operation of an open cycle gas turbine (OCGT) power station with a nominal capacity of up to 400 megawatts (MW) (the project).

The EMS is an overarching document that:

- Provides the strategic framework for environmental management of the project.
- Outlines the general approach to achieving environmental compliance with relevant licences, policies, statutory requirements, project approval conditions and consultation agreements.
- Sets objectives and targets for project environmental performance.
- Describes the environmental management related roles and responsibilities for key personnel.

- Outlines how environmental performance will be monitored so that adequate safeguards and controls are implemented during construction and operation.

This document would be made publicly available before the commencement of construction until the completion of all rehabilitation required under the Project approvals as per Condition of Approval (CoA) 6.4.

A full listing of project approval conditions including consideration of the relevant environmental aspect(s), project delivery stage(s) and responsibility for each condition is provided in Appendix E. Appendix E also indicates where in the EMS (or associated environmental management plan) each project approval condition is addressed.

The Department of Planning, Industry and Environment's (DPIE) project approval condition requiring the development of this EMS is provided in Table 1-1.

Table 1-1 Where the EMS addresses conditions of approval

CoA #	Condition of Approval 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); b) in accordance with all written directions of the Secretary; and c) generally in accordance with the EA.	Section 2.1
1.2	The conditions of this approval and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and the documents listed in condition 1.1c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition 1.1c), the most recent document prevails to the extent of any inconsistency, ambiguity or conflict	Section 2.2
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 b) the implementation of any actions or measures contained in these documents.	Section 2.3
1.4	This approval will lapse if the Proponent does not physically commence the project by 21 December 2022.	Section 2.1
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 1.1
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 2.6
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 2.1
1.8	For the purpose of section 198(3)(b) of the Environmental Planning and Assessment Regulation 2000 (the Regulation), the relevant provisions, as defined in section 198(1) of the Regulation, apply to this approval	Section 2.4
3.27	Prior to the commencement of construction of the project, other than site preparation works, or as otherwise agreed by the Secretary, the Proponent shall prepare the following studies: a) a Fire Safety Study for the project, covering relevant aspects detailed in the Department's publication Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Guidelines and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems. The Study shall include a strict maintenance schedule for essential services and other safety measures. The Study shall meet the requirements of the NSW Fire Brigades; b) a Hazard and Operability Study (HAZOP) for the project, chaired by an independent,	Section 2.7

CoA #	Condition of Approval requirement	Where addressed
	qualified person or team. The Study shall be carried out in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines and shall, in particular, address the early shut-down procedures and systems in the event of a gas leak and recommended measures for early shut-down in the event of an incident. The HAZOP report shall be accompanied by a program for the implementation of all recommendations made in the HAZOP report. If the Proponent intends to defer the implementation of a recommendation, justification must be included; c) a Final Hazard Analysis prepared in accordance with the Department's Hazardous Industry Advisory Paper No.6 – Guidelines for Hazard Analysis; and d) a Construction Safety Study for the project, prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Study Guidelines.	
3.28	Prior to the commencement of commissioning of the project, the Proponent shall prepare the following studies: a) a comprehensive Emergency Plan and detailed emergency procedures for the project. The Plan shall be prepared in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines; and b) a Safety Management System, covering all on-site operations and any associated transport activities involving hazardous materials. The System shall clearly specify all safety-related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to safety procedures. The System shall be consistent with the Department's publication Hazardous Industry Planning Advisory Paper No. 9 - Safety Management.	Section 2.7
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.	Section 2.4
3.41	At least one month prior to the commencement of construction of the project, the Proponent shall develop a plan for offsetting the biodiversity impacts resulting from the removal of any native vegetation. The plan shall be submitted to the Secretary for approval and include as appropriate, but not necessarily be limited to: a) measures for encouraging the natural regeneration of locally native vegetation, including weed management measures as identified in condition 3.44; b) replanting/compensatory plantings (at a ratio of at least 2:1) and/or land offsets, and rehabilitation measures; c) measures for replacing specific habitat values impacted by the project (e.g. provision of roost/nest boxes where significant habitat trees such as hollow bearing trees are impacted); d) a timeline for the implementation of the identified measures, including ongoing monitoring and maintenance; e) demonstration of how the plan would achieve the outcome of maintaining or improving biodiversity values in the local area; and f) measures for monitoring and maintaining any offsets in perpetuity. The plan shall be implemented in accordance with the specified measures and timeframes, unless otherwise agreed to by the Secretary.	Appendix I
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	Appendix I
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.	Appendix I
3.44	The Proponent shall monitor all rehabilitated areas, offset areas, and riparian zones for weed infestation. Any infestations shall be actively managed to remove or minimise their spread.	Appendix I
4.15	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.	Section 2.7
5.1	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 5.4

CoA #	Condition of Approval requirement	Where addressed
5.2	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 7.4
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 7.4
5.4	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Section 7.4
5.5	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)	Section 7.6
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	Section 7.6
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.	Section 7.6
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.	Section 7.6
5.9	Independent Audits of the project must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).	Section 7.2
5.10	Proposed independent auditors must be agreed to in writing by the Secretary prior to the commencement of an Independent Audit.	Section 7.2
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.	Section 7.2
5.12	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Proponent must: 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; b) submit the response to the Secretary; and 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	Section 7.2
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.	Section 7.2
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.	Section 7.2
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 6.7
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): 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. 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 6.4

CoA #	Condition of Approval requirement	Where addressed
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: 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 6.5
6.4	Before the commencement of construction until the completion of all rehabilitation required under this approval, the Proponent must: 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 b) keep such information up to date, to the satisfaction of the Secretary	Section 6.7
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: 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. The Program shall be submitted for the approval of the Secretary, prior to the commencement of construction of the development.	Section 6.2
7.1	At least one month prior to the commencement of any site preparation and/or construction activities, or as otherwise agreed by the Secretary, the Proponent shall nominate for the approval of the Secretary a suitably qualified and experienced Environmental Representative(s) independent of the design and construction personnel. The Proponent shall engage the Environmental Representative(s) during all construction activities, or as otherwise agreed by the Secretary. The Environmental Representative(s) shall be the Proponent's principal point of advice in relation to the environmental performance of the project and shall have responsibility for: a) overseeing the implementation of all construction environmental management plans and monitoring programs required under this approval, and advise the Proponent upon the achievement of these plans/programs; b) considering and advising the Proponent on its compliance obligations against all matters specified in the conditions of this approval and the Statement of Commitments as referred to under condition 1.1c) of this approval, and permits and licences; and c) having the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to the Proponent that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur.	Section 4.3

CoA #	Condition of Approval requirement	Where addressed
7.2	The Proponent shall prepare a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during construction of the project. The CEMP shall be consistent with the 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: a) a description of all activities to be undertaken on the site during construction including an indication of stages of construction; b) statutory and other obligations that the Proponent is required to fulfil prior to and during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies; c) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan - i) measures to monitor and manage dust emissions in consultation with the EPA ii) measures, prepared in consultation with Wollongong City Council, to reduce the visual impacts of the project, including landscape plans illustrating the proposed landscape planting and any embankment works, iii) measures, prepared in consultation with Wollongong City Council, for managing and reducing potential flooding; and d) electricity transmission route alignment sheets identifying the exact location of the proposed transmission lines and the location of any threatened species, threatened species habitat and Aboriginal objects in the vicinity; e) a description of the roles and responsibilities for key personnel involved in the construction of the project; f) the issue-specific management plans required under condition 7.3 of this approval; and g) complaints handling procedures during construction consistent with condition 6.2 of this approval. The Plan shall be submitted for the a approval of the Secretary no later than one month prior to the commencement of any construction works associated with the project, or within such period otherwise agreed by the Secretary. Construction works shall not commence until written approval has been received from the Secretary. The Proponent must implement the approved CEMP for the project.	Section 3.3
7.3a	As part of the CEMP for the project, required under condition 7.2 of this approval, the Proponent shall prepare and implement the following: a) a Noise Management Plan to detail measures to mitigate and manage noise during construction works, consistent with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009), or its latest version. The Plan shall include, but not necessarily be limited to - i) procedures to ensure that all reasonable noise mitigation measures are applied during construction works, ii) details of construction activities (including construction traffic) and equipment that have the potential to generate noise and/or vibration impacts on sensitive receivers, iii) the construction noise and vibration objectives for the project and all reasonable and feasible noise and vibration mitigation measures that will be implemented to control construction noise and vibration impacts, particularly where the objectives are predicted to be exceeded, iv) procedures for assessing noise levels at sensitive receivers and compliance, and v) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity;	Section 3.4
7.3b	b) a Traffic Management Plan prepared in consultation with TfNSW, Wollongong City Council and emergency services to manage the construction traffic and access impacts of the project including, but not necessarily limited to - i) details of how construction of project infrastructure will be managed in proximity to local and regional roads, ii) details of traffic routes for heavy vehicles, including any necessary route or timing restrictions for oversized loads, iii) construction vehicle volumes (construction personnel, heavy vehicle movements and oversized loads), iv) measures to ensure traffic volume, acoustic and amenity impacts along construction vehicle routes are minimised, v) details of construction activities that would require disruption to traffic such as road closures and measures to minimise impacts, vi) a Construction Vehicle Code of Conduct to set driver behaviour controls to minimise impacts on land uses along haulage routes, and vii) evidence that all statutory responsibilities with regard to road traffic impacts have been complied with	Section 3.4

CoA #	Condition of Approval requirement	Where addressed
7.3c	c) Flora and Fauna Management Plan to manage flora and fauna impacts during construction in consultation with the BCS. The Plan shall include, but not necessarily be limited to: i) details of all impacted and potentially affected threatened flora and fauna species (including ecological communities) and specific management procedures for each of these species, ii) general management procedures for both the removal of redundant transmission lines and construction of new transmission lines within vegetated areas, including the procedures for clearing vegetation and minimising the extent of clearing, weed management and the rehabilitation of any disturbed vegetation, and iii) proposed revegetation and rehabilitation measures, including completion criteria and monitoring, for any cleared areas, offset areas, and riparian zones along Yallah Creek;	Section 3.4
7.3d	d) a Soil and Water Management Plan prepared in consultation with the DPIE Water, EPA and Wollongong City Council to detail measures to mitigate and manage soil erosion and the discharge of sediment and other pollutants to land and/or water during construction. The Plan must include, but not necessarily be limited to: a) identification of the construction activities that could cause soil erosion or discharge sediment or water pollutants from the site, b) a description of the management methods to minimise soil erosion or discharge of sediment or water pollutants from the site, including a strategy to minimise the area of bare surfaces and stabilise disturbed areas, and plan drawings showing the locations for sediment and erosion control measures, c) demonstration that the proposed erosion and sediment control measures will conform with, or exceed, the relevant requirements of Managing Urban Stormwater: Soils and Construction (Landcom, 2004), d) details on the installation, monitoring and maintenance requirements for each of the recommended measures for erosion and sediment control, e) details of stormwater overflow paths and measures for managing overflows, f) detailed drawings of any engineering structures such as sediment and evaporation ponds, including design standards and management regimes; and	Section 3.4
7.3e	e) Aboriginal Cultural Heritage Management Plan to manage potential Aboriginal cultural heritage impacts during construction in consultation with Heritage NSW. The Plan shall include, but not necessarily be limited to: i) procedures for the management of any recorded sites within the project area including those required under condition 3.54 of this approval, ii) an Aboriginal Cultural Education Program for the induction of personnel and contractors involved in the construction of the project, iii) details of proposed further archaeological investigations and/or salvage projects prior to impact as required under condition 3.56 of this approval, iv) identification and management of previously unrecorded sties, v) details of an appropriate keeping place agreement with local Aboriginal community representatives for any Aboriginal objects salvaged through the development process, and vi) procedures for ongoing Aboriginal consultation and involvement	Section 3.4
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. 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: 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; b) overall environmental policies, guidelines and principles to be applied to the operation of the project; 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 – i) measures to monitor and maintain offset measures implemented in accordance with condition 3.41 of this approval, ii) methods to monitor and maintain revegetated areas (including riparian areas) during the establishment phase and long term, iii) ongoing measures to monitor and control the spread of weeds, iv) ongoing measures to control soil erosion and sedimentation; 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	Section 3.8

CoA #	Condition of Approval requirement	Where addressed
	specific pollutant streams and clean water runoff, vi) procedures for planned and unplanned water discharges from the site, and vii) emergency response procedures in the event of flooding; d) a description of the roles and responsibilities for all relevant employees involved in the operation of the project; 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; f) Removed; g) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval; and h) the environmental monitoring requirements outlined under conditions 4.5 to 4.14 of this approval, inclusive. 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.	
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 - 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, ii) monitoring for gaseous and particulate emissions from the project, 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, iv) specific procedures for the management of generating efficiency and the minimisation of greenhouse gas emissions per unit of electricity generated, v) procedures aimed at maximising the efficiency of the start-up and shut-down cycles for the project, 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, vii) plans for regular maintenance of process equipment to minimise the potential for leaks and fugitive emissions, and 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 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, ii) identification of operational activities that will be carried out and the associated noise sources, 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, v) procedures for periodic consideration of noise impacts against the noise limits specified under this approval, v) noise monitoring and reporting procedures, and vi) procedures to generate suitable documentation for annual environmental auditing,	Section 3.8
7.6	Prior to commencing construction, the Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:	This EMS
	(a) provide the strategic framework for environmental management of the project	This EMS
	(b) identify the statutory approvals that apply to the project	Section 2.1
	(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project	Section 4.2-4.3
	(d) describe the procedures that would be implemented to: keep the local community and relevant agencies informed about the operation and environmental performance of the project;	Section 6
	receive, handle, respond to, and record complaints;	Section 6.4 – 6.6

CoA #	Condition of Approval requirement	Where addressed
	resolve any disputes that may arise;	Section 6.6
	respond to any non-compliance	Section 7.4
	respond to emergencies; and	Section 5.2 – 5.4
	(e) include: references to any strategies, plans and programs approved under the conditions of this approval; and	Section 3.1 – 3.8
	a clear plan depicting monitoring to be carried out under the conditions of this approval.	Section 7.5
	Following the Secretary's approval, the Proponent must implement the Environmental Management Strategy.	This Strategy would be implemented after approval and use used in conjunction with Environmental Management Plans
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 8
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 8

CoA #	Condition of Approval requirement	Where addressed
A 1	Appendix 1: INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS WRITTEN INCIDENT NOTIFICATION REQUIREMENTS 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. 2. 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. 3. 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. 4. 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.	Section 5

2 Approvals, environmental assessment and licence requirements

2.1 Project approval

The Tallawarra Stage B Gas Turbine Power Station Project was approved as MP07-0124 by the then Minister for Planning on 21 December 2010. A modification (07_0124-Mod-1) for the extension of the Project Approval lapse date to 21 December 2020 (Mod-1) was approved by the Executive Director on 6 April 2016. The approved Project involved the development of a gas-fired power station and associated infrastructure located adjacent to the existing Tallawarra A Power Station.

EnergyAustralia, received Approval for a second modification (07_0124-Mod-2) to by the Minister for Planning in December 2020. Through this modification, EnergyAustralia has extended the Project Approval lapse date to 21 December 2022 and amended the description of condition of approval 1.5 so that a single open cycle gas turbine (OCGT) may be used for the power plant.

The Conditions of Approval (CoA) current for the project were issued for the second project modification (07_0124-Mod-2). Appendix E lists all conditions of approval and identifies where each relevant CoA is addressed in the EMS or within other management plans.

The project approval will lapse if EnergyAustralia does not physically commence the project by 21 December 2022.

In accordance with condition of approval 1.7, EnergyAustralia will ensure that all licences, permits and approvals are obtained and maintained as required throughout the life of the project and a copy of the project approval and all other relevant environmental approvals will be made available on the project site at all times during the life of the project.

2.2 Environmental assessment documents

The Environmental Assessment (EA) documents provide the environmental impact assessment as well as the safeguards and management measures to be applied on the project. Condition of approval 1.1 and 1.2 identify the need to undertake the project in accordance with written directions of the Secretary and generally in accordance with the EA.

In accordance with condition of approval 1.3 EnergyAustralia will also comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of the EA including:

- Tallawarra Stage B Gas Turbine Power Station Project, Environmental Assessment, dated July 2009 and prepared by Sinclair Knight Merz, as amended by:
  - Tallawarra Stage B Gas Turbine Power Submissions Report, dated March 2010, and prepared by Sinclair Knight Merz;
  - Supplementary Submissions Report for the Tallawarra Stage B Gas Turbine Power, prepared by Sinclair Knight Merz comprising the following documents:
    - Letter dated 5 July 2010 from TRUenergy to the Department of Planning, Submissions Report – Air Safety for Proposed Tallawarra Stage B Power Station, Yallah;
    - Letter dated 5 July 2010 from Ambidji to TRUenergy, Proposed Tallawarra Stage B Gas Fired Peaking Power Station – CASA Assessment of the OCGT and CCGT Applications;

- Aeronautical Impact Assessment Tallawarra B Gas Peaking Power Station Wollongong, NSW. Closed Cycle Gas Turbine Plume Investigation, prepared by the Ambidji Group and dated 29 March 2010;
- Aeronautical Impact Assessment Tallawarra B Gas Peaking Power Station Wollongong, NSW. Open Cycle Gas Turbine Revised Plume Investigation, prepared by the Ambidji Group and dated 24 March 2010;

- Modification application (MOD 1) - Letter dated 17 December 2015 from EnergyAustralia to the Department of Planning and Environment, Tallawarra B Power Station Extension of Permit (07_0124); and
- Modification application (MOD 2) - Tallawarra Stage B Gas Turbine Power Station, Modification Environmental Assessment, dated June 2020 and prepared by Aurecon, and
- Tallawarra Stage B Gas Turbine Power Station, Modification 2 Submissions Report, dated September 2020 and prepared by Aurecon.

2.3 Environmental assessment commitments

The project EA, Chapter 9, provides a Statement of Commitments in relation to environmental impact mitigation, management and monitoring during construction and operation. These mitigation measures and the conditions of approval issued by the Minister for Planning, have been incorporated in this Environmental Management Strategy.

Appendix F provides indicates where each commitment is addressed in the EMS.

2.4 Legislative requirements

A range of legislative requirements must be considered throughout the project. The project legislative requirements will be reviewed at regular intervals. If any other legislation not identified becomes relevant throughout the course of the project, the Health, Safety, Security and Environment Leader (HSSE Lead) will identify these requirements and ensure compliance.

Specific references to legislative compliance in the conditions of approval will be addressed in the project. These are:

- For the purpose of section 198(3)(b) of the Environmental Planning and Assessment Regulation 2000 (the Regulation), the relevant provisions, as defined in section 198(1) of the Regulation, apply to this project approval.
- 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.

The HSSE Lead will monitor changes to the project legislative framework. Any changed legislative requirements will be communicated by the HSSE Lead to the project team through inductions, updated management plans, toolbox talks, or specific training.

Appendix G provides legislative applicability to the project and identifies responsibility to comply.

2.5 Environment Protection Licence

EnergyAustralia holds an Environment Protection Licence (EPL) number 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 the Tallawarra A project and construction requirements relevant to the construction of the Tallawarra B project.

EnergyAustralia will be ultimately accountable for compliance and reporting to comply with the EPL during delivery of the project. The contractor will have shared responsibility for compliance with some EPL conditions. The EPL conditions that relate to the construction of the Project, and the responsibility for those conditions is outlined in Appendix H.

Prior to the commencement of operation of the Tallawarra B project, the EPL will need to be modified to remove Tallawarra B construction phase requirements and to incorporate appropriate Tallawarra B operational requirements. EnergyAustralia will consult with the EPA regarding this licence modification.

2.6 Aviation safety

EnergyAustralia has undertaken extensive engagement with the Civil Aviation Safety Authority (CASA) and Shellharbour City Council in order to satisfy condition of approval 1.6, which relates to aviation safety. Numerous meetings were held with CASA, Shellharbour City Council and interested stakeholders for this purpose between 2018 to 2021. EnergyAustralia has prepared a detailed aviation impact assessment to meet the requirements of the condition.

On 02 April 2020 EnergyAustralia received written notification from DPIE that condition of approval 1.6 has been satisfied.

EnergyAustralia will continue to consult with CASA, Shellharbour Council, Shellharbour Airport and the local aviation industry during the design and construction of the project.

2.7 Hazard and risk

In accordance with condition of approval 3.27 EnergyAustralia will prepare and submit to DPIE a Fire Safety Study, Hazard and Operability Study, Final Hazard Analysis and Construction Safety Study prior to construction of the project.

In accordance with condition of approval condition of approval 3.28 EnergyAustralia will prepare and submit to DPIE an Emergency Plan and Safety Management System prior to commissioning the project.

In accordance with condition of approval condition of approval 4.15 EnergyAustralia will, twelve months after the commencement of operation of the project, or within such period otherwise agreed by the Secretary, commission an independent, qualified person or team to undertake a comprehensive Hazard Audit of the project. Further Hazard Audits will be undertaken every three years thereafter. Hazard Audits shall be carried out in accordance with DPIE publication Hazardous Industry Planning Advisory Paper No. 5 - Hazard Audit Guidelines.

2.8 Other licences

Other licences that may need to be addressed during the project include:

- Pipeline License
- License for the storage, transport and use of dangerous goods (required under the *Dangerous Goods Act 1974* and Dangerous Good Regulation 1999)
- License to undertake works within a road reserve (required under Section 138 *Roads Act 1993*).

3 Environmental policy and plans

3.1 Environmental management system and policy

This EMS reflects the principles of EnergyAustralia's corporate ISO14001 Environmental Management System. EnergyAustralia has considered GE Clough's (GECL) environmental policy as part of the EPC contractor selection process. EnergyAustralia's environmental 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. EnergyAustralia's environmental policy is consistent with this EMS.

This EMS provides minimum standards for environmental management to be applied throughout the project. During construction, elements of a Contractor's ISO14001 Environmental Management System may be used, provided they meet the minimum requirements of, and are consistent with, this EMS.

3.2 Environmental management strategy (EMS)

This EMS provides the overarching project environmental management framework. Within the context of the EMS, cascading environmental management plans have been prepared to meet environmental planning approval, legislative and licence requirements.

3.3 Construction environmental management plan

Consistent with CoA 7.2, a construction environmental management plan (CEMP) has been developed for the project. It provides a system of management, including procedures, policies and processes to ensure that the project is compliant and maintains best practice controls to manage potential environmental impacts during construction. The structure of the construction environmental management documents is shown in Figure 3-1.

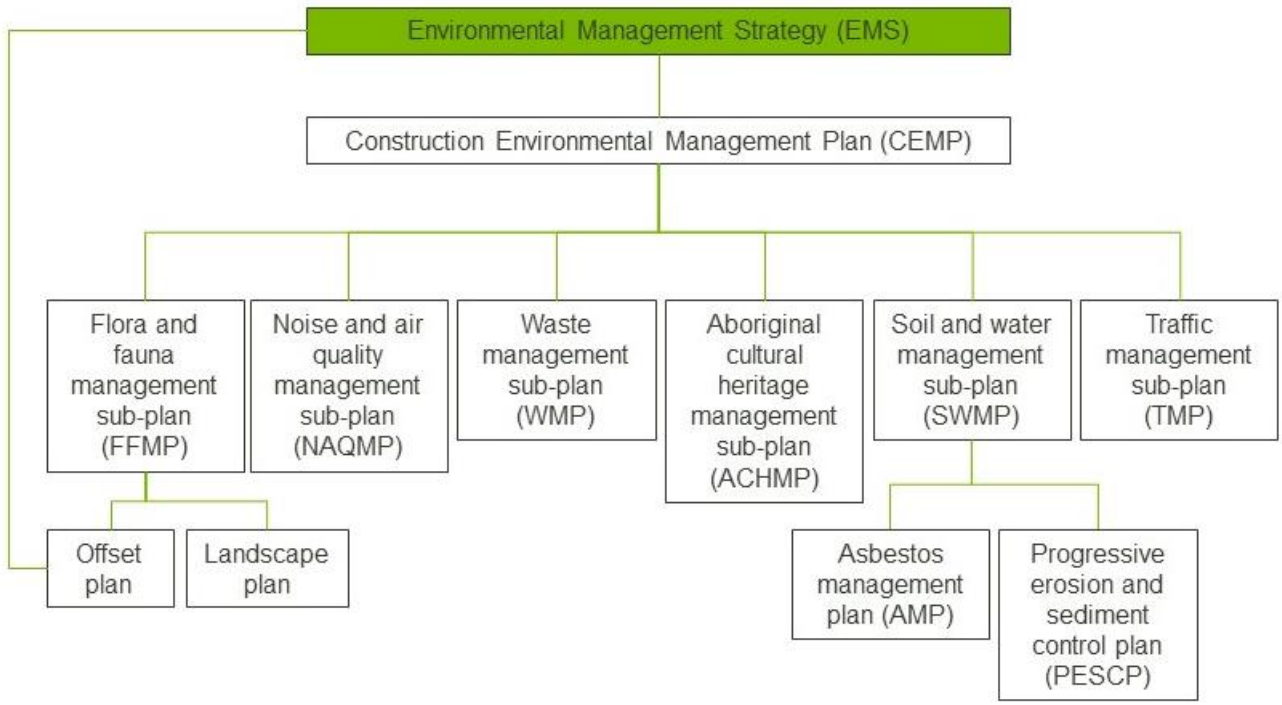

Figure 3-1 Construction environmental management document structure

3.4 CEMP sub-plans

Consistent with CoA 7.3, various CEMP sub-plans have been prepared. These are detailed in Table 3-1. The CEMP sub-plans include consideration of environment aspects, environmental impacts and translate the corresponding environmental management requirements and commitments from the EA, modification reports, and conditions of approval into actionable plans for construction.

Table 3-1 CEMP sub-plans

CEMP Sub-Plan	Description of sub-plan
Noise and Air Quality Management Plan	The noise management measures are designed to comply with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009).
Flora and Fauna Management Plan	The sub plan will include management measures for addressing the flora and fauna management requirements on the site, as well as provisions for the proposed revegetation, offsetting and rehabilitation measures as required by the approvals
Traffic Management Plan	Construction traffic predictions made in the EIS and other approvals documentation will be used to generate traffic forecasts to design appropriate traffic management approaches.
Soil and Water Management Plan	The sub plan will include provisions for water quality management, erosion and sediment controls, flooding constraints management, soil treatments, contaminated land management approaches and soil-based hazardous materials management measures.
Aboriginal Cultural Heritage Management Plan	The sub plan will include provisions for the management of recorded sites or identified Aboriginal objects within the project area, an outline for an Aboriginal Cultural Education Program for the induction of personnel and contractors involved in the construction of the project, and an unexpected finds procedure.
Waste Management Plan	The sub plan will include provisions for the management of waste likely to be created by the project, including outlining the waste management approaches towards minimisation, categorisation, disposal or reuse and reporting.

3.5 Environmental work method statements

The CEMP and CEMP sub plans include a requirement for preparing activity specific environmental work method statements (EWMS). The requirements for preparing effective EWMS are further outlined in the CEMP.

3.6 Offset plan

An offset plan is required to meet CoA 3.41 to address the impacts resulting from the removal of native vegetation. The plan identifies the project background, the assessment of the compensatory planting required and details of the site establishment requirements for the offset planting. The offset plan is included as Appendix I.

3.7 Landscaping plan

A project landscaping plan has been prepared in consultation with Wollongong City Council to meet the requirements of CoA 7.2 c) ii). The landscaping plan has been designed to reduce the visual impacts of the project as well as illustrate the proposed landscape planting and embankment works.

The landscaping plan is included in Appendix E of the flora and fauna management plan (Appendix G of the CEMP).

3.8 Operation Environmental Management Plan

An Operational Environmental Management Plan (OEMP) for the Tallawarra B Power Station, would provide a system of environmental management during operation of the project. The OEMP will be prepared consistent with the Tallawarra A OEMP prior to the commencement of operation, in accordance with CoA 7.4.

4 Organisation structure, resources and responsibilities

4.1 Contracting arrangements

The project will be delivered through various entities and contracts including:

- EnergyAustralia, as proponent / owner has overarching accountability for the project delivery. During construction, EnergyAustralia will manage delivery of certain owner directed works which may include access improvements, transmission line works or other ancillary works.
- GE Clough (GECL) has been awarded the Engineering, Procurement and Construction (EPC) main contract for delivery and commissioning of power station. GECL will generally be responsible for the power station design, construction and commissioning, including the establishment of associated construction ancillary facilities.
- Sub-contractors may be engaged by EnergyAustralia or GECL, as required.
- EnergyAustralia would operate the project following construction.

This EMS is applicable to all personnel and subcontractors associated with the delivery of the project.

4.2 Structure

The EnergyAustralia Project Director is ultimately responsible for ensuring that the specific roles and responsibilities as well as lines of report for the project are clearly defined and communicated to all relevant personnel.

The EnergyAustralia Health, Safety, Security and Environment Leader (HSSE Lead) will be responsible for the implementation and monitoring of all relevant environmental controls, commitments and due-diligence requirements associated with this EMS. The HSSE Lead directly reports to the Project Director.

The HSSE Lead is also responsible for induction, briefing and advising of all staff and contractors of their obligations and requirements. The Tallawarra B Project delivery organisational chart is presented in Figure 4-1.

Contractors, subcontractors, employees and subcontractor systems, will need to comply with EnergyAustralia systems and requirements, including the EnergyAustralia Environmental Management System, unless EnergyAustralia has approved the use of a contractor's Environmental Management System.

Contractors, subcontractors, employees and subcontractor systems, will need to comply with the approved EA, CoAs as well as the requirements of this EMS. Contractors and subcontractors are required to adopt the same responsibilities including the requirement to report environmental incidents and issues to the HSSE Lead.

EnergyAustralia may delegate responsibilities of certain roles to other parties. When responsibilities under this EMS are delegated, and changed requirements under the EMS, CEMP or CEMP sub plans must be clearly communicated in writing to all personnel with environmental management accountabilities in Table 4-1. Delegation of responsibilities of certain roles to other parties must be recorded in updated versions of the management plans or sub-plans that include

management actions for the delegated role. Updating any management plans or sub-plans under this EMS must be undertaken in accordance with condition of approval 7.8.

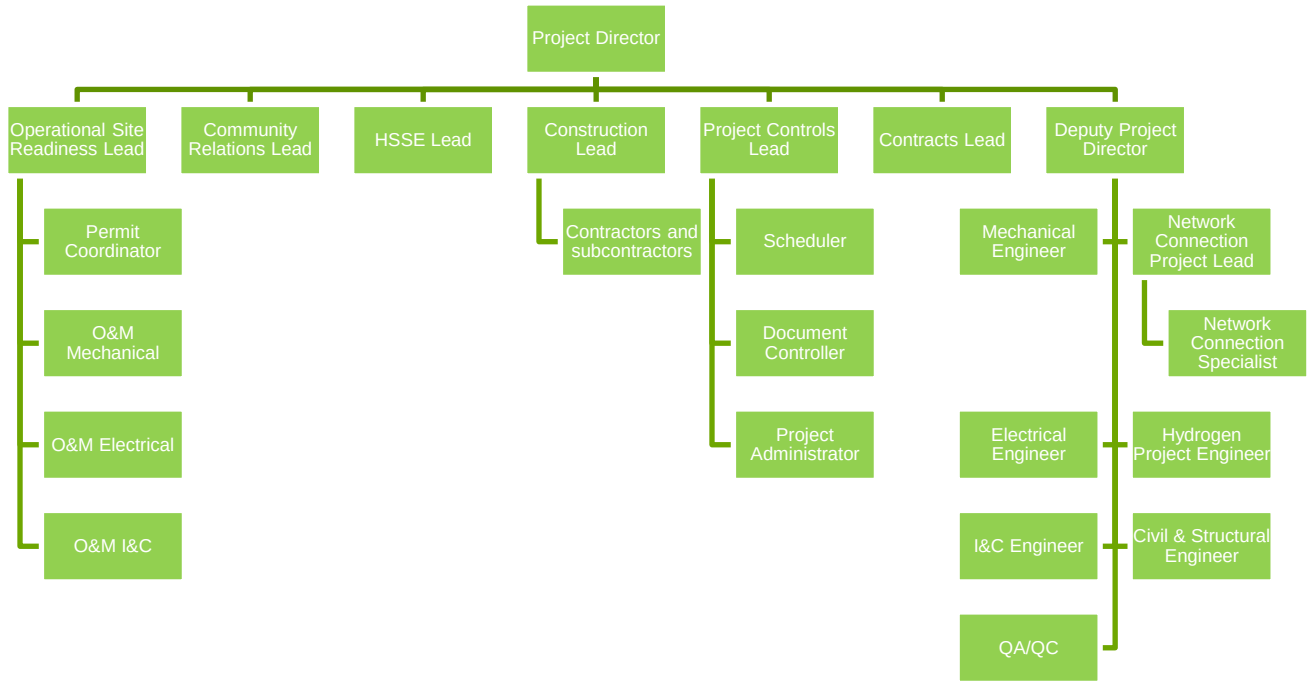

Figure 4-1 Project Organisation Chart

Table 4-1 provides further detail on the roles and responsibilities for key personnel with environmental management accountabilities during project delivery

Table 4-1 Authority, roles and responsibilities

Organisation / authority	Role	Responsibilities
EnergyAustralia	Project Director	■ Ensures delivery of the design and construction phase of the Project. They are ultimately responsible for ensuring that impacts are minimised, and obligations are met. ■ Ensure adequate resources are assigned to the site ■ Overall site responsibility for Health, Safety, Security and Environmental Compliance (some delegated authority to the HSSE Lead) ■ Day to day management of the project site ■ Responsibility for liaison with property owners and general community on site matters such as complaints and incident management ■ Ensuring that task activities are planned, implemented, controlled and their progress monitored in accordance with the EMS, CEMP and related plans ■ Reviewing the results of internal audits (including the delegation to action owners to respond to corrective action requests) ■ Ensures that incidents requiring investigation are followed up and effective ■ Provide monthly Operational Reports to EnergyAustralia Management ■ Auditing site activities to ensure compliance with the specifications, drawings, contract requirements, statutes, approval standards environmental commitments and sound engineering practice ■ Liaison with EnergyAustralia and government authorities as required ■ Ensure Leaders are completing training scheduling as per the Training Report received from the Business Operations Coordinator ■ Responsible for ensuring sufficient resources are allocated to install, inspect, maintain and repair environmental controls particularly after wet weather
EnergyAustralia	Construction Lead	■ Assisting the HSSE Lead ■ Ensuring adequate knowledge transfer during shift handover ■ Participating in plant walk downs to ensure work area issues are identified and rectified ■ Assist in risk assessments reviews to ensure hazards are identified and appropriate controls are in place ■ Ensuring that all personnel under the team's control comply with HSSE Lead requirements ■ Oversee management of the day to day environmental aspects of the site ■ Manage the works, including management of sub-contractors ■ Leads the investigation of environmental incidents and near misses ■ Ensures all personnel are aware of environmental compliance requirements and environmental controls ■ They are responsible for ensuring that the engineers take into consideration the requirements detailed within the CEMP and that there are sufficient resources in the field to meet these commitments. ■ EWMS collection, assessment, monitoring and review ■ Ensure that all workers have signed onto and off EWMS ■ Manage day to day works in the field. Ensure activities are undertaken in accordance with the EMS, CEMP and EWMS ■ Reporting all environmental incidents to the HSSE Lead ■ Checking the site on a regular basis and ensuring that regular maintenance is undertaken to minimise environmental impacts

Organisation / authority	Role	Responsibilities
		■ Ensure that personnel are provided with appropriate environmental “toolbox” training ■ Ensure that appropriate scheduling of works is undertaken to enable meeting environmental requirements ■ Ensure that the requirements associated with erosion and sediment controls are implemented
EnergyAustralia	HSSE Lead	■ Implement the project environmental management strategy ■ Review the CEMP ■ Close liaison with the Environmental Representative (ER) ■ Consult with the Stakeholder Manager regarding regulatory requirements and environmental design issues ■ Ensure that all project environmental obligations are met and prepare reports on compliance ■ Obtain relevant pre-construction licences, permits and approvals ■ Provide input and advice to others preparing activity specific EWMS ■ Manage environmental consultants ■ Consultation with regulatory agencies ■ Ensure that all project environmental obligations are met ■ Obtain relevant licences, permits and approvals necessary during construction ■ Identify and prepare environmental induction and training materials ■ Liaise with government agencies and relevant stakeholders ■ Respond to environmental incidents ■ Supports the investigation of environmental incidents and near misses ■ Maintain environmental documents.
EnergyAustralia	Deputy Project Director (and subordinates)	■ Responsible for ensuring that environmental considerations are integral to the decision making for all design and construction activities ■ Liaise closely with the HSSE Lead to ensure that the environmental controls and procedures contained in the EMS and CEMP are implemented ■ Conduct regular checks of the site to ensure environmental controls such as sediment fences and dust suppression are functioning effectively.
Contractors and subcontractors	All employees / sub-contractors	■ Comply with all HSSE procedures, including adopted procedures from approved environmental management systems ■ Conducting Safe work observations ■ Reporting all safety and environmental incidents ■ Complying with the requirements of the EMS, the CEMP and sub-plans ■ Preparing activity specific EWMS that comply with the EMS and CEMP ■ Undertaking activities in accordance with approved EWMS ■ Maintaining environmental records.

4.3 Environmental Representative (ER)

An Independent Environmental Representative (ER) is a requirement of CoA 7.1.

Energy Australia has nominated Toby Hobbs as the Environmental Representative and Susannah Price as an alternate Environmental Representative, should Toby not be available. DPIE approved the appointment of EnergyAustralia's nominated ER on 18 December 2020 (refer to Appendix D).

The principal role of the ER is to provide an independent check on the implementation of the Approval Conditions and to generally monitor environmental compliance during construction. To achieve this, the ER will periodically audit the implementation of the CEMP and the day-to-day environmental management of the project.

The ER will liaise with DPIE, EnergyAustralia, the Project Manager and HSSE Lead.

The Environmental Representative is EnergyAustralia's principal point of advice in relation to the environmental performance of the project and shall have responsibility for:

- Overseeing the implementation of all construction environmental management plans and monitoring programs required under this approval, and advise EnergyAustralia upon the achievement of these plans/programs
- Considering and advising EnergyAustralia on its compliance obligations against all matters specified in the conditions of approval and the Statement of Commitments, and permits and licences
- Having the authority and independence to recommend to EnergyAustralia reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to EnergyAustralia that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur.

5 Emergency preparedness and response

5.1 Incident identification

An incident is defined by the project conditions of approval as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be a non-compliance. Material harm is harm that:

- Involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
- Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

5.2 Incident preparedness

Activities that are associated with potential or major environmental incidents are identified in respective CEMP Sub Plans. CEMP sub plans include management actions and mitigation measures designed to avoid incidents from occurring.

During the construction of the project, the GECL Emergency Response Plan (Appendix J) will be used for incident response when incidents occur as a result of construction activities. This specifically includes incidents that occur on or in association with land as part of the Tallawarra B construction area, including construction ancillary sites.

For works outside the Tallawarra B construction area (and construction ancillary sites), EnergyAustralia will take ownership of all emergencies under their Emergency Response Plan. The EnergyAustralia **TQMS12-HSE-L001 - Emergency Response Plan** applies to the broader Tallawarra A Power Station site and incidents that may occur in relation to Tallawarra A operations, and the surrounding Tallawarra Lands. If there is any doubt as to which Emergency Response Plan applies during an incident, the EnergyAustralia **TQMS12-HSE-L001 - Emergency Response Plan** will apply.

EnergyAustralia will review the GECL Emergency Response Plan prior to construction to ensure that the appropriate separation of roles, responsibilities and approaches to emergency response are defined and coordinated between EnergyAustralia and GECL. The GECL Emergency Response Plan will also be reviewed against CoA 7.6 and this EMS. The GECL Emergency Response Plan is included in Appendix J.

A list of key internal contacts, phone (business and after hours) will be maintained and displayed at the site office (Appendix A). The HSSE Lead will maintain and regularly update the list of key contacts. Table 5-1 details important emergency contacts that may need to be notified in the instance of pollution incidents that constitute material harm.

Table 5-1 Emergency contacts

Authority	Contact number
Fire and Rescue NSW	000 / 1300 729 579
EPA environment line	131 555

Authority	Contact number
Ministry of Health	1300 066 055
SafeWork NSW	131 050
Wollongong City Council	(02) 4227 7111

5.3 Incident response

Emergency response would follow the procedures detailed in the EnergyAustralia **TQMS12-HSE-L001 - Emergency Response Plan** or the GECL Emergency Response Plan (refer to Section 5.2).

If the incident involves pollution or the threat of pollution, the EnergyAustralia **TQMS12-HSE-L001-A02 - Pollution Incident Response Management Plan** (PIRMP) must be followed. This plan is a component of the EnergyAustralia Emergency Response Plan.

A summary of the main steps to follow in the event of an incident are provided in Figure 5-1.

Figure 5-1 Emergency response procedure

5.4 Incident notification and reporting

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 and Preparedness Plan **TQMS12-HSE-L001 - Emergency Response Plan**, or the GECL Emergency Response Plan (whichever applies, refer to Section 5.2).

Environmental incident notification and reporting general requirements include:

- All personnel are required to report all incidents. Environmental incidents must be immediately reported to the HSSE Lead and Construction Manager. Verbal notification must occur immediately on becoming aware of the incident or non-compliance.
- EnergyAustralia will notify the ER within 24 hours of becoming aware of the incident and will provide full written details of the incident to ER within 7 days of the date on which the incident occurred. This requirement does not take away the responsibilities to report incidents 'immediately' to NSW EPA or other relevant agencies.
- The Secretary must be notified in writing via the Major Projects website immediately after EnergyAustralia becomes aware of an environmental incident following the requirements of Condition of Approval 5.1 and Appendix 1 of the major project approval. 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. According to Appendix 1 in the CoA, the written incident notification must:
  - Identify the development and application number.
  - Provide details of the incident (date, time, location, 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.
  - Identify a project contact for further communication regarding the incident.
- Relevant public authorities (as determined by the Secretary) must be notified in writing within 30 days of the date on which the incident occurred or as otherwise agreed to by the Secretary, in accordance with the requirements set out in Part 3 of Appendix B (as prescribed by Appendix 1 of the CoA). The Incident Report must include the following:
  - 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.
  - Details of any communication with other stakeholders regarding the incident.

- The Secretary must be notified in writing via the Major Projects website within seven days after EnergyAustralia becomes aware of any non-compliance. 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. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.
- The NSW EPA must be notified immediately of all pollution incidents that cause or threaten material harm to the environment. Notification would need to include details on:
  - The time, date, nature, duration and location of the incident
  - The location of the place where pollution is occurring or is likely to occur
  - The nature, the estimated quantity or volume and the concentration of any pollutants involved
  - The circumstances in which the incident occurred (including the cause of the incident, if known)
  - The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution
  - Other information prescribed by the regulations.
- Environmental incidents relating to the EPBC Act must be notified to the Secretary of the Department within 7 days of the event.

Details of incident management requirements are also outlined in Section 10 of the CEMP.

5.5 Incident investigation

All environmental incidents will be documented, investigations conducted, and action plans established so that the event does not occur again. Where, through investigation, current procedures are identified as being ineffective, the EMS, CEMP and relevant CEMP sub plans will be revised by the HSSE Lead to provide for improved processes.

An environmental investigation would follow the incident investigation procedures identified in the EnergyAustralia Emergency Response and Preparedness Plan **TQMS12-HSE-L001 - Emergency Response Plan**, or the GECL Emergency Response Plan (whichever applies, refer to Section 5.2), and would 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.

6 Communication and community engagement

6.1 Government agency communication

EnergyAustralia will be the main point of contact with DPIE and will notify DPIE (via the Major Project website) prior to the commencement of construction, operations, upgrading and decommissioning of the project. The HSSE Lead may communicate with DPIE directly in relation to specific environmental issues if directed by the ER or to comply with specific conditions of approval.

Details of environmental incident reporting obligations to public authorities are outlined in Section 5.

Consultation with public authorities is required to comply with CoA as outlined in Appendix E.

6.2 Community consultation program

A Community Consultation Program (CCP) has been prepared to meet the condition of approval 6.5. It should be read in conjunction with the EMS and CEMP and will be used to inform the development of activity specific Environmental Work Method Statements (EWMS).

The CCP describes the management and communication processes employed to satisfy, as far as practicable, the concerns, perceptions and expectations of the stakeholders associated with the Project. Internal and external communication would be managed as outlined in the CCP.

The CCP has been prepared to be consistent with the Community Engagement Framework which has been submitted to DPIE as part of meeting Funding Agreement conditions. The Community Engagement Framework has been approved by DPIE and prior to construction will be displayed on the project website: **https://www.energyaustralia.com.au/about-us/energy-generation/energy-projects/tallawarra-b-project**.

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
- A mechanism through which the community can provide feedback to the Proponent in relation to the environmental management and impacts of the development.

Stakeholder and community engagement have been a key tenant of the project to date. This has included an initial program of stakeholder engagement initiatives, alongside targeted site investigations to understand the specific environmental, cultural and social risks associated with development of the project.

A large portion of the engagement to date has been with the aviation community, given the project's close proximity to Shellharbour Airport.

All works associated with the Project will ensure that community stakeholders will be proactively engaged and consulted with. The principal outcome is to ensure stakeholders feel appropriately informed of plans and actions prior to them occurring and have confidence in EnergyAustralia's management approach.

The project team are committed to undertaking all activities of the Project in a manner that minimises pollution, environmental and cultural impacts, and complies with relevant legislation, industry standards and codes of practice.

Notifications issued under the CCP would outline forthcoming work activities, any impacts and work progress. Consultation with stakeholders will be ongoing during delivery of the Project as outlined in the CCP.

The Community Relations Lead will be available to respond to any stakeholder enquiry or complaints.

The CCP will be made publicly available before the commencement of construction and would be made available to any person on request.

6.3 Community liaison group

EnergyAustralia established a Community Liaison Group (CLG) in 2004 as the principal community liaison group for the Tallawarra A Power Station and for the proposed Tallawarra B Project. The CLG has been designed to inform interested members of the local community about the Project, the existing Tallawarra A power station operations and environmental performance matters. Regular updates are provided at the CLG meetings regarding all aspects of both the site operations and the Tallawarra B Project. CLG meetings are held quarterly at the Tallawarra Power Station offices.

The CLG includes members from the community and stakeholders such as: the amateur radio club, local bird watching societies, the NSW EPA, local high school, the local aboriginal land council, Illawarra National Parks Association and representatives from both Shellharbour and Wollongong City Councils.

The CLG will continue to operate throughout the construction of the Project in accordance with the CLG Terms of Reference. Minutes of CLG meetings are kept by EnergyAustralia. These minutes are not published publicly.

6.4 Complaints

To comply with CoA 6.2 and EPL requirement M6, before construction commences, EnergyAustralia will ensure that the following are available for community complaints for the life of the project (i.e. construction and operation):

- 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; The Tallawarra B Project Team, PO Box 20, Dapto NSW 2530.
- An email address to which electronic complaints may be transmitted; **Tallawarra.Community@energyaustralia.com.au**.

The telephone number, the postal address and the email address will 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 will 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 telephone number, postal address and email address will also be made publicly available on EnergyAustralia's website.

6.5 Complaints register

To comply with CoA 6.3 and EPL requirement M5 a complaints register will be established and maintained by the Community Relations Lead and who will receive, log, track and respond to all complaints within specified timeframes.

The following details will be recorded in the register:

- Date, time and nature of the complaint
- The means by which the complaint was made (i.e. telephone, letter, meeting etc)
- Any personal details of the complainant that were provided, or if no details were provided, a note to that effect
- Nature of complaint
- Any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant
- If no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

The complaints register will be made available on the EnergyAustralia website which will be updated monthly.

The complaints register will be made available for inspection by the DPIE Secretary upon request or any authorised officer of the EPA who asks to see them. All records of complaint will be kept for at least 4 years after the complaint was made.

6.6 Dispute resolution

Within 7 days of receiving a complaint, the HSSE Lead and/or the Community Relations Lead will investigate and respond with an appropriate resolution. The resolution of the issue will be documented in the complaints register and will be communicated to the complainant.

In the event of an environmental complaint or other matter of concern associated with the project is unable to be satisfactorily resolved, a meeting with HSSE Lead and Construction Lead will be convened. The meeting will assess whether all practicable actions have been undertaken to resolve the matter. All relevant stakeholders will be advised in writing of the meeting outcomes and on any further actions able to be undertaken to resolve the matter. EnergyAustralia will always endeavour to resolve disputes with neighbours and members of the local community without the need for third party intervention.

However, should the matter not be resolved directly with EnergyAustralia, landowners have the option to initiate an Independent Review process as per the Project Approval. If required to do so by the Department, the ER will liaise with DPIE, EnergyAustralia, the Project Director and HSSE Lead. The decision made resulting from this process will be final.

6.7 Public availability of documents

EnergyAustralia will make all documents required under condition of approval 6.4 available for public inspection .

7 Monitoring, measurement, analysis, and evaluation

7.1 Environmental objectives and targets

As a means of assessing environmental performance over the life of the project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key issues identified though the environmental assessment and risk assessment process. The overarching project environmental objectives and targets are provided in Table 7-1.

Table 7-1 Environmental aspect objectives and targets

item	Objective	Target	Measurement tool
Construction compliance	Construction of the project in accordance with environmental approvals and licences	Compliance with all statutory approvals	Audits, construction compliance reporting, management reviews.
Legal compliance	Design, construction and operation of the project in accordance with legal requirements	No regulatory infringements, penalties, notices or prosecutions.	Audits, construction compliance reporting, management reviews.
Environmental management systems implementation	Implement rigorous environmental management	Address all non-conformances and corrective actions within specified timeframes	Audits, management review.
Noise and vibration	To comply with conditions of approval and to ensure that noise and vibration from construction activities does not cause environmental nuisance to sensitive receivers	No valid noise / vibration complaints resulting from construction works for the duration of the Project. Compliance with all conditions of approval relating to noise limits and noise management measures.	Audits, complaints register, monitoring results.
Heritage (Aboriginal)	To comply with conditions of approval and legislative requirements and ensure that existing and undiscovered heritage and archaeological items are protected from construction activities	No disturbance or damage to existing known heritage sites or items. Unknown or undocumented heritage sites are not knowingly destroyed, defaced or damaged	Audits, construction compliance reporting, management reviews.
Soil, contamination and water	To comply with conditions of approval and legislative requirements and ensure that water discharged off-site from construction and erosion and sediment control (ESC) activities does not cause environmental nuisance / harm.	No sediment impacts to the surrounding environment and waterways as a result of the works. No off-site water quality impacts as a result of erosion and sedimentation and/or inadequate onsite controls.	Audits, construction compliance reporting, monitoring results, management reviews.

item	Objective	Target	Measurement tool
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 construction or operational activities. Compliance with all conditions of approval relating to air emission limits. No valid air quality complaints resulting from construction works for the duration of the Project.	Audits, construction compliance reporting, monitoring results, complaints register, management reviews.
Hazardous material	To comply with contractual and legislative requirements and ensure that hazardous / contaminated material from construction activities does not cause an environmental nuisance / harm and is disposed of in accordance with legislative requirements.	No environmental incidents involving contaminated/hazardous material, including asbestos	Audits, construction compliance reporting, management reviews.
Traffic, access and pedestrian	To comply with contractual requirements and ensure that noise and additional traffic from construction activities does not cause an environmental nuisance	No breaches to traffic management standards and requirements. No use of roads for construction traffic outside of the haulage routes defined in the approved planning approvals.	Audits, construction compliance reporting, management reviews.
Biodiversity and biosecurity	To comply with contractual and legislative requirements and ensure that native fauna and flora are protected from construction activities	No death or injury to fauna. No unapproved removal of flora.	Audits, construction compliance reporting, management reviews.
Visual amenity	To comply with contractual requirements and ensure that visual amenity from construction activities do not cause impacts on sensitive receivers.	No valid visual amenity complaints from construction or operations.	Audits, complaints register, construction compliance reporting, management reviews.
Waste Management	To comply with contractual and legislative requirements and ensure that waste from construction activities does not have the potential to escape from the site and cause an environmental nuisance / harm.	Target to reuse or recycle construction waste. All transport of waste will be tracked and delivered to a facility that is legally able to accept that type of waste. The NSW EPA Waste Classification Guidelines waste management hierarchy is to be adopted, where practicable.	Audits, construction compliance reporting, management reviews.

7.2 Audits

Environmental audits will be undertaken to evaluate compliance and system conformance to the EMS, CEMP and related environmental documents.

7.2.1 Internal audits

Where an environmental audit is conducted, the outcomes of the auditing process will be provided to project team for review and the actioning of any non-conformances. An audit report will be issued to management for action. Actions will be followed up for close-out of

actions within one (1) month of the issue of the audit report and/or as agreed by both parties prior to undertaking the audit process.

Internal audits would be carried out in accordance with the schedule summarised in Table 7-2.

Table 7-2 Internal audits

Type	Purpose	Frequency	Responsibility
Contractor mobilisation audit	To ensure that mobilisation criteria have been met and that procedures and systems are in place.	Within 6 weeks of mobilisation to site	HSSE Lead Contractor
Contractor CEMP audit	Internal CEMP audit to review compliance with the overarching Project CEMP and assess its effectiveness	Bi-annual	Contractor
Environmental approval audit	Environmental Approval compliance audit against CEMP commitments, design criteria, general performance and legal compliance audits	Bi-annual	HSSE Lead Contractor
Demobilisation audit	To assess Contractor compliance with CEMP and to ensure that all Project handover documents have been completed The demobilisation audit will assess all site environmental requirements, identify all environmental documentation required for handover to EnergyAustralia operations and the required remediation and rehabilitation activities	Within 4 weeks of demobilisation	Contractor HSSE Lead
Internal legal compliance audit	To review compliance with legal requirements	Bi-annual	HSSE Lead

7.2.2 External audits

EnergyAustralia would seek the written agreement of the Planning Secretary to the independent auditor(s) no later than one (1) month following commencement of Work and prior to the commencement of an Independent Audit. The Planning Secretary may direct EnergyAustralia to undertake additional Independent audits when considered necessary to address a particular issue.

The *Independent Audit Post Approval Requirements* (DPIE, 2020) requires the first construction compliance audit within 12 weeks of commencement of Construction, and subsequent audits at no more than 26 week intervals thereafter.

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.

In accordance with the specific requirements in the *Independent Audit Post Approval Requirements* (DPIE, 2020), EnergyAustralia must:

- Review and respond to each Independent Audit Report prepared under CoA 5.11 or CoA 5.13 where notice is given by the Secretary;
- Submit the response to the Secretary; and
- 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.

Independent Audit Reports and EnergyAustralia'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* (DPIE, 2020), unless otherwise agreed by the Secretary.

External audits would be carried out in accordance with the schedule summarised in Table 7-3.

Table 7-3 External audits

Type	Purpose	Frequency	Responsibility
Independent compliance and system audits	The purpose of an Independent Audit is to obtain an independent and objective assessment of the environmental performance and compliance status of a project	Within 12 weeks of commencement of Construction, and subsequent audits at no more than 26 week intervals thereafter	Contractor Independent Auditor/s HSSE Lead Independent ER
Independent compliance and system audits (direction of Secretary)	Independent audit as a result of a written requirement or direction of the Planning Secretary, including in relation to an audit of the construction of the operation of the SSI	As advised by DPIE	Contractor Independent Auditor/s HSSE Lead
Independent compliance and system audits (lead by the ER)	ER audit as a result of a direction or request by DPIE	As advised by DPIE	Independent ER HSSE Lead Contractor
Third Party Surveillance Audits	Assess compliance with licenses, works approval and permits.	As per notification	External parties

7.3 Inspections and observations

Environmental inspections provide an important function under the project in identifying and addressing environmental hazards and mitigating potential incidents and also in acknowledging good site practices being implemented at site. It also serves to identify ongoing opportunities for improvement.

Inspections and observations give an overall indication of the Project's environmental performance against KPI's through recording incidents, achievements, and non-compliance with controls

Observations would be undertaken on an as needed basis during day-to-day activities to enable the identification and communication of environmental issues which may not be covered by more formal inspection and audit processes.

Completed inspection reports will be collated and filed by the HSSE Lead and details will be included in the six-monthly reports required under the Approval Conditions.

7.3.1 Internal inspections

Internal environmental inspection activities are to be carried out as per the schedule summarised in Table 7-4.

Table 7-4 Internal inspections

Type	Purpose	Frequency	Responsibility
Site inspections	Daily inspection of active work sites	Daily	Contractor Project engineers HSSE Lead
Environmental Inspection	A weekly inspection undertaken by the Contractor. Areas for inspection would include the site to determine additional areas that require mitigation measures, the environmentally sensitive areas and delineated areas and to determine if they are working effectively, and also if correct work practices have been implemented.	Weekly	Contractor
EnergyAustralia Environmental Inspection	Formal site inspections conducted by EnergyAustralia, in conjunction with Contractor supervisory staff, to evaluate work practices against CEMP requirements.	Monthly	HSSE Lead Contractor
Design Criteria Inspection	Assessment of construction in accordance to EA Environmental Standards.	As required	HSSE Lead Contractor

7.3.2 External inspections

External environmental inspection activities are to be carried out as per the schedule summarised in Table 7-5.

Where inspections are undertaken by an external party an inspection report or debriefing will be requested by the HSSE Lead and documented. Details of the inspection will be provided to relevant site personnel or discussed in site meetings with a request to act.

Table 7-5 External inspections

Type	Purpose	Frequency	Responsibility
ER inspections	Environmental inspection undertaken by the ER, an Energy Australia representative and primary contractor representative to assess implemented environmental controls	Fortnightly	HSSE Lead ER Contractor
External organisation inspections	Inspections may be conducted by external organisations such as NSW EPA, DPIE and other organisations/agencies	Where advised	HSSE Lead Contractor

7.4 Non-compliances

Where a non-compliance is detected, or monitoring results are outside of the expected range:

- Contractors must report any non-compliances to the HSSE Lead immediately
- The results will be analysed by the HSSE Lead in more detail with the view of determining possible causes for the non-compliance
- A site inspection will be undertaken by the HSSE Lead and any affected Contractors
- Relevant personnel and stakeholders will be contacted and advised of the problem
- An agreed action will be identified or action will be implemented to rectify the problem.

A non-compliance Environmental Incident Report and/or Environmental Improvement Notice may be issued by the HSSE Lead in response to the problem if it is found to be construction related. The timing for any improvement will be agreed between the HSSE Lead and any

affected Contractors based on the level of risk e.g. a significant risk will require immediate action.

The following environmental issues/non-compliances are to be included as corrective actions:

- Internal inspection outcomes that cannot be rectified immediately – actions nominated on the inspection report
- Incidents and associated corrective actions
- Internal audit observations/non-compliance.

7.4.1 Agency requirements for non-compliances

The following DPIE requirements for non-compliances will be addressed throughout the Project:

- CoA 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.
- CoA 5.4: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.
- CoA 5.5: 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)
- CoA 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
- CoA 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.
- CoA 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.

7.5 Environmental performance monitoring and review

Environmental monitoring will involve collecting and interpreting data to provide quantification of the effectiveness of the CEMP and environmental management system.

The timing, frequency, methodology, locations and responsibilities for the proposed environmental monitoring programs are specified in the respective CEMP Sub-Plans The monitoring programs range from those involving formal sample collection, analysis and measurement to those involving a more qualitative assessment.

Irrespective of the type of monitoring conducted, the results will be used to identify potential or actual problems arising from construction processes. Where monitoring methods permit, results will be obtained at the time of the assessment and analysed immediately by the HSSE Lead. This will allow a prompt response to be initiated should an exceedance of accepted levels/criteria be identified.

The activities of the Principal Contractor and sub-contractors will be monitored. The HSSE Lead will develop a standard monitoring form to assess:

- Compliance with contractual requirements
- Knowledge of and compliance with the CEMP and work procedures and environmental controls used on site
- General work practices
- The effectiveness of environment protection measures
- The maintenance of environmental measures.

7.5.1 Environmental performance monitoring

The monitoring programs will assist in the determining the effectiveness of safeguard measures to ensure they achieve their objectives and to facilitate modification where necessary. The environmental performance monitoring program is provided in Table 7-6.

Table 7-6 Monitoring program

Type	Purpose	Frequency	Responsibility
Dust	To prevent dust impacts to sensitive receivers during construction	Daily visual monitoring during construction. As required by NAQMP.	HSSE Lead Contractor
Air emissions	To comply with operational air quality criteria	As identified in OEMP.	HSSE Lead Contractor
Asbestos	To ensure any uncovered asbestos is managed appropriately and to the correct standards and procedures	During asbestos management, removal or transportation as required by the Asbestos Management Plan (SWMP, Appendix C)	HSSE Lead Contractor
Cultural heritage	To provide for Aboriginal cultural heritage monitoring to comply with Condition of approval 3.56: "*Where ground disturbance is proposed (for example excavation or removal of vegetation) in the vicinity of Yallah Creek, prior to commencing construction, the Proponent shall undertake further archaeological surveying and assessment with the aim of identifying any Aboriginal Cultural Heritage values which may be impacted by the project. The Proponent shall ensure monitoring by Local Aboriginal Land Council representatives during such works*."	As dictated by relevant ground disturbance activities in areas identified as having moderate archaeological sensitivity (Niche 2021) As required by ACHMP.	HSSE Lead Contractor
Monitoring of offset areas (refer to Appendix I)	To ensure the success and viability of offset areas	As detailed in EMS Appendix I.	HSSE Lead
Incidental fauna monitoring	To ensure fauna are not impacted by the Project or inhabiting work areas	Daily. As required by FFMP, and OEMP.	HSSE Lead Contractor

Type	Purpose	Frequency	Responsibility
Nest box monitoring	To ensure the success and viability of nest boxes. Nest box monitoring is to include the below details to assist in the identification of required corrective actions: ■ Name of observer ■ Date of observation ■ Assessment of nest box condition (e.g. structural integrity, evidence of rot/termite activity) ■ Evidence of fauna activity, including pest species such as European Honey Bees (*Apis mellifera*) and Common Myna (*Acridotheres tristis*)	Monitoring of nest boxes is to occur at least at least every six months during construction phase of the project. Upon completion of construction, monitoring can be reduced to once yearly for two years. Upon the second yearly inspection the need for additional inspection can be reviewed. As required by FFMP, and OEMP.	HSSE Lead
Eastern Osprey monitoring	To ensure construction activities have not caused disturbance to the Osprey breeding pair, or nesting site. Observations are to include: ■ Damage to the nesting site or transmission tower ■ Absence/presence of the species ■ Any additional incidental observations	At least weekly. As required by FFMP.	HSSE Lead
Yallah Creek riparian zone	To ensure the Yallah Creek riparian zone is not impacted by the Project	At least weekly. As required by FFMP, and OEMP.	HSSE Lead
Weed monitoring	To ensure rehabilitated areas, offset areas, and riparian zones are managed for weed infestation	At least weekly. As required by FFMP, and OEMP.	HSSE Lead Contractor
Noise monitoring	To assess compliance with noise management levels at sensitive receivers, to adjust operations to manage noise impacts or to response to complaints., if required	Attended noise monitoring in accordance with the procedure outlined in the NAQMP (Section 6.2) should be undertaken at the nearest sensitive receiver to construction works: ■ Monthly during construction ■ During out of hours activities as required by an out of hours work activity approval (refer to NAQMP Appendix B) ■ In response to any construction noise complaints.	HSSE Lead Contractor
Potential acid sulfate soil (PASS)	To prevent PASS oxidation soils must be tested for acid soil potential by a qualified person whenever excavations deeper than 1m are proposed	Whenever excavations deeper than 1m are proposed. As required by SWMP.	HSSE Lead Contractor

Type	Purpose	Frequency	Responsibility
PFAS (soil)	To prevent mobilisation or exposure to PFAS	Prior to disturbing soils identified as having PFAS risk.	HSSE Lead Contractor
Resource use (energy, water, waste, clearing)	Collation of data for annual reporting	Monthly	HSSE Lead Contractor
Stormwater runoff quality	To prevent water quality impacts to sensitive receiving environments erosion and sediment controls are to be inspected and maintained	Weekly, and immediately following rainfall events. As required by SWMP, and OEMP	HSSE Lead Contractor
Waste	To maintain tracking register for appropriate disposal of wastes. Refer to the Waste management Register (WMP, Appendix A)	Weekly during construction. As required by the WMP and OEMP.	HSSE Lead Contractor
Public road dilapidation	To check that the Project does not cause damage to Yallah Bay Road, in accordance with the Road Dilapidation Report prepared under CoA 3.57	Monthly (visual). As required by the TMP.	Construction Manager
EPL No.555 Identification P1.3 item 2	Effluent quality monitoring	Quarterly during discharge	HSSE Lead as part of implementation of the Tallawarra A OEMP
EPL No. 555 Identification P1.3 item 3	Sewage volume monitoring	Continuous	HSSE Lead as part of implementation of the Tallawarra A OEMP
Traffic and parking	To follow road safety measures, to confirm there is no parking outside of areas as defined in Table 5.1 of the TMP and to confirm there is no parking of construction vehicles along Yallah Bay Road outside the Lot boundary	Regular monitoring as identified in Table 5.1 of the TMP.	HSEE Lead Contractor

7.6 Reporting

Environmental reporting will be undertaken to track and record environmental management and compliance throughout the project. Reporting requirements are summarised in Table 7-7 and further detailed within this section.

Table 7-7 Reporting requirements

Type	Purpose	Frequency	Responsibility	Recipient
Contractor Environmental Compliance Report (refer to Section 12.1)	Contractor to provide monthly summary to EnergyAustralia inclusive of: waste, clearing of native vegetation, incidents and any records of demonstrating compliance with CoA requirements.	Monthly, report submitted within 10 days of end of month	Contractor	HSSE Lead
Project Environmental Audit Report (refer to EMS Section 7.2)	Contractor to provide to EnergyAustralia results from any internal and/or external Environmental/CEMP audits.	Internal audits at least 6-monthly. External audits at least annually.	Contractor	HSSE Lead
Environmental Incidents Report (refer to EMS Section 7.4)	To report incidents to appropriate people and agencies.	Immediately to EPA (if required) and to the HSSE Lead	Contractor	HSSE Lead Contractor

Type	Purpose	Frequency	Responsibility	Recipient
		Within 7 days to DPIE (if required) Within 24 hours to the ER		Project Director Public authorities (if required)
Water monitoring report	Report to EnergyAustralia on surface water quality in response to an incident or due diligence requirement.	As required	Contractor	HSSE Lead
Soil testing and monitoring Report	Report to EnergyAustralia on soil testing results.	As required	Contractor	HSSE Lead
Environmental Representative reporting	The DPIE approved ER will undertake site inspections and review documentation for compliance.	Monthly	ER	Contractor HSSE Lead
DPIE Compliance Reporting (refer to Section 7.6.2)	To monitor and report on the compliance status of a project as well as to communicate the status of a project's performance (in relation to compliance with the conditions of consent).	Monthly reporting Audits as per audit schedule	ER Independent Auditor	DPIE

7.6.1 Contractor environmental compliance report

Monthly performance reports will be provided to the HSSE Lead in relation to compliance with the CEMP, CoA requirements and environmental performance by the contractor. The report would be provided to the Project Director for review.

The report will assist the HSSE Lead to identify any recurring issues or impacts, to develop environmental training programs, identify areas of the CEMP or related documents that may require review and to prepare DPIE compliance reporting.

These performance reports will include:

- Performance against objectives and targets, monitoring results, any incidents occurring within the period, including comments on response procedures and remedial actions.
- Results from any internal and/or external audits, including any environmental management compliance and monitoring results.
- Environmental performance outcomes, improvement initiatives or corrective measures.
- Stakeholder feedback on project environmental performance.
- Environmental incident and event management including the outcomes from incident investigations and tracking of corrective actions.

7.6.2 DPIE compliance reporting and auditing

EnergyAustralia has engaged an independent ER in accordance with Condition of Approval 7.1 to provide oversight of environmental and planning performance and communicate this to the Department.

8 Review and improvement of the EMS

An Independent auditor has also been engaged by EnergyAustralia to meet the requirements of Conditions of Approval 5.9 to 5.13 inclusive. EnergyAustralia and the Environmental Representative will assist the Independent Auditor in their activities.Review of this EMS is required to comply with Condition of Approval 7.7. This condition requires that 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;

EnergyAustralia 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.

In accordance with project condition of approval 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, EnergyAustralia may submit revised studies, strategies or plans required for the project under the conditions of approval at any time.

EnergyAustralia proposes to revise the transmission line alignment compared to the existing alignment as shown in the original EIS. Given the timing of these design changes, EnergyAustralia is seeking to stage the approval of the management plans in relation to the transmission lines and associated clearing of vegetation in accordance with condition 7.8.

In accordance with condition of approval 7.8 EnergyAustralia will review the EMS every six months.

With the agreement of the Secretary, EnergyAustralia 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. EnergyAustralia is not intending to stage the submission of any study, strategy or plan required under the conditions of approval.

With the approval of the Secretary, EnergyAustralia may prepare the revised or staged strategy or plan without undertaking consultation with all parties nominated under the applicable condition in this approval.

9 Document control

During construction and operation environmental documents will be stored at the main site office and will be available for access on request by relevant stakeholders.

Documents and data that are to be issued and liable to change will be controlled to ensure that they are approved before issue and that the current issue or revision is known to and available to those requiring them. This document would be made publicly available in accordance with conditions of approval.

A register and distribution list will identify the current revision of documents or data and who has been issued with a copy.

After several changes have been made to a document it will be withdrawn and reissued as a new revision. Data will be issued on a revision basis only. Obsolete documents and data will be kept for legal and other reasons but will be clearly marked “superseded”.

The record keeping system will be implemented, identifying how records will be managed and maintained during the Project. Records systems to be established which are directly relevant to environmental and social management include:

- Induction register.
- Public consultation (including grievance complaints and responses).
- Environmental and social incidents, non-conformances and complaints.
- Inspection reports, checklists, diary entries.
- Environmental and social monitoring results (including calibration records).
- Meeting minutes.
- Formal letters and correspondence.
- Waste measurement and tracking records.
- Activity specific EWMS.

Appendix A: Emergency contacts

Role	Name	Contact details
-	Fire and Rescue NSW	000 / 1300 729 579
-	EPA environment line	131 555
-	Ministry of Health	1300 066 055
-	SafeWork NSW	131 050
-	Wollongong City Council	(02) 4227 7111
Project Director	Paul Farnworth	0477 057 829
HSSE Lead	Glen Cowling	0418 425 780
Construction Lead	Lyell Blackman	0417883470
Deputy Project Director	Adam Emera	03 9060 0442

Appendix B: Written incident notification and reporting requirements

Written incident notification requirements in accordance with Condition of Approval (Appendix A):

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.

2. 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.

3. 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.

4. 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

Appendix C: Environmental Incident Forms

HSE INCIDENT INITIAL REPORT

This form should be used to report any HSE incident, where an event/injury occurs or near miss. Please fill in each section and complete section 5.

1. Reporters Details:			
Your Name:		**Your Company:**	
Today's Date:			

2. Incident Details:		
Date and Time of the incident:		
Location:		
Provide a summary of events leading up to, and including the incident: **(please include as much detail as possible. A separate sheet can be attached to this form if more space is required)**		
Was someone injured?	**Yes** ☐	**No** ☐
If you answered "Yes" to the above, please detail the injury below		
Person's name	**Injury** (please include the body part injured, the type of injury and a description of the severity)	
If no person was injured, did an injury nearly occur?	**Yes** ☐	**No** ☐
If you answered "Yes" to the above, please detail the injury that nearly occurred below:		
Person's name	**Potential Injury** (please include the body part injured, the type of injury and a description of the severity)	

HSE INCIDENT INITIAL REPORT

This form should be used to report any HSE incident, where an event/injury occurs or near miss. Please fill in each section and complete section 5.

3. Other Persons Involved

Name	Type of Involvement (Witness, First responder, RIC etc.)	Company

Who is the Supervisor responsible for this task or the team involved?			
Has the Supervisor been informed of the Incident?	**Yes** ☐ **No** ☐	**Date and Time:**	
How did you notify your supervisor (Email, phone call?			
If not, Why?			

4. Preventing Re-Occurrence:

Is the hazard still present/what control(s), temporary or permanent have been put place to prevent this incident from occurring again?

How do you think it could be prevented from happening in the future?

5. Submission

This form must be delivered to an EA Leader or HSE Team member to review this incident and determine if it is reportable, and initiate the investigation.

Appendix D: Environmental Representative Endorsement

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 E: Conditions of approval responsibility table

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Responsibility**	
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); b) in accordance with all written directions of the Secretary; and c) generally in accordance with the EA.	No										X		X		2.1	X	X
1.2	The conditions of this approval and directions of the Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and the documents listed in condition 1.1c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition 1.1c), the most recent document prevails to the extent of any inconsistency, ambiguity or conflict	No										X				2.2	X	
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 b) the implementation of any actions or measures contained in these documents.	No										X				2.3	X	
1.4	This approval will lapse if the Proponent does not physically commence the project by 21 December 2022.	No										X		X		2.1	X	
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	No										X	X		X	1.1	X	
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	Yes										X		X	X	2.6	X	

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Responsibility**	
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.	No										X			X	2.1	X	
1.8	For the purpose of section 198(3)(b) of the Environmental Planning and Assessment Regulation 2000 (the Regulation), the relevant provisions, as defined in section 198(1) of the Regulation, apply to this approval	No										X				2.4	X	
2.1	Natural gas is the only fuel approved for firing of the burner/turbine.	No											X	X	X	NAQMP	X	
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.	No													X	OEMP	X	
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.	No			X										X	OEMP	X	
3.1	The Proponent shall only undertake construction activities associated with the project that would generate an audible noise at any sensitive receivers during the following hours: a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive; b) 8:00 am to 1:00 pm on Saturdays; and c) at no time on Sundays or public holidays. This condition does not apply in the event of a direction from police or other relevant authority for safety reasons, or to prevent environmental harm, the loss of property or risk to life.	No									X			X		NAQMP		X

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Responsibility**	
3.2	The hours of construction activities specified under condition 3.1 of this approval may be varied with the prior written approval of the Secretary. Any request to alter the hours of construction specified under condition 3.1 shall be: a) considered on a case-by-case basis; b) accompanied by details of the nature and need for activities to be conducted during the varied construction hours; and c) accompanied by written evidence demonstrating consultation with the EPA in relation to the proposed variation in construction times (including the consideration of any comments made by the EPA).	Yes									X			X		NAQMP		X
3.3	The Proponent shall implement all reasonable and feasible mitigation measures with the aim of achieving the following construction noise and vibration goals: a) where audible at any sensitive receivers, the LAeq (15minute) noise level from construction activities should not exceed the rating background level by more than 10 dB; and b) the vibration limits set out in the Assessing Vibration: A Technical Guideline (Department of Environment and Climate Change, 2006) for human exposure	No									X			X		NAQMP		X
3.4	During construction, the Proponent shall minimise noise emissions from plant and equipment, including bulldozers, cranes, graders, excavators and trucks, by installing and maintaining where reasonable and feasible, efficient silencers and low-noise mufflers (residential standard).	No									X			X		NAQMP		X
3.5	The Proponent shall design, construct, operate and maintain the project to ensure that the total cumulative noise contribution from the combined operation of the Tallawarra Stage A and Tallawarra Stage B power stations to the background acoustic environment does not exceed the noise limits specified in Table 1 and Table 2.	No									X		X	X	X	NAQMP OEMP	X	X

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										Stage				Responsibility	

Table 1 – Maximum Allowable Noise Limits Outside the Tallawarra Lands

Location	Day 7:00 am to 6:00 pm Mondays to Saturdays 8:00 am to 6:00 pm Sundays and public holidays	Evening 6:00 pm to 10:00 pm on any day	Night 10:00 pm to 7:00 am Mondays to Saturdays 10:00 pm to 8:00 am Sundays and public holidays	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{Amax}
Locality T2 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 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 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 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 Any residence in Haywards Bay	35 dB(A)	35 dB(A)	35 dB(A)	45 dB(A)

The localities set out in Table 1 are those described in Appendix E of the document listed in condition 1.1c). For the purpose of Table 1, "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 2 - Noise Limits for Tallawarra Lands Residential Areas

Location	Day 7:00 am to 6:00 pm Mondays to Saturdays 8:00 am to 6:00 pm Sundays and public holidays	Evening 6:00 pm to 10:00 pm on any day	Night 10:00 pm to 7:00 am Mondays to Saturdays 10:00 pm to 8:00 am Sundays and public holidays	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	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)

The proposed residential areas set out in Table 2 are those illustrated in Appendix A of the Tallawarra Concept Plan Application – Preliminary Assessment Report prepared by Don Fox Planning and dated June

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Respon sibility**	
	2009. For the purpose of Table 2, “residence” is defined as any residential dwelling once constructed, either prior to or post the 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. If noise from an activity is substantially tonal, intermittent or impulsive in nature and contains major components within the low frequency range (as described in Noise Policy for Industry (NSW EPA, 2017)), 5 dB(A) must be added to the measured noise level when comparing the measured noise with the limits specified in Tables 1 and 2, in accordance with the requirements of the Noise Policy for Industry (NSW EPA, 2017). The noise limits set out in Table 1 and Table 2 do 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. Stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in the Noise Policy for Industry (NSW EPA, 2017). The data to be used for determining meteorological conditions is that recorded by the meteorological weather station located at the Tallawarra Stage A power station.																	
3.6	Where operational noise monitoring (as required by either conditions 4.1 or 4.5 of this approval) identifies any non-compliance with the operational noise limits specified under condition 3.5 of this approval, the Proponent shall prepare and submit to the Secretary for approval a report including, but not limited to: a) an assessment of all reasonable and feasible physical and other mitigation measures for reducing noise at the source; b) identification of the preferred measure(s) for reducing noise at the source; c) evidence that the EPA is satisfied that the proposed noise mitigation measures are acceptable; and d) location, type, timing and responsibility for implementation of the noise mitigation measure(s). The report is to be submitted to the Secretary within 90 days of undertaking the noise monitoring which has identified	Yes									X				X	OEMP		X

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Respon sibility**	
	exceedances of the operational noise criteria specified under condition 3.5, unless otherwise agreed to by the Secretary. The Proponent shall implement all reasonable and feasible mitigation measures in accordance with the requirements of the Secretary.																	
3.7	If, after the implementation of all reasonable and feasible source controls, as identified in the report required by condition 3.6, the noise generated by the combined operation of the Tallawarra Stage A and Tallawarra Stage B power stations exceeds the noise limits stipulated in Table 3 and Table 4 at the specified localities, upon receiving a written request from an affected landowner (unless that landowner has acquisition rights under condition 3.13 of this approval and has requested acquisition) the Proponent shall investigate and implement reasonable and feasible at-receiver noise mitigation measures such as double glazing, insulation, air conditioning and or other building acoustic treatments at any residence on the land, in consultation with the landowner, to ensure that the noise limits specified in condition 3.5 of this approval are not exceeded.	Yes									X		X		X	OEMP	X	

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										Stage				Responsibility	
	Table 3 – Additional Noise Mitigation Criteria Outside the Tallawarra Lands Location / Day (7:00 am to 6:00 pm Mondays to Saturdays; 8:00 am to 6:00 pm Sundays and public holidays) / Evening (6:00 pm to 10:00 pm on any day) / Night (10:00 pm to 7:00 am Mondays to Saturdays; 10:00 pm to 8:00 am Sundays and public holidays) $L_{Aeq(15\ minute)}$ / $L_{Aeq(15\ minute)}$ / $L_{Aeq(15\ minute)}$ Locality T2 – Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, Koonawarra: 40 dB(A) / 40 dB(A) / 40 dB(A) Locality T4 – Any residence on Wyndarra Way and Malonga Place in Koonawarra: 41 dB(A) / 41 dB(A) / 41 dB(A) Locality ML#9 – 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 – Any residence on Reddall Parade and Henricks Parade in Mt Warrigal: 40 dB(A) / 40 dB(A) / 40 dB(A) Locality ML#11 – Any residence in Haywards Bay: 47 dB(A) / 47 dB(A) / 47 dB(A) **Table 4 - Additional Noise Mitigation Criteria for Tallawarra Lands Residential Areas** Location / Day (7:00 am to 6:00 pm Mondays to Saturdays; 8:00 am to 6:00 pm Sundays and public holidays) / Evening (6:00 pm to 10:00 pm on any day) / Night (10:00 pm to 7:00 am Mondays to Saturdays; 10:00 pm to 8:00 am Sundays and public holidays) $L_{Aeq(15\ minute)}$ / $L_{Aeq(15\ minute)}$ / $L_{Aeq(15\ minute)}$ 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) If noise from an activity is substantially tonal, intermittent or impulsive in nature and contains major components within the low frequency range (as described in Noise Policy for Industry (NSW EPA, 2017)), 5 dB(A) must be added to the measured noise level when comparing the measured noise with the limits specified in Tables 3 and 4, in accordance with the requirements of the Noise Policy for Industry (NSW EPA, 2017).																	
3.8	The Proponent shall bear the costs of any additional at-receiver mitigation measures implemented at an affected property or land.	No									X	X			X	OEMP	X	

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Respon sibility**	
3.9	The Proponent 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 the Proponent and 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.	Yes									X	X			X	OEMP	X	
3.10	If a landowner has agreed to, or a property has been the subject of the application of, at-source noise mitigation measures under condition 3.7, the Proponent's obligations to re-consider the land or property under the requirements of condition 3.7 shall cease, unless otherwise agreed by the Secretary	Yes									X	X			X	OEMP	X	
3.11	The requirements of conditions 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.	Yes									X	X			X	OEMP	X	
3.12	The Proponent shall provide written notice to all landowners that are entitled to rights under condition 3.7 within 21 days of determining the landholdings to which these rights apply. This condition only applies where operational noise levels have been confirmed. For the purpose of this condition and condition 3.18, confirmation of operational noise levels means: a) completion of the operational noise review required under condition 4.1 of this approval; and b) implementation of any source controls, as required under condition 3.6 of this approval, should the operational noise review indicate noise levels in excess of the operational noise limits specified in condition 3.5; and c) monitoring of operational noise levels, as per the requirements under condition 4.5 of this approval, following the implementation of any source controls.	Yes									X	X			X	OEMP	X	
3.13	If, after the implementation of all reasonable and feasible source controls, as identified in the report required by condition 3.6, the noise generated by the combined operation of the Tallawarra Stage A and Tallawarra Stage B power stations exceeds the noise limits specified in Table 5 and Table 6 at the specified localities, the Proponent shall, upon receiving a written request for acquisition from the landowner,	Yes									X	X			X	OEMP	X	

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										Stage				Responsibility	

within two years of the date of that landowner being notified of his/her acquisition rights, acquire the land in accordance with the procedures in conditions 3.14 to 3.16 of this approval.

Any landowner that has agreed to, or property that has been the subject of, the application of additional noise mitigation measures under condition 3.7 of this approval waives the right to land acquisition.

Table 5 - Land Acquisition Criteria for Residential Receivers Outside the Tallawarra Lands

Location	Day 7:00 am to 6:00 pm Mondays to Saturdays 8:00 am to 6:00 pm Sundays and public holidays	Evening 6:00 pm to 10:00 pm on any day	Night 10:00 pm to 7:00 am Mondays to Saturdays 10:00 pm to 8:00 am Sundays and public holidays
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Locality T2 Any residence on Carlyle Close, Wollin Place, Coronet Place, and Crompton Street, Koonawarra	43 dB(A)	43 dB(A)	43 dB(A)
Locality T4 Any residence on Wyndarra Way and Malonga Place in Koonawarra	44 dB(A)	44 dB(A)	44 dB(A)
Locality ML#9 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 Any residence on Reddall Parade and Henricks Parade in Mt Warrigal	43 dB(A)	43 dB(A)	43 dB(A)
Locality ML#11 Any residence in Haywards Bay	50 dB(A)	50 dB(A)	50 dB(A)

Table 6 - Land Acquisition Criteria for Tallawarra Lands Residential Areas

Location	Day 7:00 am to 6:00 pm Mondays to Saturdays 8:00 am to 6:00 pm Sundays and public holidays	Evening 6:00 pm to 10:00 pm on any day	Night 10:00 pm to 7:00 am Mondays to Saturdays 10:00 pm to 8:00 am Sundays and public holidays
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$
Most affected residence - proposed northern residential area	46dB(A)	46dB(A)	46dB(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)

If noise from an activity is substantially tonal, intermittent or impulsive in nature and contains major components within the low frequency range (as described in Noise Policy for Industry (NSW EPA, 2017)), 5 dB(A) must be added to the measured noise level when comparing the measured noise with the limits specified in Tables 5 and 6, in accordance with the requirements of the Noise Policy for Industry (NSW EPA, 2017).

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Respon sibility**	
3.14	Within three months of receiving a written request from a landowner with acquisition rights under condition 3.13 of this approval, the Proponent shall make a binding written offer to the landowner based on: (a) 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 which is the subject of the project application, having regard to the - i) existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request, and ii) 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; (b) the reasonable costs associated with - i) relocating within the Wollongong or Shellharbour local government areas, ii) obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and (c) reasonable compensation for any disturbance caused by the land acquisition process. However, if at the end of this period, the Proponent and landowner cannot agree 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. Upon receiving such a request, the Secretary shall request 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 both parties, and determine a fair and reasonable acquisition price for the land, and/or terms upon which the land is to be acquired. Within 14 days of receiving the independent valuer's determination, the Proponent shall 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.	Yes									X	X			X	OEMP	X	
3.15	The Proponent shall 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.	Yes									X	X			X	OEMP	X	

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Responsibility**	
3.16	If a landowner has already agreed to an offer of acquisition under the requirements of condition 3.13, or an offer of acquisition has been made under the requirements of condition 3.13 and refused by the landowner, the Proponent's obligations to re-consider the landowner's request or property under the requirements of condition 3.13 shall cease, unless otherwise agreed by the Secretary	Yes									X	X			X	OEMP	X	
3.17	The requirements of conditions 3.13 to 3.16 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 relevant landowner	Yes									X	X			X	OEMP	X	
3.18	The Proponent shall provide written notice to all landowners that are entitled to rights under condition 3.13 within 21 days of determining the landholdings to which land acquisition rights apply. This condition only applies where operational noise levels have been confirmed in accordance with the definition in condition 3.12.	Yes									X	X			X	OEMP	X	
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.	No	X			X			X					X	X	NAQMP	X	X
3.20	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.	No				X				X				X	X	NAQMP	X	X
3.21	Prior to the installation of any fuel burning equipment associated with the project, the Proponent shall submit the manufacturer's performance guarantee for that equipment to the EPA. The documentation shall demonstrate to the EPA's satisfaction that the equipment, when operating at design load, will comply with the air discharge limits specified in this approval under condition 3.24.	Yes				X						X		X	X	NAQMP		X
3.22	For the purpose of this approval, air discharge/monitoring points are identified in Table 7.	No				X									X	OEMP	X	

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			Aspect										Stage				Responsibility	
	Table 7 - Identification of Air Monitoring and Air Discharge Points EPA Identification Number: 1 — Type of Monitoring Point: Air emissions monitoring — Type of Discharge Point: Discharge to air — Description of Location: Stack Serving the Open Cycle Plant Turbine EPA Identification Number: 2 — Type of Monitoring Point: Air emissions monitoring — Type of Discharge Point: Discharge to air — Description of Location: Stack Serving the Combined Cycle Plant Turbine																	
3.23	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.	No				X							X	X		NAQMP	X	X
3.24	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 shutdown 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)** Pollutant: Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent — Unit of measure: ppm — 100 percentile limit: 25 — Reference conditions: Dry, 273 K, 101.3 kPa, 15% O_2 — Averaging Period: 1-hour	No				X							X	X	X	NAQMP OEMP	X	X
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.	No				X							X	X	X	NAQMP OEMP	X	X
3.26	The stacks associated with the project must be marked and lit in accordance with the requirements of the CASA.	No	X			X						X	X	X	X	OEMP		X
3.27	Prior to the commencement of construction of the project, other than site preparation works, or as otherwise agreed by the Secretary, the Proponent shall prepare the following studies: a) a Fire Safety Study for the project, covering relevant aspects detailed in the Department's publication Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Guidelines and the New South	No			X							X		X		2.7		X

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	Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems. The Study shall include a strict maintenance schedule for essential services and other safety measures. The Study shall meet the requirements of the NSW Fire Brigades; b) a Hazard and Operability Study (HAZOP) for the project, chaired by an independent, qualified person or team. The Study shall be carried out in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines and shall, in particular, address the early shut-down procedures and systems in the event of a gas leak and recommended measures for early shut-down in the event of an incident. The HAZOP report shall be accompanied by a program for the implementation of all recommendations made in the HAZOP report. If the Proponent intends to defer the implementation of a recommendation, justification must be included; c) a Final Hazard Analysis prepared in accordance with the Department's Hazardous Industry Advisory Paper No.6 – Guidelines for Hazard Analysis; and d) a Construction Safety Study for the project, prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Study Guidelines.																	
3.28	Prior to the commencement of commissioning of the project, the Proponent shall prepare the following studies: a) a comprehensive Emergency Plan and detailed emergency procedures for the project. The Plan shall be prepared in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines; and b) a Safety Management System, covering all on-site operations and any associated transport activities involving hazardous materials. The System shall clearly specify all safety-related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to safety procedures. The System shall be consistent with the Department's publication Hazardous Industry Planning Advisory Paper No. 9 - Safety Management.	No			X							X		X	X	2.7		X
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;	No			X									X	X	SWMP		X

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	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.																	
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.	No			X		X						X	X	X	2.4 Appendix G		X
3.31	Soil and water management controls shall be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities, in accordance with Landcom's (2006) Managing Urban Stormwater: Soils and Construction.	No			X		X						X	X	X	SWMP		X
3.32	In the event that a combined cycle plant is constructed, the Proponent shall design, construct, operate and maintain the plant so that the combined cooling water discharge from the Tallawarra Stage A and B plants into the outlet canal, downstream of the attemperation mixing zone, does not exceed 35 degrees Celsius	No					X			X			X	X	X	N/A		
3.33	In the event that a combined cycle plant is constructed, the Proponent shall ensure that the concentration of biocide in the cooling water discharge into the outlet canal, downstream of the attemperation mixing zone, does not exceed the limits set out in Table 9. **Table 9 - Biocide Concentration Limits in Cooling Water Discharge** Pollutant: Hydrex 2470 — 100 Percentile Concentration Limit: 0.1 milligrams per litre — Reference Conditions: Five minutes after the start of the blowdown discharge from the cooling tower system. Pollutant: Registered/permitted product containing paracetic acid — 100 Percentile Concentration Limit: 0.1 milligrams per litre — Reference Conditions: Five minutes after the start of the blowdown discharge from the cooling tower system.	No					X			X				X	X	N/A		
3.34	The Proponent shall utilise existing crossings over Yallah Creek and shall avoid constructing temporary watercourse crossings for heavy vehicles and machinery	No					X		X					X		TMP		X
3.35	The Proponent shall ensure that any construction activities within 40 metres of the bank of Yallah Creek, and any other watercourses, are	No		X	X		X		X					X		SWMP		X

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	consistent with Controlled Activity Guidelines (Department of Water and Energy, 2008) including, but not limited to, 'In-stream Works', 'Outlet Structures', 'Riparian Corridors', 'Vegetation Management Plans', and 'Watercourse Crossings', or any guidelines which supersede these documents.																	
3.36	The Proponent shall ensure that the project is designed, sited and constructed so that it is not subject to inundation by floodwaters up to or at a level of the Probable Maximum Flood, nor does it exacerbate flooding on adjacent land. Where the Proponent can demonstrate to the satisfaction of the Secretary that it is not reasonable and feasible to design to the Probable Maximum Flood, the Proponent may nominate an alternative design flood level for the approval of the Secretary. The alternative flood level shall be developed using a risk-based approach and in consultation with Wollongong City Council	Yes					X						X	X		SWMP	X	X
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.	No			X		X						X	X	X	SWMP		X
3.38	The Proponent shall ensure that there is no disturbance to the endangered ecological communities, including the Illawarra Subtropical Rainforest in the Sydney Basin Bioregion and the Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions, during the construction and operation of the project	No		X	X		X						X	X	X	FFMP		X
3.39	The Proponent shall mark the areas of endangered ecological communities with flagging tape or similar prior to commencing construction to ensure that there is no incursion into, or clearing of the areas	No		X									X	X		FFMP		X
3.40	The Proponent shall ensure that clearing of native vegetation is limited to the minimal extent required for the construction of the project and shall undertake all reasonable and feasible measures to avoid the clearing of any threatened flora species. All cleared areas shall be stabilised with local native grasses and ground cover plants as soon as practicable to minimise soil erosion.	No		X	X		X						X	X		FFMP		X
3.41	At least one month prior to the commencement of construction of the project, the Proponent shall develop a plan for offsetting the	Yes		X	X		X						X	X		Appendix I	X	

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	biodiversity impacts resulting from the removal of any native vegetation. The plan shall be submitted to the Secretary for approval and include as appropriate, but not necessarily be limited to: a) measures for encouraging the natural regeneration of locally native vegetation, including weed management measures as identified in condition 3.44; b) replanting/compensatory plantings (at a ratio of at least 2:1) and/or land offsets, and rehabilitation measures; c) measures for replacing specific habitat values impacted by the project (e.g. provision of roost/nest boxes where significant habitat trees such as hollow bearing trees are impacted); d) a timeline for the implementation of the identified measures, including ongoing monitoring and maintenance; e) demonstration of how the plan would achieve the outcome of maintaining or improving biodiversity values in the local area; and f) measures for monitoring and maintaining any offsets in perpetuity. The plan shall be implemented in accordance with the specified measures and timeframes, unless otherwise agreed to by the Secretary.																	
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	No		X	X		X						X	X	X	Appendix I FFMP	X	
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.	No		X	X		X					X		X	X	Appendix I FFMP	X	X
3.44	The Proponent shall monitor all rehabilitated areas, offset areas, and riparian zones for weed infestation. Any infestations shall be actively managed to remove or minimise their spread.	No		X	X		X					X		X	X	Appendix I FFMP	X	X
3.45	In the event a combined cycle plant is constructed, the extent of seagrass beds in the receiving waters of Lake Illawarra shall be mapped each summer using a combination of aerial images and field observations, and using the methodologies detailed in the document titled Tallawarra Combined Cycle Gas Turbine Power Station Water Quality and Biological Community Management Plan (May, 2008). Nothing in this approval restricts the Proponent from utilising the	No		X			X							X	X	N/A		

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	existing seagrass monitoring plan for the Tallawarra Stage A power station to satisfy the requirements of condition.																	
3.46	In the event a combined cycle plant is constructed, the Proponent shall manage operations to avoid the net loss of seagrass beds in the receiving waters of Lake Illawarra, excluding the outlet canal.	No		X			X							X	X	N/A		
3.47	Should a net loss of seagrass beds occur, the Proponent shall prepare and submit to the Secretary a report detailing the percentage and physical area of loss, the reasons for the loss, and the proposed measures for minimising any further loss and offsetting the loss.	Yes		X			X					X		X	X	N/A		
3.48	In the event a combined cycle plant is constructed, benthos shall be monitored each summer as detailed in the document titled Tallawarra Combined Cycle Gas Turbine Power Station Water Quality and Biological Community Management Plan (May, 2008). Nothing in this approval restricts the Proponent from utilising the existing benthos monitoring plan for the Tallawarra Stage A power station to satisfy the requirements of condition	No		X			X							X	X	N/A		
3.49	The Proponent shall undertake landscaping works to reduce the visual impact of the power station from residences along the foreshore, prior to the commencement of operation of the project. Vegetation used in landscaping works shall comprise local native species	No	X	X									X	X	X	FFMP		X
3.50	The Proponent shall minimise the use of reflective building elements and maximise the use of building materials and treatments which visually complement the surrounding landscape.	No	X										X	X		FFMP		X
3.51	The Proponent shall ensure that the power station is consistent in design (including materials, finishes and colours) with the Tallawarra Stage A power station	No	X										X			FFMP		X
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.	No	X						X			X	X	X		FFMP		X
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	No	X									X	X	X		FFMP		X

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	create a nuisance to the surrounding environment, properties and roadway.																	
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.	Yes						X				X	X	X	X	ACHMP	X	X
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.	Yes						X						X	X	ACHMP	X	X
3.56	Where ground disturbance is proposed (for example excavation or removal of vegetation) in the vicinity of Yallah Creek, prior to commencing construction, the Proponent shall undertake further archaeological surveying and assessment with the aim of identifying any Aboriginal cultural heritage values which may be impacted by the project. The Proponent shall ensure monitoring by Local Aboriginal Land Council representatives during such works.	Yes						X						X		ACHMP	X	X
3.57	Upon determining the haulage route(s) for construction vehicles associated with the project, the Proponent shall commission an independent, qualified person or team to undertake a Road Dilapidation Report for Yallah Bay Road. The report shall assess the current condition of the road and describe mechanisms to restore any	Yes							X					X		TMP		X

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	damage that may result due to traffic and transport related to the construction of the project. The Report shall be submitted to the relevant road authority for review prior to the commencement of haulage. The Proponent shall ensure that any measures to restore or reinstate roads affected by the project are undertaken in a timely manner, in accordance with the requirements of and to the satisfaction of the relevant road authority, and at the full expense of the Proponent. In the event of a dispute between the parties with respect to the extent of restorative work that may be required under this condition, any party may refer the matter to the Secretary for resolution. The Secretary's determination of any such dispute shall be final and binding on the parties.																	
3.58	All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.	No								X				X	X	WMP		X
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.	No		X	X					X			X	X	X	WMP		X
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.	No								X		X		X	X	WMP		X
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.	No								X		X		X	X	WMP		X
4.1	Within 90 days of the commencement of operation of the project, or as may be agreed by the Secretary, and during a period in which the project is operating under design loads and normal operating conditions, the Proponent shall undertake an Operational Noise Review to confirm the noise emission performance of the project. The Review shall be prepared in consultation with, and to the satisfaction of, the EPA.	Yes									X	X			X	OEMP	X	

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4.2	Noise monitoring is to be consistent with the guidelines provided in the Noise Policy for Industry (NSW EPA, 2017) and must include attended noise monitoring at the receiver locations identified in Table 1 and Table 2. The noise assessment must 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 at the locations defined in condition 3.5 of this approval.	No									X			X	X	NAQMP OEMP	X	
4.3	For the purpose of assessment of noise emissions, noise from the project shall be: a) measured at the most affected point within the residential boundary or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary; b) measured at one metre from the dwelling facade to determine compliance with the LAmax noise limits specified in Table 1 and in Table 2 of this approval; and c) 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, the Proponent may employ an alternative noise assessment method deemed acceptable by the EPA (refer to Noise Policy for Industry (NSW EPA, 2017). Details of such an alternative noise assessment method accepted by the EPA shall be submitted to the Secretary prior to the implementation of the assessment method.	No									X			X	X	NAQMP OEMP	X	
4.4	A report providing the results of the Operational Noise Review shall 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) a description of the methodologies for noise monitoring, including the location of monitoring sites and frequency of monitoring; b) 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; c) 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; d) details of the meteorological conditions prevailing during the monitoring; and e) details of any entries in the Complaints Register (condition 6.3 of this approval) relating to noise impacts.	Yes									X	X			X	OEMP	X	

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4.5	The Proponent shall prepare and implement an Operational Noise Monitoring Program to assess ongoing compliance against the operational noise limits set out in condition 3.5 of this approval. 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) and must include, but not be limited to: a) noise monitoring at the locations specified in Table 1 and Table 2 of this approval, in accordance with the requirements of condition 4.3 of this approval; b) attended noise monitoring; c) 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; and d) monitoring of the effectiveness of any noise mitigation measures implemented under condition 3.6 of this approval, against the noise limits specified in condition 3.5 of this approval. A report providing the results of the program shall be submitted to the Secretary and the EPA within 28 days of completion of each monitoring event. The monitoring program shall form part of the Operational Noise Management Plan referred to in condition 7.5 of this approval.	Yes									X	X			X	OEMP	X	
4.6	Ongoing noise monitoring shall be undertaken by the Proponent on an annual basis and as may be directed by the Secretary. The requirements for ongoing annual noise monitoring will be determined by the Secretary based on the results collected.	Yes									X				X	OEMP	X	
4.7	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.	No				X									X	OEMP	X	

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	Table 10 – Periodic Pollutant/Parameter Monitoring (Air) Pollutant/Parameter / Units of Measure / Frequency / Sampling Method Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent — ppm — Continuous — CEM-2 and US EPA Procedure 1 Moisture — % — Continuous — Special Method 1 and US EPA Procedure 1 Oxygen — % — Continuous — CEM-3 and US EPA Procedure 1 Temperature — °C — Continuous — TM-2 and US EPA Procedure 1 Velocity — m/s — Continuous — CEM-6 and US EPA Procedure 1 Volumetric flow rate — m^3/s — Continuous — CEM-6 and US EPA Procedure 1 Selection of sampling positions — - — - — TM-1 *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.*																	
4.8	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: 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; 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; 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; 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 e) details of any entries in the Complaints	Yes				X									X	OEMP	X	

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	Register (condition 6.3 of this approval) relating to air quality impacts. 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																	
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 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 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.	Yes				X								X	OEMP	X	
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	No					X							X	X	N/A		
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.	No					X							X	X	N/A		
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	No					X							X	X	N/A		
4.13	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	No					X								X	N/A		

<table>
<tr><th>ID #</th><th>Description of commitment / undertaking / obligation / requirement / condition</th><th>Consultation</th><th>Landscaping</th><th>Biodiversity</th><th>Soils</th><th>Air quality</th><th>Hydrology</th><th>Aboriginal heritage</th><th>Traffic and transport</th><th>Waste management</th><th>Noise and vibration</th><th>Administrative</th><th>Design relevant</th><th>Construction relevant</th><th>Operation relevant</th><th>EMS Section / Management Plan</th><th>EnergyAustralia</th><th>Contractor</th></tr>
<tr><td></td><td></td><td></td><td colspan="11">Aspect</td><td colspan="3">Stage</td><td></td><td colspan="2">Respon sibility</td></tr>
<tr><td></td><td>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.
Table 11 - Water Quality Monitoring<table><tr><th>Pollutant</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Hydrex 2470</td><td>mg/L</td><td>Daily</td><td>Grab sample with the monitoring methodology as approved by the EPA</td></tr><tr><td>Registered / permitted product containing peracetic acid</td><td>mg/L</td><td>Daily</td><td>Grab sample with the monitoring methodology as approved by the EPA</td></tr></table></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></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>No</td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td>X</td><td>OEMP</td><td>X</td><td></td></tr>
<tr><td>4.15</td><td>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>Yes</td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td>X</td><td>2.7 OEMP</td><td>X</td><td></td></tr>
</table>

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5.1	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.	Yes										X		X	X	5.4	X	
5.2	The Secretary must be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance.	Yes										X		X	X	7.4	X	
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.	No										X		X	X	7.4	X	
5.4	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	No										X				7.4	X	
5.5	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)	No										X				7.6	X	
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	No										X				7.6	X	
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.	No										X				7.6	X	
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.	No										X			X	7.6 OEMP	X	

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5.9	Independent Audits of the project must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).	Yes										X				7.2	X	
5.10	Proposed independent auditors must be agreed to in writing by the Secretary prior to the commencement of an Independent Audit.	Yes										X				7.2	X	
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.	Yes										X				7.2	X	
5.12	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Proponent must: 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; b) submit the response to the Secretary; and 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	Yes										X				7.2	X	
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.	Yes										X				7.2	X	
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.	Yes										X			X	7.2	X	
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.	No										X				6.7	X	
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): a) a telephone number on which complaints about construction and operational activities at the site may be registered; b) a postal address	No										X		X	X	6.4	X	

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	to which written complaints may be sent; and c) an email address to which electronic complaints may be transmitted. The telephone number, the postal address and the 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.																	
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: 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.	No									X				6.5	X	
6.4	Before the commencement of construction until the completion of all rehabilitation required under this approval, the Proponent must: 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	No									X				6.7	X	

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	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 b) keep such information up to date, to the satisfaction of the Secretary																	
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: 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. The Program shall be submitted for the approval of the Secretary, prior to the commencement of construction of the development.	Yes										X		X	X	6.2 CCP	X	
7.1	At least one month prior to the commencement of any site preparation and/or construction activities, or as otherwise agreed by the Secretary, the Proponent shall nominate for the approval of the Secretary a suitably qualified and experienced Environmental Representative(s) independent of the design and construction personnel. The Proponent shall engage the Environmental Representative(s) during all construction activities, or as otherwise agreed by the Secretary. The Environmental Representative(s) shall be the Proponent's principal point of advice in relation to the environmental performance of the project and shall have responsibility for: a) overseeing the implementation of all construction environmental management plans and monitoring programs required under this approval, and advise the	Yes										X		X		4.3	X	

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	Proponent upon the achievement of these plans/programs; b) considering and advising the Proponent on its compliance obligations against all matters specified in the conditions of this approval and the Statement of Commitments as referred to under condition 1.1c) of this approval, and permits and licences; and c) having the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to the Proponent that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur.																	
7.2	The Proponent shall prepare a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during construction of the project. The CEMP shall be consistent with the 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: a) a description of all activities to be undertaken on the site during construction including an indication of stages of construction; b) statutory and other obligations that the Proponent is required to fulfil prior to and during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies; c) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan - i) measures to monitor and manage dust emissions in consultation with the EPA ii) measures, prepared in consultation with Wollongong City Council, to reduce the visual impacts of the project, including landscape plans illustrating the proposed landscape planting and any embankment works, iii) measures, prepared in consultation with Wollongong City Council, for managing and reducing potential flooding; and d) electricity transmission route alignment sheets identifying the exact location of	Yes	X	X	X	X	X	X				X		X		3.3 CEMP	X	X

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	the proposed transmission lines and the location of any threatened species, threatened species habitat and Aboriginal objects in the vicinity; e) a description of the roles and responsibilities for key personnel involved in the construction of the project; f) the issue-specific management plans required under condition 7.3 of this approval; and g) complaints handling procedures during construction consistent with condition 6.2 of this approval. The Plan shall be submitted for the a approval of the Secretary no later than one month prior to the commencement of any construction works associated with the project, or within such period otherwise agreed by the Secretary. Construction works shall not commence until written approval has been received from the Secretary. The Proponent must implement the approved CEMP for the project.																	
7.3a	As part of the CEMP for the project, required under condition 7.2 of this approval, the Proponent shall prepare and implement the following: a) a Noise Management Plan to detail measures to mitigate and manage noise during construction works, consistent with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009), or its latest version. The Plan shall include, but not necessarily be limited to - i) procedures to ensure that all reasonable noise mitigation measures are applied during construction works, ii) details of construction activities (including construction traffic) and equipment that have the potential to generate noise and/or vibration impacts on sensitive receivers, iii) the construction noise and vibration objectives for the project and all reasonable and feasible noise and vibration mitigation measures that will be implemented to control construction noise and vibration impacts, particularly where the objectives are predicted to be exceeded, iv) procedures for assessing noise levels at sensitive receivers and compliance, and v) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity;	Yes									X		X		3.4 CEMP NAQMP	X	X
7.3b	b) a Traffic Management Plan prepared in consultation with TfNSW, Wollongong City Council and emergency services to manage the construction traffic and access impacts of the project including, but not necessarily limited to -								X					X		3.4 CEMP TMP	X	X

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	i) details of how construction of project infrastructure will be managed in proximity to local and regional roads, ii) details of traffic routes for heavy vehicles, including any necessary route or timing restrictions for oversized loads, iii) construction vehicle volumes (construction personnel, heavy vehicle movements and oversized loads), iv) measures to ensure traffic volume, acoustic and amenity impacts along construction vehicle routes are minimised, v) details of construction activities that would require disruption to traffic such as road closures and measures to minimise impacts, vi) a Construction Vehicle Code of Conduct to set driver behaviour controls to minimise impacts on land uses along haulage routes, and vii) evidence that all statutory responsibilities with regard to road traffic impacts have been complied with																	
7.3c	c) Flora and Fauna Management Plan to manage flora and fauna impacts during construction in consultation with the BCS. The Plan shall include, but not necessarily be limited to: i) details of all impacted and potentially affected threatened flora and fauna species (including ecological communities) and specific management procedures for each of these species, ii) general management procedures for both the removal of redundant transmission lines and construction of new transmission lines within vegetated areas, including the procedures for clearing vegetation and minimising the extent of clearing, weed management and the rehabilitation of any disturbed vegetation, and iii) proposed revegetation and rehabilitation measures, including completion criteria and monitoring, for any cleared areas, offset areas, and riparian zones along Yallah Creek;	Yes		X										X		3.4 CEMP FFMP	X	X
7.3d	d) a Soil and Water Management Plan prepared in consultation with the DPIE Water, EPA and Wollongong City Council to detail measures to mitigate and manage soil erosion and the discharge of sediment and other pollutants to land and/or water during construction. The Plan must include, but not necessarily be limited to: a) identification of the construction activities that could cause soil erosion or discharge sediment or water pollutants from the site, b) a description of the management methods to minimise soil erosion or discharge of sediment or water pollutants from the site, including a strategy to minimise the area of bare surfaces and stabilise disturbed areas, and plan drawings showing the locations for sediment and	Yes			X		X							X		3.4 CEMP SWMP	X	X

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	erosion control measures, c) demonstration that the proposed erosion and sediment control measures will conform with, or exceed, the relevant requirements of Managing Urban Stormwater: Soils and Construction (Landcom, 2004), d) details on the installation, monitoring and maintenance requirements for each of the recommended measures for erosion and sediment control, e) details of stormwater overflow paths and measures for managing overflows, f) detailed drawings of any engineering structures such as sediment and evaporation ponds, including design standards and management regimes; and																	
7.3e	e) Aboriginal Cultural Heritage Management Plan to manage potential Aboriginal cultural heritage impacts during construction in consultation with Heritage NSW. The Plan shall include, but not necessarily be limited to: i) procedures for the management of any recorded sites within the project area including those required under condition 3.54 of this approval, ii) an Aboriginal Cultural Education Program for the induction of personnel and contractors involved in the construction of the project, iii) details of proposed further archaeological investigations and/or salvage projects prior to impact as required under condition 3.56 of this approval, iv) identification and management of previously unrecorded sties, v) details of an appropriate keeping place agreement with local Aboriginal community representatives for any Aboriginal objects salvaged through the development process, and vi) procedures for ongoing Aboriginal consultation and involvement	Yes						X						X		3.4 CEMP ACHMP	X	X
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. 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: a) identification of all relevant statutory and other obligations that the	Yes		X	X		X			X		X			X	3.8 OEMP	X	

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	Proponent is required to fulfil in relation to operation of the project, including all relevant approvals, licences, and permits; b) overall environmental policies, guidelines and principles to be applied to the operation of the project; 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 – i) measures to monitor and maintain offset measures implemented in accordance with condition 3.41 of this approval, ii) methods to monitor and maintain revegetated areas (including riparian areas) during the establishment phase and long term, iii) ongoing measures to monitor and control the spread of weeds, iv) ongoing measures to control soil erosion and sedimentation; 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, vi) procedures for planned and unplanned water discharges from the site, and vii) emergency response procedures in the event of flooding; d) a description of the roles and responsibilities for all relevant employees involved in the operation of the project; 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; f) Removed; g) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval; and h) the environmental monitoring requirements outlined under conditions 4.5 to 4.14 of this approval, inclusive. 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																		

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	Secretary. The Proponent must implement the approved OEMP for the project.																	
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 - 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, ii) monitoring for gaseous and particulate emissions from the project, 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, iv) specific procedures for the management of generating efficiency and the minimisation of greenhouse gas emissions per unit of electricity generated, v) procedures aimed at maximising the efficiency of the start-up and shut-down cycles for the project, 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, vii) plans for regular maintenance of process equipment to minimise the potential for leaks and fugitive emissions, and 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 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, ii) identification of operational activities that will be carried out and the associated noise sources, iii) details of all	Yes				X					X	X			X	3.8 OEMP	X	

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	management methods, procedures and mitigation measures that will be implemented to control individual and overall noise emissions from the site during operation, v) procedures for periodic consideration of noise impacts against the noise limits specified under this approval, v) noise monitoring and reporting procedures, and vi) procedures to generate suitable documentation for annual environmental auditing,																	
7.6	Prior to commencing construction, the Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must: a) provide the strategic framework for environmental management of the project; b) identify the statutory approvals that apply to the project; c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; d) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise; • respond to any non-compliance; • respond to emergencies; and e) include: • references to any strategies, plans and programs approved under the conditions of this approval; and • a clear plan depicting monitoring to be carried out under the conditions of this approval. Following the Secretary's approval, the Proponent must implement the Environmental Management Strategy.	No									X		X		1.2	X	
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	No									X		X	X	8	X	

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	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.																	
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.	No									X		X	X	8	X	
A 1	Appendix 1: INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS WRITTEN INCIDENT NOTIFICATION REQUIREMENTS 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. 2. Written notification of an incident must: a) identify the development and application number;	No									X		X	X	5	X	X

ID #	Description of commitment / undertaking / obligation / requirement / condition	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
			Aspect										**Stage**				**Respon sibility**	
	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. 3. 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. 4. 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.																	

Appendix F: Statement of commitments responsibility table

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
		Aspect										Stage				Responsibility	
Proposed hours of construction for the project site are: - Monday to Friday – 7am to 6pm; - Saturday – 7am to 1pm if inaudible at residential premises, otherwise 8am to 1pm; and - No work on Sundays or public holidays. The Construction EMP will outline the procedures that need to be complied with before any work can be carried out on the project site outside these hours (e.g. approval of relevant authorities and notification of local residents).	No									X	X		X		NAQMP	X	X
A construction environmental management plan (CEMP) will be prepared and implemented to guide construction activities. The CEMP will cover the following areas: traffic and transport; air quality; water; noise and vibration; heritage; ecology; hazards and risk; visual; waste management; and communication. Any plans and strategies contained in the CEMP will be developed in consultation with the relevant agencies.	No	X	X	X	X	X	X	X	X	X	X		X		CEMP	X	X
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	No					X					X	X	X	X	TMP	X	X
Subject to availability, the construction works will use the new temporary area to the north east of the power station site, adjacent to the squash courts/ basketball courts. Access will be via the southern access and service road, minimising the interaction between construction vehicles and other vehicles. Consultation with the relevant roads authority will be undertaken before the commencement of works that may affect public roads or traffic. Traffic and transport mitigation measures and safeguards implemented for the construction of the Tallawarra Stage A plant will be reinstated for the construction of the Tallawarra Stage B power station. In particular, warning signs for the general public and employees will be re-installed and regular inspections of Tallawarra Road's surface condition will continue to be carried out. A traffic management plan will be developed as part of the CEMP.	Yes							X					X		TMP	X	X
The following dust control procedures will be implemented during the construction phase of the project if there is a possibility of wind-blown dust affecting residential areas: In dry, windy conditions, water carts will be used to dampen soils prior to excavation and handling. Exposed surfaces and stockpiles will be watered, sprayed and covered if required. Vehicles will only be loaded to their carrying capacity and loads of fill will be covered or dampened during transport. Any soil adhering to the undercarriage and wheels of the trucks will be removed prior to departure from the site. Any long-term stockpiles of soil will be stabilised using fast-seeding grass or synthetic cover spray. In addition, construction plant and equipment used on the site for the project will be well maintained and regularly serviced so that emissions from	No			X	X			X					X		NAQMP	X	X

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
construction plant and vehicles remain within applicable air quality guidelines and standards.																	
All applicable activities will be carried out in a manner that minimises erosion and sedimentation. These measures will be carried out in accordance with the applicable principles and practices contained in 'Soils and Construction' (Landcom, 2004).	No			X		X							X		SWMP	X	X
Construction will be carried out during the hours specified above under 'Environmental Management - Manage hours of construction work'. Practical measures will be used to manage noise from construction equipment, particularly in instances where extended hours of operation are required. Noise compliance monitoring will be carried out for all major equipment and activities on site and investigative monitoring of noise will be carried out in response to specific complaints. Contractors will be required to comply with applicable noise criteria in the construction of the proposed plant. Noise limits will be given to suppliers of plant equipment so that the equipment can be designed to comply with project specific noise goals. „ Suppliers of construction equipment will be required to comply with Australian Standard AS 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites. All equipment used on-site will need to demonstrate compliance with the noise levels recommended within AS 2436-1981.	No									X	X		X		NAQMP	X	X
The location of existing Aboriginal heritage sites close to the proposed works will be noted. A suitable buffer will be physically marked and construction staff will be made aware of their responsibilities and obligations under the *National Parks and Wildlife Act 1974*.	No						X						X		ACHMP	X	X
All construction personnel will be inducted on the potential to find previously unrecorded Aboriginal items. If an item (or suspected item) of Aboriginal heritage is discovered during works, all work likely to affect the discovery will cease. DECC will be informed and further investigation will be undertaken by an archaeologist before recommencement of work.	Yes						X				X		X		ACHMP	X	X
The proposed disturbance footprint will be clearly defined on-ground, using temporary fencing, to avoid unnecessary vegetation and habitat removal. Appropriate weed management strategies will be implemented during construction to ensure they are not spread throughout the study area.	No		X	X									X		FFMP	X	X
Sediment and erosion controls will be adopted to minimise the impact on water quality. Appropriate measures to store and manage fuels and oils on the project site will be adopted and spill containment equipment will be available on site at all times to prevent and contain accidental spills near local waterways.	No		X	X		X							X		SWMP	X	X

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
The following studies will be completed as part of the ongoing assessment of hazards and risks prior to commencement of operations: fire safety study, in accordance with Hazardous Industry Planning Advisory Paper (HIPAP) No. 2; „ hazard and operability study, in accordance with HIPAP No. 8; „ emergency response planning, in accordance with HIPAP No. 1; construction safety study, in accordance with HIPAP No. 7; and safety management system assessment, in accordance with HIPAP No. 9.	No			X							X		X	X	2.7	X	
Plant will be designed to be consistent with adjacent structures, including Tallawarra Stage A. The design and colour scheme chosen for the built components will be selected to ensure they do not stand out within the natural settings.	No	X										X			FFMP	X	X
Revegetation of earthwork areas will be conducted as soon as practicable during the construction phases.	No	X	X	X									X		SWMP	X	
A waste management plan (WMP) will be developed for incorporation into the CEMP. The WMP will include: procedures for the management of construction wastes from the site; an inventory of all waste types anticipated; and the preferred options for re-use, recycling or disposal. The WMP will seek to ensure that all waste generated at the site is recorded to help achieve waste minimisation. Waste for disposal will be removed by a licensed waste contractor and disposed of at a licensed landfill facility. 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.	No			X					X				X		WMP	X	X
A construction communications plan will be prepared and implemented. This plan will include: continuation of the existing community liaison group that was established in 2003 for Tallawarra Stage A and the Tallawarra Lands planning process; establishment of a basis for liaison with the community to deal with construction issues; maintenance of phone/fax/website to provide opportunity for community input; and implementation of an effective complaints handling procedure to address and respond to issues raised by the community.	Yes										X		X		CCP	X	X
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.	No	X	X	X	X	X	X	X	X	X	X			X	OEMP	X	

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
Any plans and strategies contained in the OEMP will be developed in consultation with the relevant agencies.																	
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. The plant's hours of operation will be 24 hours 7 days per 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.	Yes									X	X	X		X	OEMP	X	
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. The air and greenhouse proposal for the Stage B CCGT plant will be designed and implemented to ensure that the NSW DECC criteria for each pollutant identified in Tables 8-1 and 8-2 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				X									X	OEMP	X	X
In order to determine the annual NOx load, TRUenergy propose to install and operate a continuous NOx monitoring system at the site. 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. 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. Ongoing monitoring of greenhouse gas emissions will be undertaken and reported in the proponent's Annual Environmental Report.	No				X						X			X	NAQMP OEMP	X	

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
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.																	
The project noise goals listed in Table 7-17, developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B OCGT plant. The project noise goals listed in Table 8-16, developed in accordance with the Industrial Noise Policy (INP), will be adhered to during the operation of the Stage B CCGT plant.	No									X	X			X	NAQMP	X	
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. „ 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.	No									X	X			X	NAQMP	X	
The fitting line will be situated on an above ground pipe rack, with markers that are in accordance with the national standard, as was required for the Tallawarra Stage A plant. The distance between the marker signs located along the fitting line route will be no more than 50m apart, irrespective of clear visibility along a straight flat section of the fitting line route. A safety management system element will be developed specifically for the fitting line. This element should include regular fitting line route and equipment inspections and inspection and checking of the impresses current corrosion protection system. A site first flush retention pond, designed to contain a minimum of 216m3 of water, will be installed to ensure fire water is retained on site. A hazard audit, in accordance with HIPAP No. 5, will be conducted within 12 months of the commencement of operations.	No			X							X	X	X	X	2.7	X	X
The existing comprehensive routine monitoring program (as required for Tallawarra Stage A) will be used to monitor the water quality in Lake Illawarra. 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. 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.	No					X			X			X		X	OEMP	X	X

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
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. 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. Subject to any future development of Tallawarra Lands and the availability of sewer TRUenergy intent to connect to this system																	
Monitoring of the revegetated areas will be undertaken to ensure they are functioning as designed.	No		X								X			X	FFMP	X	
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).	Yes						X							X	ACHMP	X	
The existing landscape planting for Tallawarra Stage A will be enhanced at key locations around the site. „ The existing earth mound to the east of the site will be elevated to screen the proposed power stations. 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.	No	X	X	X										X	FFMP	X	X
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 being collected regularly and disposed of at licensed facilities as appropriate. 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.	No			X					X				X	X	OEMP	X	X
If a CCGT configuration is chosen for the plant, the CCGT will: be designed to utilise wet mechanical draft cooling towers, in preference to once-through cooling, to minimise the amount of water required and the thermal effects of the outlet discharge; se attemperation water (additional intake water to lower the discharge water temperature) to maintain the temperature of cooling water below 35°C.	No					X						X		X	N/A	N/A	

Description of commitment	Consultation	Landscaping	Biodiversity	Soils	Air quality	Hydrology	Aboriginal heritage	Traffic and transport	Waste management	Noise and vibration	Administrative	Design relevant	Construction relevant	Operation relevant	EMS Section / Management Plan	EnergyAustralia	Contractor
Periodic environmental reports will be prepared to measure performance and progress against the Construction EMP and Operational EMP. Any shortcomings in environmental performance identified by the reporting process will be addressed by updating the relevant EMP. These reports will provide relevant authorities with access to important environmental information about the facility.	No										X			X	7.6	X	X
An emergency response and incident management plan (ERIMP) will be prepared to ensure incidents are handled promptly and safely. The ERIMP will outline the appropriate emergency response equipment that will be provided, the mandatory training requirements, the emergency response procedures and the responsibilities of site operators for these matters.	No										X		X	X	5	X	X

Appendix G: Legislative requirements responsibility table

Legislation	Details and obligations	Application to the project	Approvals/ Permit / License Required	Responsibility	
				Proponent	**Contractor**
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 CEMP	X	X
Environmental Planning and Assessment Act 1979 and Regulation 2000 Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017	Development in NSW is regulated principally through this Act. The modification to the Project (Mod-2) and the alteration of the original Minister's Conditions of Approval were made under Section 5.25 of the EP&A Act.	EnergyAustralia, as the proponent, received Approval for a second modification (07_0124-Mod-2) to by the Minister for Planning in December 2020.	Approval received – no further action		
	EP&A Act 1979 - (Building code of Australia, relevant AS and Project Approval conditions for compliance).	Plans, specifications and details may need to be submitted to a private to Certifier for the 'building' works.	Construction certificates		X
		Completion of building work. Need to start process prior to building work in construction certificate.	Building Compliance certificates and occupancy certificate		X
		Need to appoint accredited practitioners (fire safety) during project design	Fire Safety certificate and fire protection system certificate		X

Legislation	Details and obligations	Application to the project	Approvals/ Permit / License Required	Responsibility	
				Proponent	**Contractor**
Environment Protection and Biodiversity Conservation Act 1999	Provides an assessment and approval system for actions that impact on matters of national environmental significance.	No matters of national environmental significance are known to be impacted by the project.	Monitor project changes for potential impacts to MNES.	X	
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.	X	
Heritage Act 1977	Provides protection for the heritage items.	No known non-indigenous heritage items exist within the corridor. If non-indigenous heritage items are discovered, the *Unexpected Heritage Finds & Human Remains Procedure* should be followed	Implementation of CEMP	X	X
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.	Currently not required. An updated *Aboriginal Objects Due Diligence Assessment Tallawara B Power Station Project* (Energy Australia 2021) has been prepared. The assessment concluded that works would have negligible direct impact on known Aboriginal cultural heritage areas or artefacts.	Implementation of CEMP	X	X
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 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).	Implementation of CEMP	X	X

Legislation	Details and obligations	Application to the project	Approvals/ Permit / License Required	Responsibility	
				Proponent	**Contractor**
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 Environmental Protection Licence (EPL) to operate under section 48 of the POEO Act.	Environmental Protection Licence (EPL) has been obtained, licence #555. Construction requirements in the EPL must be complied with. The EPL would need to be modified prior to operation of the project.	X	X
Pipelines Act 1993	The Pipelines Act 1967 is responsible for regulating the design, construction, operation, and maintenance of pipelines in NSW.	A Pipeline License is required under Part 3A of the EP&A Act, obtained through NSW Department of Energy and Water, following project approval. A Pipeline License cannot be refused by the department if the project is granted under Part 3A of the EP&A Act (Section 75V EP&A Act).	Pipeline License may be required.	X	
Waste Avoidance and Resource Recovery Act 2001	Addresses the preparation of waste strategies that identify targets and objectives for waste reduction.	Compliance must be achieved in relation to waste management during construction. This is being achieved by the development of a Waste Management Plan	Implementation of CEMP	X	X
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 CEMP	X	X
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.	Approval	X	X

Legislation	Details and obligations	Application to the project	Approvals/ Permit / License Required	Responsibility	
				Proponent	**Contractor**
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 CEMP	X	X
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). The Flora and Fauna Management Plan will prescribe the control measures to control weeds.	Implementation of CEMP	X	X
Roads Act 1993	Regulates activity on public roads.	A license is required, under Section 138 of the Roads Act 1993, "in order to undertake works within a road reserve". Access to the site is off the Princes Highway, with heavy equipment and parts transported on road from Port Kembla	Road occupancy licences may be required	X	X
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	X	X
State Environmental Planning Policy (SEPP) 33- Hazardous and Offensive Development	SEPP No. 33 "requires the consent authority to consider whether an industrial proposal is a potentially hazardous industry or a potentially offensive industry".	A hazard assessment is required as part of the EA to determine this.	Site may be classified as a major hazard facility	X	X
Wollongong Local Environmental Plan 2009	Provides statutory planning controls for the Wollongong local government area.	The EA considered the LEP and consultation with Council is ongoing.	Ongoing consultation with Council is required.	X	

Legislation	Details and obligations	Application to the project	Approvals/ Permit / License Required	Responsibility	
				Proponent	**Contractor**
NSW Work Health and Safety Act 2011 NSW Work Health and Safety Regulation 2011	All dangerous goods and substances will be stored as per WH&S Act 2011.	Dangerous goods storage	Consider if licence is required	X	X

Appendix H: EPL construction requirements responsibility table

<table>
<tr><th>ID #</th><th>Tallawarra B EPL Construction Conditions</th><th colspan="2">Responsibility</th></tr>
<tr><th></th><th></th><th>Proponent</th><th>Contractor</th></tr>
<tr><td>P1.3</td><td>Location of monitoring/discharge points and area
For each discharge point or utilisation area specified below, the licensee must monitor:
a. the volume of liquids discharged to water or applied to the area;
b. the mass of solids applied to the area;
c. the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.
<table><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Location Description</th><th>Pollutant</th><th>Sample measurement</th></tr><tr><td>2</td><td>Effluent quality monitoring</td><td>Treated Sewage Sampling port in effluent line from the effluent collection pit to the utilisation area labelled as "EPA 2" on map titled "Energy Australia Protection Licence 555 Compliance Locations" and dated 7.3.2017 (EPA ref DOC17/139625-03).</td><td>Biochemical oxygen demand and Total suspended solids</td><td>Milligrams per litre (unit of measure), special frequency 1 (quarterly during discharge), grab sample (sampling method)</td></tr><tr><td>3</td><td>Volume monitoring</td><td>Treated Sewage Volume Monitoring via a magnetic flow meter labelled as "EPA 3" on map titled "Energy Australia Protection Licence 555 Compliance Locations" and dated 7.3.2017 (EPA ref DOC17/139625-03).</td><td>N/A</td><td>Continuous (frequency), kilolitres per day (unit of measure), in line instrumentation (sampling method)</td></tr></table></td><td>X</td><td></td></tr>
<tr><td>E3.1</td><td>Construction Environmental Management Plan
Prior to the commencement of construction the licensee must prepare and submit a Construction Environmental Management Plan (CEMP) to the EPA for the Tallawarra B Power Station.

Note 1: A copy of the Project Approval (consolidated) is kept on EPA file DOC20/1009475.

Note 2: Following satisfactory completion of the CEMP per Project Approval condition 7.2, EPA will remove this condition from the licence.</td><td>X</td><td></td></tr>
</table>

ID #	Tallawarra B EPL Construction Conditions	Responsibility	
		Proponent	Contractor
E3.2	**Construction Hours** 1. "Unless permitted by another condition of this licence, construction works and activities related to the construction of the Tallawarra B Power Station must: (a) only be undertaken between the hours of 7:00 am and 6:00 pm Monday to Friday; (b) only be undertaken between the hours of 8:00 am to 1:00 pm on Saturday; and (c) not be undertaken on Sundays or public holidays"; 2. "The categories of works that may be undertaken outside the hours of operation permitted by the above condition are: a) construction work that causes LAeq(15 minute) noise levels that are no more than 5 dB above rating background levels at any residence; or b) the delivery of materials requested by police or other authorised authorities for safety reasons; or c) emergency work to avoid the loss of lives, property, and/or to prevent environmental harm; or d) other activities as agreed by the EPA; or e) works approved by the Secretary of the Department of Planning, Industry and Environment under condition 3.2 of approval 07_0124, provided the EPA is notified in advance of each out-of-hours work occurrence. 3. The EPA must be consulted in to support any proposed variation in construction times. (Modified from Project Approval condition 3.2)	X	X
E3.3	**Construction Noise** The licensee must ensure that all feasible and reasonable noise and vibration mitigation and management measures are implemented during construction work authorised by this licence for the Tallawarra B Power Station, in accordance with the Interim Construction Noise Guideline (DECC, 2009)"	X	X
L1.1	**Pollution of Waters** Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the *Protection of the Environment Operations Act 1997*.	X	X

Appendix I: Offset plan

Tallawarra B Power Station

Vegetation Offset Plan

EnergyAustralia Tallawarra Pty Ltd

Reference: MP07_0124

Revision: 2.3

2022-01-27

EnergyAustralia

LIGHT THE WAY

Document control record

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Approval			
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Abbreviations

Abbreviation	Description
CoA	Conditions of Approval
EMS	Environmental Management Strategy
km	Kilometres
kV	Kilovolt
m	Metres
mm	Millimetres
MW	Megawatts
OCGT	Open Cycle Gas Turbine
PCT	Plant Community Type
Sp	Species
Spp	Species (plural)

1 Introduction

1.1 Overview

The Tallawarra B Gas Turbine Power Station Project Approval 07_0124 was granted under Section 75J of the *Environment Planning and Assessment Act 1979*, Modification 2 dated December 2020. This vegetation offset plan is prepared under as part of Condition of Approval (CoA) 3.41 for the Tallawarra B 400-megawatt gas fired power station (the Project). This plan details the required compensatory planting requirements as specified in the project approval for vegetation offsetting. This plan identifies the project background, the assessment of the compensatory planting required and details of the site establishment requirements for the offset planting.

1.2 Responsibility for achieving plan

Energy Australia will be responsible for all activities and tasks associated with compensatory planting and meeting offset obligations. This includes all planning, site establishment, planting, monitoring and maintenance requirements as detailed in CoA 3.41.

The plan shall be implemented in accordance with the specified measures and timeframes, unless otherwise agreed to by the Secretary.

1.3 Project background

1.3.1 Project site and surrounds

The Project is located adjacent to the existing Tallawarra A Power Station on Yallah Bay Road, Yallah. The site is located on the western bank of Lake Illawarra and on the southern footslopes of Mount Brown, which rises to about 130 metres (m). The Project is positioned in a historically disturbed location on the foundations of a former coal power station, which was decommissioned in 1989. The land is owned by EnergyAustralia.

The Tallawarra Lands surrounding the site are currently leased for low density cattle grazing and comprise of undulating grassy slopes.

The location of the project is shown in Figure 1-1.

1.3.2 Project summary

The project involves the construction and operation of an open cycle gas turbine (OCGT) power station and associated infrastructure including a new transmission line, new gas receival station infrastructure andnew gas feeder pipeline infrastructure.

Construction of the project would require the temporary establishment of construction ancillary areas adjacent to the project site. This will include the use of some land associated with the Tallawarra A power station.

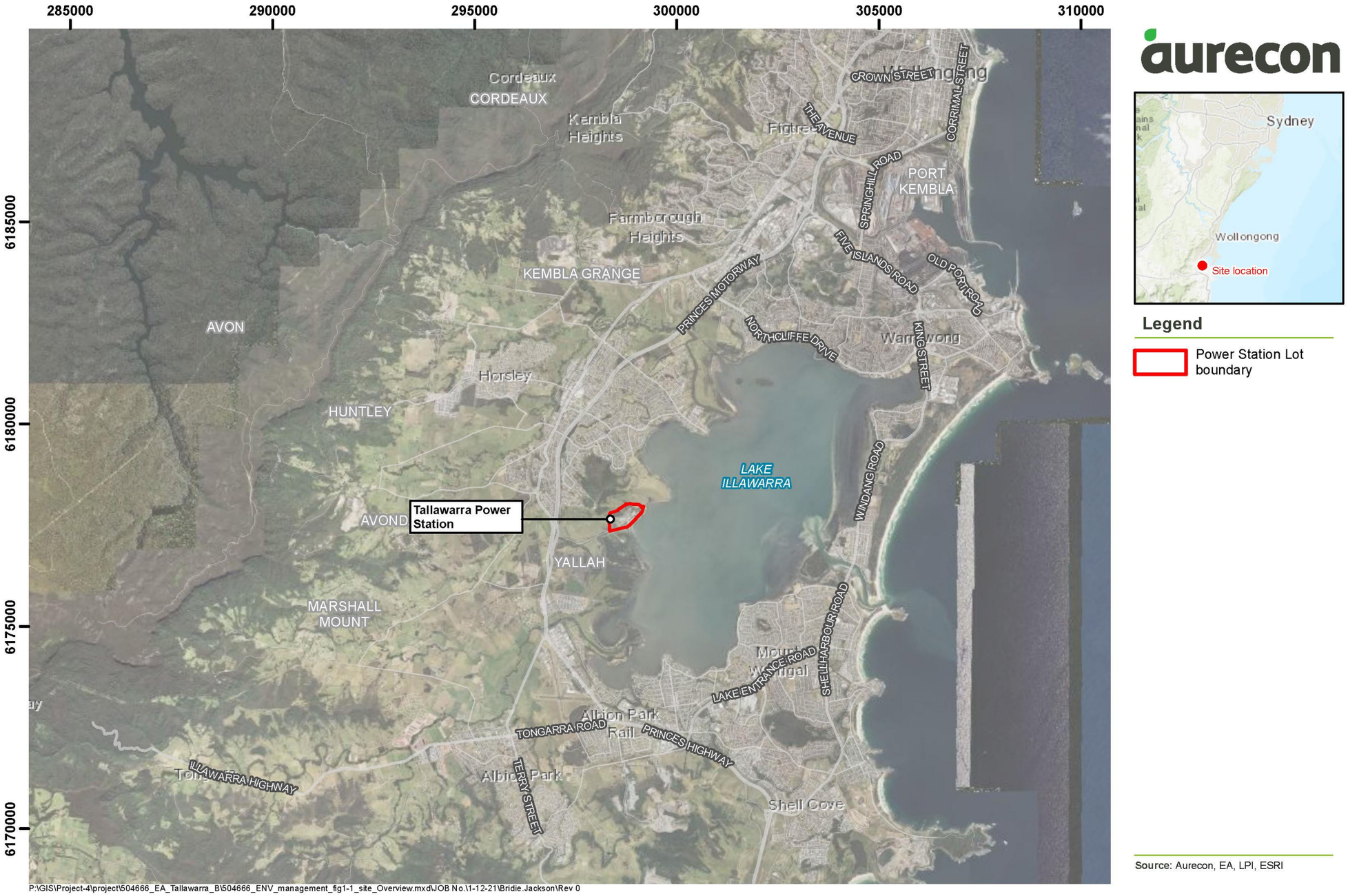
Following construction, disturbed areas will be rehabilitated, and landscaping will be established.

1.3.3 Security mechanism

A security mechanism is required to monitor and maintain the final offset site in perpetuity. In discussion with the Biodiversity Conservation Trust (BCT) and other relevant stakeholders, EnergyAustralia will investigate available security mechanisms, and will enter into either a Conservation Agreement or Stewardship Agreement with BCT. The proposed timeframe to implement the security mechanism will be within 36 months of the completion of compensatory planting, and is based on the following estimated timeframes:

- Confirm approach with BCT (3 months)

- Subdivision of property (9 months)
- Biodiversity assessment (6 months)
- Draft Agreement (3 months)
- Final approvals (4 months)
- Management/Contingency (8 months)



Tallawarra B Power Station

FIGURE 1.1: Site location

Figure 1-1 Site location

1.4 Purpose of this plan

This plan has been developed to meet legislative requirements as detailed via the Conditions of Approval (CoA) issued by the Minister of Planning. Furthermore, this plan will be produced in consideration of the statement of commitments listed as part of the environmental assessment of the Project.

All other relevant legislative requirements will be followed in accordance with the Project Environmental Management Strategy (EMS).

1.4.1 Conditions of approval

The removal of native vegetation is required as part of the Project and as such this Offset plan has been developed in accordance with Conditions of Approval (CoA) 3.41. Additionally, other CoA are considered in this Offset Plan to enable the objectives of this offset plan to be met, and the plan is also consistent with other CoAs. The Department of Planning, Industry and Environment's (DPIE) project approval conditions relevant to this EMS are listed in Table 1-1.

Table 1-1 Compliance with CoA

CoA #	CoA requirement	How addressed
3.38	The Proponent shall ensure that there is no disturbance to the endangered ecological communities, including the Illawarra Subtropical Rainforest in the Sydney Basin Bioregion and the Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions, during the construction and operation of the project	Section 2.1 and FFMP
3.39	The Proponent shall mark the areas of endangered ecological communities with flagging tape or similar prior to commencing construction to ensure that there is no incursion into, or clearing of the areas.	Section 2.1 and FFMP
3.40	The Proponent shall ensure that clearing of native vegetation is limited to the minimal extent required for the construction of the project and shall undertake all reasonable and feasible measures to avoid the clearing of any threatened flora species. All cleared areas shall be stabilised with local native grasses and ground cover plants as soon as practicable to minimise soil erosion.	Section 2.3, 2.4, 3.10, 3.11, FFMP and SWMP
3.41	At least one month prior to the commencement of construction of the project, the Proponent shall develop a plan for offsetting the biodiversity impacts resulting from the removal of any native vegetation. The plan shall be submitted to the Secretary for approval and include as appropriate, but not necessarily be limited to: a) measures for encouraging the natural regeneration of locally native vegetation, including weed management measures as identified in condition 3.44 b) replanting/compensatory plantings (at a ratio of at least 2:1) and/or land offsets, and rehabilitation measures c) measures for replacing specific habitat values impacted by the project (e.g. provision of roost/nest boxes where significant habitat trees such as hollow bearing trees are impacted) d) a timeline for the implementation of the identified measures, including ongoing monitoring and maintenance e) demonstration of how the plan would achieve the outcome of maintaining or improving biodiversity values in the local area; and f) measures for monitoring and maintaining any offsets in perpetuity. The plan shall be implemented in accordance with the specified measures and timeframes, unless otherwise agreed to by the Secretary.	This plan Section 2.5, 3.2, 3.9 and 4.4 Section 3.5 Section 3.6 Section 4.4 Section 2.4, 2.5, 3.2.1 Section 4 Section 1.2
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.	Section 3.2 and FFMP

CoA #	CoA requirement	How addressed
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.	Section 4, Appendix C and FFMP
3.44	The Proponent shall monitor all rehabilitated areas, offset areas, and riparian zones for weed infestation. Any infestations shall be actively managed to remove or minimise their spread.	Section 4 and FFMP

1.4.2 Statements of commitments

The Project Environmental Assessment, Chapter 9, provides a Statement of Commitments in relation to environmental impact mitigation, management and monitoring during construction and operation. Relevant statement of commitments for the purposes of this offset plan are as follows:

- The proposed disturbance footprint will be clearly defined on-ground, using temporary fencing, to avoid unnecessary vegetation and habitat removal.
- Appropriate weed management strategies will be implemented during construction to ensure they are not spread throughout the study area.
- Revegetation of earthwork areas will be conducted as soon as practicable during the construction phases.
- Monitoring of the revegetated areas will be undertaken to ensure they are functioning as designed.
- The existing landscape planting for Tallawarra Stage A will be enhanced at key locations around the site. The existing earth mound to the east of the site will be elevated to screen the proposed power stations. 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.

1.5 Consultation

EnergyAustralia consulted with the Biodiversity Conservation Division (BCD) via email and an online meeting in early September 2021. BCD was provided with a draft version of the Flora and Fauna Management Plan and this Vegetation Offset Plan (including the draft Landscape Plan) prior to the meeting, and we discussed aspects of both plans and project with a BCD representative. BCD provided formal feedback on both the FFMP and Vegetation Offset Plan on 8 September which has been incorporated in this plan. Stakeholder consultation correspondence is provided in Appendix D.

1.6 Methodology

The development of this Offset Plan included the completion of three days of field survey (16 June, 17 June and 12 July 2021) to prepare a detailed inventory of native vegetation that will require clearing at all stages of the Project (including both construction and early works). Additionally, offset sites were determined through a field survey and desktop assessment of environmental conditions to determine their suitability.

For the purposes of this plan, *native vegetation* is considered to be trees/shrubs and saplings of woody vegetation indigenous to Australia in accordance with growth forms as defined by the Biodiversity Assessment Methodology[1]. Given the nature of compensatory planting, this does not include ground cover species, vines, scramblers, or forbs as these species are difficult to quantify, and often do not have the long growth time required for woody species.

Best efforts have been made to fully identify native species to the species level, to enable similar biodiversity values to be replaced. However, limitations such as the lack of fruiting material or restricted access to plant individuals (such as due to blackberry vine or safety considerations) only allowed some plants to be recorded

[1] See list of native species by growth form here: https://www.lmbc.nsw.gov.au/bamcalc/app/assets/NativeSpeciesByGrowthFrom_PowerQuery.xlsx

to the Genus level. For the purposes of this plan, this is sufficient for the identification of native/non-native trees and associated compensatory planting.

2 Clearing area survey

2.1 Location and clearing extent

Clearing will be conducted for Project activities including:

- Site investigations
- Establishment of erosion and sediment control measures
- Development to the power station site
- Development of the gas receival station site
- Establishment of construction ancillary sites
- Establishment of the transmission line easements.

The areas where clearing is required for these facilities are shown as 'impact areas' within Figure 2-1 and consists of laydown areas and car parks, transmission line easement, and proposed pole locations. Further details of these sites are provided in Table 2-1.

No clearing areas are identified (or permitted) within areas of EEC or within the riparian exclusion zone. These areas must be marked off with flagging tape or similar prior to commencing construction to ensure that there is no incursion into, or clearing of the areas (as required by the Flora and Fauna Management Plan)

The location of clearing sites has been assessed as per the design dated on the 12th of July 2021. Variations of the design may occur between the initial assessment date and the beginning of construction such that purpose of these sites or required level of impact may change (e.g. proposed car park may instead be utilised for crib huts). Given the level of uncertainty around final design impacts, a conservative approach has been taken which assumes the complete removal of all native trees where assessed. This will have the benefit of allowing flexibility of the design and construction methodology in these areas.

Additional counts of impacted trees will be conducted at the time of clearing which may result in a lower count of impacted trees where changes to the design or construction methodology reduce the need for vegetation clearing. If so, then offset obligations may be less than described within this document. See Section 2.4 for recommendations and examples where required clearing can be reduced.

Alternatively, any additional clearing outside of the areas identified within Figure 2-1 and Table 2-1 has the potential to increase offset obligations and therefore will require further assessment in the form of a count of impacted trees and habitat values such as hollow bearing trees.

2.2 Existing environment

Previous ecological investigations (Aurecon, 2020) identified and mapped vegetation communities present within the site. Communities to be cleared are classified as:

- Planted natives and weeds
- Forest Red Gum and Paperbark mixed planting
- Acacia scrub
- Radiata pine forest
- Eucalypt and casuarina grassy woodland
- Scattered individual trees.

Locations of these communities are shown in Figure 2-1 and a description of each community is provided in Section 2.2.1 to 2.2.5.

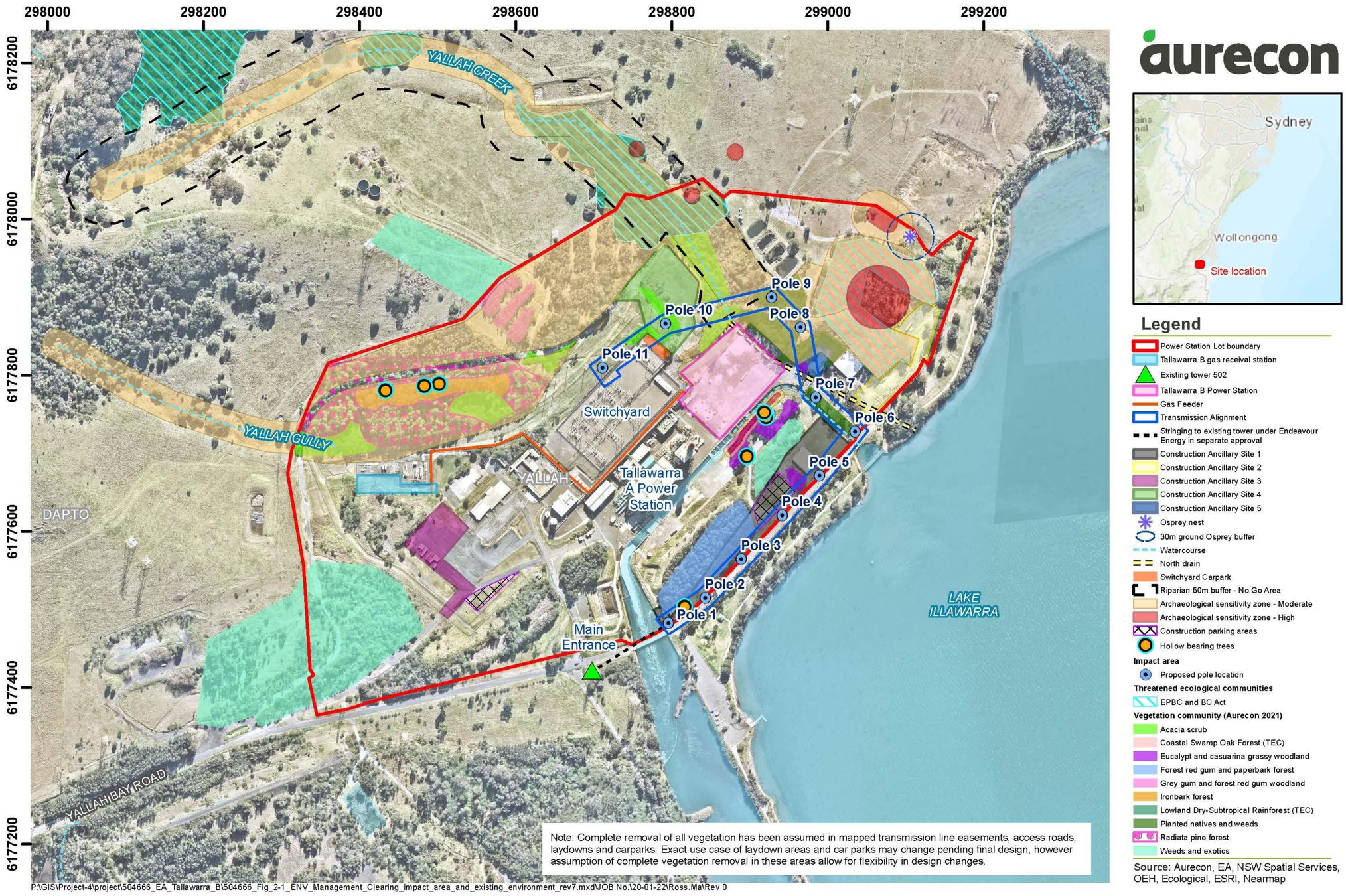


Figure 2-1 Clearing impact locations and environmental constraints

2.2.1 Planted natives and Weeds

This community is largely located adjacent to roadways and within the proposed transmission line easement. The community consists largely of an assortment of native vegetation that was most likely planted as part of Tallawarra Landscape Master Plan (URS, 2006) which has since been heavily invaded by an assortment of weed species, particularly within the understorey.

Whilst native species include some local endemic species such as Swamp Oak (*Casuarina glauca)* and Native Cherry (*Exocarpus cupressiformis*), many natives identified originate from outside the Illawarra region including Bottletree (*Brachychiton rupestris*) and Brush Box *(Lophostemon confertus)*. Lantana (*Lantana camara)* and Blackberry *(Rubus fruticosus*) are generally the most dominant weeds although other weed species such as Mickey Mouse Plant (*Ochna serrulate*) and invasive grasses such as Kikuyu (*Pennisetum clandestinum*) are also present. Examples of the community are shown in Figure 2-2 and Figure 2-3.

Figure 2-2 Typical vegetation (mixture of weeds and natives) between poles seven and eight.

Figure 2-3 Planted roadside trees between poles six and seven

2.2.2 Forest Red Gum and Paperbark mixed planting

This is a forest community with a canopy of about 5 – 10 metres high. It is dominated by Forest Red Gum (*Eucalyptus tereticornis*) and Prickly Leaved Paperbark (*Melaleuca styphelioides*), also with tea tree (*Leptospermum spp*.), Bottle Brush (*Callistemon salignus*), Swamp Mahogany (*Eucalyptus robusta*) and Coastal Grey Box (*Eucalyptus bosistoana*) (Figures 2-4 and 2-5).

This community does not correspond with a Plant Community Type (PCT) description as it is a mixed species planting (planted approximately 10 to 15 years ago) and is not a natural formation. However, it is similar to 'MU23 Coastal Grassy Red Gum Forest' (NPWS, 2002). The condition of the vegetation is moderate to high with minimal presence of weed species, although the high density of the tree plantings has resulted in tall thin-stemmed trees with little opportunity for a ground storey to be developed.

Figure 2-4 Typical representation of Forest Red Gum and Paperbark mixed planting at Construction Ancillary Site 1

Figure 2-5 Example of lack of groundcover within the Forest Red Gum Paperbark mixed planting.

2.2.3 Acacia scrub

This community is a scrubland formation with a canopy of about 3 – 5m high. It is a derived vegetation community resulting from colonisation by acacias and other colonising species following past clearing and disturbance of the original vegetation community (Figure 2-6 and Figure 2-7). Acacia species present include *Acacia mearnsii*, *A.longifolia, A.suaveolens.* The midstorey is generally dominated by large lantana shrubs (*Lantana camara)*. Other weed species identified in the understorey includes asparagus weed (*Asparagus spp.*), bitou bush (*Chrysanthemoides monilifera*), fireweed (*Senecio madagascariensis*), blackberry (*Rubus fruticosus*), balloon cotton bush (*Gomphocarpus physocarpus*), oxalis (*Oxalis spp.*), cassia (*Senna spp.*), olive (*Olea europena*) and passion vine (*Passiflora spp.*).

This community corresponds with the PCT 'MU56 Acacia scrub' (NPWS, 2002), and is noted to occur in combination with species common to rainforest and wet sclerophyll forest types.

Figure 2-6 Acacia scrub within Construction Ancillary Site 4

Figure 2-7 Acacia scrub within the switchyard car park area

2.2.4 Radiata pine forest

This is an open forest structure community dominated by exotic radiata pine (*Pinus radiata*) and with a canopy of about 10 – 15 metres high. In more open areas (less canopy cover), the midstorey is dominated by weed species including lantana (*Lantana camera*), cotoneaster (*Cotoneaster spp.*), small-leaved privet (*Ligustrum sinense*). Other weed species identified in the understorey include asparagus weed (*Asparagus spp.*), Bitou Bush (*Chrysanthemoides monilifera*), Fireweed (*Senecio madagascariensis*), blackberry (*Rubus fruticosus*), balloon cotton bush (*Gomphocarpus physocarpus*).

Although a mostly exotic community, occasional paperbarks (*Melaleuca stypheloides*) and acacias *(Acacia mearnsii*) are located within the mid storey, particularly directly adjacent to the road corridor of the existing access road.

2.2.5 Eucalypt and casuarina grassy woodland

This is an open woodland community with assorted eucalypt species including brown stringybark (*Eucalyptus capitellata*), spotted gum (*Corymbia maculata*), lemon scented gum (*Corymbia citriodora*), forest red gum (*Eucalyptus teriticornis*) and coast grey box (*Eucalyptus bosistoana*). There are several additional medium to large trees including willow bottlebrush (*Callistemon salignus*) and swamp oak (*Casuarina glauca*). The ground cover is dominated by couch grass (*Cynodon dactylon*) and other ground herbs including clovers (*Trifoloum spp.*), plantains (*Plantago spp*.), crabgrass (*Digitaria sanguinalis*), and flea bane (*Conyza spp*.).

2.2.6 Scattered individual trees

In some instances, individual trees that do not belong to any of the other identified communities are to be removed. This includes Red Bloodwood (*Corymbia maculata*), Forest Red Gum (*Eucalyptus tereticornis*) and Blackbutt (*E. pilularis*) and other non-surveyed trees that are conservatively assumed to be native species. It is uncertain if these trees are planted or natural regeneration, and they are generally surrounded by a non-native groundcover.

2.3 Native vegetation identified for removal

The survey of clearing areas identified an inventory of 805 native trees of various ages and sizes to be removed for the Project. A count of these trees at each project area is detailed in Table 2-1, with a detailed inventory of trees identified for removal provided in Appendix A.

Table 2-1 Vegetation inventory of clearing areas

Site location	Native vegetation to be removed
Construction ancillary site 1	502
Construction ancillary site 2	14
Construction ancillary site 3	20
Construction ancillary site 4	37
Construction ancillary site 5	32
Gas receival station	8
Switchyard carpark	16
Tallawarra B Power Station	16
Transmission line easement	160
Total	**805**

2.4 Opportunities for limiting clearing

In compliance with CoA 3.40, clearing of native vegetation is to be kept to the minimal extent necessary. Although the removal of up to 805 native trees is required, the selection of these sites was carefully chosen as the only remaining options due to environment, site access and geographic restraints within the Power Station boundary, with all other disturbed areas already being utilised for the purposes of the project.

However, the inventory of required cleared trees has taken a conservative approach and with it assumed that all native trees within identified laydown and transmission line easement sites will be removed. As such there may be opportunities at each location to retain vegetation and thus minimise required offsets whilst reducing safety and environmental risks. This includes:

Construction ancillary sites 1 - 5

Clearing for temporary works should only be undertaken where necessary. Detailed construction planning should be undertaken to ensure that all areas identified as construction laydown areas need to be cleared. In some cases, it may be feasible to reduce the area of construction ancillary sites, or to protect and retain stands of trees located within the extend of the mapped areas.

Transmission line easement

Clearing estimates have been based upon complete ground clearance of a 6-metre easement either side of the proposed transmission line. Depending on transmission line detailed design, reduced easement widths may be considered in consultation with Endeavour Energy. Some native vegetation may be able to be retained by pruning rather than clearing (in accordance with the relevant National powerline vegetation management requirements).

Where new poles are located within stands of vegetation, a conservative assessment of clearing to support access and pole installation of 100 square metres per pole has been made. Detailed construction planning should seek to minimise the clearing of vegetation for access and construction of new poles.

2.5 Rehabilitation and revegetation

As required within CoA 3.41(a) the regeneration of locally native vegetation and effective weed management is required in addition to the 2:1 compensatory planting ratio. This will be integral in areas where impacts to native vegetation have been identified (as detailed within Table 2-1) as this disturbance will result in the loss of native species, whilst providing the opportunity for further weed establishment. Therefore, effective rehabilitation is required following any disturbance.

The below requirements summarise how disturbed sites are to be rehabilitated such that biodiversity values of the area are maintained and enhanced. Additional details are provided within the associated Flora and Fauna Management Plan for the Project.

2.5.1 Landscaping plan

A separate Project landscaping plan has been prepared in consultation with Wollongong City Council. The landscaping plan seeks to manage the visual impacts of the Project and to optimise the landscaping and revegetation undertaken for the Project. This landscaping plan is not held to the same monitoring, maintenance, and performance requirements as this offset plan (as detailed in CoA 3.41). Therefore, activities conducted as part of the landscaping plan is not considered to contribute to the compensatory targets of this offset plan. The landscaping plan is found in Appendix E of the Flora and Fauna Management Sub Plan.

However, the landscaping plan presents an opportunity to encourage the long-term establishment and regeneration of native vegetation as required within CoA 3.41(a) whilst meeting visual amenity requirements. This is to be achieved using locally endemic species as identified within Appendix B.

2.5.2 Construction rehabilitation and weed management

Throughout all construction and early works activities, the following is to occur to ensure weed species are effectively controlled, and disturbed areas are able to be effectively rehabilitated:

- Washdown of vehicles, boots, and equipment prior to entering site and when moving between vegetated locations.
- Effective stockpile management and use of any weed free imported material to prevent weed invasion
- Reestablishment of disturbed areas with native and locally endemic groundcover species (as detailed within Section 3.11) as soon as practicable
- Active rehabilitation and removal of weed species within the construction site, riparian zones and amongst adjacent retained native vegetation within the Power Station Site Boundary.
- Separation of weed species from native species (weeds not to be used as mulch)
- No stockpiling of weed contaminated material
- Disposal of weed material at an appropriate waste facility
- Management of weed species, particularly the extensive infestation of WoNs such as Blackberry (*Rubus fruticosus*) and Lantana (*Lantana camara*) which are present within the riparian zone and underneath the proposed transmission line easement from pole 4 to 6 (Figure 2-1).

Following the completion of construction and the reestablishment of temporary laydown areas, weeds are to be continued to be suppressed as part of general maintenance of the Power Station Site. A current annual program of herbicide spraying of both priority weeds (such as *Lantana camara*) and other general weeds exists for Tallawarra Power Station and the surrounding Tallawarra Lands, with spraying in each area occurring throughout the year. It is recommended that this program continues, with additional effort placed upon the rehabilitated/landscaped areas to ensure that native vegetation can establish and thrive.

3 Compensatory planting plan

3.1 Landscaping plan

A separate Project landscaping plan has been prepared in consultation with Wollongong City Council. The landscaping plan seeks to manage the visual impacts of the Project and to optimise the landscaping and revegetation undertaken for the Project. This landscaping plan is not held to the same monitoring, maintenance, and performance requirements as this offset plan (as detailed in CoA 3.41). Therefore, activities conducted as part of the landscaping plan are not considered to contribute to the targets of this offset plan.

The landscaping plan is provided in the Flora and Fauna Management Sub Plan in Appendix E.

3.2 Location options

Three options were considered for the potential offset planting site: Yallah Creek, the Bowling Club Mound and Duck Creek. These sites were considered as they were on land owned by EnergyAustralia, were not likely to impact on current or future EnergyAustralia activities and were adjacent to known ecological communities or in areas where replanting would provide visual amenity. These options are discussed in detail below.

3.2.1 Option 1 - Yallah Creek (preferred option)

A potential offset planting site is identified north of Tallawarra Power Station along the Yallah Creek drainage line (Figure 3-6). This area is currently used as a pasture site with active cattle grazing in the area. It consists of a mostly grassland groundcover (Figure 3-1) along two drainage lines (Yallah Creek and a small drainage line tributary). This site is the preferred option and is referred to as 'the offset site' for the remainder of this offset plan. This site is the preferred option due to the following benefits:

- Planting of appropriate species would '*fill in the gap'* and provide connectivity between fragmented patches of the threatened ecological community *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion* located both upstream and downstream of the offset site (Figure 3-3 and Figure 3-4). This would improve biodiversity values in the area by enhancing connectivity of existing patches, improving pathways, roosting and sheltering for terrestrial and arboreal fauna.
- Offset site in this location would contribute to the development of a Yallah Creek riparian zone in line with CoA 3.42. Whilst this condition requires the establishment of a riparian zone specifically *within the power station site boundary*, riparian vegetation already extends right up to hardstand areas and there is limited opportunity for additional native vegetation planting within the site boundary (Figure 3-6). As such utilising area within the Tallawarra Lands area will allow for further contribution to the development of the Yallah Creek riparian zone, whilst meeting offset obligations and improving biodiversity values within the area.
- The location would not impact upon current and future planned EnergyAustralia activities
- Abundant space is present for the required replanting.

Additionally, whilst pasture weeds such as Balloon Cotton Bush (*Gomphocarpus physocarpus*) are present, the site does not contain the infestation of thick woody vegetation such as Lantana (*Lantana carmara*) and Blackberry (*Rubus fruiticosus*) that is present throughout the rest of the Tallawarra site. Therefore, required weeding at site preparation and establishment stage would be minimised. However, one large damaged Coral Tree (*Erythrina sp.*) is present at the edge vegetated *Illawarra Subtropical Rainforest* riparian zone. As an identified weed[2] it is recommended that the tree, fallen logs and all branch materials are removed to prevent further establishment of the weed, which may cause competition with offset plantings

[2] See **https://weeds.dpi.nsw.gov.au/Weeds/CockspurCoralTree#biosecurity**

During the field inspection a concrete dyke cutting across both drainage lines creating two bio-retention ponds Figure 3-2) was identified. Common Eastern Froglet (*Crinia signifera*) was aurally observed during field inspection indicating that these ponds are suitable as frog habitat. It is recommended planting does not occur too close to this concrete dyke so tree roots do not damage its structural integrity in the future.

The offset site is located upon the 'Shellharbour' soil landscape. This landscape is characterised by rolling low hills with a volcanic sandstone geology. Previous soil surveys in the area[3] have characterised top soil in the area as heavy clay to sandy loam with a pH between 6.5 to 7.5. Field inspection of the area was conducted following 8mm of rain in the previous 24 hours which resulted in the ground within the drainage lines to become waterlogged, however the upper slopes away from the drainage lines remained relatively dry. Minimal erosion is present, except in areas where cattle have significantly disturbed the soil.

Non-native species observed during field survey include a single fox (*Vulpes vulpes*) and multiple cattle (*Bos taurus*). Whilst the fox will not affect revegetation, cattle have the potential to significantly impact planted seedlings through trampling or grazing. As such cattle access must be excluded from the establishment area with effective fencing for the first five years of establishment.

Figure 3-1 Yallah Creek offset zone facing north

Figure 3-2 Bio-retention pond within drainage line

Figure 3-3 Rainforest TEC located downstream of offset site

Figure 3-4 Rainforest TEC located upstream of offset site.

3.2.2 Option 2 – Bowling club mound

Discussions with EnergyAustralia identified that a small mound adjacent to the Bowling Club site (Figure 3-5) has the requirement within the Statement of Commitments to be raised and revegetated to meet visual amenity standards. Survey of this mound identified abundant weed species such as Lantana, Blackberry,

[3] As provided through **https://www.environment.nsw.gov.au/eSpade2Webapp**

Castor Oil Plant, Prickly Pear and Rhodes Grass. This would require substantial weed clearing into the long term.

Additionally, there is known asbestos contamination issues within the soil in this mound which presents a significant environmental/safety hazard if disturbed.

As such, although this area requires revegetation for screening purposes, it is not suitable as a specific compensatory plantings offset site, due to the risks associated with weed competition, coupled with the hazardous materials present. However, if revegetated for screening purposes, eucalypt species such as Forest Red Gum and Coastal Grey Box, Spotted Gum or Coastal Grey Box could be considered as they can provide adequate screening, and are known to be present nearby and therefore may be more suited to site conditions. Although planting of vegetation in this location to meet screening objectives would require detailed consideration of its suitability based on the hazardous materials present, potential exposures in establishment, as well as consideration potential impacts of tree roots on capping materials.

Figure 3-5 Former Bowling Club mound site

3.2.3 Option 3 – Duck Creek

A secondary potential offset site of Duck Creek, located south west of Tallawarra Power Station, has also been proposed by Energy Australia. However as the Yallah Creek offset set can fully meet the obligations of CoA 3.42, there is no need to establish a secondary offset site at Duck Creek. As such, the Duck Creek offset site should only be considered if other external factors prevent the use of Yallah Creek and only once appropriate site investigations have been undertaken.

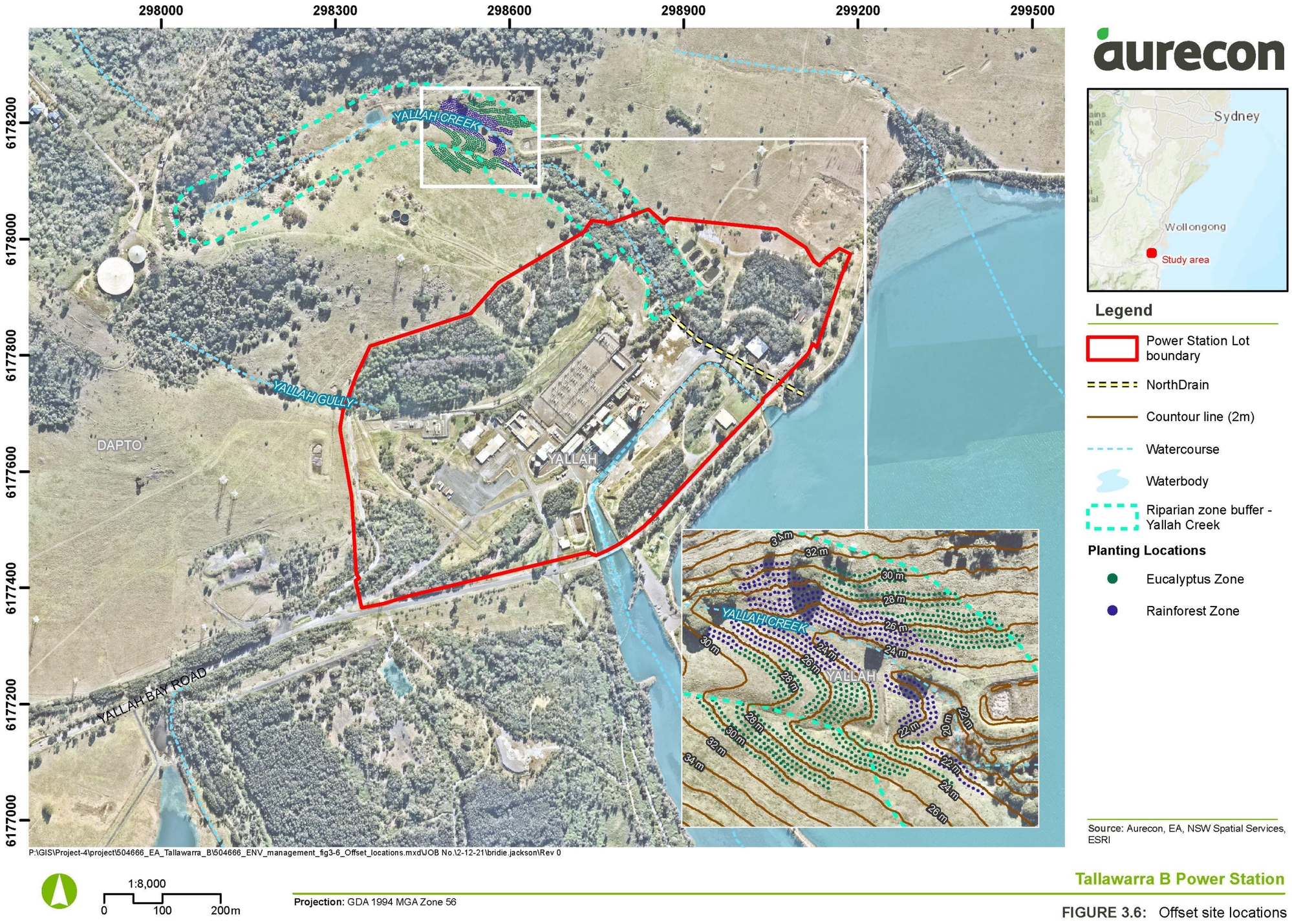


Figure 3-6 Proposed Yallah Creek Offset Site location and layout

3.3 Aboriginal Cultural Heritage

Aboriginal objects due diligence assessment for the Tallawarra Power Station site has identified the Yallah Creek riparian zone as having a moderate archaeological sensitivity (Niche 2021). Therefore, as planting works will require new ground disturbance further assessment in the form of an Aboriginal Cultural Heritage Assessment will be required in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). Additionally, Aboriginal community consultation will be required in accordance with *Aboriginal Cultural Heritage Consultation Requirements for Proponent 2010* (DECCW 2010).

Furthermore, all activities associated with this Offset Plan are to occur in accordance the Aboriginal Cultural Heritage Management Sub-Plan for the project .

It is noted that all areas of low archaeological sensitivity identified within Niche (2021) are highly disturbed or modified areas that would not be suitable as an offset site location. As such all suitable locations for the offset site that have been assessed as part of the Aboriginal Cultural Heritage due diligence have a moderate or high archaeological sensitivity. Alternative offsets sites not assessed as part of Niche (2021), such as Duck Creek, will also require due diligence assessment and possibly impact assessment.

3.4 Offsetting schedule

Activities associated with this offset plan will be conducted in accordance with the following schedule:

- Inventory of cleared native trees - initial inventory completed as of July 2021, to be updated once all vegetation clearance has been completed.
- Aboriginal Cultural Heritage assessment – 12 months prior to planting
- Sourcing of plants (including seed collection and propagation if required) – 12 to 18 months prior to planting
- Site preparation works – 3 weeks prior to planting
- Planting – to be conducted during appropriate seasonal and weather conditions
- Maintenance and monitoring – to be conducted in perpetuity following planting

Further details of offsetting activities are provided below in Sections 3.5 to 3.15. Additionally, the planting and maintenance schedule is summarised in Table 4-1. Specific monitoring requirements and maintenance requirements are discussed in Section 4.

3.5 Site plantings

The CoA requires a 2:1 compensatory offset planting for each tree removed. To verify the site planting requirements calculated in this Offset Plan, records must be kept by all contractors that undertake any form of vegetation clearing for the project. All vegetation clearing records must be provided to the HSSE Lead. Vegetation clearing records must include

- Area (square metres) of vegetation removed
- A map of the clearing area
- Date that the clearing was undertaken
- A count and type of any habitat features removed, including hollow bearing trees or stags
- A count of the native vegetation removed. Native vegetation is considered to be trees/shrubs and saplings of woody vegetation indigenous to Australia in accordance with growth forms as defined by the Biodiversity Assessment Methodology.

Subject to validation of the actual vegetation clearing undertaken for the Project, this Offset plan has identified a requirement to offset an estimated 805 trees to be removed. This relates to a minimum of 1,610

trees that require planting as a compensatory offset. Recognising the high costs of conducting additional replanting in subsequent years to replace trees that have not survived the initial planting, it is recommended that an additional 10% of trees are planted to account for potential mortality. As such the it is recommended that 1,771 trees be planted within the offset site. These quantities must be revised following the completion of clearing for the Project to ensure that the offset planting amounts are correct.

Tree selection is guided by those species that occur in surrounding vegetation communities as well as species which can be successfully grown in the area as detailed in local tree planting guides (E.g. **https://finder.growingillawarranatives.org/plants/finder** and **http://www.irbd.com.au/**). Using local species increases the chances that trees planted are better suited to the existing conditions, and more likely to successfully establish, avoiding costly follow up in-fill planting in subsequent years.

A broad mix of trees and shrubs are nominated to increase the value of the regrowth vegetation and over time allow for site seeding and secondary regeneration of a desirable species mix. Using a mixture of species will also create structural diversity in growth forms and potentially mitigate the risk of loss of one species from unpredicted changes (which may result in a total stand loss if a monoculture was planted).

To meet these revegetation objectives, the following planting zones are identified:

- Riparian Rainforest planting zone
  - Situated directly along and adjacent to the bank of Yallah Creek, to develop a riparian zone
  - Establishing a mixture of rainforest tree and shrub species consistent with the Plant Community Type (PCT) 1300: *Whalebone Tree - Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion*.
  - Planted to enhance biodiversity outcomes by planting seedlings in a location which will provide a vegetated link upstream and downstream of the offset site, to the existing fragmented patches of the threatened ecological community *Illawarra Subtropical Rainforest in the Sydney Basin Bioregion.*
  - Planting locally endemic species such as Whalebone Tree (*Streblus brunonianus*), Coffee Bush (*Breynia oblonifolia*) and Native Quince (*Alectryon subcinereus*) which are known to occur in the surrounding environment. This would have the benefit of allowing for the collection of native seeds in the surrounding area.
  - This community naturally has minimal groundcover due to the shading caused by the extensive middle and upper stratums of the community. As such the few species that do occur as groundcover consists largely of shade preferring ferns such as Necklace fern (*Asplenium flabellifolium*) and Sickle Fern (*Pellaea falcata*). These species are unlikely to become established until the community has reached a canopy cover close to benchmark conditions (Table 5-1) and exotic groundcovers have been outcompeted by overshading. Therefore, planting of these species is only recommended once community has reached benchmark conditions and where self-seeding of native groundcovers dispersed from adjacent rainforest areas has not occurred.
  - This community contains a high diversity of vine/scrambler species, however it is not recommended for these to be planted during initial plantings, as there will be insufficient mature vegetation to provide suitable climbing support. In some cases, the planting of these species may even smother tree plantings whilst they are small. Additionally, many of these species are common and are able to self-seed successfully without human intervention, such as the Silkpod Vine (*Parsonia straminea*) which spreads via airborne seeds. Therefore, it is likely that these species will colonise the offset area, once the zone approaches benchmark conditions.
- Eucalyptus planting zone
  - Situated on the outer bank of the riparian zone
  - Establishing a mixture of mostly Eucalypt species that also occur in surrounding PCTs such as *PCT 838: Forest Red Gum - Thin-leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin* Bioregion and *PCT 1326: Woollybutt - White Stringybark - Forest Red Gum grassy woodland on coastal lowlands, southern Sydney Basin Bioregion and South East Corner Bioregion*

- Will enhance habitat values (such as winter flowering gums, potential for developing hollows in the future, shelter and rough/loose bark habitat) associated with the removal of over 300 eucalypt plants adjacent to the existing powerstation, at a more natural location.
- Planting species such as Forest Red Gum (*Eucalyptus tereticornis*), Spotted Gum (*Corymbia maculata*), Woolybutt (*Eucalyptus longifolia*), Thin-leaved Stringybark (*Eucalyptus eugenoides*) and White Feather Honey-myrtle (*Melaleuca decora*) which are known to occur in surrounding environment and grow well with each other. This would have the benefit of allowing for the collection of native seeds in the surrounding area.
- Grassy groundcover species have consistent with this community has been recommended for rehabilitation purposes within Section 3.11. The introduction of native groundcover seeds, and the continued weed maintenance of the offset site will assist in developing a native understorey as canopy cover increases.

Recommended species suitable for planting within the Offset Site and for meeting the above revegetation objectives are provided in Appendix B. A combination of some or all these species can be used depending on plant sourcing ability. However, a greater diversity of the plantings will promote better biodiversity outcomes and lower risk of unsuccessful plantings if unexpected factors cause certain species to become unviable.

Furthermore, it is recommended particular emphasis is placed upon planting of key diagnostic species for each target PCT to achieve revegetation objectives. Therefore, the Eucalypt Zone should contain a sizeable proportion of Forest Red Gum (*Eucalyptus tereticornis*) and the Rainforest Zone should contain a sizeable proportion of Whalebone Tree (*Streblus brunonianus*).

Additional species not listed in Appendix B may be utilised if gathered from a local seed source within target PCTs (i.e. PCT 838, 1300 and 1326) provided that they are neither invasive species or high growth native species such as Sweet Pittosporum (*Pittosporum undulatum*) which have the potential to outcompete desired species.

3.6 Replacement of habitat values

The presence of habitat values has been considered during the species planting selection process as detailed in Table 3-1. Through planting of these species, it is likely that lost habitat will be largely replaced, or if not improved over existing lost vegetation.

Where possible, large woody debris created as a result of native tree removal should be retained and placed within the offset area to provide habitat for small fauna species such as snakes and lizards.

One small hollow (<40mm) was identified within a *Eucalyptus sp.* tree along the proposed powerline easement (pole 1 to 2) and therefore needs to be replaced with a nest box in accordance with CoA 3.41 (c). As this may be suitable roosting for microbat species such as the Little Bent-winged Bat (*Miniopterus australis*) which are known to occur in the local, a minimum of one nest box (to meet a one to one ratio of replacement) is to be installed in line with microbat nest box designs such as detailed in Franks and Franks (2006). Additional nest boxes can be installed if desired and economical.

Location of the nest box is best suited for installation amongst the retained eucalypt planted area north of the Bowling Club Site. Continued monitoring and maintenance of the nest box is to be undertaken to ensure nest box is repaired where required, not invaded by pest species, and determine whether it has been successfully utilised by native species. Monitoring and maintenance requirements for nest boxes are detailed in Table 3-2.

Table 3-1 Nest box monitoring and maintenance requirements

Habitat value	Purpose	Frequency	Responsibility
Nest box monitoring	To ensure the success and viability of nest boxes. Nest box monitoring is to include the below details to assist in the identification of required corrective actions: – Name of observer – Date of observation – Assessment of nest box condition (E.g. structural integrity, evidence of rot/termite activity) – Evidence of fauna activity, including pest species such as European Honey Bees (*Apis mellifera*) and Common Myna (*Acridotheres tristis*)	Monitoring of nest boxes is to occur at least at least every six months during construction phase of the project. Upon completion of construction, monitoring can be reduced to once yearly for two years. Upon the second yearly inspection the need for additional inspection can be reviewed.	Energy Australia HSSE

3.7 Signage

Signs should be erected stating that the areas are a compensatory planting zone, it is a livestock exclusion zone and that no access is permitted by unauthorised persons.

No parking for vehicles is to occur in the compensatory planting areas except where used for planting maintenance works (e.g. for weeding)

3.8 Site preparation

Poor weed control is a major cause of failure in many revegetation campaigns (Rutherford et al., 2000). As such effective site preparation is essential to the success of the offset plan.

At least one month prior to planting and when weeds are actively growing, the offset site should be sprayed with a broad spectrum non residual glyphosate-based herbicide which has been manufactured for low aquatic toxicity to aquatic ecosystems (bioactive formulation). This is to only be conducted by a suitably qualified person under the NSW Pesticides Act (1999) and Workplace Health and Safety Act (2011). ChemCert AQF 3 Accreditation is classified as a suitable qualification. Any herbicide use is to be approved by Energy Australia prior to use.

Additionally, given the close proximity to the riparian corridor and the presence of the *Illawarra Subtropical Rainforest* TEC downstream of site, herbicide application must be conducted in accordance with *NSW Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations* (DPI, 2018). This includes measures such as:

- Spraying during appropriate weather conditions (low wind, temperature less than 28ºC)
- Use of appropriate spray equipment and nozzles that minimise down drift
- Maintaining a down-wind buffer zone
- Operating sprayers at appropriate height, angle, and pressure to minimise drift

Herbicide treatment is effective only on actively growing plants; therefore, spraying must occur approximately 7 days after rains of over 20 mm or when new growth of at least 50 mm is obvious.

The use of the long-stem planting method (as discussed in Section 3.12.4) will minimise the need for extensive ground ripping and weed management. As such herbicide use is to be restricted to spot spraying in one metre wide strips along the proposed planting contour lines to minimise weed presence that would directly interfere with plantings.

Once the weeds have been sprayed, ripping or digging of the soil must not commence for at least 21 days to enable the herbicide to penetrate the entire plant and reduce its viability.

Historical soil reports for the site[4] determined the topsoil pH to be 6.5 to 7.5 which is suitable for most plantings. Therefore, no additional soil ameliorates will need to be added.

3.9 Fencing

Given the presence of cattle within the offset site, livestock exclusion fencing is required to be placed around the compensatory planting areas to protect the site from both native and introduced herbivores and enable plant establishment. Design of fencing is to consider potential livestock routes to allow for sufficient passage around the offset site and adjacent threatened ecological communities, so that surrounding land uses can be maintained.

Fencing material can be made from either conventional material (E.g. barbed wire) or electric fencing in accordance with availability, cost and desired maintenance schedule, provided that it is made secure enough to prevent livestock access to all planted seedlings. Choice of fencing material and design is to be decided upon by rehabilitation contractor and EnergyAustralia.

Fencing is to be installed prior to or during the site preparation phase. Exclusion fencing should be inspected during each monitoring period to ensure no damage has occurred (see Table 4-1 for monitoring period schedule).

3.10 Erosion and sediment control

Assessment of the Offset Site identified that soils are stable with minimal erosion present. The proposed long-stem planting method (as detailed in Section 3.12.4) 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.

However, if significance ground disturbance from vehicle tracks/augur holes or drainage line crossings significantly disturb the soil, then sediment controls are to be implemented as per the ‘Blue Book’ (Managing Urban Stormwater: Soils and construction - Volume 1 (4th edition)) (NSW Government 2004). This will require the construction of sediment fencing on the lower contour slope below where plantings occur to prevent erosion of dug material into the adjacent waterway.

Sediment fencing is to be removed once disturbed ground has been stabilised by groundcover vegetation as confirmed during follow up monitoring event.

3.11 Groundcover seeding

Where required for stabilisation native groundcover seeds should be sowed into the soil to minimise loss of sediment and prevent out-competition of the native groundcover by invasive weeds. Groundcover species should be locally endemic and be consistent with the objectives of each planting zone (i.e. be consistent with target PCTs listed in Section 3.3. Species that would achieve these goals are:

- Common sedge (*Carex longebrachiata*) – **Eucalyptus Zone**
- Kangaroo grass (*Themeda australis*) – **Eucalyptus Zone**
- Commelina (*Commelina cyanea*) – **Eucalyptus Zone**
- Weeping Grass (*Microleana stipoides*) – **Eucalyptus Zone**

[4] As per NSW Department Primary Industries and Environment eSpade data https://www.environment.nsw.gov.au/eSpade2Webapp

- Kidney Weed (*Dichondra repens*) – **Eucalyptus Zone**
- Tussock grass (*Poa labillardieri*) – **Eucalyptus Zone**
- Bushy Hedgehog-grass (*Echinopogon caespitosus*) – **Eucalyptus Zone**
- Native Geranium (*Geranium homeanum*) – **Eucalyptus Zone**
- Basket Grass (*Oplosmenus hirtellus*) – **Eucalyptus and Rainforest Zone**

Additionally, Blue Flax-lilly (*Dianella longifolia*) seedlings can be included for planting within the Eucalyptus Zone for sediment and erosion control, whilst contributing to groundcover diversity.

A seed purity, providence and viability certification must be supplied by the revegetation contractor to Energy Australia and verified prior to seeding commencing. This certification must be included in the first site monitoring report.

This groundcover mix should also be also be considered for use in groundcover stabilisation and rehabilitation associated with Tallawarra B construction and all early works activities.

3.12 Planting

3.12.1 Plant sourcing

Where possible, plants should be sourced from locally genetic material rather than sourced from outside of the Illawarra region. Local suppliers such as Wollongong Botanic Garden GreenPlan Nursery or Jamberoo Native Nursery may be able to source such plants or alternatively seed can be collected from plants in the surrounding area (for example Mt Brown or within Tallawarra Lands area) and propagated. Native seed collection to only be conducted where a permit to pick or harm a threatened species or ecological community[5] has been obtained, as required under Part 2 of the *Biodiversity Conservation Act 2016*.

Plant sourcing is to occur at earliest convenience as sourcing and propagating could take upwards of 18 months depending on propagation/planting methods and stock availability.

3.12.2 Planting timing

Planting is to occur only after site preparation has been completed and there is suitable soil moisture (i.e. 50mm in the last two weeks). Additionally, planting is to occur preferably in autumn where there is less likelihood of extreme temperatures occurring or alternately in late winter -early spring (if soil moisture conditions are suitable and favourable conditions are forecast (ie not during drought or drier conditions). Given the climate data for the region, the optimal months for planting in order of most preferable include March, April, May, or August and early September (if suitable soil moisture is present).

3.12.3 Planting layout

A proposed approximate planting layout is shown in Figure 3-6. This planting layout has considered planting in rows at a spacing of 3m between trees and 3m between rows. Rows have been chosen to follow along the 2m contour line of the site (ie across the slope not downslope), as is best practice in revegetation projects.

The current planting layout is designed for approximately 1,300 planting points for trees, which leaves approximately 471 plantings remaining. It is recommended that these extra ~471 plantings consist of shrub planted randomly in between the 3-metre tree spacings to help develop the understorey shrub layer whilst outcompeting pasture weeds/grasses. Additionally, some species (such as *Acacias*) provide additional nutrients that will assist in the growth of surrounding species such as through nitrogen fixing. Suitable shrub species for this purpose include:

- Rainforest zone

[5] For further details see: https://www.environment.nsw.gov.au/licences-and-permits/wildlife-licences/licences-to-controlor-harm/licences-to-harm-threatened-species

- Coffee Bush (*Breynia oblonifolia*)
- Maidens Wattle (*Acacia Maidenii*)
- Black Wattle (*Acacia mearnsii*)
- Native Cascarilla (*Croton verreauxii*)

- Eucalypt Zone
  - Two-veined Hickory (*Acacia binervata*)
  - Sickle Wattle (*Acacia falcata*)
  - Blackwood (*Acacia melanoxylon*)
  - White Feather Honey-myrtle (*Melaleuca decora*).

3.12.4 Planting method – long-stem planting

Long stick planting has shown success in achieving successful plant establishment, particularly along riparian zones where long stems are closer to permanent water (Rutherford et al., 2000; APS, 2010). Benefits of this method include:

- Seedlings are older and stronger at time of planting due to longer nursery period
- Deeply rooted soil ball is better insulated against changes in soil moisture and temperature. Therefore, mulch is not usually necessary.
- Seedlings are more stable once planted due to greater area of root binding. Protects against wind and soil/flood erosion
- No further watering or fertiliser is required once planted
- More difficult to pull out of ground, which may assist in the event livestock of other factors access the areas and attempt to pull out the seedlings.
- Extensive ripping of the soil and weeds is not normally required
- Protects against competition from invasive weeds

The key downside to this approach is that plants need to be grown in pots within a nursery environment for a period of 10 to 18 months. However, given the limited ongoing maintenance requirements, and the benefits which result in a greater survival rate, long-stem planting is considered to be the most appropriate planting method for the offset site.

This method does not require extensive ripping or tilling of the ground, and instead only requires auguring at individual planting sites. As the site has heavy clay soil, the use of a power tools such as a soil augur may result in the walls of the planting hole to be too smooth and thus restricting root penetration (APS, 2010). If this issue arises, then hole walls will need to be roughened slightly before planting of the tube stock.

Generally, for this method the deeper the planting hole is the better. As such depth of each hole is to be approximately 0.6 to 1 metre (dependent upon the height of each species at the time of planting). However, holes are to be shallower in the event the water table is reached, so as to not drown the plant.

For some species, the use of long-stem planting may not be practical from a supplier perspective or may not be effective (Long-stem planting is generally more effective with species that can propagate from cuttings). In these cases, the use of tube stock may be required. This is to be avoided where possible as the use of two separate planting methods will result in different maintenance regimes. As such this method is to be reserved to small shrubs which have a greater likelihood of establishment.

3.12.5 Tree guard installation

Although the benefits Long-stem generally reduce the need for tree guards, they will still provide protection against exotic herbivores such as cattle (*Bos taurus*) if they breach the exclusion fencing, and rabbits (*Oryctolagus cuniculus*) which are known to occur in the area. Furthermore, guards will provide additional

protection from wind, moisture stress and accidental damage during slashing. As such, given the increase of survival rates at a relatively low cost they are mandatory for this offset site.

It is recommended that corflute guards be used as they are a low cost but highly effect waterproof and UV stabilised guard that will unlikely need replacing during the establishment period. The use of two stakes per plantings will provide additionally stability to the guards and lower the likelihood of guards being dislodged (e.g. during high wind events).

3.12.6 Mulching

Mulch is not considered necessary for the Offset Site, especially if using tree guards and the Long-stem planting method which provides similar benefits of mulch through its deep planting of the root system. Additionally, issues of mould and rot may arise if mulch has consistent contact with woody stem of deep planted trees.

3.13 Fertilisation

Plant along with native tree fertiliser tablet for each tree/shrub planted to increase success rate of planting. As the long-stem planting method will be used, additional fertilisation is unlikely to be required unless further monitoring identifies areas poor growth.

3.14 Watering

At the time of planting each tree/shrub planted using the long-stem planting method will require at least two litres of water (more will be required if the subsoil is dry as per APS, 2020). Use of the long-stem planting method will negate the need for further watering except for during the extreme drought or extended heatwave conditions.

Any tube stock planted will need at least ten litres per tube stock in two five litre applications. Watering will need to occur once a week for a minimum of four weeks unless sufficient rain (over 50mm) has fallen within the preceding week.

3.15 Monitoring points

The use of traditional photo points in combination with aerial imagery monitoring of the offset area will be used to provide key snapshots of planting success. A six monthly to yearly interval (as specified in Table 4-1) would allow for the identification of canopy/understorey growth over time and tracking overall project success.

At least six on ground photo points are to be utilised (three within each zone) with photos taken from both outside and within the offset area. The locations of these photo points are to be determined at the time of planting and marked via GPS coordinates and a stake. Photos at these points are to be taken from the same location and orientation at each monitoring event to provide consistency and easy visualisation of change over time.

The use of aerial imagery in conjunction with on ground photo points will also assist in the mapping of long-term landscape change (i.e. if growth in vegetated areas is occurring) in an efficient manner. Preferably aerial/satellite imagery should be obtained from the one source to minimise variance associated with differences in photogrammetry technologies.

Additionally, general site walkovers should occur during monitoring periods with GPS tagged photographs of key features (i.e. areas of failure or areas of substantial growth) that would not otherwise be captured from stationary photo points.

4 Monitoring and maintenance

4.1 Weed and grass control

Spot spaying for weed and competing grass species will occur bi-annually for the first two years following compensatory plantings, then then every year.

A weed ground cover percentage of under 8% within proposed 1 metre planting rows should be considered an acceptable threshold. This allows for germination weed seed stock which may be present in the existing topsoil and seed imported through natural processes.

Given the exclusion fencing will prevent cattle from grazing grasses within the offset site, native and non-native groundcovers/grasses between plantings may grow and raise fuel levels creating a fire hazard. As such regular inter-row mechanical slashing of natives and spot spraying of weeds should be conducted to keep fuel levels down until the tree canopy grows to provide sufficient shading that understorey grasses growth is limited. Any spraying or slashing activities will need to avoid damaging plantings.

4.2 Replacement planting

If plant losses of greater than 20% occur within the first 12 month period following plantings, then replanting will occur to achieve the required offset planting quota.

4.3 Monitoring works

Bi-annual monitoring will occur for the first two years following initial planting works. Annual monitoring will occur for the following third, fourth and fifth year following.

Monitoring will include but no be limited to:

- Number of plant stock survival/failure
- Health of plantings
- Percentage foliage cover
- Evidence and degree of native species recruitment
- Degree of predation by herbivores
- Quality of topsoil and moisture levels
- List of weed and grass species present
- Species list of non-planted native recruitment
- Density of weeds to natives
- Photographs taken at predefined photo point locations, and general GPS tagged photographs of key findings during site walkover
- Presence/absence of erosion
- Damage to fencing or evidence of failure to contain livestock permanently.
- Remove any tree guards (if used) once trees/shrubs are twice the height of the guard
- Maintenance and monitoring of any installed habitat sites such as nest boxes
- Review and storage of most recent aerial/satellite imagery of the site

An example monitoring checklist template has been provided in Appendix C to ensure the above works are completed.

A short report outlining the findings of these monitoring events should be prepared and used to identify any corrective actions that are required.

4.4 Summary of establishment, monitoring and maintenance measures

A summary of establishment, monitoring and maintenance measures required for the successful establishment of the offset site is provided in Table 4-1. Frequency of monitoring and maintenance events have been considered in accordance with expected maintenance requirements of the long-stem planting method. However, frequency of monitoring and maintenance events can be increased if proposed schedule is found to not be achieving desired performance measures.

Table 4-1 Summary of establishment, monitoring and maintenance measures

Timing	Action
Up to 18 months prior to site preparation	**Plant sourcing:** ■ Engage native plant supplier to begin propagation of native seedlings.
Week one – Site preparation	**Signage:** ■ Erect 'restricted access' signage at offsetting site
	Fencing: ■ Erect livestock exclusion fencing around each planting area
	Weed and grass control: ■ Slash and spot spray for weeds and grasses in a strip along proposed planting contour line (Note: spraying must occur approximately 7 days after rains of over 20 mm or when new growth of at least 50 mm is obvious)
	Monitoring: ■ Review and store most recent aerial/satellite imagery of the site. ■ Damage to fencing or evidence of failure to contain livestock ■ Quality of topsoil and moisture levels
Week four – Planting (Not within 21 days following weed control)	**Erosion and sediment:** ■ Erect sediment fencing on the downward side slope at each planting area if significance soil disturbance occurs during planting
	Monitoring: ■ Monitoring works requirements as detail in Section 4.3
	Long-stem planting: ■ Conduct planting at offset site location
	Fertiliser: ■ Apply a slow release native fertiliser tablet for each tree/shrub planted
	Watering (if conditions require): ■ Water at least 2L per long stem planted tree/shrub ■ Water at least 10L per tube stock in two separate 5L applications
Site establishment complete	

Timing	Action
Month One to three	**Watering (if conditions require):** ■ Monthly follow up watering if insufficient rainfall occurs (<100mm over a period of four weeks) or insufficient soil moisture
Six months following site establishment	**Weed and grass control:** ■ Spot spraying and slashing as required. Accepted weed threshold <8%
	Replacement planting: ■ Replace failed plantings if >20% of plantings fail
	Monitoring: ■ Monitoring works requirements as detail in Section 4.3
12, 18 and 24 months following site establishment	**Weed and grass control:** ■ Spot spraying and slashing as required. Accepted weed threshold <8%
	Replacement planting: Replace failed plantings if >20% of plantings fail (18 months after establishment)
	Monitoring: ■ Monitoring works requirements as detail in Section 4.3
3, 4 and 5 years following site establishment	**Weed control:** Spot spraying as required. Accepted weed threshold <8%
	Monitoring: ■ Monitoring works requirements as detail in Section 4.3
5 years following site establishment	**Final assessment:** ■ A biological assessment is to be undertaken to determine if the compensatory planting areas are self-recruiting and viable. If so current monitoring and maintenance schedule can cease. If not found to be self-recruiting and viable, monitoring and maintenance works to continue annually until evidence of complete establishment native canopy species is evident and system is viable.
Annually from 6 years onwards in perpetuity	**Weed control:** ■ Yearly spot spraying and slashing as required. Accepted weed threshold <8%
	Conservation: ■ Continued protection of offset area in perpetuity. No clearing of this land is to occur without additional approvals and assessment.

5 Performance requirements and corrective actions

To ensure that the intent of this Offset Plan is met, a number of performance requirements and corrective actions have been developed (refer to Table 5-1).

Table 5-1 Rehabilitation objects and performance criteria

Performance requirements	Acceptable solution	Corrective Action	Timing
Foliage cover to be increasing at each monitoring event until the following approximate benchmarks are achieved at maturity: **Rainforest Zone** 50% Tree foliage cover 75% Shrub foliage cover **Eucalypt Zone** 50% Tree foliage cover 20% Shrub foliage cover	Must meet performance requirement except in times of extreme environmental stress which may affect performance (i.e. major drought conditions)	Direct planting at rates great enough to achieve desired densities. Direct plantings to meet desired rates may be postponed in times of extreme environmental stress (e.g. major drought conditions) where conditions may not be conducive to the survival of new plantings.	Planting as part of initial planting works Foliage cover to be recorded during each monitoring event.
Survival rate of planted trees to be >80% (i.e > 1290 plantings)	Must meet performance requirement	Analysis of failure to occur (E.g. unsuitable species planted, extreme weather event, weed out competition, pest incursion) Additional planting to occur if planting mortality >20% in accordance with failure analysis	Survival rates to be determined at each monitoring event.
No sediment deposition into Yallah Creek	Sediment fencing only to be removed once topsoil is stabilised by native groundcover.	Sediment fences and other erosion control measures put in place and maintained as required	During site preparation. Sediment fencing to be inspected at each monitoring event and removed once monitoring event identifies stabilised topsoil.
Suitable number of flora species planted and expected to self-seed within required time frames.	Must meet performance requirement	Direct planting at rates great enough to achieve desired densities Control of weed species to reduce competition for native species	Planting as part of initial planting works Weed species to be controlled in perpetuity

Performance requirements	Acceptable solution	Corrective Action	Timing
No incidence of undesirable livestock incursion	Installation of livestock fencing	Livestock exclusion fencing to be maintained as required	Installation of fencing prior to or during site preparation Monitoring of fence line or evidence undesirable livestock incursion Maintenance of fencing in perpetuity
Installed habitat sites (e.g. nest/roost boxes) to be suitable for native species	Evidence of native species usage of habitat site Habitat site to be well maintained and free of pest species	Maintenance/repair of habitat sites as required Continued monitoring for native species usage throughout monitoring period	Installation during site preparation works Monitoring to occur during each monitoring event
Contiguous riparian zone is developed along Yallah Creek, connecting fragmented patches of *Illawarra Subtropical Rainforest* TEC	Planting of rainforest zone within chosen offset site location	Direct planting at rates great enough to achieve desired densities Control of weed species to reduce competition for native species	Planting as part of initial planting works Weed species to be controlled in perpetuity Fragmentation to rainforest patches to be monitored via aerial imagery during each monitoring event

6 References

Australian Plant Society (APS), 2010. The Long-stem Planting Guide. Available from: https://www.environment.nsw.gov.au/resources/grants/Longstemguide.pdf [Accessed 24/06/2021]

Aurecon, 2020.Tallawarra Stage B Gas Turbine Power Station – Ecological Advice.

Department Environment, Climate Change and Water NSW (DECCW), 2010. Aboriginal Cultural Heritage Consultation Requirements for Proponent 2010. Part 6 of the National Parks and Wildlife Act 1974. Department of Environment, Climate Change and Water NSW

Franks, A and Franks, A., 2006. Nest Boxes For Wildlife: A Practical Guide. Blooming Books, Melbourne

National Parks and Wildlife Services (NPWS), 2002. Wollongong LGA Bioregional Assessment (Part I): Native Vegetation of the Illawarra Escarpment and Coastal Plain. Report for the Commission of Inquiry into Planning and Development on the Illawarra Escarpment. NSW National Parks and Wildlife Service, Sydney

Niche Environment and Heritage (Niche), 2021. Aboriginal Objects Due Diligence Assessment Tallawarra B Power Station Project

NSW Department of Primary Industries (DPI), 2018. New South Wales Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations 7th Edition

Office of Environment and Heritage (OEH), 2011. Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW

Road and Transport Authority (RTA), 2011. Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects. Revision 0/September 2011.

Rutherfurd, I.D., Jerie, K. and Marsh, N., 2000. A rehabilitation manual for Australian streams (Vol. 1, p. 171). Canberra: Land and Water Resources Research and Development Corporation and Cooperative Research Centre for Catchment Hydrology.

SKM, 2009. Tallawarra Stage B Gas Turbine Power Station Environmental Assessment

URS Australia, 2006. Tallawarra Power Station – Landscape Master Plan

Appendix A
Native vegetation identified for removal

Species	Construction Ancillary Site 1	Construction Ancillary Site 2	Construction Ancillary Site 3	Construction Ancillary Site 4	Construction Ancillary Site 5	Tallawarra B Gas Receival Station	Switchyard Carpark	Tallawarra B Power Station	Transmission Line Easement
Eucalypts, Anophoras and Corymbias									
Forest Red Gum (*Eucalyptus tereticornis*)	181								
Red bloodwood (*Corymbia gummifera*)									
Coastal Grey Box (*Eucalytpus bosistoana*)	63								
Sydney Red Gum (Angophora costata)									4
Stringybark (*Eucalyptus eugenioides*)	9								
Swamp Mahogany (*Eucalyptus robusta*)	16								
Blackbutt (*Eucalyptus pilularis*)									
Grey Gum (*Eucalyptus punctata*)		3							3
Juvenile Eucalyptus (Possibly Grey Gum)									1
Spotted Gum *(Corymbia maculata*)									21
Tallowwood (*Eucalyptus microcorys*)									1
Bangalay (*Eucalytpus botryoides*)									1
Eucalyptus sp.									7
Acacias									
Sydney Golden Wattle (*Acacia longifolia*)	6			14			10		
Sickle Wattle (*Acacia falcata*)				4			4		
Sydney Green Wattle (*Acacia parramentensis*)				2					
Black wattle (*Acacia mearnsii*)				2			2		22
Sweet Wattle (*Acacia suaveolens*)				1					
Coastal Wattle (*Acacia Binerva*)									2
Acacia Sp. (Exact species unknown as access issue required survey from distance)									3
Melaleucas, Callisetmons and leptospermum									
Prickly-Leaved Paperbark (*Melaleuca styphelioides*)	113								
Willow Bottlebrush (*Callistemon salignus*)	16	2							2
Snow in Summer (*Melaleauca linariifolia*)	52								1
Tea Tree (*Leptospermum sp*)	15								1
Casuarina and Exocarpus									
Swamp Oak (*Casuarina glauca*)	6								16

Species	Construction Ancillary Site 1	Construction Ancillary Site 2	Construction Ancillary Site 3	Construction Ancillary Site 4	Construction Ancillary Site 5	Tallawarra B Gas Receival Station	Switchyard Carpark	Tallawarra B Power Station	Transmission Line Easement
Native Cherry (*Exocarpos cupressiformis*)				1					20
Other									
Small leaved Lilly Pilly (*Syzygium luehmannii*)									1
Waterhousia (*Waterhousia floribunda*)									1
Tuckeroo (*Cupanioppsis anacardioides*)									2
Fig Sp. (Juvenile)									1
Rusty Fig (*Ficus rubiginosa*)									1
Water Gum (*Tristaniopsis laurina*)									2
Brush Box (*Lophostemon confertus*)									3
Sweet Pittosporum (*Pittosporum undulatum*)	5								2
Bottletree (*Brachychiton rupestris*)									1
Brush Cherry (*Syzygium australe*)									1
Silky Oak (*Grevillia robusta*)									2
Unidentified presumed native species	7	9	20	13	32	8		16	38
Area total	502	14	20	37	32	8	16	16	160
Total	**805**								

Appendix B

Site Planting List[6]

Species	Recommended planting location zone	Justification for use	Habitat values
Whalebone tree (*Streblus brunonianus*)	Rainforest riparian zone – Overstorey tree	▪ Slow growing, but able to self-seed upon establishment ▪ Species is a key species amongst adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ▪ Is present along Yallah creek so known to be able to survive local conditions ▪ Able survive windblown slopes, such as those present along Mount Brown	▪ Produces fruit that is popular with numerous bird species
Guioa (*Guioa semiglauca*)	Rainforest riparian zone – mid-storey tree	▪ Associated with adjacent rainforest located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ▪ Recommended as useful for regenerating former rainforest sites, particularly due to its adaptability to a range of environments including amongst sclerophyll rainforest environments	▪ Dense canopy produces suitable nesting sites for a range of bird species which also feed on fruits.
Brush Wilga (*Geijera salicifolia*)	Rainforest riparian zone – Exposed outer edges of the rainforest	▪ Known to occur in close association with Whalebone tree within the surrounding Mt Brown area. ▪ Can tolerate drier conditions more than most rainforest species ▪ *Note:* Propagation from seed may be slow and unreliable. Additionally deer are highly attracted to the species and may kill the tree by rubbing of antlers along the trunk.	▪ Flowers attract insects and insect eating birds ▪ Produces fruits that are consumed by a wide range of native bird species.
Native Quince (*Alectryon subcinereus*	Rainforest riparian zone – Understorey shrub/Overstorey tree	▪ Highly adaptable plant that is able to grow along riparian corridor ▪ Species is a key species amongst adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ▪ Will grow either as canopy species or an understorey rainforest species	▪ Fruits are eaten by bird species such as Green Catbird (*Ailuroedus crassirostris*)
Red Ash (*Alphitonia excelsa*)	Rainforest tree – intergrading plant between eucalypt and rainforest zones	▪ Associated with target rainforest community PCT 1300 ▪ Present in surrounding region such as Mt Brown ▪ Slow growing species, but it is a tough and hardy rainforest species that can withstand dry periods	▪ Fruits are eaten by a wide range of bird species ▪ Provides nectar which is consumed by flying foxes ▪ Produces shade and shelter for a range of fauna ▪ Larval food plant for the Small Green-banded Blue Butterfly (*Psychonotis caelius*)
Coffee Bush (*Breynia oblonifolia*)	Rainforest riparian zone and eucalypt zone – Understorey shrub	▪ Widespread and regenerates readily so is useful for sites without rainforest vegetation already present. ▪ Grows well as an understorey species and is suitable for shrub planting alongside larger trees.	▪ Produces fruit that is eaten by a range of bird species.
Grey Myrtle (*Backhousia myrtifolia*)	Rainforest riparian zone – Understorey shrub	▪ Associated with adjacent rainforest located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ▪ Useful for bush regeneration of rainforest creeks within the coastal plain	▪ Provides suitable habitat for small bird species who utilises the bushy habit of the shrub
Maiden's Wattle (*Acacia maidenii*)	Outer edge of Rainforest riparian zone – Overstorey tree. Eucalypt zone – Understorey tree	▪ Pioneering plant able to grow fast fix nitrogen and adapt to disturbed soil environments ▪ Species is a key species amongst adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ▪ Does not grow in marshy boggy conditions, so would be suitable for planting along the outer edge the rainforest riparian zone	▪ Leaves a food source for a several native butterfly species ▪ Attracts seed eating and insectivorous birds such as the King Parrot
Cockspur Thorn (*Maclura cochinchinensis*)	Rainforest understorey shrub/climber Note: This species is to be planted sparingly due to possibility of overgrowing and limiting access for weed maintenance purposes	▪ Associated with target rainforest community PCT 1300 ▪ Present within surrounding areas such as Mount Brown ▪ Fast growing species that may assist in deterring larger unwanted animals such as deer and cattle due to large thorns	▪ Provides suitable replacement habitat for small bird species who may utilise invasive scramblers such as lantana or blackberry, which will be removed as part of weed management procedures throughout the area. ▪ Fruits are eaten by small birds and Flying Foxes

[6] Note: Plant species habitat values and environmental preferences provided as per **https://finder.growingillawarranatives.org/plants/finder**. Additionally plant species have been considered in accordance with previously identified species within the local area, as identified within **http://www.irbd.com.au/**

Species	Recommended planting location zone	Justification for use	Habitat values
Black wattle (*Acacia mearnsii*)	Rainforest zone – Understorey tree	■ Pioneering plant able to grow fast fix nitrogen and adapt to disturbed soil environments ■ Replaces the up to 38 individuals lost during clearing ■ Associated with adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ■ Useful as a screen or windbreak for small and more sensitive species	■ Cockatoos eat grubs within the bark ■ Produces sap that sugar gliders feed on ■ Flowers attract Two-spotted Line-blue butterfly (*Nacaduba biocellata*)
Two-veined Hickory (*Acacia binervata*)	Eucalypt Zone – Understorey tree	■ Fast growing and short-lived pioneer species that grows well within a sclerophyll forest and along the edges of rainforests	■ Larval plant for butterfly species ■ Gum/sap accretions attracts sugar gliders ■ Attracts seed eating birds and insects
Blackwood (*Acacia melanoxylon*)	Eucalypt Zone – Understorey tree	■ Useful for bush regeneration within riparian and degraded areas ■ Grows quickly and moderately long-lived ■ Dead wood breaks down in the soil, providing nitrogen for adjacent plant species to utilise	■ Seeds are eaten by parrot species ■ Larval food plant for butterfly species
Sickle Wattle (*Acaica falcata*)	Eucalypt Zone – Understorey shrub	■ Useful stabilising shrub ■ Replaces the 117 individuals lost during clearing ■ Fast-growing short-lived plant that can be used as a pioneer species.	■ Food plant for a range of butterfly and insect species.
Prickly-leaved paperbark (*Melaleuca styphelioides*)	Rainforest riparian and Eucalypt zone – Understorey tree/Shrub	■ Grows well in association with eucalypt species such as Forest Red Gum (*Eucalyptus tereticornis*) and Woollybutt (*Eucalyptus longifolia*) ■ Will replace the 127 individuals lost during clearing ■ Large examples of the species are already present at the offset site, showing suitability for environmental conditions	■ Attracts nectar eating birds and butterflies, and produces seeds for seed eating birds
White Feather Honey-myrtle (*Melaleuca decora*)	Eucalypt zone – Understorey shrub/small tree	■ Grows well with eucalypt species such as Forest Red Gum (*Eucalyptus tereticornis*) and Woollybutt (*Eucalyptus longifolia*) ■ Suitable for heavy clay soils on coastal plain	■ Produces nectar for flying foxes, birds and insects. ■ Bark produces cracks and crevices for small fauna such as insects
Native Cascarilla (*Croton verreauxii*)	Rainforest riparian zone – Understorey shrub	■ Useful pioneering shrub for regenerating rainforests, particularly at the integrate with between rainforest and sclerophyll eucalypt communities. ■ Associated with adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community	■ Produces fruit that is eaten by a range of bird species.
Hairy Clerodendrum (*Clerodendrum tomentosum*)	Intergrading between rainforest riparian zone and Eucalypt zone – Understorey shrub	■ Associated with adjacent rainforest community located upstream and downstream. Planting species along the riparian corridor will connect fragmented native community ■ Hardy plant useful for growing at the rainforest edge. Able to survive drought conditions and major root disturbance	■ Larval butterfly food plant ■ Produces fruits eaten by bird species such as the Satin Bowerbird (*Ptilonorhynchus violaceus*)
Forest Red Gum (*Eucalyptus tereticornis*)	Eucalypt zone	■ Suitable tree for most bush revegetation projects ■ Ideal to replace the over 180 species lost as part of the clearing	■ Provides typical eucalypt habitat such as seeds, bird roosting sites and potential for developing hollows. Also produces nectar used by parrots, honey eaters and insects.
Woolybutt (*Eucalyptus longifolia*)	Eucalypt zone	■ Identified as useful for bush regeneration projects on the coastal plain particularly alongside other Eucalypts ■ Grows in a range of soil types but prefers clay soils	■ Provides typical eucalypt habitat such as seeds, bird roosting sites and potential for developing hollows. Also produces nectar used by parrots, honey eaters and insects.
Thin-leaved Stringybark (*Eucalyptus eugenoides*)	Eucalypt zone	■ Suitable for bush regeneration as it grows well in a range of soil types (from well drained loamy soils to poorly drained floodplains) ■ Grows well in association with other species such as Forest Red Gum (*Eucalyptus tereticornis*). Woollybutt (*Eucalyptus longifolia*) and White Feather Honey-myrtle (*Melaleuca decora*)	■ Provides typical eucalypt habitat such as seeds, bird roosting sites and potential for developing hollows. Also produces nectar used by parrots, honey eaters and insects. ■ Stringybark provides cracks and crevices for small fauna species.
White Stringybark (*Eucalyptus globoidea*)	Eucalypt Zone	■ Key species of target plant community PCT 1326 ■ Grows well in mixed eucalypt plantings particularly alongside Forest Red Gum (*Eucalyptus tereticornis*). Woollybutt (*Eucalyptus longifolia*) and White Feather Honey-myrtle (*Melaleuca decora*) ■ Known to grow in the surrounding Yallah region	■ Provides typical eucalypt habitat such as seeds, bird roosting sites and potential for developing hollows. Also produces nectar used by parrots, honey eaters and insects. ■ Stringybark provides cracks and crevices for small fauna species.

Species	Recommended planting location zone	Justification for use	Habitat values
Swamp Mahogany (*Eucalyptus robusta*)	Eucalyptus Zone	■ Fast growing species that is able to grow in swampy waterlogged soils on the coast. ■ Grows well in association with other Eucalypt species such as Forest Red Gum (*Eucalyptus tereticornis*) and Woolybutt (*Eucalyptus longifolia*)	■ Winter flowering species providing nectar for fauna such as the Swift Parrot and the Grey-headed Flying Fox
Coastal Grey Box (*Eucalyptus bosistoana*)	Eucalyptus Zone	■ Grows well in association with other Eucalypt species such as Forest Red Gum (*Eucalyptus tereticornis*) and Woolybutt (*Eucalyptus longifolia*) ■ Fast growing species suitable for the coastal plain ■ Replaces the up to 63 individuals which may be cleared during early works	■ Provides typical eucalypt habitat such as seeds, bird roosting sites and potential for developing hollows. Also produces nectar used by parrots, honey eaters and insects.
Mutton Wood (*Myrsine variabilis*)	Eucalyptus Zone	■ Associated with target plant community PCT 838 ■ Suitable for bush regeneration projects due to resilient nature ■ Known to be present in the surrounding Mt Brown region	■ Attracts birds such as the Lewin's Honeyeater ■ Larval food plant for the White-banded Line-blue Butterfly (*Nacaduba kurava*)

Appendix C
Monitoring checklist template

Monitoring Point #				**Recorder**	
Vegetation Zone	***Eucalypt / Rainforest***			**Date**	
Inspection Items	**Yes**	**No**	**N/A**	**Comments**	**Required action (if necessary)**
Photograph from photo point taken? *List of general comments as identified from photo point.*	☐	☐	☐		
Evidence of planting failure? *Count by species of failed plants.*	☐	☐	☐		
Are the plantings healthy? *Signs of disease/stress*	☐	☐	☐		
Area foliage cover *Area (m^2) of total foliage cover* *Area (m^2) of tree foliage cover*	☐	☐	☐		
Is there evidence of native species recruitment? *Provide count of native species seedlings.*	☐	☐	☐		
Evidence of predation by herbivores? *Count and list of species affected* *Possible herbivore (Rabbit, Cow, Deer, Wallaby, other)*	☐	☐	☐		

Monitoring Point #				Recorder	
Vegetation Zone	*Eucalypt / Rainforest*			Date	
Inspection Items	**Yes**	**No**	**N/A**	**Comments**	**Required action (if necessary)**
Quality of topsoil *Evidence of erosion. Any sediment flow into Yallah Creek* *Soil moisture level (wet to dry as per selected moisture probe scale)*	☐	☐	☐		
Are weed species present? *List weeds species present*	☐	☐	☐		
Density of weed species to natives *Ratio of weed species to natives in a 10m x 10m plot*	☐	☐	☐		
Evidence of livestock incursion? *Cattle or evidence of cattle such as footprints and scat within the offset area?* *Fence in good condition and in no need of repair?*	☐	☐	☐		
Have tree guards been removed (if necessary)?	☐	☐	☐		
Have any installed nest boxes been monitored? *Signs of disrepair?* *Evidence of usage by native species?* *Presence of invasive/pest species?*	☐	☐	☐		
Has most recent satellite imagery of the offset site been reviewed?	☐	☐	☐		

Appendix D
Agency Consultation Log

Agency	Date	Method	Actions and responses
Biodiversity and Conservation Division (BCD)	27-08-2021 to 30-08-2021	Email	▪ Email sent to BCD seeking consultation contacts and teleconference meeting ▪ Response from Vanessa Allen (Senior Conservation Planning Officer) stating that they would be happy to review flora and fauna management reports ▪ Offset Plan and Flora and Fauna management Plan provided to BCD for review prior to teleconference meeting.
Biodiversity and Conservation Division (BCD)	06-09-2021	Teleconference	▪ Teleconference with BCD discussing: – Overview of the Tallawarra B Power Station Project – Overview of the proposed environmental management framework for construction – Overview of the planning approval conditions relevant to BCS – Discussion on FFMP, general management procedures and offsets. – Next steps
Biodiversity and Conservation Division (BCD)	09-09-2021	Email – Written comments received	Written comments received from Vanessa Allen. Overall the proposed actions within the offset plan has been supported following update of the report as per BCD comments. Consultation comments/issues outlined below: ▪ ***Comment:*** *Further information on measures for encouraging the natural regeneration of locally native vegetation, including weed management, in accordance with CoA 3.41(a) is required. The Offset Plan only addresses weed management for the Yallah Creek offset area prior to planting. Existing native vegetation to be retained within the site could also benefit from weed management, particularly given disturbance resulting from new works will occur. These areas should be identified in the Offset Plan, including details on how weed management will be achieved to meet CoA 3.41 (particularly a,d,e,f).* – **Response:** Report has been updated to reflect this, particularly with the inclusion of Section 2.5 ▪ ***Comment:*** *Species list for replanting. Species list should be expanded. Use species inventory from Mount Brown as guide. Provide list as a reference in Appendix. Refer to http://www.irbd.com.au/ for nearby species lists.* – **Response:** Species planting list has been moved to Appendix B and additional species have been added including Brush Wilga, Red Ash, Grey Myrtle, Cockspur thorn, Hairy Cleodendrum, Swamp Mahogany, Coastal Grey Box, Mutton Wood. Additionally have added Kidney Weed and Tussock Grass to groundcover seeding suggestion. Have added further details regarding the absence of more groundcover/vine species within Section 3.5 ▪ ***Comment:*** *The Report states that seeds may be sourced from nearby vegetation at Mount Brown. Please be aware that a Biodiversity Conservation Licence is required for this. Refer to* ***https://www.environment.nsw.gov.au/licences-and-***

			permits/wildlife-licences/licences-to-controlor- *harm/licences-to-harm-threatened-species* – **Response:** Added the requirement for licence ■ ***Comment:*** *The document states that traditional permanent photo points are unlikely to be effective given the size and shape of the area. We disagree and consider these should be included.* – **Response:** Requirement for traditional photo points has been added ■ ***Comment:*** *Replacement plantings occur if losses greater than 20% within 6 months. This should be increased to 12 months to ensure plants get through at least one summer.* – **Response:** Increased period from 6 months to 12 months as required.

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Bringing ideas to life

Appendix J: GECL Emergency Response Management Plan

Emergency Response Management Plan

Project	Tallawarra B Power Plant		
Customer	EnergyAustralia LIGHT THE WAY		
Contractor(s)	GE Power CLOUGH		
Stamping (review & validation status – if needed)		**Client Document Number**	TBA
		GE Document Number	TBC
		Clough Document Number	45762-HSE-PL-G-1003

Rev	Date	Document Status	Prepared	Reviewed	Approved
A	13/12/2021	Issued for Review	S.Wallace	S.Wallace A. Ward	G. Gaudiello J. Westerbrink

Revision History	
Rev.	**Detailed Description**
A	Issued for Use

Contents

1 Introduction

Clough delivers an integrated Engineering, Procurement and Construction Management service to projects in the oil and gas, mineral and infrastructure sectors throughout Australia and the world. We deploy an integrated management system and are committed to achieving our vision of zero harm to our people, the environment and the communities in which we work.

1.1 Purpose

The purpose of the Emergency Response Plan is to establish guidelines for the effective management of emergencies that may be encountered on the Tallawarra B Project.

1.2 Scope

The GECL Emergency Response Plan (ERP) has been developed to provide guidance to the Project personnel, including subcontractors and other Project visitors when dealing with emergency situations that may occur during the Tallawarra B works.

When works cross interface onto Energy Australia's (EA) site, Energy Australia will take ownership of all emergencies under there Emergency Response Plan

This ERP shall include and define the process for:

- Incident Response **(Section 3.1)** and Reporting **(Section 5)**
- Emergency Management **(Section 4)**
- Assessing Risk **(Section 6)**
- Communication **(Section 7)**
- Roles and Responsibilities **(Section 4.1)**
- Incident Procedures **(Appendix 2)**

The ERP does not include for environmental emergencies including flood and major spills. These events will be managed as per the Pollution Incident Response Management Plan (PIRMP) and Construction Environmental Management Plan (CEMP) **Note: Any environmental event must be reported immediately**

1.3 Objectives

Clough has a policy of prudent over-reaction and subsequent de-escalation when considering the level of activation required in response to an incident, as it is easier and usually more effective to scale down a response than it is to ramp up an under reaction.

The key priorities in any emergency or crisis situation are to:

- Save life and ensure well-being through a strong focus on the ability to account for people;
- minimize damage to the environment;
- protect Clough, <CLIENT> and third party assets and information from further damage;
- minimise business interruptions and maximise business opportunities;
- minimise financial and legal liability; and
- protect and where possible enhance reputation.

The aim is to protect our people and those affected by our work, to maintain and/or enhance reputation, minimise loss of commercial position and meet statutory obligations.

Measures are in place to ensure a high level of readiness is maintained through regular programmed training exercises which include Senior Management members with specific funding in place to support this.

1.4 Definitions and Abbreviations

Unless noted otherwise, definitions listed in ISO 9000:2000, Quality Management System – Fundamentals and Vocabulary shall apply.

1.4.1 Definitions

Competent Person	A person who has acquired through training, qualification, or experience, or a combination of these, the knowledge and skills qualifying that person to perform specified tasks.
Duty of Care	A statutory legal obligation that places a clear responsibility on organisations to ensure the health and safety of their employees and to prevent harm to the environment.
Incident	An event or situation that results in damage or has the potential to cause injury, illness, financial loss or liability, or an environmental impact.
Major Event or Crisis An event where:	[a] there has been (or possibility will be) loss of life or permanent disability or a serious impact on people's health [b] the surrounding environment has been seriously damaged [c] the situation has potential to result in community outrage or organised action by major interest groups [d] the matter is likely to provoke intense state wide or national media interest [e] significant state or federal regulations have been broken [f] GE or Clough financial performance will be seriously compromised [g] GE or Clough corporate reputation will be adversely impacted [h] GE or Clough relationship with Government or Energy Australia is at risk
Notification to the Regulator	A notification to the regulator is required of any incident in relation to a workplace that exposes an employee or any other person to a serious injury or illness.

1.4.2 Abbreviations

2PIC	2ND Person In Charge
BC	Business Continuity
CEMP	Construction Environmental Management Plan
CMS	Clough Management System
DRABCDE	Danger Response Airway Breathing Circulation Disability Exposure
JHA	Job Hazard Analysis
EMT	Emergency Management Team
EPC	Engineering, Procurement, Construction
EPRP	Emergency Preparedness and Response Plan
ERT	Emergency Response Team
HAZID	Hazard Identification
HAZOB	Hazard Observation
HSSE	Health, Safety, Security and Environment
HSSEMP	Health, Safety, Security and Environment Management Plan
HRWL	High Risk Work Licence
IMT	Incident Management Team
ICT	Incident Coordination Team
ISOS	International SOS
MD	Managing Director
PCBU	Person Conducting a Business or Undertaking
PIC	Person in Charge
PST	People Support Team
SMT	Strategy and Marketing Team
SWMS	Safe Work Method Statement

2 Supporting Documents

Document Title	Document Number
GECL Documents	
HSE Management Plan	45762-HSE-PL-G-1001
Security Management Plan	45762-HSE-PL-D-1005-Security Management Plan and Site Rules Rev A
Major Accident Event Hazard Management Procedure	CORP-HSE-PR-G-0068
Health and Safety Management Operating Standard	CORP-HSE-OS-G-0001
Assurance Procedure	CORP-RA-PR-G-0003
HSE Incident Notification, Investigation and Review	CORP-HSE-PR-G-0066
HSE Risk Management Procedure	CORP-HSE-PR-G-0072
Major Accident Event Hazard Management Operating Standard	CORP-HSE-OS-G-0004
Marketing & Communications Team Support Plan	CORP-CM-PL-G-0001
Major Incident Management Plan	CORP-HSE-PL-G-0001
Major Incident Coordination Team Plan	CORP-HSE-PL-G-0002
Transfer of Personnel Work Instruction	CORP-HSE-WI-G-0025
Policy for Health and Safety	CORP-GOV-POL-G-0012
Pandemic Influenza Planning Checklist	CORP-HSE-FO-G-0007
Pre-Shift Safety Briefing	CORP-HSE-FO-G-0057
First Aid and Emergency Assessment Form	CORP-HSE-FO-G-0169
GE Documents	GE to provide/IMT CMT plans
Energy Australia Documents	
Pollution Incident Response Management Plan (PIRMP)	
Emergency Response Procedure	

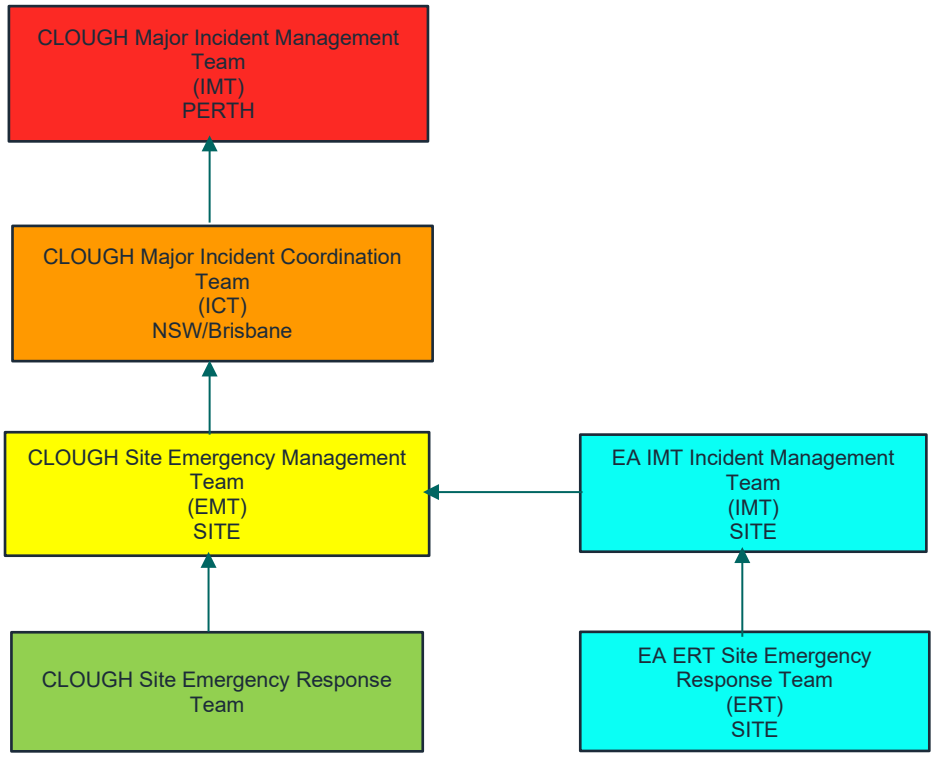
2.1 Incident Response Structure

The incident response organisation has a three-tiered structure as shown in Figure 2-1 with;

1. Major Incident Management Team (Clough)
2. Major Incident Coordination Team (Clough)
3. Site / Project specific Site Emergency Management Team (EMT)

The structure ensures the capability to effectively always manage any potential incident, and to ensure that the overarching Contractor objectives of prevention of harm to our people, stakeholders and the environment are upheld, in conjunction with the Company requirements.

Figure 2-1 GECL Incident Response Structure



2.2 Major Incident Management Team

The priority of the GECL Incident Management Team (IMT) is to focus on strategic issues affecting future operability, profitability, and reputation. The structure and actions associated with the team are described within the Major Incident Management Team Plan (CORP-HSE-PL-G-0001).

2.3 Major Incident Coordination Team

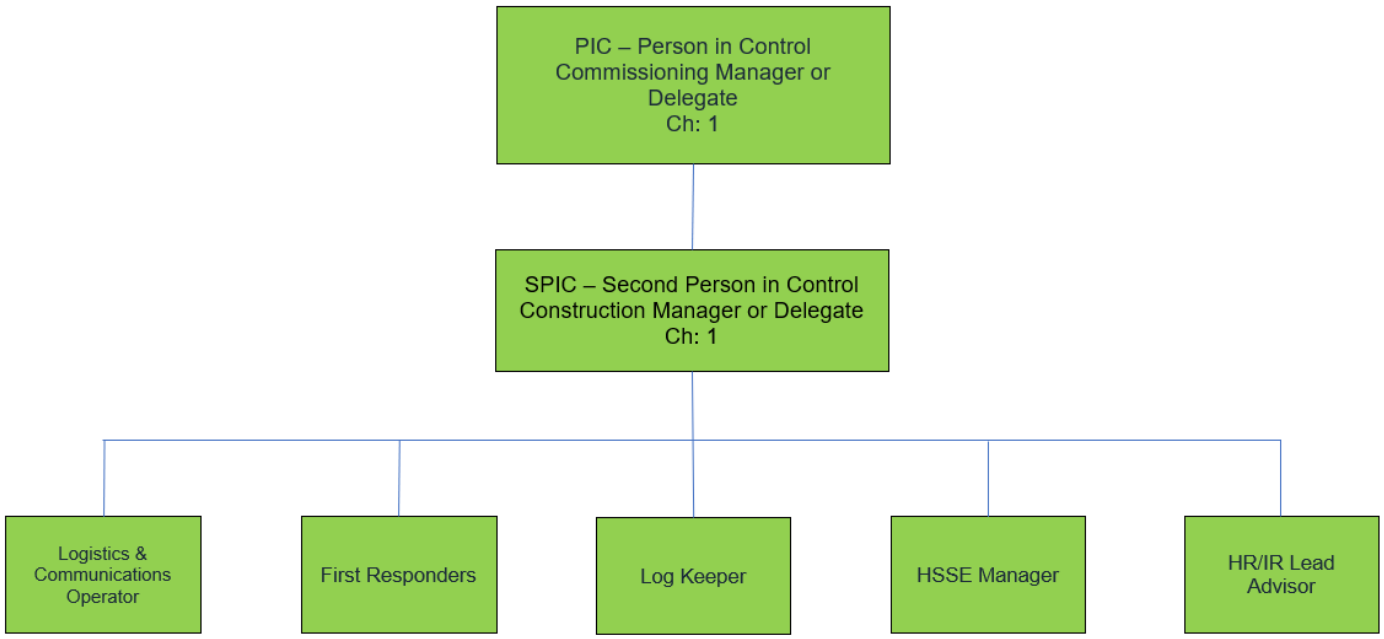
The priority of the ICT is to provide support to Site Emergency Management Team in any form necessary for them to manage the actual incident onsite. The ICT will also identify strategic issues that may need to be referred to the IMT.

The operation of the ICT including activation and detailed roles and responsibilities of members will be captured in Major Incident Coordination Plan (CORP-HSE-PL-G-0002).

2.4 Site Emergency Management Team

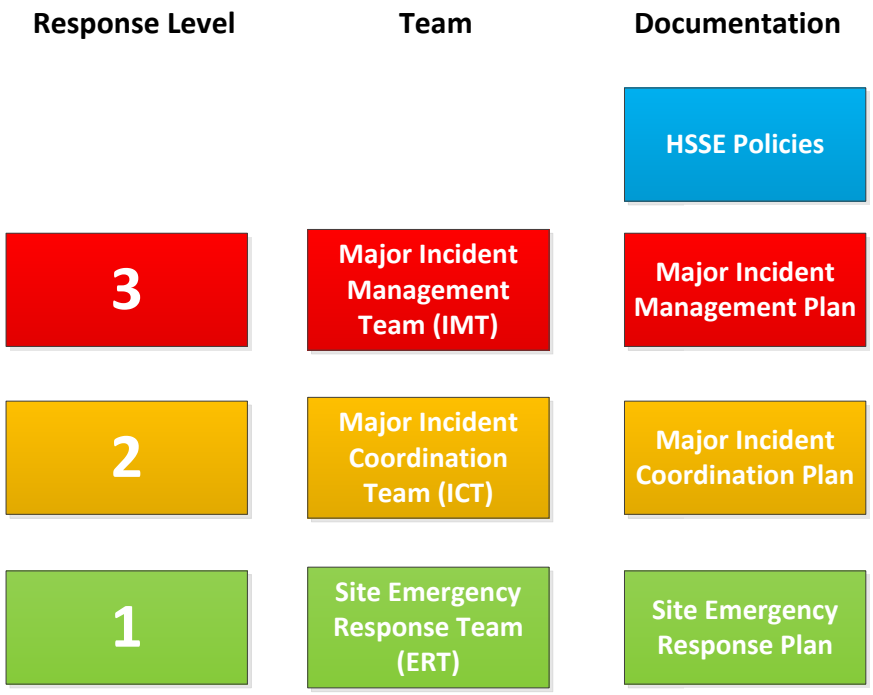
The Site EMT is the onsite response organisation responsible for physically responding to and controlling any emergency situation that develops on a site. Each site will have developed a specific Emergency Response Plan that describes emergency response actions and the roles and responsibilities of the Site EMT personnel for each potential scenario.

2.4.1 Site Emergency Management and Response Team



2.5 Major Incident Response Documentation

Figure 2-2 Team Hierarchy and Relevant Documentation



2.6 Response Levels

The levels of response for major incident situations shall be determined in accordance with the:

- Actual outcome of the situation and measurement of actual risk, and;
- Potential escalation of the incident situation and measurement of potential risk.

The activation and notification level of response depends upon the incident classification.

Major incidents are classified as Level 1, 2 or 3 according to severity. Table 2-1 describes the incident classification and the subsequent response team(s) activation and notification requirements.

The Clough ICT and IMT shall comply with the following activation and notification requirements as detailed in Table 2-1 in the event of an incident situation.

2.7 Clough Incident Classification Levels

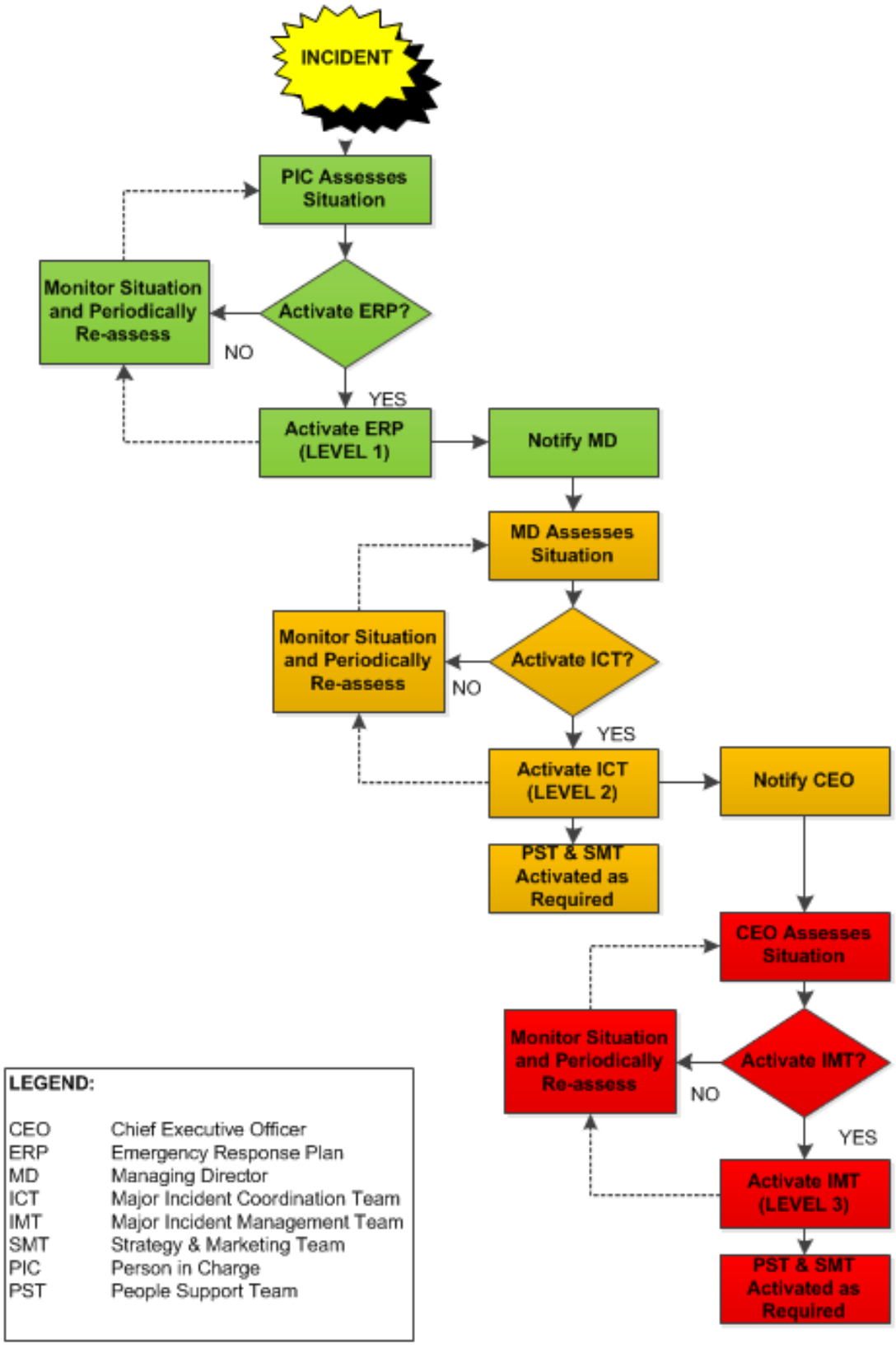
Incident classifications (Level 1, 2 or 3) shall be determined in accordance with Table 2-1.

Incident classification levels are then used to determine notification and subsequent team activation as per Figure 2-3.

Table 2-1 Incident Classification Levels

	TABLE 1: INCIDENT CLASSIFICATION LEVELS		
	LEVEL 1 – Site ERP	**LEVEL 2 – ICT Activation**	**LEVEL 3 – IMT Activation**
Definition	An Emergency situation that is contained on site, where potential for escalation and external existence may exist	The response exceeds capacity of site resources, considerable risk to life, environment and property and a significant commitment of resources required to control the situation.	The incident the potential to or has impacted the business in terms of, reputation, liability, commercial and continuity.
Examples	• Requirement for casualty evacuation • Fire and / or explosion • Major release of hazardous substance as defined by legislation • Activation of cyclone management plan • Loss / damage project critical equipment • Identified potential for local unrest / violence, armed conflict, attack, civil war / uprising, coup. • Aircraft overdue up to 15 minutes with no contact established.	• Single fatality. • Multiple casualty events. • Site impacted by natural disaster event. • Aircraft crash. • Aircraft over due by more than 15 minutes with no contact established. • Local unrest / violence, armed conflict, attack, civil war / uprising, coup. • Arrest or detention of personnel.	• Single / multiple fatalities. • Requirement for significant re-allocation of assets for continued operation. • Potential for significant harm to Clough reputation, liability, business continuity and commercial impact. • Lost / missing Aircraft. • Aircraft crash with multiple fatality / no survivors. • Loss of access to country and personnel. • Compulsory acquisition of major Clough assets by government. • Decision to evacuate personnel from country. • Kidnap &Ransom. ***Any event that has the potential to limit the capability of Clough in all areas of operation.***
Action	1. Assess the situation 2. Identify support that may be required and the potential level of incident (1, 2 or 3). 3. Activate the ERP. 4. Notify the BD MD. 5. Manage the Incident.	1. Assess the situation; 2. Establish the site support requirements; 3. Establish BD capability; 4. Identify incident level (1, 2 or 3); 5. Monitor; OR 6. Activate the ICT / notify the CEO.	1. Assess the situation; 2. Establish the BD support requirements; 3. Monitor; OR 4. Activate the IMT; 5. Establish vulnerabilities to be managed; 6. Manage the crisis.
Action Plan	**ERP ACTIVATION = NOTIFY MD**	**ICT ACTIVATION = NOTIFY CEO**	**IMT ACTIVATION – NOTIFY M&R CEO**

Figure 2-3 Clough Incident Notification and Activation

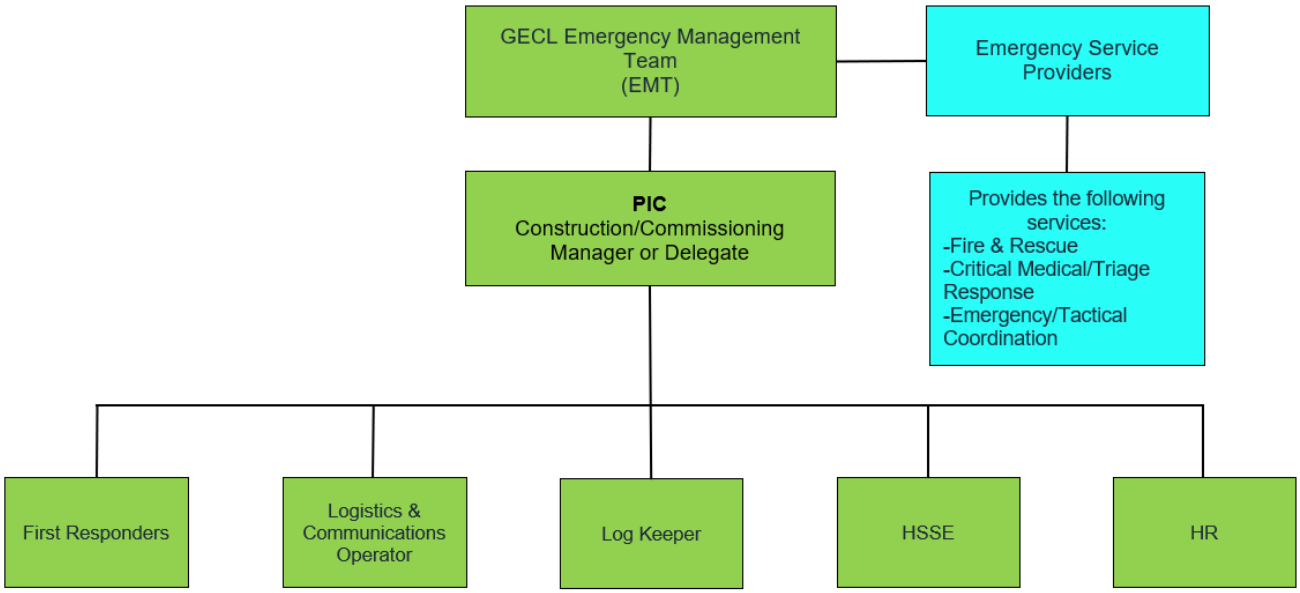


3 Structure of the Site Emergency Management Team

Clough will rely on mutual arrangements with the emergency services at the <PROJECT SITE> to provide emergency response support as shown in Figure 3-1.

The site emergency response organisation may vary depending upon the nature and duration of the emergency event.

Figure 3-1 Organisational Structure Chart



3.1 Roles and Responsibilities

3.1.1 Person in Charge

The Person in Charge (PIC) of the project/site will retain local command of emergency response operations throughout the duration of the emergency.

The Person in Charge should inform the Clough ICT Leader or Delegate of incidents that require the activation of the EMT and if required, the ICT can be activated to support the site. The PIC will remain the focal point for communications with the ICT until the incident has been resolved.

The PIC will notify the EA representative immediately of an emergency event and shall continue to always liaise with the Energy Australia (EA) representative until the event is resolved.

The PIC in conjunction with the Site HSSE Manager are to ensure that all Site EMT members have undergone Emergency Response training, as required by their role/function.

The responsibilities of the PIC are detailed in the functional checklist at Appendix 1

3.1.2 Second Person in Charge

The 2nd Person in Charge (2PIC) will carry out the role and responsibilities of the PIC when the PIC is not able to be contacted, out of communications or another situation where they cannot be raised.

The responsibilities of the 2PIC are detailed in the functional checklist for the PIC at Appendix 1.

3.1.3 Site HSSE Manager

The Site HSSE Manager provides specialist HSSE advice and general support to the Site EMT. Maintains appropriate contact with external agencies and ensures, with the PIC, that the processes and intent of this ERP are met.

The Site HSSE Manager in conjunction with the PIC is to ensure that all Site EMT members have undergone Emergency Response training as required by their role/function.

The responsibilities of the HSSE Manager are detailed in the functional checklist at Appendix 1.

3.1.4 Logistics Coordinator / Radio Operator

The primary role of the Logistics Coordinator is to organise and coordinate provision of transport, emergency and ancillary services. The Logistics Coordinator shall also organise contract services only as required by the PIC following consultation with the EA representative.

The responsibilities of the Logistics Coordinator/Radio Operator are detailed in the functional checklist at Appendix 1.

3.1.5 Log Keeper

The Log Keeper is responsible for ensuring that all information collected is in a format suitable for analysis, interpretation and dissemination and that records and information are accurately recorded and filed.

The responsibilities of the Log Keeper are detailed in the functional checklist at Appendix 1.

3.1.6 First Responders

Project emergency first responders, specialist work at heights, confined space entry, Low Voltage switchboard rescue responders will triage the area and inform the site emergency response team on the nature of the event and the type of emergency response required. First aid can only be performed if the area is secure and safe to do so.

4 Event Reporting

All incidents that occur on the Tallawarra B project including near miss incidents, regardless of how minor, must be reported to a supervisor by personnel involved or witnesses to the event as soon as practicable after the incident occurs.

For any High Potential / High Consequence Event, Medical Treatment, Restricted Work Case, Lost Time Incident, or any incident with a potential to escalate including reputational or media influenced **– A phone Call or text message within 1 hour or as soon as practical, of the Incident occurring. (This only needs to be a quick initial call with main points)**

- **Phone call / Message / Text**: from the Project Manager or delegate onsite to John Guyer (Senior VP Operations) who will report up to John Galvin (Executive VP APAC)
- **Phone call / Message / Text**: from the Project HSSE Manager / Regional HSSE Manager or delegate to Nev Warwick (HSSE Manager APAC) who will report up to Roberta Selleck (Clough Head of HSSE)
- **Phone call / Message / Text**: from the Project HSSE Manager or delegate to their respective Regional HSSE manager

The notification of events will be as per the Project HSE Incident Notification, Investigation and Review Procedure. The Energy Australia representative will be verbally notified within 1 hour of an event an in alignment with the Project ***Health and Safety Management Plan***

5 Client Event Notification

5.1 Tallawarra B Emergency Event Affecting Tallawarra A

The following process should be followed in the case of an emergency where construction works at the Tallawarra B site have the potential to cause significant impacts to Tallawarra A plant operations. An immediate alarm shall be raised with the Tallawarra A control room by the following means

- Portable UHF radio Channels 5 to 16 Emergency Channels
- Dialling (02) 4231 0810 on a site land line;
- Dialling (02) 4231 0810 on a mobile telephone (ONLY from a secure location)
- Once an alarm has been raised communications between client and GECL should be conducted as set out in section 4.1.1 Person in Charge (PIC)

6 Risk Assessment

A risk assessment (HAZID) shall be conducted to identify and assess potential emergency incidents to foster understanding of what can go wrong and develop contingency plans. The risk assessment shall define control measures and must address on-site and off-site scenarios (e.g. transit to site).

The process of identifying potential incident and emergency situations at the Project site must be undertaken by persons who are trained and subject matter experts regarding the definition and criteria which constitute an emergency situation.

7 Emergency Response Training

To ensure the process described in the ERP is effective and to identify further opportunities for the improvement of the process. Quarterly exercises will be conducted on site. These activities should be scheduled by the Project HSSE manager in conjunction with the Project construction team. The Project will also schedule conjointly simulated emergencies with Energy Australia and local emergency responders

The objectives of these activities are to not only test response arrangements to a simulated emergency incident but to also:

- practice call out of all involved staff and associated elements;

- test the adequacy of facilities;
- exercise members of the various supporting government agencies; and
- test the adequacy of appropriate contingency plans.

Each activity will be planned with specific objectives in mind with the view to assess the current proficiency level and to identify areas for improvement. Upon completion of the drill or exercise the Site HSSE Manager should present the findings to the management team and discuss any arrangements that need to be put in place to deal with any deficiencies that may have been identified. The Site HSSE Manager is to ensure that all results and findings that emanate from drills and exercises are properly recorded and retained in a secure area for the life of the Project.

8 Emergency Response Equipment

The following emergency response equipment will be made available to all work areas on site:

- Suitable and up to date fire extinguishers (by type);
- First aid equipment including cardiac defibrillators, kits, located strategically within the site;
- Fire blankets;
- Megaphones or other loud speaker devices;
- Location of the Energy Australia warning sirens and flashing lights in strategic areas within the site;
- Spill kits and appropriate waste bins (refer to CEMP);
- This ERP;
- Emergency contacts list.

GECL will conduct periodical audit assurance regarding emergency equipment. Quarterly mock emergency response evacuations will be conducted to verify and test effectiveness of the audit process and that equipment is compliant

Tallawarra A will at a minimum test the operation and effectiveness of the audible Alarm and evacuation sirens on a weekly basis as per site **PM: 11-CYE-P-001 Friday Emergency and Evacuation Alarm Test.**

9 Muster Points

Each work site will have designated muster points and all personnel new to that area or visitors will be given a brief of the location and procedures.

10 Communication

10.1 Communication of the Emergency Response Plan (ERP)

This plan shall be formally communicated to the following stakeholders:

- Project / Site Personnel During induction or when changes are made to the ERP
- Energy Australia representative/ERT

- Subcontractors

- Contractor Incident Coordination Team (ICT) & Management Team (IMT).
- Emergency Services (if required)

Should any subsequent reviews and amendments of this plan be undertaken the above-mentioned stakeholders must be provided with an updated copy. Copies are to be stored in HAZMAT boxes and in main office.

10.2 GECL Emergency Methods of Communication

The telephone system is the primary means of communication to the affected site and other sources of assistance external to Contractor. This is supplemented by the normal tools of business communication (i.e., email, intranet, internet, website, radio). In the event of an incident, telephone usage must be restricted to emergency use only. This will ensure lines are available when required. If one of the methods of communication fails or becomes unworkable, then all other available methods of communication between the affected site and the EMT are to be utilised.

When GECL site personnel are providing the location of emergencies to emergency response providers, the following must be given

Energy Australia Tallawarra Power Station
Yallah Bay Road,
Yallah New South Wales

2530 *(Entry via Old Princes Highway)*

The GECL site personnel must then meet the emergency personnel at the Main Gate (Gate 12) to direct them to the event/incident.

10.2.1 Table 1: GECL Site Emergency Team Contact List

GECL Tallawarra B Site Emergency Team Contact List

Name	Role	Phone	Email	Channel
Regan Jones	PIC (alternates with Stephen Lee)	+61427167786	regan.jones@cloughgroup.com	Ch 1
Stephen Lee	SPIC	+61420774786	Stephen.Lee3@clough.com.au	Ch 1
Ken Axford	Logistics & communication Op	+61404674314	Kenneth.Axford@cloughgroup.com	Ch 1
Stewart Wallace	HSSE Manager	+61410212089	Stewart.Wallace@cloughgroup.com	Ch 1
Natasha Kelly	Log Keeper	+61480344002	Natasha.Kelly@cloughgroup.com	Ch1
David Sproule	IR Manager	+61409675065	David.Sproule@cloughgroup.com	Offsite

Name	Role	Phone	Email	Channel
Lawrie MacIntosh	**SMP Superintendent**	+61439955035	Lawrence.McIntosh@clough.com.au	Ch 1
Roger Henningsen	**SMP Superintendent**	+61428880563	roger.henningsen@cloughgroup.com	Ch 1
Leon Homes	**Electrical Superintendent**	TBA	TBA	Ch 1
Justin Hofman	**(Contract Elec Supt)**	+61488056411	Justin.Hofman@ceqgroup.com	Ch 1
Terence Kemp	**Civil Supervisor**	+61410446403	Terence.Kemp@cloughgroup.com	Ch 1

10.2.2 External Communications during / following a Major Incident

All external health and safety communications, including with government authorities, shall be undertaken by the Project team in conjunction with the Clough communications team. Social media output will be monitored by Clough communications team. Notification of communications will be made to Energy Australia representative as soon as it is practicable

10.2.3 Regulators and Media

Where an event takes place under the Projects responsibility, external communications with the regulator will be performed by the Project in conjunction with IMT. In the event of media communications Clough Strategy and Marketing Team (SMT) will be made aware of these communications in advance. That function will be performed by the Project PIC. Please refer to the Marketing and Communications Team Support Plan (CORP-CM-PL-G-0001) for information pertaining to external communications

10.3 Communications Responsibility of EA Events

Where an event takes place on Energy Australia's work area under their responsibility external communications are delegated from Energy Australia's Operations representative to the Project PIC, the MCT is responsible for those external communications. When providing the location of emergencies to emergency response providers, the following must be given-

Energy Australia Tallawarra Power Station
Yallah Bay Road,
Yallah New South Wales

2530 (Entry via Old Princes Highway)

11 Site EMT Stand Down Process

The EMT is responsible in consultation with senior management and the Company, to declare the crisis or emergency incident over and give the “all clear” and have all affected employees, subcontractors and visitors informed of the status.

Once the “all clear” is in effect, the EMT is to commence the following actions:

- Ongoing management of incident as necessary;
- Ensure adequate resources are allocated to on-going management;
- Draft the final information releases to:
    - Employees;
    - Regulators;
    - Media;
    - Stakeholders;
    - Local communities;
    - Subcontractors;
    - Suppliers;
    - Insurers;
    - Legal;
    - Police; and
    - Emergency services.
- Debrief all EMT members;
- Ensure welfare and counselling arrangements are in place;
- Compile and file all documentation relating to the response;
- Arrange for full incident investigation and analysis;
- Review EPRP for effectiveness; and
- Capture lessons learned.

Note: all employees involved in any incident are to log their actions and provide a copy to the line Manager once the incident is over.

All incidents will be reported, documented, investigations conducted and action plans (if required) established in order to prevent or reduce a reoccurrence of the incident, in accordance with the Health and Safety, Environment and Quality Management Plans.

12 Major Incident Guidelines

A list of incident events deemed most likely to affect Project operations are described in Appendix 2. The list is preliminary and will be further developed after contact award when the risk assessment has been completed.

13 Roles & Responsibilities Checklists

Functional checklists are provided in Appendix 1 for each project/site functional head who are required to attend the Site EMT.

Each functional head checklist provides guidance on their respective roles, responsibilities and actions during any Level 1, 2 or 3 incident. The checklist is not designed to be prescriptive and simply provides a base line from which each functional head is required to complete their initial actions and then contribute to the management of the crisis under the direction and control of the Company Operations representative so that the major incident is de-escalated, as soon and is reasonably practicable.

14 Review and Audit

14.1 Review of the Procedure

Post emergency event de-brief and review shall be initiated by the Project HSSE Manager. Notification of the intended review activity will be communicated to site management. The results of the review shall be communicated to the Project team, internal stakeholders and Energy Australia where directed.

When conducting a review or amending the existing plan consideration should be given to the following significant deviations:

- Previous audit and review results,
- Changes in legislation or regulations or amendments in policy,
- Incident statistics,
- Areas for improvement,
- Training needs and records,
- Exercise/drill schedules and,
- Lessons learned from incidents and drills.
- Energy Australia, emergency services or other key stakeholders feedback
- Change of Project scope or conditions
- Review or update of the Project Risk Register

Any amendments or change to the existing plan must first be consulted with key project and business stakeholders. Further subsequent peer and stakeholder review process must be undertaken and change management process followed prior to any amendment being implemented.

15 Key Supporting Documents

Document Title	Document Number
Project HSSE Management Plan Template	CORP-HSE-TPL-G-0037
Environmental Management Plan Template	CORP-HSE-TPL-G-0030
Health Management Plan	CORP-HSE-TPL-G-0032

Security Management Plan	CORP-HSE-TPL-G-0031
Major Accident Event Hazard Management Procedure	CORP-HSE-PR-G-0068
Health and Safety Management Operating Standard	CORP-HSE-OS-G-0001
Assurance Procedure	CORP-RA-PR-G-0003
HSSE Incident Notification, Investigation and Review	CORP-HSE-PR-G-0066
HSSE Risk Management Procedure	CORP-HSE-PR-G-0072
Major Accident Event Hazard Management Operating Standard	CORP-HSE-OS-G-0004
Marketing & Communications Team Support Plan	CORP-CM-PL-G-0001
Major Incident Management Plan	CORP-HSE-PL-G-0001
Major Incident Coordination Team Plan	CORP-HSE-PL-G-0002
Transfer of Personnel Work Instruction	CORP-HSE-WI-G-0025
Policy for Health and Safety	CORP-GOV-POL-G-0012
Pandemic Influenza Planning Checklist	CORP-HSE-FO-G-0007
Pre-Shift Safety Briefing	CORP-HSE-FO-G-0057
First Aid and Emergency Assessment Form	CORP-HSE-FO-G-0169

Appendix 1 - Site Emergency Management Team Functional Checklists

Person In Charge / Second Person in Charge (PCI/2PIC) Role

Site Person in Charge Functional Checklist		
TASK	**TIME**	**COMPLETE (✓) / NA**
• Upon notification of any major incident, proceed to the Site Emergency Response Room (ERR) located at: ***"insert location here".***		
• Upon notification of Level 2 or 3 incident from the <CLIENT> Operations IMT, make contact with the Clough Corporate ICT Leader using the Major Incident Contacts List CORP-HSE-SCH-G-0001 (Perth) confirm the incident on site as a Level 2 or Level 3, utilising Table 1.		
• If first to arrive in ERR, follow "First Person to arrive functional checklist, at Appendix 1.5.		
• On arrival at the ERR check that all functional roles have been filled.		
• Liaise with <CLIENT> Operations IMT and where / if necessary deploy a liaison officer to the <CLIENT> Incident Control Centre.		
• Coordinate overall incident response operations in conjunction with the Clough ICT Operations Coordinator / ICT Leader.		
• Coordinate with the Clough ICT Operation's Coordinator, the need for any external support services required, i.e. ISOS etc.		
• Maintain a personal log of events, decisions and actions and pass copies to the Log Keeper; CORP-HSE-FO-G-0122 - Message Taking Form CORP-HSE-FO-G-0121 – Event / Action Log Sheet		
• Ensure that the Clough ICT Leader is regularly updated and briefed. Level 2 – every 2 hours. Level 3 every 30 minutes.		
• In conjunction with the EMT, ensure all resources have been stood down and demobilised.		
• Ensure that all records have been collected and passed to the Log Keeper for lodging on InControl.		
Time Concluded		
Name:	Date:	Signature:

Site HSSE Manager Role

Contractor HSSE Manager Functional Checklist		
TASK	**TIME**	**COMPLETE (✓) / NA**
• Upon notification of any major incident, proceed to the Site Emergency Response Room (ERR) located at: ***"insert location here".***		
• Obtain a briefing about the current status of the incident from the PIC.		
• Identify & define resources required for this incident.		
• Obtain sufficient information to allow evaluation of the HSSE issues involved.		
• Liaise with PIC to ensure a risk assessment of the presenting incident and treatment options is conducted prior to the EMT proposing a course of action.		
• Provide advice, as required, on the implementation of any oil spill response requirement and provide specialist advice as appropriate.		
• Ensure that appropriate information for notification to regulatory bodies (e.g. NOPSA) are made in a timely manner to the Clough ICT and in consultation with the <CLIENT> Operations representative.		
• For ongoing operations (if the team needs to remain activated beyond 8 hours) ensure that rosters are in place to ensure a rotation of team members. Provide advice to the PIC on changeover of EMT members. Obtain time functional heads arrival and time of arrival checklist from "first person in the room".		
• Monitor EMT members for signs of fatigue; ensure that sufficient food and water is available to team members for extended operations.		
• Make arrangements for the Incident Investigation (CORP-HSE-PR-G-0006) and formal debriefing and analysis of the incident response – all of which should be fully documented.		
• Maintain a personal log of events, decisions and actions and pass copies to the Log Keeper. CORP-HSE-FO-G-0122 - Message Taking Form CORP-HSE-FO-G-0121 - Event/Action Log Sheet		
• Ensure that all records have been collected and passed to the Log Keeper for lodging in 'InControl'.		
Time Concluded		
Name:	Date:	Signature:

Site Logistics Coordinator / Radio Operator

Contractor Logistics Coordinator / Radio Operator Functional Checklist		
TASK	**TIME**	**COMPLETE (✓) / NA**
• Upon notification of any major incident, proceed to the Emergency Response Room (ERR) located at: ***"insert location here".***		
• If first to arrive in ERR, follow "First Person to arrive functional checklist, at Appendix 1.5.		
• Obtain a briefing about the incident, subsequent actions taken and identify immediate logistic requirements as directed by the PIC		
• Take any immediate action required (under direction from PIC), e.g. helicopter mobilisation,		
• Establish contact with the Clough ICT and coordinate provision of emergency services & other resources as required by the PIC.		
• Formulate a communications / logistics plan (if required)		
• Note and keep up-to-date the key logistics information and provide to the PIC.		
• Obtain up-to-date weather forecasts.		
• Arrange for passenger manifests to be passed to the Clough ICT and Human Resources Manager.		
• Compile all relevant information on finalisation of incident.		
• Maintain a personal log of events, decisions and actions and pass copies to the Log Keeper. CORP-HSE-FO-G-0122 - Message Taking Form CORP-HSE-FO-G-0121 - Event/Action Log Sheet		
• Ensure that all records have been collected and passed to the Log Keeper for lodging on InControl.		
Time Concluded		
Name:	Date:	Signature:

Site Log Keeper Role

Site Log Keeper Functional Checklist		
TASK	**TIME**	**COMPLETE (✓) / NA**
• Upon notification of any major incident, proceed to the Emergency Response Room (ERR) located at: ***"insert location here".*** Bringing a laptop and laptop charger.		
• Collate all significant decisions, activities, events and times on CORP-HSE-FO-G-0145 Major Incident Correspondence and Action Log (chart). This shall be done electronically (file to be stored on the laptop desktop of all Log Keepers) and kept in chronological order.		
• Remind all EMT members to use personal logs. One event / action per sheet is sufficient. CORP-HSE-FO-G-0121 – Event / Action Log Sheet		
• Highlight actions to be completed in red text.		
• Ensure that any actions requiring follow-up are addressed in a timely manner.		
• File all records and information accurately.		
• Collate all information and provide copies to the PIC when the Clough ICT stands down for follow up investigation, compensation, insurance and litigation purposes. Lodge copies of all logs, debriefing notes etc. onto InControl for further review.		
Time Concluded		
Name:	Date:	Signature:

First Person to Arrive in the Emergency Response Role (ERR) Role

First Person to Arrive in the ERR Functional Checklist		
TASK	**TIME**	**COMPLETE (✓) / NA**
• Ensure sufficient telephone and radios / other communications devices are available as a minimum: o 1 x Incoming telephone line o 1 x Outgoing telephone line o Two radios – 1 for each channel being used o Phone and radio chargers o Laptop with internet / 3G connection		
• Provide butcher's paper and relevant map and post on the walls.		
• Ensure each functional head has a copy of their functional checklists and log keeping papers.		
• Ensure a whiteboard is clean and ready to use.		
• Notify Reception that an incident has required activation of the Site EMT and advise them to deal with enquires as per their training and functional checklist.		
• Check off functional heads arrival with time of arrival, hand to site HSSE Manager on his/her arrival.		
• Brief PIC of operational status of the ERR on their arrival.		
• Hand control of ERR to the PIC and stand down or act as otherwise instructed.		
Time Concluded		
Name: Date: Signature:		

Appendix 2 – Incident Guidelines

Bomb Threat

Scenario description	Persons who wish to cause disruption to the organisation to which they are made usually commit bomb threats. Bomb threats must be taken seriously.	
General outline of Emergency Response	Every telephone should have a bomb threat checklist to facilitate correct procedures and minimise stress to the person receiving the call. With many outside telephone lines located within Project site complexes there is a requirement for a consistent response to a bomb threat made by telephone. In the event that a telephone bomb threat is made the person receiving the phone call shall: Record all details of the threat on the Bomb Threat Checklist by your phone. Refer to Appendix 3. Immediately notify HSSE Manager who will notify the Project PIC. HSSE personnel shall ensure the Bomb Threat Checklist is kept by all. Telephones on the site. Any person who receives a telephone call purporting to be a threat directed at the Construction Area or the Operations Area shall follow the steps on the checklist.	
Disciplines required (indicate) – Guide only	Fire fighting ☒	First Aid ☐
	Vehicle extrication ☐	Breathing apparatus ☐
	Hazmat ☒	Rescue ☐
	Specialist ☒	Police ☒
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics
	External support	Police

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency”	Bystander/Witness	Radio (to be confirmed)
“Emergency, emergency, emergency” acknowledged		ERT Leader responds to incident
ERT team called		ERT muster
PIC advised		Site Project Manager
Ambulance to scene as appropriate	Paramedic	Paramedic to standby until scene made safe
Site assessed	ERT Leader	360°
ERT respond to scene	Team members	
Priorities set and engaged	ERT Leader	
Police notified if required	<CLIENT>/Clough	Cordon off area
Scene made safe	All members on site	Preserve evidence
Investigation commenced and debrief	HSSE Manager	All involved personnel

Electric Shock or High Voltage Incident

Scenario description	Any and ALL electrical shock, high voltage incident regardless of severity			
General outline of Emergency Response	Generally limited to paramedic response but could entail rescue or fire but with additional requirements to isolate source of shock as a priority. All electrical shocks, regardless of voltage or severity are to be reported All persons receiving an electrical shock, regardless of severity, are to be transported by a supervisor to the Paramedic or medical facility for 12-lead ECG monitoring and clearance by a medical practitioner.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☒	Breathing apparatus	☒
	Hazmat	☐	Rescue	☒
	Specialist	☒	Other	☒
Emergency Response resources and their location	**ER internal support**	ERT leader, High Voltage supervisors, Site based Paramedics.		
	ER External support	Immediate Hospital,		

Action Required	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/Witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged	Paramedic/ERT Leader	Paramedic responds to incident
ERT advised	Paramedic	ERT Leader responds to incident and puts in place 100metre cordon of incident
Power isolation	Electrical High Voltage isolator	ERT leader responds to electrical High Voltage operators to attend incident
Power isolation	Electrical High Voltage isolator	
Power isolation	Electrical High Voltage isolator	Advise ERT leader all clear of power isolated to incident area
Vehicle / Personnel rescue	ERT leader	Once power confirmed and tested isolated by electrical High Voltage isolator rescue to take place.
DRABCDE	Paramedic on scene	Severity of event determined
Casualty stabilised	Paramedic on scene	Extrication of casualty as directed
Evacuate casualty to medical assistance	As directed by Paramedic	As per medical evacuation procedures

Collisions Involving Heavy Equipment, Light Vehicles & Others

Scenario description	Any collision involving the above			
General outline of Emergency Response	When an alarm is raised of a collision the emergency response organisation will respond. The scene will be assessed and made safe, any casualties assessed and stabilised. Extrication of casualties and transfer to treatment facility. Scene to be secured and investigation commenced. Participants to be debriefed.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☒	Breathing apparatus	☐
	Hazmat	☒	Rescue	☒
	Specialist	☐	Other	☐
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Paramedics, Fire Rescue		

Action Required	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/Witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged		ERT Leader responds to incident
ERT called		ERT muster
PIC		Site Manager
Ambulance to scene as appropriate	Paramedic	Ambulance to scene as appropriate
Site assessed	ERT Leader	360°
ERT respond to scene	Team members	
Priorities set and engaged	ERT Leader	
DRABCDE	All members on site	Triage as necessary
Casualties stabilised	All members on site	Extrication of casualties
Evacuate casualties to medical assistance	As directed by Paramedic	As per medical evacuation procedures
Scene made safe	All members on scene	Preserve evidence for investigation

Falls from Heights - Rescue

Scenario description	Falling from height.			
General outline of Emergency Response	ERT Leader will secure the area. Casualties to be stabilised, first aid administered and evacuated as required. Involve appropriate external agencies if required.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☐
	Hazmat	☐	Rescue	☒
	Specialist	☐	Other	☐
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Paramedics, Fire Rescue		

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency” called	Bystander/Witness	Radio Channel (to be confirmed)
“Emergency, emergency, emergency” acknowledged		ERT Leader responds to incident
PIC advised		HSSE Manager
Ambulance to scene as appropriate	Paramedic	Paramedic to standby at scene until scene made safe
DRABCDE	All members on scene	Triage as necessary
Casualties stabilised	All members on scene	Extrication of casualties as directed
Evacuate casualties to medical assistance	All members as directed by Paramedic	As per medical evacuation procedures
Contact external services as required	ERT Leader	Immediate Hospital,
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Flooding – Inclement Weather

Scenario description	Local flooding from Cyclones and or rain deluge.			
General outline of Emergency Response	ERT Leader will secure the area. Casualties to be stabilised, first aid administered and evacuated as required. Involve appropriate external agencies if required.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☐
	Hazmat ☐		Rescue ☒	
	Specialist	☐	Other	☒
Emergency Response resources and their location	**Site**	ERT, HSSE Manager		
	ER Internal support	Fire Rescue, SES		
	ER External support			

	Y/N	
Can work be relocated to a drier area?		If Y, then work can proceed
Is there alternative work available at a direr location?		If Y, then work can proceed
Can tarps/enclosures be erected to keep out the rain?		If Y, then work can proceed
Can truck unloading be performed in a dry area?		If Y, then work can proceed
Can non-electrical work be performed?		If Y, then work can proceed if workers remain dry
Is the rain only light? i.e. drizzle, mist, light shower		If Y, then work can proceed if workers remain dry
Will wet weather gear keep the user dry?		If Y, then work can proceed if work can be done safely
Will wearing of wet weather gear cause additional hazards, excessive sweating, heat stress, etc?		If Y, then wet weather gear not suitable, alternative work required
Can slings/chains be prevented from slipping, can lift be performed safely?		If Y, then work can proceed if workers remain dry
Is work to be performed within an excavation?		If Y, then alternative work is required
Is lightning & thunder evident?		If Y, then personnel must work under cover
Are high winds present?		If Y, then crane lifts and work from EWPs may have to be postponed. Ensure equipment, materials and structure is secured.
Is the area likely to flood?		If Y, then consider damming area, temporary sump pump or alternative work.

Fire in Equipment / Plant

Scenario description	Any event of a fire in equipment or plant			
General outline of Emergency Response	Operator attempted to extinguish fire if safe to do so. ERT responded and assisted with extinguishing fire, and secured area. ERT First Responders provide First-Aid. HSE site based Paramedics respond and provide advanced care. Transport casualties to receiving medical facility as required via land or vessel transport. Involve external agencies if required.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☒	Breathing apparatus	☒
	Hazmat	☒	Rescue	☒
	Specialist	☐	Other	☐
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics. Internal Clough personnel and External Ambulance and Paramedics. (Off shore activities)		
	ER External support	Fire Rescue		

Action Required	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/Witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged		ERT Leader responds to incident
ERT called		ERT muster
PIC advised		Site Manager
Ambulance to scene as appropriate	Paramedic	Paramedic to standby until scene made safe
Site assessed	ERT Leader	360°
If on vessel, vessel master to call all personnel to muster point.	Vessel Master	POB checked to confirm all personnel are accounted for.
ERT respond to scene	Team members	
Priorities set and engaged	Team Leader	
If fire on vessel is uncontrollable and/or evacuation is deemed required, vessel is be abandoned as per each vessel's evacuation plan.	Vessel Master	Via gangplank, rope ladder etc. to life raft or rescue/transfer vessels etc. Emergency evacuation drills to be conducted on regular basis.
DRABCDE	All members on scene	Triage as necessary
Casualties stabilised	All members on scene	Extrication of casualties as directed
Evacuate casualties to medical assistance	As directed by Paramedic	As per medical evacuation procedures
Contact external services as required	ERT Leader	Immediate Hospital, etc.
Scene made safe	All members on site	Preserve evidence
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Fatalities – Confirmed or Suspected.

Scenario description	Suspected/Confirmed Fatality.	
General outline of Emergency Response	Only a registered medical practitioner can confirm a death. If not at the scene, arrangements should be made as soon as possible for a doctor to attend the incident. Until this occurs, or confirmation is received, the circumstance should be referred to as a possible or suspected death.	
Disciplines required (indicate) – Guide only	Fire fighting ☐	First Aid ☒
	Vehicle extrication ☐	Breathing apparatus ☐
	Hazmat ☐	Rescue ☐
	Specialist ☐	Other ☐
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics. Preservation of scene is paramount. No movement to occur unless authorised by Police and/or WorkSafe.
	ER External support	Police, work safe, Paramedics, Doctor

Action Required	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/Witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged		ERT Leader responds to incident
In the event that an employee is seriously and or suspected to have received fatal injuries, the Paramedic shall record the employees name and ID number and pass onto the Onsite response team leader	Paramedic	The casualty shall be referred to as a casualty until such time that a medical practitioner has certified the death
The Onsite response team leader shall contact HSSE Manager and request their attendance.	ERT Leader	The casualty shall be referred to as a casualty until such time that a medical practitioner has certified the death.
On arrival of HSE Manager, the PIC shall pass on the recorded personal detail of the casualty and request that it be transported confidentially to the SC.	ERT Leader	The casualty shall be referred to as a casualty until such time that a medical practitioner has certified the death
During this assignment, the HSE Manager shall not in any way, unless it is unsafe, carry out any act or allow any act that may mitigate the above process.	HSSE Manager	The casualty shall be referred to as a casualty until such time that a medical practitioner has certified the death
Every effort shall be made to secure and seal off the incident area and machinery involved in the suspected fatality, until <CLIENT> officials, police and Work-Safe arrive. The immediate area surrounding the casualty should not be disturbed in any way other than to cover the casualty, to protect from weather/screen from	HSSE Manager	Preserve evidence for investigation
public view/documented and photographed by police and Work Safe.		

Police and Work-Safe shall be notified as soon as possible		Preserve evidence for investigation
Police are responsible for notifying the next of kin. In some cases, it would be appropriate for the employer's personnel to accompany the police.	Police	Notification to next-of-kin is not carried out until a medical practitioner confirms official confirmation of death.
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel
Counselling provided to all personnel involved in incident as well as next-of-kin and the employees <CLIENT> personnel.	HSSE Manager	Project Peer Support Teams / Counselling Services EAP Providers

Fire - In Office / Accommodation / Site Infrastructure

Scenario description	Any event involving fire in an office, accommodation or infrastructure building.			
General outline of Emergency Response	Initial response using equipment on hand, e.g. fire extinguishers, fire hose reels. Personnel will not expose themselves to smoke or fumes. Supplementary fire-fighting to be upwind and remote from building.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☒
	Hazmat	☐	Rescue	☒
	Specialist	☐	Other	☐
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Fire Rescue		

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency” called	Bystander/Witness	Radio (to be confirmed)
Acknowledgement of automated fire alarm activation by HSE Manager personnel		Automated fire alarm activation
“Emergency, emergency, emergency” acknowledged		ERT Leader responds to incident
ERT called		ERT muster
PIC advised		HSSE Manager
Ambulance to scene as appropriate	Paramedic	Paramedic to standby at scene until scene made safe
Site assessed	ERT Leader	360°
ERT respond to scene	Team members	Emergency response vehicle
Priorities set and engaged	ERT Leader	
DRABCDE	All members on scene	Triage as necessary
Casualties stabilised	All members on scene	Extrication of casualties as directed
Evacuate casualties to medical assistance	All members as directed by Paramedic	As per medical evacuation procedures
Contact external services as required	ERT Leader	Immediate Hospital
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Hazardous Spills / Fires

Scenario description	Any land and/or water based spill / fire involving hazardous/biological materials, e.g. hydrocarbons (diesel, oil), chemicals, and waste water at the construction area of operations.			
General outline of Emergency Response	The initial response is to be by personnel at the scene of the spill, using spill kits or earth bunds to contain the spill if safe to do so, or designated Spill contractor. If the MSDS calls for additional PPE or evacuation, then all personnel are to remove themselves upwind from the scene and await the arrival of the ERT. Generally, no material that has a requirement for additional PPE or evacuation in the event of a spill will be permitted onto site without first having the necessary equipment and controls in place. In this case, specific procedures will be developed. In all hazardous materials spills the <CLIENT> Environmental Manager will be immediately contacted.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☒
	Hazmat	☒	Rescue	☒
	Specialist	☒	Other	☐
Emergency Response resources and their location	**Site**	ERT and Site Based Paramedics		
	ER External support	Hazardous spill contractor, Fire Rescue		

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency” called	Bystander/Witness	Radio (to be confirmed)
“Emergency, emergency, emergency” acknowledged		ERT Leader responds to incident
MSDS consulted		ERT Leader responds to incident
ERT called		ERT muster
PIC advised		HSE Manager
Environmental specialist notified	ERT Leader	Any specialist advice noted
Site assessed	ERT Leader	360°
ERT respond to scene	Team members	Emergency response vehicle
Priorities set and engaged	ERT Leader	
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Influenza (Pandemic / High Risk)

Scenario description	*Influenza pandemic* is an epidemic influenza that has spread worldwide infecting manage people in the population. For project-based FIFO workforce the challenges of a severe pandemic are likely to be compounded by multi-national workforce residing in construction camps with reduced medical capacity and / or quarantine facilities able to segregate infected workers.			
General outline of Emergency Response	Regardless of severity immediate public health messages to contain spread will be instituted as follows: • Communication of basic hygiene information across all areas of the project including notification of personnel off site on R&R • Daily reporting of events and briefing of supervisors as required • Cleaning – review of all offices, facilities and managed camp accommodation including escalation of hygiene controls (use of gloves, disinfecting common areas etc.) and use of P2 masks. • Identification of personnel with risk factors for severe disease – morbid obesity, chronic diseases (diabetes, cancer, respiratory and cardiac diseases) or conditions (e.g. pregnancy) and arrange for early demobilization • People with flu like symptoms at camp – isolate and to remain in rooms with meals delivered until illness symptoms have passes. • Avoid travel through affected regions (e.g. China) and where travel has occurred isolate individual from the workplace until the incubation period has passed or the individual has been cleared by a doctor. Activate Pandemic Influenza Planning checklist (CORP-HSE-FO-G-0007) and monitor ongoing situation as detailed in the Project Health Management Plan (CORP-HSE-TPL-G-0032Q).			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☒
	Hazmat	☐	Rescue	☐
	Specialist	☒	Other	☐
Emergency Response resources and their location	**Site**	Site Based Paramedics		
	ER External support	Clough Medical Service Provider		

Action Required	Role Responsible	Comment
Paramedic and HSE notified	Unwell person / supervisor	Radio (to be confirmed)
Patient quarantined	Supervisor	Camp manager to make arrangements
PIC advised	Paramedic	HSE Manager
Medical service provider notified	PIC / HSE	Any specialist advice noted
Patient demobilised	Supervisor	Under medical direction and infection protocols
Investigation into others potentially exposed / to be isolated or at risk	HSE	Personnel identified as coming into close contract to be isolated and / or demobilised.
Monitor and report ongoing status	PIC	Report status to MIC team
Daily debrief until all cases resolved	PIC	MIM Team, MIC Team

Lightning

Scenario description	Impending storm where lightning is expected			
General outline of Emergency Response	Monitor and issue alerts. Respond to any emergency incidents only if safe to do so. Actions as per standard operating procedures for identified incident.			
Disciplines required (indicate) – Guide only	Fire fighting	☒	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☐
	Hazmat	☐	Rescue	☐
	Specialist	☐	Other	☒
Emergency Response resources and their location	**Site**	ERT,		
	ER External support	Paramedics		

Action Required	Role Responsible	Comment
Monitor impending storm and issue alerts as appropriate.	ERT Leader	Lightning will be monitored within 50km. Clough will be notified through <CLIENT>'s Lightning Warning System when it is within 50km
Respond to alert	ERT Leader	'Cease Work' procedures
PIC advised	ERT Leader	HSSE Manager
Continually monitor for actual or potential Emergency Incident	ERT Leader	Maintain safe communication procedures
Respond appropriately to incident only if safe to do so	ERT Leader	Determine HSSE of incident site before mobilising.
Site assessed -360°	ERT Leader	Dangers to crew and casualties, etc.
Priorities set and engaged	ERT Leader	RECEO VS
DRABCDE	All members on scene	Triage as necessary
Casualties stabilised	All members on scene	Extrication of casualties as directed
Evacuate casualties to medical assistance	All members as directed by Paramedic	As per medical evacuation procedures
Contact external services as required	ERT Leader	Immediate Hospital
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Medical Emergency

Scenario description	Any medical emergency affecting an individual, e.g. chest pain, asthma attack, acute abdominal pain.			
General outline of Emergency Response	Generally the initial response will be by the Paramedic. If the event is determined by the Paramedic to be serious and requiring further medical assistance.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☐
	Hazmat	☐	Rescue	☐
	Specialist	☒	Other	☒
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Paramedics		

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency” called	Bystander/Witness	Radio (to be confirmed)
“Emergency, emergency, emergency” acknowledged	First Response – First Aider arrives	First Aider should be at the seen
ERT Leader	Paramedic	ERT Leader responds to incident
PIC advised	ERT Leader	HSSE Manager
DRABCDE	Paramedic on scene	Severity of event determined
Casualty stabilised	Paramedic on scene	Extrication of casualty as directed
Evacuate casualty to medical assistance	As directed by on site doctor	As per medical evacuation procedures
Contact external services as required	Injury Case File Manager	Immediate Hospital

Rescue from Confined Space

Scenario description	To be determined from confined space Rescue Plan			
General outline of Emergency Response	To be developed in response to requirement determined by JHA and Rescue Plan. Generally will be a response involving the ERT and Paramedic The use of on-site cranes, man cages and elevated work platforms (EWP) may be considered in the rescue plan. Specialist support may be identified as a requirement and the personnel and expertise contracted for the duration of the risk. This may be specialist rope rescue, B.A. or other as required.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☒
	Hazmat	☐	Rescue	☒
	Specialist	☒	Other Gas Monitor	☒
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Paramedics, Fire Rescue		

Action Required from rescue plan	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged		ERT Leader responds Paramedic responds
Secure the area without putting themselves at risk	Bystander/witness	Do not enter the confined space
Provide assistance only if safe to do so	Bystander/witness	Do not enter the confined space
Reassure the trapped person/s that help is on the way	Bystander/witness	Do not enter the confined space
DO NOT enter the confined space	Bystander/witness	Do not enter the confined space
Send a spotter to guide Emergency Response to the incident	Bystander/witness	Do not enter the confined space
Ensure clear access to the incident site is available for Emergency Response	Bystander/witness	Do not enter the confined space
Do not crowd or enter the incident area without prior approval from the ERT leader	ERT Leader	Do not enter the confined space
ERT respond to scene	Team members	
Priorities set and engaged	ERT Leader	
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Rescue from Trench

Scenario description	Personnel caught in an entrapment or collapsed in trench.			
General outline of Emergency Response	To be developed in response to requirement determined by JHA and rescue plan. Generally will be a response involving the ERT and Paramedic with site based equipment. The use of on-site cranes, man cages and EWPs may be considered in the rescue plan. Specialist support may be identified as a requirement and the personnel and expertise contracted for the duration of the risk. This may be specialist rope rescue or other as required.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☐
	Hazmat	☐	Rescue	☒
	Specialist	☒	Other Earth moving equipment with competent operators, Hand Tools (shovels, rakes, etc)	☒
Emergency Response resources and their location	**Site**	ERT, Site based Paramedics.		
	ER External support	Paramedics, Fire Rescue		

Action Required	Role Responsible	Comment
“Emergency, emergency, emergency” called	Bystander/witness	Radio (to be confirmed)
“Emergency, emergency, emergency” acknowledged		ERT Leader responds Paramedic responds
Secure the area without putting themselves at risk	Bystander/witness	Do not attempt rescue unless trained and equipped to do so
Provide assistance only if safe to do so	Bystander/witness	Do not attempt rescue unless trained and equipped to do so
Reassure the trapped person/s that help is on the way	Bystander/witness	Do not attempt rescue unless trained and equipped to do so
Send a spotter to guide Emergency Response to the incident	Bystander/witness	Do not attempt rescue unless trained and equipped to do so
Ensure clear access to the incident site is available for Emergency Response	Bystander/witness	Do not attempt rescue unless trained and equipped to do so
Do not crowd or enter the incident area without prior approval from the ORT leader	ERT Leader	Do not attempt rescue unless trained and equipped to do so
ERT respond to scene	Team members	Emergency response vehicle
Priorities set and engaged	ERT Leader	
Scene made safe	All members on scene	Preserve evidence for investigation
Investigation commenced	HSSE Manager	All involved personnel
Debrief	ERT Leader	All involved personnel

Suspicious Package

Scenario description	Suspicious package.			
General outline of Emergency Response	It is appropriate that people handling mail remain vigilant and cautious at this time, but it should be remembered that most reports of suspicious packages are false alarms. All people handling mail items in a work or business situation should be aware of the emergency procedures for responding to and reporting a suspicious article. Where possible, the sorting and processing of mail and packages should be conducted in an area that is separate from the main organisation and which can be easily contained.			
Disciplines required (indicate) – Guide only	Fire fighting	☐	First Aid	☒
	Vehicle extrication	☐	Breathing apparatus	☒
	Hazmat	☒	Rescue	☐
	Specialist	☐	Other	☐
Emergency Response resources and their location	**Site**	ERT.		
	ER External support	Police		

Action Required	Role Responsible	Comment
"Emergency, emergency, emergency" called	Bystander/Witness	Radio (to be confirmed)
"Emergency, emergency, emergency" acknowledged		ERT Leader responds to incident
Do not disturb the item any further. Do not pass it around. If any material has spilt from the item, do not try to clean it up, or brush it from your clothing.	Bystander/Witness	Do not panic, follow procedure
Keep your hands away from your face to avoid contaminating your eyes, nose and mouth.	Bystander/Witness	Do not panic, follow procedure
Contact your Area Warden or nearest non-effected person and request assistance. Warn them not to enter your immediate area.	Bystander/Witness	Do not panic, follow procedure
If possible, have the building ventilation system shut down and turn off any fans or equipment that is circulating air around your workplace.	Bystander/Witness	Do not panic, follow procedure
DO NOT touch the suspicious package until rendered safe to do so by the ERT Team leader or specialist.		Do not panic, follow procedure
Stay in your office or immediate work area. This also applies to Co-workers in the same room. Prevent others from entering the area and becoming contaminated. Remember you are not in immediate danger	Bystander/Witness	Do not panic, follow procedure
Wait for help to arrive and follow instructions.	ERT Leader	
ERT respond to scene	Team members	
Priorities set and engaged	ERT Leader	
Scene made safe	All members on scene	Preserve evidence for investigation

Appendix 3 - Bomb Checklist

BOMB THREAT CHECK LIST							
Time:		Date:		Place:			
Name of person receiving call:							
Question to Ask the Caller:							
Who are you?							
When is the bomb going to explode?							
Where is it right now?							
What does it look like?							
What kind of bomb is it?							
What will cause it to explode?							
Did you place the bomb?							
Why are you doing this?							
What is your address?							
Note down demand word for word							
Did the caller appear familiar with the area, which is threatened? Yes: ☐ No: ☐							
CALLER IDENTIFICATION							
Type of Call:		**Voice:**		**Speech:**		**Language:**	
Standard	☐	Male	☐	Fast	☐	English	☐
Local	☐	Female	☐	Slow	☐	Asian	☐
Public Phone Box	☐	Child	☐	Slurred	☐	Other-Please specify	☐
Mobile	☐	Angry	☐	Nasal	☐		
Inter local	☐	Stammer	☐	Distorted	☐		
International	☐	Calm	☐	Stutter	☐	**Accent:**	
		Obscene	☐	Distinct	☐	Australian	☐
		Giggling	☐	Other	☐	English	☐
		Other	☐			Other-Please specify	☐
Command of language:		**Background Noise:**					
Excellent	☐	None	☐	Children	☐	Other	☐
Good	☐	Radio/TV	☐	Construction	☐		
Fair	☐	Train	☐	Traffic	☐		
Poor	☐	Aircraft	☐	Sirens	☐		
Comments by the person receiving the call :							

Appendix 4 – Emergency and Key Contacts

EMERGENCY CONTROL ORGANISATION (ECO) & FIRST RESPONDERS		
ECO Position	**Name**	**Contact Number**
GECL Person in Control (PIC)	Stephen Lee Regan Jones	0420 774 786 or 0427 167 786
GECL Emergency Response Team (First responders)	Lawrence MacIntosh Roger Henningsen Leon Homes Justin Hoffman Terence Kemp	0439 955 035 0428 880 563 TBA 0488 056 411 0410 446 403
EA Operations Control Room	On shift operator	02 4231 0810/0821 or 0432 751 617
EA Project Emergency Contact	Lyell Blackman Glen Cowling	0417 883 470 0418 425 780

KEY PROJECT CONTACTS		
Position	**Name**	**Contact Number**
Project Director	Jason Westerbrink	0439 424 755
Senior Project Manager	Giuseppe Gaudiello	0409 584 895
Construction Manager	Steve Lee	0420 774 786
Commissioning Manager	Regan Jones	0427 167 786
Superintendent	Roger Henningsen	0428 880 563
Superintendent	Lawrence McIntosh	0439 955 035
Engineering Manager	Brett Pratt	0407 799 030
Lead Engineer	Tristan Lewis	0416 211 305
HSE Manager	Stewart Wallace	0410 212 089
Environmental Advisor	Nicola Fraser	0400 675 298
Safety Officer	TBA	TBA

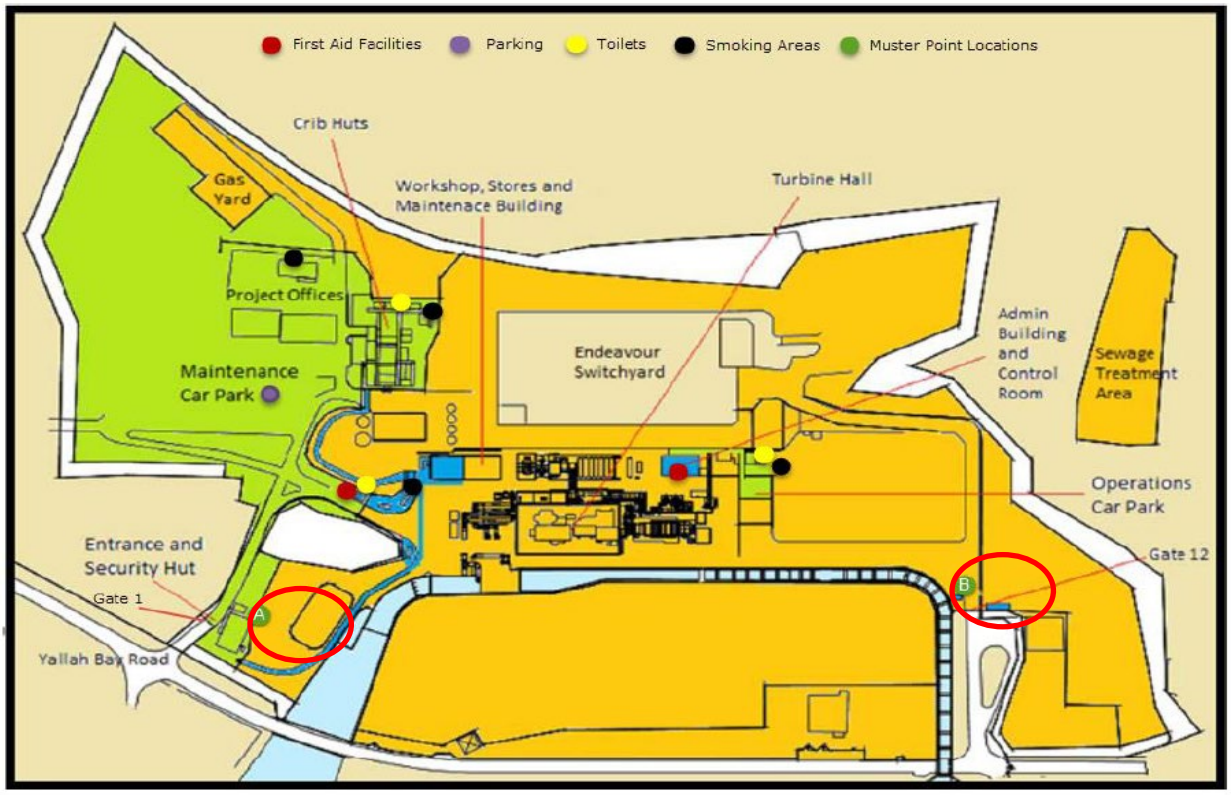
EMERGENCY SERVICES		
Services	**Address**	**Contact Number**
Fire		000
Ambulance		000
Police		000
Albion Park Police Station		02 4256 1044
Wollongong Hospital	Loftus Street, Wollongong	02 4222 5000
Shellharbour Hospital	Madigan Boulevard, Mt Warrigal	02 4295 2500
Endeavour Energy		131 003
Jemena (Fuel Gas Supply)		132 500
SES		132 500
Poisons Information Centre		131 126
Wollongong Council		02 4221 6111
SafeWork NSW – Notify Incident		131 050
SafeWork NSW – Wollongong Branch		4222 7333
EPA Pollution Hotline		131 555

Appendix 5 – Evacuation Procedure

General Evacuation Procedure:

1. Project Manager, Supervisor or Safety Representative or Relevant ECO directs an evacuation.
2. Proceed in an orderly manner to a muster point (Gate 12 primary or Gate 1 secondary).
    - If you come across another person whilst proceeding to the muster point, ensure they are aware of the evacuation and muster point area.
    - Visitors – the fully inducted person responsible is responsible for assisting the visitor/s to evacuate
3. Wait at the muster point for further instructions.
4. Project Manager, Supervisor or Safety Representative to sweep the site to ensure all persons have evacuated successfully.

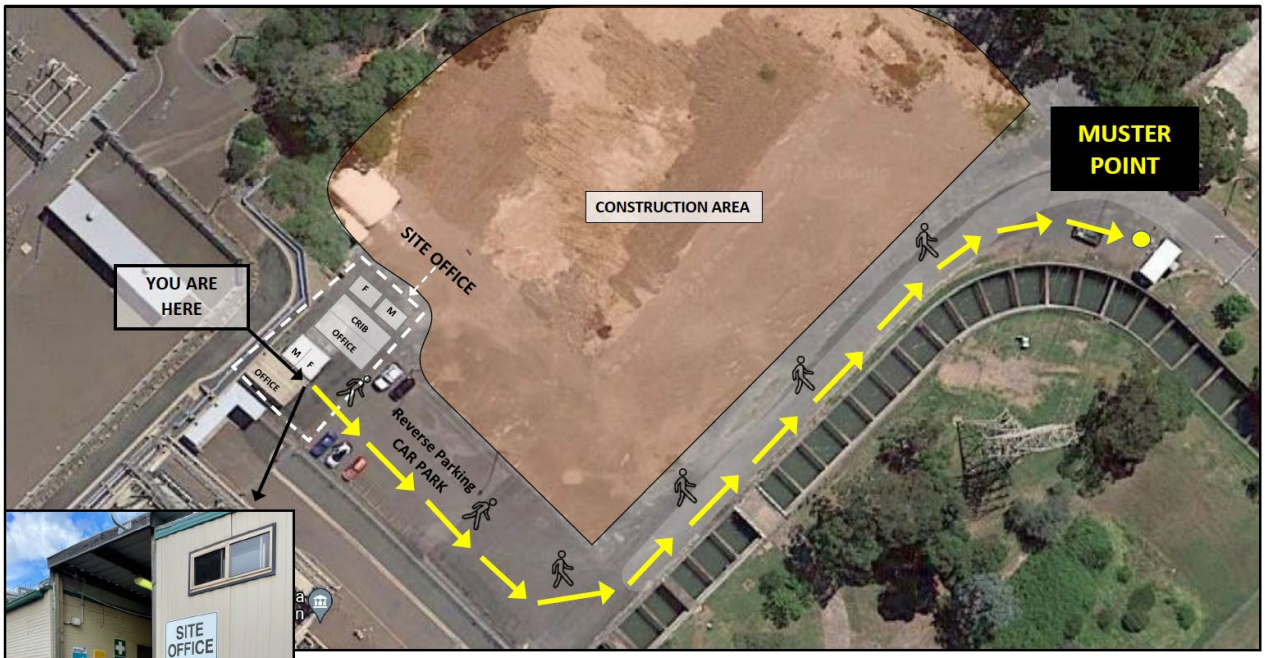
Note: Emergency evacuations will be in conjunction with Energy Australia.



Tallawarra B Emergency Muster Points

SITE EMERGENCY DETAILS

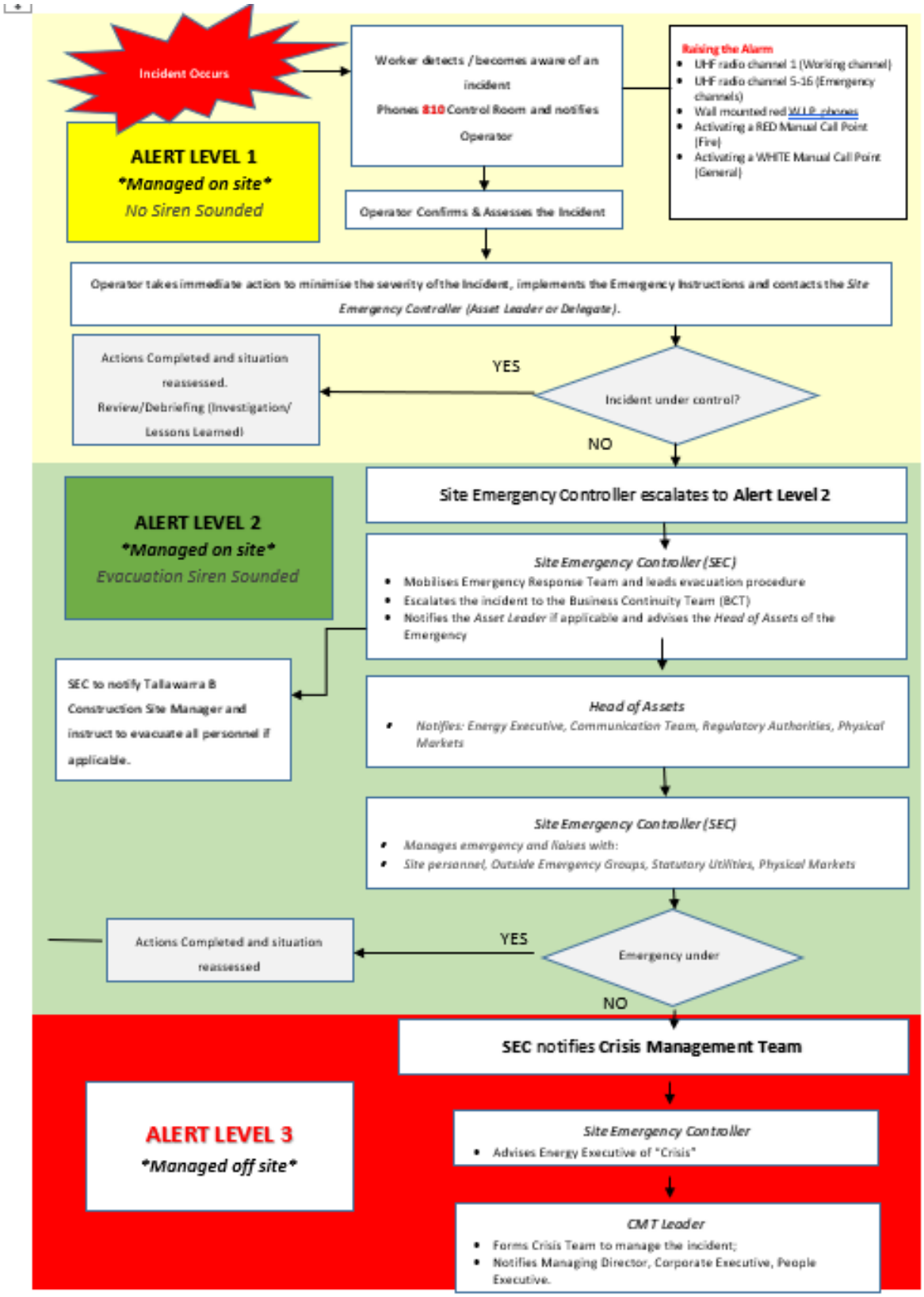
CLOUGH



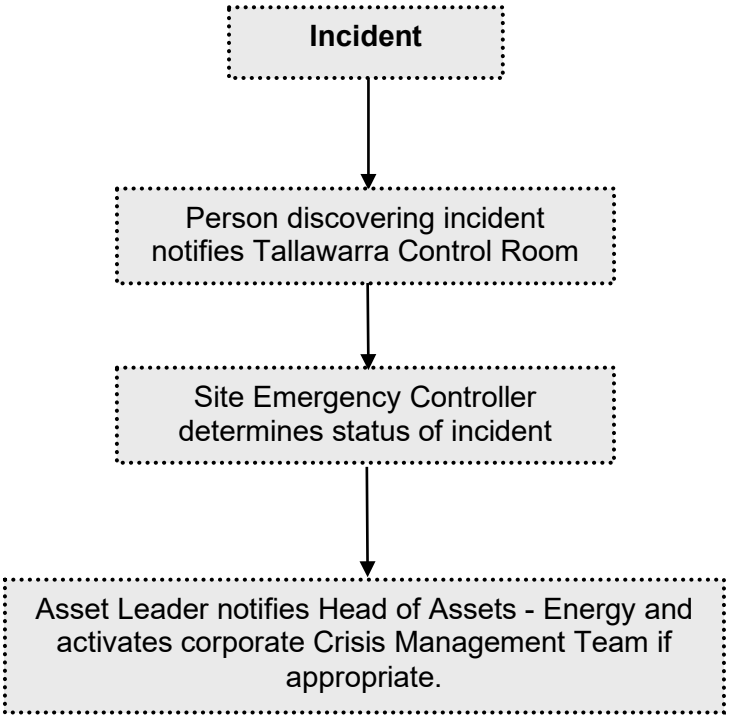
EMERGENCY CONTACTS

NAME	#
Ambulance, Fire, Police	000
Steve Lee – Construction Manager	0420 774 786
Stewart Wallace – HSE Manager	0410 212 089
Lawrence McIntosh – SMP Superintendent	0439 955 035

Appendix 6 – Energy Australia Emergency Alert System for Tallawarra A



Appendix 7– Emergency Classification & EMT Activation



Raising the Alarm

The alarm can be raised by contacting the Tallawarra Control Room via the following means:

- Portable UHF radio on Channel 1 (Working Channel) or Channels 5 to 16 (Emergency Channels);
- Dialling (02) 4231 0810 on a site land line;
- Activating a RED Manual Call Point - `Break Glass' unit in case of Fire;
- Activating a WHITE Manual Call Point - `Break Glass' unit in case of General Emergency;
- Dialling (02) 4231 0810 on a mobile telephone (ONLY from a secure location i.e. workshop).

The person raising the alarm must inform the control room of the location, size and nature of the emergency without delay so that the emergency can be classified as a Status 1 or 2 and carry out the relevant procedures.

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.

1.1. Immediate Actions – Contractors, Visitors and Energy Australia Employees

When the Evacuation Alarm system is activated, the following actions will be carried out by all Energy Australia employees and contractors on site:

- 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);
- REPORT to the Muster Point Controller.

Note: The primary Muster Point for **On-shift Energy Australia** personnel is the Operations Control Room.

These procedures are designed to:

- Ensure all Energy Australia employees, contractors and visitors are accounted for.

On sounding the Evacuation Alarm, either the Tallawarra Asset Leader or his delegate or the Power Plant Technician will assume the role of 'Site Emergency Controller' and take charge of the emergency.

Once the Muster is completed and all persons accounted for:

- Energy Australia employees are to report to the Site Emergency Controller as directed;
- The Site Emergency Controller will then delegate tasks to those members of the Emergency Response Team;
- The Emergency Response Team will maintain radio contact using the Emergency Radio Channel 1.

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