

CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

Lockyer Energy Project

.....
November 2022
.....



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DECLARATION OF ACCURACY

EPBC number - 2017/7994.

Project name - Lockyer Energy Project.

Proponent /approval holder - Capital Partners Australia Pty Limited.

ACN or ABN - ACN: 152 374 895.

The proposed/approved action - To develop a natural gas-fired power generation plant, 2.5 km north of Gatton, Queensland.

Location of the action - Ranger Road, Adare (Lot 191 on CSH2361).

Date of preparation of the management plan - 22 November 2022 (Version 3.0).

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

I declare that the information within this Construction Environment Management Plan is true and has been prepared in accordance with the Environmental Management Plan Guidelines and the conservation advice for koalas.

Signed



Full name (please print) Robert Kerr

Position (please print) Director

Organisation Capital Partners Australia Pty Limited
A.C.N. 152 374 895

Date 22 / Nov / 2022



An extract of the EPBC Act is attached below.

490 Providing false or misleading information in response to a condition on an approval or permit

(1) A person is guilty of an offence if:

- (a) the person is the holder of an environmental authority; and
- (b) a condition attached to the environmental authority requires the person to provide information; and
- (c) the person provides information in response (or purportedly in response) to the requirement; and
- (d) the person is reckless as to whether the information is false or misleading in a material particular.

Note: The fault element in paragraph (1)(d) can be demonstrated by proof of knowledge. See subsection 5.4(4) of the *Criminal Code*.

(2) The offence is punishable on conviction by:

- (a) imprisonment for a term not more than 2 years, a fine not more than 120 penalty units, or both, if it is proved the person knew the information was false or misleading; or
- (b) imprisonment for a term not more than 1 year, a fine not more than 60 penalty units, or both, if it is proved the person was reckless as to whether the information was false or misleading.

Note: Subsection 4B(3) of the *Crimes Act 1914* lets a court fine a body corporate up to 5 times the maximum amount the court could fine a person under this subsection.

491 Providing false or misleading information to authorised officer etc.

(1) A person is guilty of an offence if the person:

- (a) provides information or a document to another person (the **recipient**); and
- (b) knows the recipient is:
 - (i) an authorised officer; or
 - (ii) the Minister; or
 - (iii) an employee or officer in the Department; or
 - (iv) a commissioner; performing a duty or carrying out a function under this Act or the regulations; and
- (c) knows the information or document is false or misleading in a material particular.

(2) The offence is punishable on conviction by imprisonment for a term not more than 1 year, a fine not more than 60 penalty units, or both.

Note: Subsection 4B(3) of the *Crimes Act 1914* lets a court fine a body corporate up to 5 times the maximum amount the court could fine a person under this subsection.

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1 INTRODUCTION

The following Construction Environment Management Plan (CEMP) has been prepared by Litoria Consulting on behalf of Lockyer Energy Management Pty Ltd for the construction of a natural gas-fired power generation plant. The plant is to be constructed on land described as Ranger Road, Adare (Lot 191 on CSH2361). Figure 1 shows an aerial photo of the site.

The objectives of the CEMP are to:

- Ensure the works avoid and protect environmental values of the site;
- Where impacts are unavoidable, mitigate and manage potential environmental impacts during the construction of the project;
- Develop a procedure for auditing compliance and environmental management performance;
- Ensure compliance with the proponent's statutory obligations;
- Ensure compliance with relevant approvals, including:
 - *Environment Protection and Biodiversity Conservation Act 1999* (Qld) (EPBC Act; EPBC Act approval (EPBC referral 2017/7994, approval decision date 29 January 2018);
 - Development permit for a material change of use (electricity generation infrastructure) (approved in the Planning and Environment Court, No. 2606 of 2010),
 - Development permit for environmentally relevant activity no. 14 (approved in the Planning and Environment Court, No. 2606 of 2010).
 - Development permit for operational work (clearing of native vegetation) (approved in the Planning and Environment Court, No. 2606 of 2010).

Condition four (4) of EPBC Act approval requires the preparation of a CEMP prior to the commencement of site works.

The CEMP has been prepared in accordance with the relevant approval and the Australian Government's Environmental Management Plan Guidelines (Commonwealth of Australia 2014). The CEMP is divided into the following sections:

- Conditions of approval;
- Project description;
- Objectives;
- Environmental management roles and responsibilities;
- Inspections, monitoring, auditing and reporting;
- Environmental training;
- Emergency contacts and procedures;
- Potential environmental impacts and risks;
- Environmental management measures;
- Audit and review; and,
- Glossary of terms.



Figure 1: Aerial photograph of the site (Image date: 15 April 2020)
(Nearmap 2020).

2 CONDITIONS OF APPROVAL

Table 1 outlines the relevant conditions of the Planning and Environment Court decision (No. 2606 of 2010) and the Federal EPBC Act approval (2017/7994, approval decision date 29 January 2018), along with the sections of this CEMP that address each of the conditions. Copies of the approvals are attached in Appendix 1 and 2.

Table 1: Relevant approval conditions.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU	10	Clearing of vegetation shall only occur within areas identified on Vegetation Clearing Plan 4122282- L007 prepared by GHD and dated 28 May 2010 and in accordance with the requirements of the Department of Environmental Resource Management as a referral agency.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearance limits.
MCU	11	All vegetation that is cleared on the site or external to the site to provide access shall be mulched on-site and used for onsite landscaping works.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage on-site vegetation mulching.
MCU	12	Where vegetation that is cleared on the site or external to the site to provide access cannot be used for onsite landscaping works it shall be removed and disposed of in an approved facility.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing including mulching and disposal.
MCU	13	A Koala spotter must be present on-site during all vegetation clearance works of trees greater than 15cm diameter at breast height (DBH). This condition applies during clearing works.	Section 10.1, Section 10.1.2, Table 8, Table 9, Table 10	The Fauna Management sub-plan and Vegetation Management sub-plan address management practices to identify and manage Koala pre-clearing and clearing requirements.
MCU	14	Within Area B as defined by the Department of Environmental Resource Management approval map RARP2009/009249 the 50m boundary fire trail/break shall be reduced to 1.5 times the height of the tallest vegetation or 20m whichever is the greater. The difference between this and the 50m firebreak is to be rehabilitated to reflect the precleared Regional Ecosystem. The Applicant is to submit and secure Council	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage the fire break.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		approval of an amended Landscaping and Rehabilitation Plan to reflect this condition.		
MCU	15	Within Area B as defined by the Department of Environmental Resource Management approval map RARP2009/009249, the developer shall provide wildlife friendly fencing that allows the movement of macropods, koalas and gliders. This fencing must also be designed to reduce possible injury to native wildlife. Within the balance of the lot, the applicant must utilise wildlife friendly fencing that is designed to minimise possible injury to native wildlife.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan and Boundary Fencing sub-section address management practices relating to koala and other fauna fencing.
MCU	16	Except where amended by conditions of this approval all rehabilitation and landscaping works are to be undertaken in accordance with: <ul style="list-style-type: none"> A. Westlink Power Project Landscape Management and Revegetation Plan Rev 0 prepared by GHD and dated 23 February 2010. B. Westlink Power Project Draft Landscape Specification Rev 0 prepared by GHD and dated 23 February 2010. C. Westlink Power Project Visual Impact Rev 0 and Landscape Assessment prepared by GHD and dated 31 August 2009. D. Westlink Power Project Visual Impact and Landscape Assessment Addendum prepared by GHD and dated February 2010. 	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan and Rehabilitation and Landscaping Works sub-section address management practices for all rehabilitation and landscaping works.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		E. Vegetation Clearing Plan 41-22282-L007 prepared by GHD and dated 28 May 2010.		
MCU	21	<p>All waste storage and management shall be undertaken in accordance with Westlink Power Project Waste Management Plan Rev 0 prepared by GHD and dated 23 February 2010 subject to the following:</p> <ul style="list-style-type: none"> A. An adequate number of an appropriate type of commercial and bulk waste containers shall be provided at a central location to accommodate all waste produced on the site; B. Arrangements shall be made for all waste collected on the site to be removed not less than once per week; C. The waste collection area shall be provided with an imperviously paved area on which to stand all waste containers and a suitable form of enclosure to conceal and secure the waste disposal area; and D. The waste collection area must be located such that the waste collection vehicle can collect the waste without obstruction and leave the property in a forward gear. 	Section 10.1.8, Table 16, Appendix 19	The Waste Management sub plan addresses waste related management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU	34	All stormwater management and drainage infrastructure shall be designed by an RPEQ generally in accordance with: <ul style="list-style-type: none"> A. A. Westlink Power Project Stormwater Management Plan Rev 0 prepared by GHD and dated 23 February 2010; B. Gatton Shire Council Planning Scheme; C. Queensland Urban Drainage Manual; and D. Any other detail or documentation required to be included in the Operational Works application by conditions of this approval. 	Section 10.1.4, Table 12, Appendix 15	The Water Quality Management sub-plan and the Stormwater Design Considerations sub-section address stormwater management requirements.
MCU	35	Stormwater drainage structures shall be designed so that there is 'no worsening' of runoff beyond that which occurs on the existing undeveloped site.	Section 10.1.4, Table 12, Appendix 15	The water Quality Management sub-plan and the Stormwater Design Considerations sub-section address stormwater management requirements.
MCU	37	All devices shall be installed on the development site and responsibility for maintenance shall rest with the relevant site manager. Details of required operation and maintenance procedures shall be supplied for future Council reference if required.	Section 10.1.4, Appendix 15	The Water Quality Management sub-plan and the Stormwater Design Considerations sub-section address stormwater management requirements.
MCU	38	The Fords Road table drain on the outlet for the culverts through the landscape bund shall be reshaped and stabilised as necessary to carry the ARI 100 year design outlet flow from the detention basin. Such works shall be continued as necessary to an agreed point of discharge.	Section 10.1.4, Appendix 15	The Water Quality Management sub-plan and the Stormwater Design Considerations sub-section address stormwater management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU	39	Ponding of stormwater must not occur on the subject land, adjoining allotments or road reserve unless specifically conditioned as part of this development approval or the subsequent approval for Operational Works.	Section 10.1.4, Appendix 15	The Water Quality Management sub-plan and the Stormwater Design Considerations sub-section address stormwater management requirements.
MCU	40	Erosion and sediment control measures shall be provided generally in accordance with Westlink Power Project Erosion Management Plan Rev 0 prepared by GHD and dated 23 February 2010.	Section 10.1.4, Appendix 10	The Water Quality Management sub-plan and the Erosion Design Considerations sub-section address all erosion and sedimentation management requirements.
MCU	42	All unlined open drains on the site and along Fords Road adjacent to the site shall be stabilised with vegetation upon completion in accordance with Table 9.05.3 of QUDM.	Section 10.1.1, Section 10.1.4, Appendix 9, Appendix 10, Appendix 15	The Rehabilitation And Landscaping Works sub-section of the Vegetation Management sub-plan, the Landscape and Revegetation Plan (Litoria Consulting, 26/2/21, Issue B), the Landscape Management and Revegetation Plan (GHD, February 2010), the Water Quality Management sub-plan, the Erosion Design Considerations sub-section and the Stormwater Design Considerations sub-section address drain stabilisation requirements.
MCU DERM	DERM 2.1	Clearing of assessable native vegetation is limited to Area A as shown on the attached Referral Agency Response (Vegetation) Plan that has the reference RARP2009/009249	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits.
MCU DERM	DERM 2.2	Clearing within Area A is limited to the extent necessary to establish the Westlink Powerstation as shown on siteplan titled 'Plan Layout Option 1' prepared by GHD	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		drawing number 41-2139-SK004 Rev E, dated 3 December 2009		
MCU DERM	DERM 2.3	<p>No clearing as a result of the Material Change of Use is to occur within the area shown as Area B on the attached Referral Agency Response (Vegetation) Plan that has the reference RARP2009/009249, unless the clearing is—</p> <ul style="list-style-type: none"> • By fire under the Fire and Service Rescue Service Act 1990 to reduce hazardous fuel loads or an activity under the Fire Service and Rescue Act 1990, section 53, 68 or 69; or • Where it is necessary to remove or reduce the imminent risk that the vegetation poses to serious personal injury or damage to property; or • To establish a firebreak to protect the Westlink Powerstation as shown on siteplan titled 'Plan Layout Option 1' prepared by GHD, drawing number 41-2139-SK004 Rev E, dated 3 December 2009 for a maximum width not exceeding 1.5 times the height of the tallest vegetation adjacent to the infrastructure, or 20 metres, whichever is the greater; and • To give effect to any subsequent development approvals for operational works that is the clearing of native vegetation. 	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits, including fire break management.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU DERM	DERM 2.4	Prior to, during and post clearing of assessable native vegetation, sediment and erosion controls must be implemented in accordance with the site management plan titled 'Westlink Power Project Erosion Management Plan' prepared by GHD, dated February 2010.	Section 10.1.4, Appendix 10	The Water Quality Management sub-plan and the Erosion Design Considerations sub-section address all erosion and sedimentation management requirements.
MCU DERM	DERM 2.5	Clearing of assessable native vegetation must be staged in accordance with operational needs	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits, including fire break management.
MCU DERM	DERM 2.6	Any clearing or activities associated with clearing within Permit Area A on the attached Referral Agency Response (Vegetation) Plan that has the reference RARP2009/009249 must not adversely impact on assessable native vegetation outside Permit Area A.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits, including fire break management.
MCU DERM	DERM 2.7	Within Permit Area A as shown on the attached Referral Agency Response (Vegetation) Plan that has the reference RARP2009/009249 clearing must only commence once the clearing area has been clearly defined.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits, including fire break management.
MCU DERM	DERM 2.8	Land clearing debris must not be pushed into gullies, watercourses, other drainage line or waterlogged areas.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses vegetation management requirements.
MCU DERM	DERM 2.9	Site briefings for all construction staff must occur prior to any major works and before commencement of works daily to discuss approved clearing processes and provide	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses vegetation management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		clear understanding of areas to be protected from construction.		
MCU DERM	DERM 2.10	No clearing as a result of the Material Change of Use shall occur in any High Value Regrowth vegetation unless clearing is exempt under schedule 24 of the Sustainable Planning Regulation 2009 or done in accordance with the Regrowth Vegetation Code - Version 1, October 2009.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits.
MCU DERM	DERM General 1	In carrying out the activity to which this approval relates, all reasonable and practicable measures must be taken to prevent or to minimise the likelihood of environmental harm being caused.	Section 4	Referred to in CEMP objectives (Section 4) and addressed throughout the CEMP.
MCU DERM	DERM General 2	Subject to condition General 3, the person undertaking the activity to which this approval relates must do each of the following— (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; (b) maintain such measures, plant and equipment in a proper and efficient condition; and (c) operate such measures, plant and equipment in a proper and efficient manner.	Section 4, Section 6, Section 9, Section 10,	The CEMP outlines all contractor responsibilities and refers the reader to relevant management plans which detail compliance measures for all environmental related approval conditions.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU DERM	DERM General 3	Condition General 2 applies to measures, plant or equipment intended to measure compliance with condition Air 4 only if the person undertaking the activity to which this approval relates is directed by the administering authority under condition Air 5 to undertake monitoring for these contaminants, and then only for the period of time stated in the direction.	Section 10.1.6	The CEMP outlines all contractor responsibilities and refers the reader to relevant management plans which detail compliance measures for all environmental related approval conditions. Air quality specific management and monitoring is also covered in the Air Quality Management sub-plan.
MCU DERM	DERM General 5	From commencement of the activity to which this approval relates, a site based management plan that addresses the following matters must be implemented – (a) environmental commitments – a commitment by the person undertaking the activity to which the approval relates to achieve environmental goals stated in the plan and undertake continuous improvement in the overall environmental performance of the environmentally relevant activity; (b) identification of environmental issues (including all sources or potential sources of environmental harm) and potential impacts of those issues on the environment; (c) control measures for routine operations and all sources of actual or potential environmental harm mentioned in (b) to prevent or minimise the likelihood of environmental harm;	Section 4 to Section 11	This CEMP is the site-based management plan. It covers all matters listed in this approval condition.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		(d) contingency plans and emergency procedures for non-routine situations; (e) organisational structure and responsibility; (f) effective communication; (g) monitoring of contaminant releases; (h) conducting environmental impact assessments; (i) staff training; (j) record keeping; (k) periodic review of environmental performance with the terms of the site based management plan and benchmarks against which compliance can be measured; and (l) commitment by the operator to undertake continuous improvement in the overall environmental performance of the environmentally relevant activity.		
MCU DERM	DERM General 6	The site based management plan, or any amendments made to it, must not be inconsistent with any condition(s) of this approval if the inconsistency would result in a lower standard of environmental performance than is required under the conditions of the approval. Example for condition General 6: A lower standard of environmental performance might include, for example— (a) specifying targets for the release of contaminants (incl. air, noise or water) at concentrations higher than those permitted for the contaminant under this approval, or where	Section 4	Section 4 details the requirements for the CEMP to meet all approval conditions.

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Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		<p>the concentrations of contaminants are specified under this approval as a range, by specifying concentrations targets for emissions outside that range; or</p> <p>(b) requiring less frequent monitoring or reporting than required under the conditions of this approval.</p>		
MCU DERM	DERM General 7	To the extent of any inconsistency between a site based management plan and any condition(s) of this approval, other than where the inconsistency is of a type authorised under condition General 6, or any law of the State or Commonwealth in force at the relevant time, the site based management plan is invalid.	Section 4	Section 4 details the requirements for the CEMP to meet all approval conditions.
MCU DERM	DERM General 8	<p>To remove any doubt, if a site based management plan imposes a higher standard of environmental performance than the standard required under the conditions of this approval, the registered operator must, under condition General 5, give effect to higher standard stated in the site based management plan.</p> <p>Example for condition General 8: a higher standard of environmental performance requirement might include, for example—</p> <ul style="list-style-type: none"> (a) specifying lower emissions targets for contaminants to air or lower noise emissions than the limits specified for the contaminant under this approval; (b) requiring more frequent monitoring or reporting of emissions than is required under this approval ; or (c) requiring more frequent training for employees undertaking the activity about environmental 	Section 4	Section 4 details the requirements for the CEMP to meet all approval conditions.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		issues than is required under the conditions of this approval.		
MCU DERM	DERM General 21	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated – (a) if a statutory instrument or standard made under a law of the State prescribes standards for calibrating the equipment – in accordance with that statutory instrument or standard; or (b) otherwise – according to any relevant AS applicable to the calibration of the equipment.	Section 6.2	The Environmental Monitoring Program details the monitoring requirements.
MCU DERM	DERM 22	The person undertaking the activity to which this approval relates must keep an appropriate spill kit, personal protective equipment, operator instructions and emergency procedure guides for the management of wastes and chemicals associated with the activity in a place accessible to all employees at the authorised place.	Section 10.1.8	The Waste Management sub-plan and Spill Kit sub-section details the relevant requirements for waste and spills.
MCU DERM	DERM 23	The person undertaking the activity to which this approval relates must ensure that all employees undertaking the activity at the place have received training in the use of the spill kit and the handling of chemicals stored at the authorised place.	Section 10.1.8	The Waste Management sub-plan and Spill Kit sub-section details the relevant requirements for waste and spills.
MCU DERM	DERM 24	The training mentioned in condition General 23 must be repeated for each employee at	Section 10.1.8	The Waste Management sub-plan and Spill Kit sub-section details the relevant requirements for waste and spills.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		the authorised place at intervals of not greater than two (2) years.		
MCU DERM	DERM 25	The person undertaking the activity to which this approval relates must keep a record of the training provided to employees, including – (a) the names of all persons who undertook the training; (b) the date on which the training was provided; and (c) an outline of the training provided.	Section 7	Training and record keeping for training is detailed in the Environmental Training section of the CEMP.
MCU DERM	DERM Air 3	The release of dust or particulate matter resulting from the activity to which this approval relates must not cause an environmental nuisance at any nuisance sensitive place or commercial place.	Section 10.1.6	The Air Quality Management sub-plan addresses all air quality management requirements.
MCU DERM	DERM Air 4	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive place or commercial place: (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with AS 3580.10.1 of 2003 (or more recent editions); or (b) a concentration of particulate matter with an aerodynamic diameter of ≤ 10 micrometre (μm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a nuisance	Section 10.1.6	The Air Quality Management sub-plan addresses all air quality management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		<p>sensitive or commercial place downwind of the authorised place, when monitored in accordance with —</p> <ul style="list-style-type: none"> • AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air — Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet — Gravimetric method'; or • any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority; or <p>(c) a concentration of particulate matter with an aerodynamic diameter of ≤ 2.5 micrometre (μm) (PM2.5) suspended in the atmosphere of 25 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the authorised place, when monitored in accordance with —</p> <ul style="list-style-type: none"> • any relevant AS to the extent it is relevant to the measurement of PM2.5 particles; or • any alternative method of monitoring PM2.5 which may be permitted by the 'Air Quality Sampling Manual' as 		

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		published from time to time by the administering authority.		
MCU DERM	DERM Land 6	All fuels and chemicals must be stored in an onsite containment system of a type suitable to prevent the spillage of the material and its discharge to the environment.	Section 10.1.8	The Waste Management sub-plan and Chemical Storage sub-section detail the waste and chemical management requirements.
MCU DERM	DERM Land 7	In all instances, the storage and handling of chemicals and fuels done in accordance with the relevant AS (as amended or substituted by a later standard) shall be taken to be sufficient for compliance with condition Land 6. At this date, see Standards: <ul style="list-style-type: none"> • AS1940 – 2004 The storage and handling of flammable and combustible liquids; • AS3780 – 2008 The storage and handling of corrosive substances; and • AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and bulk intermediate containers. 	Section 10.1.8	The Waste Management sub-plan and Chemical Storage sub-section detail the waste and chemical management requirements.
MCU DERM	DERM Noise 2	Noise from the activity to which this approval relates must not cause an environmental nuisance at any nuisance sensitive place or commercial place.	Section 10.1.7, Table 15	The Noise Management sub-plan address all noise management requirements.
MCU DERM	DERM Noise 5	The method of measurement and reporting of noise levels must comply with the latest edition of the 'Noise Measurement Manual' as published from time to time by the administering authority.	Section 10.1.7, Table 15	The Noise Management sub-plan address all noise management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU DERM	DERM Social 1	<p>The person undertaking the activity to which this approval relates must record the following information for each complaint received about the activity —</p> <ul style="list-style-type: none"> (a) time, date, name and contact details of the complainant; (b) reasons for the complaint; (c) any investigations undertaken by the person undertaking the activity to which this approval relates; (d) conclusions formed by the person undertaking the activity to which this approval relates following the investigation; and (e) any actions taken by the person undertaking the activity to which this approval relates to resolve the complaint(s). 	Section 6.7	The Complaint Reporting section of the CEMP details all complaints management and reporting requirements.
MCU DERM	DERM Waste 3	<p>Waste (other than wastewater or sludges in the evaporation pond) must be removed from the authorised place within the timeframe specified for the waste as follows —</p> <ul style="list-style-type: none"> (a) if the waste is surplus from the construction of the power station — within three (3) months after the power station is commissioned; or (b) otherwise — within three (3) months of the waste being generated. 	Section 10.1.8	The Waste Management sub-plan details all waste management requirements.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
MCU DERM	DERM Waste 4	Waste generated by the activity to which this approval relates must be stored, pending its lawful disposal to landfill or to a recycling facility, or another place with the written approval of the administering authority, in a location at the authorised place where it is not visible to a person outside the authorised place.	Section 10.1.8	The Waste Management sub-plan details all waste management requirements.
MCU DERM	DERM Waste 6	Waste must not be buried or burned at the authorised place.	Section 10.1.8	The Waste Management sub-plan details all waste management requirements.
MCU DERM	DERM Water 1	Erosion protection and sediment control measures must be implemented and maintained to minimize erosion and prevent the release of sediment to any surface waters during construction of the power plant.	Section 10.1, Section 10.1.4	The Water Quality Management sub-plan and Erosion Design Considerations sub-section address all erosion and sediment control requirements.
MCU DERM	DERM Water 9	Banks and diversion drains must be of suitable design and capacity to disperse noncontaminated stormwater so as not to cause flooding, or contribute to increased flood potential of the area.	Section 10.1, Section 10.1.4	The Water Quality Management sub-plan and Stormwater Design Considerations sub-section address stormwater management requirements.
Cultural Heritage		Three isolated artefacts are not subject to inadvertent harm during construction works. They should be flagged or fenced as appropriate, and marked on relevant construction plans as 'no go' areas.	Section 10.1.5, Table 13	The Aboriginal Cultural Heritage Management sub-plan and Aboriginal Objects Find Procedure sub-section outline procedures for protecting known artefacts.
Cultural Heritage		Two potential scar trees are not subject to inadvertent harm during construction works. They should be flagged or fenced as appropriate, and marked on relevant construction plans as 'no go' areas.	Section 10.1.5, Table 13	The Aboriginal Cultural Heritage Management sub-plan and Aboriginal Objects Find Procedure sub-section outline procedures for protecting potential scar trees.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
Cultural Heritage		Implement Aboriginal Objects Find Procedure as per CH duty of care assessment.	Section 10.1.5, Table 13	Requirements of the Aboriginal Objects Find Procedure sub-section of the Aboriginal Cultural Heritage Management sub-plan will be implemented throughout construction.
Cultural Heritage		Implement Aboriginal Human Remains find procedure.	Section 10.1.5, Table 13	Requirements of the Aboriginal Human Remains Find Procedure sub-section of the Aboriginal Cultural Heritage Management sub-plan will be implemented throughout construction.
EPBC	1	The approval holder must not clear vegetation outside of the project site and the approval holder must not clear more than 18.38 hectares of vegetation within the project site.	Section 10.1, Section 10.1.1, Table 8	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits.
EPBC	2	The approval holder must ensure a pre-clearance survey is undertaken by a suitably qualified person within 24 hours before any clearing of vegetation within the project site, to identify any koalas present.	Section 9, Section 10.1.1, Section 10.1.2	The Fauna Management sub-plan, and the Vegetation Management sub-plan address management practices to identify and manage Koala pre-clearing requirements.
EPBC	3	The approval holder must not clear any vegetation supporting any koalas until such time that any present koalas vacate the vegetation or are relocated by a suitably qualified person. Veterinary care, or assistance from a wildlife refuge, must be sought if any koalas are found injured within the project site while clearing and/or construction occurs within the project site.	Section 9, Section 10.1.1, Section 10.1.2	The Fauna Management sub-plan, and the Vegetation Management sub-plans address management practices to identify and manage Koala clearing requirements.

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Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
EPBC	4	Prior to the commencement of the action, the approval holder must develop a Construction Environment Management Plan. The Construction Environment Management Plan must incorporate all of the management objectives, performance criteria and management controls described in Attachment A of these conditions and be implemented until the end date.	CEMP document	This CEMP meets the requirements of this condition.
EPBC	9	The approval holder must ensure that management plans are prepared in accordance with the Environmental Management Plan Guidelines. Each management plan must also: <ul style="list-style-type: none"> a. include details on how the management plan is consistent with the Environmental , Management Plan Guidelines and the conservation advice for koalas. b. provide a statement signed by the approval holder declaring that the information is true and has been prepared in accordance with the Environmental Management Plan Guidelines. 	Section 1	This CEMP has been prepared following all guidelines outlined in the Environmental Management Plan Guidelines and the EPBC Act Referral Guidelines for the Vulnerable Koala. A declaration of accuracy has been attached to the CEMP.
EPBC	12	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions, including measures taken to implement any management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an	Section 6	Section 6 of this CEMP outlines the requirements for inspections, monitoring, auditing and reporting.

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.		
EPBC	13	Within 60 business days of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on its website addressing compliance with each of the conditions, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions must be provided to the Department at the same time as the compliance report is published. The Minister may provide written consent to the approval holder to cease reporting if satisfied additional reports are not warranted.	Section 6	Section 6 of this CEMP outlines the requirements for inspections, monitoring, auditing and reporting.
EPBC	14	The approval holder must report any potential or actual contravention of the conditions to the Department in writing within 5 business days of the approval holder becoming aware of the potential or actual contravention.	Section 6	Section 6 of this CEMP outlines the requirements for inspections, monitoring, auditing and reporting.
EPBC	Attachment A	Vegetation clearing limits will be defined under the contract documentation, to minimise the extent of vegetation clearing whilst allowing construction to occur, taking into account erosion and sediment controls.	Section 9, Section 10.1.1, Section 10.1.2, Section 10.1.4	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits. The Water Quality Management sub-plan and Erosion

Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
				Design Considerations sub-section address erosion and sediment controls. The CEMP will be included in the contract documentation.
EPBC	Attachment A	Incorporation of No-Go Zones and vegetation clearing limits with specific vegetation clearing requirements and methodologies within the contract documentation.	Section 9, Section 10.1.1, Section 10.1.2,	The Vegetation Management sub-plan addresses management practices to identify and manage vegetation clearing limits. The CEMP will be included in the contract documentation.
EPBC	Attachment A	All vehicles and plant will stay on pre-determined routes and adhere to site construction and operational rules related to speed limits. Speed limits to be clearly signposted to minimise potential for fauna impact.	Section 10.1.2, Table 9, Table 10,	The Fauna Management sub-plan addresses management practices to reduce risk of fauna impact by vehicles.
EPBC	Attachment A	Locations and design of koala exclusion fencing to be incorporated into contract documentation and construction schedule to ensure appropriate structures, placement and timing. Replacement of all cattle fencing with wildlife friendly fencing to the site's eastern, western and northern boundaries. Koala exclusion fencing will be installed along the southern boundary in accordance with Road and Traffic Authority (NSW) Standard Drawing and include the following specifications: <ul style="list-style-type: none"> - Galvanised wire 50 mm chain-link fence, with additional 0.5m overhang "floppy top" (outward of road formation). 	Section 10.1.1, Table 9, Appendix 14	The Vegetation Management sub-plan and Boundary Fencing sub-section address management practices relating to Koala and other fauna fencing. The location of boundary fencing is shown in the Landscape and Revegetation Plan (Litoria Consulting, 26/02/21, Issue B).

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Approval	Condition	Requirement	Plan reference	Demonstration of how the plan addresses requirements and commitments made in the plan to address condition requirements
		<ul style="list-style-type: none"> – 3 m buffer free of vegetation (excluding grasses) on habitat side of fence. 		
EPBC	Attachment A	Undertake an environmental induction to all site personnel to outline responsibilities in relation to the koala.	Section 10.1.2	The Koala and Grey-Headed Flying Fox Management sub-section of the Fauna Management sub-plan addresses management and induction requirements for site personnel that are specific to these species.

3 PROJECT DESCRIPTION

The Lockyer Energy Project is an open cycle gas turbine project located north of Gatton in South East Queensland. The project will draw gas from the Roma to Brisbane Pipeline and supply power to the Energex 110 kV substation immediately adjacent to the project.

The project is a staged development of a natural gas-fired power generation plant proposed by Quinbrook Infrastructure Partners in response to growing demand for electricity. The proposed life of the plant is 30 years, with the following anticipated loads:

- Stage 1 - 200-300 MW;
- Stage 2 - 300-400 MW; and,
- Stage 3 - 300-400 MW.

The activities planned for construction of the power plant include:

- Vegetation clearing and stripping / stockpiling topsoil;
- Installation of temporary and/or permanent erosion and sediment control measures;
- Earthworks to level the development pad;
- Dewatering and filling of two (2) farm dams;
- Construction of stormwater and drainage structures, batters and earth bunds; and,
- Rehabilitation, stabilisation and planting of earth bunds and other areas.

The approved development can be seen in Appendix 3, with a copy of the approval conditions contained in Appendix 1 and 2.

In relation to vegetation clearing, to facilitate the project, clearing of 18.38 hectares of vegetation within the project site is required. The extent of approved clearing can be seen in Figure 2.

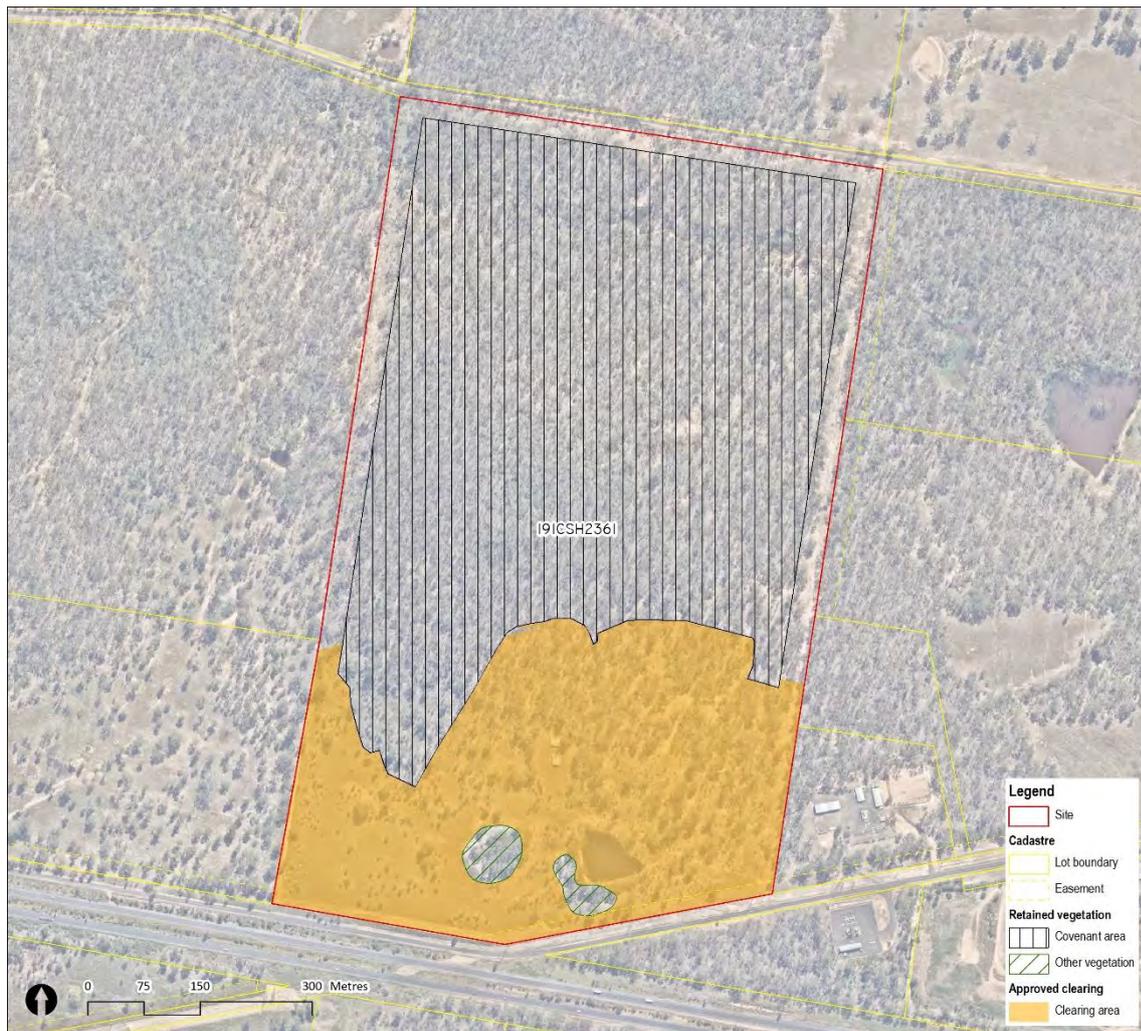


Figure 2: Approved clearing area (Image date: 15 April 2020) (Nearmap 2020).

4 OBJECTIVE

The objective of the CEMP is to ensure that all works undertaken for construction of a natural gas-fired power generation plant, including vegetation clearing required to facilitate the development, comply with the relevant legislation and conditions of approval.

In carrying out their activities on site, all contractors must ensure that all reasonable and practicable measures are taken to prevent or minimise the likelihood of environmental harm being caused.

The CEMP provides contractors with guidance for their relevant activities and ensures that all works are managed to prevent and to minimise any adverse effects on the environment, particularly on the Koala and Grey-headed Flying-fox and their respective habitats within the project footprint. This will be achieved by identifying and reducing environmental risks, providing appropriate training for all contractors, and promoting environmental awareness of the project.

The CEMP covers all environmental aspects associated with the works, providing control measures to minimise adverse effects on the environment. Monitoring and reporting requirements, corrective actions and key responsibilities are also outlined.

The CEMP covers key environmental themes that will be the focus of management, as follows:

- Vegetation and fauna, including pest management;
- Water quality, including erosion and sediment control and stormwater management;
- Cultural heritage;
- Noise;
- Air quality; and,
- Waste management.

This CEMP aims to ensure that the information contained within this management plan is consistent with all conditions as set out in Section 2. Where the CEMP imposes a higher standard of environmental performance than the standard required under the conditions of this approval, the contractor or registered operator must follow the requirements as set out in the CEMP.

5 ENVIRONMENTAL MANAGEMENT ROLES AND RESPONSIBILITIES

Positive environmental outcomes are dependent on the clear and unambiguous assignment of accountability and responsibilities of key positions within the organisational structure. The contractor will be ultimately responsible for compliance with the CEMP and will oversee the implementation of the CEMP with the Site Environmental Manager and sub-contractors.

The CEMP is to be implemented by all site personnel and contractors prior to and during the process of construction and is to be administered by the Site Environmental Manager or their agent, the contractor(s) responsible for the removal / clearing of vegetation and relevant construction works, revegetation / landscape contractor and a licensed Fauna Spotter Catcher.

A copy of the CEMP, including the Personnel Register, (Appendix 4) is to be maintained on-site during construction phases, and where relevant, operation of the facility post-construction. The Personnel Register is to be kept updated with any new contact information.

Environmental management and compliance with the CEMP will be overseen by the Site Environmental Manager.

5.1 OVERALL RESPONSIBILITIES

All site personnel are responsible for complying with the CEMP. Employees, contractors, sub-contractors and suppliers are required to:

- Take all reasonable steps to seek information on the environmental requirements of the project;
- Undertake all activities in accordance with the CEMP and any associated documents;
- Ensure that they are aware of the relevant person in charge of overseeing compliance with the CEMP;
- Supervise the environmental performance of each task against the CEMP;
- Report any activity which has, will have, or has the potential to cause environmental harm;
- Notify the Site Environmental Manager of any non-compliance with the CEMP;
- Complete pre-start checks and inspections of all equipment prior to works and to report any equipment defects;
- Ensure that they undertake any environmental training provided and understand their obligations under the CEMP and relevant legislation; and,
- Complete the Personnel Register (Appendix 4) and Environmental Inspection Checklist (Appendix 6) to acknowledge they have read and understood all aspects of the CEMP.

The CEMP will be included in all site inductions to ensure that employees, contractors, sub-contractors and suppliers are aware of their responsibilities.

5.2 SITE ENVIRONMENTAL MANAGER

The Site Environmental Manager is responsible for compliance with the CEMP and any relevant legislation. The Site Environmental Manager is responsible for:

- Maintenance, review and implementation of the CEMP;
- Auditing and compliance in accordance with the CEMP requirements;
- Assisting project personnel to understand their roles and responsibilities under the CEMP;
- Ensuring that adequate training has been provided to all site personnel;
- Carrying out regular inspections of work areas in accordance with CEMP and legislative requirements;
- Identifying environmental incidents or issues and implementation of management measures to avoid and minimise environmental harm;
- Being present on site during high risk activities, such as during clearing of vegetation, and;
- Maintaining environmental records.

Site Environmental Manager contact details can be found in the contacts list (Appendix 5).

As separate contractors will be responsible for subsequent stages of works, the CEMP is to be updated as required with details of the relevant Site Environmental Manager.

6 INSPECTIONS, MONITORING, AUDITING, AND REPORTING

This section outlines the environmental inspections, monitoring, auditing, and reporting requirements for this project. These activities ensure the project is compliant with all federal legislative requirements and will ensure identification of all non-compliance issues.

Construction phases throughout the life of the project have been identified as:

1. Pre-construction;
2. Construction; and,
3. Post-construction.

All environmental management procedures and sub-plans within this CEMP relate to activities performed during all three phases of construction. All site personnel must make themselves aware of all environmental management procedures and sub-plans. All site personnel will receive training and inductions regarding environmental management plans prior to accessing the site

A copy of the CEMP, including the Personnel Register (Appendix 4) and Environmental Inspection Checklist (Appendix 6), is to be maintained on-site during the construction phase of the development.

6.1 ENVIRONMENTAL INSPECTIONS

The Site Environment Manager or delegate will conduct weekly environmental inspections to monitor and evaluate the effectiveness of on-site environmental controls.

Environmental inspections will be recorded using the Environmental Inspection Checklist (EIC; Appendix 6) and will be used to record any maintenance or equipment defects. Inspection frequencies are listed in Table 2.

Table 2: Environmental inspection requirements.

Type of Inspection	Inspection Frequency	Form used
Active work sites	Weekly	EIC
Cultural Heritage Areas	Weekly	EIC
Incident or Complaint	Event	Incident form
Non-compliance	Event	Incident form

6.2 ENVIRONMENTAL MONITORING

To ensure compliance with all aspects of the CEMP, environmental monitoring will be performed through each phase of construction, as set out in Table 3. Details for

environmental monitoring procedures are outlined within each of the respective environmental management sub-plans.

Table 3: Environmental monitoring required at each phase of construction.

Construction Phase	Monitoring Programs
Pre-construction	Vegetation Management; Fauna Management; Pest Management; and, Water Quality Management.
Construction	Aboriginal Cultural Heritage Management; Vegetation Management; Fauna Management; Pest Management; Water Quality Management; Air Quality Management; Noise Management; and, Waste Management.
Post-construction	Vegetation Management; Pest Management; and, Water Quality Management.

The implementation of the environmental monitoring will be the responsibility of the Site Environmental Manager, or delegate, and will include:

- Coordinating sample collection and documentation;
- Coordination of sample and monitoring equipment;
- Ensuring monitoring frequency is in accordance with all approvals, permits, ASs, and any other industry standards;
- Data management and representation of results;
- Reporting non-compliance or incidents related to monitoring;
- Responsible for the implementing any corrective actions related to non-compliance or monitoring incidences;
- Training of personnel in monitoring procedures, and;
- Arranging specialist consultants to conduct monitoring duties, as required.

All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated in the following way:

- If a statutory instrument or standard made under a law of the State prescribes standards for calibrating the equipment — in accordance with that statutory instrument or standard; or,
- Otherwise — according to any relevant AS applicable to the calibration of the equipment.

In addition to recording monitoring data, the following information will also be recorded:

- Name of recorder(s);
- Date and time of monitoring and/or sampling;
- Location of sampling, including general information such as nearest road, property name, descriptive information, as well as GPS coordinates, and;
- Photographs of monitoring location, as well as surrounding area.

6.3 AUDITING

Auditing will be undertaken to verify compliance with all aspects of the CEMP. Audits will be conducted by the site Environmental Manager, or delegate:

- Prior to any project or construction works for any stage of the project;
- At the completion of any project or construction works;
- During or after any major corrective actions or remediation works; and,
- Periodically throughout the life of the project.

Audits will include a review of compliance with the CEMP, compliance with each condition of approval and any prior corrective actions.

6.4 REPORTING

The Site Environmental Manager is responsible for the preparation of monthly reports on environmental compliance. The monthly reports will summarise compliance and non-compliance with all monitoring requirements within the CEMP. The monthly reports will also summarise any environmental incidents and environmental issues that occurred during the month. The monthly report will include relevant incident report numbers and summarise improvements that have been made to address environmental issues and incidents.

The Site Environmental Manager is responsible for preparing annual compliance reports under Condition 13 of EPBC 2017/7994 no later than within 60 days of every 12-month anniversary of the commencement of the action. The annual compliance reports must include a report of compliance with each of the conditions of approval, including implementation of any management plans as specified in the conditions of approval.

Additionally, under Condition 14 of EPBC 2017/7994, the Site Environmental Manager, or delegate, must report any potential or actual contravention of the conditions to the Department in writing within 5 business days of the approval holder becoming aware of the potential or actual contravention.

6.5 NON-CONFORMANCE PROCEDURE

Non-conformance with the CEMP will be immediately reported to the Site Environmental Manager for remedial action. Actions taken shall reflect the magnitude of environmental impact.

For minor non-conformance incidents, the Site Environmental Manager shall specify remedial actions in accordance with the CEMP. An example of a minor incident is the inadequate maintenance of temporary sediment and erosion control structures.

For major non-conformance:

- Construction works will immediately cease;
- Applicable authority will be notified of extent of non-conformance; and,
- Remedial actions to be carried out in consultation with relevant officers and Site Environmental Manager as necessary.

An example of major non-conformance is the removal of vegetation marked for retention or injury to wildlife.

6.6 INCIDENT REPORTING

Ongoing monitoring includes the assessment of incidents and hazards identified by site personnel. It is the responsibility of all personnel to report any incidents to the Site Environmental Manager. An environmental incident is any breach of the environmental management procedures detailed in the CEMP, or any other unplanned action detrimental to the environment.

All environmental incidents must be recorded using an Incident Reporting Form (Appendix 7) along with any corrective and preventative actions taken to address the environmental incident. The details of the incident are to be recorded by the Site Environmental Manager, or delegate, in the Corrective Actions Register (Appendix 8).

As reports are submitted, it is the Site Environmental Manager's role to ensure that the forms are completed and management measures are initiated or updated accordingly to reflect the information provided. The CEMP is to be updated to reflect any changes or additions to management measures.

If the incident results in a severe impact on Matters of National Environmental Significance the Site Environmental Manager, or delegate, is to provide an incident investigation report to the Commonwealth Department of the Environment within one week of being notified of the incident. Examples of a severe incident include impacts to a species or community listed as a Matter of National Environmental Significance, for example a Koala injury or mortality, or unapproved clearing of critical fauna habitat.

6.7 COMPLAINT REPORTING

The Site Environmental Manager will maintain a register of complaints. Complaints relating to environmental aspects will be treated as environmental incidents in terms of investigation and will include a record of any action taken with respect to the complaint.

The person undertaking the activity to which this approval relates must record the following information for each complaint received about the activity:

- Time, date, name and contact details of the complainant;
- Reasons for the complaint;

- Any investigations undertaken by the person undertaking the activity to which this approval relates;
- Conclusions formed by the person undertaking the activity to which this approval relates following the investigation; and,
- Any actions taken by the person undertaking the activity to which this approval relates to resolve the complaint(s)

6.8 CORRECTIVE ACTIONS

All corrective actions identified for incidents, complaints and non-conformance audit results are to be recorded in a Corrective Actions Register, administered by the Site Environmental Manager. The register will be monitored weekly by the Site Environmental Manager to ensure that corrective actions listed in the register are completed.

The register is to include the following details:

- Date & location of incident/complaint/non-conformance;
- Details of incident/complaint/non-conformance;
- Actions taken to control the incident/complaint/non-conformance and prevent any future occurrence;
- Date by which the corrective action will be completed (unless ongoing); and,
Appropriate sign-off, indicating that the incident/complaint/non-conformance was investigated and followed up appropriately.

7 ENVIRONMENTAL TRAINING

The Site Environmental Manager, or delegate, will provide site personnel and site visitors with suitable environmental training to ensure they are competent to perform their work in an environmentally acceptable manner. Environmental training will be given as part of the site induction procedure and will be performed prior to site access.

All forms and relevant associated material are to be stored in both a digital and hard copy format for a period of at least two (2) years.

The person undertaking the activity to which this approval relates must keep a record of the training provided to employees, including:

- Names of all persons who undertook the training;
- Date on which the training was provided; and,
- An outline of the training provided.

The environmental training will ensure the following:

- That all personnel and site visitors are aware of the CEMP and related documents;
- That all personnel are aware of their responsibilities;
- That all site personnel have familiarised themselves with the CEMP and its procedures;
- That all site personnel have signed a register noting that they have reviewed and will comply with the requirements of the CEMP;
- That all contractors shall review and carry out activities in accordance with measures outlined with in the CEMP and guide construction including civil works as necessary, in consultation with the Site Environmental Manager.

8 EMERGENCY CONTACTS AND PROCEDURES

In the event of an environmental incident, the priority is to ensure the safety of all site personnel and the neighbouring community. All practical steps shall then be taken to minimise further environmental damage through the implementation of the appropriate contingency and corrective actions, as outlined in the CEMP environmental management sub-plans in Section 10.1.

All environmental incidents must be immediately reported to the Site Environmental Manager. Emergency contact information can be found in the contacts listed in Appendix 5.

9 POTENTIAL ENVIRONMENTAL IMPACTS AND RISKS

The following section sets out the results of a qualitative risk assessment applied to the potential environmental impacts associated with project actions.

Each environmental risk has been given a rating in terms of likelihood (Table 4; qualitative measure of likelihood – how likely is it that this event / incident will occur after control strategies have been put in place) and consequence (Table 5; qualitative measure of consequences rating – what will be the consequences / results / outcome if this event / issue does occur), then combined using a risk rating matrix (Table 6) to generate a risk rating of low, medium, high or severe.

The qualitative risk assessment (Table 7) must be updated by the Site Environmental Manager at the following times:

- Prior to initial commencement of works;
- Prior to vegetation clearing operations;
- At the completion of vegetation clearing operations;
- As required following non-conformances or other changes to procedures; and,
- Annually, as part of the review and audit procedures.

Table 4: Likelihood risk rating description.

Descriptor	Description
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur, but is considered unlikely or doubtful to occur
Rare	May occur, but only in exceptional circumstances

Table 5: Consequences risk rating description.

Descriptor	Description
Minor	Minor incident of environmental damage that can be reversed
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts
High	Substantial instances of environmental damage that could be reversed with intensive efforts
Major	Major loss of environmental amenity and real danger of continuing
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage

Table 6: Risk rating matrix.

		Consequence				
		Minor	Moderate	High	Major	Critical
Likelihood	Highly likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

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Table 7: Environmental risk assessment.

Item	Construction Phase	Factor	Potential Environmental Impacts	Likelihood	Consequence	Inherent Risk	Planned Mitigation	Likelihood	Consequences	Residual Risk
1	Pre-construction	Vegetation clearing and management	Clearing outside approved boundary or unapproved removal of trees	Likely	Major	High	Vegetation Management sub-plan	Unlikely	Major	High
2		Fauna	Injury or mortality	Possible	Major	High	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Major	High
3			Unapproved removal of critical fauna habitat	Possible	Major	High	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Major	High
4		Fauna - Koalas	Injury or mortality	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
5			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
6		Fauna Grey-Headed Flying Fox	Injury or mortality	Unlikely	Critical	High	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
7			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
8		Pest management	Spread of weeds and fire ants	Likely	Major	High	Pest Management Sub-plan	Unlikely	Major	High
9		Water quality	Erosion and loss of topsoil	Likely	High	High	Water Quality Management Sub-plan	Unlikely	High	Medium
10		Air Quality	Dust emissions during clearing impacting adjacent stakeholders	Possible	Moderate	Medium	Air Quality Management Sub-plan	Unlikely	Moderate	Low
11	Construction	Vegetation clearing and management	Damage or accidental clearing of vegetation outside approved boundary or unapproved removal of trees	Likely	Major	High	Vegetation Management Sub-plan	Unlikely	Major	High
12		Fauna	Injury or mortality	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
13			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
14		Fauna - Koalas	Injury or mortality	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
15			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
16		Fauna Grey-Headed Flying Fox	Injury or mortality	Unlikely	Critical	High	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
17			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Unlikely	Critical	High
18		Pest management	Spread of weeds and fire ants	Likely	Major	High	Pest Management sub-Plan	Unlikely	Major	High
19		Water quality	Erosion and loss of topsoil	Likely	High	High	Water Quality Management sub-plan	Unlikely	High	Medium
20		Air Quality	Dust emissions during clearing impacting adjacent stakeholders	Possible	Moderate	Medium	Air Quality Management sub-plan	Unlikely	Moderate	Low
21		Noise	Negative impact to the social environment through excess noise and vibration	Possible	Moderate	Medium	Noise Management sub-plan	Unlikely	Moderate	Low
22		Waste	Environmental harm caused by incorrect storage of waste	Possible	Moderate	Medium	Waste Management sub-plan	Unlikely	Moderate	Low

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Item	Construction Phase	Factor	Potential Environmental Impacts	Likelihood	Consequence	Inherent Risk	Planned Mitigation	Likelihood	Consequences	Residual Risk
23		Aboriginal cultural heritage	Damage to items cultural heritage significance	Possible	High	Medium	Aboriginal Cultural Heritage Management sub-plan	Unlikely	High	Medium
24	Post-construction	Vegetation clearing and management	Damage or accidental clearing of vegetation outside approved boundary or unapproved removal of trees	Possible	Major	High	Vegetation Management sub-plan	Rare	Major	Medium
25		Fauna	Injury or mortality	Possible	Major	High	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Major	Medium
26			Unapproved removal of critical fauna habitat	Possible	Major	High	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Major	Medium
27		Fauna - Koalas	Injury or mortality	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
28			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
29		Fauna Grey-Headed Flying Fox	Injury or mortality	Unlikely	Critical	High	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
30			Unapproved removal of critical fauna habitat	Possible	Critical	Severe	Vegetation Management sub-plan; Fauna Management sub-plan	Rare	Critical	High
31		Pest management	Spread of weeds and fire ants	Likely	Major	High	Pest Management sub-plan	Rare	Major	Medium
32		Water quality	Erosion and loss of topsoil	Likely	High	High	Water Quality Management sub-plan	Rare	High	Low

10 ENVIRONMENTAL MANAGEMENT MEASURES

The following sections summarise the activities, timing and management responses for the pre-construction, construction, and post-construction stages of works. Compliance with the environmental management procedures set out in this CEMP ensures all activities carried out on-site comply with environmental obligations, including those listed in Section 2 of the CEMP.

A series of management sub-plans have been developed that cover work activities during all three stages of works on-site. The various plans apply in the following stages.

The following environmental management sub-plans have been identified for pre-construction works

- Vegetation Management;
- Fauna Management;
- Pest Management; and,
- Water Quality Management.

The following environmental management sub-plans have been identified for construction works

- Vegetation management;
- Fauna management;
- Pest management;
- Water quality management;
- Aboriginal cultural heritage management;
- Air quality management;
- Noise management; and,
- Waste management.

The following environmental management sub-plans have been identified for post-construction works

- Vegetation management;
- Pest management; and,
- Water quality management.

10.1 ENVIRONMENTAL MANAGEMENT SUB-PLANS

10.1.1 VEGETATION MANAGEMENT

Vegetation clearing and management must only occur in accordance with the project approvals. Clearing may only occur within the approved areas marked as 'Clearing Area' in Figure 2.

Areas of retained vegetation are to be protected during works and maintained with weed control methods. Specifically, care is to be taken to preserve the two stands of trees to be retained in the southern portion of the site (Figure 2 and Appendix 9).

All vegetation clearing and ongoing vegetation management must meet all approval conditions and cultural heritage obligations, in particular the obligations under the Koala management plan. This includes all management actions outlined in the Vegetation Management sub-plan (Table 8). Additionally, all clearing of assessable native vegetation must be staged in accordance with operational needs.

Prior to, during and post clearing of assessable native vegetation, sediment and erosion controls must be implemented in accordance with the Erosion Management Plan (GHD, 2010, Rev 1.0; Appendix 10) and the Water Quality Management sub-plan (Table 12) as outlined in Section 10.1.4.

All rehabilitation and landscaping works are to be undertaken in accordance with the updated Landscaping and Revegetation Plan (Appendix 9). Further information can also be found in the Landscape Management and Revegetation Plan (GHD, 2010, Rev 0; Appendix 11), and the Visual Impact and Landscape Assessments (Appendices 12 (GHD, 2009, Rev 0) and 13 (GHD, 2009, Rev B)).

Table 8: Vegetation clearing and management sub-plan

Vegetation Clearing and management		
Objectives		
<ul style="list-style-type: none"> Clearing and management of vegetation in accordance with approvals. 		
1. KPI's and Targets		
Details		
<ul style="list-style-type: none"> No clearing or damage to native vegetation outside of the approved clearing areas. Disturbed areas are stabilised and rehabilitated sequentially and as soon as possible following disturbance. 		
2. Management Actions		
Description	Responsibility	Timing
<p>Prior to vegetation clearing, boundary fencing work must be completed in accordance with:</p> <ul style="list-style-type: none"> EPBC referral 2017/7994; Development permit for operational work (clearing of native vegetation) (approved in the Planning and Environment Court, No. 2606 of 2010); Approved drawings / plans in Appendix 9 and Appendix 14; and, Design specifications listed in Section 10.1.1.1. 	PM	Prior to clearing
Approved clearing areas are identified and demarcated using GPS coordinates and flagged star pickets.	PM	Prior to clearing
Vegetation conservation areas are identified, demarcated, and where applicable, tree protection fencing is erected.	PM	Prior to clearing
Tree protection zones (TPZ) are to be established around all trees to be conserved which are near proposed working areas (i.e. adjacent to the confirmed working areas extents).	SEM	Prior to clearing
TPZs are to be established in accordance with <i>AS 4970 - Protection of trees on development sites</i> . TPZs include the assembly of mesh tree barriers / guards to protect 'at risk' retained trees from encroachment / accidental damage.	SEM	Prior to clearing
<p>TPZs are to be established prior to the commencement of any clearing or site works. Within the TPZ, the following activities are not permitted:</p> <ul style="list-style-type: none"> Storage and mixing of materials; Vehicle parking; Liquid disposal; Machinery repairs and/or refuelling; Construction of site office or shed; Combustion of any material; Stockpiling of soil, rubble or debris; 	SEM	Prior to clearing

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<ul style="list-style-type: none"> Any filling or excavation including trenching, topsoil skimming and/or surface excavation, unless otherwise approved by the Chief Executive Officer; and, Unauthorised application of pesticides, herbicides or chemicals. 		
Restrict access to all areas outside of the approved clearing and construction areas.	SEM	At all times
Ensure vegetation clearing, including tree felling, does not impact areas outside of approved clearing areas.	SEM	During clearing
Ensure all vehicle and personnel movement is limited to the approved clearing and construction areas.	SEM	At all times
Ensure that all fauna management measures are strictly followed prior to, and during vegetation clearing and management.	SEM	At all times
All vegetation that is cleared on the site shall be mulched on-site and used for onsite landscaping works.	SEM	During clearing
Vegetation cleared and not suitable for mulching shall be removed and disposed of in an approved disposal facility.	SEM	During clearing
Land clearing debris must not be pushed into gullies, watercourses, other drainage line or waterlogged areas, or any areas outside of the approved clearing extent.	SEM	During clearing
Vegetation clearing must not occur outside of the approved clearing areas and must not exceed 18.38 hectares of vegetation within the project site.	SEM	During clearing
An approved koala exclusion fence is in place on the southern boundary of the property, and the manual vehicle access gate is closed.	SEM	At all times
Approved fencing is in place along the eastern, western and northern boundaries of the property.	SEM	At all times
Any exposed or damaged tree roots are identified and treated in accordance with AS 4373–2007 - <i>Pruning of amenity trees</i> .	SEM	At all times
Arborist / contractor to treat any damaged trees. Works are to be undertaken by a qualified minimum Level 5 Arborist or suitably qualified person.	SEM	At all times
Site briefings for all staff must occur prior to any major works and before commencement of works daily to discuss approved clearing processes and provide clear understanding of areas to be protected from construction.	SEM	Prior to clearing and major works
All rehabilitation and landscaping works are to be undertaken in accordance with the updated Landscaping and Revegetation Plan (Appendix 9).	SEM	At all times
3. Monitoring		
Description	Responsibility	Frequency
Inspect clearing areas to ensure only vegetation marked for clearing are removed or damaged.	SEM	Daily during clearing

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Inspect project boundaries to ensure flagging, fencing and TPZ fencing are intact and no boundary breach has occurred.	SEM	Daily during clearing Bi-monthly during clearing
Cleared vegetation has not been pushed into gullies, watercourses, other drainage line or waterlogged areas.	SEM	Daily during clearing
Ensure required fauna controls, including Fauna Spotter Catcher, in place for disturbance works.	SEM	Daily during clearing
Inspect cleared vegetation is stored correctly and/or mulched and used on-site.	SEM	Daily during clearing
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Boundary of approved clearing area is breached	Report and investigate as an incident.	SEM
	Report immediately to SEM.	PM
	Halt activities until impacted area is reviewed by SEM.	SEM
	Re-demarcate boundary with temporary fencing.	SEM
	Rehabilitate impacted areas.	SEM
	Retrain relevant personnel in regard to CEMP procedures and controls.	SEM
Incorrect placement /storage of cleared vegetation	Report and investigate as an incident.	SEM
	Report immediately to SEM.	PM
	Halt activities until impacted area is reviewed by SEM.	SEM
	Rehabilitate impacted areas.	SEM
	Retrain relevant personnel in regard to CEMP procedures and controls.	SEM
Clearing of vegetation outside of approved clearing areas	Report and investigate as an incident.	SEM
	Report immediately to SEM.	PM
	Halt activities until impacted area is reviewed by SEM.	SEM
	Re-demarcate boundary with temporary fencing.	SEM
	Rehabilitate impacted areas.	SEM
	Retrain relevant personnel in regard to CEMP procedures and controls .	SEM

10.1.1.1 VEGETATION MANAGEMENT DESIGN CONSIDERATIONS

Boundary Fencing

Boundary fencing work must be completed prior to the commencement of clearing, as follows:

- The southern boundary fence shall be replaced with Koala exclusion fencing that meets the requirements of Road and Traffic Authority (NSW) Standard Drawing (Appendix 14) and includes the following:
 - Galvanised wire 50 mm chain-link fence, with additional 0.5m overhang “floppy top” (outward of road formation). Refer to NSW RTA Drawing R0800-31 (Appendix 14);
 - 3 m buffer free of vegetation (excluding grasses) on habitat side of fence; and,
 - A manual gate is to be provided in the location of the permanent driveway. The gate must be at least eight meters wide to allow heavy haulage trucks to enter the site.
- The eastern, western and northern boundary fences are to be replaced with, or modified to become, wildlife friendly fencing that allows the movement of macropods, Koalas and gliders.

Acceptable options to achieve this include:

- Replacing the barbed wire strands with plain, high tensile wire ensuring there is 300-500mm (0.3-0.5m) gap between the ground level and the bottom strand so that koalas and macropods can move underneath the fence. Make top strand visible using white strand wire, sections of poly pipe or flagging tape.
- Replace with a chain wire fence with timber bracing up to 1.2m height max to allow passage for macropods, gliders and koalas; and,
- Replace with timber post and rail fencing.

The location of fauna friendly boundary fencing can be seen in Figure LRP02 within Appendix 9 (Landscape & Revegetation Plan, Litoria Consulting, 2021, Issue B).

10.1.2 FAUNA MANAGEMENT

The approval holder must ensure a pre-clearing survey is undertaken by a suitably qualified person within 24 hours before any clearing of vegetation, to identify any fauna present. A suitably qualified Fauna Spotter Catcher must also be present during all vegetation clearing works.

The approval holder must not clear any vegetation supporting any fauna until such time that the individual(s) vacates the vegetation or is relocated by a suitably qualified person.

Veterinary care, or assistance from a wildlife refuge, must be sought if any fauna are found injured within the project site while clearing and/or construction occurs within the project site. To reduce risk of injury to fauna, all vehicles and plant machinery must stay on pre-determined routes and roads and must adhere to site speed limits at all times.

Further management and control actions are outlined in the Fauna Management sub-plan (Table 10).

Koala and Grey-Headed Flying-Fox Management

The Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) *Phascolarctos cinereus* and Grey-Headed Flying-Fox (*Pteropus poliocephalus*) are listed as threatened species under the EPBC Act and require management on site to ensure their protection and wellbeing during any works onsite (Department of the Environment and Heritage 2003, Department of the Environment 2014). This includes any potential koala habitat.

Koala exclusion fencing must be installed, and in working condition, along the southern boundary in accordance with Road and Traffic Authority (NSW) Standard prior to any vegetation clearing or management actions.

All workers must ensure their actions avoid or effectively mitigate direct and indirect impacts on the Koala and Grey-headed Flying-Fox, and their habitat within the project footprint. Further details relating to Koala and Grey-Headed Flying-Fox management can be found in the Koala and Grey-Headed Flying Fox Design Management Controls (Table 9) and the Fauna Management sub-plan (Table 10).

The following management control measures (Table 9) have been identified in regard to the management of Koala and Grey-Headed Flying-Fox. Further fauna management measures can be found in Table 10.

Table 9: Koala and Grey-headed Flying-fox management controls

Management Control / Activity	Responsibility	Effectiveness of Management Action	Environmental Outcomes	Measure, Monitor, Audit, Activity and Frequency
Environmental contract documentation to address specific erosion and sediment control and landscape and revegetation requirements to be managed during the construction and post-construction phase of the project.	Owner's Engineer, Proponent.	This will assist in minimising indirect impacts to habitat through a reduction in sediment loss and associated water quality impacts.	Minimisation of indirect impacts on the Koala / Grey-headed Flying-fox.	Audit prior to request for tender release. Auditing of contract documentation will be undertaken in accordance with the Construction Environment Management Plan (CEMP).
Incorporate into the CEMP appropriate measures (including the below provisions) for fauna management, vegetation management, weed management, rehabilitation management.	Construction Contractor, Proponent.	This will reduce impacts on the Koala / Grey-headed Flying-fox and habitat through appropriate management of rehabilitation areas and inclusion of procedures for vegetation clearing, fauna management and general environmental management.	Minimisation of direct and indirect impacts on the Koala/Grey-headed Flying-fox.	CEMP to be audited for completeness prior to mobilisation, as well as auditing for compliance during and post-construction.
Vegetation clearing limits will be defined under the contract documentation, to minimise the extent of vegetation clearing whilst allowing construction to occur, taking into account erosion and sediment control devices.	Owner's Engineer, Proponent.	Vegetation clearing limits will ensure minimisation of clearing required for the project and reduce impacts on the Koala / Grey-headed Flying-fox supporting habitat.	Avoid unnecessary removal of fauna habitat.	Audit prior to request for tender release. Auditing of contract documentation will be undertaken in accordance with the CEMP.
Additional workspace areas (laydown areas) are to be placed in previously cleared areas or on the project pad. where possible.	Construction Contractor.	This will minimise the vegetation clearing required for the project.	Avoid unnecessary removal of fauna habitat.	CEMP to be audited for completeness prior to mobilisation, as well as auditing for compliance during and post-construction.

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Management Control / Activity	Responsibility	Effectiveness of Management Action	Environmental Outcomes	Measure, Monitor, Audit, Activity and Frequency
Incorporation of No-Go Zones and vegetation clearing limits with specific vegetation clearing requirements and methodologies within the contract documentation. All vehicles and plant will stay on pre-determined routes and adhere to site construction and operation rules relating to speed limits. Speed limits would be clearly signposted to minimise the potential for fauna impact.	Owner's Engineer, Proponent.	Implementation of No-Go Zones and restricted access routes will prevent inadvertent disturbance within habitat to be retained.	Avoid fauna collisions / mortality from construction equipment and enable the relocation of MNES away from the working areas as appropriate.	Audit prior to request for tender release. Auditing of contract documentation will be undertaken in accordance with the CEMP. A register of wildlife incidents (fauna strike and mortality) will be established and maintained as part of the CEMP.
Locations and design of koala exclusion fencing to be incorporate into contract documentation and construction schedule to ensure appropriate structures, placement, and timing. Replacement of all cattle fencing with wildlife friendly fencing to the site's eastern, western, and northern boundaries. koala exclusion fencing will be installed along the southern boundary in accordance with Road and Traffic Authority (NSW) Standard Drawing and include the following specifications: <ul style="list-style-type: none"> Galvanised wire 50 mm chain-link fence, with additional 0.5 m overhang "floppy top" {outward of road formation). 	Owner's Engineer, Proponent.	Fauna exclusion fencing is an effective management measure to reduce vehicle collisions with Koalas (and other native fauna). This fencing is also dog-proof, therefore helping reduce predator movements onto the site.	Prevent increased fauna mortality from the project and guide and direct fauna movement between retained / rehabilitated bushland habitat and away from the road.	Audit prior to request for tender release. Auditing of contract documentation will be undertaken in accordance with the CEMP.

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Management Control / Activity	Responsibility	Effectiveness of Management Action	Environmental Outcomes	Measure, Monitor, Audit, Activity and Frequency
<ul style="list-style-type: none">- 3 m buffer free of vegetation (excluding grasses) on habitat side of the fence.				

Table 10: Fauna management sub-plan.

Fauna management		
Objectives		
<ul style="list-style-type: none"> Relocation, protection, and management of native fauna. No injury or death of the Koala or Grey-headed Flying-fox as a result of the project. 		
1. KPI's and Targets		
Details		
<ul style="list-style-type: none"> No harm or injury to any native fauna including the Koala and Grey-Headed Flying-Fox. No unapproved disturbance of any native fauna habitat. Fauna Spotter Catcher present during all clearing works. No possible predators are introduced to the site. Koala exclusion fencing is clear of vegetation on the habitat side and no holes or gaps are present. 		
2. Management Actions		
Description	Responsibility	Timing
A suitably qualified Fauna Spotter Catcher must also be present on-site during all vegetation clearing works.	SEM	Prior to, and during clearing
The approval holder must not clear any vegetation supporting any fauna until such time that any present fauna vacates the vegetation or are relocated by a suitably qualified person.	SEM	Prior to, and during clearing
Veterinary care, or assistance from a wildlife refuge, must be sought if any fauna are found injured within the project site while clearing and/or construction occurs within the project site.	SEM	Prior to, and during clearing
To reduce risk of injury to fauna, all vehicles and plant machinery must stay on pre-determined routes and roads and must adhere to site speed limits at all times.	SEM	At all times
The approval holder must ensure a pre-clearing survey is undertaken by a suitably qualified person within 24 hours before any clearing of vegetation within the project site, to identify any fauna present.	SEM	Prior to clearing, with 24hr of proposed activities
Immediately prior to the commencement of clearing and on each day that vegetation clearing is to take place, a licensed Fauna Spotter Catcher should be on-site in the event that fauna are observed which require protection, relocation or in case of fauna injury.	SEM	Prior to, and during clearing
Licensed Fauna Spotter Catcher to inspect trees to be trimmed / removed and identify hollows for retention / salvage, respectively.	SEM	Prior to clearing
Non-itinerant fauna (other than Koalas) are, where practicable, relocated / ushered to nearby patches of vegetation or nearby bushland - refer to licensed Fauna Spotter Catcher for advice.	SEM	Prior to, and during clearing
Vegetation containing Koala(s) is to be demarcated with high visibility flagging tape and no further clearing is take place within 20m of the vegetation until such time as Koala(s) has	SEM	Prior to, and during clearing

completely vacated the vegetation and the site – refer to licensed Fauna Spotter Catcher for advice.		
An approved koala exclusion fence is in place on the southern boundary of the property, and the manual vehicle access gate is closed.	SEM	At all times
Approved fencing is in place along the eastern, western and northern boundaries of the property.	SEM	At all times
All domesticated animals are prohibited from site.	SEM	At all times
Personnel are prohibited from interacting with and/or feeding native or non-native fauna on-site.	SEM	At all times
All vehicles will stay on pre-determined routes and adhere to site speed limits. Speed limits to be clearly signposted to minimise potential for fauna impact.	SEM	At all times
A register of wildlife incidents (fauna strike and mortality) will be established and maintained as part of the CEMP.	SEM	At all times
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection for presence of fauna within approved vegetation clearing areas by licensed Fauna Spotter Catcher.	SEM	Prior to, and during clearing
Visual inspection of protected (non-approved) vegetation within 20m of proposed clearing areas by licensed Fauna Spotter Catcher.	SEM	Prior to, and during clearing
Inspect fauna exclusion and fauna friendly fencing to ensure they are in good condition.	SEM	Prior to, and during clearing
Appropriate barriers, protection, and signage in place for all protected areas.	SEM	Prior to, and during clearing
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Koala(s) foraging on vegetation within or adjacent to site during vegetation clearing or management.	Report as an incident (no investigation required).	SEM
	Report immediately to wildlife spotter/catcher.	SEM
	Halt activities until vegetation containing Koala(s) is demarcated with high visibility flagging tape. No further clearing to take place within 20m of the vegetation until such time as Koala(s) has completely vacated the vegetation and the site – refer to licensed Fauna Spotter Catcher for advice.	SEM
Native fauna (other than Koala(s)) present onsite.	Report as an incident (no investigation required).	SEM
	Report immediately to Fauna Spotter Catcher.	SEM
	If the fauna is not at risk of being impacted (not in proximity to vegetation clearing or management activities) allow the fauna to move on in own time.	SEM
	If fauna is at risk of being impacts, halt vegetation clearing or management activities until fauna have moved on, or are removed by a qualified Fauna Spotter Catcher.	SEM

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Injured fauna present onsite	Report and investigate as an incident.	SEM
	Report immediately to the Fauna Spotter Catcher.	SEM
	If animal is at further risk, contact RSPCA animal Emergency Hotline on the provided contacts list (Appendix 5).	SEM

10.1.3 PEST MANAGEMENT

Movement of equipment across the site, in addition to vegetation clearing activities has the potential to introduce and/or spread weeds and other pest species, such as fire ants (*Solenopsis invicta*). The impact of weed and other pest invasion and spread include:

- Loss of biodiversity;
- Loss of habitat;
- Increased fire risk and changes to fire regimes;
- Introduction of weeds and pests detrimental to nearby agricultural areas.

Weeds and other pests will be managed by the implementation of the Pest Management sub-plan, detailed in Table 11.

Table 11: Pest Management sub-plan (including pest plants and Fire Ants).

Pest management		
Objectives		
<ul style="list-style-type: none"> To prevent the spread of weeds and pests within the site. To prevent the spread of weeds and pests to neighbouring properties. To prevent the introduction of new weeds and pests to the site. No possible predators are introduced to the site. No new disease or pathogen is introduced. To control existing weed infestations so as not to increase in habitat areas. 		
1. KPI's and Targets		
Details		
<ul style="list-style-type: none"> No introduction of new weed or pest species to the site or neighbouring properties. No spread of weeds or pests within the site. To effectively control or eradicate existing weed or pest species within the site. No new disease or pathogen is introduced to the site. 		
2. Management Actions		
Description	Responsibility	Timing
Conduct baseline surveys of the site to determine the current level of weed and pest infestations.	PM	Prior to clearing
Conduct weed control for target species on a seasonal basis as per optimal control for each target species (refer to Landscaping and Revegetation plan (Litoria Consulting, 2021, Rev B; Appendix 9) for weed control methods).	SEM	Seasonal as per optimal control for each target species
Conduct follow up weed and pest surveys following the completion of all clearing activities to compare with the original baseline survey.	SEM	Following clearing
Ensure all vehicles, equipment and plant undergo a thorough inspection prior to access to site and are free of plant material and soil.	SEM	At all times
Ensure soil used on-site adheres to the soil movement guidelines as outlined in the <i>Biosecurity Regulation 2016 (Qld)</i> for fire ant movement controls.	SEM	At all times
Ensure soil and mulch used on site is uncontaminated, and free of weeds and pests.	SEM	At all times
Conduct herbicide spraying of weeds along the clearing line and the site boundary prior to weeds setting seed.	SEM	Seasonal
Control any infestation of weeds or pests on site.	SEM	As required
Locate cleared vegetation and mulch stockpiles away from areas where runoff from rainfall may occur.	SEM	At all times
3. Monitoring		

Description		Responsibility	Frequency
Prior to excavating or disturbing any ground, conduct thorough visual inspection for fire ants or signs of fire ants.		SEM	Prior to vegetation clearing
Visual inspection of cleared vegetation and mulch stockpiles for weeds and pests.		SEM	Following and during clearing
Visual inspection of landscaping areas within site and along boundaries for weeds and pests.		SEM	Ongoing
Appropriate records of weed spraying and/or removing are being recorded.		SEM	Ongoing
Examples of Contingency and Corrective Actions			
Incident	Corrective Action	Responsibility	
New weed infestation occurring onsite, on mulch stockpiles, or within landscaping areas.	Report and investigate as an incident.	SEM	
	Arrange for weed or pest control by a suitably trained contractor.	SEM	
	Increase monitoring frequency until weed or pest occurrence has been controlled.	SEM	
	Retrain relevant personnel in regard to CEMP procedures and controls.	SEM	
Fire ants identified on site	Report and investigate as an incident.	SEM	
	Notify personnel who are suitably trained ¹ in the identification of fire ants.	SEM	
	If a suspected nest is observed, the suitably trained personnel can use a long rod or stick to gently prod the nest and inspect for any ants present.	SEM	
	Advise Biosecurity Queensland if fire ants are confirmed or suspected.	SEM	

¹ Free training available from Biosecurity Queensland.

10.1.4 WATER QUALITY MANAGEMENT

Erosion may be a factor through all phases of construction. Erosion within the site will most likely be caused by rainfall and surface runoff. Erosion may have the following impacts:

- Deposition of sediment on neighbouring properties;
- Nuisance impacts on neighbouring properties; and,
- Channelling and deposition within the site

Erosion and stormwater will be managed and monitored in accordance with the Erosion Management Plan (GHD, 2010, Rev 1; Appendix 10), the Stormwater Management Plan (GHD, 2010, Rev B; Appendix 15), and the Water Quality Management Sub-Plan (Table 12).

All erosion and stormwater control devices set out in the Erosion and Stormwater Management Plans respectively shall be installed on the development site. Responsibility for maintenance shall rest with the relevant site manager. Details of required operation and maintenance procedures shall be supplied for future Council reference if required.

Table 12: Water Quality Management sub-plan (including erosion and storm water control).

Water quality management, including erosion and storm water		
Objectives		
<ul style="list-style-type: none"> To minimise erosion during construction. Manage storm water across site during construction phases. No adverse impacts on adjacent properties. 		
1. KPI's and Targets		
Details		
<ul style="list-style-type: none"> No visible signs of erosion within or at the boundaries of the site. Address all complaints regarding erosion and storm water run-off. No irreparable collapse or destabilisation of the site from erosion. No evidence of erosion or sedimentation of waterways as a result of the project. 		
2. Management Actions		
Description	Responsibility	Timing
Erosion and sediment control measures installed in accordance with: <ul style="list-style-type: none"> Erosion Management Plan (GHD, 2010, Rev 1; Appendix 10); Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites (The Institution of Engineers, Australia Queensland Division June 1996); Best Practice Erosion and Sediment Control (International Erosion Control Association 2008); and, Any relevant permit conditions. 	SEM	Prior to and throughout construction phases
Stormwater control measures installed in accordance with: <ul style="list-style-type: none"> Erosion Management Plan (GHD, 2010, Rev 1; Appendix 10); Stormwater Management Plan (GHD, 2010, Rev B; Appendix 15); Water by Design Bioretention Technical Design Guidelines Version 1.1, October 2014; Healthy Waterways Water Sensitive Urban Design Technical Design Guidelines for South East Queensland Version 1, June 2006; Water by Design Construction and Establishment Guidelines: Swales, Bioretention Systems and Wetlands Version 1.1, April 2010; and, Fire ant relevant permit conditions. 	SEM	Prior to and throughout construction phases
Where required, construct earth bunds around the perimeter of the site (see Appendix 9), as detailed in the Erosion Management Plan (GHD, 2010, Rev 1; Appendix 10) and Stormwater Management Plan (GHD, 2010, Rev B; Appendix 15).	SEM	Prior to works
Stormwater drainage structures shall be designed so that there is 'no worsening' of runoff beyond that which occurs on the existing undeveloped site.	SEM	Prior to and throughout

		construction phases
All complaints regarding erosion and water stormwater run-off are to be recorded within a Complaints Register immediately.	SEM	At all times
All complaints regarding erosion and stormwater run-off are to be addressed within 24 hours if severe, or within one week for minor complaints.	SEM	At all times
There shall be no deposition of sediment from the project site on to neighbouring properties.	SEM	At all times
There shall be no nuisance impacts as a result of erosion, stormwater runoff, or sedimentation on to neighbouring properties.	SEM	At all times
There shall be no channelling and/or deposition as a result of erosion, stormwater runoff, or sedimentation within the site.	SEM	At all times
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection of earthwork bunds, drainage channels, gullies, and perimeter of site for signs of erosion, bank slumping, or the formation of rills and gullies.	SEM	Ongoing
Inspections after each storm event to assess the adequacy of the erosion control measures.	SEM	As required
During construction phase of operations, end of day inspection of erosion and sediment control devices and rectification where required.	SEM	Daily
Daily following a rainfall event, inspection and sediment removal where required as soon as practicable.	SEM	As required
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Signs of erosion	Report and investigate as an incident.	SEM
	Remediate erosion and stabilise.	SEM
	'Make good' any damage or non-performing erosion control devices and clean up any sediment that has left the site or is on the roads within and external to the site.	SEM
Complaint received	Report and investigate as an incident.	SEM
	Complaint must be addressed within 24 hours if severe, or within one week for minor complaints.	SEM
	Review procedures and adjust if required.	SEM
	Notify the PM if the complaint escalates to a serious concern that cannot be addressed by the SEM.	SEM
	Retrain relevant personnel regarding CEMP procedures and controls.	

10.1.4.1.1 WATER QUALITY DESIGN CONSIDERATIONS

The Fords Road table drain on the outlet for the culverts through the landscape bund shall be reshaped and stabilised as necessary to carry the ARI 100-year design outlet flow from the detention basin. Such works shall be continued as necessary to an agreed point of discharge. Refer to Appendix 16 and Appendix 9 for design and layout information.

Ponding of stormwater must not occur on the subject land, adjoining allotments or road reserve unless specifically conditioned as part of this development approval or the subsequent approval for operational works. Refer to Appendix 9 and Appendix 16 for design and layout information for approved on-site pondwater locations.

All unlined open drains on the site and along Fords Road adjacent to the site shall be stabilised with vegetation upon completion in accordance with Table 9.05.3 of The Queensland Urban Drainage Manual. Details for landscape and revegetation works can be found in the Landscape Management and Revegetation Plans (Litoria Consulting, 2021, Rev B; Appendix 9 and Appendix 12).

Erosion Design Considerations

A number of design considerations have been proposed to minimise the risks associated with erosion on the site. Full design and planning information can be found in the Erosion Management Plan (GHD, 2010, Rev 1; Appendix 10).

Key design aspects for erosion mitigation are as follows:

- The area of disturbance on site will be limited to the footprint required to support the gas-fired turbines and necessary infrastructure and landscaping. Existing ground cover and vegetation will be preserved for the balance of the area;
- A relatively level platform is to be created using cut and fill techniques to enable the infrastructure to be constructed in a functional manner;
- Stormwater drainage systems will be established to manage stormwater runoff and to minimise velocity across open areas. Roofwater will be collected and discharged away from disturbed areas to minimise the risk of sediment entering the stormwater system;
- Vehicular access, manoeuvring and parking areas will be sealed to reduce the risk of erosion occurring within high traffic routes;
- Cut batters will be steepened toward the rear of the site where exposure of subsurface sandstone is likely. Weathered sandstone may be subject to the development of dispersive soils and therefore minimisation of exposure to rainfall is desirable;
- Diversion drains and bunding will be put in place upslope of the cut batters to divert all stormwater from upslope in the undisturbed portions of the catchment away from the construction area and the location of the new development. Diversion drains will be grass lined for the upper reaches where stormwater velocities are low and be rock lined at lower reaches as velocities and flow volumes increase. Specific design details will be provided at detailed design phase;
- Stormwater management will be achieved in the south western extent of the site through a series of large bunds that will be stabilised through revegetation as shown in Appendix 9 of this report;

- Progressive landscaping of all disturbed areas will be undertaken in accordance with the landscaping plans provided with this application. Jute matting and hydromulching will be installed in areas supporting batters steeper than 1 on 2 grades. Other areas are to be rehabilitated through a mixture of geofabric protection, mulch, hydromulching and the planting of shrubs and trees as shown in the landscape plan; and,
- The layout will assist in allowing efficient drainage of the site without resulting in high velocity flows being diverted over areas that may be subject to erosion.

Stormwater Design Considerations

A number of design considerations have been proposed to minimise the risks associated with stormwater on the site. Full design and planning information can be found in the Stormwater Management Plan (GHD, 2010, Rev B; Appendix 15).

Stormwater drainage structures shall be designed so that there is 'no worsening' of runoff beyond that which occurs on the existing undeveloped site.

The following objectives provide the basis for management of stormwater quantity on the site:

- There is no increase in peak flow rates post-development compared to predevelopment peak flow rates;
- Reuse of water on site should be maximised by adopting rainwater tanks with first flush devices; and,
- All stormwater that is discharged from the site (except during flood events) should be treated prior to release by filtration and/or infiltration.

Attenuation of peak flow rates can be achieved through the use of structures such as a detention basin. Infiltration trenches can be used to help manage surface runoff volumes.

Reuse of collected roof water can be performed by collecting water in tanks (above or below ground). Uses for this water include, but not limited to, toilet flushing and/or landscaping irrigation.

10.1.5 ABORIGINAL CULTURAL HERITAGE MANAGEMENT

If any features are identified that may be of Aboriginal cultural heritage, cease works in the area surrounding the feature and notify the relevant Aboriginal Party.

Features of importance may include ceremonial places, scarred or carved trees, burials, rock art, fish traps and weirs, occupation sites, quarries and artefact scatters, grinding grooves, contact sites, wells and/or other landscape features.

Several artefacts of cultural heritage have been identified within the site:

- Three isolated artefacts; and,
- Two potential scar trees.

Artifacts of cultural heritage should be flagged or fenced as appropriate and marked on relevant construction plans as 'no go' areas (Everick Heritage Consultants, 2018, Rev 5; Appendix 17).

Refer to the Cultural Heritage Assessment (Everick Heritage Consultants, 2018, Rev 5; Appendix 17) and the Cultural Heritage management sub-plan (Table 13) for guidance on how to manage cultural heritage on-site, including procedures to follow if potential artefacts are found during construction works.

Aboriginal Objects Find Procedure

It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of development activities within the project area:

- Work in the surrounding area is to stop immediately;
- A temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around the known edge of the site;
- The current Aboriginal Party (presently Jagera People) should be engaged to identify the find, assisted by an appropriately qualified archaeological consultant if reasonably required; and,
- If the material is found to be of Aboriginal origin, the Aboriginal Party for the region, being Jagera People, should be consulted over the management of the find. Any management agreement should be clearly documented in writing signed by both parties.

Aboriginal Human Remains Find Procedure

Although it is highly unlikely that human remains will be located at any stage during earthworks within the project area, should this event arise it is recommended that all works must halt in the immediate area to prevent any further impacts to the remains.

The site should be cordoned off and the remains themselves should be left untouched. The nearest police station (Gatton) and DATSIP are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the site for criminal activities, the Aboriginal Party for the region, being Jagera People, should be consulted as to how the remains should be dealt with.

Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

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It is also recommended that in all dealings with Aboriginal human remains, all personnel should use respectful language, bearing in mind that they are the remains of Aboriginal People rather than scientific specimens.

Table 13: Aboriginal Cultural Heritage Management sub-plan.

Cultural heritage		
Objectives		
<ul style="list-style-type: none"> To protect and minimise impact on all items of significant cultural heritage. 		
1. KPI's and Targets		
Details		
To avoid disturbing known and unknown artefacts of cultural heritage.		
2. Management Actions		
Description	Responsibility	Timing
Ensure previously identified artefacts are not subject to inadvertent harm during construction works. They should be flagged or fenced as appropriate and marked on relevant construction plans as 'no go' areas.	SEM	Prior to and throughout construction phases
Ensure previously identified scar trees are not subject to inadvertent harm during construction works. They should be flagged or fenced as appropriate and marked on relevant construction plans as 'no go' areas.	SEM	Prior to and throughout construction phases
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection of areas containing known cultural heritage artefacts to ensure areas flagged or fenced as appropriate.	SEM	Monthly or as required
Visual inspection of areas containing identified scar trees to ensure areas containing the trees are flagged or fenced as appropriate.	SEM	Monthly, or as required
Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Finding potential Aboriginal objects	Report and investigate as an incident.	SEM
	Stop all works in area.	PM
	Implement Aboriginal objects find procedure as per above.	SEM
Finding potential human remains	Report and investigate as an incident.	SEM
	Stop all works in area.	SEM
	Report to Police.	SEM
	Implement Aboriginal human Remains find procedure as per above.	SEM

10.1.6 AIR QUALITY MANAGEMENT

Construction works must occur so they do not cause unreasonable interference with the amenity of adjoining premises by reason of noise, vibration, electrical or electronic interference, smell, fumes, vapour, steam, soot, ash, dust, grit, oil or otherwise.

Dust control measures (Table 14) will be implemented to achieve compliance with Workplace Exposure Standards for Airborne Contaminants (Safe Work Australia 2019) and applicable workplace health and safety regulations.

Table 14: Air Quality Management sub-plan.

Dust management		
Objectives		
<ul style="list-style-type: none"> To minimise dust lift during construction. No adverse impacts on adjacent properties. 		
1. KPI's and Targets		
Details		
<ul style="list-style-type: none"> To ensure dust and particulate matter do not exceed allowable air quality concentrations. Address all complaints regarding dust management. 		
2. Management Actions		
Description	Responsibility	Timing
Where required, install wind fencing around the perimeter of the site, taking into consideration the use of natural wind fencing (remnant vegetation) as a natural wind barrier.	SEM	Prior to works
Water trucks are to water down unsealed roads and working surfaces during operation to reduce dust lift.	SEM	Prior to works
All complaints regarding dust are to be recorded within a Complaints Register immediately.	SEM	At all times
All complaints regarding dust are to be addressed within 24 hours if severe, or within one week for minor complaints.	SEM	At all times
All trucks removing materials from site will be loaded inside site perimeter.	SEM	At all times
All loads shall be securely covered prior to exiting site perimeter.	SEM	At all times
Minimise stockpiling of material.	SEM	At all times
Maintain stabilised access roads and driveways.	SEM	At all times
Maintain clean roadways wherever possible, particularly at entry / exit points.	SEM	At all times
Dust and particulate matter must not exceed the allowable following levels when measured at any nuisance sensitive place or downwind of the project site (see Monitoring section below for further details).	SEM	At all times
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection of wind fences for signs of dust deposition.	SEM	Ongoing
Monitoring of dust lift-off during works, or windy conditions.	SEM	As required
Dust and particulate matter with an aerodynamic diameter of ≤ 2.5 micrometre (μm) (PM2.5) suspended in the atmosphere must not exceed 25 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the authorised place, when monitored in accordance with:	SEM	Daily

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<ul style="list-style-type: none"> Any relevant AS to the extent it is relevant to the measurement of PM2.5 particles; or, Any alternative method of monitoring PM2.5 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority. 		
<p>Dust and particulate matter with an aerodynamic diameter of ≤ 10 micrometre (μm) (PM10) suspended in the atmosphere must not exceed 50 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the authorised place, when monitored in accordance with:</p> <ul style="list-style-type: none"> AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air – Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet – Gravimetric method'; or Any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority 	SEM	Daily
<p>Dust deposition must not exceed 120 milligrams per square metre per day, when monitored in accordance with AS 3580.10.1 of 2003 (or more recent editions).</p>	SEM	Daily
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Observation of excessive dust lift-off during work operations	Report and investigate as an incident.	SEM
	Halt work within proximity of the area until cause of dust is addressed.	SEM
	Apply water as an immediate dust suppressant measure.	SEM
	Increase dust mitigation measures (e.g. more water trucks) as required.	SEM
Complaint received	Report and investigate as an incident.	SEM
	Complaint must be addressed within 24 hours if severe, or within one week for minor complaints.	SEM
	Review procedures and adjust if required.	SEM
	Notify the PM if the complaint escalates to a serious concern that cannot be addressed by the SEM.	SEM
	Retrain relevant personnel in regard to CEMP procedures and controls.	SEM

10.1.7 NOISE MANAGEMENT

Noise associated with construction of the proposed development shall be in accordance with the *Environmental Protection Act 1994* (Qld) and subordinate *Environmental Protection (Noise) Policy 2019* (Qld) and associated noise management criteria (Table 15).

Noise from the activity to which this approval relates must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

The method of measurement and reporting of noise levels must comply with the latest edition of the Noise Measurement Manual (Queensland Department of Environment and Science 2020) (Appendix 18) as published from time to time by the administering authority.

Where a construction noise complaint(s) is received, noise compliance monitoring must be undertaken as soon as practicable by the contractor.

Table 15: Noise Management sub-plan.

Noise management		
Objectives		
<ul style="list-style-type: none"> To minimise noise during construction. No adverse noise impacts on adjacent properties. 		
1. KPI's and Targets		
Details		
Address all complaints regarding noise management.		
2. Management Actions		
Description	Responsibility	Timing
Where required, install noise abatement barriers or fencing around the perimeter of the site.	SEM	Prior to and throughout construction phases
Make use of noise attenuating controls at the source, such as mufflers or acoustic screens.	SEM	Prior to works
All complaints regarding noise are to be recorded within the Corrective Actions Register.	SEM	At all times
All complaints regarding noise are to be addressed within 24 hours if severe, or within one week for minor complaints.	SEM	At all times
Locate static sources of noise such as the generators as remotely as possible from noise sensitive receivers.	SEM	Prior to works
Modification of work activities where noise or vibration is found to cause unacceptable impact.	SEM	At all times
Hours of construction must be in accordance with: <ul style="list-style-type: none"> The provisions of any relevant local law; or, In the absence of any relevant local law or condition, the hours of construction must be limited to 0630–1830 Monday to Saturday and not at all on Sunday and public holidays. 		At all times
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection of noise barriers and fences for signs of damage.	SEM	Ongoing
Monitoring noise levels during works to ensure they do not exceed permissible levels	SEM	As required
Noise compliance monitoring shall be undertaken in accordance Noise Measurement Manual (Queensland Department of Environment and Science 2020) or AS 1055-1997 Acoustics - Description and measurement of environmental noise. Noise compliance monitoring results shall be provided to the regulator.	SEM	Ongoing
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility

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Observation of excessive noise during work operations	Report and investigate as an incident.	SEM
	Halt work within proximity of the area until cause of excessive noise is addressed.	SEM
Complaint received	Report and investigate as an incident.	SEM
	Complaint must be addressed within 24 hours if severe, or within one week for minor complaints.	SEM
	Review procedures and adjust if required.	SEM
	Notify the PM if the complaint escalates to a serious concern that cannot be addressed by the SEM.	SEM
	Retrain relevant personnel regarding CEMP procedures and controls.	SEM

10.1.8 WASTE MANAGEMENT

All refuse storage, removal and collection methods must be in accordance with any relevant local government policy or standard or, where no relevant local government policy or standard exists, are to be in accordance with the *Waste Reduction and Recycling Act 2011* (Qld) so as not to cause any unreasonable interference with the amenity to the surrounding area and to provide an acceptable level of amenity for future users of the site (Table 16). The Waste Management Plan can be found in Appendix 19.

Solid waste includes vegetation cleared as part of the proposed development. Cleared 'green waste' is to be managed by the contractor in accordance with the CEMP. Other solid waste is to be disposed of at landfill in accordance with Council's local laws and regulations.

Waste management follows the waste hierarchy:

- Avoid;
- Reduce;
- Reuse;
- Recycle;
- Treat; and,
- Dispose.

The following waste storage practices should also be implemented and adhered to at all times.

Asbestos or Asbestos Containing Material

Where asbestos or asbestos containing material (ACM) is found on site during construction works, asbestos shall be managed in accordance with the:

- *Work Health and Safety Act 2011* (Qld) (WHS Act);
- *Work Health and Safety Regulation 2011* (Qld) (WHS Regulation);
- Code of Practice: How to Safely Remove Asbestos (Qld); and,
- Code of Practice: How to Manage and Control Asbestos in the Workplace (Qld).

Where asbestos or ACM is found on the site, a site-specific Asbestos Management Plan should be put in place. The plan must be administered by the principal contractor and include:

- Identification and signage of the asbestos or ACM;
- Safe work procedures and control measures;
- Incidents or emergency procedures; and,
- Consultation, information and training responsibilities for staff and contractors.

Chemical Storage

All fuels and chemicals must be stored in an onsite containment system of a type suitable to prevent the spillage of the material and its discharge to the environment.

In all instances, the storage and handling of chemicals and fuels done in accordance with the relevant AS (as amended or substituted by a later standard) shall be taken to be sufficient for compliance with relevant conditions in Section 2.

See the following ASs for requirements for storage and handling of chemicals and fuels:

- *AS1940 – 2004 The storage and handling of flammable and combustible liquids;*
- *AS3780 – 2008 The storage and handling of corrosive substances; and*
- *AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and bulk intermediate containers.*

Spill Kits

The person undertaking any waste management or activity that includes the use of chemicals must keep an appropriate spill kit, personal protective equipment, operator instructions and emergency procedure guides for the management of wastes and chemicals associated with the activity in a place accessible to all employees.

Employees undertaking any waste management activity or handling chemicals must have received appropriate training in the use of the spill kit and the handling of chemicals stored on-site. Training must be repeated at intervals not greater than two years

Table 16: Waste management sub-plan.

Waste management		
Objectives		
<ul style="list-style-type: none"> To minimise and manage waste during construction. No adverse waste impacts on adjacent properties. 		
1. KPI's and Targets		
Details		
All waste is managed correctly.		
2. Management Actions		
Description	Responsibility	Timing
All waste should be placed in appropriate disposal containers and areas during construction.	SEM	At all times
All waste should be removed from site and disposed of appropriately.	SEM	At all times
Where possible ensure that waste onsite is appropriately covered.	SEM	At all times
Covered bins are provided to collect waste and prevent fauna being attracted to the work site.	SEM	At all times
An adequate number of an appropriate type of commercial and bulk waste containers shall be provided at a central location to accommodate all waste produced on the site.	SEM	At all times
All waste collected on the site to be removed not less than once per week.	SEM	At all times
Appropriate spill kits, personal protective equipment, operator instructions and emergency procedure guides for the management of wastes and chemicals must be in a place accessible to all employees.	SEM	At all times
All fuels and chemicals must be stored in an onsite containment system of a type suitable to prevent the spillage of the material and its discharge to the environment.	SEM	At all times
All general and regulated waste records, including transfer station dockets and waste tracking certificates, are to be retained.	SEM	At all times
Waste must be stored, pending its lawful disposal to landfill or to a recycling facility, or another place with the written approval of the administering authority, in a location at the authorised place where it is not visible to a person outside the authorised place.	SEM	At all times
Waste (other than wastewater or sludges in the evaporation pond) must be removed from the authorised place within the timeframe specified for the waste as follows: <ul style="list-style-type: none"> If the waste is surplus from the construction of the power station – within three (3) months after the power station is commissioned; or, Otherwise – within three (3) months of the waste being generated. 	SEM	At all times
Waste storage areas are to be signed and located away from environmentally sensitive areas.	SEM	At all times
Burning of waste is prohibited.	SEM	At all times

Adequately sized refuse bins will be made available on-site and will have suitable lids to prevent access by animals.	SEM	At all times
Construction site is to be kept in an orderly and hygienic standard, free of litter and waste.	SEM	At all times
3. Monitoring		
Description	Responsibility	Frequency
Visual inspection of waste and chemical storage facilities.	SEM	Weekly
Monitoring waste movement and disposal during works.	SEM	As required
Visual inspection to ensure appropriate bunding is maintained and operated correctly.	SEM	Weekly
Examples of Contingency and Corrective Actions		
Incident	Corrective Action	Responsibility
Observation of incorrectly stored waste during work operations	Report and investigate as an incident.	SEM
	Halt work within proximity of the area until waste is stored correctly.	SEM
	Train relevant personnel in the correct waste management procedures.	SEM
Complaint received	Report and investigate as an incident.	SEM
	Complaint must be addressed within 24 hours if severe, or within one week for minor complaints.	SEM
	Review procedures and adjust if required.	SEM
	Notify the PM if the complaint escalates to a serious concern that cannot be addressed by the SEM.	SEM
	Retrain relevant personnel regarding CEMP procedures and controls.	SEM

10.1.8.1 WASTE MANAGEMENT DESIGN CONSIDERATIONS

Waste storage areas are to be signed and located away from environmentally sensitive areas. Install bunding if required.

The waste collection area shall be provided with an imperviously paved area on which to stand all waste containers and a suitable form of enclosure to conceal and secure the waste disposal area.

The waste collection area must be located such that the waste collection vehicle can collect the waste without obstruction and leave the property in a forward gear.

11 AUDIT AND REVIEW

11.1 ENVIRONMENTAL AUDITING

Compliance with the CEMP will be achieved through self-administered weekly monitoring and subsequent reporting to the relevant authority (if required).

Environmental auditing, monitoring and compliance will be overseen by the Site Environmental Manager; however, all personnel entering the site must familiarise themselves with the CEMP and acknowledge their responsibility to comply with the Plan's requirements.

In addition, an EIC has been prepared which provides a procedure for auditing compliance with the CEMP. The audit will be administered by the proponent's Site Environmental Manager.

11.2 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN REVIEW

As the project progresses, environmental impacts may change. As such, it is important that this CEMP is revised to address any environmental impacts arising from the changes in activities.

The CEMP will be reviewed by the project manager as required if any additional activities are to be carried out. Each review period will investigate:

- Potential gaps between the CEMP management measures and on-site construction activities;
- Assessment of any incidents or near misses that occurred since the previous review; and,
- Employee and workplace compliance.

The review should include consultation between employees and management to review and discuss concerns.

Ongoing monitoring and review of the CEMP ensures that risk identification and management measures are constantly assessed, ensuring the efficiency and effectiveness of the CEMP.

The Project Manager's details are located in the site contacts list (Appendix 5).

12 GLOSSARY

Acronym	Description
CEMP	Construction Environment Management Plan
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Qld)</i>
SEM	Site Environmental Manager
TPZ	Tree Protection Zone
DATSIP	Department of Aboriginal and Torres Strait Islander Partnerships
PM	Project Manager
ACM	Asbestos containing material
AS	Australian Standard

13 REFERENCES

- Commonwealth of Australia (2014). Environmental Management Plan Guidelines.
- Department of the Environment (2014). EPBC Act referral guidelines for the vulnerable koala. Canberra, Department of the Environment.
- Department of the Environment and Heritage (2003). EPBC Administrative Guidelines on Significance: Supplement for the Grey-headed Flying-fox. Department of the Environment and Heritage. Canberra, ACT.
- Nearmap (2020). "Nearmap PhotoMaps." from <https://www.nearmap.com/au/en>.
- Queensland Department of Environment and Science (2020). "Noise measurement manual."
- Safe Work Australia (2019). Workplace exposure standards for airborne contaminants