



# **APPENDIX E – Environmental Impact Statement**

## **Mitigation Measures**

Prepared for Lake Lyell Project Pty Ltd



This Appendix provides a consolidated list of mitigation measures proposed to manage the potential impacts of the project. The management plans proposed for the project are described in Appendix E.1, and the list of mitigation measures for the project are listed in the relevant tables for each key issue, as described below.

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## E.1 Management plans

**Table E.1 Summary of management plans**

Management plan	Relevant management sub plan(s) and/or procedures
<b><i>Community and Stakeholder Engagement Plan</i></b>	
<ul style="list-style-type: none"> <li>• A dedicated Communication and Stakeholder Engagement Plan will be developed by the project for the construction period. This will include:               <ul style="list-style-type: none"> <li>– a 24 hour community hotline as a grievance management mechanism during construction, and dedicated relationship manager/s for adjacent landowners</li> <li>– engagement with the broader Aboriginal community such as key-knowledge holders and Registered Aboriginal Parties (RAPs). Activities will include holding monthly project briefings to provide updates on project activities and upcoming activities, Aboriginal employment and opportunities to be directly involved in the project</li> <li>– notifications to the local community (including business owners) on the timing and frequency of any road closures, over-sized over-mass vehicle movements and other key traffic movements in the local and regional area</li> <li>– signage posted at the beginning of key 4wd access routes to Mt Walker denoting any access changes</li> <li>– ongoing engagement with stakeholders along the access route, emergency services and bus service providers to reduce the risk of traffic related safety impacts.</li> </ul> </li> </ul>	
<b><i>Early Works Environmental Management Plan</i></b>	
<ul style="list-style-type: none"> <li>• An Early Works Environmental Management Plan will be prepared to identify the management measures to be implemented to mitigate risks from the early works construction activities, including geotechnical drilling, road access works, limited site establishment works, and establishment of the accommodation camp. The Early Works Environmental Management Plan will:               <ul style="list-style-type: none"> <li>– include requirements for reporting and detail roles and responsibilities for implementation of the plan</li> <li>– identify the specific clearing limits for removal of native vegetation due to Early Works and the mechanism for offsets to be implemented prior to any clearing occurring</li> <li>– identify specific salvage and management measures for Aboriginal archaeology within the Early Works disturbance areas, including consultation and monitoring requirements</li> <li>– include all other relevant mitigation measures recommended in the EIS for the management of soil and water, dust, noise and vibration, traffic and waste.</li> </ul> </li> </ul>	
<b><i>Construction Environmental Management Plan</i></b>	
<ul style="list-style-type: none"> <li>• A CEMP will be prepared before construction and will provide measures to manage and mitigate the residual environmental impacts of the project. The overarching environmental management framework provided by the CEMP will be supported by several other environmental management plans, sub-plans and monitoring programs, as specified in this EIS. It will also incorporate the construction environmental management measures and specific controls identified in Table E.2 of Appendix E.</li> </ul>	

Management plan	Relevant management sub plan(s) and/or procedures
<p><b>Soil and Water Management Plan</b></p> <ul style="list-style-type: none"> <li>• This plan will be prepared in accordance with relevant consent conditions. It will: <ul style="list-style-type: none"> <li>– describe the contaminated water, stormwater and wastewater management systems</li> <li>– describe how water will be managed to achieve compliance with consent and EPL conditions, including safety and environmental controls not limited to: <ul style="list-style-type: none"> <li>▪ erosion and sediment control plans, prepared progressively for construction area</li> <li>▪ management of surface water runoff and groundwater ingress around the excavation/tunnelling/blasting areas and prevention of surface water and groundwater entering excavations</li> <li>▪ stockpile management procedures for segregating materials and preventing cross contamination of clean material with contaminated material (if present)</li> </ul> </li> <li>– establish surface water quantity and quality monitoring requirements</li> <li>– include measures for the management of liquid and solid waste arising from construction and blasting activities (e.g. during excavation of the diversion tunnel), including mitigation of blasting residues</li> <li>– include measures for spill management and response, water quality trigger levels, corrective actions, contingencies, and responsibilities for all management measures.</li> </ul> </li> <li>• The plan must be prepared in consultation with NSW DCCEEW, the NSW EPA and key local stakeholders, and would consider concerns raised during the exhibition and approvals process for the project.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Trigger Action Response Plan(s)</b> – to identify relevant criteria for surface and groundwater and identify actions that would be triggered should there be any exceedance.</li> <li>• <b>Surface and Groundwater Monitoring Plan</b> – the monitoring program will incorporate and update the existing monitoring network, and identify: <ul style="list-style-type: none"> <li>– monitoring frequencies and water quality constituents</li> <li>– physical water take and pumping volumes between water storage structures</li> <li>– reporting frameworks prepared in accordance with licensing and agency requirements.</li> </ul> </li> <li>• <b>Unexpected Contaminated Finds procedure</b> – The procedure would include: <ul style="list-style-type: none"> <li>– cease work in the vicinity</li> <li>– initial assessment by an appropriately qualified environmental consultant</li> <li>– further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act.</li> </ul> </li> </ul>
<p><b>Biodiversity management plan</b></p> <p>A Biodiversity Management Plan (BMP) will be prepared and implemented prior to construction. The BMP will include the mitigation measures outlined in the BDAR (EMM, 2025) and will include:</p> <ul style="list-style-type: none"> <li>• techniques, timing, frequency and responsibility for the implementation of measures</li> <li>• identification of the risk of failure of measures</li> <li>• monitoring requirements to determine the efficacy of measures</li> <li>• triggers and responses for adaptive management.</li> </ul> <p>Key minimisation and mitigation measures to be included in the BMP are:</p> <ul style="list-style-type: none"> <li>• retention of vegetation and habitat where feasible and practical</li> <li>• minimising injury of native animals during clearing and construction</li> <li>• weed control</li> <li>• native vegetation restoration.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Vegetation Management Plan</b> – to ensure revegetation occurs as quickly as possible and uses suitable species it is recommended that a vegetation management plan be prepared that includes detailed guidance on: <ul style="list-style-type: none"> <li>– scheduling to ensure suitable plants are produced in a timely manner for staged replanting</li> <li>– planting design to ensure visual mitigation benefits are maximised</li> <li>– seed collection to ensure plant stock with local provenance is used</li> <li>– an irrigation plan to ensure water is available to ensure reliable establishment of new planting.</li> </ul> </li> <li>• <b>Biosecurity Management Plan</b> – to detail the steps that will be taken onsite to manage and mitigate biosecurity risks, specifically in regard to surrounding agricultural lands and the Marrangaroo National Park. It will include a comprehensive weed control protocol.</li> </ul>

**Platypus Management Plan**

A Platypus Management Plan (PMP) must be prepared prior to construction commencing and prior to any dewatering occurring. The PMP will detail measures and management actions related to the platypus.

**Aboriginal Cultural Heritage Management Plan**

Prior to construction ground disturbance, an Aboriginal Cultural Heritage Management Plan (ACHMP) must be developed by a heritage specialist in consultation with the Registered Aboriginal Parties (RAPs) to provide the post-approval framework for managing archaeological mitigation and Aboriginal heritage within the Proposal area.

The ACHMP will be prepared in line with the guiding principles defined in Annexure G of the ACHA (EMM, 2025).

**Construction Traffic Management Plan**

A detailed Construction Traffic Management Plan (CTMP) will be prepared for the project generally aligning to the framework of the CTMP provided in Chapter 7 of the TIA (EMM, 2025). The CTMP will include at a minimum:

- the proposed traffic management measures and controls identified in the TIA and Table Exx
- a Drivers Code of Conduct
- consultation with Lithgow City Council and TfNSW.

- Drivers Code of Conduct

**Construction noise and vibration management plan**

A construction noise and vibration management plan (CNVMP) will be prepared prior to commencement of construction activities associated with the project.

The CNVMP will include as a minimum:

- identification of nearby residences and sensitive land uses along with appropriate corresponding noise criteria
- a description of approved hours of work and what works will be undertaken
- a description of work practices to be applied to minimise and manage construction noise where it is predicted to be above relevant criteria.
- a description of the complaints handling process
- a description of any noise monitoring that is required
- a procedure to measure and validate predicted construction noise levels and re-evaluate noise mitigation and management measures where required, to reduce noise levels as close to NMLs as possible.

Management plan	Relevant management sub plan(s) and/or procedures
<p><b>Spoil Management Plan</b></p> <p>A spoil management plan will be prepared post-approval. The plan will include:</p> <ul style="list-style-type: none"> <li>• key information from the detailed design of each permanent spoil emplacement</li> <li>• procedures for handling and storing excavated rock and/or stockpiled materials, including potentially or known contaminated soil/fill in accordance with the POEO Act and any offsite transport of excess material that has been assessed as not suitable for re-use or management</li> <li>• details on the capture and management and/or treatment of any contaminated water or land</li> <li>• complete pre- and post-construction site assessments in areas to be used for project office compounds, depots or laydown areas in accordance with the ASC NEPM</li> <li>• process for tracking excavated material and waste.</li> </ul>	<p><b>Nitrogen Management Plan</b></p> <p>This plan will be prepared post approval in accordance with relevant consent conditions. It will describe protocols for storing, handling and using explosives to minimise the release of nitrogen from explosives use.</p>
<p><b>Fire management plan</b></p> <p>A Fire Management Plan will be developed for the project, in consultation with the NSW RFS District Office and Fire Rescue NSW, before construction starts. The Fire Management Plan will inform operational and emergency management practices at the facility and effectively describes all fire hazards and provides clear actions and accountabilities for their management.</p> <p>The minimum requirements of a Fire Management Plan are:</p> <ul style="list-style-type: none"> <li>• Ongoing bush fire fuel management within the development footprint</li> <li>• Site infrastructure plan</li> <li>• Site access and internal road plan</li> <li>• APZs and their continued maintenance; and</li> <li>• Location of hazards (physical, chemical etc.) that may impact firefighting operations.</li> </ul>	
<p><b>Rehabilitation Plan</b></p> <p>A Rehabilitation Management Plan will be prepared prior to construction that incorporates the rehabilitation measures outlined in the Rehabilitation Strategy (Appendix T). It will include rehabilitation work method statements to allow progressive rehabilitation throughout construction.</p>	
<p><b>Construction Waste Management Plan</b></p> <p>A construction waste management plan (CWMP) will be prepared and implemented as part of the CEMP. The CWMP will include but not be limited to:</p> <ul style="list-style-type: none"> <li>• measures to avoid and minimise waste associated with the project</li> <li>• classification of wastes and management options (re-use, recycle, stockpile, disposal)</li> <li>• statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions</li> <li>• procedures for storage, transport and disposal</li> <li>• monitoring, record keeping and reporting.</li> </ul>	

Management plan	Relevant management sub plan(s) and/or procedures
<p><b><i>Operational Environmental Management Plan</i></b></p> <p>An operational environmental management plan (OEMP) would be developed to manage potential impacts to the surrounding environment during operation of the project after the project works are complete. The OEMP would be a 'live' document with the capacity to be updated if conditions are different to those expected and would include provision for the management of environmental incidents (including leaks and spills) associated with the use of chemicals and hydrocarbons, which may occur during operation of the project</p>	
<p><b>Operations Management Plan</b></p> <p>This plan will be prepared post approval in accordance with relevant consent conditions. It will:</p> <ul style="list-style-type: none"> <li>describe operating protocols for Lake Lyell and the PHES for normal, high inflow events and drought conditions</li> <li>include a water and algae monitoring plan.</li> </ul>	<p><b>Water and algae monitoring plan.</b></p>
<p><b>Operations Water Management Plan</b></p> <p>This plan will be prepared post approval in accordance with relevant consent conditions. It will:</p> <ul style="list-style-type: none"> <li>establish the water management systems in accordance with the controls in Table 6.4 of the surface water assessment for: <ul style="list-style-type: none"> <li>stormwater runoff from permanent infrastructure areas including the switchyard and infill pad</li> <li>stormwater runoff from sealed and unsealed permanent roads</li> <li>seepage from PSEs</li> <li>intercepted groundwater in the powerhouse, MAT and ECVT</li> <li>wastewater from amenities.</li> </ul> </li> <li>include a water monitoring plan.</li> </ul>	<p><b>Water monitoring plan</b></p> <p><b>TARPs</b></p>
<p><b>Operations Traffic Management Plan</b></p> <p>A detailed Operations Traffic Management Plan (OTMP) will be prepared prior to commencement of operations in consultation with the relevant traffic authorities.</p>	
<p><b><i>Worker Health &amp; Safety Plan</i></b></p>	
<p><b>Asbestos management plan</b></p> <p>A site-specific asbestos management plan (AMP) is required under Part 8.4 of the NSW Work Health and Safety Regulation 2017 should ACM be encountered during construction.</p> <p>Specific protocols would be stipulated for separation, monitoring, validation and clearance of asbestos.</p> <p>The AMP and associated Standard Work Procedures would satisfy the relevant requirements of:</p> <ul style="list-style-type: none"> <li>Work Health and Safety Regulation 2017</li> <li>the Safe Work Australia Asbestos Codes of Practice and Guidance Notes.</li> </ul> <p>All persons performing the works would be required to undertake a suitable risk assessment and develop a Safe Work Method Statement (SWMS) for all work activities prior to commencing work in potential or actual asbestos impacted areas.</p>	

**Emergency and Evacuation Management Plan**

An Emergency and Evacuation Management Plan (EEMP) will be prepared for the project. The EEMP will include:

- site specific hazards and risk at each main works site
- procedures to maintain bushfire awareness
- ignition prevention and bushfire mitigation measures
- fire preparedness actions
- fire response actions
- emergency egress and evacuation plans
- bushfire recovery steps.

The EEMP will be provided to the Local Emergency Management Committee for its information prior to the commencement of construction.

**Workforce management plan**

Development of a Workforce Management Plan that:

- documents services to be provided to workers and strategies for supporting workers
- documents expectations around worker behaviour through a Worker Code of Conduct, as well as services to be provided to workers and strategies for supporting workers including mental health support
- includes a workforce accommodation strategy to secure worker accommodation that enhances project benefits for local accommodation suppliers, without negatively influencing capacity available to tourists and visitors. To prevent impacts on key visitor markets the project should, where possible, avoid accommodating the project workforce away from the accommodation camp during peak periods including holidays and weekends. The strategy should also avoid use of rental housing and be prepared in collaboration with local and regional service providers, and with consideration of demand associated with nearby mines and potential future projects. This is to be determined through engagement with these stakeholders
- sets targets to support and enhance recruitment of workers from the regional and local areas
- considers long term partnership opportunities with schools and tertiary institutions, such as TAFE, to support employment targets and upskill local workers.
- targets key local skillsets expected to be available within the region and relevant to the project.

**Procurement Strategy**

Development of a procurement strategy alongside detailed design and delivery that:

- is prepared in consultation with Lithgow City Council and local and regional businesses and Business Chambers
- targets for local and regional suppliers for project procurement opportunities, where the relevant skillsets are available, and local procurement would not result in a lack of availability to meet local demand
- includes regular project updates for local and regional businesses on opportunities and tenders, including on timelines and upcoming procurement opportunities
- aligns with the Workforce Management Plan to support trades traineeships with existing local businesses, to increase overall regional availability following the culmination of the construction phase of the project.

**Industry and Aboriginal Participation Plan**

Preparation of an Industry and Aboriginal Participation Plan (IAPP) that is aligned with the Procurement Strategy and Workforce Management Plan, in consultation with Aboriginal stakeholders to confirm the project's commitments for increasing employment and income opportunities for Aboriginal peoples and communities in the construction and operation of new electricity infrastructure projects in NSW delivered under the NSW Electricity Infrastructure Roadmap.

## E.2 Water

**Table E.2 Water mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Surface water				
Construction Water Management	SW01	<p>A Soil and Water Management Plan will be prepared in accordance with relevant consent conditions. It will:</p> <ul style="list-style-type: none"> <li>– describe the contaminated water, stormwater and wastewater management systems</li> <li>– describe how water will be managed to achieve compliance with consent and EPL conditions, including safety and environmental controls not limited to: <ul style="list-style-type: none"> <li>▪ erosion and sediment control plans, prepared progressively for construction area</li> <li>▪ management of surface water runoff and groundwater ingress around the excavation/tunnelling/blast areas and prevention of surface water and groundwater entering excavations</li> <li>▪ stockpile management procedures for segregating materials and preventing cross contamination of clean material with contaminated material (if present)</li> </ul> </li> <li>– establish surface water quantity and quality monitoring requirements</li> <li>– establish groundwater monitoring requirements</li> <li>– include measures for the management of liquid and solid waste arising from construction and blasting activities (e.g. during excavation of the diversion tunnel), including mitigation of blasting residues</li> <li>– include measures for spill management and response, water quality trigger levels, corrective actions, contingencies, and responsibilities for all management measures.</li> </ul> <p>The plan must be prepared in consultation with NSW DCCEE and the NSW EPA.</p>	Construction	Contractor
Nitrate contamination	SW02	<p>A Nitrogen Management Plan will be prepared in accordance with relevant consent conditions. It will describe protocols for storing, handling and using explosives to minimise the release of nitrogen from explosives use.</p>	Construction	Contractor
Contaminated water management	SW03	<p>The contaminated water system will be implemented to manage potentially contaminated water generated from:</p> <ul style="list-style-type: none"> <li>• PSE runoff (during construction) and seepage</li> <li>• water pumped from subsurface excavation areas during construction</li> <li>• surface water from high intensity construction areas.</li> </ul> <p>The system will:</p> <ul style="list-style-type: none"> <li>• separate potentially contaminated water from clean water and stormwater systems</li> <li>• capture and contain contaminated water to minimise spills into the stormwater system</li> <li>• beneficially use water for construction purposes to minimise discharge</li> <li>• treat surplus water to meet the minimal harm criteria (Table 5.1 of the surface water assessment) prior to discharge to Lake Lyell or Farmers Creek.</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Stormwater management	SW04	Stormwater will be managed in accordance with the approach described in Table 5.10 of the surface water assessment, which is generally in accordance with the methods described in <i>Managing Urban Stormwater: Soils and Construction Volume 1</i> (Landcom 2004).	Construction	Contractor
Waste water management	SW05	All wastewater generated at the accommodation camp and construction site amenities will be trucked to a licensed facility unless a connection to an existing nearby sewerage main is available. No onsite treatment or disposal of wastewater is proposed.	Construction	Contractor
Lake Lyell operations during construction	SW06	EnergyAustralia will continue to operate Lake Lyell to meet the environmental flow requirements specified in section 57H of the <i>Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023</i> and the water supply work and water use approval 10CA117220 held by EnergyAustralia.	Construction	EnergyAustralia
Works on waterfront land	SW07	Works on waterfront land will be undertaken in accordance with the approach described in Table 5.11 of the surface water assessment.	Construction	Contractor
Assessment of scour potential in Farmers Creek arm of Lake Lyell	SW08	Further assessment of scour potential in Farmers Creek arm of Lake Lyell will be undertaken at detailed design. This assessment will be informed by a numerical model and will be used to inform the design of the inlet and outlet structure and identify the need for and inform the design of shoreline armouring.	Detailed Design	LLP
Environmental releases from Lake Lyell	SW09	EnergyAustralia will continue to operate Lake Lyell to meet the environmental flow requirements specified in section 57H of the <i>Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023</i> and the water supply work and water use approval 10CA117220 held by EnergyAustralia	Operation	EnergyAustralia
PHES operations during high inflow events	SW10	PHES generation and associated discharges from the upper reservoir to Lake Lyell will cease when the lake water level reaches the maximum PHES discharge level of 785.5 m AHD, which is the same as the Lake Lyell FSL. This will avoid PHES discharges while Lake Lyell is spilling (due to inflows).	Operation	LLP
Lake Lyell and PHES Operations and Maintenance Plan	SW11	An Operations and Maintenance Plan will be prepared prior to operation in accordance with relevant consent conditions. It will: <ul style="list-style-type: none"> <li>describe operating protocols for Lake Lyell and the PHES for normal, high inflow events and drought conditions</li> <li>include a water and algae monitoring plan</li> <li>include all other information required by the Dams Safety Act 2015 and Dams Safety Regulation 2019</li> </ul>	Prior to operation	LLP
Water management during operations	SW12	The following sources of water will require management during operations: <ul style="list-style-type: none"> <li>stormwater runoff from permanent infrastructure areas including the switchyard and infill pad</li> <li>stormwater runoff from sealed and unsealed permanent roads</li> <li>seepage from PSEs</li> <li>intercepted groundwater in the powerhouse, MAT and ECVT</li> <li>wastewater from amenities.</li> </ul> Water management systems for each of these sources will be established in accordance with the controls in Table 6.4 of the surface water assessment.	Operation	Contractor LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Water management during operations	SW12	<p>The following sources of water will require management during operations:</p> <ul style="list-style-type: none"> <li>• stormwater runoff from permanent infrastructure areas including the switchyard and infill pad</li> <li>• stormwater runoff from sealed and unsealed permanent roads</li> <li>• seepage from PSEs</li> <li>• intercepted groundwater in the powerhouse, MAT and ECVT</li> <li>• wastewater from amenities.</li> </ul> <p>Water management systems for each of these sources will be established in accordance with the controls in Table 6.4 of the surface water assessment.</p>	Operation	Contractor LLP
Operations Water Management Plan	SW13	<p>A Water Management Plan will be prepared for the operation of the project in accordance with relevant consent conditions. It will:</p> <ul style="list-style-type: none"> <li>• describe the water management systems (from Measure ID# SW12)</li> <li>• include a water monitoring plan.</li> </ul>	Operation	Contractor LLP
<b>Groundwater</b>				
Groundwater monitoring	GW01	<p>The baseline groundwater monitoring network will be expanded to include:</p> <ul style="list-style-type: none"> <li>• water metering from excavations, allowing for validation of numerical model inflow predictions</li> <li>• water quality sampling from captured groundwater, ensuring releases to nearby watercourses from the WTP (if required) are in accordance with the SWMP.</li> </ul> <p>Any required ongoing development and expansion of the monitoring network will occur in consultation with NSW DCCEEW.</p> <p>Groundwater monitoring requirements are to be included in a Surface and Groundwater Monitoring Plan and included in the SWMP.</p>	Construction	Contractor
Groundwater model validation	GW02	<p>The groundwater model predictions would be validated by installing groundwater monitoring sites at selected, virtual monitoring sites simulated in the model. Model recalibration will be considered every two years (based on analysis of predicted versus actual impacts) and completed as required to:</p> <ul style="list-style-type: none"> <li>• incorporate groundwater supply bores, following completion of water supply prospectivity investigations</li> <li>• incorporate deep layer measurements (parameters and observed heads)</li> <li>• consider all remaining comments from the independent peer review in the future models</li> <li>• check model validity using recently collected data</li> <li>• refine and/or recalibrate the model if needed</li> <li>• revise predictions if needed, including uncertainty analysis.</li> </ul> <p>Significant deviations from the predicted impacts will be investigated and reported on annually.</p>	Construction	Contractor LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Groundwater drawdown (levels and extent) is significantly larger than predicted	GW03	If required, to restrict groundwater inflows the following methods are to be considered in consultation with DCCEE Water: <ul style="list-style-type: none"> <li>• pre-grouting (i.e. grouting through pilot holes at the excavation face if inflows are un-manageable via pumping)</li> <li>• post-grouting (i.e. following excavation and installation of any structural liners).</li> </ul>	Construction	Contractor LLP
Groundwater inflow rates are higher than predicted to the tunnel, affecting water management system and project water licensing (compliance)	GW04	<ul style="list-style-type: none"> <li>• Metering and monitoring will be in place to record the volume of water removed from the tunnel.</li> <li>• Notify regulators.</li> <li>• Standby pumps to increase volume removed from the underground for safe operation.</li> <li>• Review of groundwater model.</li> </ul>	Construction Operation	Contractor LLP
Monitoring indicates baseflow and/or groundwater quality impacts are greater than predicted	GW05	<ul style="list-style-type: none"> <li>• Monitoring during operations to provide indication of impact.</li> <li>• Develop trigger action response plans (TARP) for groundwater impacts</li> <li>• Notify relevant regulators in accordance with management measures</li> </ul>	Operation	LLP

### E.3 Excavated Rock

**Table E.3 Excavated rock mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Water quality	ER1	A Spoil Management Plan will be prepared prior to construction including key information from the detailed design of each permanent spoil emplacement. The Spoil Management Plan will include measures to manage water quality for: <ul style="list-style-type: none"> <li>• the embankment constructed using excavated rock (PSE 1) as outlined in Table 5.2 of the Excavated Rock Management Strategy</li> <li>• in-reservoir PSEs as outlined in Table 5.4 of the Excavated Rock Management Strategy</li> <li>• the laydown pad (PSE 3) as outlined in Table 5.5 of the Excavated Rock Management Strategy</li> <li>• at land-based PSEs as outlined in Table 5.7 of the Excavated Rock Management Strategy.</li> </ul>	Construction	Contractor
Water quality	ER2	During construction, all collected runoff, and seepage will be managed in the contaminated water system outlined in the Surface Water Assessment.	Construction	Contractor

## E.4 Biodiversity

**Table E.4 Terrestrial and aquatic biodiversity mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
General biodiversity impacts	TE01	<p>A Biodiversity Management Plan (BMP) will be prepared and implemented prior to construction. The BMP will include the mitigation measures outlined in this mitigation table and will include:</p> <ul style="list-style-type: none"> <li>• techniques, timing, frequency and responsibility for the implementation of measures</li> <li>• identification of the risk of failure of measures</li> <li>• monitoring requirements to determine the efficacy of measures</li> <li>• triggers and responses for adaptive management.</li> </ul> <p>Key minimisation and mitigation measures to be included in the BMP are:</p> <ul style="list-style-type: none"> <li>• retention of vegetation and habitat where feasible and practical</li> <li>• minimising injury of native animals during clearing and construction</li> <li>• weed control</li> <li>• native vegetation restoration.</li> </ul>	Construction	Contractor
Harm to native habitat	TE02	Native vegetation and fauna habitat will be retained, wherever possible. Clearing will only occur within the defined construction envelope, with clearing limited to the extent required to safely construct and operate the project and within the clearing thresholds of plant community types identified in Table 8.1 of the BDAR.	Construction	Contractor
Harm to native habitat	TE03	The removal of large trees (>0.5 m diameter at breast height (dbh)), will be avoided, wherever practicable, by designing the precise location of temporary access tracks with consideration of the 'structural root zone' of trees as described in the relevant Standards Australia, Protection of trees on development sites, Standards Australia, Sydney (AS 2009). The precise locations of the trunks of large trees to be removed and retained would be identified by land survey and included on design plans to facilitate avoidance.	Construction	Contractor
Harm to native habitat	TE04	Exclusion zones around all areas of retained vegetation and fauna habitat will be set up where practicable. These areas will be fenced using appropriate fencing materials and designated and signed as 'No-go Zones' or 'Environmentally Sensitive Areas'.	Construction	Contractor
Harm to native habitat	TE05	Contractors will only use designated routes on existing tracks when accessing construction sites.	Construction	Contractor
Harm to native flora	TE06	No materials, spoil or machinery will be stored or vehicles parked within the drip-line of any trees to be retained.	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Harm to native fauna	TE07	<p>Drivers of construction vehicles will comply with the Driver Code of Conduct and comply with speed limits along the site access route. This includes:</p> <ul style="list-style-type: none"> <li>• 50 km/h speed limit for Sir Thomas Mitchell Drive and Magpie Hollow Road during daylight hours</li> <li>• 40 km/h speed limit for Sir Thomas Mitchell Drive and Magpie Hollow Road between sunset and sunrise</li> <li>• Minimisation of construction traffic between sunset and sunrise</li> <li>• Monitoring of roadkill during construction.</li> </ul> <p>Trigger levels for roadkill frequency will be developed and documented in the BMP, and management measures implemented, if trigger levels are exceeded.</p>	Construction	Contractor
Harm to native fauna	TE08	<p>Power infrastructure, buildings and fences to be constructed will be designed to:</p> <ul style="list-style-type: none"> <li>• minimise electrocution risk by adhering to <i>Protecting birds on powerlines: a practical guide on the risks to birds from electricity transmission facilities and how to minimise any such adverse effects</i> (Haas et. al 2003)</li> <li>• include animal climbing guards</li> <li>• allow safe movement of wildlife between areas of habitat and the disturbance footprint</li> <li>• avoid use of barbed wire fencing where possible</li> <li>• adhere to <i>Reducing Bird Collisions with Buildings and Building Glass Best practices</i> (USFWS 2021).</li> </ul>	Detailed Design Construction	Contractor
Potentially excessive environmental harm	TE09	<p>Vegetation clearing works will follow a two-phase process, as outlined below:</p> <ul style="list-style-type: none"> <li>• Phase 1 will include the removal of all non-habitat vegetation</li> <li>• Phase 2 will include the removal of all habitat features (e.g. hollow bearing trees, surface rocks, large logs).</li> </ul> <p>This two-phase process will be documented in a Vegetation Management Procedure.</p>	Construction	Contractor
Harm to fauna species and clearing management	TE10	<p>Prior to vegetation clearing, pre-clearance (Phase 1) surveys will be undertaken by appropriately qualified ecologists. Phase 1 clearing may be undertaken immediately after pre-clearance (Phase 1) surveys. A minimum of 24 hours is required between Phase 1 and Phase 2 clearing.</p>	Construction	Contractor
	TE11	<p>Clearing supervision (Phase 1) will be conducted by an ecologist and include:</p> <ul style="list-style-type: none"> <li>• inspection of areas planned for Phase 1 clearing on a daily basis to detect any animals that may be present, particularly Koalas in any unmarked trees; clearing would be avoided within 30 m of the location until the Koala moves away.</li> <li>• capture and relocate any animals encountered by clearing crews during clearing works.</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
	TE12	<p>Phase 2 clearing will be conducted in the following manner:</p> <ul style="list-style-type: none"> <li>• If safe to do without significant risk to plant operators, hollow bearing trees should be knocked several times with an excavator on the day prior to removal to encourage animals to move away immediately or overnight. Knocking should also be repeated immediately prior to the removal of hollow-bearing trees.</li> <li>• Where safe for staff and practicable with regard to tree height and terrain, tree limbs containing hollows would be removed using tree-climbing techniques and/or an elevated work platform to allow hollows to be gently lowered to the ground, thus minimising the risk of injury to fauna.</li> </ul>	Construction	Contractor
	TE13	<p>Clearing supervision (Phase 2) will include:</p> <ul style="list-style-type: none"> <li>• inspection of areas planned for Phase 2 clearing on a daily basis to detect any animals that may be present, particularly Koalas; if a Koala is sighted, clearing would not be undertaken within 30 m of the location until the Koala moves away.</li> <li>• direct and constant supervision of clearing works, including inspection of trees immediately prior to and after felling to locate, capture and manage any animals encountered by clearing crews during clearing works.</li> <li>• Uninjured animals would be temporarily housed and later relocated to similar habitat within the project area but at least 200 m away from the Construction Envelope.</li> <li>• For injured animals, veterinary advice would be sought and animals would either be transferred to veterinarians or licenced wildlife carers or humanely euthanized.</li> <li>• Euthanasia of animals would only be undertaken if advised by a veterinarian; euthanasia would either be undertaken by a veterinarian or as advised by a veterinarian and in accordance with an approved Animal Research Authority.</li> <li>• Details of any vertebrate animals that are sighted, relocated, found dead or euthanized during clearing would be recorded and described in a clearing supervision report.</li> </ul>	Construction	Contractor
The destruction of salvageable habitat elements	TE14	<p>Where practicable, removal of hollow bearing trees will be undertaken in spring (September to November), and outside the main breeding period for hollow dependent fauna.</p> <p>If hollow-bearing trees are to be removed prior to September and after November, monitoring of breeding activity will be carried out by an appropriately qualified ecologist/s approximately one week prior to the proposed tree removal. If nesting activity is recorded, additional mitigation measures, such as short-term delays in the removal of trees or careful removal of nestlings for rearing by wildlife carers, would be recommended, as necessary.</p>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
The introduction and/or spread of weeds, or plant pathogens	TE15	<p>A Biosecurity Management Plan will be developed as part of the Biodiversity Management Plan. Weed and pathogen management controls to be included are:</p> <ul style="list-style-type: none"> <li>• baseline surveys of all areas within 50 m of the disturbance footprint to collect data on presence and abundance of weeds</li> <li>• a weed control protocol</li> <li>• undertaking weed control in key areas prior to construction works to minimise impacts during construction</li> <li>• appropriate management and disposal of weed species during clearing works</li> <li>• active and intensive weed control will be undertaken within 50 m of the disturbance footprint</li> <li>• requirements for vehicles, machinery and equipment must be clear of soil and plant debris</li> <li>• wash-down stations will be constructed near entry points into key project components</li> <li>• a weed pathogen monitoring program will be implemented.</li> <li>• revegetation of cleared areas as quickly as possible following construction works in an area.</li> </ul>	Construction	Contractor
Native vegetation and habitat restoration within the construction envelope	TE16	<p>Rehabilitation of disturbed areas will be undertaken progressively as construction is completed. The proposed rehabilitation measures will be outlined and developed in a comprehensive Rehabilitation Plan, prior to construction commencing. The plan is to incorporate native vegetation restoration measures including:</p> <ul style="list-style-type: none"> <li>• As soon as practicable, and over at least one spring-summer season prior to substantial vegetation clearing, a seed collection specialist should be employed to collect seed in the project area for use in revegetation. Collection of seed from large trees is likely to be most practical during vegetation clearing activities and should continue to be undertaken throughout the construction phase of the project.</li> <li>• A native seed production nursery would be established prior to substantial vegetation clearing to ensure that a sufficient source of native grass and ground cover seeds are available for restoration activities</li> <li>• Where practicable, large surface rocks should also be moved into rehabilitated areas or retained native vegetation to provide habitat for ground-dwelling animals.</li> <li>• Woody native vegetation removed from the Disturbance Footprint should be utilised for vegetation and habitat restoration preferentially. This should include mulching of shrubs and smaller trees for use in soil amelioration and use of large woody debris (i.e. large sections of tree trunks, root balls and large branches) for habitat enhancement in revegetation areas.</li> <li>• Rehabilitation and revegetation will be undertaken as soon as practicable within temporary infrastructure locations and would include restoration of native species composition consistent with nearby areas of structurally intact native vegetation on similar soil and terrain.</li> <li>• Areas requiring an active restoration approach would require preparatory earthworks to create conditions suitable for the reestablishment of near-natural vegetation. Earthworks in these areas would involve removal of topsoil with the associated elevated nutrient levels and weed seedbank and/or capping with a deep layer of rock and soil to provide conditions</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
		<p>suitable for native species to grow and compete successfully with invasive species.</p> <ul style="list-style-type: none"> <li>Restoration would be targeted to ensure that it benefits the species impacted by the project by including plant species that provide foraging resources for native species.</li> <li>Restoration should be achieved, at least in part, by spreading topsoil stripped from donor sites in the Disturbance Footprint. Topsoil donor sites should have low weed cover.</li> <li>The success of native vegetation restoration should be monitored to determine whether any changes to management such as additional weed management or seedling or planting of native species are required.</li> </ul> <p>The Rehabilitation Plan will include a commitment to an Environmental bond to ensure ongoing funding to support implementation and monitoring of the effectiveness of rehabilitation measures.</p>		
<b>Aquatic ecology</b>				
Construction near waterways	AE01	Construction periods in and around waterways would be kept to a minimum to limit disruption to aquatic fauna where practical relevant to specific construction elements.	Construction	Contractor
Trapped aquatic fauna	AE02	Daily inspections of the works site (particularly around the waters edge) would be completed to check for aquatic fauna that may become entrapped in the works site after overnight foraging.	Construction	Contractor
Dewatering of cofferdams	AE03	<p>During dewatering of cofferdams during construction, the following measures will be implemented:</p> <ul style="list-style-type: none"> <li>A qualified ecologist must be on site during any dewatering activities to assist with fauna salvage. Appropriate permits and animal ethics approvals will be required.</li> <li>The removal of instream habitat structures (e.g. cobbles, boulders, vegetation, snags) must be minimised.</li> <li>Snags are not to be removed from waterways but should be realigned or relocated (ideally replaced into the same location) in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management (2013).</li> <li>No removal of native riparian vegetation beyond those areas defined in the BDAR.</li> </ul>	Construction	Contractor
Riparian habitat	AE04	Where required, ensure bed, banks and riparian zone is progressively rehabilitated as soon as practicable following disturbance, in accordance with the Rehabilitation Plan.	Construction	Contractor
Sedimentation	AE05	<p>The sedimentation management protocols must be installed and utilised across the site in accordance with the project's Soil and Water Management Plan.</p> <p>The Soil and Water Management Plan is to include a trigger action response plan to minimise downstream water quality and aquatic ecology impacts (e.g. turbidity, dissolved oxygen, salinity, metals).</p>	Construction	Contractor
Sedimentation	AE06	<p>Instream silt curtains will be installed where required to reduce downstream transport of sediment.</p> <p>Where silt curtains are used, a qualified aquatic ecologist must undertake fauna salvage to relocate any aquatic species trapped within the enclosed area.</p>	Pre-construction Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Fish passage	AE07	Undertake a detailed design of the Lake Diversion to obtain the best outcomes for platypus and fish passage in accordance with the design principles and recommendations outlined in Appendix J of the Aquatic Ecology Assessment.	Detailed Design	Contractor
Platypus management	AE08	<p>A Platypus Management Plan (PMP) must be prepared prior to commencing any on ground site works that may impact platypus including the construction of the diversion or the proposed lowering of Lake Lyell for the construction works. The PMP must detail measures and management actions should aquatic fauna or fauna habitat be disturbed pre-, during, and post-construction. The PMP will include, but are not limited to, the following mitigation measures:</p> <ul style="list-style-type: none"> <li>• monitoring of platypus throughout the pre-construction and construction period (see monitoring requirements in AE10)</li> <li>• avoiding the platypus nesting period (October to March) where possible, or conducting suitable inspection and management actions to be identified in the PMP</li> <li>• installation of platypus exclusion controls, such as floating boom</li> <li>• aquatic areas to be impacted must be inspected for burrows prior to works commencing and outside of the breeding season. If burrows are detected, platypus must be relocated out of the immediate area by a qualified ecologist. Platypus must then be excluded from the area.</li> <li>• all platypuses must be excluded from works areas. Potential methods include silt curtains that rise above the water level and fencing on land.</li> <li>• if any areas are to be dewatered a qualified animal handler with the appropriate permits will be on site to assist with relocating any platypus as required.</li> <li>• No night works to be undertaken for temporary bridge construction and piling activities.</li> </ul> <p>The PMP must be prepared in consultation with a suitably qualified aquatic ecologist.</p>	Pre-construction Construction	Contractor / Advisory panel
Adaptive management strategies	AE09	The PMP must incorporate adaptive management strategies, including a translocation option if the Lake Lyell/Farmers Creek platypus population's fitness or condition declines (as determined by results of monitoring measures, see AE11). Translocation is considered a risk and is only to be used in response to observable, measurable and demonstrated deterioration due to the Lake Lyell PHES construction and operation. It will only proceed if recommended by an expert and in consultation with stakeholders.	Construction Operation	Contractor LLP
Long term monitoring	AE10	<p>Monitoring will be carried out for the project as follows.</p> <ul style="list-style-type: none"> <li>• during the construction phase and first two years of operation: <ul style="list-style-type: none"> <li>– Tracking of platypuses to monitor their behaviour and population. This will include assessment of platypus condition to assist with determining impacts to platypus resulting from the project.</li> </ul> </li> <li>• during the first two years of operation: <ul style="list-style-type: none"> <li>– The macroinvertebrate assemblage within Lake Lyell will be monitored for the first two years of operation to assess the long-term impacts of water level flux. This data will assist with determining short term and long-term impacts to macroinvertebrates resulting from this type of project.</li> </ul> </li> </ul>	Construction Operation	LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Aquatic offset approach	AE11	Any offset strategy shall be developed in consultation with the DPI Fisheries, and relevant technical staff, to determine on-site improvement or contribution to priorities identified by DPI Fisheries to be funded by the project.  The offset strategy and timing for its implementation will be agreed with DPI Fisheries prior to construction.	Construction	LLP

## E.5 Heritage

**Table E.5 Aboriginal and historic heritage mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Aboriginal heritage				
Cultural heritage management	AH01	Where Early Works intersect with LD 13 (AHIMS #45-4-0916) and LD 14 (AHIMS #45-4-0915), an archaeological research design (ARD) should be developed by a heritage specialist in consultation with the Registered Aboriginal Parties (RAPs) to outline archaeological mitigation requirements (e.g. salvage excavation) of the portions of the identified site within potential impacts. The ARD should be submitted to Heritage NSW, and implemented prior to ground disturbance activities.  Where Early Works do not intersect with LD 13 (AHIMS #45-4-0916) and LD 14 (AHIMS #45-4-0915), they may proceed under supervision (e.g. micro-siting and/or) by a heritage specialist and/or RAP representatives and managed in accordance with the project's unexpected finds protocols.	Detailed Design Construction	Contractor
Cultural heritage management	AH02	Prior to implementation of main works, an Aboriginal Cultural Heritage Management Plan (ACHMP) must be developed by a heritage specialist in consultation with the RAPs to provide the post-approval framework for managing archaeological mitigation and Aboriginal heritage within the construction envelope. The ACHMP should include approaches and methods outlined in the guiding principles presented in Annexure G of the ACHA focussing on Aboriginal consultation, avoidance/impact minimisation, and mitigation of identified and/or unexpected cultural materials (e.g. archival recording, salvage excavation, etc).	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Cultural values	AH03	<p>A cultural values mitigation strategy must be developed in consultation with the Elders and key knowledge-holders who participated in the cultural values mapping study for the project. This document should be undertaken to explore mitigations for the perceived social and cultural impacts to Mount Walker and a Platypus Dreaming story associated with Coxs River. The document should include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Ongoing on-Country access within the project area and/or other mutually agreed location for the local Aboriginal community to undertake traditional cultural and educative activities (e.g. hunting, fishing, etc).</li> <li>• Facilitation and ongoing support of an Aboriginal ranger program or equivalent to enable long-term management of flora and fauna associated with the project area. This may include ongoing access to the project area or equivalent, opportunity to relocate plants and species from the construction envelope prior to, and/or during construction, and educative activities.</li> <li>• Integration of Aboriginal participants, Indigenous knowledge and traditional ecological methods into future ecological and aquatic ecological requirements that result from the EIS assessment.</li> <li>• Suitable management of any impacted view-lines from Mount Walker by the project within the limits of the proposed development activities.</li> </ul>	Construction Operation	LLP
Heritage Interpretation	AH04	<p>A heritage-interpretation strategy must be developed by a heritage specialist to identify the interpretive values of the project, and specifically Aboriginal heritage values across the project area, and to provide direction for potential interpretive opportunities for the project and/or off-site (e.g. at Wallerawang and/or Lithgow). This strategy should be made available for consultation and feedback with the Wiradjuri traditional owners. Following consultation and feedback on the strategy, a heritage interpretation plan would refine the strategy with content (visual and textual) and design details in order to allow the implementation stage. The interpretation strategy and interpretation plan must include consideration of guiding principles presented in Appendix G of the ACHA.</p>	Construction Operation	LLP
Aboriginal consultation	AH05	<p>Consultation must be maintained with the RAPs during the finalisation of the assessment process and throughout the project.</p>	Construction Operation	Contractor LLP
Historical heritage				
Unexpected finds	HH01	<p>Any unexpected finds or human remains discovered during construction will be managed through an unexpected finds protocol, which is to be included in the CEMP.</p>	Construction	Contractor
Site specific management measures	HH02	<p>The No. 2 Stockade on Cox's River site will be made known in the CEMP and identified as a no-go area.</p>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Site specific management measures.	HH03	<p>If the preferred lakeside camp is not chosen for the temporary workforce accommodation, then the following must be completed for site Lithgow Valley Colliery &amp; Pottery Site, Lithgow Valley Pottery and Brickworks, and Pottery Estate Heritage Conservation Area in compliance with the DCP:</p> <ul style="list-style-type: none"> <li>• archaeological assessment/investigation</li> <li>• detailed design of camp to consider the design policies from the DCP</li> <li>• prepare an 'Integrated Interpretation Plan'</li> <li>• photographic archival recording.</li> </ul>	Detailed Design	Contractor

## E.6 Landscape and visual

**Table E.6 Landscape and visual mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Visual impacts during construction and operation	LV01	<p>The following measures are to be included in detailed and construction design (to the extent possible):</p> <ul style="list-style-type: none"> <li>• Further avoidance during site selection where possible, including: <ul style="list-style-type: none"> <li>– exclusion areas that preserve the highest quality vegetation</li> <li>– preservation of vegetation along water courses and higher slopes.</li> </ul> </li> <li>• Use natural stone for construction of the upper reservoir and other earthworks, and harmonious colours and materials for buildings, structures etc. to blend into the existing landscape.</li> <li>• Mitigation at the source, including: <ul style="list-style-type: none"> <li>– Locating laydown areas in areas with limited visibility from residences and public roads</li> <li>– Sensitive alignment of access tracks to minimise their appearance within the landscape and views, using landform and vegetation to assist in partially screening and integrating them.</li> <li>– Measures to minimise dust generation</li> <li>– Minimising clearing in line with vegetation retention objectives</li> </ul> </li> </ul>	Detailed design Construction	Contractor
Visual impacts of accommodation camp	LV02	Accommodation camp will be built with colours and materials that blend into existing landscape, be arranged to prevent repetitive or continuous facades and include vegetation screening on the perimeter.	Detailed Design	Contractor
Visual impacts during construction	LV03	<p>The following measures will be included in the CEMP to minimise visual impacts during construction:</p> <ul style="list-style-type: none"> <li>• Creation of dust from vehicles and wind will be minimised where possible</li> <li>• Earthworks undertaken during construction will be restored or remediated as soon as possible.</li> <li>• Clearing and trimming of vegetation will be kept to a minimum.</li> </ul>	Construction	Contractor
Vegetation retention	LV04	Vegetation on ridgelines and upper slopes will be retained wherever possible, to screen views (especially from the east) into the project.	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Vegetation management	LV05	<p>Vegetation clearing will be carried out in accordance with a Vegetation Management Plan. The Vegetation Management Plan will require revegetation to occur as quickly as possible and using suitable species. The plan will include detailed guidance on:</p> <ul style="list-style-type: none"> <li>• scheduling to ensure suitable plants are produced in a timely manner for staged replanting</li> <li>• planting design to ensure visual mitigation benefits are maximised</li> <li>• seed collection to ensure plant stock with local provenance is used</li> <li>• an irrigation plan to ensure water is available to ensure reliable establishment of new planting.</li> </ul>	Construction	Contractor
Mitigation at the receiver	LV06	<p>Screening at the receiver can only be achieved through agreement with the landowner. Receivers with a moderate or high visual impact rating (as identified in the LVIA) will be consulted to more accurately determine existing screening and impacts, and to discuss feasible mitigation measures and whether they could be reasonably implemented on the property to reduce visual impacts. Mitigation at the receiver for receivers confirmed to have a high visual impact rating will be developed in consultation with affected landowner(s) as part of the Neighbour Agreement Guide process.</p>	Construction	LLP

## E.7 Social and economic

**Table E.7 Social and economic mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Social				
Community engagement	S01	<p>A Community and Stakeholder Engagement Plan will be implemented for the construction project and will include:</p> <ul style="list-style-type: none"> <li>• a 24 hour community hotline as a grievance management mechanism during construction, and dedicated relationship manager/s for adjacent landowners</li> <li>• engagement with the broader Aboriginal community such as key-knowledge holders and Registered Aboriginal Parties (RAPs). Activities will include holding monthly project briefings to provide updates on project activities and upcoming activities, Aboriginal employment and opportunities to be directly involved in the project</li> <li>• notifications to the local community (including business owners) on the timing and frequency of any road closures, over-sized over-mass vehicle movements and other key traffic movements in the local and regional area</li> <li>• signage posted at the beginning of key 4wd access routes to Mt Walker denoting any access changes</li> <li>• ongoing engagement with stakeholders along the access route, emergency services and bus service providers to reduce the risk of traffic related safety impacts.</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Community dissatisfaction	S02	<p>As part of the Community and Stakeholder Engagement Plan, the following ongoing and targeted engagement measures will be undertaken:</p> <ul style="list-style-type: none"> <li>Continuing to provide a dedicated local engagement resource to strengthen relationships with the community during project planning and construction.</li> <li>Providing a dedicated First Nations Engagement Advisor to act as a central point for information, liaison and relationship management across all Aboriginal Parties affected by the project during planning and construction stages of the project.</li> <li>Continuing consultation with surrounding landowners and tourism businesses during the design, construction, dilapidation and vegetation growth periods to address amenity concerns and visual impacts.</li> <li>Targeted engagement with service providers, including NSW Health, NSW Police, NSW Ambulance, NSW Fire and Rescue, Rydal RFS and NSW SES, and TAFE NSW</li> <li>During detailed design, it is recommended that the project identify objectives for decommissioning, and communicate these to the community.</li> </ul>	Detailed Design Construction Operation	Contractor LLP
Near neighbour impacts	S03	The project will continue the Neighbour Agreement Guide, with ongoing focus on health and wellbeing and addressing the needs of local recreation and tourism providers.	Construction	LLP
Community benefits	S04	<p>The Shared Benefits Program will be developed and implemented in consultation with local residents and businesses, local and regional community organisations, and Lithgow City Council. The program will include consultation on beneficial re-use of the accommodation camp infrastructure and/or sites, and opportunities to enhance recreational values.</p> <p>The benefit sharing program should be reviewed through annual analysis of grants provided and their effect, and any community feedback on accessibility of benefits from the plan.</p>	Construction Operation	LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Workforce management	S05	<p>A Workforce Management Plan will be developed and implemented for the project. The Plan will:</p> <ul style="list-style-type: none"> <li>document services to be provided to workers and strategies for supporting workers</li> <li>document expectations around worker behaviour through a Worker Code of Conduct, as well as services to be provided to workers and strategies for supporting workers including mental health support</li> <li>include a workforce accommodation strategy to secure worker accommodation that enhances project benefits for local accommodation suppliers, without negatively influencing capacity available to tourists and visitors. To prevent impacts on key visitor markets the project should, where possible, avoid accommodating the project workforce away from the accommodation camp during peak periods including holidays and weekends. The strategy should also avoid use of rental housing and be prepared in collaboration with local and regional service providers, and with consideration of demand associated with nearby mines and potential future projects. This is to be determined through engagement with these stakeholders</li> <li>set targets to support and enhance recruitment of workers from the regional and local areas</li> <li>consider long term partnership opportunities with schools and tertiary institutions, such as TAFE, to support employment targets and upskill local workers.</li> <li>targets key local skillsets expected to be available within the region and relevant to the project.</li> </ul>	Construction	Contractor LLP
Local and regional economic impacts	S06	A Procurement Strategy will be prepared and implemented for the project. The strategy will identify targets for local and regional suppliers and businesses.	Construction Operation	Contractor LLP
Aboriginal employment opportunities	S06	An Industry and Aboriginal Participation Plan (IAPP) will be prepared and implemented for the project. The IAPP will be prepared in consultation with Aboriginal stakeholders to confirm the project's commitments for increasing employment and income opportunities for Aboriginal peoples and communities in the construction and operation of new electricity infrastructure projects in NSW delivered under the NSW Electricity Infrastructure Roadmap.	Construction Operation	Contractor LLP
Surroundings	S07	Implement the mitigation measures for biodiversity (E.5) to avoid and minimise impacts to local flora and fauna	Construction	Contractor
Culture	S08	Implement the mitigation measures for Aboriginal and historic heritage (E.6). The Aboriginal Cultural Heritage Mitigation Strategy should include enabling ongoing access to the site for Aboriginal community where feasible.	Operation	LLP
Reduced access	S09	Implement signage and a notification process for any changes to public access due to construction or road works	Construction	Contractor LLP
Recreational impacts	S10	Implement new hazard signs around the Lake, including signage indicating the changing water levels and any access restrictions.	Construction Operation	Contractor LLP
Amenity impacts	S11	Implement the relevant mitigation measures for noise, air quality, visual and traffic in alignment with relevant technical studies and the CEMP.	Construction Operation	Contractor LLP

## E.8 Traffic and transport

**Table E.8 Traffic and transport mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Construction traffic management	TR01	A detailed Construction Traffic Management Plan (CTMP) will be prepared and implemented for the project. The CTMP will be prepared in line with the framework provided in Chapter 7 of the Traffic Impact Assessment (TIA).	Construction	Contractor
Narrow sections of Sir Thomas Mitchell Drive	TR02	Appropriate traffic control measures and/or upgrades to narrow sections are to be included in the CTMP.	Construction	Contractor
Road upgrades and widening	TR02	Upgrades and widening to the site access route are to be completed prior to construction, as identified in Table 5.17 or Table 5.18 the TIA, depending on the accommodation camp to be built. This includes: <ul style="list-style-type: none"> <li>• Widening of Magpie Hollow Road between Great Western Highway and Sir Thomas Mitchell Drive to minimum 9m wide seal</li> <li>• Widening of Sir Thomas Mitchell Drive to minimum 9m wide seal</li> </ul>	Detailed Design	Contractor
Intersection upgrades (site access)	TR03	Modifications and treatments to the following intersections are to be completed prior to construction: <ul style="list-style-type: none"> <li>• Magpie Hollow Road / Sir Thomas Mitchell Drive <ul style="list-style-type: none"> <li>– Basic left turn (BAL) treatment on the north approach.</li> <li>– Modification of intersection line markings, to allow vehicles approach at a more perpendicular angle.</li> </ul> </li> <li>• Magpie Hollow Road / Great Western Highway <ul style="list-style-type: none"> <li>– The proposed signalisation design of the Magpie Hollow Road and Great Western Highway Intersection will be reviewed and approved by Transport for NSW prior to construction.</li> </ul> </li> </ul>	Detailed Design	Contractor
Intersection upgrades (Lakeside camp)	TR04	Should the Lakeside camp be selected, the following road upgrades and intersection modifications are required: <ul style="list-style-type: none"> <li>• Lockyers Line widening to minimum 7m seal</li> <li>• Magpie Hollow Road / Lockyers Line <ul style="list-style-type: none"> <li>– Intersection is to be slightly shifted to the north to achieve required sight distances</li> <li>– Short right turn (CHR(s)) treatment to be provided on the Magpie Hollow Road north approach.</li> </ul> </li> </ul>	Detailed Design	Contractor
Intersection upgrades (Town camp)	TR05	Should the Town camp be selected, the following alternative intersection modifications are required: <ul style="list-style-type: none"> <li>• Signalise intersection of Lithgow Street and Kirkland Street</li> <li>• Extend north approach right turn pocket on Great Western Highway to Magpie Hollow Road to 150 m</li> <li>• Extend south approach right turn pocket on Great Western Highway to Bayonet Street to 160 m</li> </ul>	Detailed Design	Contractor
OSOM route upgrades	TR06	A series of road modifications, traffic control measures and traffic sign removal and replacement measures are presented in the OSOM reports in Appendix D of the traffic impact assessment. The extent of road modifications required will be further detailed in the detailed design stage.	Detailed Design Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Impacts to public transport infrastructure and users	TR07	A Drivers Code of Conduct will be prepared and implemented as part of the CTMP. It will provide measures for driver awareness and public safety.	Construction	Contractor
Road safety	TR08	A comprehensive signage plan should be prepared for the affected sections along Magpie Hollow Road, Sir Thomas Mitchell Drive, and Lockyers Line, in consultation with Lithgow City Council and consideration by the Lithgow Local Traffic Committee. The signage plan should be included in the CTMP.	Construction	Contractor
Operation management plan	TR09	A detailed Operations Traffic Management Plan (OTMP) will be prepared prior to commencement of operations in consultation with the relevant traffic authorities.	Operation	LLP

## E.9 Noise and vibration

**Table E.9 Noise and vibration mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Construction Noise	NV01	<p>A construction noise and vibration management plan (CNVMP) will be prepared and implemented that will address noise and vibration management and mitigation options (where required). The CNVMP will include as a minimum:</p> <ul style="list-style-type: none"> <li>• identification of nearby residences and sensitive land uses along with appropriate corresponding noise criteria</li> <li>• a description of approved hours of work and what works will be undertaken</li> <li>• a description of work practices to be applied to minimise and manage construction noise where it is predicted to be above relevant criteria.</li> <li>• a description of the out of hours works protocol</li> <li>• a description of the complaints handling process</li> <li>• a description of any noise monitoring that is required.</li> </ul>	Construction	Contractor
Construction noise impact and management validation	NV02	<p>The CNVMP will outline a procedure to:</p> <ul style="list-style-type: none"> <li>• measure construction noise levels at early stages to validate the predicted construction noise levels.</li> <li>• re-evaluate the predicted construction noise levels at assessment locations, and where required review noise management and mitigation measures to reduce levels as close to NMLs as possible. This may include (but is not limited to): <ul style="list-style-type: none"> <li>– limiting construction within a certain distance of assessment locations during the evening and night-time period</li> <li>– selecting quieter equipment or reduced equipment fleet</li> <li>– measuring construction noise levels at assessment locations, especially during the evening and night-time period, if relevant, and implementing further noise management and mitigation measures where an exceedance of NMLs is identified</li> <li>– offering a negotiated agreement with affected landholders.</li> </ul> </li> </ul>	Construction	Contractor LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Consultation with affected community	NV03	Affected landholders should be consulted prior to and during construction where an exceedance of NMLs has been predicted and should be notified of proposed mitigation measures that will be used to manage construction noise levels to below ICNG NMLs where practicable.	Construction	Contractor
Operational noise	NV04	All operational plant and equipment including ventilation, pumps, generators, transformers, variable speed drives (VSDs) or other plant associated with the operation of the project shall be subject to detailed acoustic review prior to final specification.  Design shall be assessed against the requirements of the NPfI and consider the amenity criteria for all receiver types.	Construction	Contractor
Construction vibration	NV05	If the safe working distances in Section 5.2.1 of the noise and vibration assessment are encroached, vibration monitoring will be carried out at nearby sensitive structures. If required, the monitoring system will be fitted with an auditory and visual alarm that triggers when vibration levels reach the nominated criteria. This would indicate if or when alternate work practices should be adopted (such as a reduction in vibratory intensity, alternate equipment selection, etc.).	Construction	Contractor
Blasting	NV06	Management measures for blasting impacts will be incorporated in the CVMP, including but not limited to: <ul style="list-style-type: none"> <li>• A survey of heritage items and other potential vibration sensitive receivers will be completed within the blast offset zones identified</li> <li>• Blast practices are to be reviewed when blasting occurs in the vicinity of significant heritage items. This may include limiting the MIC or re-assessing the significance and/or the sensitivity of these items to vibration prior to construction commencing in the area</li> <li>• Blast practices will be reviewed and adapted if complaints are received from residents due to blasting.</li> </ul>	Construction	Contractor
Operational noise	NV07	All operational plant and equipment including ventilation, pumps, generators, transformers, variable speed drives (VSDs) or other plant associated with the operation of the project shall be subject to detailed acoustic review prior to final specification.  Design shall be assessed against the requirements of the NPfI and consider the amenity criteria for all receiver types.	Operation	Contractor

## E.10 Air quality and Greenhouse gas

**Table E.10 Air quality and greenhouse gas mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Air quality				
Fugitive particulate matter emissions	AQ01	<p>Air quality mitigation measures will be incorporated into the project's CEMP and include:</p> <ul style="list-style-type: none"> <li>• minimising vehicle travel speeds</li> <li>• ensuring internal routes are kept moist with the use of water carts</li> <li>• watering of exposed areas where practical</li> <li>• watering during unloading of spoil</li> <li>• watering unpaved haul routes</li> <li>• water injection through drill holes.</li> </ul> <p>Mitigation measures to be implemented will align with the best practice measures proposed in Table 10.1 of the Air Quality Impact Assessment.</p>	Construction	Contractor
Diesel combustion emissions	AQ02	<p>Emissions from the combustion of diesel during the project's construction and operational phases will be minimised by the following:</p> <ul style="list-style-type: none"> <li>• where feasible, mobile and stationary equipment compliant with a more recent emission standard than USEPA Tier 2 will be sourced</li> <li>• unpaved roads will be routinely maintained to reduce truck tyre rolling resistance</li> <li>• all equipment will be routinely serviced to maintain manufacturers' emission specifications</li> <li>• idling of diesel equipment will be minimised wherever feasible</li> <li>• low-sulphur diesel fuels and lubricants will be used where feasible.</li> </ul>	Construction Operation	Contractor LLP
Greenhouse gas				
Reduction of GHG emissions	GHG01	<p>Greenhouse gas mitigation measures will be implemented as part of the CEMP. This includes but not limited to:</p> <ul style="list-style-type: none"> <li>• Rehabilitation of areas disturbed during pre-construction and construction will be undertaken progressively during all stages and phases of the project in line with the project's Rehabilitation Plan.</li> <li>• Reuse of vegetation in line with the Waste Management Plan</li> <li>• Consideration of fuel/energy efficiency during procurement of vehicles and equipment, such as use of electric vehicles</li> <li>• Sourcing materials from local sources where possible</li> <li>• Installation of on-site renewable energy source (e.g. solar) to supplement diesel use for powering equipment where possible.</li> <li>• The generation of waste will be minimised as far as possible.</li> <li>• Recycled or renewable materials will be used where practical.</li> </ul>	Construction	Contractor
Electricity consumption	GHG02	<p>The project would utilise intermittent renewable energy whenever possible during pumping cycles and utilise generation cycles during peak demand periods, to provide resilience and stability to the grid.</p>	Operation	LLP

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Electricity consumption	GHG03	Electricity and fuel usage will be tracked on a regular basis.	Operation	LLP

## E.11 Soils, land and rehabilitation

**Table E.11 Soils, land and rehabilitation mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Rehabilitation	SLR01	<p>Rehabilitation will occur progressively over the construction period in post-construction disturbance areas not required to be retained for the operation of the project in accordance with the rehabilitation strategy outlined in Section 5 of the Soils, Land and Rehabilitation Assessment, and a Rehabilitation Plan prepared for the project.</p> <p>The Rehabilitation Plan will detail all aspects of returning construction areas to a safe, erosionally stable and non-polluting landform consistent with surrounding terrain and land uses. The Rehabilitation Plan will include rehabilitation objectives and protocols for:</p> <ul style="list-style-type: none"> <li>• the capping of disturbance areas, using suitable topsoil material and spread to a depth that reflects natural soil horizons, as soon as possible during the construction phase</li> <li>• soil stripping and re-use, including localised re-use wherever possible (i.e. respread in proximity from where it was stripped)</li> <li>• measuring effectiveness of rehabilitation.</li> </ul>	Construction	Contractor
Rehabilitation	SLR02	Groundcover within the rehabilitated areas should be established and sustained to a minimum of 70% of vegetation or mulch where practical.	Construction	Contractor
Soil stripping	SLR03	<p>Soils should be stripped only in areas where soil disturbance occurs. The depth of soil salvaged should be as deep as excavations or surface disturbance is required, or to a depth where parent material is encountered. The soil types within the construction envelope are generally physically and chemically stable and suitable for reuse as growth medium.</p> <p>Handling and rehandling of stripped topsoil will be minimised as far as practicable by progressively stripping vegetation and soil only as needed for development activities.</p> <p>Further, care must be taken during stripping, stockpiling and/or re-spreading to ensure that structural degradation/compaction of the soil is minimised. Strip topsoil to depths of 300mm, or further over areas of Soil Unit 1 and 2 if additional soil volumes are required.</p>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Soil Stockpiling	SLR04	<p>Management measures for soil stockpiling will be included in the Soil and Water Management Plan, including:</p> <ul style="list-style-type: none"> <li>• small scale stockpiles in areas associated with temporary construction surface disturbance will be placed adjacent to stripping zones wherever possible, and maintain a maximum stockpile height of 2 m to create a low-profile landform</li> <li>• stockpiling topsoils using methods and machinery that limit the amount of compaction. The surface of soil stockpiles should be left in as coarsely structured a condition as possible</li> <li>• erosion and sediment control measures to slow erosion, weed establishment and to maintain moisture content</li> <li>• all stockpiles must remain in a free-draining location to avoid long term soil saturation</li> <li>• employing a stabilising agent or seed and fertiliser to stockpiles as soon as possible. Rehabilitation target species should be established on stockpiles to build up a desirable long term species seed bank in the topsoil.</li> <li>• an inventory of available soil to ensure adequate materials are available for planned rehabilitation activities.</li> </ul>	Construction	Contractor
Soil Respread	SLR05	Soil stabiliser agents must be applied if adverse weather conditions and seasonal variation is not supportive of regrowth (e.g. drought conditions).	Construction Rehabilitation	Contractor
Soil Preparation	SLR06	Thorough seedbed preparation will be undertaken to ensure optimum establishment and growth of vegetation. This will include the scarification of the respread soil to reduce run-off and increase infiltration and seed strike.	Construction Rehabilitation	Contractor
Spoil	SLR07	Any excess spoil to that used as part of the project within the operational disturbance footprint will be transported offsite to a facility approved to accept the material, and in accordance with the Spoil Management Plan.	Construction	Contractor
Erosion and sediment control	SLR08	<p>At all locations where earthworks result in excavation and exposure, erosion and sediment controls will be placed in accordance with the Landcom (2004) guidelines and the Soil and Water Management Plan for the project. The following additional measures and/or procedures will be included in the Soil and Water Management Plan:</p> <ul style="list-style-type: none"> <li>• Regular inspections of erosion and sediment controls, particularly following rainfall. Inspections and maintenance will be recorded.</li> <li>• Wash down/cleaning of vehicles and machinery to avoid tracking sediment onto public roads</li> <li>• Restricting traffic to formed access tracks and roads to limit additional soil disturbance</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Erosion and sedimentation control	SLR09	<p>Preservation and stabilisation of drainageways and minimisation of the extent and duration of any surface disturbance will be prioritised during construction. Site specific erosion and sediment control plans will be prepared to address specific soil dispersion risks.</p> <p>Site specific measures to be incorporated into erosion and sediment control plans include:</p> <ul style="list-style-type: none"> <li>• preference for soft, vegetated structures instead of hard engineering erosion controls</li> <li>• where practicable dirty water will be directed from disturbed areas to sediment basins or to areas with adequate controls to trap and/or filter coarse sediment before it leaves the site</li> <li>• progressive stabilisation with vegetation.</li> </ul>	Construction	Contractor
Erosion and sedimentation control	SLR10	All areas disturbed during construction that are not in active use for over 3 months should be spread with topsoils and stabilised, such as by sowing pasture/ native vegetation species with starter fertiliser to provide stabilising ground cover to promote vegetation cover to provide long term protection against wind erosion. The existing seed bank in the applied topsoil can then generate intermixed with cover crop or following cover crop dieback.	Construction	Contractor
Erosion and sedimentation control	SLR11	Where potential erosive impacts have been identified due to significant disturbance of soils on steep slopes, soil amelioration should be undertaken as part of rehabilitation earthworks.	Construction Rehabilitation	Contractor
Land use conflict	SLR12	<p>Land use and land use conflict related mitigation measures will be included in the project's CEMP or relevant sub plans as identified in E.3-E.13, including compliance with but not limited to:</p> <ul style="list-style-type: none"> <li>• ongoing consultation with stakeholders to address land use conflict concerns if they arise throughout construction and operation</li> <li>• providing continued access to Lake Lyell for recreation during construction and operation</li> <li>• measures to manage land use conflicts with Marrangaroo National Park will be contained in the Noise and Vibration Management Plan, Soil and Water Management Plan, Biodiversity Management Plan and Biosecurity Management Plan</li> <li>• measures to manage workforce behaviour in the Workforce Management Plan</li> <li>• measures to manage bushfire in the Fire Management Plan</li> <li>• measures to mitigation amenity impacts including dust and air quality, noise and traffic.</li> </ul>	Construction Operation	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Land use conflict	SLR13	<p>The following additional measures are to be implemented to manage land use conflict to Marrangaroo National Park:</p> <ul style="list-style-type: none"> <li>The CEMP and OEMP will be prepared in accordance with Guidelines for Development adjacent to National Parks and Wildlife Services Lands including the prevention of unmanaged visitation of Marrangaroo National Park and the prevention of domestic animal introduction into Marrangaroo National Park. Any fencing used in proximity to Marrangaroo National Park should be wildlife-compatible.</li> <li>A spatial survey of project boundaries in relation to Marrangaroo National Park has been completed to inform project design and will to inform construction activities</li> <li>During construction works adjacent to the boundary of the Marrangaroo National Park demarcation using a visually obvious barrier such as temporary fencing, signage or flicker tape should be implemented to reduce the risk of accidental encroachments.</li> <li>The project must ensure construction activities, including the provision of temporary fencing, does will not block or in any way impede tactical fire trails.</li> </ul>	Construction	Contractor

## E.12 Hazards

**Table E.12 Hazards mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Contamination				
High potential for contaminated land	CON01	<p>Intrusive ground investigation is required if disturbance is proposed within the footprint of either of the following:</p> <ul style="list-style-type: none"> <li>Shell Service Station off Magpie Hollow Road and Great Western Highway</li> <li>Town camp.</li> </ul> <p>Intrusive ground investigations will assist with identifying potential liabilities associated with the presence of contamination at these locations and result in further, specific mitigation measures if required.</p>	Detailed Design	Contractor
Contaminated land management	CON02	<p>Protocols for the management of contaminated soil and water during construction would be included in the project's Soil and Water Management Plan and the project's Spoil Management Plan. These protocols will include but are not limited to:</p> <ul style="list-style-type: none"> <li>safety controls for contaminated materials, decontamination measures, training and supervision, etc.</li> <li>environmental controls for erosion and sediment control, stockpile management, spill management, materials tracking and records, etc.</li> </ul>	Construction	Contractor
Contaminated land management	CON03	<p>The CEMP and/or Waste Management Plan will include:</p> <ul style="list-style-type: none"> <li>material handling requirements for trucks transporting materials offsite</li> <li>assessment protocols for importation of any virgin excavated natural material (VENM) or excavated natural material (ENM)</li> </ul>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Unexpected contaminated finds	CON04	<p>The CEMP will include an unexpected finds protocol (UFP), which would including training of project workers to identify potentially contaminated materials or evidence of contamination. The UFP would include the following requirements:</p> <ul style="list-style-type: none"> <li>• cease work in the vicinity</li> <li>• initial assessment by an appropriately qualified environmental consultant</li> <li>• further assessment and management of contamination, if confirmed, in accordance with guidance endorsed under section 105 of the CLM Act.</li> </ul>	Construction	Contractor
Handling of Hazardous Materials	CON05	A site-specific Asbestos Management Plan (AMP) will be prepared (as part of the Work Health and Safety Plan) should asbestos containing materials be encountered during construction.	Construction	Contractor
Accidental spill	CON06	A site-specific emergency spill protocol would be developed as part of the CEMP, and include spill management measures in accordance with relevant EPA guidelines. The plan would address measures to be implemented in the event of a spill, including initial response and containment, notification of emergency services and relevant authorities.	Construction Operation	Contractor
Use of hazardous materials	CON07	The use of hazardous materials would be undertaken following a risk assessment. Risk assessments would include an environmental assessment to determine whether it is practical to use a chemical with a lower hazard level and the key controls to be implemented prior to use.	Construction Operation	Contractor
<b>Bushfire</b>				
Bushfire protection and management	BF1	<p>The bushfire management recommendations #1-10 described in Section 6.2 of the Bush Fire Assessment Report (Waratah, 2025), and with guidance from <i>Planning for Bush Fire Protection 2019</i>, will be incorporated into the detailed design of the project. This includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• implementation of APZs and siting of infrastructure within areas exposed to BAL 29 or less</li> <li>• design of access roads to comply with performance criteria for non-perimeter roads</li> <li>• provision of water supply for firefighting purposes.</li> </ul> <p>Where recommendations are unable to be achieved, consultation with NSW Rural Fire Service will be undertaken to determine alternative design solutions.</p>	Detailed design	Contractor
Emergency and Evacuation Management Plan	BF2	<p>An Emergency and Evacuation Management Plan (EEMP) will be prepared for the project, and will include relevant measures for bushfire events, in accordance with <i>Planning for Bushfire Protection (RFS 2019)</i> and consistent with <i>A Guide to Developing a Bushfire Emergency Management and Evacuation Plan (RFS 2014)</i>. The EEMP will be provided to the Local Emergency Management Committee for its information prior to the commencement of construction.</p>	Construction	Contractor

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Fire Management Plan	BF8	<p>A Fire Management Plan will be developed for the project and will include as a minimum:</p> <ul style="list-style-type: none"> <li>• Ongoing bush fire fuel management within the development footprint</li> <li>• Site infrastructure plan</li> <li>• Site access and internal road plan</li> <li>• APZs and their continued maintenance; and</li> <li>• Location of hazards (physical, chemical etc.) that may impact firefighting operations.</li> </ul>	Construction	Contractor

## E.13 Climate change

**Table E.13 Climate change mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Climate change adaptation	CC1	<p>The additional measures identified in Appendix B of the Climate Change Risk Assessment will be considered further during detailed design and preparation of management plans. These include:</p> <ul style="list-style-type: none"> <li>• Bushfire fuel management and bush fire refuge</li> <li>• Include and/or expand drought reserve in upper reservoir and/or covering/shading of reservoir to reduce evaporation</li> <li>• Alternative site access</li> <li>• Additional construction risk management measures to mitigate damage to site access and infrastructure due to increased rainfall events.</li> </ul>	Detailed design Construction Operation	Contractor

## E.14 Waste

**Table E.14 Waste mitigation measures**

Impact/risk	ID#	Measure(s)	Timing	Responsibility
Construction waste	WM01	<p>A construction waste management plan (CWMP) will be prepared and implemented as part of the CEMP. The CWMP will incorporate the mitigation measures listed in Table 6.2 of the Waste Management report (EMM, 2025). The CWMP will include but not be limited to:</p> <ul style="list-style-type: none"> <li>• measures to avoid and minimise waste associated with the project</li> <li>• classification of wastes and management options (re-use, recycle, stockpile, disposal)</li> <li>• statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions</li> <li>• procedures for storage, transport and disposal</li> <li>• monitoring, record keeping and reporting.</li> </ul>	Construction	Contractor

