

APPENDIX

INLAND
RAIL 

I

Outline Construction Environmental Management Plan

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT

 ARTC

The Australian Government is delivering
Inland Rail through the Australian
Rail Track Corporation (ARTC), in
partnership with the private sector.



NARROMINE TO NARRABRI PROJECT

Environmental Impact Statement

Outline Construction Environmental Management Plan

October 2020



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1 Context

Inland Rail operates within the broader ARTC environmental management system. ARTC manages its environmental responsibilities and environmental performance by implementing an environmental management system that is consistent with the principles contained within the ISO 14000 series and standards.

The Inland Rail Environment and Sustainability Policy guides the planning, design and implementation of the Inland Rail Program. It outlines the organisation's commitment to effectively manage any risks that may lead to an impact on the environment during construction and operation of Inland Rail.

Consistent with this policy, ARTC has developed a Construction Environmental Management Framework to provide for a high standard of environmental performance during construction of all Inland Rail projects. In accordance with the framework, contractors will be required to develop, implement and maintain a construction environmental management plan (CEMP) that meets the requirements of the respective contract, the Construction Environmental Management Framework and the conditions of approval for the project. Construction is required to be completed in accordance with the most recent version of the CEMP approved by the relevant administering authority (where required).

The relationship between the Construction Environmental Management Framework, ARTC's and Inland Rail's corporate and program-level environmental documentation, and the CEMP is shown by Figure 1.1.

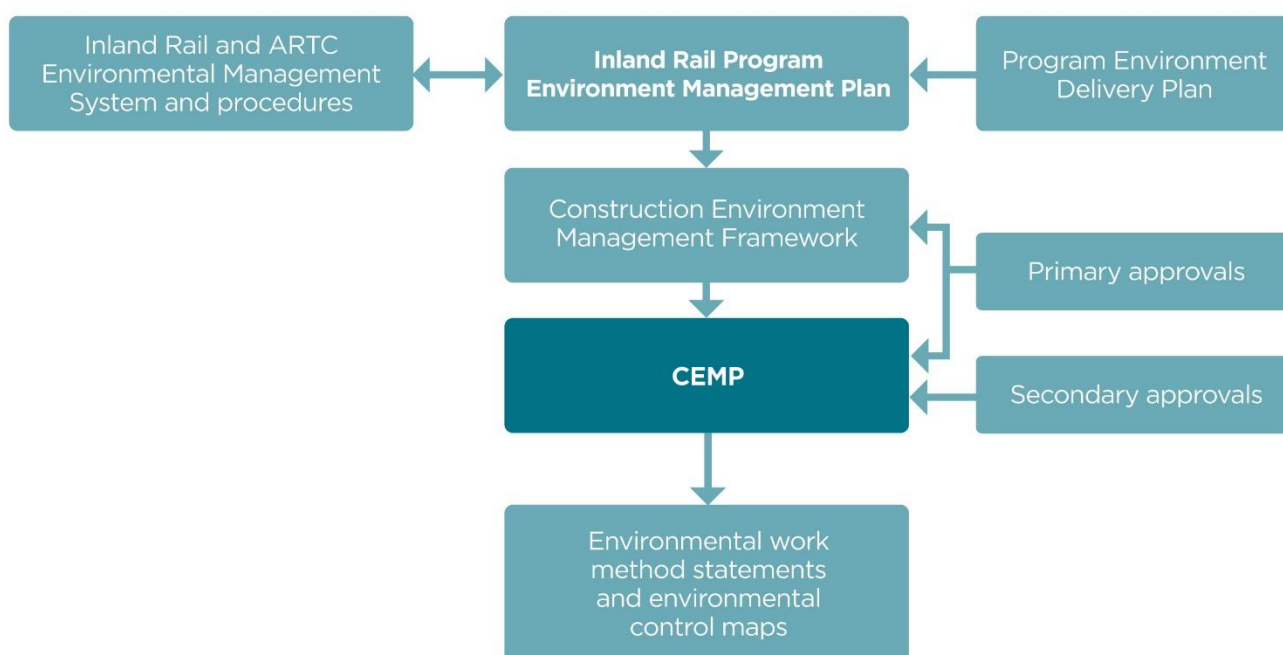


Figure 1.1 Environmental management hierarchy

2 Outline construction environmental management plan

The management of environmental impacts during construction would be documented in the CEMP, to be prepared by the construction contractor(s). The CEMP would provide a centralised mechanism through which all potential construction-related environmental impacts will be managed. It would also provide the overall framework for the system and procedures to ensure that environmental impacts are minimised, and that legislative and approval requirements are fulfilled.

The CEMP would include detailed management plans (environmental sub-plans), which would detail how specific environmental issues are to be managed during construction in accordance with the mitigation measures provided in the EIS and the conditions of approval. It would be prepared in accordance with the Inland Rail Construction Environmental Management Framework and all relevant approvals for the proposal, and include:

- ▶ environmental obligations
- ▶ all applicable conditions of approval
- ▶ required licences, approvals and permits
- ▶ all applicable environmental assessment mitigation measures
- ▶ environmental aspects and impacts associated with project scope of works
- ▶ allocation and statement of ARTC and contractor obligations
- ▶ environmental management roles and responsibilities
- ▶ coverage of identified risks by environmental controls and mitigations
- ▶ environmental training needs
- ▶ obligations of reporting to ARTC
- ▶ emergency response incident management and non-compliance processes
- ▶ hold point list, as supplied by ARTC
- ▶ complaints and enquiries procedure
- ▶ incident and emergencies procedure
- ▶ document change / version control for the CEMP.

Contractors would develop and document a process of periodically reviewing the CEMP. The process would focus on identifying opportunities for continual improvement of processes and practices to ensure that the CEMP is relevant to contractors' activities. The process would address how legislative changes and environmental incident corrective actions will be addressed via an update to the CEMP. Any changes to the CEMP would be reported as part of contractors' monthly environmental reports.

Contractors would be required to submit a copy of the CEMP to Inland Rail for review prior to submission to regulatory authorities required by the applicable conditions of approval.

2.1.1 Environmental performance

The management measures detailed in the CEMP would be monitored during construction to confirm their effectiveness and whether any additional measures are required. Site inspections would be regularly undertaken to check and update erosion and sediment control measures as necessary. Environmental site monitoring would also be undertaken to confirm project impacts and existing environmental values in accordance with monitoring commitments made in this document.

The CEMP would provide for an internal compliance monitoring program where the construction contractor(s) would periodically monitor and report on project performance against conditions of approval. Independent external audits would also be carried out in accordance with *ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing* every six months.

2.1.2 Non-conformance and corrective action

For any environmental issues that arise, corrective and preventative actions must be implemented. Corrective and preventative actions might be developed to address issues or initiate environmental management improvement opportunities identified as a result of incidents, inspections and monitoring, and audit findings and other reviews.

The CEMP would document the corrective and preventative action procedures that will be implemented during construction of the project.

2.1.3 Continual improvement

The CEMP and sub-plans would be reviewed and updated as required in response to audit findings, compliance monitoring results, incidents and inspections that identify corrective and preventative actions. This would include regular management reviews by the construction contractor(s) and an annual review conducted by the contractor(s) as part of the continual improvement process.

2.1.4 Outline of CEMP sub-plans

The CEMP would comprise a main CEMP document, issue-specific sub-plans, activity-specific procedures and strategies, and site-based control maps. The CEMP, issue-specific sub plans and strategies/plans proposed to manage the impacts identified in the EIS (in accordance with the mitigation measures) are shown in Figure 2.1.

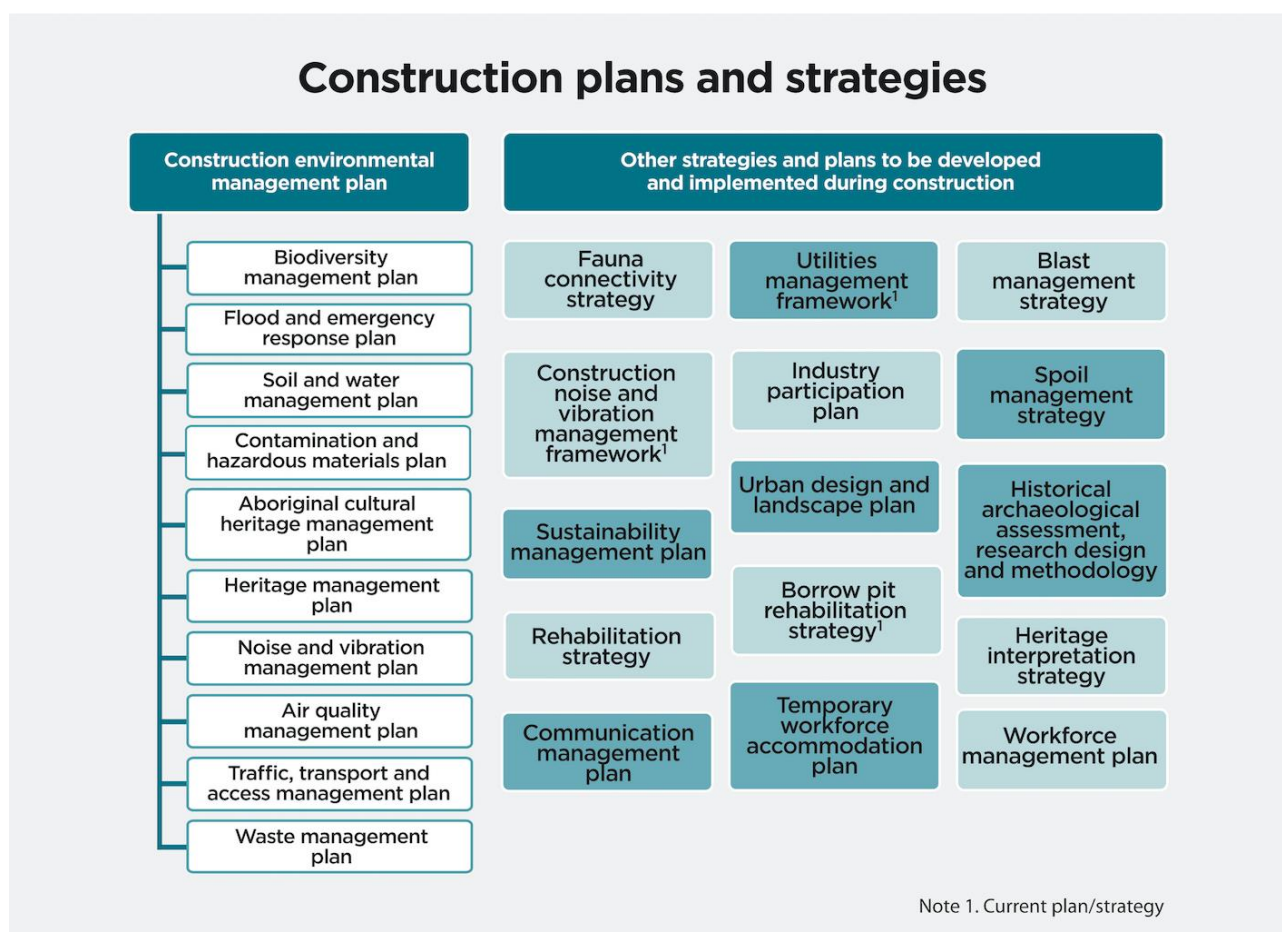


Figure 2.1 Construction plans and strategies

An outline of the required sub-plans, and a guide to the general construction management measures required in each, is provided in Table 2.1 to Table 2.10. The requirement to prepare these plans is specified by the mitigation measures in relevant EIS chapters, which have been compiled into chapter D5 of the EIS. It is noted that the conditions of approval may require different and/or additional matters to be addressed in the CEMP or sub-plans.

Table 2.1 Biodiversity

BIODIVERSITY MANAGEMENT PLAN	
Objectives	<p>Ensure controls and procedures are implemented during construction to avoid, minimise or manage potential adverse impacts on biodiversity within and adjacent to the proposal site.</p> <p>Retain and protect existing flora and fauna habitat as far as practicable.</p> <p>Appropriately manage the spread of weeds and plant pathogens.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to assess, monitor, minimise and mitigate biodiversity impacts. It will detail how construction impacts on terrestrial and aquatic and flora and fauna will be mitigated, managed and monitored.</p> <p>The plan will include:</p> <ul style="list-style-type: none"> ▶ locations and requirements for pre-clearing surveys ▶ establishing protocols for the staged clearing of vegetation and safe tree felling and log removal to reduce the risk of fauna mortality ▶ measures to avoid and minimise clearing of hollow-bearing trees where practicable ▶ measures relating to the provision and management of nest boxes, including reuse of hollows and monitoring protocols ▶ an unexpected finds protocol ▶ measures to manage biosecurity risks in accordance with the <i>Biosecurity Act 2015</i> ▶ measures to reduce the risk of aquatic fauna mortality/injury.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Biodiversity Conservation Act 2016</i> ▶ Biodiversity Conservation Regulation 2017 ▶ <i>Biosecurity Act 2015</i> ▶ <i>National Parks and Wildlife Act 1974</i> ▶ <i>Fisheries Management Act 1994</i> ▶ <i>Environmental Protection and Biodiversity Conservation Act 1999</i> ▶ <i>Why do Fish need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (Fairfull and Witheridge, 2003).
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ Identify and locate habitat features on site, and mark those to be protected during clearing. ▶ Woody debris, large rocks and boulders that are removed will be placed upstream and downstream of the construction footprint, in consultation with a qualified ecologist. ▶ Clear vegetation so as not to mix topsoil with debris and to avoid impacts on surrounding native vegetation. ▶ Priority weeds will be managed in accordance with the <i>Biosecurity Act 2015</i>. Weeds of national significance will be managed in accordance with the Weeds of National Significance: weed management guides. ▶ Areas of biodiversity value outside the proposal site will be fenced or signposted, where appropriate, to prevent the unnecessary disturbance during the construction phase. ▶ Pre-clearance surveys will be implemented within areas of woody native vegetation that are to be cleared. Pre-clearance surveys will be undertaken by suitably qualified and experienced ecologists and involve the following: <ul style="list-style-type: none"> ▶ the demarcation of areas approved for clearing to reduce risk of accidental clearing/disturbance of surrounding native vegetation

BIODIVERSITY MANAGEMENT PLAN	
	<ul style="list-style-type: none"> the likely habitat resources and habitat trees will be identified and marked. Habitat trees are those containing hollows, cracks or fissures and spouts, active nests, dreys or other signs of recent fauna usage. Other habitat features to be identified include fallen timber/hollow logs and burrows. In watercourses identified as potential habitat for native fish species that require habitat features for spawning, construction will not take place within the watercourse during the breeding season (spring and summer). This would only apply to watercourses that have available water. After completion of the construction phase, aquatic habitat features such as woody debris, instream aquatic macrophytes, rocks and boulders, will be reinstated within watercourses in the construction footprint.
Related strategies, plans or requirements (see chapter B1)	<ul style="list-style-type: none"> Fauna connectivity strategy ARTC Biodiversity Offset Delivery Strategy – New South Wales Rehabilitation strategy

Table 2.2 Flood and emergency response plan

FLOOD AND EMERGENCY RESPONSE PLAN OUTLINE	
Objectives	Appropriate controls and procedures are implemented during construction activities to avoid or minimise impacts due to the occurrence of emergency situations including flooding and inundation, bushfires, fires and explosions.
Purpose and requirements	<p>The plan will detail processes, roles and responsibilities and measures to manage impacts to the environment and health during emergency situations.</p> <p>The plan will include a detailed list of measures that will be implemented during construction to minimise impacts during emergency situations, including:</p> <ul style="list-style-type: none"> allocation of general site practices and responsibilities appropriate monitoring strategies following floods to verify design performance and impact predictions flood warning and evacuation procedures for emergency management of flooding up to the probable maximum flood event details of traffic management measures to be implemented during emergencies measures to address the potential environmental impacts of an emergency situation response and recovery arrangements effective communication systems/channels in the event of an emergency training programs to ensure that all staff are familiar with the plan.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> <i>Rural Fires Act 1997</i> <i>Public Health Act 2010</i> <i>Water Management Act 2000</i> Council floodplain risk management plans.

FLOOD AND EMERGENCY RESPONSE PLAN OUTLINE	
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ In the case of an emergency plant or equipment will be moved out of the immediate area if necessary, if safe to do so. ▶ A competent person will be placed at the designated meeting point to guide emergency services. ▶ First aid facilities will be located in every work vehicle and in the site offices. ▶ Firefighting equipment will be located in every work vehicle and in the site offices. ▶ All works involving potential ignition sources will be subject to a risk assessment or ban on total fire ban days. ▶ Develop protocols for equipment and materials that can be removed from the proposal site during a flood event where reasonable and feasible ▶ NSW State Emergency Services will be notified of any partial or total road closures during construction because of the proposal with the Flood and Emergency Response Plan detailing any impacts on existing flood conditions in relation to flood evacuation routes.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Geomorphology monitoring program

Table 2.3 Soil and water

SOIL AND WATER MANAGEMENT PLAN OUTLINE	
Objectives	<p>Appropriate controls and procedures are implemented during construction activities to avoid or minimise erosion and sedimentation impacts.</p> <p>Minimise potential impacts on water quality in surrounding watercourses.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage potential soil and water quality impacts during construction, including potential impacts associated with stockpile management, saline soils and acid sulfate soils.</p> <p>The plan will include a detailed list of measures that will be implemented during construction to minimise the potential for soil and water impacts, including:</p> <ul style="list-style-type: none"> ▶ allocation of general site practices and responsibilities ▶ material management practices ▶ stockpiling and topsoil management, including prompt stabilisation of spoil mounds and treatment of dispersive soils in mounds (for example, through mixing of gypsum) ▶ surface water and erosion control practices that take into account site-specific soil types (for example, dispersive soils). <p>A contingency procedure will also be prepared as part of the plan to ensure potential impacts to water quality and aquatic ecology are minimised in case of unexpected rainfall during works in dry watercourses.</p>

SOIL AND WATER MANAGEMENT PLAN OUTLINE	
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Water Management Act 2000</i> ▶ <i>Water Act 1912</i> ▶ <i>Protection of the Environment Operations Act 1997</i> ▶ <i>Managing Urban Stormwater – Soils and Construction</i>, Volume 1 (Landcom, 2004), Volume 2C Unsealed roads (DECC, 2008b) and Volume 2D (DECC, 2008c) (the Blue Book) ▶ <i>Guidelines for watercourse crossings on waterfront land</i> (DPI, 2012b) ▶ <i>Technical Guideline: Temporary stormwater drainage for road construction</i> (RMS, 2011) ▶ <i>Acid Sulfate Soils Assessment Guidelines</i> (Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998) ▶ <i>Acid Sulfate Soil Manual</i> (Acid Sulfate Soil Management Advisory Committee, 1998), ▶ <i>Waste Classification Guidelines - Part 4: Acid Sulfate Soils</i> (EPA, 2014) ▶ <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (Australian and New Zealand Governments, 2018) (the Water Quality Guidelines) ▶ ARTC Contamination, Spoils and Waste Management Strategy.
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ As far as practicable, concrete usage will be minimal in locations within 100 metres of watercourses that have been identified as sensitive receiving environments. ▶ Sediment and erosion control devices will be installed to minimise mobilisation and transport of sediment in accordance with the Blue Book. ▶ No stockpiles of materials or storage of fuels or chemicals will be located within high/medium flood risk areas or flow paths. ▶ Maintenance and checking of the erosion and sedimentation controls will be undertaken on a regular basis and any subsequent records retained. Sediment will be cleared from behind barriers/sand bags on a regular basis as required and all controls will be managed to ensure they work effectively at all times. ▶ The area of exposed surfaces will be minimised. Disturbed areas will be stabilised progressively to ensure that no areas remain unstable for any extended length of time. ▶ Soil and sediment that accumulates in erosion and sediment control structures will be reused where practicable during site reinstatement, unless it is contaminated or otherwise inappropriate for reuse. ▶ Work will cease where practicable during heavy rainfall events when there is a risk of sediment loss off site or ground disturbance due to waterlogged conditions. ▶ Sediment traps or filters will be used to target the removal of sediments, located at all discharge locations and appropriately maintained. ▶ Water collected in sediment basins will be re-used during construction or be directed as 'overflow' using flow distributors (and scour protection) to nearest existing drainage line. ▶ Emergency spill procedures will be developed to avoid and manage accidental spillages of fuels, chemicals, and fluids during construction. ▶ Construction works within and/or next to the watercourses and drainage lines will be minimised as much as feasibly possible to minimise disturbance of sediments in or near the waterway. ▶ Visual monitoring of local water quality (ie turbidity, hydrocarbon spills/slicks) will be undertaken on a regular basis to identify any potential spills. ▶ Where practicable, culverts and bridge piers will be installed when the waterway is dry.

SOIL AND WATER MANAGEMENT PLAN OUTLINE	
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Rehabilitation strategy ▶ Surface water monitoring framework ▶ Groundwater monitoring program ▶ Spill response procedure ▶ Dam dewatering protocol

Table 2.4 Contamination and hazardous materials

CONTAMINATION AND HAZARDOUS MATERIALS PLAN OUTLINE	
Objectives	<p>Appropriate controls and procedures are implemented during construction activities to avoid or minimise impacts due to leaks and spills or the handling of hazardous materials.</p> <p>Minimise potential impacts associated with encountering contaminated soils.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage potential contamination impacts during construction, including potential impacts associated with the presence of existing contamination and the handling and storage of hazardous materials and dangerous goods.</p> <p>The plan will include a detailed list of measures that will be implemented during construction to minimise the potential for contamination impacts, including:</p> <ul style="list-style-type: none"> ▶ allocation of general site practices and responsibilities ▶ hazardous materials and dangerous goods management practices ▶ procedures to be undertaken during demolition of structures ▶ spill/incident management procedures. <p>An unexpected finds protocol will be prepared as part of the plan and outline the activities to be undertaken in the event that previously undetected contamination is identified, which will include making the site safe, carrying out an assessment of the finds, and managing the finds based on the results of the assessment.</p>
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Protection of the Environment Operations Act 1997</i> ▶ <i>Contaminated Land Management Act 1997</i> ▶ <i>Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites</i> (OEH, 2011a) ▶ <i>Contaminated Sites: Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (EPA, 2015a) ▶ <i>Waste Classification Guidelines - Part 1: Classifying waste</i> (EPA, 2014) ▶ ARTC Contamination, Spoils and Waste Management Strategy.

CONTAMINATION AND HAZARDOUS MATERIALS PLAN OUTLINE	
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ Spill kits will be maintained on-site at all times. ▶ Machinery will be checked daily to ensure that no oil, fuel or other liquids are leaking. ▶ Refuelling of plant and equipment will be undertaken within designated areas with appropriate controls. ▶ Vehicle wash down and/or cement truck washout will occur in a designated bunded area or off-site. ▶ The storage of hazardous materials, and refuelling/maintenance of construction plant and equipment, will be undertaken in clearly marked designated areas that are designed to contain spills and leaks. ▶ The storage of hazardous materials and dangerous goods will be undertaken in accordance with all relevant Australian Standards and regulatory requirements. ▶ The transport of dangerous goods will be undertaken in accordance with the Dangerous Goods (Road and Rail Transport) Regulation 2009 and the <i>Australian Code for the Transport of Dangerous Goods by Road & Rail</i> (National Transport Commission, 2017). ▶ In the event that indicators of contamination are encountered during construction (such as odours or visually contaminated materials), work in the affected area will cease immediately, and the procedures detailed in the unexpected finds protocol will be implemented. ▶ The unexpected finds protocol will include the following general approach: <ul style="list-style-type: none"> ▶ site workers will make the area safe, stop work, and notify the construction supervisor, who will quarantine/fence the area, notify staff on-site and the project manager ▶ the project manager or their representative will notify an appropriately qualified environmental consultant who will carry out an assessment of the nature and extent of the unexpected contamination ▶ remediation will be undertaken as required and as advised by the environmental consultant ▶ works may only recommence at the site after approval has been obtained by the environmental consultant and the project manager ▶ validation of the remediation will be carried out to assess the success of the remediation works. ▶ Awareness training will be provided for all onsite staff to assist in the identification of potentially contaminated material.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Surface water monitoring framework ▶ Groundwater monitoring program ▶ Spill response procedure ▶ Hazardous materials surveys ▶ Rehabilitation strategy

Table 2.5 Aboriginal heritage

ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN OUTLINE	
Objectives	<p>Ensure appropriate controls and procedures are implemented during construction to avoid or minimise potential adverse impacts on items of heritage value.</p> <p>Avoid accidental impacts on heritage items.</p> <p>Maximise worker's awareness of heritage.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage Aboriginal heritage and minimise the potential for impacts during construction. It will provide the framework and mechanisms for the management and feasible and reasonable mitigation of potential Aboriginal heritage impacts, and will include:</p> <ul style="list-style-type: none"> ▶ a salvage methodology (mitigation measure AH2) ▶ an unexpected finds procedure (mitigation measure AH10) ▶ plans and installation procedures for fencing and protective coverings ▶ induction package for construction workers and supervisors (mitigation measure AH9) ▶ measures to protect sites close to the proposal site from inadvertent impacts ▶ outcomes of further investigations (mitigation measures AH3 and AH4). <p>The plan will be prepared in consultation with registered Aboriginal parties and the Department of Planning, Industry and Environment, where relevant. It will:</p> <ul style="list-style-type: none"> ▶ identify Aboriginal heritage items in the vicinity of the proposal site ▶ include appropriate measures to comply with all relevant legislation and other requirements ▶ include appropriate controls and procedures to avoid or minimise potential adverse impacts to Aboriginal heritage ▶ define the requirements for heritage awareness and management training for relevant personnel involved in site works ▶ describe the procedures to manage unexpected items of potential heritage significance or human remains ▶ provide a mechanism for the monitoring, review and amendment of this plan.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>National Parks and Wildlife Act 1974</i> ▶ <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECC, 2010c) ▶ <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW, 2010c) ▶ <i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i> (OEH, 2011) ▶ <i>Policy Directive: Exhumation of Human Remains</i> (NSW Health, 2013) ▶ <i>Manual for the identification of Aboriginal remains</i> (DEC, 2006) ▶ <i>Skeletal Remains: Guidelines for Management of Human Skeletal Remains</i> (NSW Heritage Office, 1998) ▶ <i>Aboriginal Cultural Heritage Standards and Guidelines Kit</i> (NPWS, 1997).

ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN OUTLINE	
Example management measures	<p>Management measures to be included in the plans and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ All identified items within and in the immediate vicinity of the proposal site will be marked on the environmental control maps, site plans, fenced off where appropriate, and avoided. ▶ Works will not destroy, modify or otherwise physically affect any heritage items, including human remains, outside of the construction boundary through demarcation, identification and training. ▶ Identified Aboriginal objects will be avoided and protective measures implemented to ensure no disturbance of such objects including; delineating and marking areas as no-go zones for earthworks, excavations and stockpile sites. ▶ A safe keeping place for any artefacts recovered during construction will be identified in consultation with the RAPs. ▶ Consultation will be ongoing with RAPs during construction. ▶ Any works outside the proposal site will need to be subject to further review of Aboriginal significance.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Salvage methodology ▶ Unexpected finds procedure

Table 2.6 Non-Aboriginal heritage

HERITAGE MANAGEMENT PLAN OUTLINE	
Objectives	<p>Ensure appropriate controls and procedures are implemented during construction to avoid or minimise potential adverse impacts on items of heritage value.</p> <p>Avoid accidental impacts on heritage items.</p> <p>Maximise worker's awareness of heritage.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage non-Aboriginal heritage and minimise the potential for impacts during construction. It will provide the framework and mechanisms for the management and feasible and reasonable mitigation of potential non-Aboriginal heritage impacts.</p> <p>The plan will be prepared in consultation with the relevant heritage agencies (local councils), where relevant. It will:</p> <ul style="list-style-type: none"> ▶ identify non-Aboriginal heritage items within/in the vicinity of the proposal site ▶ include outcomes of further surveys during detailed design ▶ include appropriate controls and procedures to avoid or minimise potential adverse impacts to non-Aboriginal heritage along the proposal site and comply with all relevant legislation and other requirements ▶ heritage awareness and management training for relevant personnel involved in site works ▶ details regarding the conservation and curation of any historical artefacts recovered during works ▶ describe the procedures for the reinstatement of areas of heritage value that would be temporarily impacted by construction ▶ describe the procedures to manage unexpected items of potential heritage significance or human remains ▶ provide a mechanism for the monitoring, review and amendment of this plan.

HERITAGE MANAGEMENT PLAN OUTLINE	
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Heritage Act 1977</i> ▶ <i>Historical Archaeology Code of Practice</i> (Heritage Office, 2006) ▶ <i>Policy Directive: Exhumation of Human Remains</i> (NSW Health, 2013) ▶ <i>Skeletal Remains: Guidelines for Management of Human Skeletal Remains</i> (NSW Heritage Office, 1998).
Example management measures	<p>Management measures to be included in the plans and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ All identified items within and in the immediate vicinity of the proposal site will be marked on the environmental control maps, site plans, fenced off where appropriate, and avoided. ▶ Works will not destroy, modify or otherwise physically affect any heritage items, including human remains, outside of the construction boundary through demarcation, identification and training. ▶ Any heritage items not impacted by the works will be retained and protected throughout construction by demarcation, identification and training. ▶ Construction activities will be conducted in a manner to minimise the potential for vibration impacts in accordance with mitigation measure CNV6. ▶ Non-Aboriginal historical heritage awareness training will be provided for contractors prior to commencement of construction works to ensure understanding of potential heritage items that may be impacted during the proposal, and the procedure required to be carried out in the event of discovery of historical heritage materials, features or deposits, or the discovery of human remains.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Heritage interpretation strategy ▶ Archival photographic recording ▶ Archaeological assessment, research design and methodology

Table 2.7 Noise and vibration

NOISE AND VIBRATION MANAGEMENT PLAN OUTLINE	
Objectives	<p>Minimise potential adverse noise and vibration impacts on the environment and community.</p> <p>Minimise unreasonable noise and vibration impacts on receivers.</p> <p>Avoid structural damage to buildings or heritage items as a result of construction vibration.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage noise and vibration and minimise the potential for impacts during construction. It will provide the framework and mechanisms for the management and feasible and reasonable mitigation of potential noise and vibration impacts.</p> <p>The plan will be prepared in consultation with the EPA, where relevant. It will:</p> <ul style="list-style-type: none"> ▶ ensure compliance with the Inland Rail NSW Construction Noise & Vibration Management Framework ▶ identify noise and vibration performance criteria ▶ confirm sensitive receivers and features in the vicinity of the proposal site ▶ include standard and additional mitigation measures from the <i>Interim Construction Noise Guideline</i> (DECC, 2009), where relevant ▶ include protocols that will be adopted to manage works required outside standard construction hours, in accordance with relevant guidelines including for management of respite periods ▶ include specific measures to manage noise within the multi-function compounds, temporary workforce accommodation and borrow pits

NOISE AND VIBRATION MANAGEMENT PLAN OUTLINE	
	<ul style="list-style-type: none"> describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures include details for ongoing consultation with receivers and procedures for handling complaints include measures to manage vehicle movements outside standard construction working hours provide a mechanism for the monitoring, review and amendment of this plan.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> Inland Rail NSW Construction Noise and Vibration Management Framework <i>Interim Construction Noise Guideline</i> (DECC, 2009) <i>AS 2436-2010 Guide to noise and vibration control on construction, demolition and maintenance sites.</i>
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> The noise levels of plant and equipment will have operating sound power or sound pressure levels that comply with the required criteria. All site workers will be informed of the potential for noise and vibration impacts upon sensitive receivers and will take practical and reasonable measures to minimise noise during activities. Quieter and less vibration emitting construction methods will be used where reasonable and feasible. Loading and unloading of materials/deliveries will occur as far as possible from sensitive receivers, and preferably during standard construction hours. Materials dropped from heights into or out of trucks will be minimised. No plant or equipment will be left idling when operating near sensitive receivers. Specific consultation will be undertaken with potentially impacted sensitive receivers prior to commencement of vibration generating activities, and throughout the construction phase, with regards to potential detectable vibration levels. Where required, specific work practices or scheduling arrangements will be considered to minimise potential impacts on the sensitive receivers. In cases where noise or vibration levels are identified as likely exceeding applicable criteria. Modification or substitution of work methods will be undertaken where practicable, including but not limited to: <ul style="list-style-type: none"> works programming assessments selective use of enhanced equipment/plant noise barriers or earthen bunds equipment/plant substitution. Use of horns, bells, beepers and other audible signals will be minimised as much as practicable. Construction works will only be undertaken during approved working hours, unless otherwise permitted by the EPL. Simultaneous operation of noisy plant within range of sensitive receivers will be avoided, as far as practicable.
Related strategies, plans or requirements	<ul style="list-style-type: none"> Construction noise and vibration impact statements Blast management strategy Inland Rail NSW Construction Noise and Vibration Management Framework Out-of-hours work protocol Building condition surveys

Table 2.8 Air quality

AIR QUALITY MANAGEMENT PLAN OUTLINE	
Objectives	<p>Minimise gaseous and particulate pollutant emissions from construction activities as far as feasible and reasonable.</p> <p>Identify and control potential dust and air pollutant sources.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to manage air quality and minimise the potential for impacts during construction.</p> <p>The plan will be prepared in consultation with relevant government agencies (as appropriate) and will include management and mitigation related to:</p> <ul style="list-style-type: none"> ▶ spoil handling ▶ machinery operating procedures ▶ soil treatments ▶ stockpile management ▶ haulage ▶ dust suppression ▶ monitoring. <p>The plan will include specific measures to manage air quality within the multi-function compounds, temporary workforce accommodation and borrow pits.</p>
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Protection of the Environment Operations Act 1997</i> ▶ Protection of the Environment Operations (Clean Air) Regulation 2010.
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ Haulage likely to generate excessive dust or odour will be scheduled during mornings. Seasonal variation in wind strength, with lighter winds during winter/spring, will also be considered when scheduling works. ▶ Dust generation will be monitored visually, and where required, dust control measures such as water spraying will be implemented to control the generation of dust. ▶ Rehabilitation of disturbed surfaces that do not form part of the operational footprint will be carried out as soon as possible after works completion to assist in limiting dust levels and assist in reestablishment. ▶ Access points will be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment will be promptly removed from roads to minimise dust generation. ▶ Dust suppressants will be applied to stockpiled dirt if the pile is inactive for extended periods. ▶ Modify or cease construction activities with the potential to generate dust during unfavourable weather conditions as required to reduce the potential for amenity impacts on adjacent sensitive receivers. ▶ Topsoils and ground cover will be replaced following ground disturbance as soon as practicable. ▶ Materials transported to and from the site will be covered to reduce dust generation in transit. ▶ Any vehicles, plant or equipment non-compliant with standards or producing excessive (visual assessment) emissions will be disused immediately until service/maintenance can be undertaken to return them to normal working order. ▶ Any manufacturer specified exhausts and/or baffles will be installed and operational as per specifications. ▶ Machinery will be turned off when not in use and not left to idle for prolonged periods. ▶ Low sulfur content diesel fuel/oil will be utilised where available.

AIR QUALITY MANAGEMENT PLAN OUTLINE	
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Rehabilitation strategy

Table 2.9 Traffic, transport and access

TRAFFIC, TRANSPORT AND ACCESS MANAGEMENT PLAN OUTLINE	
Objectives	<p>Ensure appropriate controls and procedures are implemented to minimise potential traffic, transport and access impacts.</p> <p>Identify appropriate traffic management measures and establish a framework for coordinating their implementation.</p> <p>Maintain network journey times and congestion at acceptable levels.</p> <p>Ensure access to properties are maintained.</p>
Purpose and requirements	<p>The plan will detail processes and responsibilities to minimise traffic and access delays and disruptions, and identify and respond to changes in road safety.</p> <p>The plan will be prepared in consultation with Transport for NSW; Narromine, Gilgandra, Coonamble, Warrumbungle and Narrabri councils; and public transport/bus operators (as relevant).</p> <p>The plan will include measures to:</p> <ul style="list-style-type: none"> ▶ maintain access to individual residences, services and businesses, and for livestock across the proposal site ▶ identify alternative routes for construction traffic activities in the event roads are closed by relevant authorities ▶ communicate changes in traffic conditions and access arrangements ▶ provide safe routes for pedestrians and cyclists during construction ▶ minimise the number of changes to road users' travel paths ▶ manage the movements of construction-related traffic to minimise traffic and access disruptions in the public road network ▶ manage temporary access arrangements where required ▶ identify haulage routes ▶ provide a mechanism for the monitoring, review and amendment of the plan.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Roads Act 1993</i> ▶ Traffic control at work sites (Roads and Maritime Services, 2018b) ▶ AS 1742.3–2009: <i>Manual of uniform traffic control devices – Traffic control for works on roads</i>.
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ Adequate road signage will be provided to inform drivers of the work, timing and alternative access arrangements. ▶ Heavy vehicle movements will be minimised during peak traffic times. ▶ Measures to manage traffic flows around the area affected by construction will be provided, including required regulatory and directional signposting, line marking, variable message signs, and all other necessary traffic control devices. ▶ Designated queuing and idling areas will be determined near work areas to minimise disruption to the local community.

TRAFFIC, TRANSPORT AND ACCESS MANAGEMENT PLAN OUTLINE	
	<ul style="list-style-type: none"> ▶ Appropriate controls will be established where vehicles are required to cross footpaths to access construction sites. This may include manual supervision, physical barriers or temporary traffic signals as required. ▶ Construction vehicles will park within the construction compound where practicable. ▶ The timing of deliveries accessing the site will be programmed to ensure there is sufficient space within the proposal site to accommodate deliveries.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Road safety audits ▶ Dilapidation survey

Table 2.10 Waste

WASTE MANAGEMENT PLAN OUTLINE	
Objectives	<p>Implement the waste management hierarchy of avoidance, minimisation, reuse, recycling and disposal.</p> <p>Minimise waste generation and maximise reuse as far as practicable.</p> <p>Maximise awareness of waste and resource use management issues.</p>
Purpose and requirements	<p>The plan will detail processes, responsibilities and measures to minimise waste generation and conserve energy during construction.</p> <p>The plan will include:</p> <ul style="list-style-type: none"> ▶ expected waste types and volumes ▶ proposed waste reuse, recovery and recycling and disposal measures ▶ specific measures to manage vegetation waste ▶ procedures for managing office and proposal waste materials including separation, treatment and disposal in accordance with relevant guidelines ▶ the process for identifying waste reuse sites including approval requirements ▶ procedures for the identification, handling and disposal of hazardous materials including potential asbestos waste ▶ waste tracking, record keeping and reporting requirements, including the implementation of a waste register.
Relevant guidelines and standards	<p>The plan will be prepared in accordance with relevant legislation, guidelines and standards, including:</p> <ul style="list-style-type: none"> ▶ <i>Protection of the Environment Operations Act 1997</i> ▶ Protection of the Environment Operations (Waste) Regulation 2005 ▶ <i>Waste Avoidance and Resource Recovery Act 2001</i> ▶ <i>Waste Classification Guidelines</i> (NSW EPA, 2014a) ▶ ARTC's sustainability framework for Inland Rail ▶ ARTC Contamination, Spoils and Waste Management Strategy.

WASTE MANAGEMENT PLAN OUTLINE	
Example management measures	<p>Management measures to be included in the plan and implemented during construction will include (but not be limited to):</p> <ul style="list-style-type: none"> ▶ Waste management strategies will be implemented in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> management hierarchy. ▶ Colour-coded waste segregation bins will be located at key construction compounds where practicable, to facilitate segregation and prevent cross contamination. ▶ Resource management hierarchy principles will be followed: <ul style="list-style-type: none"> ▶ avoid unnecessary resource consumption as a priority ▶ avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery) ▶ disposal is undertaken as a last resort. ▶ Waste segregation bins/stockpiles will be located at various locations within the proposal site, if space permits, to facilitate segregation and prevent cross contamination. ▶ Trees and weed free plant material will be mulched or chipped on site and used in landscaping where practicable to stabilise disturbed soils. ▶ Identify recycled materials (such as recycled aggregates in road pavement and surfacing; steel with recycled content) for use in construction or operation of the proposal where they are cost, quality and performance competitive.
Related strategies, plans or requirements	<ul style="list-style-type: none"> ▶ Spoil management strategy ▶ Sustainability management plan