

APPENDIX

A

Secretary's Environmental Assessment Requirements

NARRABRI TO NORTH STAR—PHASE 2 ENVIRONMENTAL IMPACT STATEMENT



Contents

APPENDIX A SECRETARY’S ENVIRONMENTAL ASSESSMENT REQUIREMENTS 1

A1	General Secretary’s Environmental Assessment Requirements	1
A2	Key issue Secretary’s Environmental Assessment Requirements	5
A2.1	Summary of EPBC Act assessment requirements (from Attachment A to the SEARs)	13
A2.2	Agency requirements	14

Appendix A Secretary's Environmental Assessment Requirements

A1 General Secretary's Environmental Assessment Requirements

Desired performance outcomes	Requirement	EIS reference
1. Environmental impact assessment Process The process for assessment of the project is transparent, balanced, well- focused and legal.	1 The Environmental Impact Statement must be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation).	
	2 The project will impact matters of national environmental significance (MNES) protected under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and will be assessed under an Accredited Assessment. The Proponent must assess impacts to MNES protected under the EPBC Act. The assessment must be in accordance with the requirements listed in Attachment A.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
	3 Where the project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement (pursuant to Amending Agreement No. 1) the EIS must address: a consideration of any Protected Matters that may be impacted by the development where the Commonwealth Minister has determined that the project is a Controlled Action; b identification and assessment of those Protected Matters that are likely to be significantly impacted; c details of how significant impacts to Protected Matters have been avoided, mitigated and if necessary, offset; and d consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
	4 The onus is on the Proponent to ensure legislative requirements relevant to the project are met.	Chapter 3: Statutory context
2. Environmental Impact Statement The project is described in sufficient detail to enable clear understanding that the project has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse environmental, social and economic impact, including its cumulative impacts.	1 The EIS must include, but not necessarily be limited to, the following: a executive summary	Proposal summary
	b a description of the project, including all components and activities (including ancillary components and activities) required to construct and operate it including: i project overview; ii site and route locations (including use of plans); iii scope of works to construct the project, including key activities, description of methodologies, working hours, indicative plant and equipment to be used; iv timing of key construction activities; v acquisition of privately owned, council and crown land; and vi connection to Inland Rail – Narrabri to North Star Phase 1	Chapter 1: Introduction Chapter 8: Construction of the proposal
	c a statement of the objective(s) of the project;	Chapter 1: Introduction
	d a summary of the strategic need for the project regarding its State significance and relevant State Government policy;	Chapter 5: Need for the Inland Rail Program and the strategic context of the proposal
	e an analysis of alternatives to the project;	Chapter 6: Inland Rail Program development, alternatives and the proposal

Desired performance outcomes	Requirement	EIS reference
	f a description of options within the project;	Chapter 6: Inland Rail Program development, alternatives and the proposal
	g a description of how alternatives to and options within the project were analysed to inform the selection of the preferred alternative/option. The description must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) within the project were selected;	Chapter 6: Inland Rail Program development, alternatives and the proposal
	h a general description of different construction methods that were analysed and preferred methods;	Chapter 8: Construction of the proposal
	i a concise description of the general biophysical, social and economic environment that is likely to be impacted by the project (including offsite impacts). Elements of the environment that are not likely to be affected by the project do not need to be described;	Chapter 2: General biophysical and cultural environment
	j a description of the trains that will operate under the project;	Chapter 7: Proposal features and operation
	k a demonstration of how the project design has been developed to avoid or minimise likely adverse impacts;	Chapter 6: Inland Rail Program development, alternatives and the proposal Chapter 7: Proposal features and operation
	l the identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome;	Chapter 6–Chapter 26
	m a statement of the outcomes the Proponent will achieve for each key issue;	Chapter 6–Chapter 26
	n measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact;	Chapter 6–Chapter 26
	o consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts;	Chapter 6–Chapter 26
	p an assessment of the relevant cumulative impacts of the project taking into account other projects that have been approved but where construction has not commenced, projects that have commenced construction, and projects that have recently been completed;	Chapter 26: Cumulative impacts
	q statutory context of the project as a whole, including: i how the project meets the provisions of the EP&A Act and EP&A Regulation; and ii a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out;	Chapter 3: Statutory context
	r a chapter that synthesises the environmental impact assessment and provides: i a succinct but full description of the project for which approval is sought; ii a description of any uncertainties that still exist around design, construction methodologies and/or operational methodologies and how these will be resolved in the next stages of the project; iii a compilation of the impacts of the project that have not been avoided;	Throughout the EIS, and Chapter 6–Chapter 26

Desired performance outcomes	Requirement	EIS reference
	iv a compilation of the proposed measures associated with each impact to avoid or minimise (through design refinements or ongoing management during construction and operation) or offset these impacts; v a compilation of the outcome(s) and criteria the proponent will achieve and how these will be monitored; and vi the reasons justifying carrying out the project as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts; and	
	s relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.	Throughout the EIS
	2 The EIS must only include data and analysis that is reasonably needed to make a decision on the project. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.	Detailed findings are provided in appendices and technical reports
3. Assessment of key issues* Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact. * Key issues are nominated by the Proponent in the Critical State Significant Infrastructure (CSSI) project application and by the NSW Department of Planning, Industry and Environment in the SEARs. Key issues need to be reviewed throughout the preparation of the EIS to ensure any new key issues that emerge are captured. The key issues identified in this document are not exhaustive but are key issues common to most CSSI projects.	1 The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the project location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts. 2 For each key issue the Proponent must: a assess the issue (including modelling as relevant), and address and undertake the requirements specified in section 2; b describe the biophysical, social and economic environment, as far as it is relevant to that issue, including substantiated baseline data that is reflective of current guidelines where relevant; c describe the legislative and policy context, as far as it is relevant to the issue; d identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the project and cumulative impacts (parallel and sequential) with other projects; e demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); f identify clear and quantifiable actions, outcomes and, where possible, performance criteria; g detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); h detail how residual impacts will be managed or offset, and the approach and effectiveness of these measures; and i measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met. 3 Where multiple options to avoid or minimise impacts are available, they must be identified and considered, and the proposed measure justified taking into account the public interest.	Chapter 6– Chapter 26 Chapter 6– Chapter 26
4. Consultation The project is developed with meaningful and effective engagement during project design and delivery.	1 The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups, local Aboriginal community groups, affected landowners, businesses and the community. The consultation process must be undertaken in accordance with the current guidelines. 2 The Proponent must document the consultation process and demonstrate how the project has responded to the inputs received.	Chapter 4: Consultation Appendix D: Community consultation

Desired performance outcomes	Requirement	EIS reference
	3 The Proponent must describe the timing and type of community consultation proposed during the design and delivery of the project, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.	

A2 Key issue Secretary's Environmental Assessment Requirements

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
1. Flooding and hydrology The project minimises changes to the existing flood regime's impacts on property, public safety and the environment resulting from alteration of the water flow characteristics of watercourses and overland flowpaths. The project includes remedial measures to mitigate any adverse water flow impacts or flood safety risks caused by the existing rail infrastructure within the project area. Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.	1 Description of topographic and hydrological conditions of the site and surrounding area, including: a Assessment of the existing hydrology and flooding characteristics of watercourses within and adjacent to the project area. This includes locating and assessing flowpaths emanating from existing culverts, pipes and bridges under the rail formation, or from overtopping of the existing formation in flood events. b Description of the existing and proposed topography in areas that could be potentially affected by floodwaters. This includes the spatial location, and the horizontal and vertical dimensions of spoil mounds. c Carrying out of investigations to assess the propensity for scour, erosion and geomorphological changes to occur within any watercourses or overland flowpaths affected by the project. 2 Design parameters and features, including: a Description and justification of quantitative flood management objectives for flooding, hydrological and geomorphological changes resulting from the project. These objectives are to consider land use and include afflux, velocity, extent, duration, hazard and scour potential. b Description and justification of the proposed flood planning level (FPL) for the project including the AEP of the flood which will overtop the formation and rail. When establishing the appropriate FPL, consider any impacts on adjacent infrastructure and any alteration works required to improve flood immunity of affected infrastructure. c Description of the location and size of existing and proposed pipes, culverts and bridges, and the locations and annual exceedance probabilities (AEPs) of floods that overtop the existing formation and rail. d Preliminary engineering designs of the velocity dissipation or other mitigation works that are proposed to avoid adverse offsite scouring on the adjoining land downstream of the project area, adjacent to locations where pipes, culverts or bridges are proposed or where the rail formation may be overtopped. e At locations along the rail route, identification of the width of land between the toe of the formation and the downstream boundary of the project area, that is available for the construction of these mitigation works. Where there is insufficient width of project land available for these works, clear identification of the extent of additional land beyond the project boundary that may be required, including the locations where easements over land or acquisition of land may be required. 3 Pre-construction and operational phase impacts of the project on flood behaviour for a full range of flood events up to and including the PMF (including consideration of the impacts of climate change and differing storm durations), including: a Utilisation of 2D hydrologic and hydraulic models that are consistent with ARR and current best practice and utilise topographic and infrastructure data that is of sufficient spatial coverage and accuracy to ensure the resultant models can accurately assess existing and proposed water flow characteristics; b Identification of allowance for blockage of cross-drainage structures to be made in accordance with ARR; c Having these models independently peer-reviewed with the review findings published in the EIS;	Chapter 12: Hydrology and flooding impact assessment Technical paper 4: Hydrology and flooding impact assessment

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
	d Assessing any changes to the potential flood affectation, scouring or geomorphological changes to other properties, assets and infrastructure, over a full range of flood durations and flood frequencies against the proposed flood management objectives; e Assessing changes in upstream and downstream flowpaths (location, discharges and velocities, including overland flow); f Where the existing rail infrastructure has an adverse flood impact on property or people, the flood assessment must consider the extent to which the project alleviates or exacerbates these existing impacts; g Assessing impacts of extreme floods up to the probable maximum flood (PMF) including consideration of flood risks to people and property resulting from failure of the formation or washouts of ballast. h Assessing the consistency (or inconsistency) with the applicable Council or DPIE Water floodplain management plans. The requirements of these plans must be discussed with DPIE Water and the relevant Council; i assessing whether each component of the project is compatible with the flood hazard of the land and the hydraulic functions of flow conveyance, floodway and flood storage; j Assessing impacts on farm dams, agricultural infrastructure, crops and activities associated with altered hydrology including volumetric changes in water flows; k Assessing any impacts that the project may have upon existing community emergency management arrangements for flooding. These matters must be discussed with the State Emergency Service and applicable Council; and l Evaluating any social and economic impacts that the project may have on the community as a consequence of changes to flooding and hydrology including dividing or fragmentation of property and changes to property management which could lead to the loss of viability. 4 A qualitative assessment identifying land uses and infrastructure in the vicinity of the project susceptible to flood impacts that may arise during the construction phase and measures to mitigate risks of construction impacts occurring. 5 In the event that operational impacts do not meet the nominated flood management objectives, provide measures to ensure the project's detailed design meets the objectives. Alternatively: a demonstrate that design changes to meet objectives at a given project location are not practicable; and b describe how broad flooding objectives will still be met at a given location; and c detail procedures to ensure that the flood performance is acceptable to affected parties.	
2. Water—hydrology Long-term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised. The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems including estuarine and marine	1 Describe (and map) the existing hydrological regime for any surface and groundwater resource (including reliance by users and for ecological purposes) likely to be impacted by the project, including stream orders, as per the BAM. 2 Prepare a conceptual water balance for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration, sources, security and licensing requirements. 3 Surface and groundwater hydrology impacts of the construction and operation of the project and ancillary facilities (both built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines, including: a Natural processes within rivers, wetlands, estuaries, marine waters and floodplains that affect the health of the fluvial, riparian, estuarine or marine system and landscape health	Chapter 12: Hydrology and flooding impact assessment Chapter 13: Surface water quality impact assessment Chapter 14: Groundwater Technical paper 4: Hydrology and flooding impact assessment

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources.	(such as modified discharge volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge; b Impacts from permanent and temporary interruption of groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, ecosystems and species, groundwater users and the potential for settlement; c Changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources; d Direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses; e Minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates, management methods and re-use options) and on the conveyance capacity of existing stormwater systems where discharges are proposed through such systems; and f Water take (direct or passive) from surface and groundwater sources with estimates of annual volumes during construction and operation, including an assessment of the availability of water where water entitlement is required to be purchased. 4 Identification of any requirements for baseline monitoring of hydrological attributes.	Technical paper 5A: Surface water impact assessment Technical paper 5B: Groundwater impact assessment
3. Water—quality The project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time where they are currently not being achieved, including downstream of the project to the extent of the project's impact.	1 Water Quality impacts, including: a stating the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated trigger values or criteria for the identified environmental values; b identifying and estimating the quality and quantity of pollutants that may be introduced into the water cycle by source and discharge point and describe the nature and degree of impact that any discharge(s) may have on the receiving environment, including consideration of pollutants that pose a risk of non-trivial harm to human health and the environment; c identifying the rainfall event that the water quality protection measures will be designed to cope with; d the significance of any identified impacts including consideration of the relevant ambient water quality outcomes; e demonstrating how construction and operation of the project will, to the extent that the project can influence, ensure that: i where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and ii where the NSW WQOs are not currently being met, activities will work toward their achievement over time; f justifying, if required, why the WQOs cannot be maintained or achieved over time; g demonstrating that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented; h identifying sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments; and i identifying proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.	Chapter 13: Surface water quality impact assessment Chapter 14: Groundwater Technical paper 5A: Surface water impact assessment Technical paper 5B: Groundwater impact assessment

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
4. Biodiversity The project design considers measures to avoid and minimise impacts on terrestrial and aquatic biodiversity. Offsets and/or supplementary measures are assured which are equivalent to any residual impacts of project construction and operation.	1 Biodiversity impacts in accordance with s7.9 of the <i>Biodiversity Conservation Act 2016</i> (BC Act), the Biodiversity Assessment Method (BAM), and be documented in a Biodiversity Development Assessment Report (BDAR). 2 The BDAR must document the application of the avoid, minimise and offset framework in accordance with the BAM. 3 The BDAR must include information in the form detailed in s6.12 of the BC Act, cl6.8 of the Biodiversity Conservation Regulation 2017 and the BAM. 4 The BDAR must be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the BAM. 5 The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the BC Act. 6 The BDAR must include details of the measures proposed to address offset obligations in accordance with the BAM and the EPBC Act. 7 Impacts on biodiversity values not covered by the BAM. This includes a threatened aquatic species assessment (Part 7A <i>Fisheries Management Act 1994</i> (FM Act)) to address whether there are likely to be any significant impact on listed threatened species, populations or ecological communities listed under the FM Act. 8 Identify whether the project, or any component of the project, would be classified as a Key Threatening Process (KTP) in accordance with the listings in the BC Act, FM Act and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act).	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report Technical paper 2: Post-wet aquatic ecology assessment
5. Noise and vibration Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity. Increases in noise emissions and vibration affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and wellbeing of the community. Increases in noise emissions and vibration affecting environmental heritage as defined in the <i>Heritage Act 1977</i> during operation of the project are effectively managed.	1 Construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. 2 The assessment of construction noise and vibration must address: - a the nature of construction activities and related noise characteristics; - b the intensity and duration of noise (both air and ground borne) and vibration impacts. This must include consideration of extended construction impacts associated with ancillary facilities (and the like) and construction fatigue; - c the identification and nature of receivers, existing and proposed, during the construction period; - d the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage). - e the nature of the impact and the sensitivity of receivers, including but not limited to residential (permanent and short term), tourist and commercial uses, both existing and proposed, and level of impact including for out of hours works; - f the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management); - g noise impacts of out-of-hours works (including utility works and works associated with the SSI including those undertaken under another assessment pathway), possible locations where out-of-hours works would be undertaken, the activities that would be undertaken, the estimated duration of those activities and justification for these activities in terms of the Interim Construction Noise Guideline (DECCW, 2009); - h sleep disturbance (including the number of noise-awakening events); - i details and analysis of the predicted effectiveness of mitigation measures to adequately manage identified impacts, including impacts as identified in (h),	Chapter 16: Noise and vibration Technical paper 10: Construction noise and vibration impact assessment Technical paper 11: Operational noise and vibration impact assessment

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
	j any potential residual noise and vibration impacts following application of mitigation measures; and k a description of how receiver feedback received during the preparation of the EIS has been taken into account (and would be taken into account post exhibition of the EIS) in the design of mitigation measures, including any tailored mitigation, management and communication strategies for sensitive receivers. 3 If blasting is required, demonstration that blast impacts can comply with current guidelines.	
6. Heritage The design, construction and operation of the project facilitates, to the greatest extent practicable, the long term protection, conservation and management of the heritage and cultural significance of items of environmental heritage and Aboriginal objects and places. The design, construction and operation of the project avoids or minimises impacts, to the greatest extent practicable, on the heritage significance of environmental heritage and Aboriginal objects and places.	1 Direct and/or indirect impacts (including cumulative impacts) to the significance of: a Aboriginal places, objects and cultural heritage values, as defined under the <i>National Parks and Wildlife Act 1974</i> and in accordance with the principles and methods of assessment identified in the current guidelines; b Aboriginal places of heritage significance, as defined in the Standard Instrument—Principal Local Environmental Plan; c environmental heritage, as defined under the <i>Heritage Act 1977</i>; and d items listed on the State, National and World Heritage lists; e heritage items, areas of cultural significance and conservation areas identified in environmental planning instruments applicable to the project area; f heritage items in relevant Section 170 Heritage and Conservation Registers. 2 Where impacts to State or locally significant heritage items are identified, the assessment must: a include a significance assessment, a statement of heritage impact for all heritage items and a historical archaeological assessment; b assess the consistency of the project against conservation policies of any relevant conservation management plan; c consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation and site compounds (as relevant) d outline measures to avoid and minimise those impacts during construction and operation in accordance with the current guidelines; and e be undertaken by a suitably qualified heritage consultant(s), cultural consultant(s) and/or historical archaeologist (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria). 3 Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010). 4 Impacts to Aboriginal objects and/or places must be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation must be undertaken with Aboriginal people in accordance with the Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010). The ACHAR must: a document the outcomes of consultation with Aboriginal people and outline measures proposed to mitigate impacts, and document the significance of cultural heritage values for Aboriginal people who have a cultural association with the land;	Chapter 15: Cultural heritage Technical paper 6: Cultural heritage assessment report Technical paper 7: Draft statement of heritage impact

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
	b identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project; c document the outcomes of the archaeological surface survey and test excavation to inform the need for targeted test excavations; d assess and document impacts on Aboriginal cultural heritage values and demonstrate attempts to avoid impacts upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the AHIMS Register; and e outline procedures to be followed if Aboriginal objects, burials or skeletal material are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.	
7. Economic, land use and agriculture The project minimises adverse economic impacts and capitalises on opportunities potentially available to affected communities. The project minimises impacts to property and business including agricultural enterprises and accommodation and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.	1 Economic impacts in accordance with the current guidelines. 2 Economic impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users, including property acquisitions/adjustments, access, amenity and relevant statutory rights. 3 Opportunities and processes to prioritise local industry participation practices to source construction goods and services, including training and employment targets within communities along or near the rail alignment. 4 Agricultural land use impacts in accordance with the current guidelines including: a current and potential Biophysical Strategic Agricultural Land and Class, 2, and 3 Agricultural Land Classes that will be impacted at Camurra hairpin curve development site, including land capability and agricultural productivity; b division or fragmentation of property and changes to property management which could lead to the loss of viability; c property access and the efficient and safe crossing of the rail corridor by machinery and livestock; d impacts to changes in water regimes; e connectivity of property infrastructure severed by the rail corridor; and f livestock exclusion/management to minimise harm and losses.	Chapter 8: Construction of the proposal Chapter 9: Land use and property Chapter 17: Social impact assessment Chapter 18: Economics Technical Paper 8: Social impact assessment Technical paper 9: Economic impact assessment
	5 Biosecurity risks and management measures relating to the potential for spread of pests, diseases or weeds along the length of the project alignment, in accordance with the 'general biosecurity duty' under the <i>Biosecurity Act 2015</i> .	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
	6 Economic impact of temporary accommodation for construction workers on communities near the project site.	Chapter 18: Economics Technical paper 9: Economic impact assessment
	7 The temporary and permanent interface with road reserves, crown land and Travelling Stock Routes and the use and management of these landholdings affected by the project.	Chapter 7: Proposal features and operation Chapter 8: Construction of the proposal Chapter 9: Land use and property

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
8. Social The project minimises adverse social impacts and capitalises on opportunities potentially available to affected communities.	1 Potential social impacts of the project from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project. 2 How potential environmental changes in the locality may affect people's (including, but not limited to): - a community; - b access to accommodation and housing - c access to and use of infrastructure, services, and facilities; - d culture; - e health and wellbeing; surroundings; - f personal and property rights; - g decision-making systems; and - h fears and aspirations, as relevant and considering how different groups may be disproportionately affected. 3 Social actions and outcomes that address both negative and positive social impacts.	Chapter 17: Social impact assessment Technical paper 8: Social impact assessment
9. Transport and traffic Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained. Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and future transport corridors.	1 Construction transport and traffic (vehicle, pedestrian and cyclists) impacts, including, but not necessarily limited to: - a The likely construction access routes (including haul routes) and the scheduling of construction vehicle movements; - b the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements and track machines); - c construction worker parking; - d the nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times movement of livestock, agricultural machinery, farm vehicles and other farm infrastructure, construction deliveries and parking arrangements) and assessment of traffic impacts on these routes including identifying traffic management measures to mitigate any issues; - e provisions proposed to ensure safe access and egress to/from the classified road network; - f the nature of any train paths (types and number of movements) and potential impact to these train paths due to additional track possession requirements; and - g the need to close, divert or otherwise reconfigure elements of the road and cycle network associated with construction of the project and the duration of these changes. 2 Operational transport impacts of the project for both road and rail, including: - a forecast travel demand and traffic volumes for the project (road and rail); - b travel time analysis; - c performance of key intersections and level crossings by undertaking a level of service analysis at key locations; - d wider transport interactions (local and regional roads, cycling, movement of livestock or farm vehicles, intermodal hubs, public and freight transport and the broader NSW rail network); and - e identification of traffic and transport measures to mitigate any impacts. The assessment must include the modelling of the operational impact of the project. 3 Assess the feasibility of level crossings (existing and proposed), and justify the safety and operational impacts and/or benefits of the proposed crossing type, taking into account the NSW Government's Construction of New Level Crossings Policy.	Chapter 11: Traffic and transport Technical paper 3: Traffic impact assessment

Key issues and desired performance outcomes	Requirement (specific assessment requirements in addition to the general requirements above)	EIS reference
	4 In the assessment of level crossings, the EIS must take into account: a Provide a safety assessment for each level crossing. The safety assessment is to be consistent with ALCAM, and any Interface Agreements and related Safety Management Plans; b demonstrate how the risks identified in the So Far As Is Reasonably Practicable (SFAIRP) process will be reduced in consultation with the relevant road authority and TfNSW; c assess potential short-stacking impacts; d confirm road approaches to level crossings are fit for purpose, safe and designed and constructed in accordance with Austroads Guide to Road Design; and e account any rationalisation of private and public level crossings in line with the NSW Government's <i>Level Crossing Closure Policy</i>.	
10. Visual amenity The project minimises adverse impacts on the visual amenity of the built and natural environment (including public open space) and capitalises on opportunities to improve visual amenity.	1 Assess the visual impact of the project (including permanent spoil mounds, rail formation, bridges, and over or underpasses) and any ancillary infrastructure on: a Views and vistas; b Streetscapes, key sites and buildings; c Heritage items including aboriginal places and environmental heritage; and d Private landowners and the local community. 2 Provide artist impressions and perspective drawings of the project to illustrate how the project has responded to the visual impact through urban design and landscaping.	Chapter 19: Landscape and visual Technical paper 6: Cultural heritage assessment report Technical paper 7: Statement of heritage impact
11. Climate change and sustainability The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources. Conservation of natural resources is maximised. The project is designed, constructed and operated to be resilient to the future impacts of climate change.	1 Sustainability of the project in accordance with the Infrastructure Sustainability Council of Australia (ISCA) <i>Infrastructure Sustainability Rating Tool</i> and recommend an appropriate target rating for the project. 2 Sustainability of the project against the current guidelines including targets and strategies to improve Government efficiency in use of water, energy and transport. 3 The risk and vulnerability of the project to climate change in accordance with the current guidelines. 4 Climate change risks must be quantified with reference to the NSW Government's climate projections at 10km resolution (or lesser resolution if 10km projections are not available) or equivalent projection tool (such as the Climate Futures Tool from CSIRO and BoM (attenuated for project region)) and incorporate specific adaptation actions in the design.	Chapter 22: Climate change Chapter 23: Sustainability
12. Other issues	1 An assessment of the following issues must be undertaken in accordance with the commitments in Section 6 of the Scoping Report: a Air quality b Greenhouse gases and energy c Hazards and risk d Topography, geology and soils e Utilities and services f Waste and resource use	Chapter 20: Soils and contamination, Chapter 21: Waste Chapter 24: Air quality and greenhouse gas Chapter 25: Health and safety Utilities, services, hazards, and risks are addressed throughout Chapters 9–27

A2.1 Summary of EPBC Act assessment requirements (from Attachment A to the SEARs)

Key issue	Requirement	EIS reference
General assessment requirements The EIS must address the matters outlined in Schedule 4 of the EPBC Regulations and the matters outlined below in relation to the controlling provisions.	For each of the EPBC Act-listed threatened species and ecological communities impacted by the proposed action, the EIS must provide the following information: 1 Survey results including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice. 2 A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival). For the ecological communities, assessments should be targeted to determine if the vegetation patches conform to the EPBC-listed TECs. 3 Information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve. 4 A description of the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on relevant EPBC Act listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act listed species or community.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report Technical paper 2: Post-wet aquatic ecology assessment

A2.2 Agency requirements

Agency	Requirement	EIS reference
Department of Industry: Agriculture	Consideration for impacts to agricultural resources and land	1 Chapter 9: Land use and property
	1 Describe the current and potential BSAL and Class 1, 2 and 3 Agricultural land Classes that will be impacted at Camurra hairpin curve development site.	2 Chapter 12: Hydrology and flooding impact assessment
	2 Flood management. Describe how the project minimises adverse impacts on existing flooding characteristics preventing new or additional damage to agricultural infrastructure or crops.	3 Chapter 9: Land use and property
	3 The project minimises dividing or fragmentation of property and changes to property management which could lead to the loss of viability.	4 Chapter 9: Land use and property
	4 The project assesses and makes provisions for efficient and safe crossing of agricultural machinery, livestock and other farm infrastructure.	5 Chapter 9: Land use and property
Department of Industry: Agriculture	5 Livestock exclusion/management to minimise harm and losses is assessed.	6 Chapter 9: Land use and property
	6 State how the project design has given consideration to minimising impacts on agricultural land and production (see Infrastructure Proposals on Rural Land Guideline).	
	Biosecurity standards met	Chapter 10: Biodiversity
	1 Biosecurity risks and management measures relating to the potential for spread of pests, diseases or weeds along the length of the project alignment, in accordance with the 'general biosecurity duty' under the <i>Biosecurity Act 2015</i> .	Technical paper 1: Biodiversity development assessment report
	2 Develop a biosecurity response plan to deal with identified risks as well as contingency plans for any failures. Including monitoring and mitigation measures in weed, disease and pest management plans.	
Department of Industry: Agriculture	Suitable traffic movements	Chapter 11: Traffic and transport
	Consideration of the route for movements needs to be taken into account so that impacts on sensitive receptors are minimised (e.g. noise, dust, volume of traffic). This should include consideration of Travelling Stock Reserves (TSR) and the movement of livestock or farm vehicles along / across the affected roads.	Technical paper 3: Traffic impact assessment
Department of Industry: Agriculture	Adequate consultation with community	Chapter 4: Consultation
	Consult with the owners / managers / lessee of affected and adjoining neighbours and agricultural operations in a timely and appropriate manner about the project, the likely impacts and suitable mitigation measures or compensation.	Appendix D: Community consultation
Department of Industry: Fisheries	General aquatic ecological assessment	Chapter 10: Biodiversity
	The aquatic ecological environmental assessment should include the following information:	Technical paper 1: Biodiversity development assessment report
	1 A recent aerial photograph (preferably colour) of the locality (or reproduction of such a photograph) should be provided.	Technical paper 2: Post-wet aquatic ecology assessment
	2 Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (and aerial photographs).	
	3 Waterways within the area of development are to be identified.	
	4 Description and quantification of aquatic and riparian vegetation should be presented and mapped. This should include an assessment of the extent and condition of riparian vegetation and the extent and condition of freshwater aquatic vegetation and the presence of significant habitat features (e.g. gravel beds, snags, reed beds, etc)	
	5 Quantification of the extent of aquatic and riparian habitat removal or modification which will result from the proposed development,	
	6 Details of the location of all waterways crossings and construction designs, such as bridges, culverts, or temporary access tracks.	
Department of Industry: Fisheries	7 Aspects of the management of the project, both during construction and after completion, which relate to impact minimisation.	

Agency	Requirement	EIS reference
	Waterway crossings DPI Fisheries need to be consulted with regards to the crossing methodology and site specific mitigation measures for replacement of culverts and bridges in watercourses that are considered to be Key Fish Habitat. The design and construction of bridges, culverts, and temporary access tracks across all waterways should be undertaken in accordance with the Department's Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013). The replacement of waterway crossings needs to ensure that the works are undertaken with minimal impact on the aquatic environment within the immediate vicinity of the proposed works. The environmental assessment should provide details on methods of dredging, duration and timing of works, and the proposed mitigation measures to protect riparian and aquatic habitat. Another concern the department has is the requirement to avoid temporary waterway crossings for heavy machinery wherever possible. DPI Fisheries need to be consulted with regards to any temporary measures that will result in blocking fish passage. This includes coffer dams, temporary access tracks or redirecting flows whilst works are conducted.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
	Threatened species, populations and ecological communities—<i>Fisheries Management Act 1994</i> The project should include a threatened aquatic species assessment (as per part 7A <i>Fisheries Management Act 1994</i>) to address whether there are likely to be any significant impacts on listed threatened species, populations or ecological communities listed under the <i>Fisheries Management Act 1994</i>. Threatened fish species mapping distributions are available at: dpi.nsw.gov.au/fishing/threatened-species/what-current/threatened-species-distributions-in-nsw Whilst the scoping report indicates the likelihood of Freshwater Catfish (<i>Tandanus tandanus</i>), Murray Cod (<i>Maccullochella peelii</i>) and Silver Perch (<i>Bidyanus bidyanus</i>), there is no mention of the likelihood of Olive Perchlet (<i>Ambassis agassizii</i>) in the report which is listed under Schedule 4 of the FM Act as an Endangered population and expected to be present within the locality of this project as per the threatened fish species mapping distribution on the website.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
	Riparian buffer zones DPI Fisheries policy advocates the use of terrestrial buffer zones as per the <i>Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)</i> available on the Department's website at dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation which states that '<i>NSW DPI will generally require riparian buffer zones to be established and maintained for developments or activities in or adjacent to TYPE 1 or 2 habitats or CLASS 1-3 waterways</i>'. The department anticipate that adequate riparian buffer zones will be maintained adjacent to the watercourses that will be crossed as part of this project.	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report
Department of Planning, Industry & Environment: Biodiversity and Conservation	Biodiversity 1 Biodiversity impacts related to the proposed Inland Rail Narrabri to North Star Phase 2 project are to be assessed in accordance with Section 7.9 of the <i>Biodiversity Conservation Act 2017</i>, the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the <i>Biodiversity Conservation Act 2016</i> (s6.12), <i>Biodiversity Conservation Regulation 2017</i> (s6.8) and Biodiversity Assessment Method, unless the Department determine that the proposed development is not likely to have any significant impacts on biodiversity values. 2 The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method. 3 The BDAR must include details of the measures proposed to address the offset obligation as follows; - a The total number and classes of biodiversity credits required to be retired for the development/project; - b The number and classes of like-for-like biodiversity credits proposed to be retired;	Chapter 10: Biodiversity Technical paper 1: Biodiversity development assessment report

Agency	Requirement	EIS reference
	- c The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; - d Any proposal to fund a biodiversity conservation action; - e Any proposal to conduct ecological rehabilitation (if a mining project); - f Any proposal to make a payment to the Biodiversity Conservation Fund. If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits. 4 The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix 11 of the BAM. 5 The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the <i>Biodiversity Conservation Act 2016</i>.	
	Water and soils 1 The EIS must map the following features relevant to water and soils including: - a Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). - b Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). - c Wetlands as described in s4.2 of the Biodiversity Assessment Method. - d Groundwater. - e Groundwater dependent ecosystems. - f Proposed intake and discharge locations. 2 The EIS must describe background conditions for any water resource likely to be affected by the project, including: - a Existing surface and groundwater. - b Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. - c Water Quality Objectives (as endorsed by the NSW Government environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. - d Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government. - e Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions. 3 The EIS must assess the impacts of the project on water quality, including: - a The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the project protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. - b Identification of proposed monitoring of water quality. 4 The EIS must assess the impact of the project on hydrology, including: - a Water balance including quantity, quality and source. - b Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. - c Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. - d Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape	Chapter 20: Soils and contamination Chapter 12: Hydrology and flooding impact assessment Chapter 13: Surface water quality impact assessment Chapter 14: Groundwater Technical paper 2: Post-wet aquatic ecology assessment Technical paper 4: Hydrology and flooding impact assessment Technical paper 5B: Surface water impact assessment Technical paper 5B: Groundwater impact assessment

Agency	Requirement	EIS reference
	health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g Identification of proposed monitoring of hydrological attributes.	
	Flooding 1 The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: a Flood prone land. b Flood planning area, the area below the flood planning level. c Hydraulic categorisation (floodways and flood storage areas). d Flood hazard. 2 The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event. 3 The EIS must model the effect of the proposed project (including fill) on the flood behaviour under the following scenarios: a Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change. 4 Modelling in the EIS must consider and document: a Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies. b The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood. c Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories. d Relevant provisions of the NSW Floodplain Development Manual 2005. 5 The EIS must assess the impacts on the proposed project on flood behaviour, including: a Whether there will be detrimental increases in the potential flood affection of other properties, assets and infrastructure. b Consistency with Council floodplain risk management plans. c Consistency with any Rural Floodplain Management Plans. d Compatibility with the flood hazard of the land. e Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land. f Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site. g Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. h Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council. i Whether the project incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.	Chapter 12: Hydrology and flooding impact assessment Chapter 13: Surface water quality impact assessment Chapter 14: Groundwater Technical paper 4: Hydrology and flooding impact assessment Technical paper 5A: Surface water impact assessment Technical paper 5B: Groundwater impact assessment

Agency	Requirement	EIS reference
	j Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES. k Any impacts the development may have on the social and economic costs to the community as consequence of flooding.	
Department of Planning, Industry & Environment: Water and Natural Resources Access Regulator	1 The SEARS should include: a The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased. b A detailed and consolidated site water balance. c Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. d Proposed surface and groundwater monitoring activities and methodologies. e Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://www.industry.nsw.gov.au/water).	Chapter 13: Surface water quality impact assessment Chapter 14: Groundwater Technical paper 4: Hydrology and flooding impact assessment Technical paper 5A: Surface water impact assessment Technical paper 5B: Groundwater impact assessment
Environmental Protection Agency	Noise and Vibration Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity. Increases in noise emissions and vibration affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and well-being of the community. Increases in noise emissions and vibration affecting environmental heritage as defined in the <i>Heritage Act 1977</i> during operation of the project are effectively managed. 1 Construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. 2 The assessment of construction noise and vibration must address: a the nature of construction activities and related noise characteristics; b the intensity and duration of noise (both air and ground borne) and vibration impacts. This must include consideration of extended construction impacts associated with ancillary facilities (and the like) and construction fatigue; c the identification and nature of receivers, existing and proposed, during the construction period; d the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage); e the nature of the impact and the sensitivity of receivers and level of impact including for out of hours works; f the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management); g noise impacts of out-of-hours works (including utility works and works associated with the SSI including those undertaken under another assessment pathway), possible locations where out-of-hours works would be undertaken, the activities that would be undertaken, the estimated duration of those activities and justification for these activities in terms of the Interim Construction Noise Guideline (DECCW, 2009); h sleep disturbance (including the number of noise-awakening events);	Chapter 16: Noise and vibration Technical paper 10: Construction noise and vibration impact assessment Technical paper 11: Operational noise and vibration impact assessment

Agency	Requirement	EIS reference
	- i a cumulative noise and vibration assessment inclusive of impacts from the project, including concurrent construction activities within the project and the construction of other relevant development in the vicinity of the project; - j details and analysis of the predicted effectiveness of mitigation measures to adequately manage identified impacts, including impacts as identified in (h), - k any potential residual noise and vibration impacts following application of mitigation measures; and - l a description of how receiver feedback received during the preparation of the EIS has been taken into account (and would be taken into account post exhibition of the EIS) in the design of mitigation measures, including any tailored mitigation, management and communication strategies for sensitive receivers. 3 If blasting is required, demonstration that blast impacts can comply with current guidelines.	
Heritage Council NSW	1 Direct and/or indirect impacts (including cumulative impacts) to the significance of: - a Aboriginal places, objects and cultural heritage values, as defined under the <i>National Parks and Wildlife Act 1974</i> and in accordance with the principles and methods of assessment identified in the current guidelines; - b Aboriginal places of heritage significance, as defined in the Standard Instrument—Principal Local Environmental Plan; - c environmental heritage, as defined under the <i>Heritage Act 1977</i>; - d items listed on the State, National and World Heritage lists; - e heritage items, areas of cultural significance and conservation areas identified in environmental planning instruments applicable to the project area; - f heritage items in Section 170 Heritage and Conservation Register; and - g potential heritage items and archaeological potential. 2 Where impacts heritage items are identified, the assessment must: - a include a significance assessment, a statement of heritage impact for all heritage items and a historical archaeological assessment; - b assess the consistency of the project against conservation policies of any relevant conservation management plan; - c consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation and site compounds (as relevant) - d include consideration of alternatives and options to avoid or minimise heritage impacts. The assessment must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) are recommended; and - e be undertaken by a suitably qualified heritage consultant(s), cultural consultant(s) and/or historical archaeologist (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria). 3 Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010). 4 Impacts to Aboriginal objects and/or places must be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation must be undertaken with Aboriginal people in accordance with the Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010). The ACHAR must: - a document the outcomes of consultation with Aboriginal people and outline measures proposed to mitigate impacts, and document the	Chapter 15: Cultural heritage Technical paper 6: Cultural heritage assessment report Technical paper 7: Statement of heritage impact

Agency	Requirement	EIS reference
	significance of cultural heritage values for Aboriginal people who have a cultural association with the land; b identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project; c document the outcomes of the archaeological surface survey and test excavation to inform the need for targeted test excavations; d assess and document impacts on Aboriginal cultural heritage values and demonstrate attempts to avoid impacts upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the AHIMS Register; and e outline procedures to be followed if Aboriginal objects, burials or skeletal material are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts. 5 The historical archaeological assessment should identify and address any archaeological potential and significance on the site and evaluate the impacts the SSI proposal might have on this significance. Where harm is likely to occur, it is recommended that the significance of the archaeological resource be carefully considered in determining an appropriate mitigation strategy. In the event that harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared and submitted to the satisfaction of HNSW to guide any proposed excavations.	
Heritage NSW: Aboriginal Cultural Heritage	1 The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigation in NSW (OEH 2010), and be guided by the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (DECCW 2011). 2 Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR. 3 Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW. 4 The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts. 5 The ACHAR must outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.	Chapter 15: Cultural heritage Technical paper 6: Cultural heritage assessment report Technical paper 7: Statement of heritage impact
Transport for NSW	Traffic management 1 A traffic impact study is to be prepared in accordance with Austroads Guide to Traffic Management, including, but not limited to: a Hours and days of construction. b Schedule for phasing/staging of the project. c Road and rail traffic volumes including: i Existing background traffic. ii Project-related traffic for each stage including construction and operation. iii Vehicle types including details of over-size and over-mass vehicles and loads.	Chapter 11: Traffic and transport Technical paper 3: Traffic impact assessment

Agency	Requirement	EIS reference
	- iv Projected future traffic volumes, including background and project related. - d Traffic volumes are to also include a description of: - i Ratio of light vehicles to heavy vehicles. - ii Peak hours for existing road and rail traffic, including seasonal peaks. - iii Peak times for project-related road and rail traffic. - e The origin, destination and routes for construction traffic including: - i Employee and contractor light traffic. - ii Heavy traffic. - iii Oversize and over mass traffic. - f The impact of traffic generated by the project and measures employed to ensure efficiency and safety on the public road network during construction and operation of the project. - g The proponent is to confirm the length of trains that will operate under this project.	
2	Proposed road work, facilities, access and intersection treatments, including road-rail interfaces, are to be identified and be in accordance with Austroads Guide to Road Design and TfNSW supplements. Road works are not to decrease the level of safety and functionality of the public road network.	
3	Local climate conditions that may affect road safety for vehicles used during construction and operation of the project (e.g. fog, wet weather, dust, etc).	
4	A Construction Traffic Management Plan is to be developed in consultation with Moree Plains Shire Council and TfNSW prior to the commencement of haulage and/or construction operations.	
5	Details of access requirements and an analysis of affected intersections are to be provided to determine their suitability. In particular, access requirements and locations to/from the classified road network, that is, the Gwydir (HW12) and Newell (HW17) Highways, are to be identified and provisions proposed to ensure safe access and egress. As far as is reasonably practical, access and haulage routes from classified roads to the rail corridor during construction and operation are to be via existing public and private road intersections with classified roads. Any new accesses to classified roads will require prior concurrence from TfNSW pursuant to section 138(2) of the <i>Roads Act 1993</i> .	
6	Details of intermodal hubs required to service the project, their locations, uses and projected traffic impacts on the public road network generated by such development. In particular, details of how inland rail will interface with and connect to the Moree Special Activation Precinct.	
7	The level crossing study is to: - a Include a safety assessment for each level crossing. The safety assessment is to be consistent with any Interface Agreements, related Safety Management Plans, including draft Interface Agreements and draft Safety Management Plans. - b Demonstrate how the risks identified in the So Far As Is Reasonably Practical (SFAIRP) process will be reduced in consultation with, and to the satisfaction of, the relevant road authority and TfNSW. - c Measure the setback from the approach road hold line from nearby intersections to determine whether sufficient storage space exists for vehicles approaching and departing the level crossing. Measures are to be employed to ensure vehicles giving way to rail or road traffic do not over hang the rail corridor or nearby intersections. In this regard, the proponent will need to consult with TfNSW and the relevant Councils to determine the appropriate design vehicle for each level crossing. - d Include an assessment of the impact to road freight movements due to additional and longer time delays and/or alternative route selection.	

Agency	Requirement	EIS reference
	- e Confirm road approaches to level crossings are fit for purpose, safe and designed and constructed in accordance with Austroads Guide to Road Design. - f Confirm the length of trains that will operate under this project and the approval process required for longer trains to operate on the corridor in the future. - g Assessment of seasonal peak road movements generated by agricultural, industrial and horticultural industries such as harvest, sale yard operations and inclusion of peak movements in Average Annual Daily Traffic (AADT) calculations.	
	Design and Construction 1 Vibration assessments and studies are to include the impact of construction and rail traffic on nearby road infrastructure including roads, bridges, culverts and roadside furnishings. 2 Details of existing or required rail encroachments into adjoining road reserves. 3 A hydrology study is to be prepared that demonstrates that downstream surface water afflux will not exceed allowable increases over the Newell Highway as detailed in Roads and Maritime's (now TfNSW) letter to ARTC dated 16 August 2019 (copy enclosed). 4 Identify realignment of the existing Mungindi Line, its connection to Inland Rail and works to be undertaken on this line as part of the project. 5 Consideration, assessment and inclusion of TfNSW's Newell Highway Heavy Duty Pavement Upgrade and Overtaking lane projects at Boolooroo and Camurra are to be included in the EIS, the Hydrology Study and where adjacent to rail, in the final design plans.	Chapter 8: Construction of the proposal Chapter 9: Land use and property Chapter 12: Hydrology and flooding impact assessment Technical paper 4: Hydrology and flooding impact assessment Chapter 6: Inland Rail Program development, alternatives and the proposal Chapter 8: Construction of the proposal Chapter 26: Cumulative impacts
	Social Impacts As part of the social assessment the proponent must also identify potential cumulative impacts of other infrastructure and construction projects on the availability of local construction workforce and opportunities of local businesses.	Social Impacts Chapter 4: Consultation Appendix D: Community consultation Chapter 17: Social impact assessment Technical paper 8: Social impact assessment
Moree Plains Shire Council	Suggested text has been updated in current SEAR's as issued by DPIE.	