Secretary's Environmental Assessment Requirements

Application Number	SSI 18_9487
Proposal	Inland Rail – Narromine to Narrabri
Location	Land generally in a new north-south corridor between the towns of Narromine and Narrabri via Curban and Baradine. The southern end is located about 5.6 km south-west of Narromine and the northern end about 4 km north of Narrabri
Proponent	Australian Rail Track Corporation
Date of Issue	9 September 2020

General Standard SEARs

Desired Performance Outcome	Requirement	Current Guidelines[1]
1. Environmental Impact Assessment Process The process for assessment of the proposal is transparent, balanced, well focussed 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. 3. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.	EPBC Act Environment Assessment Process (SEWPAC, 2010)
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; (b) A description of the project including: – all components and activities (including ancillary components and activities, borrow sites, construction camps and rail sidings) required to construct and operate it; – additionally, in relation to borrow sites: o the amount, type and composition of the resource to be extracted; o the extraction and production process and processing activities, including the in-flow and out-flow of materials and points of discharge to the environment; o decommissioning, remediation and rehabilitation of the borrow sites; and o details of any previous quarrying on the site(s); (c) A statement of the objective(s) of the project; (d) A summary of the strategic need for the project regarding its state significance and relevant state government policy; (e) An analysis of any feasible alternatives to the project;[2] (f) A description of feasible options within the project;[3] (g) A description of how alternatives to and options within the project were analysed to inform the selection of the preferred alternative / option, including options of maintaining the alignment within the existing corridor where possible, and maximising separation distances between the rail line and	

[1] Guidelines listed are the current list of guidelines that may be applicable to a SSI project. It is the Proponents responsibility to identify, and justify, which guidelines have been applied to a specific project.

[2] Alternatives to a project are different projects which would achieve the same project objective(s) including the consequences of not carrying out the project. For example, alternatives to a road project may be a rail project in the same area and alternate routes for the road.

[3] Options within the project are variations of the same project. For example, options within a road project could be design of an intersection; the location or design of a bridge; locations for a vent stack.

Desired Performance Outcome	Requirement	Current Guidelines[1]
	main roads, agricultural enterprises and dwellings; (h) The description must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) within the project were selected; (i) A concise description of the general biophysical and socio-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; (j) A demonstration of how the project design has been developed to avoid or minimise likely adverse impacts; (k) The identification and assessment of key issues as provided in the 'assessment of key issues' performance outcome; (l) A statement of the outcome(s) the proponent will achieve for each key issue; (m) 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; (n) Consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts; [4] (o) An assessment of the 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; (p) Statutory context of the project as a whole, including: – how the project meets the provisions of the EP&A Act and EP&A Regulation; and – a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out; (q) A chapter that synthesises the environmental impact assessment and provides: – a succinct but full description of the project for which approval is sought; – 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; – a compilation of the impacts of the project that have not been avoided; – 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; – a compilation of the outcome(s) the Proponent will achieve; and	

[4] Measures proposed to avoid or minimise one impact may cause an unintended impact on another issue. Therefore, these impacts and their interactions need to be analysed and resolved where possible.

Desired Performance Outcome	Requirement	Current Guidelines[1]
	– 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 (r) Relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software. (s) The EIS must only include data and analysis that is reasonably needed to make a decision on the proposal. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.	
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 SSI project application and by the Department 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 SSI 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 proposal 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) Describe the biophysical and socio-economic environment, as far as it is relevant to that issue; (b) Describe the legislative and policy context, as far as it is relevant to the issue; (c) 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), and the cumulative impacts; (d) Demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); (e) 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); and (f) Detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures. 3. Where multiple reasonable and feasible 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.	
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 State and local government agencies, infrastructure and service providers, special interest and industry groups (including agriculture businesses), affected landowners, businesses and the community. The consultation process must be undertaken in accordance with the current guidelines.	

Desired Performance Outcome	Requirement	Current Guidelines[1]
	2. The Proponent must document the consultation process and demonstrate how the project has responded to community and stakeholder inputs received. 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. 4. Where the Proponent establishes a Community Consultative Committee (CCC) for the project, the establishment and operation of the CCC must be in accordance with the Department's *Community Consultative Guidelines State Significant Projects (2016)*. The CCC must not be the only or primary method of engagement with the community on the project.	

Key Issue Standard SEARs

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
5. Socio-economic, Land Use and Property The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities. The project minimises impacts to property and business 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. The Proponent must assess social and economic impacts in accordance with the current guidelines. 2. The Proponent must assess agricultural land use impacts in accordance with the current guidelines, including: (a) Current and potential Important Agricultural Land within the project and surrounding locality, 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) Process for the amalgamation or subdivision of land affected by the rail corridor, taking into account council zoning and minimum lot size requirements for subdivisions and dwellings; (d) Property access and the efficient and safe crossing of the rail corridor by vehicles, machinery and livestock, with consideration of grade separated access; (e) Connectivity of property infrastructure severed by the rail corridor; and (f) Livestock exclusion/management and rail corridor protection measures to minimise harm and losses. 3. The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users (for example, recreational and commercial fishers, including property acquisitions/adjustments, access, amenity and relevant statutory rights. 4. The Proponent must consider the capacity for communities along or near the rail corridor to house construction workers in existing accommodation. Where temporary accommodation for construction workers (construction camps) is proposed, the Proponent must assess their social and economic impact on local communities. 5. The Proponent must identify opportunities and processes to prioritise local participation practices to source construction and operation	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) Social Impact Assessment Guideline for State significant mining, petroleum production and extractive industry development (DPE, 2017) Social Impact Assessment Scoping Tool (DPE, 2017) Infrastructure Proposals on Rural Land Primefact 1063, second edition (DPI, 2013) NSW Invasive Species Plan 2018-202 (DPI, 2018) Land Use Conflict Risk Assessment (LUCRA) Guide (DPI, 2011) Central West and Orana Regional Plan 2036 (DPE, 2017) propertyacquisition.nsw.gov.au

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	employment, goods and services from communities along or near the rail alignment. 6. The Proponent must assess biosecurity risks and identify management measures to minimise the spread of pests, diseases or weeds along the rail corridor (including residual lands), in accordance with the 'general biosecurity duty' under the Biosecurity Act 2015. 7. The Proponent must assess the impact of the project on significant mineral and extractive resources, including: (a) Any operating mines, extractive industries or known mineral, extractive or petroleum resources; (b) Exploration activities in the vicinity of the proposed development; and (c) Access for future exploration in the area. 8. The Proponent must identify encroachments into adjoining road reserves, travelling stock routes, Crown land and paper roads.	
6. Biodiversity The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity. Offsets and/or supplementary measures are assured which are equivalent to any remaining impacts of project construction and operation.	1. The Proponent must assess biodiversity impacts in accordance with s7.9 of the *Biodiversity Conservation Act 2016* (BC Act), the Biodiversity Assessment Method (BAM), and be documented in a Biodiversity Development Assessment Report (BDAR). 2. 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. 3. The BDAR must be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the BAM. 4. 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. 5. The BDAR must include details of the measures proposed to address offset obligations. *6.* The Proponent must assess any impacts on biodiversity values not covered by the BAM. This includes a threatened aquatic species assessment (Part 7A *Fisheries Management Act 1994*) to address whether	Biodiversity Assessment Method (OEH, 2017) Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013 (DPI, 2013) Threatened Species Survey and Assessment Guidelines Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003) Freshwater threatened species distribution maps (www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps)

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	there are likely to be any significant impact on listed threatened species, populations or ecological communities listed under the *Fisheries Management Act 1994* (FM Act). 7. The Proponent must 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 *Environmental Protection* and the *Biodiversity Conservation Act 2000* (EPBC Act).	
7. Protected and Sensitive Lands The project is designed, constructed and operated to avoid or minimise impacts on protected and sensitive lands. The project is designed, constructed and operated to avoid or minimise future exposure to coastal hazards and processes.	1. The Proponent must assess the impacts of the project on environmentally sensitive land and processes (and the impact of processes on the project) including, but not limited to: (a) Protected areas (including land and water) managed by OEH and/or DPI Fisheries under the *National Parks and Wildlife Act 1974* and the *Marine Estate Management Act 2014*; (b) Key Fish Habitat as mapped and defined in accordance with the FM Act; (c) Waterfront land as defined in the *Water Management Act 2000;* (d) Land or waters identified as Critical Habitat under the BC Act, FM Act or EPBC Act; and (e) Biobank sites, private conservation lands and other lands identified as offsets.	Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010) Revocation, Re-categorisation and Road Adjustment Policy (OEH, 2012) Guidelines for controlled activities on waterfront land (DPI 2012) Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013 (DPI, 2013) Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003)
8. 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	1. The Proponent must assess construction transport and traffic (vehicle, pedestrian and cyclists, bus services, and train operations) impacts, including, but not necessarily limited to: (a) A considered approach to route alignment identification and scheduling of transport movements; (b) The number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements and track machines), including those related to the establishment and operation of borrow sites and haulage to and from borrow sites; (c) The nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times and sensitive road users and parking arrangements) and	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2007) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002) Cycling Aspects of Austroads Guides (Austroads, 2014) NSW Bicycle Guidelines v 1.2 (RTA, 2005) Planning Guidelines for Walking and Cycling (DIPNR, 2004) Construction of New Level Crossing Policy (TfNSW, 2011)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
infrastructure and future transport corridors.	assessment of traffic impacts on these routes including identifying traffic management measures to mitigate any impacts; (d) The closure, diversion or reconfiguration of elements of the road network associated with the construction of the project; and (e) Safe access and egress to/from the classified road network. 2. The Proponent must assess (and model) the operational transport impacts of the project, including: (a) The performance of key level crossings and intersections; (b) Wider transport interactions (local and regional roads, cycling, public and freight transport and the broader NSW rail network); and (c) Identification of traffic and transport measures, including grade separation of rail/road interfaces to mitigate any impacts. 3. The Proponent must 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 classification of the road. 4. In the assessment of level crossings, the EIS must take into account: (a) The NSW Government's *Construction of New Level Crossings Policy;* (b) Level crossing ALCAM assessments for public crossings and site-specific risk assessments. The Proponent must demonstrate how it has reduced risks identified So Far As Is Reasonably Practicable (SFAIRP); (c) Consistency with any Interface Agreements and related Safety Management Plans, including draft Interface Agreements and draft Safety Management Plans; (d) The practice of upgrading active public level crossings to boom gates and flashing lights as adopted by the NSW Level Crossing Improvement Program (LCIP); (e) The rationalisation of private and public level crossings in line with the NSW Government's *Level Crossing Closures Policy*; (f) The closure of public roads and the provision of alternative road routes, taking into consideration the existing and proposed traffic volumes and intersection performance, and the condition of the alternative roads, and any necessary road upgrades (including	Future Transport Strategy 2056 (TfNSW, 2018) NSW Draft Freight and Ports Plan (TfNSW, 2018) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Australian Level Crossing Assessment Model (ALCAM, 2016) Railway Crossing Safety Series 2011, Plan: Establishing a Railway Crossing Safety Management Plan (RTA, 2011)

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	stormwater drainage systems) to accommodate increased traffic volumes; and (g) Operation of level crossings with regard to road and rail travel speeds, vehicle types, train lengths, train numbers, road and rail traffic volumes, vehicle queuing and sight distance.	
9. Water - Flooding The project minimises adverse impacts on property, public safety and the environment resulting from alteration of the water flow characteristics of watercourses and overland flowpaths. Where feasible, the project includes remedial measures to mitigate any adverse water flow impacts, geomorphological 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, geomorphological impacts or dam failure.	1. The Proponent must describe the existing flooding characteristics and assess flooding impacts on property and public safety. The assessment must include, but not necessarily be limited to: (a) The location and size of all existing and proposed pipes, culverts, viaducts and bridges, and the locations and annual exceedance probabilities (AEPs) of flows that overtop the existing formation and rail; (b) The existing and proposed topography in all flood prone areas, including the indicative locations, and typical horizontal and vertical dimensions of spoil mounds. Where there is uncertainty about the total spoil volume, upper and lower bounds must be estimated; (c) Describe and justify the proposed flood planning level (FPL) for the project including the AEP of the flood which will overtop the formation and rail. The FPL must consider adjacent infrastructure such as road crossings whose flood immunity is determined by the project's FPL; (d) Assess the existing hydrology, geomorphology and flooding characteristics of all 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 large storms; (e) Develop and justify quantitative design limits on potential adverse flooding, hydrological and geomorphological impacts resulting from the project. These are to consider land use and include afflux, velocity, extent, duration, hazard, scour potential, etc; (f) Carry out geotechnical and geomorphological investigations to assess the propensity for scour, erosion and geomorphological changes to occur within any watercourses or overland flowpaths affected by the project; (g) Consider the impacts of floods up to the probable maximum flood	NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005) PS 07-003 New guideline and changes to section 117 direction and EP&A Regulation on flood prone land Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007) Floodplains Management Plans: https://www.industry.nsw.gov.au/water/plans-programs/healthyfloodplains-project/plans Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation Australian Disaster Resilience Handbook 7 – Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia. (AIDR, 2017) AS/NZS 3100:2009 Risk Management – Principles and Guidelines

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	including consideration of flood risks to people and property resulting from failure of the rail formation or washouts of ballast; (h) Prepare preliminary engineering designs of the velocity dissipation or other mitigation works that are proposed to avoid adverse offsite scouring or geomorphological impacts 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; (i) At locations along the rail route, identify 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; and (j) Where there is insufficient width of project land available for these works, clearly identify 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. 2. The Proponent must model the impacts of the project on flood behaviour, including the existing, during construction and post construction (i.e. Operational) flooding conditions for a full range of flood events up to and including the probable maximum flood. The assessment must include consideration of the impacts of climate change and differing storm durations, and include but not necessarily be limited to: (a) Utilising hydrologic and hydraulic models that are consistent with 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) Having these models independently peer-reviewed with the review findings published in the EIS; (c) Assessing any detrimental increases in the potential flood affectation, scouring or geomorphological changes to other properties, assets and infrastructure, over a full range of flood durations and flood frequencies; (d) The extent to which the project alleviates or exacerbates the flood impact the existing rail infrastructure has on property or people; (e) An assessment of the consistency (or inconsistency) with the	

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	applicable Council or OEH floodplain management plans. The requirements of these plans must be discussed with OEH and the Council; (f) 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; (g) Assessing existing upstream and downstream flow, level, velocity, hazard and scour potential, and changes following the decommissioning of the borrow pit upstream and downstream flowpaths (location, discharges and velocities); (h) Quantifying and evaluating changes in flood safety risks on private and public land including roads and pathways; (i) 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 (j) Evaluating any social and economic impacts that the project may have on the community as a consequence of changes to flooding, hydrology and geomorphology.	
10. Water – Resources 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 water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources.	1. The Proponent must 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. The Proponent must prepare a conceptual water balance for ground and surface water including indicative locations for proposed intake and discharge locations, volume, frequency and duration, potential sources, security and licensing requirements. 3. The Proponent must assess (and model if appropriate) the impact of the construction and operation of the project (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 (such as modified discharge	Biodiversity Assessment Method (OEH, 2017) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) NSW Aquifer Interference Policy (DPI, 2012) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012) Relevant NSW Water Sharing Plans for surface and groundwater resources

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge; (b) Impacts from any 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 all surface and groundwater sources with estimates of annual volumes during construction and operation. 4. The Proponent must identify any requirements for baseline monitoring of hydrological attributes.	
11. 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 impact including estuarine and marine waters (if applicable).	1. The Proponent must: (a) State 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) Identify and estimate the quality and quantity of all 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 all pollutants that pose a risk of non-trivial harm to human health and the environment; (c) Identify the rainfall event that the water quality protection measures	NSW Water Quality and River Flow Objectives at http://www.environment.nsw.gov.au/ieo/ Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ ARMCANZ, 2000) Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DECC, 2008) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation

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	will be designed to cope with; (d) Assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes; (e) Demonstrate how construction and operation of the project will, to the extent that the project can influence, ensure that: – where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and – where the NSW WQOs are not currently being met, activities will work toward their achievement over time; (f) Justify, if required, why the WQOs cannot be maintained or achieved over time; (g) Demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented; (h) Identify sensitive receiving environments (which may include marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments; and (i) Identify proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.	of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)
12. Soils The environmental values of land, including soils, subsoils and landforms, are protected. Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	1. The Proponent must assess whether the land is likely to be contaminated and identify if remediation of the land is required, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where assessment and/or remediation is required, the Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines. 2. The Proponent must assess whether salinity is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area. 3. The Proponent must assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology. 4. The Proponent must assess the impacts on soil and land resources (including erosion risk or hazard). Particular attention must be given to	Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP & EPA, 1998) Guidelines for Consultants Reporting on Contaminated Sites (OEH, reprinted 2011) Guidelines for the NSW Site Auditor Scheme (DEC, 2006) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015) Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets (http://www.environment.nsw.gov.au/salinity/solutions/urban.htm) which includes *Site Investigations for Urban* Salinity (DLWC, 2002)

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	soil erosion and sediment transport consistent with the practices and principles in the current guidelines.	Landslide risk management guidelines presented in Australian Geomechanics Society (2007) Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) Other guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*
13. Air Quality The project is designed, constructed and operated in a manner that minimises air quality impacts (including nuisance dust and odour) to minimise risks to human health and the environment to the greatest extent practicable.	1. The Proponent must undertake an air quality impact assessment (AQIA) for the establishment and operation of the borrow sites and road haulage in accordance with the current guidelines, with a particular focus on dust emissions, including $PM_{2.5}$ and PM_{10}. 2. The Proponent must ensure the AQIA also includes the following: (a) Demonstrated ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Clean Air) Regulation (2010)*; and (b) A cumulative local and regional air quality impact assessment.	Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005) Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2005) Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)
14. Heritage The design, construction and operation of the project facilitates, to the greatest extent possible, the long-term protection, conservation and management of the heritage 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 possible, on the heritage significance of environmental heritage and	1. The Proponent must identify and assess any direct and/or indirect impacts (including cumulative impacts) to the heritage significance of: (a) Aboriginal places and objects, as defined under the *National Parks and Wildlife Act 1974* 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 *Heritage Act 1977*; and (d) Items listed on the National and World Heritage lists. 2. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in	Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010) Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010) NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998) Aboriginal site recording form Aboriginal site impact recording form

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
Aboriginal objects and places.	accordance with section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). 3. 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 document the outcomes of consultation with Aboriginal people and outline measures proposed to mitigate impacts. The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR. 4. Where impacts to State or locally significant heritage items are identified, the assessment must: (a) Include a statement of heritage impact for all heritage items (including significance assessment); (b) 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 (as relevant); (c) Outline measures to avoid and minimise those impacts in accordance with the current guidelines; and (d) Be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).	Aboriginal Heritage Information Management System site registration form Care agreement application form Criteria for the assessment of excavation directors (NSW Heritage Council, 2011) NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning, 1996) Assessing Heritage Significance (NSW Heritage Office, 2001) The Australia ICOMOS Burra Charter
15. Noise and Vibration - Amenity 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	1. The Proponent must assess construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to sensitive receivers including small businesses, and include consideration of sleep disturbance and, as relevant, the characteristics of noise and vibration (for example, low frequency noise). 2. The Proponent's assessment of construction and operational noise and vibration impacts must consider activities within the proposed corridor,	Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990) Assessing Vibration: a technical guideline (DEC, 2006) Interim Construction Noise Guideline (DECCW, 2009) Noise Policy for Industry (EPA, 2017)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
receivers during operation of the project are effectively managed to protect the amenity and well-being of the community.	activities at ancillary sites, including but not limited to borrow sites, and vehicle movements associated with the proposal, including haulage vehicles. 3. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.	Construction Noise Strategy (TfNSW, 2017) Rail Infrastructure Noise Guideline (EPA, 2013) NSW Road Noise Policy (DECCW, 2011) Development Near Rail Corridors and Busy Roads – Interim guideline (DoP, 2008) Noise Mitigation Guideline (RMS, 2015) Noise Criteria Guideline (RMS, 2015) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017)
16. Noise and Vibration - Structural Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage. Increases in noise emissions and vibration affecting environmental heritage as defined in the *Heritage Act 1977* during operation of the project are effectively managed.	1. The Proponent must assess construction and operation noise and vibration impacts (including impacts of construction traffic) in accordance with relevant NSW noise and vibration guidelines. The assessment must include consideration of impacts to the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage). 2. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.	German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures
17. Rehabilitation The project provides for the proposed borrow sites to be rehabilitated at the conclusion of the project. Rehabilitation should occur in accordance with the relevant strategic framework and best practice. The project must propose rehabilitation actions with measurable criteria and clearly identified timeframes for their completion.	1. The Proponent must provide a rehabilitation strategy for the borrow sites having regard to: (a) Rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; (b) Nominated final land use and landform having regard to any relevant strategic land use planning or resource management plans or policies; and 2. The potential for integrating this strategy with other rehabilitation and / or offset strategies in the region.	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth) Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth) Strategic Framework for Mine Closure (ANZMEC-MCA)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
18. 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. The Proponent must assess the visual impact of the project (including permanent spoil mounds, borrow sites, rail formation, bridges, viaducts, 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. The Proponent must provide artist impressions and perspective drawings to illustrate how the project has responded to the visual impact through urban design and landscaping.	AS4282-1997 Control of the obtrusive effects of outdoor lighting Dark Sky Planning Guideline Protecting the observing conditions at Siding Spring (DEP 2016) Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Technical guideline for Urban Green Cover in NSW (OEH, 2015)
19. Waste All wastes generated during the construction and operation of the project are effectively stored, handled, treated, reused, recycled and/or disposed of lawfully and in a manner that protects environmental values.	1. The Proponent must assess predicted waste generated from the project during construction and operation, including: a) Classification of the waste in accordance with the current guidelines; b) Estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance; c) Handling of waste including measures to facilitate segregation and prevent cross contamination; d) Management of waste including estimated location and volume of stockpiles; e) Waste minimisation and reuse; f) Lawful disposal or recycling locations for each type of waste; and g) Contingencies for the above, including managing unexpected waste volumes. 2. The Proponent must assess potential environmental impacts from the excavation, handling, storage on site and transport of the waste particularly with relation to sediment/leachate control, noise and dust.	NSW Waste Avoidance and Resource Recovery Strategy 2014-21 (EPA 2014) *Waste Classification Guidelines – Part 1: Classification of Waste* (EPA 2014) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)
20. Climate Change Risk The project is designed, constructed and operated to be resilient to the future impacts of climate change.	1. The Proponent must assess the risk and vulnerability of the project to climate change in accordance with the current guidelines. 2. The Proponent must quantify specific climate change risks 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	Australian Government's Climate Change Impacts and Risk Management – A Guide for Business and Government (2006) AS/NZS 3100:2009 Risk Management – Principles and Guidelines

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	(attenuated for project region)) and incorporate specific adaptation actions in the design.	AS 5334-2013 Climate change adaptation for settlements and infrastructure – A risk based approach Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft)
21. 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.	1. The Proponent must assess the sustainability of the project in accordance with the Infrastructure Sustainability Council of Australia (ISCA) *Infrastructure Sustainability Rating Tool* and recommend an appropriate target rating for the project, including targets and strategies to improve Government efficiency in use of water, energy and transport.	NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Infrastructure Sustainability Rating Tool Scorecard relating to energy and carbon for large infrastructure projects, ISCA NSW Infrastructure Skills Legacy Programs' training and employment targets (DOI, 2017)

ATTACHMENT A – EPBC Act Requirements

Australian Government
Department of the Environment and Energy

Inland Rail – Narromine to Narrabri, NSW (EPBC 2018/8259, SSI 18_9487)

The proposed action is being assessed for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) under Part 5 Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). This document is intended to assist the NSW Department of Planning and Environment (NSW DPE) to manage the environmental impact assessment process. It is not legally binding and does not replace the requirements of the EPBC Act.

Proposed Action

To construct a rail line approximately 300 km in length between Narromine and Narrabri, NSW, as part of the Inland Rail Programme.

Matters of National Environmental Significance

The EPBC Act controlling provisions for the proposed action are:

- listed threatened species and communities (sections 18 and 18A).

  The Department considers that the proposed action is likely to significantly impact the following listed ecological communities:

- Coolibah - Black Box Woodland of the Darling Riverine Plains and the Brigalow Belt South Bioregions – endangered
- Brigalow (*Acacia harpophylla* dominant and co-dominant) – endangered
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Grey Box Woodlands) – endangered
- Natural grasslands on basalt and fine-textured alluvial plains of northern NSW and southern QLD – critically endangered
- Weeping Myall Woodlands – endangered
- White Box- Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Box Gum Woodland) – critically endangered.

All listed threatened species that may occur in the project area are potentially relevant and require further assessment of significance. It is the responsibility of the proponent to ensure any protected matters under this controlling provision are assessed for the Commonwealth decision-maker's consideration.

Key Issues

- The project will be assessed under the Biodiversity Assessment Method (BAM). DOEE understands that property access constraints may affect the ability to comply with BAM, and that the BDAR will be reliant in part on desktop information. Any proposed deviation from BAM needs to be negotiated and supported by OEH, in consultation with DOEE.

- The referral does not contain sufficient information to determine significance for any species, as detailed ecological surveys have not yet been completed. Consequently, the Department recommends engagement in Stage 2, before the draft EIS is exhibited, to consider the assessments of significance and determine which species are relevant to assessment of the action for EPBC Act purposes.

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.

1. For each of the EPBC Act listed species predicted to occur in the project site, and each of the EPBC Act listed ecological communities likely to be significantly impacted, the EIS/BDAR must provide:

    a. 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 and/or the NSW Biodiversity Assessment Method (BAM).

    b. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices and recovery plans, threat abatement plans and wildlife conservation plans; and

    c. Maps displaying the above information (specific to each EPBC protected matter) overlaid with the proposed action.

    Note - It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS/BDAR must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act listed species or community and provided individual maps for each species or community.

2. The EIS/BDAR must describe the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any 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.

3. For each of the EPBC Act listed species and communities that are likely to be impacted by the development, the EIS/BDAR must provide 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. The EIS/BDAR must identify each EPBC Act listed species and community likely to be significantly impacted by the proposed action. Where a significant impact is likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit, how offsets will be secured, and timing of protection.

    Note - A number of offsets options under the NSW *Biodiversity Conservation Act 2016* will be acceptable for EPBC Act approval purposes. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. ‘like for like’. Like-for-like includes protection of native vegetation that is the same EEC or habitat being impacted, or funding to provide a direct benefit to the matter being impacted i.e. threat abatement, breeding and propagation programs or other relevant conservation measures.