APPENDIX

A

Basis of Assessment Technical Report

NORTH STAR TO QUEENSLAND BORDER ENVIRONMENTAL IMPACT STATEMENT

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

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TABLE 1 RESPONSE TO THE NORTH STAR TO BORDER SEARS

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
Environmental Impact Assessment Process The process for assessment of the proposal is transparent, balanced, well focused and legal.	1.1	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).	*EPBC Act Environment Assessment Process* (SEWPAC, 2010)	Table 2 in Appendix A (this document)
	1.2	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 as 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.		-
	1.3	The onus is on the Proponent to ensure legislative requirements relevant to the project are met.		Legislative requirements are set out in Chapter 5: Planning and Assessment Process and addressed throughout the Environmental Impact Statement (EIS)
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.	2.1	The Environmental Impact Statement must include, but not necessarily be limited to, the following:		-
	2.1 (a)	Executive summary		Executive Summary
	2.1 (b)	A description of the project, including:		Chapter 6: The Proposal and Chapter 7: Construction of the Proposal
		All components and activities (including ancillary components and activities, borrow pits, construction camps and rail sidings) required to construct and operate it		

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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.	2.1 (b)	Additionally, in relation to borrow sites:		Chapter 6: The Proposal and Chapter 7: Construction of the Proposal
		The amount, type and composition of the resource to be extracted		
		The extraction and production process and processing activities, including the in-flow and out-flow of materials and points of discharge to the environment		
		Decommissioning, remediation and rehabilitation of the borrow sites, and		Chapter 6: The Proposal and Chapter 7: Construction of the Proposal
		Details of any previous quarrying on the site(s)		
	2.1 (c)	A statement of the objective(s) of the project		Section 1.3
	2.1 (d)	A summary of the strategic need for the project with regard to its State significance and relevant State Government policy		Chapter 2: Strategic Context
	2.1 (e)	An analysis of feasible alternatives to the project		Section 3.2, Section 3.3
	2.1 (f)	A description of feasible options within the project		Section 3.4
	2.1 (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 option(s) within the project were selected		Assessed throughout Chapter 3
	2.1 (h)	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.		Assessed throughout Chapter 3 Chapter 4: Site Description
	2.1 (i)	A demonstration of how the project design has been developed to avoid or minimise likely adverse impacts		Section 3.1, Section 3.2 and section 3.3

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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.	2.1 (j)	The identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome		Chapters 11 through 25
	2.1 (k)	A statement of outcome(s) the proponent will achieve for each key issue		Chapter 27: Environmental Management Plan, Section 27.13
	2.1 (l)	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 11: Biodiversity through to Chapter 25: Waste and Resource Management, and Section 27.13
	2.1 (m)	Consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts		Chapter 11: Biodiversity through to Chapter 25: Waste and Resource Management
	2.1 (n)	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		Chapter 26: Cumulative Impacts
	2.1 (o)	Statutory context of the project as a whole, including:		Chapter 5: Planning and Assessment Process
		How the project meets the provisions of the *Environment Planning and Assessment Act* and Environment Planning and Assessment Regulation		
		A list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out		
	2.1 (p)	A chapter that synthesises the environmental impact assessment and provides:		The synthesis is provided in Chapter 27: Environmental Management Plan and Chapter 28: Conclusions
		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 states of the project		

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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.	2.1 (p)	A compilation of the impacts of the project that have not been avoided		The synthesis is provided in Chapter 27: Environmental Management Plan and Chapter 28: Conclusions
		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		
		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		
	2.1 (q)	Relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software		Throughout the EIS
	2.2	The Environmental Impact Statement 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 Environmental Impact Statement and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.		Throughout the EIS

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	3.1	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.		The assessment methodology for each Key Issue is provided in Chapter 10: Assessment Methodology
	3.2	For each key issue the Proponent must:		Chapter 11: Biodiversity through to Chapter 25: Waste and Resource Management
	3.2 (a)	Describe the biophysical and socio-economic environment, as far as it is relevant to that issue		
	3.2 (b)	Describe the legislative and policy context, as far as it is relevant to the issue		
	3.2 (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 cumulative impacts		
	3.2 (d)	Demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies)		
	3.2 (e)	Detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness or these measures (against performance criteria where relevant)		Chapter 11: Biodiversity through to Chapter 25: Waste and Resource Management
	3.2 (f)	Detail how any residual impacts will be managed or offset, and the approach and effectiveness or these measures		
	3.3	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.		

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
Consultation The project is developed with meaningful and effective engagement during project design and delivery	4.1	The project must be informed by consultation, including with relevant state (including Queensland) and local government agencies, infrastructure and service providers, special interest and industry groups, affected landowners, businesses and the community. The consultation process must be undertaken in accordance with the current guidelines.		Chapter 8: Consultation
	4.2	The proponent must document the consultation process and demonstrate how the project has responded to the inputs received.		
	4.3	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.		
	4.4	Where the Proponent establishes a Community Consultative Committee for the project, the establishment and operation of the Community Consultative Committee must be in accordance with the Department's Community Consultative Guidelines State Significant Projects (2016). The Community Consultative Committee must not be the only or primary method of engagement with the community on the project.		

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	5.1	The Proponent must assess biodiversity impacts in accordance with s7.9 of the Biodiversity Conservation Act 2016, the Biodiversity Assessment Method, and be documented in a Biodiversity Development Assessment Report.	*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* (Smith, 2003) Freshwater threatened species distribution maps	Section 11.4.4 and 11.10.1
	5.2	The Biodiversity Development Assessment Report must include information in the form detailed in s6.12 of the Biodiversity Conservation Act 2016, cl6.8 of the Biodiversity Conservation Regulation 2017 and the Biodiversity Assessment Method.		Section 11.4.4 and Appendix B: Biodiversity Technical Report
	5.3	The Biodiversity Development Assessment Report must be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the Biodiversity Assessment Method.		Digital spatial data associated with the survey will be provided with Appendix B: Biodiversity Technical Report
	5.4	The Biodiversity Development Assessment Report 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 *Biodiversity Conservation Act 2016*.		Section 11.4.4 and Section 3.2.1.1 Appendix B: Biodiversity Technical Report
	5.5	The Biodiversity Development Assessment Report must include details of the measures proposed to address offset obligations.		Section 11.15

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	5.6	The Proponent must assess any impacts on biodiversity values not covered by the Biodiversity Assessment Method. This includes a threatened aquatic species assessment (Part 7A *Fisheries Management Act 1994*) to address whether there are likely to be any significant impact on listed threatened species, populations or ecological communities listed under the *Fisheries Management Act 1994.*	*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* (Smith, 2003) Freshwater threatened species distribution maps	Section 11.4.1, 11.4.4, 11.5.3.3, 11.10.2 and 11.14 and Appendix S: Aquatic Biodiversity Technical Report
	5.7	The Proponent must identify whether the project as a whole, or any component of the project, would be classified as a Key Threatening Process in accordance with the listings in the *Biodiversity Conservation Act 2016, Fisheries Management Act 1994* and EPBC Act.		Section 11.14
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.	6.1	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:	*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)	-
	6.1 (a)	Protected areas (including land and water) managed by the Office for Environment and Heritage and/or Department of Primary Industries Fisheries under the *National Parks and Wildlife Act 1974* and the *Marine Estate Management Act 2014.*		Section 11.5.8, 11.8 and Appendix B: Biodiversity Technical Report
	6.1 (b)	Key Fish Habitat as mapped and defined in accordance with the *Fisheries Management Act 1994.*		Section 11.5.4 and 11.8
	6.1 (c)	Waterfront land as defined in the *Water Management Act 2000*		Section 11.5.7 and 11.8
	6.1 (d)	Land or waters identified as Critical Habitat under the *Biodiversity Conservation Act 2016*, *Fisheries Management Act 1994* or EPBC Act		Section 11.5.6 and 11.8
	6.1 (e)	Biobank sites, private conservation lands and other lands identified as offsets		Section 11.5.8 and 11.15

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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.	7.1	The Proponent must assess construction transport and traffic (vehicle, pedestrian, bus services, train operations) impacts, including, but not necessarily limited to:	*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 v1.2* (RTA, 2005) *Planning Guidelines for Walking and Cycling* (DIPNR, 2004) *Construction of New Level Crossing Policy* (TfNSW, 201) *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* (2016) *Railway Crossing Safety Series 2011, Plan: Establishing a Railway Crossing Safety Management Plan* (RTA, 2011)	
	7.1 (a)	A considered approach to route identification and scheduling of transport movements		Section 20.3.1 and Section 20.6.1
	7.1 (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		Section 20.4.1.2
	7.1 (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 assessment of traffic impacts on these routes including identifying traffic management measures to mitigate any impacts		Section 20.4.1.1 Section 20.7.2 Section 20.8
	7.1 (d)	The closure, diversion or reconfiguration of elements of the road network associated with the construction of the project		Section 20.6.1.3
	7.1 (e)	Safe access and egress to/from the classified road network		Section 20.4.1.2 and Section 20.7.2.2
	7.2	The Proponent must assess (and model) the operational transport impacts of the project, including:		
	7.2 (a)	The performance of key level crossings and intersections		Section 20.7.2.2 and Section 20.7.3.1

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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.	7.2 (b)	Wider transport interactions (local and regional roads, cycling, public and freight transport and the broader NSW rail network)	*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 v1.2* (RTA, 2005) *Planning Guidelines for Walking and Cycling* (DIPNR, 2004) *Construction of New Level Crossing Policy* (TfNSW, 2011) *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* (2016) *Railway Crossing Safety Series 2011, Plan: Establishing a Railway Crossing Safety Management Plan* (RTA, 2011)	Section 20.5.2
	7.2 (c)	Identification of traffic and transport measures to mitigate any impacts.		Section 20.8
	7.3	The proponent must assess the feasibility of level crossings (existing and planned) 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.		Section 20.5.1.1 and Section 20.7.3.1
	7.4	In the assessment of level crossings, the Environmental Impact Statement must take into account:		
	7.4 (a)	The NSW Government's Construction of New Level Crossings Policy.		Section 20.7.3.1
	7.4 (b)	Level crossing Australian Level Crossing Assessment Model assessments and site-specific risk assessments. The Proponent must demonstrate how they reduce risks identified so far as is reasonably practicable.		Section 20.8.1
	7.4 (c)	Consistency with any Interface Agreements and related Safety Management Plans, including draft Interface Agreements and draft Safety Management Plans.		Section 20.30
	7.4 (d)	The practice of upgrading active public level crossings to boom gates and flashing lights adopted by the NSW Level Crossings Improvement Program.		No existing crossings, so not applicable

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	7.4 (f)	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.		Section 20.7.3.1

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Flooding, Hydrology and Geomorphology 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.	8.1	The Proponent must:	*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 Guidelines* (DECC, 2007) *Australian Disaster Resilience Handbook 7—Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (2017) *AS/NZS 3100:2009 Risk Management—Principles and Guidelines* (Standards, Australia, 2009)	
	8.1 (a)	Describe the location and size of all existing and proposed pipes, culverts and bridges, and the locations and annual exceedance probabilities of flows that overtop the existing formation and rail.		Sections 13.5.5, 13.5.6 and 13.8.2. Appendix H: Hydrology and Flooding Technical Report, Section 8 and 9
	8.1 (b)	Describe the existing and proposed topography in all areas that could be potentially affected by floodwaters. This includes the spatial location, and the horizontal and vertical dimensions of all spoil mounds.		Sections 13.5.6, 13.8.2, 13.8.3 and Figure 13.2. Spoil mounds—Chapter 6: The Proposal
	8.1 (c)	Describe and justify the proposed flood planning level for the project including the annual exceedance probabilities of the flood which will overtop the formation and rail. The flood planning level must consider adjacent infrastructure such as road crossings whose flood immunity is determined the project's flood planning level.		Section 13.8.2.10
	8.1 (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.		Sections 13.5.4, and 13.5.6 Appendix H: Hydrology and Flooding Technical Report, Section 9. Appendix S: Aquatic Biodiversity Technical Report Section 4.3
	8.1 (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.		Section 13.4.3.1, 13.4.3.2 and 13.8.2 Appendix H: Hydrology and Flooding Technical Report, Section 4.1, 4.2 and 9

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	8.1 (g)	Consider the impacts of extreme floods up to the probable maximum flood including consideration to flood risks to people and property resulting from failure of the formation or washouts of ballast.		Section 13.6.3 Appendix H: Hydrology and Flooding Technical Report, Section 9
	8.1 (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.		Section 13.8.2.4 and 13.8.2.10
	8.1 (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.		Section 13.8.2.4 and 13.8.2.10
	8.1 (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.		All within proposal permanent footprint, therefore not required
	8.2	The Proponent must assess and model the pre-construction, during construction and operational impacts of the project on flood behaviour for a full range of flood events up to and including the probable maximum flood (including consideration of the impacts of climate change and differing storm durations). This will include:		Section 13.8.2 and 13.8.3. Appendix H: Hydrology and Flooding Technical Report, Section 9

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	8.2 (b)	Having these models independently peer-reviewed with the results published in the Environmental Impact Statement.		Section 13.8.4 Appendix H: Hydrology and Flooding Technical Report
	8.2 (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.		Section 13.8.2 and 13.8.3 Appendix H: Hydrology and Flooding Technical Report, Section 9
	8.2 (d)	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.		Section 13.8.2.1 Appendix H: Hydrology and Flooding Technical Report, Section 9
	8.2 (e)	An assessment of the consistency (or inconsistency) with the applicable Council of the Office for Environment and Heritage floodplain management plans. The requirements of these plans must be discussed with the Office for Environment and Heritage and the Council.		Section 13.8.2.10
	8.2 (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.		Section 13.8.2.5 and 13.8.2.10
	8.2 (g)	Assessing upstream and downstream flow, level, velocity, hazard and scour potential.		Section 13.8.2 and 13.8.3 Appendix H: Hydrology and Flooding Technical Report, Section 9
	8.2 (h)	Assessing changes in upstream and downstream flowpaths (location, discharges and velocities).		Section 13.8.2 and 13.8.3 Appendix H: Hydrology and Flooding, Section 9

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Flooding, Hydrology and Geomorphology 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.	8.2 (i)	Quantifying and evaluating changes in flood safety risks on private and public land including roads and pathways.	*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 guidelines* (DECC, 2007) *Australian Disaster Resilience Handbook 7—Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (2017) *AS/NZS 3100:2009 Risk Management—Principles and Guidelines* (Standards Australia, 2009)	Section 13.8.2.2, 13.8.2.9 and 13.8.2.10 Appendix H: Hydrology and Flooding Technical Report, Section 9
	8.2 (j)	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.		Section 13.8.2.9 and 13.8.2.10
	8.2 (k)	Evaluating and social and economic impacts that the project may have on the community as a consequence of changes to flooding, hydrology and geomorphology.		Chapter 23 Socio-economic Impact Assessment

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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 water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources.	9.1	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 Biodiversity Assessment Method.	*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) *Risk assessment Guidelines for Groundwater Dependent Ecosystems* (Office of Water, 2012)	Section 13.5.2.2 and Appendix S: Aquatic Biodiversity Technical Report, Section 4.3.1 Section 14.4 Section 14.4.9.3 Section 14.7
	9.2	The Proponent must prepare a detailed water balance for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration, sources, security and licensing requirements.		Section 13.6.2.1 Section 14.6
	9.3	The Proponent must assess (and model if appropriate) the impact of the construction and operation of the project and any ancillary facilities (both built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines, including:		Section 13.5.2.2 Section 13.5.2.3 Chapter 7: Construction of the Proposal, Section 7.4
	9.3 (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 volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge.		Section 13.6.2.1 Section 13.8.1.2 Section 13.8.2 and 13.8.3 Section 14.4 Section 14.4.9.3 Section 14.6 Section 14.7

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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 water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources.	9.3 (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.	*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) *Risk assessment Guidelines for Groundwater Dependent Ecosystems* (Office of Water, 2012)	Section 13.6 Appendix N: Groundwater Technical Report Section 14.7 Section 14.8
	9.3 (c)	Changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources.		Section 13.6.2.1 Section 14.7 Section 14.8
	9.3 (d)	Direct and indirect increases in erosion, siltation, destruction or riparian vegetation or a reduction in the stability of river banks or watercourses.		Section 13.6.2.2 and 13.8.2.4
	9.3 (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.		Section 13.6.2.2 Section 13.8.1.2 Section 14.7 Section 14.8
	9.3 (f)	Water take (direct or passive) from all surface and groundwater sources with estimates of annual volumes during construction and operation.		Section 13.6.2.1 Section 14.7
	9.4	The Proponent must identify any requirements for baseline monitoring of hydrological attributes.		Section 13.8 Appendix G: Surface Water Quality Technical Report Section 14.8.3

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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).	10.1	The Proponent must:	*NSW Water Quality and River Flow Objectives* *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 of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries)* (DECC, 2008)	
	10.1 (a)	State the ambient NSW Water Quality Objectives 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.		Section 13.3.3 Section 14.4.9
	10.1 (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.		Section 13.6.2.2 Section 13.6.2.3 Section 13.7.1 Section 14.7.2.6 Section 14.7.3
	10.1 (c)	Identify the rainfall event that the water quality protection measures will be designed to cope with.		Section 13.7.1
	10.1 (d)	Assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes.		Section 13.8.1.1 Section 13.8.1.2 Section 14.9
	10.1 (e)	Demonstrate how construction and operation of the project will, to the extent that the project can influence, ensure that:		Section 13.8.1 Section 14.7 Section 14.8
		Where the NSW Water Quality Objectives for receiving waters are currently being met, they will continue to be protected.		
		Where the NSW Water Quality Objectives are not currently being met, activities will work toward their achievement over time.		

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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).	10.1 (f)	Justify, if required, why the Water Quality Objectives cannot be maintained or achieved over time.	*NSW Water Quality and River Flow Objectives* *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 of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries)* (DECC, 2008)	Section 13.8.1 Section 14.4.9.3
	10.1 (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.		Section 13.6.1 Section 14.8
	10.1 (h)	Identify sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments.		Section 13.5.2.2 Section 13.5.2.4 Section 13.7 Chapter 11: Biodiversity Section 11.4.5, Section 11.5.1, Section 11.6 Section 14.4.7 Section 14.4.8 Section 14.8
	10.1 (i)	Identify proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.		Section 13.4.1 Section 14.8.3 Appendix N Groundwater (Groundwater Monitoring Program)

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	11.1	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.	*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* which includes *Site Investigation for Urban Salinity* (DLWC, 2002) *Landslide risk management guidelines presented in Australian Geomechanics Society* (2009) *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC, 2000)	Section 15.5.6 Section 15.6.6 Section 15.6.7 Section 15.7
	11.2	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.		Section 15.5.3.6
	11.3	The Proponent must assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology.		Section 15.5.3.6 and Section 15.6.5
	11.4	The Proponent must assess the impacts on soil and land resources (including erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport consistent with the practices and principles in the current guidelines.		Section 15.5.3.7 and Section 15.6
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.	12.1	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}.	*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)	Section 17.5.1
	12.2	The Proponent must ensure the AQIA also includes the following:		-
	12.2(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		Section 17.7

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	12.2(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)	Chapter 26: Cumulative impacts, Section 26.4.7
Heritage The design, construction and operation of the project facilities, 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 Aboriginal objects and places.	13.1	The Proponent must identify and assess and direct and/or indirect impacts (including cumulative impacts) to the heritage significance of:	*Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010) *NSW Skeletal Remains: Guidelines for Management of Human Remains* (Heritage Office, 1998) Aboriginal site recording form Aboriginal site impact recording form 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, 2996) *Assessing Heritage Significance* (NSW Heritage Office, 2001) *The Australian International Council on Monuments Sites Burra Charter* (The Australian ICOMOS Burra Charter, 2013)	-
	13.1 (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.		Section 12.5 Section 12.8
	13.1 (b)	Aboriginal places of heritage significance, as defined in the Standard Instrument - Principal Environmental Plan.		Section 12.5 Section 12.8
	13.1 (c)	Environmental heritage, as defined under the *Heritage Act 1977.*		Section 12.5 Section 12.8
	13.1 (d)	Items listed on the National and World Heritage lists.		Section 12.4.5 Section 12.5 Section 12.8
	13.2	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 Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010).		Section 12.4.3

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
Heritage The design, construction and operation of the project facilities, 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 Aboriginal objects and places.	13.3	Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010). The Aboriginal Cultural Heritage Assessment Report 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 document in the Aboriginal Cultural Heritage Assessment Report.	*Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010) *NSW Skeletal Remains: Guidelines for Management of Human Remains* (Heritage Office, 1998) Aboriginal site recording form Aboriginal site impact recording form 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 Australian International Council on Monuments Sites Burra Charter* (The Australian ICOMOS Burra Charter, 2013)	Section 12.4.6 Appendix E: Aboriginal Cultural Heritage and Archaeological Assessment
	13.4	Where impacts to State or locally significant heritage items are identified, the assessment must:		
	13.4 (a)	Include a statement of heritage impact for all heritage items (including significance assessment).		Section 12.5.4 Figure 12.6 Appendix E: Aboriginal Cultural Heritage and Archaeological Assessment
	13.4 (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).		Section 12.8 Table 12.20
	13.4 (c)	Outline measures to avoid and minimise those impacts in accordance with the current guidelines.		Section 12.7 Table 12.17
	13.4 (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).		Section 12.4.3 NSW Heritage Council's Excavation Director criteria will be complied with if excavation is required.

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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 receivers during operation of the project are effectively managed to protect the amenity and well-being of the community.	14.1	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).	*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) *Construction Noise Strategy* (TfNSW, 2012) *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)	Section 16.7 and Section 16.8 Appendix J: Construction Noise and Vibration Technical Report Appendix K: Operational Railway Noise and Vibration Assessment
	14.2	The Proponent's assessment of construction and operational noise and vibration impacts must consider activities within the proposed corridor and activities at ancillary sites, including but not limited to borrow sites, and vehicle movements associated with the proposal including haulage vehicles.		Appendix J: Construction Noise and Vibration Technical Report
	14.3	The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.		Section 16.6.5 and Section 16.7.4 Appendix J: Construction Noise and Vibration Technical Report
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.	15.1	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 the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).	*German Standard DIN 4150-3: Structural Vibration—effects of vibration on structures*	Section 16.7 and Section 16.8 Appendix J: Construction Noise and Vibration Technical Report Appendix K: Operational Railway Noise and Vibration Assessment
	15.2	The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.		Sections 16.6.5 and Section 16.7.4 Appendix J: Construction Noise and Vibration Technical Report

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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 property and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure.	16.1	The Proponent must assess social and economic impacts in accordance with the current guidelines.	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) Social Impact Assessment Guidelines for State significant mining, petroleum production and extractive industry development (DPE, 2017) Social Impact Assessment Scoping Tool (DPE, 2017) Infrastructure Proposal on Rural Land Primefact 1063, second edition (DPI, 2013) NSW Invasive Species Plan 2018 – 2021 (DPI, 2018) Land Use Conflict Risk Assessment (LUCRA) Guide (DPI, 2011) New England North West Regional Plan 2036 (DPE, 2017)	Chapter 23: Socio-economic Impact Assessment Appendix O: Social Impact Assessment Technical Report and Appendix I: Economic Assessment
	16.2	The Proponent must assess agricultural land use impacts in accordance with the current guidelines, including:		
	16.2 (a)	Current and potential Important Agricultural Land within the project and surrounding locality, including land capability and agricultural productivity.		Section 22.5.3.1, Section 22.5.4.1, Section 22.6.2.1 and Section 22.7.2.1 Section 7.2 in Appendix O: Social Impact Assessment Technical Report
	16.2 (b)	Division or fragmentation of property and changes to property management which could lead to the loss of viability.		Section 22.6.2.1 and Section 22.7.2.1 Section 7.2 in Appendix O: Social Impact Assessment Technical Report
	16.2 (c)	Property access and the efficient and safe crossing of the rail corridor by machinery and livestock.		Section 22.6.2.1, Section 22.6.3, Section 22.7.2.2 and Section 22.7.3 Section 7.2 in Appendix O: Social Impact Assessment Technical Report
	16.2 (d)	Connectivity of property infrastructure severed by the rail corridor.		Section 22.6.2.1, Section 22.6.4, Section 22.7.2, and Section 22.7.4 Section 7.2 in Appendix O: Social Impact Assessment Technical Report

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
	16.2 (e)	Livestock exclusion/management to minimise harm and losses.		Section 22.6.2.1 and Section 22.7.2.1 Section 7.2 in Appendix O: Social Impact Assessment Technical Report
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 property and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure	16.3	The Proponent must undertake an assessment of the 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 *Biosecurity Act 2015.*	*Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment* (RMS, 2013) *Social Impact Assessment Guidelines for State significant mining, petroleum production and extractive industry development* (DPE, 2017)	Section 22.7.2.1
	16.4	The Proponent must assess the social and economic impact of temporary accommodation for construction workers (construction camps) on communities near the project site.	*Social Impact Assessment Scoping Tool* (DPE, 2017) *Infrastructure Proposal on Rural Land Primefact 1063, second edition* (DPI, 2013)	Section 23.5.1
	16.5	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.	*NSW Invasive Species Plan 2018–2021* (DPI, 2018) *Land Use Conflict Risk Assessment (LUCRA) Guide* (DPI, 2011) *New England North West Regional Plan 2036* (DPE, 2017)	Section 23.5
	16.6	Where the project may impact on significant mineral resources, the proponent must assess the impact of the project on these resources, including:		
	16.6 (a)	Any operating mines, extractive industries or known mineral or petroleum resources.		Section 22.5.3.4
	16.6 (b)	Exploration activities in the vicinity of the proposed development.		Section 22.5.3.4
	16.6 (c)	Access for future exploration in the area.		Section 22.6.5
	16.7	The Proponent must identify encroachments into adjoining road reserves, travelling stock routes and any Crown land affected by the project.		Section 22.5.1, Section 22.5.3.1, Section 22.6.1, Section 22.6.2.1, Section 22.7.1 and Section 22.7.2.2

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
Rehabilitation The proposed borrow sites are rehabilitated at the conclusion of construction of the project. Rehabilitation should occur in accordance with the relevant strategic framework and best practice.	17.1	The Proponent must provide a rehabilitation strategy for the borrow sites having regard to:	*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)	Chapter 9: Rehabilitation Strategy
	17.1(a)	Rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria		Section 9.3 Section 9.4 Section 9.5 Section 9.6
	17.1(b)	Nominated final land use and landform having regard to any relevant strategic land use planning or resource management plans or policies; and		Section 9.2
	17.2	The potential for integrating this strategy with other rehabilitation and / or offset strategies in the region.		Section 9.2.1
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.	18.1	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:	*AS4282-1997 Control of the obtrusive effects of outdoor lighting* (Standards Australia, 1997) *Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW* (RMS, 2012) *NSW Sustainable Design Guidelines Version 4.0* (TfNSW, 2017) *Technical Guidelines for Urban Green Cover in NSW* (OEH, 2015)	Chapter 21: Landscape Character and Amenity
	18.1 (a)	Views and vistas.		Section 21.6.3.2
	18.1 (b)	Streetscapes, key sites and buildings.		Section 21.6.3.1
	18.1 (c)	Heritage items including Aboriginal places and environmental heritage.		Section 21.6.3.1 and Section 21.6.3.2
	18.1 (d)	Private landowners and the local community.		Section 21.6.3.2
	18.2	The Proponent must 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.		Section 21.6.3.2

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
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.	19.1	The Proponent must assess predicted waste generated from the project during construction and operation, including:	*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)	Chapter 25: Waste and Resource Management
	19.1 (a)	Classification of the waste in accordance with the current guidelines.		Section 25.6
	19.1 (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.		
	19.1 (c)	Handling of waste including measures to facilitate segregation and prevent cross contamination.		Section 25.8.6 Section 25.4.7 Section 25.10
	19.1 (d)	Management of waste including estimated location and volume of stockpiles.		Section 25.5.2
	19.1 (e)	Waste minimisation and reuse.		Section 25.8 Section 25.10
	19.1 (f)	Lawful recycling or disposal locations for each type of waste.		Section 25.5 Section 25.5.3
	19.1 (g)	Contingencies for the above, including managing unexpected waste volumes.		Section 25.10
	19.2	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.		Section 25.8.6 and Section 25.10 Chapter 13: Surface Water and Hydrology Section 16.7 Chapter 17: Air Quality Appendix J: Construction Noise and Vibration

Desired performance outcome	SEARs reference	Requirement	Current guidelines	Where addressed in the EIS
Climate Change Risk The project is designed, constructed and operated to be resilient to the future impacts of climate change.	20.1	The Proponent must assess the risk and vulnerability of the project to climate change in accordance with the current guidelines.	*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* (Standards Australia, 2009) *Technical Guide for Climate Change Adaptation for the State Road Network* (RMS, in draft)	Section 19.3.1 and Section 19.5 Appendix Q: Climate Change Risk Assessment Technical Report
	20.2	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 (attenuated for project region)) and incorporate specific adaptation actions in the design.		Section 19.4.1, Section 19.5 and Section 19.6 Appendix Q: Climate Change Risk Assessment Technical Report
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.	21.1	The Proponent must assess the sustainability of the project in accordance with the Infrastructure Sustainability Council of Australia 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* (Infrastructure Sustainability Council of Australia) *NSW Infrastructure Skills Legacy Programs' training and employment targets* (DOI, 2017)	Sections 18.3 Section 18.5.3 Section 18.6 Section 18.6.4

TABLE 2 RESPONSE TO PART 3, SCHEDULE 2 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

Sub-section	Reference	Item	Service Provider Response
Form of environmental impact statement	6	An environmental impact statement must contain the following information:	Refer to the certification at the front of the EIS.
	6 (a)	The name, address and professional qualifications of the person by whom the statement is prepared,	
	6 (b)	The name and address of the responsible person,	
	6 (c)	The address of the land:	
	6 (c) (i)	In respect of which the development application is to be made, or	
	6 (c) (ii)	On which the activity or infrastructure to which the statement relates is to be carried out,	
	6 (d)	A description of the development, activity or infrastructure to which the statement relates,	
	6 (e)	An assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule,	
	6 (f)	A declaration by the person by whom the statement is prepared to the effect that:	
	6 (f) (i)	The statement has been prepared in accordance with this Schedule, and	
	6 (f) (ii)	The statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and	
	6 (f) (iii)	That the information contained in the statement is neither false nor misleading.	
Content of environmental impact statement	7	An environmental impact statement must also include each of the following:	-
	7 (a)	A summary of the environmental impact statement,	Executive Summary
	7 (b)	A statement of the objectives of the development, activity or infrastructure,	Section 1.3
	7 (c)	An analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,	Sections 3.1 and 3.3
	7 (d)	An analysis of the development, activity or infrastructure, including:	-
	7 (d) (i)	A full description of the development, activity or infrastructure, and	Chapter 6: The Proposal and Chapter 7: Construction of the Proposal
	7 (d) (ii)	A general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and	Chapter 4: Site Description

Sub-section	Reference	Item	Service Provider Response
Content of environmental impact statement	7 (d) (iii)	The likely impact on the environment of the development, activity or infrastructure, and	Chapter 11: Biodiversity through to Chapter 25: Waste and Resource Management
	7 (d) (iv)	A full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Chapter 27: Environmental Management Plan
	7 (d) (v)	A list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,	Chapter 5: Planning and Assessment Process
	7 (e)	A compilation (in a single Section of the environmental impact statement) of the measures referred to in item 7 (d) (iv),	Chapter 27: Environmental Management Plan
	7 (f)	The reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).	Chapter 28: Conclusions