Secretary's Environmental Assessment Requirements

Application Number	SSI 10055
Proposal	Inland Rail – Albury to Illabo
Location	Land generally within the existing rail corridor between Albury and Illabo
Proponent	Australian Rail Track Corporation
Date of Issue	14 October 2020

1. General SEARs

Desired Performance Outcome	Requirement	Current Guidelines
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. It is the Proponent's responsibility to determine whether the project needs to be referred to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) for an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Proponent must contact DAWE immediately if it is determined that an approval is required under the EPBC Act, as supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under the Accredited Assessment can be achieved. 3. Where the project requires approval under the EPBC Act and is being assessed under the Accredited Assessment the EIS should address: (a) Consideration of any Protected Matters that may be impacted by the development where the Commonwealth Minister has determined that the proposal is a Controlled Action; (b) Identification and assessment of those Protected Matters have been avoided, mitigated and, if necessary, offset; (c) Details of how significant impacts to Protected Matters have been avoided, mitigation and, if necessary, offset. (d) Consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans. 4. 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	1. The EIS must include, but not necessarily be limited to, the following:	

Desired Performance Outcome		
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.	(a) an executive summary; (b) a description of the project, including key components and activities (including ancillary components and activities) required to construct and operate it including: - project overview; - site and route locations (including use of plans); - scope of works to construct the project, including key activities, description of methodologies, working hours, indicative plant and equipment to be used; - timing of key construction activities; - acquisition of privately owned, council and crown land; and - connections to other Inland Rail projects; (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 alternatives to the project; (f) a description of options within the project; (g) a description of how alternatives to and options within the project were analysed to inform the selection of the preferred alternative / option. The description must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) within the project were selected; (h) a general description of different construction methods that were analysed and preferred methods;	

Desired Performance Outcome	Requirement	
	(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) a description of the trains that will operate under the project; (l) the identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome; (m) a statement of the outcome(s) the Proponent will achieve for each key issue; (n) measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact; (o) consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts; (p) 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; (q) a clear description of construction scheduling and how suitable access to crossings, bridges and rail/road network will be maintained during construction; (r) 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 (s) a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out; a chapter that synthesises the environmental impact assessment and provides: - a succinct but full description of the project for which approval is sought;	

Desired Performance Outcome	Requirement	
	- 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) and criteria the proponent will achieve and how these will be monitored; and - 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 (t) relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software. 2. 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.	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) assess the issue (including modelling as relevant), and address and undertake the requirements specified in section 2,	

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* 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.	(b) describe the biophysical and socio-economic environment, as far as it is relevant to that issue; (c) describe the legislative and policy context, as far as it is relevant to the issue; (d) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), and the cumulative impacts; (e) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); (f) identify clear and quantifiable actions, outcomes and, where possible, performance criteria; (g) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); and (h) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures and (i) measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met. 3. Where 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, affected landowners, businesses and the community. The consultation process must be undertaken in accordance with the current guidelines. 2. The Proponent must document the consultation process and demonstrate how the project has responded to the inputs received. 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.	

2. Key Issue SEARs

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
1. Transport and Traffic Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained. Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and future transport corridors.	1. Construction transport and traffic (vehicle, pedestrian and cyclists, bus services, and train operations) impacts, including, but not necessarily limited to: (a) the likely construction access routes (including haul routes) and scheduling of construction vehicle movements; (b) the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements and track machines); (c) construction worker parking; (d) the nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times, movement of livestock, agricultural machinery, farm vehicles and other farm infrastructure, construction deliveries and parking arrangements and sensitive road users) and assessment of traffic impacts on these routes including identifying traffic management measures to mitigate any impacts; (e) provisions proposed to ensure safe access and egress to/from the classified road network; (f) the nature of any train paths (types and number of movements) and potential impact to these train paths due to additional track possession requirements; (g) the need to close, divert or otherwise reconfigure elements of the road and cycle network associated with construction of the project and the duration of these changes; and (h) impacts to on-street parking, including to residents and businesses. 2. Operational transport impacts of the project (vehicle, pedestrian and cyclists, bus services, and train operations), including: (a) forecast travel demand and traffic volumes for the project (road	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, 201) Future Transport Strategy 2056 (TfNSW, 2018) NSW Freight and Ports Plan 2018-2023 (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) Guides to Road Design (Austroads)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	and rail); (b) travel time analysis; (c) the performance of key intersections and level crossings by undertaking a level of service analysis at key locations along the project alignment; (d) wider transport interactions (local and regional roads, cycling, public and freight transport and the broader NSW rail network); (e) consideration of how increased train movements would impact level crossings and emergency access across the rail line; and (f) identification of traffic and transport measures to mitigate any impacts. The assessment must include modelling of the operational impact of the project. 3. Assess the feasibility of changes to level and grade-separated crossings along the project alignment (existing and proposed) and justify the safety and operational impacts and/or benefits of the proposed crossing type, taking into account the NSW Government's Construction of New Level Crossings Policy. 4. In the assessment of level crossings, the EIS must: (a) provide a safety assessment for each level. The safety assessment is to be consistent with ALCAM and any Interface Agreements and Safety Management Plans; (b) demonstrate how the risks will be reduced So Far As Is Reasonably Practical (SFAIRP) in consultation with the relevant road authority; (c) assess potential short-stacking impacts; (d) confirm road approaches to level crossings are fit for purpose, safe and designed and constructed in accordance with Austroads	

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	Guide to Road Design; and (e) account any rationalisation of private and public level crossings in line with the NSW Government's *Level Crossing Closure Policy.*	
2. 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.	1. Direct and/or indirect 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*; (d) items listed on the National and World Heritage lists; (e) heritage items and conservation areas identified in environmental planning instruments applicable to the project area; (f) heritage items in relevant Section 170 Heritage and Conservation Registers. 2. Where impacts to State or locally significant heritage items are identified, the assessment must: (a) include a significance assessment, a statement of heritage impact for heritage items and a historical archaeological assessment; (b) justify any changes to heritage fabric and/or landscape analysis, including an options analysis. (c) assess the consistency of the project against conservation policies of any relevant conservation management plan; (d) 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	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 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 Archaeological Assessment Guidelines (NSW

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	noise treatment (as relevant); (e) consider heritage sites located within the vicinity of the proposed corridor beyond the 200 m zone, where there may be a potential impact on significant view lines or corridors; (f) outline measures to avoid and minimise those impacts during construction and operation in accordance with the current guidelines; (g) be undertaken in accordance with relevant stakeholders including Councils; and (h) be undertaken by a suitably qualified heritage consultant(s) and/or historical archaeologist (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria). 3. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010). 4. Impacts to Aboriginal objects and/or places must be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). Consultation must be undertaken with Aboriginal people in accordance with the *Aboriginal Cultural Heritage Consultation requirements for proponents* (DECCW, 2010). The ACHAR must: (a) document the outcomes of consultation with Aboriginal people and outline measures proposed to mitigate impacts, and document the significance of cultural heritage values for Aboriginal people who have a cultural association with the land;	Heritage Council, 1996) Assessing Significance for Historical Archaeological Sites and Relics (DoP, 2009)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	(b) identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project; (c) document the outcomes of the archaeological surface survey and test excavation to inform the need for targeted test excavations; (d) assess and document impacts on Aboriginal cultural heritage values and demonstrate attempts to avoid impacts upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the AHIMS Register; and (e) outline procedures to be followed if Aboriginal objects, burials or skeletal material are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.	
3. Social The project minimises adverse social impacts and capitalises on opportunities potentially available to affected communities.	1. Potential social impacts of the project from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project. 2. How potential environmental changes in the locality may affect people's: (a) community (b) access to and use of infrastructure, services and facilities; (c) culture; (d) health and wellbeing; surroundings; (e) personal and property rights; (f) decision-making systems; and	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) Social Impact Assessment Guideline (DPE, 2017) Social Impact Assessment Scoping Tool (DPE, 2017)

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	(g) fears and aspirations, as relevant and considering how different groups may be disproportionately affected. 3. The potential disruption and restrictions arising from the construction and operation of the proposal of affected communities. 4. Social actions and outcomes that address both negative and positive social impacts. 5. Identify potential cumulative impacts of other infrastructure construction projects on the availability of local construction workforce and opportunities of local businesses.	
4. Economic and Land Use 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. Economic impacts in accordance with the current guidelines. 2. Economic impacts on potentially affected properties, businesses, recreational users and land and water users (for example, recreational and commercial fishers), including property acquisitions/adjustments, access, accessibility, amenity and relevant statutory rights. 3. Opportunities and processes to prioritise local industry participation practices to source construction goods and services, including training and employment targets within communities along or near the rail alignment.	Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (RMS, 2013) 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) Riverina Murray Regional Plan 2036 (DPE, 2017) NSW Infrastructure Skills Legacy Program NSW Aboriginal Participation in Construction Policy 2018

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	4. Undertake an assessment of 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.*	

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	5. Assess the economic impact of temporary accommodation for construction workers on communities near the project site.	

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	6. Consider the implications of the project on current local and state strategic frameworks of key urban and regional centres along the alignment.	
5. Noise and Vibration Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity. Increases in noise emissions and vibration affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and well-being of the community. 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. Construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines. 2. The assessment of **construction noise and vibration** must address: (a) the nature of construction activities and related noise characteristics; (b) the intensity and duration of noise (both air and ground borne) and vibration impacts. This must include consideration of extended construction impacts associated with ancillary facilities (and the like) and construction fatigue; (c) the identification and nature of receivers, existing and proposed, during the construction period; (d) the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage); (e) the impact of construction and rail traffic on nearby road infrastructure including roads, bridges, culverts and road side furnishings; (f) the nature of the impact and the sensitivity of receivers and level of impact including for out of hours works; (g) the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management); (h) noise impacts of out-of-hours works (including utility works and works associated with the SSI including those undertaken under another assessment pathway), possible locations where out-of-hours works would be undertaken, the activities that would	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 (DECC, 2009) Noise Policy for Industry (EPA, 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) German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures

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	be undertaken, the estimated duration of those activities and justification for these activities in terms of the *Interim Construction Noise Guideline* (DECC, 2009); (i) sleep disturbance (including the number of noise-awakening events); (j) a cumulative noise and vibration assessment inclusive of impacts from the proposal, including concurrent construction activities within the proposal and the construction of other relevant development in the vicinity of the proposal; (k) details and analysis of the predicted effectiveness of mitigation measures to adequately manage identified impacts, including impacts as identified in (h), (l) any potential residual noise and vibration impacts following application of mitigation measures; and (m) a description of how receiver feedback received during the preparation of the EIS has been taken into account (and would be taken into account post exhibition of the EIS) in the design of mitigation measures, including any tailored mitigation, management and communication strategies for sensitive receivers. 3. If blasting is required, demonstration that blast impacts can comply with current guidelines.	
6. Biodiversity The project design considers measures to avoid and minimise impacts on terrestrial and aquatic biodiversity.	1. 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).	Biodiversity Assessment Method (OEH, 2017) Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013 (DPI, 2013) Threatened Species Survey and Assessment

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he Offsets and/or supplementary measures are assured which are equivalent to any remaining impacts of project construction and operation.	2. The BDAR must document the application of the avoid, minimise and offset framework in accordance with the BAM. 3. The BDAR must include information in the form detailed in s6.12 of the BC Act, cl6.8 of the *Biodiversity Conservation Regulation 2017* and the BAM. 4. The BDAR must be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the BAM. 5. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the BC Act. 6. The BDAR must include details of the measures proposed to address offset obligations in accordance with the BAM. 7. 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 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). 8. 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).	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) Biodiversity Assessment Method Operational Manual Stage 1 (OEH, 2018) Biodiversity Assessment Method Operational Manual Stage 2 (OEH, 2019)
7. Visual Amenity The project minimises adverse impacts on the visual amenity of the built and natural environment (including public open space)	1. Assess the visual impact of the project (including temporary and permanent spoil mounds, rail formation, bridges, and over or underpasses) and any ancillary infrastructure on: (a) Views and vistas; (b) Streetscapes, key sites and buildings;	AS4282-1997 Control of the obtrusive effects of outdoor lighting Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (Centre for Urban

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and capitalises on opportunities to improve visual amenity.	(c) Heritage items including aboriginal places and environmental heritage; and (d) Private landowners and the local community. 2. Provide artist impressions and perspective drawings of the project to illustrate how the project has responded to the visual impact through urban design and landscaping.	Design, 2019) NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Technical guideline for Urban Green Cover in NSW (OEH, 2015) Beyond the Pavement: Urban design approach and procedures for road and maritime infrastructure planning, design and construction (TfNSW/Centre for Urban Design, 2020) Guideline for landscape character and visual impact assessment: Environmental impact assessment practice note EIA-04 (RMS, 2018)
8. Flooding The project minimises adverse impacts on existing flooding characteristics. Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.	1. Changes to flood behaviour during construction and operation for a full range of flood events up to the probable maximum flood (including consideration of the impacts of climate change and differing storm durations) including: (a) any detrimental increases in the potential flood affectation of other properties, assets and infrastructure; (b) consistency (or inconsistency) with applicable Council floodplain risk management plans; (c) compatibility with the flood hazard of the land; (d) compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land; (e) downstream velocity and scour potential; (f) impacts the development may have upon existing community emergency management arrangements for flooding. These matters must be discussed with the State Emergency Services and Council; and	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) 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)

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	(g) any impacts the development may have on the social and economic costs to the community as consequence of flooding. 2. Flood management objectives and outcomes must be clearly identified and substantiated to address the characteristics of the environment and relevant legislative, management and guidance requirements.	AS/NZS 3100:2018 Risk Management – Principles and Guidelines Australian Rainfall and Runoff (Commonwealth of Australia, Geoscience Australia, 2019) Floodplain Risk Management Guide - Incorporating [2016] Australian Rainfall and Runoff in studies (OEH, 2019)
9. 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.	1. Describe (and map) the existing hydrological regime for any surface and groundwater resource (including reliance by users and for ecological purposes) likely to be impacted by the project, including stream orders, as per the BAM. 2. Prepare a conceptual water balance for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration, sources, security and licensing requirements. 3. Surface and groundwater hydrology impacts of the construction and operation of the project and any ancillary facilities (both built elements and discharges) on surface and groundwater hydrology in accordance with the current guidelines, including: (a) natural processes within rivers, wetlands, estuaries, marine waters and floodplains that affect the health of the fluvial, riparian, estuarine or marine system and landscape health (such as modified discharge 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,	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 Water Sharing Plans (available at https://www.industry.nsw.gov.au/water/plans-programs/water-sharing-plans)

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	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 and an assessment of current market depth where water entitlement is required to be purchased. 4. Identify any requirements for baseline monitoring of hydrological attributes.	
10. 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. Water quality impacts, including: (a) stating the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated trigger values or criteria for the identified environmental values; (b) identifying and estimating the quality and quantity of pollutants that may be introduced into the water cycle by source and discharge point and describe the nature and degree of impact that any discharge(s) may have on the receiving environment, including consideration of pollutants that pose a risk of non-trivial harm to human health and the environment; (c) identifying the rainfall event that the water quality protection	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 (ANZG, 2018) 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.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	measures will be designed to cope with; (d) the significance of any identified impacts including consideration of the relevant ambient water quality outcomes; (e) demonstrating how construction and operation of the project will, to the extent that the project can influence, ensure that: - 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) justifying, if required, why the WQOs cannot be maintained or achieved over time; (g) demonstrating that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented; (h) identifying sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments; and (i) identifying proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.	Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) Guidelines for Controlled Activities on Waterfront Land (DPI, 2018)
11. 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. Verify the risk of acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) in the area likely to be impacted by the project and the impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines. 2. The likelihood of land contamination 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 EIS must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.	Acid Sulfate Soils Assessment Guidelines (DoP, 2008) Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998) National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC, amended 2013) Managing Land Contamination: Planning Guidelines SEPP 55 –Remediation of Land, (DUAP & EPA, 1998)

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
	3. Identify whether soil salinity is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area, and assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology. 4. 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.	Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015) Guidelines for the NSW Site Auditor Scheme (3rd Edition) (EPA, 2017) PFAS National Environmental Management Plan version 2.0 (HEPA, January 2020) 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) 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*
12. Climate Change and Sustainability The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources. Conservation of natural resources is	1. 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. 2. Sustainability of the project against the current guidelines 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 Australian Government's Climate Change Impacts

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines
maximised. The project is designed, constructed and operated to be resilient to the future impacts of climate change.	3. The risk and vulnerability of the project to climate change in accordance with the current guidelines. 4. Climate change risks must be quantified with reference to the NSW Government's climate projections at 10km resolution (or lesser resolution if 10km projections are not available) or equivalent projection tool (such as the Climate Futures Tool from CSIRO and BoM (attenuated for project region)) and incorporate specific adaptation actions in the design.	and Risk Management – A Guide for Business and Government (2006) AS/NZS 31000:2018 Risk Management – Principles and Guidelines Technical Guide for Climate Change Adaptation for the State Road Network (RMS, in draft) Practical Consideration of Climate Change – Floodplain Risk Management Guideline (DECC, 2007)
13. Other Issues	1. Assess the following issues in accordance with the commitments made in Chapter 6 of the Scoping Report: (a) Air Quality (b) Waste (c) Greenhouse gases and energy (d) Hazards (e) Cumulative impact	