Appendix A

Environmental assessment requirements

Appendix A

Secretary's Environmental Assessment Requirements

The Planning Secretary's Environmental Assessment Requirements (7 July 2021) (SEARs), and where these requirements are addressed in this Environmental Impact Statement, are outlined in Table 1 and Table 2. Some of the SEARs outlined in Table 1 and Table 2 make reference to requirements specified in the *Sydney Metro West Scoping Report - Major civil construction work between The Bays and Sydney CBD* (Sydney Metro, 2021). All Scoping Report requirements, and where they are addressed in this Environmental Impact Statement, are outlined in Table 3 of this appendix.

Table 1 Secretary's Environmental Assessment Requirements – General

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
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).	EPBC Act Environment Assessment Process (SEWPAC, 2010)	Throughout this Environmental Impact Statement.
	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). If DAWE has determined that an approval is required under the EPBC Act, supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under an Accredited Assessment can be achieved.		Section 3.1.5 (Commonwealth legislation) of this Environmental Impact Statement states that the proposal is not likely to have a significant impact on Matters of National environmental Significance. As a result, no referral is required.
	3. Where the project requires approval under the EPBC Act and is being assessed under the Bilateral Agreement 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 that are likely to be significantly impacted. c. Details of how significant impacts to Protected Matters have been avoided, mitigated and, if necessary, offset. d. Consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans.		Section 3.1.5 (Commonwealth legislation) of this Environmental Impact Statement states that the proposal is not likely to have a significant impact on Matters of National environmental Significance. As a result, no referral is required. Issues with respect to Matters of National Environmental Significance are discussed in Chapter 8 (Non-Aboriginal heritage) and Chapter 18 (Biodiversity).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
1. cont.	1. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.		Section 3.2 (Summary of approval requirements) of this Environmental Impact Statement describes the approvals required for the project, while Chapter 6 to 22 provide additional details of legislation applicable to specific environmental issues.
2. Environmental Impact Statement **The proposal is described in sufficient detail to enable clear understanding that the proposal has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the proposal, on balance, has the least adverse environmental, social and economic impact, including its cumulative impacts.**	1. The EIS must include, but not necessarily be limited to, the following: a. executive summary;		Executive Summary.
	b. a description of the Sydney Metro West scheme and the staged approach to obtaining approval for the Sydney Metro West scheme;		Chapter 1 (Introduction).
	c. a description of the proposal, including key components and activities (including ancillary components and activities) required to construct it including: – station locations and the proposed route (including use of plans) – scope of works to construct the proposal, 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		Chapter 5 (Project description).
	d. a description of feasible options within the proposal; e. a description of how alternatives to and options within the proposal 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 proposal were selected;		Chapter 2 (Development and alternatives).
	f. a concise description of different construction methods that were analysed and preferred methods;		Chapter 2 (Development and alternatives).
	g. a concise description of the general biophysical and socio-economic environment that is likely to be impacted by the proposal (including offsite impacts). Elements of the environment that are not likely to be affected by the proposal do not need to be described;		Chapter 23 (Synthesis of the Environmental Impact Statement).
	h. a demonstration of how the proposal design has been developed to avoid or minimise likely adverse impacts;		Chapter 23 (Synthesis of the Environmental Impact Statement).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
2. cont.	i. the identification and assessment of key issues as provided in the 'Assessment of Key Issues' performance outcome;		Chapter 6 to 22.
	j. a statement of and the quantification of outcomes and performance criteria the proposal will achieve for each key issue;		Chapter 6 to 22.
	k. 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; l. consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts;		Chapter 23 (Synthesis of the Environmental Impact Statement).
	m. an assessment of the relevant cumulative impacts of the proposal taking into account other State Significant projects that have been approved but where construction has not commenced, projects that have commenced construction, and projects that have recently been completed (such as WestConnex, Western Harbour Tunnel, Sydney Metro West (Major civil construction between Westmead and The Bays, SSI-10038), and approved construction in the relevant precincts);		Chapter 6 to 22.
	n. statutory context of the proposal, including: – how the proposal meets the provisions of the EP&A Act and EP&A Regulation; – a list of any approvals that must be obtained under any other Act or law before the proposal may lawfully be carried out; – identification of the environmental planning instruments and government strategic plans and policies relevant to the proposal and land subject to the proposal (including State environmental planning policies, land use and infrastructure strategies and local strategic planning statements);		Chapter 3 (Planning and assessment process).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
2. cont.	o. a chapter that synthesises the environmental impact assessment and provides: – a succinct but full description of the proposal for which approval is sought; – a description of any uncertainties that still exist around the construction footprint, construction methodologies and how these will be resolved in the following project application(s); – a compilation of the impacts of the proposal 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 or during latter stage(s) of the proposal) or offset these impacts; – a compilation of the outcome(s) and criteria the proposal will achieve and how these will be monitored; and – the reasons justifying carrying out the proposal as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts;		Chapter 23 (Synthesis of the Environmental Impact Statement).
	p. relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.		Chapter 6 to 22.
	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.		Throughout this Environmental Impact Statement.

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
3. Assessment of Key Issues* **Key issue impacts are assessed objectively and thoroughly to provide confidence that the proposal will be constructed within acceptable levels of impact.** *** Key issues are nominated by the Proponent in the CSSI 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 CSSI projects.**	1. The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the proposal location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts. 2. For each key issue the Proponent must: a. describe the biophysical and socio-economic environment, as far as it is relevant to that issue, including substantiated baseline data that is reflective of current guidelines where relevant; b. describe the legislative and policy context, as far as it is relevant to the issue; c. identify, describe, quantify (if possible) and assess (including modelling as relevant) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the proposal, cumulative impacts (parallel and sequential) with other projects and address and undertake the requirements specified in section 5; d. demonstrate how potential impacts have been avoided (through design, or construction methodologies); e. detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); f. detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures; and g. measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met. 3. Where multiple options to avoid or minimise impacts are available, they must be identified and considered, and the proposed measure justified taking into account the public interest. 4. The assessment of each key issue must consider (as relevant) the listed guidelines.		Throughout this Environmental Impact Statement.

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
4.Consultation **The proposal is developed with meaningful and effective engagement.**	1. The proposal must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses and the community with specific consultation for each station precinct.		Section 4.4, Section 4.5 and Section 4.6 of this Environmental Impact Statement.
	2. The consultation process must be documented and include information on how the proposal has responded to the inputs received.		Section 4.6 of this Environmental Impact Statement.
	3. The timing and type of community consultation undertaken or proposed must be described, including the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.		Section 4.4, Section 4.5, Section 4.6, Section 4.7 and Section 4.8 of this Environmental Impact Statement.

Table 2 Secretary's Environmental Assessment Requirements – Key issues

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
1. Business **The proposal minimises impacts to business function and property including maintenance of appropriate access to businesses.**	1. Impacts to potentially affected businesses, including property acquisitions/adjustments, access, amenity and relevant statutory rights. Identify management measures to minimise impacts to businesses as a result of the proposal.		Section 12.5, Section 12.6, Section 12.7, Section 12.8 and Section 12.10 of this Environmental Impact Statement.

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
2. Design, Place and Movement **The proposal minimises adverse impacts on accessibility and connectivity for communities and public spaces.**	1. Visual, access, connectivity and related amenity impacts of construction including on streetscapes, key sites and buildings (including existing landscape works, greenspace and tree canopy).	*Better Placed – An integrated design policy for built environment of New South Wales* (Government Architect NSW, 2017) Designing with Country (Government Architect NSW, 2020) Connecting with Country (Government Architect NSW, 2020) Aligning Movement and Place – Outline for understanding places in relation to movement infrastructure (Government Architect of NSW, 2019) Practitioner's Guide to Movement and Place (NSW Government 2020) Healthy Urban Development Checklist (NSW Health, 2009), section 10 Creating Walkable Neighbourhoods (Active Living NSW, 2018) Sydney Green Grid – Spatial Framework and Project Opportunities (Tyrrell Studio and Office of the Government Architect 2017) Greener Places – Establishing an urban Green Infrastructure policy for New South Wales (NSW Government, 2020) AS4282-1997 Control of the obtrusive effects of outdoor lighting AS4970-2009 Protection of trees on development sites Walking Space Guide: Towards Pedestrian Safety and Comfort (TfNSW, 2020) Road User Space Allocation Policy (TfNSW, 2021) Cycleway design toolbox: Designing for cycling and micromobility (TfNSW, 2020) Sydney Streets design code (City of Sydney, 2013)	Section 11.5, Section 11.6 and Section 11.7 of this Environmental Impact Statement. Section 5.4, Section 5.5, Section 5.6, Section 5.7, Section 6.4, Section 6.5, Section 6.6, Section 6.7, Section 7.4, Section 7.5 and Section 7.6 of Technical Paper 5 (Landscape and visual impact assessment).
The proposal contributes to greener places by facilitating the enhancement and provision of green infrastructure.	2. Open space and tree impacts, including: a. estimating the number of trees to be cleared that will not be covered by a biodiversity offset strategy; and		Section 18.7 and Section 18.8 of this Environmental Impact Statement. Section 5.4, Section 5.5, Section 6.4, Section 6.5, Section 7.4 and Section 7.5 of Technical Paper 5 (Landscape and visual impact assessment).
The proposal minimises adverse impacts on the visual amenity of the built and natural environment (including public open space).	b. for areas where trees are to be cleared, investigate means to increase the number of trees and canopy within proximity of the impacted areas by providing additional planting before construction.		Section 18.11 of this Environmental Impact Statement. Section 9 of Technical Paper 5 (Landscape and visual impact assessment).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
3. Flooding **The proposal minimises adverse impacts on existing flooding characteristics.** **Construction of the proposal avoids or minimises the risk of, and adverse impacts from, infrastructure flooding or flooding hazards.**	1. **Flood management objectives** must be clearly identified and justified to address the characteristics of the environment and relevant legislative, management and guidance requirements.	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)	Section 3.3 of Technical Paper 9 (Hydrology, flooding and water quality).
	2. Flood behaviour during construction including: a. potential flood affectation of other properties, assets and infrastructure;		Section 17.6 of this Environmental Impact Statement. Section 5.1 of Technical Paper 9 (Hydrology, flooding and water quality).
	b. consistency (or inconsistency) with applicable Council floodplain risk management plans;		Section 17.6 of this Environmental Impact Statement. Section 5.1 of Technical Paper 9 (Hydrology, flooding and water quality).
	c. compatibility with the flood hazard of the land; and		Section 17.6 of this Environmental Impact Statement. Section 5.1 of Technical Paper 9 (Hydrology, flooding and water quality).
	d. compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land.		Section 17.6 of this Environmental Impact Statement. Section 5.1 of Technical Paper 9 (Hydrology, flooding and water quality).
	3. Identify measures to achieve the flood management objectives.		Section 17.8 of this Environmental Impact Statement. Section 6.3 of Technical Paper 9 (Hydrology, flooding and water quality).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
4.Heritage **The design and construction of the proposal, 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 and construction of the proposal avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage and Aboriginal objects and places.**	1. Direct and/or indirect impacts to the **heritage significance** of: a. Aboriginal places, objects and cultural heritage values, 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;	*Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) *Aboriginal Cultural Heritage Consultation requirements for proponents* (DECCW, 2010) *Due diligence 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 assessing Excavation Directors (NSW Heritage Council, 2019) NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning, 1994) Assessing Heritage Significance (NSW Heritage Office, 2001) The Australia ICOMOS Burra Charter 2013 Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch, Department of Planning, 2009) Archaeological Assessment (Heritage Office and Department of Urban Affairs and Planning, 1996)	Section 9.5, Section 9.6, Section 9.7 and Section 9.8 of this Environmental Impact Statement. Section 10.1, Section 10.2 and Section 10.3 of Technical Paper 4 (Aboriginal Cultural Heritage Assessment Report).
	b. Aboriginal places of heritage significance, as defined in the Standard Instrument – Principal Local Environmental Plan;		Section 9.5, Section 9.6, Section 9.7 and Section 9.8 of this Environmental Impact Statement. Section 2.3 of Technical Paper 4 (Aboriginal Cultural Heritage Assessment Report).
	c. environmental heritage, as defined under the *Heritage Act 1977*;		Section 8.5, Section 8.6, Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 6.1, Section 6.2, Section 6.3 and Section 6.4 of Technical Paper 3 (Non-Aboriginal heritage).
	d. historical and/or maritime archaeology (including reclaimed land and foreshore areas);		Section 7.1 and Section 7.2 of Technical Paper 3 (Non-Aboriginal heritage).
	e. items uncovered during investigation for the proposal that are found to have heritage significance;		Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 9.1 of Technical Paper 3 (Non-Aboriginal heritage).
	f. items listed on the State, National and World Heritage lists; and		Section 8.5, Section 8.6, Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 6.1 and Section 6.2 of Technical Paper 3 (Non-Aboriginal heritage).
	g. heritage items and conservation areas identified in environmental planning instruments applicable to the proposal area.		Section 8.5, Section 8.6, Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 6.1, Section 6.2, Section 6.3 and Section 6.4 of Technical Paper 3 (Non-Aboriginal heritage).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
4.cont.	2. The historical and/or maritime archaeology impacts (including reclaimed land and foreshore areas) should be addressed through an archaeological assessment by suitability qualified archaeologist.		Section 1.4, Section 7.1 and Section 7.2 of Technical Paper 3 (Non-Aboriginal heritage).
	3. Where impacts to State or locally significant heritage items are identified, the assessment must: a. include a heritage significance assessment for all heritage items, a statement of heritage impact for all heritage items and a historical archaeological assessment;		Section 8.6, Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 6.1, Section 6.2, Section 6.3, Section 6.4, Section 7.1 and Section 7.2 of Technical Paper 3 (Non-Aboriginal heritage).
	b. consider conservation policies of relevant conservation management plans;		Section 2.4.2 of Technical Paper 3 (Non-Aboriginal heritage).
	c. consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation and site compounds (as relevant) and whether these are permanent or temporary impacts or structures		Section 8.5, Section 8.6, Section 8.7 and Section 8.8 of this Environmental Impact Statement. Section 6.1, Section 6.2, Section 6.3, Section 6.4, Section 7.1 and Section 7.2 of Technical Paper 3 (Non-Aboriginal heritage).
	d. outline measures to avoid and minimise those impacts during construction in accordance with the current guidelines; and		Section 8.10 of this Environmental Impact Statement. Section 9.1 of Technical Paper 3 (Non-Aboriginal heritage).
	e. 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).		Section 1.4 of Technical Paper 3 (Non-Aboriginal heritage).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
4.cont.	4. Where archaeological investigations 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 1.5 and Section 3.4 of Technical Paper 4 (Aboriginal Cultural Heritage Assessment Report).
	5. Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the current guidelines.		Section 9.3 of this Environmental Impact Statement. Section 5.1, Section 5.2, Section 5.3 and Section 5.4 of Technical Paper 4 (Aboriginal Cultural Heritage Assessment Report).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
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, and adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage.**	1. **Construction noise and vibration** impacts in accordance with relevant NSW noise and vibration guidelines.	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) Construction Noise Strategy (TfNSW, 2012) Sydney Metro Construction Noise and Vibration Standard (2021) Rail Infrastructure Noise Guideline (EPA, 2013) NSW Road Noise Policy (DECCW, 2011) Environmental Noise Management Manual (RMS 2001) Development Near Rail Corridors and Busy Roads – Interim guideline (DoP, 2008) Noise Mitigation Guideline (RMS, 2015) Noise Criteria Guideline (RMS, 2015)Transport for NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures	Section 7.2 of this Environmental Impact Statement. Section 5.1, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 2 (Noise and vibration).
	2. The assessment must clearly differentiate between tunnel activities, and the tunnel support or ancillary activities in the assessment and describe their impacts and proposed hours of work.		Section 7.3 and Section 7.5 of this Environmental Impact Statement. Section 5.1, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 2 (Noise and vibration).
	3. The assessment of **construction noise and vibration** must address:		Section 7.6, Section 7.7 and Section 7.8 of this Environmental Impact Statement. Section 5.2 of Technical Paper 2 (Noise and vibration).
	a. the identification and nature of receivers, existing and proposed, during the construction period;		
	b. the intensity and duration of noise (both air and ground borne) and vibration impacts. This must include consideration of the construction program, high noise generating activities and extended construction impacts associated with ancillary facilities (and the like) and construction fatigue;		Section 7.3, Section 7.5, Section 7.6, Section 7.7, Section 7.8 and Section 7.9 of this Environmental Impact Statement. Section 4.4, Section 4.5, Section 5.1, Section 5.2, Section 5.3, Section 5.4, Section 5.5 and Section 5.6 of Technical Paper 2 (Noise and vibration).
	c. the nature of construction activities and related noise characteristics using typical and worst-case scenarios;		Section 7.3 of this Environmental Impact Statement. Section 5.1, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 2 (Noise and vibration).
	d. the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).		Section 7.3, Section 7.8, Section 8.5.1, Section 8.6, Section 8.7, Section 8.8, and Section 9.5.1 of this Environmental Impact Statement. Section 3.5 and Section 5.2 of Technical Paper 2 (Noise and vibration).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
5. cont.	e. the nature of the impact and the sensitivity of receivers and level of impact including for out of hours work;		Section 7.5, Section 7.6, Section 7.7 and Section 7.8 of this Environmental Impact Statement. Section 5.1, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 2 (Noise and vibration).
	f. the need to balance timely conclusion of noise and vibration-generating works with periods of receiver respite, and other factors that may influence the timing and duration of construction activities (such as traffic management);		Section 7.3 and Section 7.10 of this Environmental Impact Statement. Section 6.3 of Technical Paper 2 (Noise and vibration).
	g. a statement of the proposed hours of construction. Justification must be provided where these are not consistent with standard construction hours stated in the Interim Construction Noise Guideline;		Section 7.3 of this Environmental Impact Statement. Section 4.4 of Technical Paper 2 (Noise and vibration).
	h. noise impacts of out-of-hours works (including utility works and works associated with the proposal including those undertaken under another assessment pathway), possible locations where out-of-hours works would be undertaken, the activities that would be undertaken, the estimated duration of those activities, the relevant stage the activities are proposed and justification for these activities;		Section 7.3, Section 7.5, Section 7.6, Section 7.7 and Section 7.8 of this Environmental Impact Statement. Section 4.4, Section 5.2, Section 5.3 and Section 5.4 of Technical Paper 2 (Noise and vibration).
	i. assessment of construction traffic noise on public roads must include consideration of gradient, construction vehicle type, acceleration and deceleration and potential annoyance;		Section 7.3, Section 7.6, Section 7.7 and Section 7.8 of this Environmental Impact Statement. Section 5.5 of Technical Paper 2 (Noise and vibration).
	j. sleep disturbance (including the number of noise-awakening events);		Section 7.6, Section 7.7 and Section 7.8 of this Environmental Impact Statement. Section 5.2 of Technical Paper 2 (Noise and vibration).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
5. cont.	k. a cumulative noise and vibration assessment inclusive of impacts from the proposal, including concurrent construction activities within the proposal, the Sydney Metro West scheme and the construction of other relevant development in the vicinity of the proposal when considering mitigation;		Section 7.9 of this Environmental Impact Statement. Section 5.6 of Technical Paper 2 (Noise and vibration).
	l. qualitative assessment of the predicted effectiveness of management and mitigation measures to manage identified, including impacts as identified in (h); and		Appendix F (Environmental risk analysis results). Section 6.3 of Technical Paper 2 (Noise and vibration).
	m. any potential residual noise and vibration impacts following application of mitigation measures; and		Appendix F (Environmental risk analysis results). Section 6.3 of Technical Paper 2 (Noise and vibration).
	n. 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.		Section 4.6, Section 7.10 and Section 7.11 of this Environmental Impact Statement. Section 6.3 of Technical Paper 2 (Noise and vibration).
	4. The process for community engagement should be included or referenced in the noise and vibration assessment as part of the mitigation strategy and assessment.		Section 7.10 of this Environmental Impact Statement. Section 6.1, Section 6.2 and Section 6.3 of Technical Paper 2 (Noise and vibration).
	5. If **blasting** is required, demonstration that blast impacts can comply with current guidelines.		N/A

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
6. Social **The proposal provides socially sustainable outcomes.** **The proposal maximises the social and economic welfare of the community.** **The proposal delivers better development outcomes by minimising negative social impacts and enhancing positive social impacts on affected communities.**	1. Potential social impacts of the proposal, in accordance with the DPIE Social Impact Assessment Guideline, including but not limited to: a. Consideration of the principles of Section 1.2 of the Guideline;	Social Impact Assessment Guideline, State significant projects (DPIE, 2021)	Section 13.2 of this Environmental Impact Statement. Section 2, Section 3.1, Section 3.3 and Section 3.4 of Technical Paper 6 (Social impact assessment).
	b. Consideration of Satisfying the Review Questions in Appendix C of the Guideline		Appendix E of Technical Paper 6 (Social impact assessment).
	c. Considering the social impacts that the project may have on people's: – way of life; – community; – access to and use of infrastructure, services, and facilities; – culture; – health and wellbeing; – surroundings; – livelihoods; and – decision-making systems.		Section 13.5, Section 13.6, Section 13.7 and Section 13.8 of this Environmental Impact Statement. Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 6 (Social impact assessment).
	d. the distributive equity of impacts and benefits, i.e. the ways in which different social groups, may experience the project, paying particular attention to vulnerable groups;		Section 4.2, Section 4.3, Section 4.4, Section 4.5, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 6 (Social impact assessment).
	e. assessing positive, negative, and cumulative social impacts.		Section 13.5, Section 13.6, Section 13.7, Section 13.8 and Section 13.9 of this Environmental Impact Statement. Section 4.2, Section 4.3, Section 4.4, Section 4.5, Section 5.2, Section 5.3, Section 5.4 and Section 5.5 of Technical Paper 6 (Social impact assessment).
	2. Identify management, mitigation and monitoring measures to minimise negative social impacts and identify potential opportunities for positive social outcomes.		Section 13.10 of this Environmental Impact Statement. Section 6.1, Section 6.2 and Section 6.3 of Technical Paper 6 (Social impact assessment).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
7. Soils and contamination **The environmental values of land, including soils, subsoils and landforms, are protected.** **Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.**	1. The likelihood of encountering **acid sulfate soils** (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) (including impacts of acidic runoff offsite) within, and in the area in accordance with the currently guidelines and measures to manage where relevant.	Acid Sulfate Soils Assessment Guidelines (DoP, 2008) Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998) Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land, (DUAP & EPA, 1998) Contaminated Land Guidelines: Consultants Reporting on Contaminated Sites (EPA, 2020) Guidelines for the NSW Site Auditor Scheme (3rd Edition) (EPA, 2017) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015) Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets (http://www.environment.nsw.gov.au/salinity/solutions/urban.htm) which includes *Site Investigations for Urban* Salinity (DLWC, 2002) Landslide risk management guidelines presented in Australian Geomechanics Society (2007) Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) Other guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*	Section 15.5, Section 15.6 and Section 15.8 of this Environmental Impact Statement. Section 4.4, Section 5.7, Section 5.8 and Section 5.14 of Technical Paper 7 (Hydrogeology). Section 4.5, Section 5.3, Section 5.4, Section 5.5, Section 6.2, Section 6.4 and Section 7 of Technical Paper 8 (Contamination).
	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.		Section 16.5, Section 16.6, Section 16.7, Section 16.8 and Section 16.10 of this Environmental Impact Statement. Section 6.1, Section 6.2, Section 6.3, Section 6.4, Section 6.5, Section 6.6 and Section 7 of Technical Paper 8 (Contamination).
	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 proposal's area, and assess the impacts of the proposal on soil salinity and how it may affect groundwater resources and hydrology.		Section 15.5 and Section 15.6 of this Environmental Impact Statement. Section 4.5, Section 5.7 and Section 5.8 of Technical Paper 7 (Hydrogeology). Section 4.5, Section 5.3, Section 5.4, Section 5.5, Section 6.2 and Section 6.4 of Technical Paper 8 (Contamination).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
8. Spoil **Spoil generated during the construction is effectively stored, handled, treated (if necessary), reused, and/or disposed of lawfully and in a manner that protects environmental values.**	1. Spoil generation and reuse, including: a. type and quantity;		Section 20.5 of this Environmental Impact Statement.
	b. onsite storage (including capacity to minimise amenity impacts);		Section 20.5 of this Environmental Impact Statement.
	c. reuse potential and disposal sites;		Section 20.5 of this Environmental Impact Statement.
	d. transport and handling options (including traffic, distance, road safety and related amenity and environmental impacts); and		Section 20.5 of this Environmental Impact Statement.
	e. measures to prevent illegal dumping.		Section 20.5 of this Environmental Impact Statement.

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
9. Transport and traffic **Network connectivity, safety and efficiency of the transport system in the vicinity of the proposal are managed to minimise impacts.** **The safety of transport system customers is maintained, with a focus on vulnerable road users (people walking and cycling).** **Access and connectivity for people walking and cycling or using public transport is maintained or improved relative to the existing situation.** **Impacts on road network capacity and the level of service are acceptable and effectively managed.** **Works are compatible with existing infrastructure and future transport corridors.**	1. **Construction transport and traffic (vehicle, pedestrian and cyclists) impacts**, including, but not necessarily limited to: a. a considered approach to route identification and scheduling of construction vehicle movements;	Guide to Traffic Management – Part 3 Transport Study and Analysis Methods (Austroads, 2020) 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) Transport for NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017)	Section 6.4 of this Environmental Impact Statement. Section 3.5, Section 5.5, Section 5.6 and Section 5.7 of Technical Paper 1 (Transport and traffic).
	b. the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements) across the construction schedule;		Section 6.3 of this Environmental Impact Statement. Section 3.5, Section 5.5, Section 5.6 and Section 5.7 of Technical Paper 1 (Transport and traffic).
	c. construction worker parking and management;		Section 6.5 of this Environmental Impact Statement. Section 3.5 of Technical Paper 1 (Transport and traffic).
	d. the nature of current traffic (types and number of movements) on construction access routes (including consideration of peak traffic times and sensitive road users (such as emergency vehicles and school buses) and parking arrangements);		Section 6.5, Section 6.6, Section 6.7 and Section 6.8 of this Environmental Impact Statement. Section 4.2, Section 4.3 and Section 4.4 of Technical Paper 1 (Transport and traffic).
	e. access constraints and impacts on public transport (infrastructure and services), pedestrians and cyclists and property; and		Section 6.5, Section 6.6, Section 6.7 and Section 6.8 of this Environmental Impact Statement. Section 5.1, Section 5.5, Section 5.6 and Section 5.7 of Technical Paper 1 (Transport and traffic).
	f. the need to close, divert or otherwise reconfigure elements of the road, pedestrian and cycle network associated with construction of the proposal and the duration of these changes; and		Section 6.5, Section 6.6, Section 6.7 and Section 6.8 of this Environmental Impact Statement. Section 5.1, Section 5.5, Section 5.6 and Section 5.7 of Technical Paper 1 (Transport and traffic).
	g. impacts to on-street parking, loading, servicing and pick up, including to residents and businesses.		Section 6.6, Section 6.7 and Section 6.8 of this Environmental Impact Statement. Section 5.5, Section 5.6 and Section 5.7 of Technical Paper 1 (Transport and traffic).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
10. 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 proposal, including stream orders, as per the Framework for Biodiversity Assessment (FBA).	Framework for Biodiversity Assessment – Appendix 2 (OEH, 2014) 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) Transport for NSW Sustainable Design Guidelines Version 4.0 (TfNSW, 2017) Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012) Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018) Relevant Water Sharing Plans (https://www.industry.nsw.gov.au/ water/plans-programs/water-sharing-plans)	Section 14.5, Section 15.5, Section 17.5 of this Environmental Impact Statement. Section 5.7 and Section 5.8 of Technical Paper 7 (Hydrogeology). Section 3.4 of Technical Paper 9 (Hydrology, flooding and water quality).
	2. Provide a **water balance** for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration.		Section 15.6 of this Environmental Impact Statement. Section 5.12 of Technical Paper 7 (Hydrogeology). Section 5.3 of Technical Paper 9 (Hydrology, flooding and water quality).
	3. **Surface and groundwater hydrology impacts** of the proposal in accordance with the current guidelines, including: a. impacts from any permanent and temporary interruption of groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, groundwater users and the potential for settlement; and		Section 14.6 of this Environmental Impact Statement. Section 5.7 and Section 5.8 of Technical Paper 7 (Hydrogeology).
	b. minimising the effects of proposed stormwater and wastewater management during construction 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 15.6 and Section 15.8 of this Environmental Impact Statement. Section 5.2 and Section 5.3 of Technical Paper 9 (Hydrology, flooding and water quality).
	4. Identify any requirements for **baseline monitoring** of hydrological attributes.		Section 14.8 and Section 15.8 of this Environmental Impact Statement. Section 5.13 of Technical Paper 7 (Hydrogeology).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
11. Water – Quality **The project is designed, constructed and operated to protect the NSW Water Quality Objectives (WQOs) 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. Surface and groundwater quality impacts including: a. identifying and estimating the discharge water quality 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;	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. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)	Section 15.6 of this Environmental Impact Statement. Section 4.7 and Section 5.2 of Technical Paper 9 (Hydrology, flooding and water quality).
	b. identifying the rainfall event that the water quality protection measures will be designed to comply with; and		Section 15.6 and Section 15.8 of this Environmental Impact Statement. Section 6.3 of Technical Paper 9 (Hydrology, flooding and water quality).
	c. assessing the significance of identified impacts including consideration of the relevant ambient water quality outcomes.		Section 15.6 of this Environmental Impact Statement. Section 5.2 of Technical Paper 9 (Hydrology, flooding and water quality).
	2. Demonstrating how the project will ensure that: a. where the NSW WQOs for receiving waters are currently being met, they will continue to be protected; and b. where the NSW WQOs are not currently being met, activities will work toward their enhancement over time; and c. justify, if required, why the WQOs cannot be maintained or achieved over time.		Section 15.6 of this Environmental Impact Statement. Section 4.8, Section 5.2 and Section 6.3 of Technical Paper 9 (Hydrology, flooding and water quality).

Desired performance outcome	Requirement	Current guidelines	Where addressed in the Environmental Impact Statement
12. Other	1. An assessment of the following issues must be undertaken in accordance with the commitments in Section 6 of *Sydney Metro West Scoping Report – Major civil construction work between The Bays and Sydney CBD* (Sydney Metro, May 2021): a. Air quality;		Chapter 19 (Air quality).
	b. Biodiversity;		Chapter 18 (Biodiversity).
	c. Climate change adaption;		Chapter 22 (Sustainability, climate change and greenhouse gas).
	d. Greenhouse gas and energy;		Chapter 22 (Sustainability, climate change and greenhouse gas).
	e. Hazard and risk;		Chapter 21 (Hazard).
	f. Waste management and resource use; and		Chapter 20 (Spoil, waste management and resource use).
	g. Cumulative impacts.		Cumulative impacts of the proposal are assessed throughout Chapter 6 to Chapter 22, with a methodology for this assessment provided in Appendix G (Cumulative impacts assessment methodology).

Scoping Report requirements

The SEARs include references to the assessment requirements set out in the *Sydney Metro West Scoping Report - Major civil construction work between The Bays and Sydney CBD* (Sydney Metro, 2021). These requirements and where they are addressed in this Environmental Impact Statement, are outlined in Table 3.

Table 3 Scoping Report requirements

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
Transport and traffic	Identification of the existing transport and traffic environment including consideration of peak traffic times and sensitive road users and parking arrangements	Chapter 6 (Transport and traffic).
	Identification of haulage routes, construction site access and egress points	
	Daily and peak traffic movements likely to be generated and the potential temporary impacts on the local and regional traffic network	
	Potential for temporary service adjustments required to rail and bus services to allow for construction activities to safely occur	
	Potential for temporary adjustments to vehicular, pedestrian, cyclist, emergency services and public transport access and duration of these changes	
	Potential for temporary adjustments to parking supply, loading zones, servicing access and taxi zones	
	Potential for temporary altered access to private property	
	Measures to minimise or mitigate identified potential impacts, including an assessment of available options taking into consideration the implementation of the Sydney Metro Construction Traffic Management Framework, and the expected effect of the measures proposed, in accordance with relevant best practice guidelines	
	Consultation will be carried out with other sections of Transport for NSW, other Government agencies (such as Port Authority of NSW), and relevant local councils as part of the transport and traffic impact assessment.	
Noise and vibration	Identification of the nature of construction activities and related noise characteristics	Chapter 7 (Noise and vibration).
	The intensity and duration of temporary construction noise and vibration impacts. This will include a 'typical level' or 'typical range' in noise levels which would be expected as construction works move around the site as well as a realistic 'peak' noise level from each activity	
	The correlation between the likely noise impacts and the anticipated duration and timing of the activity	
	The nature, sensitivity and impact on potentially affected receivers, including consideration of particularly sensitive receivers if present within the vicinity (such as schools, hospitals, aged care facilities) and sensitive structures (particularly heritage structures and key utilities/infrastructure)	
	Identification of possible locations where out-of-hours works would be carried out, the activities that would be carried out, the estimated duration of those activities and justification for these activities	
	Potential temporary impacts associated with any works proposed to be carried out outside standard daytime construction hours	
	The potential impacts associated with long term construction noise	
	Explanation of how the extent of potential impacts on sensitive receivers have been balanced against the duration of impacts	
	Other factors that may influence the timing and duration of construction activities (such as traffic management)	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
Noise and vibration cont.	Identification and assessment of feasible and reasonable mitigation and management measures to address potential temporary construction noise and vibration impacts, taking into consideration the implementation of the Sydney Metro Construction Noise and Vibration Standard (Sydney Metro, 2020d)	Chapter 7 (Noise and vibration).
	Consistent with the philosophy described in Case Study D5 of the EPA's *draft Construction Noise Guideline*, an alternate methodology to the ICNG approach to assessing and managing construction noise may be proposed.	
Non-Aboriginal heritage	Identify items and areas of heritage significance that would be materially affected by this proposal, by field survey research, including any buildings, works, relics, gardens, landscapes, views, trees or places of heritage significance	Chapter 8 (Non-Aboriginal heritage).
	Consider the potential impacts on the values, settings and integrity of heritage areas and items and archaeological resources located near this proposal, including items both above and below ground and, where such potential exists, the likely significance of those impacts	
	Outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) in accordance with relevant best practice guidelines and Conservation Management Plans, where relevant.	
Aboriginal heritage	Identify the potential for this proposal to cause direct or indirect impacts to Aboriginal heritage (sites, objects, remains, values, features, intangible values or places), including the potential for cumulative impacts, and, where this is the case, to: • Determine, in consultation with relevant stakeholders, including the Registered Aboriginal Parties, the significance of the heritage resources to the Aboriginal community • Determine the extent and significance of impact to those values	Chapter 9 (Aboriginal heritage).
	Identify any requirements for in-situ conservation of items and/or areas (as appropriate), and the need for further archaeological testing and/or detailed archaeological excavations	
	Identify appropriate measures to avoid, minimise and/or mitigate potential impacts. Such measures would be developed as appropriate to the assessment of significance and potential impact, and may include: • Consultation with the relevant Aboriginal stakeholders, including the Metropolitan Local Aboriginal Land Council, in accordance with *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (Department of Environment, Climate Change and Water, 2010) • Archaeological test excavation • Preparation and implementation of an Aboriginal heritage management plan as part of the construction environmental management plan.	
Property and land use	Direct impacts on property and land use, including acquisition and leasing	Chapter 10 (Property and land use).
	Potential impacts on Crown land and Commonwealth land.	
Landscape and visual amenity	Describe the visual character and unique qualities of the area around the proposed work, including streetscapes, key sites and buildings, existing landscape works, greenspace and tree canopy	Chapter 11 (Landscape and visual amenity).
	Consider the heritage and other social values of the site to establish the potential sensitivity of receivers and visual absorption capacity	
	Identify the potential temporary visual impacts of work covered by this proposal during daytime and night-time conditions (including lighting)	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
	Assess the potential temporary impacts of work covered by this proposal on trees, including an assessment of the number of street trees to be cleared and loss of canopy cover	
	Identify measures to avoid, minimise and/or mitigate potential temporary landscape character and visual impacts.	
Business impacts	Identify businesses that could potentially be directly impacted	Chapter 12 (Business impacts).
	Identify nearby local businesses that may potentially be indirectly impacted	
	Assess the potential impacts on local businesses	
	Identify measures to avoid or mitigate the potential impacts.	
Social impacts and community infrastructure	A social baseline analysis, which will: • Define the Area of Social Influence for work covered by this proposal • Develop a demographic profile of the study area's communities that may be influenced by work covered by this proposal • Identify stakeholders, including communities and socially sensitive receivers, that may be affected • Identify tangible (social infrastructure) and intangible (human and social capital, community cohesion, community values and connection to place) community assets and provide a general understanding of the local social environment within the study area • Review community strategic plans and social plans relevant to each construction site to identify community values and aspirations along the corridor of this proposal	Chapter 13 (Social impacts).
	An assessment of potential social impacts for work covered by this proposal which will: • Assess the significance and likelihood of potential social impacts, both positive and negative • Recommend measures to mitigate potential social impacts • Assess residual potential social impacts including identification of the significance and likelihood of residual social impacts.	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement

Groundwater and ground movement	A hydrogeological assessment will be carried out as part of the Environmental Impact Statement for this proposal. The hydrogeological assessment will:
	• Describe the existing hydrogeological environment and groundwater resources, including:
	  • Groundwater levels and quality along the alignment and near the stations
	  • Existing groundwater users, including registered groundwater bores, groundwater dependent ecosystems and watercourses that may receive groundwater baseflow
	• Discuss the nature and extent of potential impacts on groundwater associated with construction and the ongoing presence of infrastructure including tunnels and station excavations, taking into account:
	  • Existing groundwater levels
	  • Geological context
	  • Extent to which the infrastructure is 'tanked' (designed to inhibit the inflow of groundwater)
	  • Experience on other projects (including groundwater inflow rates)
	• Identify potential impacts on groundwater quality
	• Assess potential for ground movement during work covered by this proposal (due to groundwater level drawdown and the potential impact of ground movement on assets (including potential of damage/impacts to buildings, services/utilities, and heritage structures))
	• Provide estimates of expected water takes (direct or passive) from groundwater and surface water sources with estimates of annual volumes during construction and operation
	• Assess compliance with groundwater licencing, the Minimal Impact Considerations of the *NSW Aquifer Interference Policy* and the Rules of the relevant Water Sharing Plan(s)
	• Propose monitoring and management measures to address potential impacts.
		Chapter 14 (Groundwater and ground movement).

	A ground movement and impact assessment will also be carried out for the proposal. Ground movement would potentially result from groundwater considerations but also from underground activities such as tunnelling, whether from tunnel boring machine or mined operations and from major surface excavations for shafts. The ground movement and impact assessment would include: • Estimating preliminary ground movement effects at the existing ground surface • Identify susceptible existing buildings, infrastructure (e.g. roads, railways, bridges, etc) and utilities where estimated ground movements may potentially impact on these assets • Undertake a comparison of estimated ground movement effects against adopted assessment criteria • Where possible, provide an initial indication of potential risk to that asset • Document further works, assessment and mitigation strategies required to reduce the potential impacts.	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
Soils and surface water quality	Identify the existing hydrological regime for surface water	Chapter 15 (Soils and surface water quality).
	Identify potential impacts on surface water quality	
	Identify the potential to disturb acid sulfate soils and the associated impacts	
	Consider the potential impacts associated with erosion and sedimentation	
	Propose monitoring and management measures to address potential impacts.	
Contamination	A review of previous contamination assessments (where available)	Chapter 16 (Contamination).
	A review of historical aerial photography and plans to identify potential contamination sources along and/or adjacent to the proposed construction sites	
	A review of publicly available data (web-based information searches)	
	A site inspection to identify potential contamination sources and verify those potential areas of concern identified in the review of historical and available information	
	An assessment of potential contamination risk based on the potential impacts to the construction of the project and also risks via exposure to environmental and human health receptors	
	Identification of low, medium, high and very high-risk sites including recommendations for additional investigations and/or management based on the site risk rating.	
Hydrology and flooding	Review of relevant existing flood study reports and description of flood behaviour for the existing conditions	Chapter 17 (Hydrology and flooding).
	Identification and assessment of potential impacts on stormwater quantity	
	Broad assessment of the potential change in stormwater runoff (increase or decrease) including consideration of changes to flooding behaviour in response to climate change (sea level rise and rainfall intensity)	
	Identification of potential impacts as a result of changes in surface water quantity, with respect to increases or decreases in stormwater runoff and the sensitivity of the downstream waters	
	Identification of any potential changes to flood levels (including flood affectation of other properties, assets and infrastructure), discharges, velocities, duration of flood inundation and flood hazards for the five per cent and one per cent Annual Exceedance Probability flood events, and the probable maximum flood	
	A review of consistency with applicable Council Floodplain Risk Management Study	
	A review of compatibility with flood hazard and hydraulic functions of the land	
	Identification of appropriate mitigation and management measures.	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
Biodiversity	Identify and describe the flora and fauna species, habitat, populations and ecological communities (including groundwater dependent ecosystems) that occur or are considered likely to occur	Chapter 18 (Biodiversity).
	Assess any potential direct and indirect impacts of this proposal on terrestrial flora and fauna species, populations, ecological communities and their habitats, and groundwater dependent ecosystems	
	Assess the significance of any potential impacts of this proposal on species, ecological communities and populations, and groundwater dependent ecosystems listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, the *Biodiversity Conservation Act 2016* and the *Fisheries Management Act 1994* that occur or are considered likely to occur	
	Identify and describe mitigation measures using the principles of 'avoid, minimise, mitigate', and propose offsets where residual impacts would occur.	
Air quality	Identify and describe the background air quality environment based on a desktop assessment	Chapter 19 (Air quality).
	Identify potential sources of air emissions	
	Identify potential sensitive receivers likely to be impacted by emissions to air	
	Identify and describe mitigation measures using the principles of 'avoid, minimise, and mitigate'.	
Greenhouse gas and energy	Identify the potential greenhouse gas emissions	Chapter 22 (Sustainability, climate change and greenhouse gas).
	Identify mitigation and management measures to reduce potential emissions of greenhouse gas.	
Climate change adaptation	Identify possible climate related impacts with an emphasis on any that are projected to undergo a substantial change	
	Identify components of work covered by this proposal that may be vulnerable to the climate change impacts	
	Identify possible current and future controls that may increase the resilience of particular components to climate impacts	
	Recommend what should be considered, and how to establish if further information is needed, to adequately assess climate change risk.	
Waste management and resource use	A review of the likely waste streams and volumes including spoil, wastewater and demolition materials	Chapter 20 (Spoil, waste management and resource use).
	A review of the likely resources required, including energy, fuel and steel	
	Development of management strategies to adequately address waste that would likely include: • Measures for managing construction waste through the waste hierarchy established under the *Waste Avoidance and Resource Recovery Act 2001* (i.e. avoidance of waste, resource recovery, disposal of waste) • Targets for the beneficial reuse of spoil, wastewater and other construction wastes in accordance with a future Sydney Metro West sustainability plan • An approach for the assessment, handling, stockpiling and disposal of potentially contaminated materials and wastewater, in accordance with the *Waste Classification Guidelines* (Environment Protection Authority, 2014) • Identification of opportunities to reduce the demand on electricity and other resources • Identification of how spoil would be managed, including likely volumes, likely nature and classification of excavated material, opportunities for recycling, potential disposal sites, stockpile management, and method(s) and route of transportation.	

Reference	Scoping Report requirements	Where addressed in the Environmental Impact Statement
Hazard and risk	Consideration of the relevant regulatory framework and guidelines	Chapter 21 (Hazard).
	Identification of the types of activities that may generate potential hazards	
	Identification of the potential environmental impacts associated with the potential hazards	
	Identification of mitigation measures to address potential hazards, where appropriate.	
Cumulative impacts	Details of known surrounding developments and major projects with the potential to interact with the construction work covered by this proposal will be identified through consultation with stakeholders and a review of relevant local environmental plans, the Department of Planning, Industry and Environment's Major Projects database, and local council development application registers. Potential cumulative impacts arising from the interaction of these projects will be identified and assessed in a qualitative manner. Management and mitigation measures will be proposed, where appropriate.	Throughout Chapter 6 to 22 and Appendix G (Cumulative impacts assessment methodology).