Appendix A

Assessment Requirements

Appendix A

Assessment requirements

Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements and where these requirements are addressed in this Environmental Impact Statement, are outlined in Table 1.

Some of the Secretary's Environmental Assessment Requirements outlined in Table 1 make reference to requirements specified in the Scoping Report. All Scoping Report requirements and where they are addressed in this Environmental Impact Statement are outlined in Table 2 of this Appendix.

Table 1: Secretary's Environmental Assessment Requirements

Reference	Secretary's Environmental Assessment Requirements	Where addressed
General SEARs		
1. Environmental Impact Assessment Process		
1.1	The Environmental Impact Statement (EIS) must be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the EP&A Regulation).	Appendix B
1.2	It is the Proponent's responsibility to determine whether the Proposal needs to be referred to the Commonwealth Department of the Environment and Energy (DoEE) for an approval under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). If DoEE 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.	Chapter 4
1.3	Where the Proposal 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;	N/A
	b. identification and assessment of those Protected Matters that are likely to be significantly impacted;	
	c. details of how significant impacts to Protected Matters have been avoided, mitigated and, if necessary, offset; and	
	d. consideration of, and reference to, any relevant conservation advices, recovery plans and threat abatement plans.	
1.4	The onus is on the Proponent to ensure legislative requirements relevant to the Proposal are met.	Chapter 4
2. Environmental Impact Statement		
2.1	The EIS must include, but not necessarily be limited to, the following: <u>General Information</u> a. executive summary;	Executive summary
	b. a description of the Concept, including key components and activities including: • project overview; • station and ancillary facility locations and the proposed route (including use of plans);	Chapter 6
	c. a description of the staged approach to obtaining approval for the project;	
	d. a description of Stage 1, including key components and activities (including ancillary components and activities) required to construct that stage;	Chapter 9
	e. a description of associated strategic investigations (such as Pyrmont and Rydalmere stations) that do not comprise part of the Concept;	Chapter 6
	<u>Concept - Strategic Justification</u> f. a summary of the strategic need with regard to its critical State significance and relevant State Government policy;	Chapter 2
	g. a statement of the strategic objective(s), including: • how the Concept will integrate with the broader transport network (existing and proposed); • an analysis of any feasible alternatives; • a description of feasible options within the Concept (including station numbers and locations); and • a description of how alternatives to and options within the Concept were analysed and optimised 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 Concept were selected;	Chapter 2 Chapter 3
	Statutory and Regulatory Context h. statutory context of the Proposal (as a whole) including: • how it meets the provisions of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and the 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 existing environmental planning instruments and other current government strategic plans and policies relevant to the project and land subject to the Proposal (including State environmental planning policies, land use and infrastructure strategies and local strategic planning statements);	Chapter 4
	Stage 1 – Environmental Impacts and Mitigation Measures i. a concise description of different construction methods that were analysed and justification for preferred methods;	Chapter 9

Reference	Secretary's Environmental Assessment Requirements	Where addressed
2.1 cont.	j. 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 Stage 1 do not need to be described;	Chapter 27
	k. demonstration of how the Stage 1 design has been developed to avoid or minimise likely adverse impacts;	
	l. identification and assessment of key issues as provided in the 'Key Issues SEARs';	Chapters 10 to 26
	m. a statement of and quantification (where appropriate) of outcomes and performance criteria Stage 1 will commit to target for each key issue;	Chapter 27
	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; and	Chapters 10 to 26
	p. an assessment of the relevant cumulative impacts 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, Parramatta Light Rail Stage 1 and approved construction in the relevant precincts);	Chapter 8 Chapters 10 to 26
	Impact Assessment q. 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 footprint, construction methodologies for Stage 1 and how these will be resolved in subsequent approval stages; • a compilation of the impacts that have not been avoided; • for Stage 1, 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 stages) or offset these impacts; • a compilation of the performance outcome(s) and criteria the Proponent target and how these will be monitored; and • the reasons justifying carrying out Stage 1 as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts; and	Chapter 27
	r. relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.	Chapter 6 Chapter 9 to 25
2.2	The EIS(s) 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.	Whole EIS
3. Assessment of Key Issues		
3.1	The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the Proposal location and the surrounding environment. The level of assessment must be commensurate to the degree of impact for the concept or project and sufficient to ensure that the impacts can be understood and assessed.	Whole EIS
3.2	Concept Key Issues For each **Concept** key issue, to the extent it relates to the nature of the concept, the Proponent must: a. describe the overarching biophysical and socio-economic environment, as far as it is relevant to that issue;	Chapter 8
	b. describe the policy context, as far as it is available and relevant to the issue;	
	c. address the listed matters in the 'Key Issues SEARs';	
	d. describe how potential negative impacts have been avoided (through strategic design);	
	e. identify how potential negative impacts that have not been avoided (through strategic design) will be minimised or managed;	
	f. identification of potential positive impacts or benefits; and	
	g. outline further detailed assessment required to be carried out in subsequent stages (except Stage 1).	
3.3	Stage 1 Key Issues For each **Stage 1** 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;	Chapters 10 to 26
	b. describe the legislative context, as far as it is relevant to the issue;	
	c. address the listed matters in the 'Key Issues SEARs';	
	d. identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including realistic worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities and cumulative impacts (parallel and sequential) with other projects;	Chapter 28
	e. demonstrate how potential impacts have been avoided (through design or construction methodologies);	Chapters 10 to 26
	f. 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);	
	g. detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures; and	
	h. measures to monitor the avoidance, minimisation and offsetting of impacts to ensure performance outcomes and criteria are met.	

Reference	Secretary's Environmental Assessment Requirements	Where addressed
3.4	Where multiple options to avoid or minimise impacts are available, they must be identified and considered, and the proposed measure justified considering the public interest.	Chapters 10 to 26
3.5	The assessment of each key issue must have consideration (as relevant) to the listed guidelines.	Chapters 10 to 26
4. Consultation		
4.1	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 and ancillary facility.	Chapter 5
4.2	The Proponent must document the consultation process and demonstrate how the Proposal has responded to the inputs received.	Chapter 5
4.3	The Proponent must describe the timing and type of community consultation undertaken, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.	Chapter 5
Key Issues		
1. Place and Design		
1.1 (Concept)	Outline a design process that is informed, collaborative and iterative (including the use of design review panels and consultation with community and other stakeholders).	Chapter 5 Chapter 7 Chapter 8
1.2 (Concept)	Design principles and outcomes for each station and facility that are reflective of the design objectives in Better Placed.	Chapter 7
1.3 (Concept)	Design principles and outcomes should include how crowd management and operational efficiency can be achieved for major events.	Chapter 7
1.1 (Stage 1)	Visual and related amenity impacts of construction including on streetscapes, key sites and buildings (including existing landscape works, greenspace and tree canopy).	Chapter 15
1.2 (Stage 1)	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	Chapter 15
	b. for areas where trees are to be cleared before construction, investigate means to increase the number of trees and canopy within proximity of the impacted areas by providing additional planting before construction.	
2. Spoil		
2.1 (Stage 1)	Relevant commitments made in Section 9.17.2 of the Scoping Report	Chapter 24 Refer to Table 2 of this appendix for Scoping Report requirements
2.2 (Stage 1)	Spoil generation and reuse, including: a. type and quantity;	Chapter 24
	b. onsite storage (including capacity to minimise amenity impacts);	
	c. reuse potential and disposal sites;	
	d. transport and handling options (including traffic, distance, road safety and related amenity and environmental impacts); and	
	e. illegal dumping.	
3. Social and Economic (including property, land use and business impacts)		
3.1 (Concept)	<u>Economic</u> Commitments made in Section 7.11.3 of the Scoping Report, and strategic economic impacts.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
3.2 (Concept)	<u>Social</u> Commitments made in Section 7.10.3 of the Scoping Report, and how the community would experience the Proposal at a strategic level (from environmental, amenity and social changes).	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
3.3 (Concept)	<u>Property and Land Use</u> Commitments made in Section 7.5.3 of the Scoping Report, and land use change potentially influenced by the Proposal.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
3.1 (Stage 1)	<u>Economic</u> Affected properties, businesses, recreational users and land and water users, including property acquisitions/adjustments, access, amenity and relevant statutory rights.	Chapter 16
3.2 (Stage 1)	<u>Social</u> Commitments made in Section 9.10.2 of the Scoping Report; and	Chapter 17 Refer to Table 2 of this appendix for Scoping Report requirements
3.3 (Stage 1)	Address impacts to different aspects of people's lives set out in the SIA Guideline.	Chapter 17

Reference	Secretary's Environmental Assessment Requirements	Where addressed
3.4 (Stage 1)	Property and Land Use Commitments made in Section 9.5.2 of the Scoping Report; and land use compatibility (including potential restrictions on future development, both above-ground and sub-surface);	Chapter 14 Refer to Table 2 of this appendix for Scoping Report requirements
3.5 (Stage 1)	Permanent and temporary property acquisition, including easement acquisition; and temporary or permanent leasing arrangements;	Chapter 14
3.6 (Stage 1)	Temporary loss of public open space; and	Chapter 17
3.7 (Stage 1)	Disruption to utilities and services.	Chapter 9
4. Noise and Vibration		
4.1 (Concept)	Commitments made in Section 7.2.4 of the Scoping Report; and the compatibility of the Concept with the adjoining noise environment.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
4.1 (Stage 1)	Commitments made in Section 9.2.2 of the Scoping Report.	Chapter 11 Refer to Table 2 of this appendix for Scoping Report requirements
4.2 (Stage 1)	The assessment of construction noise and vibration must address: a. the nature of construction activities and related noise characteristics;	Chapter 11
	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 nature of the impact and the sensitivity of receivers and level of impact including for out of hours works;	
	e. 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);	
	f. noise impacts of out-of-hours works (including utility works associated with the SSI including those undertaken under another assessment pathway), possible locations where out-of-hours works would be undertaken, the activities that would be undertaken, the estimated duration of those activities and justification for these activities in terms of the Interim Construction Noise Guideline (DECCW, 2009);	
	g. sleep disturbance (including the number of noise-awakening events);	
	h. a cumulative noise and vibration assessment inclusive of impacts from Stage 1, including concurrent construction activities within Stage 1 and the construction of other relevant development in the vicinity of Stage 1;	
	i. details and analysis of the predicted effectiveness of mitigation measures to adequately manage identified impacts, including impacts as identified in (h);	
	j. any potential residual noise and vibration impacts following application of mitigation measures; and	
	k. a description of how receiver feedback received would be taken into account in the design of mitigation measures, including any tailored mitigation, management and communication strategies for sensitive receivers.	
4.3 (Stage 1)	The assessment must include consideration of impacts to the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).	Chapter 11
4.4 (Stage 1)	Blast impacts (if required) can comply with current guidelines.	Chapter 11
5. Transport and Traffic		
5.1 (Concept)	Commitments made in Section 7.1.3 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
5.1 (Stage 1)	Commitments made in Section 9.1.2 of the Scoping Report.	Chapter 10 Refer to Table 2 of this appendix for Scoping Report requirements
5.2 (Stage 1)	Transport and traffic (vehicle, pedestrian and cyclists) impacts of construction, including, but not necessarily limited to: a. a considered approach to route identification and scheduling of construction vehicle movements;	Chapter 10
	b. the indicative daily number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements) across the construction schedule;	
	c. the nature of existing traffic (types and number of movements) on construction access routes (including consideration of peak traffic times and sensitive road users and parking arrangements);	
	d. construction worker parking;	
	e. access constraints and impacts on public transport (infrastructure and services), pedestrians and cyclists and property; and	

Reference	Secretary's Environmental Assessment Requirements	Where addressed
5.2 (Stage 1) cont.	f. the need to close, divert or otherwise reconfigure elements of the road, pedestrian and cycle network associated with construction of the project and the duration of these changes; and	Chapter 10
	g. impacts to on-street parking, loading, servicing and pick up, including to residents and businesses.	
6. Aboriginal Heritage		
6.1 (Concept)	Commitments made in Section 7.4.3 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
6.1 (Stage 1)	Direct and/or indirect impacts (including cumulative impacts) associated with construction 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; and	Chapter 13
	b. Aboriginal places of heritage significance, as defined in the Standard Instrument – Principal Local Environmental Plan.	
6.2 (Stage 1)	Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the current guidelines.	Chapter 13
6.3 (Stage 1)	The assessment must consider requirements for: a. *in-situ* conservation of items and or/areas;	Chapter 13
	b. the need for further archaeological testing and/or detailed archaeological investigations; and	
	c. measures to avoid, minimise and/or mitigate potential impacts.	
7. Non-Aboriginal Heritage		
7.1 (Concept)	Commitments made in Section 7.3.3 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
7.1 (Stage 1)	Potential direct and/or indirect impacts (including cumulative impacts) to the heritage significance of: a. environmental heritage, as defined under the *Heritage Act 1977*; and	Chapter 12
	b. items listed on National and World Heritage lists; and	
	c. heritage items and conservation areas identified in environmental planning instruments applicable to the project area.	
7.2 (Stage 1)	Where impacts to State or locally significant heritage items are identified, the assessment must: a. include a significance assessment, a statement of heritage impact for all heritage items and a historical archaeological assessment;	Chapter 12
	b. consider any relevant conservation management plan;	
	c. consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant) and whether these are temporary or permanent	
	d. outline measures to avoid and minimise those impacts during construction in accordance with current guidelines; and	
	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).	Chapter 1 of Technical Paper 3 (Non-Aboriginal heritage impact assessment)
8. Contamination and Soils		
8.1 (Concept)	Commitments made in Section 7.8.3 and 7.9.3 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
8.1 (Stage 1)	Commitments made in Section 9.8.2 of the Scoping Report.	Chapter 19 Refer to Table 2 of this appendix for Scoping Report requirements
8.2 (Stage 1)	The risk of 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 Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.	Chapter 20
9. Water – Hydrology and Flooding		
9.1 (Concept)	Commitments made in Section 7.12.3 of the Scoping Report, including potential scale of impacts and where the Proposal will need to respond to the existing hydrological environment.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements

Reference	Secretary's Environmental Assessment Requirements	Where addressed
9.1 (Stage 1)	The existing hydrological regime for any surface and groundwater resource (including mapping, the reliance by users, and for ecological purposes) likely to be impacted, including stream orders.	Chapter 18 Chapter 21 Technical Paper 9 (Hydrology and flooding) Technical Paper 7 (Hydrogeology)
9.2 (Stage 1)	A water balance for ground and surface water including the proposed intake and discharge locations, volume, frequency and duration.	Chapter 19
9.3 (Stage 1)	Requirements for baseline monitoring of hydrological attributes.	Chapter 18
9.4 (Stage 1)	The impact on surface and groundwater hydrology in accordance with the current guidelines, including: a. natural processes within rivers, wetlands, estuaries, marine waters and floodplains;	Chapter 18 Chapter 21
	b. impacts from any permanent and temporary interruption of groundwater flow;	
	c. stormwater and wastewater management on natural hydrological attributes and the conveyance capacity of existing stormwater systems where discharges are proposed through such systems or details of alternative disposal options; and	
	d. water take (direct or passive) from all surface and groundwater sources with estimates of annual volumes during construction.	
9.5 (Stage 1)	Flood behaviour for a range of flood events up to the probable maximum flood (taking into account sea level rise and storm intensity due to climate change) including: a. potential flood affectation of other properties, assets and infrastructure;	Chapter 21
	b. consistency (or inconsistency) with applicable Council floodplain risk management plans;	
	c. compatibility with the flood hazard of the land; and	
	d. compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land.	
10. Water - Quality		
10.1 (Concept)	Identify the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the Proposal, including the indicators and associated trigger values or criteria for the identified environmental values.	Chapter 8
10.1 (Stage 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;	Chapter 18 Chapter 19
	b. identifying the rainfall event that the water quality protection measures will be designed to cope with; and	Chapter 19
	c. assessing the significance of any identified impacts including consideration of the relevant ambient water quality outcomes.	
10.2 (Stage 1)	Demonstrating how Stage 1 will, to the extent that the project can influence, ensure that: a. where the NSW WQOs for receiving waters are currently being met, they will continue to be protected; and	Chapter 19
	b. where the NSW WQOs are not currently being met, activities will work toward their achievement over time; and	
	c. justify, if required, why the WQOs cannot be maintained or achieved over time.	
11. Biodiversity		
11.1 (Concept)	Commitments made in Section 7.13.3 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements
11.1 (Stage 1)	Biodiversity impacts in accordance with section 7.9 of the *Biodiversity Conservation Act 2016* (BC Act), the Biodiversity Assessment Method (BAM), and be documented in a Biodiversity Development Assessment Report (BDAR).	Chapter 22
11.2 (Stage 1)	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).	Chapter 22
11.3 (Stage 1)	If 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).	Chapter 22
12. Sustainability		
12.1 (Concept and Stage 1)	The sustainability of the Proposal in accordance with (as relevant) Green Star or the Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability Rating Tool (or equivalent) and commit to an appropriate target rating.	Chapter 8 Chapter 26
13. Other Issues		
13.1 (Concept)	Air quality, greenhouse gas and energy, climate change adaptation, waste management and resource use, hazard and risk assessments should be undertaken in accordance with the commitments in Section 7 of the Scoping Report.	Chapter 8 Refer to Table 2 of this appendix for Scoping Report requirements

Reference	Secretary's Environmental Assessment Requirements	Where addressed
13.1 (Stage 1)	Air quality, greenhouse gas and energy, climate change adaptation, waste management and resource use, hazard and risk assessments should be undertaken in accordance with the commitments in Section 9 of the Scoping Report.	Chapter 23 Chapter 24 Chapter 25 Chapter 26 Refer to Table 2 of this appendix for Scoping Report requirements

Scoping Report assessment requirements

The Secretary's Environmental Assessment Requirements include references to the assessment requirements set out in the Scoping Report - Westmead to The Bays and Sydney CBD (Sydney Metro 2019). These requirements and where they are addressed in this Environmental Impact Statement, are outlined in Table 2.

Table 2: Scoping Report requirements

Reference	Scoping Report requirements	Where addressed
Traffic and transport		
7.1.3 (Concept)	Description of how, at a conceptual level, Sydney Metro West will meet the transport related objectives of relevant strategic plans, including consideration of future growth areas	Chapter 7 Chapter 8
	Description of the overall strategy for managing construction sites to minimise potential adverse construction transport and traffic impacts	Chapter 8
	Identification of the types of adverse impacts which could occur on the regional and local road network during construction including: • Pedestrian and cyclist movements around the construction sites • Impacts on access to existing stations at Westmead and North Strathfield • Impacts on public transport (including rail, buses, school buses and light rail) • Impacts on private transport such as school bus services • Impacts on the performance of the surrounding road network • Impacts on emergency services, residential property access and local businesses	
	Identification of the likely traffic and transport impacts on the regional and local road network during operation and on existing and proposed public transport routes, taking into account relevant government transport planning strategies	
	Identification of the transport related benefits at a conceptual level including the principles for integrating with and encouraging active transport	Chapter 7 Chapter 8
	The proposed scope of future traffic and transport assessments to be carried out as part of planning approvals for subsequent stages	Chapter 8
	Consultation will be carried out with other sections of Transport for NSW and relevant local Councils to inform the traffic and transport impact assessment.	Chapter 5
9.1.2 (Stage 1)	Identification of haulage routes, site access and egress points	Chapter 10
	Identification of daily and peak traffic movements likely to be generated and the potential impacts on the local and regional traffic network	
	Identification of service adjustments required to rail and bus services to allow for construction activities to safely occur	
	Identification of temporary adjustments to vehicular, pedestrian, cyclist, emergency services and public transport access	
	Identification of adjustments to parking supply, loading zones, servicing access and taxi zones	
	Identification of temporary altered access to private property	
	Identification of measures to minimise or mitigate identified impacts, including an assessment of available options and the expected effect of the measures proposed, in accordance with relevant best practice guidelines.	
Noise and vibration		
7.2.4 (Concept)	Identification of the types of construction activities likely to generate high noise and vibration levels, and the likely affected receivers	Chapter 8
	Identification of potential operational noise and vibration impacts, with consideration of existing and future known land uses	
	Strategies for noise mitigation and management	
	The proposed scope of future noise and vibration assessments to be carried out as part of planning approvals for subsequent stages.	

Reference	Scoping Report requirements	Where addressed
9.2.2 (Stage 1)	Identification of the nature of construction activities	Chapter 11
	Identification of the intensity and duration of noise and vibration impacts. This will include a 'typical level' or 'typical range' in noise levels which would be expected as construction work move around the site as well as a realistic 'worst-case' noise level from each activity	
	Identification of the correlation between the likely noise impacts and the anticipated duration and timing of the activity	
	Identification of 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 impacts associated with any work proposed to be undertaken outside standard daytime construction hours	
	Identification of 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	
	Identification of other factors that may influence the timing and duration of construction activities (such as traffic management)	
	Identification of feasible and reasonable mitigation and management measures to address identified construction noise impacts.	
Non-Aboriginal heritage		
7.3.3 (Concept)	Information on how the development of the Concept has avoided or minimised impacts on heritage items	Chapter 8
	Identification of items, areas of heritage significance and archaeological resources that could be affected during its construction and operation	
	A general assessment of the type of impacts that may affect heritage items	
	An outline of potential mitigation measures and strategies	
	The proposed scope of future non-Aboriginal heritage assessments to be carried out as part of planning approvals for subsequent stages	
	Consultation with heritage specialists within the Department of Premier and Cabinet and local councils.	Chapter 5
9.3.2 (Stage 1)	Identification of items and areas of heritage significance that would be materially affected by Stage 1, by field survey and research, including any buildings, work, relics, gardens, landscapes, views, trees or places of heritage significance	Chapter 12
	Consideration of the potential impacts on the values, settings and integrity of heritage areas and items and archaeological resources located near Stage 1, including items both above and below ground and, where such potential exists, the likely significance of those impacts	
	An outline of 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.	
Aboriginal heritage		
7.4.3 (Concept)	Further consideration of the Aboriginal archaeological potential along the Concept corridor	Chapter 8
	Identification of the potential to disturb Aboriginal heritage	
	An outline of potential mitigation measures and strategies	
	Identification of the proposed scope of future Aboriginal heritage assessments, including the need for further archaeological testing and/or detailed archaeological excavations, that would be carried out as part of planning approvals for subsequent stages	
	Consultation with heritage specialists within the Department of Premier and Cabinet, local councils and registered Aboriginal parties.	Chapter 5
9.4.2 (Stage 1)	Identification of the potential for Stage 1 to disturb Aboriginal heritage (sites, objects, remains values, features or places) and, where this is the case, to: a. Determine, in consultation with relevant stakeholders, the significance of the heritage resource to the Aboriginal community	Chapter 13
	b. Determine the extent and significance of impact to those resources	
	Identification of any requirements for in-situ conservation of items and/or areas (as appropriate), and the need for further archaeological testing and/or detailed archaeological investigations	
	Identification of appropriate measures to avoid, minimise and/or mitigate potential impacts.	
Property and land use		
7.5.3 (Concept)	Identification of likely future land use based on zoning, planning proposals, major development applications and consultation with local councils and the Department of Planning, Industry and Environment	Chapter 7
	Identification of direct impacts on property and land use	Chapter 8
	Identification of indirect positive and negative impacts on property and land use, including potential land use integration issues, potential opportunities and/or benefits for urban renewal and development at and around metro stations	
	Identification of the proposed scope of future property and land use assessments to be carried out for subsequent stages of the Concept.	
9.5.2 (Stage 1)	Identification of potential impacts on property and land use from Stage 1, including the following issues: a. Direct impacts on property and land use, including acquisition and leasing b. Impacts on Crown land and Commonwealth land.	Chapter 14

Reference	Scoping Report requirements	Where addressed
Landscape character and visual amenity		
7.6.3 (Concept)	A high-level description of the visual character and qualities of the Concept corridor	Chapter 8
	Identification of the types of visual impacts which may occur due to construction and operation	
	Identification of potential landscape character changes due to the introduction of the Concept	
	An outline of urban design principles and objectives to guide further design and help minimise the impacts of potential infrastructure on surrounding visual or urban form	
	The proposed scope of future landscape character and visual amenity assessments to be carried out as part of planning approvals for subsequent stages of the Concept.	
9.6.2 (Stage 1)	Description of the visual character and unique qualities of the area around Stage 1	Chapter 15
	Consideration of the heritage and other social values of the site to establish the potential sensitivity of receivers and visual absorption capacity	
	Identification of the visual impacts of Stage 1 during daytime and night-time conditions (including lighting)	
	Identification of measures to avoid, minimise and/or mitigate potential impacts.	
Groundwater and geology		
7.7.3 (Concept)	Identification of sensitive groundwater users (registered groundwater bores) near the Concept corridor	Chapter 8
	Identification of the types of groundwater impacts (such as drawdown and settlement) that may occur during construction and operation	
	The proposed scope of future groundwater and geology assessments to be carried out as part of planning approvals for subsequent stages of the Concept.	
9.7.2 (Stage 1)	The NSW Aquifer Interference Policy (Department of Primary Industries, 2012) will be considered as relevant during the preparation of the hydrogeology assessment.	
	Description of the aquifer system(s) traversed by Stage 1	Chapter 18
	Identification of existing groundwater levels along the alignment and near the stations and portals	
	Identification of sensitive groundwater receivers (registered groundwater bores)	
	Discussion of the nature and extent of potential impacts on groundwater associated with construction and the ongoing presence of infrastructure including tunnels and station excavations. This would take into account existing groundwater levels, the geological context, the extent to which the infrastructure is 'tanked' (designed to inhibit the inflow of groundwater) and experience on other projects (including groundwater inflow rates)	
	Identification of potential impacts on groundwater quality	
	Identification of proposed monitoring/management measures to address identified impacts.	
Soils and surface water quality		
7.8.3 (Concept)	An overview of existing catchment and Water Quality Objectives for waterbodies within the Concept corridor	Chapter 8
	Identification of potential impacts on soils and water quality including surface water quality, acid sulfate soils, erosion and sedimentation	
	The proposed scope of future soil and water assessments to be carried out as part of planning approvals for subsequent stages	
	Consultation with the Environment Protection Authority.	Chapter 5
9.8.2 (Stage 1)	Identification of potential impacts on surface water quality	Chapter 19
	Identification of the potential to disturb acid sulfate soils and the associated impacts	
	Consideration of the potential impacts associated with erosion and sedimentation	
	Identification of proposed monitoring and management measures to address identified impacts.	
Contamination		
7.9.3 (Concept)	A review of available data and previous reports	Chapter 8
	Identification of the potential to encounter contamination	
	Identification of the proposed scope of future contamination assessments to be carried out as part of planning approvals for subsequent stages of the Concept	
	Consultation with the Environment Protection Authority.	Chapter 5
9.9.2 (Stage 1)	Review of previous contamination assessments (where available)	Chapter 20
	Review of historical aerial photography and plans to identify potential contamination sources along and/or adjacent to Stage 1 construction sites	
	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	
	Recommendations for additional investigations and/or management of potentially contaminated sites which could be encountered during construction.	

Reference	Scoping Report requirements	Where addressed
Social impacts and community infrastructure		
7.10.3 (Concept)	Identification of the regional level social and community facilities along the corridor (including public open spaces and recreational areas)	Chapter 8
	Identification of potential social impacts on the community and community facilities / services which could occur during construction and operation	
	Identification and assessment of potential social benefits	
	Identification of the proposed scope of future social impact assessments to be carried out as part of planning approvals for subsequent stages.	
9.10.2 (Stage 1)	Identification of the existing social environment and any impacts to social conditions, communities and community values within the areas around the Stage 1 construction sites	Chapter 17
	Review of community characteristics, including identification of significant community infrastructure	
	Assessment of the social impact on the directly affected community and its facilities and/or services around the Stage 1 construction sites	
	Identification any community facilities that would be lost as a result of Stage 1, and if alternative facilities are available or if the facilities can be replaced in the local area	
	Identification of community facilities adjacent to construction sites that may be impacted by reduced amenity or access	
	Identification of mitigation and management measures for any potential impacts.	
Business impacts		
7.11.3 (Concept)	Identification of the general types of businesses impacts (both direct and indirect) which could occur during construction and operation	Chapter 8
	The proposed scope of future business impact assessments to be carried out as part of planning approvals for subsequent stages.	
9.11.2 (Stage 1)	Identification of businesses that would be directly impacted by Stage 1	Chapter 16
	Identification of nearby local businesses that may be indirectly impacted by Stage 1	
	Assessment of the potential impacts of Stage 1 on local businesses	
	Identification of measures to avoid or mitigate the potential impacts.	
Hydrology and flooding		
7.12.3 (Concept)	Identification of the types of hydrology and flooding impacts which could occur during construction and operation	Chapter 8
	The proposed scope of future hydrology and flooding impact assessments to be carried out as part of planning approvals for subsequent stages of the Concept.	
9.12.2 (Stage 1)	Identification and assessment of potential impacts on stormwater quantity	Chapter 21
	Broad assessment of the potential change in stormwater runoff (increase or decrease)	
	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, 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	
	Identification of appropriate mitigation and management measures.	
Biodiversity		
7.13.3 (Concept)	Identification of the potential presence of any endangered ecological communities, threatened species or threatened species habitat and the nature of any potential impacts	Chapter 8
	Identification of the proposed scope of future biodiversity assessments to be carried out as part of planning approvals for subsequent stages.	
9.13.2 (Stage 1)	Identification and description of the flora and fauna species, habitat, populations and ecological communities (including groundwater dependent ecosystems) that occur or are considered likely to occur	Chapter 22
	Assessment of any direct and indirect impacts of Stage 1 on terrestrial and aquatic flora and fauna species, populations, ecological communities and their habitats, and groundwater dependent ecosystems	
	Assessment of the significance of the impacts of Stage 1 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	
	Identification and description of mitigation measures using the principles of 'avoid, minimise, mitigate', and propose offsets where residual impacts would occur. Offsets would be determined in accordance with the NSW Biodiversity Offsets Scheme (Office and Environment and Heritage, 2017b) NSW Biodiversity Offsets Policy for Major Projects (NSW Office of Environment and Heritage, 2014b).	
Air quality		
7.14.3 (Concept)	Identification of the background air quality environment based on a desktop assessment	Chapter 8
	Identification of potential sources of air emissions during both construction and operation	
	The proposed scope of future air quality assessments to be carried out as part of planning approvals for subsequent stages.	

Reference	Scoping Report requirements	Where addressed
9.14.2 (Stage 1)	Identification of and describe the background air quality environment based on a desktop assessment	Chapter 23
	Identification of Identify potential sources of air emissions during Stage 1	
	Identification of potential sensitive receivers likely to be impacted by emissions to air during Stage 1	
	Identification of and describe mitigation measures using the principles of 'avoid, minimise, and mitigate'.	
Greenhouse gas and energy		
7.15.2 (Concept)	Identification of the activities which are likely to be the major source of greenhouse gas emissions during construction and operation	Chapter 8
	The proposed scope of future greenhouse gas assessments to be carried out as part of planning approvals for subsequent stages of the Concept.	
9.15.2 (Stage 1)	Identification of the potential greenhouse gas emissions from Stage 1	Chapter 26
	Identification of mitigation and management measures to reduce potential emissions of greenhouse gas.	
Climate change adaptation		
7.16.2 (Concept)	Identification of potential climate change risks to the Concept	Chapter 8
	Identification of high-level adaptation measures to respond to the identified risks	
	The proposed scope of future climate change assessments to be carried out as part of planning approvals for subsequent stages of the Concept.	
9.16.2 (Stage 1)	The climate change adaptation assessment for Stage 1 will: Identify possible climate related impacts with an emphasis on any that are projected to undergo a substantial change	Chapter 26
	Identify Stage 1 components that may be vulnerable to the climate change impacts	
	Identify possible current and future controls that may increase the resilience of particular Stage 1 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		
7.17.2 (Concept)	Identification of the waste streams likely to be generated during construction and operation	Chapter 8
	Identification of the expected resource use during construction and operation	
	The proposed scope of future waste management assessments to be carried out as part of planning approvals for subsequent stages.	
9.17.2 (Stage 1)	Review of the likely waste streams and volumes generated during Stage 1, including spoil, wastewater and demolition materials	Chapter 24
	Review of the likely resources required during Stage 1, including energy, fuel and steel	
	Development of management strategies to adequately address waste during Stage 1. Measures 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. This would consider the cumulative effects of spoil haulage and disposal activities associated with other Sydney based tunnel projects, including other Sydney Metro projects, WestConnex and Western Harbour Tunnel and Beaches Link.	
Hazard and risk		
7.18.2 (Concept)	Identification of the types of hazards and risks that could occur during construction and operation	Chapter 8
	The proposed scope of future hazard and risk assessments to be carried out as part of planning approvals for subsequent stages.	
9.18.2 (Stage 1)	The following guidelines will be considered as relevant during the preparation of the hazard and risk assessment: • Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (Department of Planning, 2011a) • International Standard (ISO/IEC 31010:2009) Risk Management – Risk Assessment Techniques • Australian Code for the Transport of Dangerous Goods by Road and Rail (edition 7.6) (National Transport Commission, 2018) • Model Code of Practice: How to manage and control asbestos in the workplace (Safework Australia, 2018) • Code of Practice: How to Safely Remove Asbestos (Safework NSW 2016) • Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005), noting this Code is a guide for processes and controls to manage risks and is not to be relied upon to ascertain requirements under the Work Health and Safety Regulation 2011 • Australian Standard AS 2885 Pipelines – Gas and liquid petroleum • Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (Department of Planning, 2011b) • Multi-Level Risk Assessment (Department of Planning, 2011c).	Chapter 25

Reference	Scoping Report requirements	Where addressed
Cumulative impacts		
7.19.3 (Concept)	Details of known surrounding developments with the potential to interact with the construction and / or operation will be identified through consultation with stakeholders and a review of the Department of Planning, Industry and Environment's Major Projects database and local council development application registers.	Appendix G
	Identification of the types of potential cumulative impacts which could arise from the interaction of these projects. The assessment will also identify the proposed scope of future cumulative impact assessments to be carried out as part of planning approvals for subsequent stages.	Chapter 8
9.19.3 (Stage 1)	Details of known surrounding developments and major projects with the potential to interact with the Stage 1 construction work 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.	Chapters 10 to 26

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