Appendix A

Assessment requirements

Appendix A Assessment requirements

Introduction

This appendix includes the assessment requirements for this Environmental Impact Statement and an overview of where they have been addressed.

The Secretary of the then NSW Department of Planning, Industry and Environment (now Department of Planning and Environment) issued Secretary's environmental assessment requirements for this proposal on 16 August 2021. Table 1 and Table 2 include the Secretary's environmental assessment requirements and indicates where these requirements are addressed in this Environmental Impact Statement.

Some of the Secretary's environmental assessment requirements outlined in Table 1 and Table 2 make reference to requirements specified in the Scoping Report for this proposal. Scoping Report requirements and where they are addressed in this Environmental Impact Statement are outlined in Table 3 of this appendix.

Division 5 of Part 8 of the Environmental Planning and Assessment Regulation 2021 (NSW) lists the information required to be included in an Environmental Impact Statement. Table 4 provides a checklist to demonstrate where this information has been included within this Environmental Impact Statement.

Conditions were issued for the Sydney Metro West Concept on 11 March 2021 – some of which have a direct application to this proposal. Table 5 provides an overview of the where the relevant conditions of approval for the Concept have been addressed in this Environmental Impact Statement.

Secretary's environmental assessment requirements

Table 1 General standard Secretary's environmental assessment requirements

Desired Performance Outcome	equirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
 Environmental Impact Assessment Process The process for assessment of the proposal is transparent, balanced, well focused and legal. 	. The Environmental Impact Statement must be prepa with Part 3 of Schedule 2 of the <i>Environmental Plan</i> <i>Assessment Regulation 2000</i> (the EP&A Regulation	ning and Environment	Refer to Table 4 of this Appendix. The Environmental Planning and Assessment Regulation 2021 commenced on 1 March 2022 and replaces the 2000 Regulation. This Environmental Impact Statement has been prepared in accordance with Division 5 of Part 8 of the Environmental Planning and Assessment Regulation 2021.
	. It is the Proponent's responsibility to determine whe needs to be referred to the Commonwealth Departm Water and the Environment (DAWE) for an approva <i>Commonwealth Environment Protection and Biodive</i> <i>Act 1999</i> (the EPBC Act). If DAWE has determined required under the EPBC Act, supplementary enviro assessment requirements may need to be issued to streamlined assessment under an Accredited Asses achieved.	nent of Agriculture, l under the ersity Conservation that an approval is nmental ensure a	Chapter 2 (Planning and assessment process).
	 Where the proposal requires approval under the EP being assessed under the Bilateral Agreement the E consideration of any Protected Matters that may be development where the Commonwealth Minister ha the proposal is a Controlled Action; 	IS should address: impacted by the	Not applicable.
	 identification and assessment of those Protected Matters that are likely to be significantly impacted; 	atters that are likely	Not applicable.
	details of how significant impacts to Protected Matter avoided, mitigated and, if necessary, offset;	rs have been	Not applicable.
	. consideration of, and reference to, any relevant con recovery plans and threat abatement plans.	servation advices,	Not applicable.

Desired Performance Outcome	Requirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	 The onus is on the Proponent to ensure legislative requirements relevant to the proposal are met. 		Chapter 2 (Planning and assessment process). Appendix B (Legislative and policy context).
2. Environmental Impact	 The EIS must include, but not necessarily be limited to, the following: an executive summary; 		Executive summary.
Statement	 a description of the Sydney Metro West scheme and the staged approach to obtaining approval for the Sydney Metro West scheme; 		Chapter 1 (Introduction).
The proposal is described in sufficient detail to enable clear understanding that the proposal has been developed through an iterative process of impact identification	 c. a description of the proposal, including key components and activities (including ancillary components and activities), required to construct the proposal and operate the Sydney Metro West scheme including: 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. 		Chapter 5 (Proposal description – operation). Chapter 6 (Proposal description – construction). A description of this proposal for individual precincts is provided in Part B (Environmental assessment).
and assessment and proposal refinement to avoid, minimise or offset impacts so that the proposal, on	d. 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;		Part B (Environmental assessment) includes descriptions of the baseline environment as relevant to each environmental matter.
balance, has the least adverse environmental, social	e. a demonstration of how the proposal design has been developed to avoid or minimise likely adverse impacts;		Design development sections in Part B (Environmental assessment). Chapter 20 (Synthesis).
and economic impact, including its cumulative impacts.	f. the identification and assessment of key issues as provided in the '1.3 Assessment of Key Issues' performance outcome;		Part B (Environmental assessment). Chapter 21 (Environmental risk analysis).
	 g. a statement of and the quantification (where appropriate) of outcomes and performance criteria the proposal will achieve for each key issue; 		Part B (Environmental assessment). Chapter 20 (Synthesis).
	 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; 		Part B (Environmental assessment). Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).

Desired Performance Outcome	Re	quirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	i.	consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts;		Chapter 20 (Synthesis).
	j.	an assessment of the relevant cumulative impacts of the proposal taking into account other construction stages of the Sydney Metro West scheme, other State Significant projects that have been approved but where construction has not commenced, State Significant projects that have commenced construction (such as Parramatta Light Rail Stage 1), and State Significant projects that have recently been determined (such as WestConnex, Western Harbour Tunnel), and approved construction in the relevant precincts);		Chapter 19 (Cumulative impacts).
	k.	 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 2 (Planning and assessment process). Appendix B (Legislative and policy context). Placemaking sections in Part B (Environmental assessment).

Desired Performance Outcome	Requirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	 I. 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 design, construction methodologies and/or operational methodologies and how these will be resolved in the next phase of the proposal 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 and operation) or offset these impacts a compilation of the outcome(s) and criteria the proposal will achieve and how these will be monitored 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 20 (Synthesis). Chapter 22 (Justification and conclusion).
	 relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software. 		Chapter 5 (Proposal description – operation). Part B (Environmental assessment).
	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.		Whole Environmental Impact Statement.
	3. The EIS must include a single consolidated crosscheck table in an appendix which identifies where SEARs are addressed in the EIS and technical papers.		This Appendix.
3. Assessment of Key Issues Key issue impacts are assessed objectively and thoroughly to	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.		Part B (Environmental assessment).

Desired Performance Outcome	Requirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
provide confidence that the proposal will be constructed and operated within acceptable levels of impact.	 For each key issue the Proponent must: 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; 		Part B (Environmental assessment). Technical Papers 1 to 9.
	 describe the legislative and policy context, as far as it is relevant to the issue; 		Chapter 2 (Planning and assessment process). Appendix B (Legislative and policy context). Technical Papers 1 to 9.
	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;		Part B (Environmental assessment). Technical Papers 1 to 9.
	 demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); 		Chapter 20 (Synthesis). Design development sections in Part B (Environmental assessment).
	 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); 		Chapter 20 (Synthesis) Appendix J (Environmental risk analysis).
	f. detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures;		Chapter 20 (Synthesis).

Desired Performance Outcome	Requirement	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	g. measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met.		Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework). Appendix G (Construction traffic management framework).
	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. Where mitigation and minimisation options relevant to the proposal have been adopted in another stage of the Sydney Metro West scheme (SSI-10038 and SSI 19238057), they must be identified and considered for the proposal.		Part B (Environmental assessment). Chapter 20 (Synthesis).
	 The assessment of each key issue must consider (as relevant) the listed guidelines. 		Chapter 4 (Methodology). Part B (Environmental assessment) Appendix D (Detailed assessment methodologies).
4. Consultation The proposal is developed with meaningful and	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 the Clyde and Silverwater ancillary facilities.		Chapter 3 (Stakeholder and community engagement). Design development sections in Part B (Environmental assessment).
effective engagement during proposal design and delivery.	2. The consultation process must be documented and include information on how the proposal has responded to the inputs received.		Chapter 3 (Stakeholder and community engagement). Design development sections in Part B (Environmental assessment).
	3. The timing and type of community consultation undertaken or proposed must be described, including the means of facilitating engagement with communities with culturally and linguistically diverse backgrounds, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.		Chapter 3 (Stakeholder and community engagement). Appendix C (Overarching Community Communications Strategy).

Table 2 Key Issue Secretary's environmental assessment requirements

Key Issue and Desired Performance Outcome	(sp	quirement ecific assessment requirements in addition to the general uirement above)	Current Guidelines (as relevant)	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 and utilities, including property acquisitions/adjustments, access, amenity and relevant statutory rights.	N/A	Business impact sections in Part B (Environmental assessment). Section 18.2 (Property). Section 6.5.3 (Utilities management and power supply) outlines the approach to utility management during construction.
2. Design, Place and Movement The proposal is well- designed and enhances the environment where it is located, including optimising accessibility and	1. a.	A design led process that is informed, collaborative and iterative, which: utilises good design processes (such as Design Excellence and Design Review);	Better Placed – An integrated design policy for built environment of New South Wales (Government Architect NSW, 2017) Designing with Country (Government Architect NSW, 2020)	Section 5.2 (Placemaking and design) outlines the approach to placemaking and design for this proposal. The design process for this proposal is detailed in Section 5.2.7 (Design process). The guidelines specified for Design, Place and Movement would be taken into consideration as relevant during design development.
connectivity for communities, improving quality of places for people walking, cycling and using public	b.	utilises design experts and multidisciplinary teams;	Connecting with Country	Section 5.2.7 (Design process).
	C.	is designed with and connected with Country;	(Government Architect NSW, 2020) <u>Aligning Movement and</u>	Section 5.2.5 (Corridor-wide urban design principles) includes an overview of the approach to connecting with Country in design.
transport, and	d.	demonstrates how design integrity will be maintained during detailed design for the Sydney Metro West scheme;	<u>Place – Outline for</u>	Section 5.2.7 (Design process).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
enhancing public spaces. The proposal contributes to greener places,	e. involves the community, user groups and other stakeholders.	understanding places in relation to movement infrastructure (Government Architect of NSW, 2019)	Section 5.2.7 (Design process). An overview of how the design has responded to stakeholder and community feedback is provided in the design development sections in Part B (Environmental assessment).
facilitating the enhancement and provision of green infrastructure. The proposal minimises adverse impacts on the visual amenity of the built and natural	2. Identify how the place and design principles for the Sydney Metro West scheme have further developed and remain reflective of the design objectives in <i>Better Placed</i> .	Practitioner's Guide to <u>Movement and Place</u> (NSW Government 2020) <u>Healthy Built Environment</u> <u>Checklist (NSW</u> <u>Government, 2020)</u> Creating Walkable Neighbourhoods (Active Living NSW, 2018)	The Design Guidelines for Sydney Metro West (refer to Appendix E (Design Guidelines)) have built upon the place and design principles, and have considered the strategic aspirations of <i>Better Placed</i> . Information on how the design has responded to these principles is included in Placemaking sections in Part B (Environmental assessment).
(including public open space).	 Illustrate how place designs, outcomes and actions protect and facilitate improvements to the built environment and place, including in relation to: a. built form (including key project elements and amenity impacts to surrounding built environment); 	<u>Sydney Green Grid –</u> <u>Spatial Framework and</u> <u>Project Opportunities</u> (Tyrrell Studio and Office of the Government	Placemaking sections in Part B (Environmental assessment).
	 access and connectivity for people walking, cycling and using public transport; 	Architect, 2017)	Placemaking sections in Part B (Environmental assessment).
	 public space (including public open space, and how that space has been maximised and protected, access to and the quality of that space); 		Placemaking sections in Part B (Environmental assessment).
	d. residual land;	<u>Wales (NSW</u> <u>Government, 2020)</u> Smart Places Strategy (NSW Government, 2020)	The potential future use of residual land at the Clyde stabling and maintenance facility and Rosehill services facility is outlined in Section 17.3 (Placemaking) and Section 18.2 (Property).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	 e. views and vistas (including an assessment of visual impact, and visual representations of the proposal from key locations to illustrate the operational state of the proposal where visual impacts that are deemed greater than medium). 4. Illustrate how movement (accessibility and connectivity) principles, outcomes and actions achieve: a. balance between "place" and "movement"; 	AS4282-2019 Control of the obtrusive effects of outdoor lighting AS4970-2009 Protection of trees on development sites Road User Space Allocation Policy (TfNSW, 2021) Cycleway design toolbox: Designing for cycling and micromobility (TfNSW, 2020) <u>Walking Space Guide:</u> <u>Towards Pedestrian</u> <u>Comfort and Safety</u> (TfNSW, 2020) Water sensitive urban	An assessment of the potential visual impacts of the proposal is included in Part B (Environmental assessment) and Technical Paper 6 (Landscape and visual amenity). This includes photomontages which illustrate this proposal during operation at relevant sites. The landscape assessment also assesses potential impacts and benefits to public spaces within the vicinity of this proposal. An overview of how this proposal would achieve a balance between 'place' and movement' is included in Section 5.2.3 (Approach to placemaking). Detail on movement and place outcomes at each station and transport network integration are provided in Placemaking sections in Part B (Environmental assessment).
	b. access for people walking, cycling and using public transport;	design guideline (TfNSW, 2017)	Placemaking sections in Part B (Environmental assessment).
	c. integration of proposal with wider active and public transport networks and access to public space, town centres and main precincts of activity (currently existing or proposed in the plans and strategies of local councils and state authorities);	Pyrmont Peninsula Place Strategy (DPIE, 2020) Draft Westmead Place	Placemaking sections in Part B (Environmental assessment).
	d. implementation of universal design and access needs of mobility impaired users.	- Strategy	Section 5.1.2 (Key characteristics) outlines how an accessible system would be implemented.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	5. Demonstrate improvements to:a. access to public space;	Draft Bays West Place Strategy	Placemaking sections in Part B (Environmental assessment).
		Sydney Olympic Park Master Plan 2030 (2018 Review)	
	b. access to community facilities or areas providing services to the community, such as local centres;	Healthy Built Environment Checklist (NSW Government, 2020), Checklist questions 04 – Transport and connectivity (a) and (b), pages 98-100	Placemaking sections in Part B (Environmental assessment).
	c. active and public transport including local walking and cycling routes maintained or made more direct, safe and comfortable.		Placemaking sections in Part B (Environmental assessment).
	 Identify how green infrastructure design principles are reflective of the principles in Greener Places and Sydney Green Grid. 		An overview of how this proposal would support the principles of Greener Places and the Sydney Green Grid is provided in Section 5.2.5 (Corridor-wide urban design principles).
	 7. Identify how green infrastructure designs, actions and outcomes provide: a. green infrastructure, including enhancement of open space that supports recreation, biodiversity and waterway health; 		Key opportunities related to green infrastructure and improving connectivity to existing and future Green Grid projects are identified for relevant precincts in Placemaking sections in Part B (Environmental assessment).
		The station and precinct design guidelines in Appendix E (Design guidelines) provide a range of guidelines related to green infrastructure, landscaping and tree planting.	

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	b. an increase in tree numbers and canopy within proximity of the impacted area in accordance with the concept approval.		Sydney Metro West would provide a net increase in mature trees at a ratio of at least 2:1, which would result in an increase in tree canopy coverage (in line with Concept conditions of approval C-B8 and C-B9) (refer to Chapter 20 (Synthesis)).
	 Investigate crowded places strategies for higher volume stations and hostile vehicle mitigation strategies for each station and how such strategies will inform detailed design. 		Appendix E (Design guidelines) includes guidelines to incorporate strategies to manage movement of crowds and hostile vehicle mitigation strategies in design. Section 9.3.4 (Event mode and crowded spaces management) in relation to Sydney Olympic Park metro station.
	 9. Assess interchange with walking, cycling and public transport at each station including: a. considerations for people cycling; 		The operational transport impact assessment identifies how this proposal would integrate with the active and public transport (refer to Part B (Environmental assessment) and Technical Paper 1 (Operational transport).
	b. consideration for people walking (consideration of walking routes to the station, suitability of crossing infrastructure).		As above.
	10. Visual and related amenity impacts of construction to existing built and natural environments, including on streetscapes, key sites, landscape works, greenspace, and tree canopy.		Landscape and visual amenity sections in Part B (Environmental assessment). Technical Paper 6 (Landscape and visual amenity).
3. Flooding	1. Flood management objectives must be clearly identified and justified to address the characteristics of the environment and relevant legislative, management and guidance requirements.	Floodplain Development Manual (Department of Natural Resources, 2005)	Section 3.1.4 of Technical Paper 8 (Hydrology, flooding and water quality).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
The proposal minimises adverse impacts on existing flooding characteristics. Construction and	 Flood behaviour during construction and operation for a full 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. maps featuring flood prone lands, flood planning areas (areas below the flood planning level), hydraulic categorisation (flood ways and flood storage areas) and flood hazards; 	Practical Consideration of Climate Change – Flood risk management guideline (DECC, 2007) <u>Flood Prone Land</u> <u>Package (DPIE, 2021)</u> Relevant Coastal Management Program(s) or Coastal Zone Management Plan(s) and coastal zone emergency action subplan(s)	Appendix A, Appendix B and Appendix C of Technical Paper 8 (Hydrology, flooding and water quality).
operation of the proposal avoids or minimises the risk of, and adverse impacts from, infrastructure flooding or flooding hazards.	 assessment of potential flood affectation of other properties, assets and infrastructure against the flood management objectives; 		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).
	 consistency (or inconsistency) with applicable Council floodplain risk and stormwater management plans and other similar initiatives; 		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).
	d. compatibility with the flood hazard of the land;		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality),
	e. compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land;		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).
	f. the likelihood of erosion, siltation, destruction of riparian vegetation on riverbanks and watercourses;		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	g. impacts the development may have upon existing community emergency management arrangements for flooding. These matters must be discussed with the State Emergency Services and Council; and		Flooding sections in Part B (Environmental assessment). Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).
	h. any impacts the development may have on the social and economic costs to the community as consequence of flooding.		Section 5 of Technical Paper 8 (Hydrology, flooding and water quality).
	3. Identify measures to achieve the flood management objectives.		Chapter 20 (Synthesis). Section 7 of Technical Paper 8 (Hydrology, flooding and water quality).
4. Heritage The design, construction and operation of the	 Impacts to the heritage significance of: a. environmental heritage, as defined under the <i>Heritage Act</i> 1977; 	NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998)	Non-Aboriginal heritage and Aboriginal heritage sections in Part B (Environmental assessment). Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).
proposal, to the greatest extent possible, the long- term protection, conservation and management of the heritage significance of items of environmental heritage. The design, construction and operation of the proposal avoids or	 b. historical and / or maritime archaeology (including reclaimed land and foreshore areas); 	Criteria for assessing Excavation Directors (NSW Heritage Council, 2019) NSW Heritage Manual	Non-Aboriginal heritage sections in Chapter 7 (Westmead metro station); Chapter 10 (North Strathfield metro station) and Chapter 13 (The Bays Station). Section 5, Section 8 and Section 11 of Technical Paper 5 (Non-Aboriginal
	 items uncovered that are found to have heritage significance that have not been assessed under other stages of the Sydney Metro West scheme (SSI-10038 and SSI 19238057); 	(Heritage Office and Department of Urban Affairs and Planning, 1996)	Chapter 13 (The Bays Station). Section 11 of Technical Paper 5 (Non-Aboriginal heritage).
	 items listed on the State, Commonwealth (where appropriate) and World Heritage lists; 	Assessing Heritage Significance (NSW Heritage Office, 2001)	Non-Aboriginal heritage sections in Part B (Environmental assessment). Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
minimises impacts, to the greatest extent possible, on the heritage	 heritage items and conservation areas identified in environmental planning instruments applicable to the proposal area. 	The Australia ICOMOS Burra Charter 2013 Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch, Department of Planning,2009) Archaeological Assessment (Heritage	Non-Aboriginal heritage sections in Part B (Environmental assessment). Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).
significance of environmental heritage.	2. A historical and (if relevant) maritime archaeology assessment (including assessments prepared by suitability qualified and experienced archaeologist(s) according to NSW Heritage Council Guidelines.		Non-Aboriginal heritage sections in Chapter 7 (Westmead metro station); Chapter 10 (North Strathfield metro station) and Chapter 13 (The Bays Station). Section 5, Section 8 and Section 11 of Technical Paper 5 (Non-Aboriginal heritage).
	 Where impacts to State or locally significant heritage items are identified, the assessment must: a. include a heritage significance assessment of all heritage items that may be affected by the proposal, a statement of heritage impact for all heritage items and a historical archaeological assessment (where relevant) prepared in accordance with NSW Heritage Council Guidelines; Office and Department of Urban Affairs and Planning, 1996) Historical Archaeology Code of Practice (Heritage Office) 	Department of Urban Affairs and Planning, 1996) Historical Archaeology	Non-Aboriginal heritage sections in Part B (Environmental assessment). Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).
	 consider and respond to conservation policies of relevant conservation management plans or other strategic heritage planning documents (such as, heritage conservation strategy); 	2006)	Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).
	c. consider impacts to the significance of the item caused by, but not limited to, vibration, demolition, archaeological disturbance including new or altered services, change of use, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment, drainage infrastructure, contamination remediation, site compounds (as relevant) and whether these are permanent or temporary impacts or structures;		Non-Aboriginal heritage sections in Part B (Environmental assessment). Sections 5 to 14 of Technical Paper 5 (Non-Aboriginal heritage).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	d. outlining measures to avoid and minimise identified impacts during construction and operation in accordance with the current guidelines; and		Chapter 20 (Synthesis). Section 16 of Technical Paper 5 (Non-Aboriginal heritage). Appendix F (Construction Environmental Management Framework).
	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 2019).		Section 5, Section 8 and Section 11 of Technical Paper 5 (Non-Aboriginal heritage).
5. Noise and Vibration Construction noise and vibration	 Construction and operational 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	Chapter 4 (Methodology). Section 3 of Technical Paper 3 (Operational noise and vibration). Section 3 of Technical Paper 4 (Construction noise and vibration).
(including airborne noise, ground-borne noise) are effectively managed to minimise adverse impacts on acoustic amenity, and adverse impacts on the structural integrity of buildings and items.	2. The assessment must clearly differentiate between activities within the enclosed tunnels, activities below ground but not enclosed and activities on the surface and describe their impacts and proposed hours of work.	(ANZECC, 1990) Assessing Vibration: a technical guideline (DEC, 2006) Interim	Activities within the enclosed tunnels are assessed in Section 16.4 (Noise and vibration) of Chapter 16 (Tunnels). Impacts at each precinct are assessed in noise and vibration sections in Part B (Environmental assessment). Section 5 of Technical Paper 3 (Operational noise and vibration). Section 5 of Technical Paper 4 (Construction noise and vibration).
Noise emissions and vibration affecting nearby properties and other sensitive receivers during	 3. The assessment of construction noise and vibration must address: a. the nature of construction activities and related noise characteristics using typical and worst-case scenarios; 		Noise and vibration sections in Part B (Environmental assessment). Section 4.1 of Technical Paper 4 (Construction noise and vibration).

Key Issue and Desired Performance Outcome	(sp	quirement ecific assessment requirements in addition to the general uirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
operation of the proposal are effectively managed to protect the amenity and well-	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;	Construction Noise Guideline (DECC, 2009) Noise Policy for Industry (EPA, 2017)	Noise and vibration sections in Part B (Environmental assessment). Section 5 of Technical Paper 4 (Construction noise and vibration).
being of the community.	С.	the identification and nature of receivers, existing and proposed, during the construction period;	Sydney Metro Construction Noise and Vibration Standard (2021)	Noise and vibration sections in Part B (Environmental assessment). Section 2.2 of Technical Paper 4 (Construction noise and vibration).
	d.	the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage);	Rail Infrastructure Noise Guideline (EPA, 2013) NSW Road Noise Policy (DECCW, 2011)	Noise and vibration and non- Aboriginal heritage sections in Part B (Environmental assessment). Section 3.5.3 of Technical Paper 4 (Construction noise and vibration).
	e.	the nature of the impact and the sensitivity of receivers and level of impact including for out of hours work;	Environmental Noise Management Manual (RMS 2001)	Noise and vibration sections in Part B (Environmental assessment). Section 5 of Technical Paper 4 (Construction 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);	Development Near Rail Corridors and Busy Roads	Chapter 21 (Synthesis). Section 6.3 of Technical Paper 4 (Construction noise and vibration).
	g.	statement of the proposed hours of construction. Justification must be provided where these are not consistent with standard construction hours stated in the <i>Interim Construction Noise</i> <i>Guideline</i> ;		Section 6.5.1 (Construction hours). Section 4.4 of Technical Paper 4 (Construction noise and vibration).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	 h. noise impacts of out-of-hours works (including utility works and works associated with the proposal including the potential cumulative impacts of 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; 	 Interim guideline (DoP, 2008) Noise Mitigation Guideline (RMS, 2015) Noise Criteria Guideline (RMS, 2015) 	Noise and vibration sections in Part B (Environmental assessment). Section 4.4, Section 5.2 and Section 5.3 of Technical Paper 4 (Construction 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;	German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures	Noise and vibration sections in Part B (Environmental assessment). Section 5.6 of Technical Paper 4 (Construction noise and vibration).
	j. sleep disturbance (including the number of noise-awakening events);		Noise and vibration sections in Part B (Environmental assessment). Section 5.2 of Technical Paper 4 (Construction noise and vibration).
	 k. a cumulative noise and vibration assessment inclusive of impacts from the proposal, including concurrent and consecutive 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; 		Chapter 19 (Cumulative impacts). Section 5.7 of Technical Paper 4 (Construction noise and vibration).
	 I. qualitative assessment of the predicted effectiveness of management and mitigation measures (including, where relevant, case studies from other Sydney Metro projects) to manage identified impacts, including impacts as identified in (k); 		Section 5 and Section 6.3 of Technical Paper 4 (Construction noise and vibration).
	 m. any potential residual noise and vibration impacts following application of mitigation measures; 		Chapter 21 (Environmental risk analysis). Section 6.3 of Technical Paper 4 (Construction noise and vibration).

Key Issue and Desired Performance Outcome		ement c assessment requirements in addition to the general ment above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	pre be t of n mai	escription of how receiver feedback received during the paration of the EIS has been taken into account (and would taken into account post exhibition of the EIS) in the design nitigation measures, including any tailored mitigation, nagement and communication strategies for sensitive eivers.		Section 6.3 of Technical Paper 4 (Construction noise and vibration). Chapter 20 (Synthesis). Appendix H (Construction Noise and Vibration Standard).
	refe	e process for community engagement should be included or erenced in the noise and vibration assessment as part of the igation strategy and assessment.		Chapter 20 (Synthesis). Section 6.3 of Technical Paper 4 (Construction noise and vibration).
6. Social The proposal provides socially	DPI incl	tential social impacts of the proposal, in accordance with the IE Social Impact Assessment Guideline (the Guideline), luding but not limited to: nsideration of the principles of section 1.2 of the Guide;	Social Impact Assessment Guideline, State significant projects (DPIE, 2021)	Social impacts sections in Part B (Environmental assessment). Section 4 of Technical Paper 9 (Social impacts).
sustainable outcomes.		nsideration of Satisfying the Review Questions in Appendix C he Guideline;		Appendix B of Technical Paper 9 (Social impacts).
The proposal maximises the social and economic welfare of the community. The proposal delivers good development outcomes by minimising negative	aximises the social deconomic people's: d economic - elfare of the - mmunity. - e proposal delivers of development - od development tcomes by - uivelihoods -		Social impacts sections in Part B (Environmental assessment). Section 6 and Section 7 of Technical Paper 9 (Social impacts).	
social impacts and enhancing positive social impacts on affected communities.	whi	distributive equity of impacts and benefits (i.e., the ways in ich different social groups may experience the proposal, /ing particular attention to vulnerable groups);		Social impacts sections in Part B (Environmental assessment). Section 5, Section 6 and Section 7 of Technical Paper 9 (Social impacts).
	e. ass	sessing positive, negative, and cumulative social impacts.		Section 6 and Section 7 of Technical Paper 9 (Social impacts). Placemaking sections in Part B (Environmental assessment). Chapter 19 (Cumulative impacts).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	2. Identify management, mitigation and monitoring measures to minimise negative social impacts and identify potential opportunities for positive social outcomes, including specific placemaking measures which may enhance wellbeing and sense of place.		Section 6, Section 7 and Section 8 of Technical Paper 9 (Social impacts). Placemaking sections in Part B (Environmental assessment). Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
7. Transport and Traffic Network connectivity,	 Construction transport and traffic (vehicle, pedestrian and cyclists) impacts, including, but not necessarily limited to: a. considered approach to route identification and scheduling of construction vehicle movements; 	Guide to Traffic Management – Part 3 Traffic Study and Analysis Methods (Austroads,	Section 3.2 of Technical Paper 2 (Construction transport).
safety and efficiency of the transport system in the vicinity of the proposal are managed to minimise impacts.	b. the indicative number, frequency and size of construction the vicinity posal are to minimise b. the indicative number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements) across the construction schedule; Generating Development Version 2.2 (RTA, 2002)	Guide to Traffic Generating Developments	Construction description and Transport sections in Part B (Environmental assessment). Section 3.2 and Section 3.7 to Section 3.16 of Technical Paper 2 (Construction transport).
The safety of transport system customers is	c. construction worker parking and management;	Austroads Guides (Austroads, 2017) NSW Bicycle Guidelines v 1.2 (RTA, 2005) Planning Guidelines for Walking and Cycling	Section 18.7 (Transport). Section 3.2 of Technical Paper 2 (Construction transport).
maintained, with a focus on vulnerable road users (people walking and cycling).	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);		Transport sections in Part B (Environmental assessment). Section 3.7 to Section 3.16 of Technical Paper 2 (Construction transport).
Access and connectivity for people walking and cycling or using public transport is	e. access constraints and impacts on public transport (infrastructure and services), pedestrians and cyclists and property; <u>Walking Space Guide:</u> <u>Towards Pedestrian</u>	Transport sections in Part B (Environmental assessment). Section 3.7 to Section 3.16 of Technical Paper 2 (Construction transport).	

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
maintained or improved relative to the existing situation. Impacts on road network capacity and the level of service for all road users are acceptable and effectively managed. Works are compatible with existing	f. access constraints and impacts during the staging of major events at Sydney Olympic Park and Rosehill;	<u>Comfort and Safety</u> (<u>TfNSW, 2020</u>)	Transport sections in Chapter 9 (Sydney Olympic Park metro station) and Chapter 17 (Clyde stabling and maintenance facility and Rosehill services facility). Section 3.9 and Section 3.16 of Technical Paper 2 (Construction transport).
	g. 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		Construction description and Transport sections in Part B (Environmental assessment). Section 3.7 to Section 3.166 of Technical Paper 2 (Construction transport).
infrastructure and future transport corridors.	 impacts to on-street parking, loading, servicing, and drop off and pick up, including to residents and businesses. 		Transport sections in Part B (Environmental assessment). Section 3.7 to Section 3.16 of Technical Paper 2 (Construction transport)
	 Operational transport impacts of the proposal, including: a. performance of key interchanges and intersections around station precincts by undertaking a level of service analysis at key locations; 		Transport sections in Part B (Environmental assessment). Section 3 and Section 4 of Technical Paper 1 (Operational transport).
	b. performance of key interchanges and intersections around station precincts and ancillary facilities for people walking or cycling within and through the station precinct and surrounds, or to and from the metro station and other forms of transit;		Transport sections in Part B (Environmental assessment). Section 4 of Technical Paper 1 (Operational transport).
	c. wider transport interactions (local and regional roads, cycling, public and freight transport);		Transport sections in Part B (Environmental assessment). Section 4 of Technical Paper 1 (Operational transport).
	d. induced traffic and operational implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve other forms of public transport; and		Section 18.7 (Transport). Section 4 of Technical Paper 1 (Operational transport).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	 property and business access and on-street parking (including loading, servicing, and drop off and pick up). 		Transport sections in Part B (Environmental assessment). Section 4 of Technical Paper 1 (Operational transport).
8. Water - Hydrology Long term impacts on surface water and	1. Describe (and map where relevant) the existing hydrological regime for any surface water 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) Transport for NSW Sustainable Design Guidelines Version 4.0	Section 4 and Appendix A of Technical Paper 8 (Hydrology, flooding and water quality).
groundwater hydrology are minimised.	2. Provide a water balance for surface water including the proposed intake and discharge locations, volume, frequency and duration.		Section 18.9 (Hydrology and water quality).
The environmental values of nearby, connected and affected water sources, including estuarine and marine water (if applicable) are maintained (where values are	 Surfacer hydrology impacts of the construction and operation of the proposal and any ancillary facilities (both built elements and discharges) in accordance with the current guidelines, including: a. natural processes within rivers, wetlands, estuaries, marine waters and floodplains that affect the health of the fluvial, riparian, estuarine or marine system and landscape health (such as modified discharge volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge; 		Section 18.9 (Hydrology and water quality). Section 5.1 of Technical Paper 8 (Hydrology, flooding and water quality).
achieved) or improved and maintained (where values are not achieved).	 changes to environmental water availability and flows, both regulated / licensed and unregulated / rules-based sources; 	(TfNSW, 2017) <u>Guidelines for Controlled</u> <u>Activities on Waterfront</u> <u>Land (DPI, 2018)</u>	Section 18.9 (Hydrology and water quality). Section 5.1 of Technical Paper 8 (Hydrology, flooding and water quality).
Sustainable use of water resources.	c. direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses;	<u>Water Sharing Plans</u> Water sensitive urban design guideline (TfNSW, 2017)	Section 18.9 (Hydrology and water quality). Section 5.1 of Technical Paper 8 (Hydrology, flooding and water quality).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
	d. minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates, management methods and re-use options) and on the conveyance capacity of existing stormwater systems where discharges are proposed through such systems; and		Section 18.9 (Hydrology and water quality). Section 5.1 of Technical Paper 8 (Hydrology, flooding and water quality).
	e. water take (direct or passive) from all surface water sources with estimates of annual volumes during construction and operation.		Section 5.1 of Technical Paper 8 (Hydrology, flooding and water quality).
	 Identify any requirements for baseline monitoring of hydrological attributes. 		Chapter 20 (Synthesis). Section 7 of Technical Paper 8 (Hydrology, flooding and water quality).
9. Water - Quality The proposal 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 WQOs over time where they are currently not being achieved, including downstream of the	 Surface water and groundwater quality impacts, including: 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 Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006)	Section 18.9 (Hydrology and water quality). Soils, contamination and groundwater sections in Part B (Environmental assessment). Section 6 of Technical Paper 8 (Hydrology, flooding and water quality).
	 identifying the rainfall event that the water quality protection measures will be designed to comply with; 	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018)	The rainfall event for water quality protection measures is included as a mitigation measure within Appendix F (Construction Environmental Management Framework).
	 assessing the significance of identified impacts including consideration of the relevant ambient water quality outcomes. 	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DECC, 2008)	Section 18.9 (Hydrology and water quality). Section 6 of Technical Paper 8 (Hydrology, flooding and water quality).

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines (as relevant)	Where addressed in the Environmental Impact Statement
proposal to the extent of the proposal impact including estuarine and marine waters (if applicable).	 Demonstrating how construction and operation of the proposal will, to the extent that the proposal can influence, ensure that: a. where the NSW WQOs for receiving waters are currently being met, they will continue to be protected; 	Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation	Section 18.9 (Hydrology and water quality). Section 6 of Technical Paper 8 (Hydrology, flooding and water quality).
	 where the NSW WQOs are not currently being met, activities will work toward their achievement over time; 	of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines	Section 18.9 (Hydrology and water quality). Section 6 of Technical Paper 8 (Hydrology, flooding and water quality).
	 justifying, if required, why the WQOs cannot be maintained or achieved over time. 		Section 18.9 (Hydrology and water quality). Section 6 of Technical Paper 8 (Hydrology, flooding and water quality).
10. Other	 An assessment of the following issues must be undertaken in accordance with the commitments in Section 5 of Sydney Metro West Scoping Report – Rail infrastructure, stations, precincts and operations (Sydney Metro, June 2021): Aboriginal heritage; Air quality; Biodiversity; Climate change risk and adaption; Greenhouse gas and energy; Hazard and risk; Property and land use; Soils, contamination and groundwater; Waste management and resource use; Cumulative impacts. 		Refer to Table 3 of this Appendix.

Table 3 Scoping report requirements

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
Aboriginal heritage	Identification of the potential to disturb Aboriginal heritage (sites, objects, remains, values, features or places)	Aboriginal heritage sections in Part B (Environmental assessment).
	Determination, in consultation with relevant stakeholders, of the significance of any identified heritage resources	Aboriginal heritage sections in Part B (Environmental assessment).
	Determination of the extent and significance of impacts to any identified resources and values	Aboriginal heritage sections in Part B (Environmental assessment).
	Identification of the potential for in situ conservation of items and/or areas and the need for further archaeological testing and/or excavations	Aboriginal heritage sections in Chapter 7 (Westmead metro station), Chapter 10 (North Strathfield metro station) and Chapter 13 (The Bays Station). Chapter 20 (Synthesis).
	Identification of appropriate measures to avoid, minimise and/or mitigate potential impacts, including opportunities for heritage interpretation	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework). Opportunities for interpretation are also considered in Appendix K (Draft Heritage Interpretation Strategy).
	Consultation with Sydney Metro Heritage Working Group, local Councils and registered Aboriginal parties if required	Section 3.6 (Consultation during preparation of this Environmental Impact Statement)
	A Heritage Interpretation Strategy will be prepared for the proposal (as per Conditions C- B4, C-B5 and C-B6 of the Minister's Conditions of Approval for the Sydney Metro West approved Concept), which outlines how key Aboriginal and non-Aboriginal heritage values and stories of heritage items would be interpreted in the project design, including station and precinct urban design.	Appendix K (Draft Heritage Interpretation Strategy).
Air quality	Consideration of the relevant regulatory framework and guidelines	Section 4.2 (Assessment methodologies). Appendix B (Legislative and policy context).
	Desktop review and identification of the types of activities that may generate potential air quality related impacts during construction and operation	Section 18.3 (Air quality).
	Estimation of the potential for dust-related impacts during construction using the risk- based assessment approach presented in Guidance on the assessment of dust from demolition and construction Version 1.1 (United Kingdom Institute of Air Quality Management, 2014). Other impacts during construction and operation would also be qualitatively assessed	Section 18.3 (Air quality).

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
	Identification of mitigation measures to avoid or minimise air quality impacts and risks.	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
Biodiversity	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	Biodiversity sections in Part B (Environmental assessment).
	Assessment of any potential direct and indirect impacts on terrestrial flora and fauna species, populations, ecological communities and their habitats, and groundwater dependent ecosystems	Biodiversity sections in Part B (Environmental assessment).
	Assessment of the significance of any potential impacts on species, ecological communities and populations, and groundwater dependent ecosystems listed under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> , the <i>Biodiversity Conservation Act 2016</i> and the <i>Fisheries Management Act 1994</i> that occur or are considered likely to occur	Biodiversity sections in Part B (Environmental assessment).
	Identification of mitigation measures using the principles of 'avoid, minimise, mitigate', and propose offsets where residual impacts would occur	Appendix F (Construction Environmental Management Framework). Mitigation measures in Chapter 20 (Synthesis) for other environmental aspects (groundwater, water quality, landscape and visual) would contribute to the avoidance, minimisation and mitigation of potential biodiversity impacts.
	 Identification of relevant mitigation measures and/or performance outcomes to support the following Minister's Conditions of Approval for the approved concept: retaining as many mature trees as practicable and ensuring a net increase in the number of mature trees at a ratio of 2:1 within 10 years of the date of approval for the Concept or no later than the commencement of operations (in accordance with Condition C-B8 of the Minister's Conditions of Approval) increasing tree canopy coverage (in accordance with Condition C-B9 of the Minister's Conditions of Approval) identification of parts of Duck Creek and A'Becketts Creek that would remain open channels within the Clyde Stabling and Maintenance Facility site, which would require rehabilitation or renaturalisation (in accordance with Condition C-B10 of the Minister's Conditions of Approval). 	Chapter 20 (Synthesis). Section 17.3.3 (Riparian rehabilitation).
Climate change risk and adaptation	Identification of possible climate related impacts with an emphasis on any that are projected to undergo a substantial change	Section 18.4 (Sustainability, climate change and greenhouse gas).
	Identification of components of Sydney Metro West that may be vulnerable to the climate change impacts during operation	Section 18.4 (Sustainability, climate change and greenhouse gas).

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
	Identification of possible current and future controls that may increase the resilience of particular components to climate impacts	Section 18.4 (Sustainability, climate change and greenhouse gas).
	Identification of relevant mitigation measures and/or performance outcomes to meet Condition C-B11 of the Ministers Conditions of Approval, for the proposal design to withstand known impacts associated with climate change to the year 2100	Section 18.4 (Sustainability, climate change and greenhouse gas). Chapter 20 (Synthesis).
	Recommendations as to what should be considered, and how to establish if further information is needed, to adequately assess climate change risk.	Section 18.4 (Sustainability, climate change and greenhouse gas).
Greenhouse gas and energy	Identification of the potential greenhouse gas emissions from construction and operation	Section 18.4 (Sustainability, climate change and greenhouse gas)
	Identification of mitigation and management measures to reduce potential emissions of greenhouse gas.	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
Hazard and risk	Desktop review of the relevant regulatory framework and guidelines	Appendix B (Legislative and policy context).
	Identification of the types of activities during construction and operation that may generate potential hazards	Section 18.6 (Hazard and risk).
	Identification of the potential environmental impacts associated with the potential hazards	Section 18.6 (Hazard and risk).
	Identification of mitigation measures to address potential hazards, where appropriate.	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
Property and land use	Description of land use and planning context for each site along the corridor relevant to the stage	Section 18.2 (Property). Placemaking sections in Part B (Environmental assessment).
	Identification of planning controls analysis for each site along the corridor relevant to the stage	Placemaking sections in Part B (Environmental assessment).
	Identification of the potential acquisition and leasing (if required), including processes and procedures for acquisition. However, the majority of property acquisition required to support the construction of the proposal are covered by preceding Sydney Metro West planning applications and would be undertaken prior to works covered by this proposal commencing	Section 18.2 (Property).
	Identification of potential land use impacts and opportunities (for example integration with strategic planning at Clyde stabling and maintenance facility in accordance with Condition C-B2 of the Minister's Conditions of Approval for the Sydney Metro West approved Concept)	Placemaking sections in Part B (Environmental assessment).
	Identification of mitigation measures to address the property and land use impacts	Chapter 20 (Synthesis).

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
	Further consultation would be undertaken with the Department of Planning, Industry and Environment (including Sydney Olympic Park Authority), local councils and other relevant stakeholders.	Section 3.6 (Consultation during preparation of this Environmental Impact Statement).
Soils, contamination and groundwater	Soils and contamination: Consideration of the relevant regulatory framework and guidelines, and publicly available data	Section 2 and Appendix A of Technical Paper 7 (Contamination).
	Identification of the existing soil landscapes and a review of previous contamination assessments and publicly available data (web-based information searches)	Soils, contamination and groundwater sections in Part B (Environmental assessment). Appendix B of Technical Paper 7 (Contamination).
	An assessment of potential contamination risks based on the previous contamination assessments undertaken, potential impacts to existing contamination and exposure risks to environmental and human health receptors. This would take into account any remediation carried out which is subject to preceding Sydney Metro West planning applications	Soils, contamination and groundwater sections in Part B (Environmental assessment). Section 4 to Section 13 of Technical 7 (Contamination).
	Identification of low, medium, and high risk sites including recommendations for additional investigations and/or management based on the site risk rating and with consideration to the intended land use/future exposure scenarios at the relevant location	Soils, contamination and groundwater sections in Part B (Environmental assessment). Appendix F (Construction Environmental Management Framework). Section 4 to Section 13 of Technical 7 (Contamination).
	Identification of the potential to disturb acid sulfate soils and the associated impacts during construction	Soils, contamination and groundwater sections in Part B (Environmental assessment). Section 4 to Section 13 of Technical 7 (Contamination).
	Consideration of the potential impacts associated with erosion and sedimentation during construction.	Soils, contamination and groundwater sections in Part B (Environmental assessment).
	Groundwater: Characterisation of the existing environment including climate, topography, geology, groundwater occurrence, quality and use, existing groundwater users and groundwater dependent ecosystems, which would include review of preceding Sydney Metro West planning applications	Soils, contamination and groundwater sections in Part B (Environmental assessment).
	Assessment of the potential groundwater inflows to proposed untanked structures/elements during construction and operation, taking into consideration the assessment carried out in preceding Sydney Metro West planning applications	Soils, contamination and groundwater sections in Part B (Environmental assessment).

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
	Assessment of potential groundwater-related impacts due to estimated groundwater level drawdown associated with operation and cumulative impacts, taking into consideration the assessment carried out in preceding Sydney Metro West planning applications	Soils, contamination and groundwater sections in Part B (Environmental assessment). Chapter 19 (Cumulative impacts).
	Consideration of potential impacts including those related to groundwater dependent ecosystems, acid sulfate soils, groundwater contamination, groundwater quality and ground settlement (including associated potential damage to infrastructure/sensitive assets)	Soils, contamination and groundwater sections in Part B (Environmental assessment).
	Assessment of the requirements for treatment of collected groundwater at each drained structures/elements during operation, including consideration of discharge locations and relevant criteria	Soils, contamination and groundwater sections in Part B (Environmental assessment). Section 18.9 (Hydrology and water quality).
	Identification of monitoring and management measures to address potential impacts.	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
	Management of contamination and any resulting remediation would be carried out on the basis of risk, in accordance with the relevant legislation, standards and guidelines, including but not limited to the <i>National Environmental Protection (Assessment of Contamination) Measure 1999</i> , as amended 2013, and all relevant guidelines made or approved under the <i>Contaminated Land Management Act 1997</i> and the <i>Protection of the Environment Operations Act 1997</i> .	Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).
Waste management and	A review of the likely waste streams and volumes generated during construction and operation.	Section 18.5 (Waste management and resource use).
resource use	A review of the likely resources required during construction and operation, including energy, fuel and steel	Section 18.5 (Waste management and resource use). Section 18.4 (Sustainability, climate change and greenhouse gas). Section 6.5.7 (Construction materials and resources).
	Identification of environmental impacts associated with resource use and the generation (and subsequent disposal) of waste materials	Section 18.5 (Waste management and resource use).

Environmental issue	Scoping report requirements	Where addressed in the Environmental Impact Statement
	 Development of management strategies to adequately address waste during construction and operation that would likely include: Measures for managing construction and operational waste through the waste hierarchy established under the <i>Waste Avoidance and Resource Recovery Act 2001</i> (i.e. avoidance of waste, resource recovery, disposal of waste) Targets for the beneficial reuse of 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. 	Chapter 20 (Synthesis). Section 18.4 (Sustainability, climate change and greenhouse gas). Appendix F (Construction Environmental Management Framework).
Cumulative impacts	Identification of projects with the potential to generate cumulative impacts through consultation with stakeholders and review of the Department of Planning, Industry and Environment's Major Projects planning portal, government agency databases and local council development application registers	Chapter 19 (Cumulative impacts).
	Application of a screening criteria – including location, timeframe, scale and status to determine which of these projects are likely to generate cumulative impacts	Chapter 19 (Cumulative impacts).
	Identification of potential cumulative impacts	Chapter 19 (Cumulative impacts).
	Identification of mitigation measures and management strategies to address the potential cumulative impacts.	Chapter 19 (Cumulative impacts). Chapter 20 (Synthesis). Appendix F (Construction Environmental Management Framework).

Environmental Planning and Assessment Regulation 2021, Part 8, Division 5, section 190 to 193 checklist

Table 4 Environmental Planning and Assessment Regulation 2021 (NSW), Part 8, Division 5, section 190 to 193 checklist

Req	uirement	Where addressed
190	. Form of the environmental impact statement	
1.	An environmental impact statement must contain the following info	ormation—
a.	the name, address and professional qualifications of the person by whom the statement is prepared	Certification.
b.	the name and address of the responsible person	Certification.
C.	 the address of the land— to which the development application relates, or on which the activity or infrastructure to which the statement relates will be carried out 	Certification.
d.	a description of the development, activity or infrastructure	Certification.
e.	an assessment by the person who prepared the statement of the environmental impact of the development, activity or infrastructure, dealing with the matters referred to in this Division	Certification.
2.	The person preparing the statement must consider—	
a.	for State significant development—the <i>State Significant</i> Development Guidelines	Not applicable.
b.	for State significant infrastructure—the State Significant Infrastructure Guidelines.	While the State Significant Infrastructure guidelines took effect on 1 October 2021, a six- month transitional period (up to 3' March 2022) is currently in place which allows Environmental Impact Statements to be submitted to the Department of Planning and Environment that were prepared in line with previous requirements. However, this Environmental Impact Statement complies with the intent of the new guidelines where relevant.
3.	An environmental impact statement must also contain a declaration statement of the following—	on by the person who prepared the
a.	the statement has been prepared in accordance with this Division, and	Certification.
b.	the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure, and	Certification.
C.	the information contained in the statement is not false or misleading.	Certification.
191	. Compliance with environmental assessment requirements	
envi	environmental impact statement must comply with the ironmental assessment requirements notified under section 176 ne Act, section 5.16(4).	Refer to Table 1 and Table 2 of this Appendix.

Rec	juirement	Where addressed
192	. Content of environmental impact statement	
1.	An environmental impact statement must also include each of the	following:
a.	a summary of the environmental impact statement	Executive summary. Chapter 20 (Synthesis).
b.	a statement of the objectives of the development, activity or infrastructure	Chapter 1 (Introduction). Chapter 22 (Justification and conclusion).
C.	an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, considering its objectives, including the consequences of not carrying out the development, activity or infrastructure	Chapter 1 (Introduction) includes an overview of alternatives considered for the Sydney Metro West Concept. Where further design development has occurred for this proposal, this is detailed in Part B (Environmental assessment). Chapter 22 (Justification and conclusion).
d.	an analysis of the development, activity or infrastructure, including	<u> </u>
i.	a full description of the development, activity or infrastructure, and	Chapter 5 (Proposal description – operation). Chapter 6 (Proposal description – construction). A description of this proposal for individual precincts is provided in Chapter 7 (Westmead) to Chapter 17 (Clyde stabling and maintenance facility and Rosehill services facility).
ii.	a general description of the environment likely to be affected by the development, activity or infrastructure and a detailed description of the aspects of the environment that are likely to be significantly affected, and	Part B (Environmental assessment).
iii.	the likely impact on the environment of the development, activity or infrastructure, and	Part B (Environmental assessment).
iv.	a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Part B (Environmental assessment). Chapter 20 (Synthesis).
v.	a list of the approvals that must be obtained under another Act or law before the development, activity or infrastructure may lawfully be carried out	Chapter 2 (Planning and assessment process).
e.	a compilation, in a single section of the environmental impact statement, of the measures referred to in paragraph (d)(iv)	Chapter 20 (Synthesis).
f.	the reasons justifying the carrying out of the development, activity or infrastructure, considering biophysical, economic and social factors, including the principles of ecologically sustainable development set out in section 193.	Chapter 22 (Justification and conclusion).
2.	This section is subject to the environmental assessment requirements that relate to the environmental impact statement.	Table 1 and Table 2 of this Appendix.
3.	This section does not apply if—	
a.	the Planning Secretary has waived the requirement for an application for environmental assessment requirements in relation to an environmental impact statement for State significant development, and	Not applicable.
b.	the conditions of the waiver specify that the environmental impact statement must instead comply with requirements set out or referred to in the conditions.	Not applicable.

Re	quirement	Where addressed
4.	A document adopted or referred to by an environmental impact statement is taken to form part of the statement.	Entire Environmental Impact Statement.
193	8. The principles of ecologically sustainable development	Chapter 20 (Synthesis).

Conditions of approval for the Concept relevant to this proposal

Table 5 Conditions of approval for Concept relevant to this proposal

No.	Concept condition of approval relevant to this proposal	Where addressed in this Environmental Impact Statement
General		
C-A2	The Proponent must carry out the CSSI Concept in accordance with the conditions of this approval and the documents listed in Condition C-A1 of this schedule unless otherwise specified in, or required under, the conditions of this approval.	Consistency of this proposal with the relevant conditions is outlined in this table.
Place an	d Design	
C-B1	Place and Design To ensure that a high-quality urban design response is achieved, the CSSI must have regard to, and be generally consistent with, the place and design principles for each location outlined in the documents listed in Condition C-A1 of this schedule, unless expressly specified in the conditions of this approval.	 Placemaking sections in Part B (Environmental assessment) include an overview of how this proposal meets the place and design principles for each location. Design guidelines (Appendix E) have been developed to guide the design of Sydney Metro West, including urban design strategies which support the place and design principles.
C-B2	 Clyde Stabling and Maintenance Facility Site For the relevant future stage application, the following must be considered at the Clyde Maintenance and Stabling Facility site: a. publicly-accessible active transport corridors immediately around the site adjoining James Ruse Drive that connects to existing and future links and open spaces; b. public spaces for recreational use on residual land to offset the loss of the private recreational land, or any alternate and commensurate opportunity that achieves the objective and provides value for money, developed in consultation with City of Parramatta Council; c. renaturalisation of parts of Duck Creek and A'Becketts Creek and rehabilitation of the riparian corridor; and d. integration with strategic planning for the precinct. 	This proposal would include the provision of a section of the 'Wilderline' – a City of Parramatta Council proposed north- south publicly-accessible active transport corridor within the former T6 Carlingford Line. Refer to Section 17.2 (Clyde stabling and maintenance facility and Rosehill services facility description) and Section 17.3 (Placemaking) for further detail. The potential future use of residual land is subject to ongoing consultation with City of Parramatta Council and the Department of Planning and Environment in accordance with this condition of approval. Key considerations include the existing zoning of the land, the nature of the surrounding uses, the recreational needs of the local population and the necessary work and remediation to make the land suitable for potential public use. This has been included as a mitigation measure in Section 20.7 (Proposed measures to avoid or minimise impacts). Sydney Metro is also considering the potential use of this land to provide flood storage to meet the requirements of condition of approval D10 of SSI 10038.

No.	Concept condition of approval relevant to this proposal	Where addressed in this Environmental Impact Statement
		This proposal would include rehabilitation of Duck Creek and A'Beckett's Creek where they runs through or adjacent to the Sydney Metro site. The indicative rehabilitation approach is provided in Section 17.3.3 (Riparian rehabilitation) of this Environmental Impact Statement). A Rehabilitation Management Plan would be prepared to guide the rehabilitation of the waterways and provide further detail on the approach to rehabilitation.
		Integration of this proposal with strategic plans relevant to the Clyde stabling and maintenance facility is discussed in Section 17.3 (Placemaking) of this Environmental Impact Statement.
С-В3	Parramatta Metro Station Site The delivery of the section of the future Parramatta Civic Link located on the Parramatta metro station construction site must be facilitated to enable completion before operation of the CSSI.	As outlined in Chapter 8 (Parramatta metro station) of this Environmental Impact Statement, this proposal would include the delivery of a section of the Civic Link within the station precinct footprint (between Macquarie and George Streets) to meet the requirements of this condition of approval. A temporary pedestrian connection would also be provided during the construction of this proposal.
С-В4	Aboriginal and Non-Aboriginal Heritage The relevant future stage application relating to the design of stations must include a Heritage Interpretation Strategy, prepared in consultation with Heritage NSW, which outlines how key Aboriginal and non-Aboriginal heritage values and stories of Heritage items will be interpreted in the project design, including station and precinct urban design. The Heritage Interpretation Strategy must include procedures for how to include results of archaeological findings (historical and Aboriginal archaeological results) when they become available.	A draft heritage interpretation strategy has been prepared in line with these requirements and is provided in Appendix K (Draft heritage interpretation strategy). Sydney Metro would continue ongoing consultation with knowledge holders through the Connect with Country pilot, and councils, prior to finalisation of the strategy during the response to submissions phase of this proposal. Section 6 of Appendix K (Draft heritage interpretation strategy) includes precinct-specific recommendations for heritage interpretation, consultation and key themes. Section 7 of Appendix K (Draft heritage interpretation strategy) outlines procedures to include archaeological finds into interpretation planning.
C-B5	Aboriginal and Non-Aboriginal Heritage The Heritage Interpretation Strategy must be prepared in accordance with the NSW Heritage Manual, the NSW Heritage Office's Interpreting Heritage Places and Items: Guidelines (August 2005), and the NSW Heritage Council's Heritage Interpretation Policy	Appendix K (Draft heritage interpretation strategy) has been prepared in accordance with these guidelines.

No.	Concept condition of approval relevant to this proposal	Where addressed in this Environmental Impact Statement
C-B6	 Aboriginal and Non-Aboriginal Heritage The Heritage Interpretation Strategy must include, but not be limited to: a. a discussion of key interpretive themes, stories and messages proposed to interpret the history and significance of archaeological excavation, the affected Heritage items and sections of heritage conservation areas (if applicable); b. options for the re-purposing of archaeological finds (results and artefacts), heritage features or listed items salvaged or protected during construction stages of the CSSI, and how they will be integrated into the final project design; c. Aboriginal cultural and heritage values of the project area including the results of any archaeological investigations undertaken (or any interim results of any archaeological investigations that have commenced but have yet to be completed) and key socio-cultural values identified in the Aboriginal Cultural Heritage Assessment Report referred to in Condition C-A1 of this schedule, and those of any future stages of the CSSI; d. details of the audience, potential devices to be employed in interpretation, possible locations for interpretation and how this will be incorporated into design; e. engagement with the Relevant Council(s) and regard for any relevant council heritage interpretation guidelines; and f. with respect to the Parramatta construction site and (a) above, any discussion must include how the heritage interpretation of the CSSI relates to the heritage interpretations of other SSI projects. 	 A draft heritage interpretation strategy has been prepared in line with these requirements and is provided in Appendix K (Draft heritage interpretation strategy). The requirements of this condition are addressed in Appendix K as follows: a. Section 4 discusses key interpretive themes, extrapolated from the historical overview provided in Section 3; b. Section 6 and Section 7 include options for repurposing archaeological finds; c. Aboriginal cultural and heritage values have informed Section 4, Section 6 and Section 7; d. Section 6 includes a discussion of audience. Section 5 includes potential devices. Possible locations for interpretation will form part of the detailed interpretation plan; e. preparation of the draft strategy involved engagement with local councils to meet this requirement, as outlined in Section 1. The relevant guidelines considered are also noted in Section 1; f. Section 2 and Section 6 include discussion on existing heritage interpretation in the vicinity of Sydney Metro West stations (including Parramatta metro station in Section 6.10). This has considered State Significant Development projects and other SSI projects.
C-B7	Sustainability The CSSI must achieve a minimum Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability rating of 75 (Version 1.2) (or equivalent level of performance using a demonstrated equivalent rating tool) or a 5-Star Green Star rating (or equivalent level of performance using a demonstrated equivalent rating tool).	This has been committed to as a performance outcome for this proposal in Section 20.7 (Proposed measures to avoid or minimise impacts).
C-B8	Biodiversity and Trees As many mature trees as practicable must be retained. In addition, within ten (10) years of the date of this approval or no later than the commencement of operation of the CSSI (whichever is earlier) there must be a net increase in the number of mature trees provided at a ratio of 2:1.	Vegetation removal has been minimised where possible for this proposal. This proposal includes a commitment to replace trees at a ratio of 2:1 and achieve no net overall loss in tree canopy within 10 years of the date of approval for the Concept or no later than the commencement of operations (whichever is earlier) (refer to Section 20.7 (Proposed measures to avoid or minimise impacts)).

No.	Concept condition of approval relevant to this proposal	Where addressed in this Environmental Impact Statement
C-B9	Biodiversity and Trees The CSSI must result in an increase in tree canopy coverage.	This proposal includes a commitment to replace trees at a ratio of 2:1 within 10 years of the date of approval for the Concept or no later than the commencement of operations (whichever is earlier) and achieve an increase in tree canopy coverage (refer to Section 20.7 (Proposed measures to avoid or minimise impacts)).
С-В10	Biodiversity and Trees Parts of Duck Creek and A'Becketts Creek that remain open channels at the Clyde Stabling and Maintenance Facility site must be rehabilitated and / or renaturalised before operation of the CSSI commences. Only species that are representative of PCT 920 (Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion) must be used in the revegetation of the riparian zone along the open channels to Duck Creek and A'Becketts Creek.	This proposal would include rehabilitation of Duck Creek and A'Beckett's Creek where they runs through or adjacent to the Sydney Metro site to meet the requirements of this condition. The indicative rehabilitation approach is provided in Section 17.3.3 (Riparian rehabilitation) of this Environmental Impact Statement. A Rehabilitation Management Plan would be prepared to guide the rehabilitation of the waterways and provide further detail on the approach to rehabilitation.
		One of the objectives of the waterway rehabilitation would be to facilitate the expansion of mangroves (Plant Community Type (PCT) 920) as needed to fill their full potential as an ecological niche within the site. Revegetation would be undertaken with species that are representative of PCT 920 and supplemented with additional species as required to support the success of the revegetation. Sydney Metro will seek an administrative modification to the Concept approval to enable the use of additional species.
C-B11	Climate Change The CSSI must be designed to withstand known impacts associated with climate change to year 2100.	This has been committed to as a performance outcome for this proposal in Section 20.7 (Proposed measures to avoid or minimise impacts) of this Environmental Impact Statement. Climate change risk treatments would be confirmed and incorporated into the detailed design for this proposal. Section 18.4 (Sustainability, climate change and greenhouse gas) includes an overview of the types of measures proposed to improve resilience to climate change.