Australian Government

NSW GOVERNMENT

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Sydney Metro – Western Sydney Airport

Appendix A
Environmental assessment requirements

Secretary's Environmental Assessment Requirements

The Planning Secretary's Environmental Assessment Requirements (July 2020) (SEARs) and where these requirements are addressed in this Environmental Impact Statement are outlined in Table 1 and Table 2. Some of the SEARs outlined in Table 1 and Table 2 make reference to requirements specified in the Scoping Report. All Scoping Report requirements and where they are addressed in this Environmental Impact Statement are outlined in Table 3 of this appendix. The Commonwealth assessment requirements for both on-airport and off-airport are included in Appendix J (EPBC Act Draft Environmental Impact Assessment of on-airport proposed action (EPBC 2019/8541)) and Appendix K (EPBC Act Draft Environmental Impact Assessment of off-airport proposed action (EPBC 2020/8687)).

Table 1 Secretary's Environmental Assessment Requirements - General

Desired Performance Outcome	Requirement	Current Guidelines[1]	Where addressed in the Environmental Impact Statement
1. Environmental Impact Assessment Process The process for assessment of the proposal is transparent, balanced, well focussed and legal.	1. The Environmental Impact Statement must be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation).	EPBC Act Environment Assessment Process (SEWPAC, 2010)	Refer to Table 4 of this appendix
	2. It is the Proponent's responsibility to determine whether the project needs to be referred to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) for an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). If DAWE has determined that an approval is required under the EPBC Act, supplementary environmental assessment requirements may need to be issued to ensure a streamlined assessment under an Accredited Assessment can be achieved.		Technical Paper 3 (Biodiversity Development Assessment Report) Appendix K (EPBC Act Draft Environmental Impact Assessment of off-airport proposed action (EPBC 2020/8687))
	3. The onus is on the Proponent to ensure legislative requirements relevant to the project are met.		Chapter 4 (Planning and assessment process) and Appendix B (Statutory approvals framework) describe the approvals required for the project, while chapters 9 to 24 provide additional details of legislation applicable to specific environmental issues.
2. Environmental Impact Statement The project is described in sufficient detail to enable clear understanding that the	1. The EIS must include, but not necessarily be limited to, the following: (a) executive summary;		Executive Summary
	(b) a description of the project, including key components and activities (including ancillary components and activities) required to construct and operate it including: – project overview		Chapter 7 (Project description – operation)

[1] Guidelines listed are the current list of guidelines that may be applicable to a CSSI project. It is the Proponents responsibility to identify, and justify, which guidelines have been applied to a specific project.

Desired Performance Outcome	Requirement	Current Guidelines[1]	Where addressed in the Environmental Impact Statement
project has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse environmental, social and economic impact, including its cumulative impacts.	– site and route locations (including use of plans) – scope of works to construct the project, including key activities, description of methodologies, working hours, indicative plant and equipment to be used – timing of key construction activities – acquisition of privately owned, council and Crown land.		Chapter 8 (Project description – construction) Chapter 19 (Land use and property)
	(c) a statement of the objective(s) of the project; (d) summary of the strategic need for the project with regard to its critical State significance and relevant State Government policy;		Chapter 2 (Project need and justification)
	(e) an analysis of any feasible alternatives to the project.[2]; (f) a description of feasible options within the project.[3]; (g) a description of how alternatives to and options within the project were analysed to inform the selection of the preferred alternative / option. The description must contain sufficient detail to enable an understanding of why the preferred alternative to and options(s) within the project were selected; (h) a concise description of different construction methods that were analysed and preferred methods;		Chapter 6 (Project development and alternatives)
	(i) a concise description of the general biophysical and socio-economic environment and changing land use in the area that is likely to be impacted by the project (including offsite impacts). Elements of the environment that are not likely to be affected by the project do not need to be described;		Chapters 9 (Transport) to Chapter 23 (Hazard and risk)
	(j) a demonstration of how the project design has been developed to avoid or minimise likely adverse impacts;		Chapter 6 (Project development and alternatives)
	(k) an assessment of key issues as identified in the risk assessment included in the scoping application and as amended in the 'Assessment of Key Issues' performance outcome;		Chapters 9 (Transport) to Chapter 17 (Sustainability, climate change and greenhouse gas)
	(l) a statement of and the quantification of outcomes and performance criteria the proponent will achieve for each key issue; (m) measures to avoid, minimise or offset impacts must be linked to the impact(s) they treat, so it is clear which measures will be applied to each impact;		Chapter 27 (Synthesis)

[2] Alternatives to a project are different projects which would achieve the same project objective(s) including the consequences of not carrying out the project. For example, alternatives to a road project may be a rail project in the same area and alternate routes for the road.

[3] Options within the project are variations of the same project. For example, options within a road project could be design of an intersection; the location or design of a bridge; locations for a vent stack.

Desired Performance Outcome	Requirement	Current Guidelines[1]	Where addressed in the Environmental Impact Statement
	(n) consideration of the interactions between measures proposed to avoid or minimise impact(s), between impacts themselves and between measures and impacts;[4]		Chapters 9 (Transport) to Chapter 24 (Cumulative impacts)
	(o) an assessment of the relevant cumulative impacts of the project taking into account other projects that have been approved but where construction has not commenced, projects that have commenced construction, and projects that have recently been completed;		Chapter 24 (Cumulative impacts)
	(p) statutory context of the project as a whole, including: - how the project meets the provisions of the *Environmental Planning & Assessment Act 1979* and EP&A Regulation; - a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out;		Chapter 4 (Planning and assessment process) and Appendix B (Statutory approvals framework)
	(q) a chapter that synthesises the environmental impact assessment and provides: - a succinct but full description of the project for which approval is sought; - a description of any uncertainties that still exist around design, construction methodologies and/or operational methodologies and how these will be resolved in the next stages of the project; - a compilation of the impacts of the project that have not been avoided; - a compilation of the proposed measures associated with each impact to avoid or minimise (through design refinements or ongoing management during construction and operation) or offset these impacts; - a compilation of the outcome(s) and criteria the proponent will achieve and how these will be monitored; and - the reasons justifying carrying out the project as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts.		Chapter 27 (Synthesis)
	(r) relevant project plans, drawings, diagrams in an electronic format that enables integration with mapping and other technical software.		Chapter 7 (Project description – operation) to Chapter 24 (Cumulative impacts)

[4] Measures proposed to avoid or minimise one impact may cause an unintended impact on another issue. Therefore these impacts and their interactions need to be analysed and resolved where possible.

Desired Performance Outcome	Requirement	Current Guidelines[1]	Where addressed in the Environmental Impact Statement
	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. Assessment of Key Issues* Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact. * Key issues are nominated by the Proponent in the CSSI project application and by the Department in the SEARs. Key issues need to be reviewed throughout the preparation of the EIS to ensure any new key issues that emerge are captured. The key issues identified in this document are not exhaustive but are key issues common to most CSSI projects.	1. The level of assessment of likely impacts must be proportionate to the significance of, or degree of impact on, the issue, within the context of the proposal location and the surrounding environment. The level of assessment must be commensurate to the degree of impact and sufficient to ensure that the Department and other government agencies are able to understand and assess impacts.		Chapters 9 (Transport) to Chapter 24 (Cumulative impacts)
	2. For each key issue the Proponent must: (a) describe the biophysical and socio-economic environment, as far as it is relevant to that issue, including substantiated baseline data that is reflective of current guidelines where relevant; (b) describe the legislative and policy context, as far as it is relevant to the issue; (c) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), the impacts of concurrent activities within the proposal and cumulative impacts (parallel and sequential) with other projects; (d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies); (e) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); (f) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures; and (g) measures to monitor the avoidance, minimisation and offsetting of impacts to ensure quantified outcomes and criteria are met.		Chapter 6 (Project development and alternatives), Chapter 9 (Transport) to Chapter 17 (Sustainability, climate change and greenhouse gas), Chapter 27 Synthesis,
	3. Where multiple reasonable and feasible options to avoid or minimise impacts are available, they must be identified and considered and the proposed measure justified taking into account the public interest.		Chapter 9 (Transport) to Chapter 17 (Sustainability, climate change and greenhouse gas)

Desired Performance Outcome	Requirement	Current Guidelines[1]	Where addressed in the Environmental Impact Statement
4. Consultation The project is developed with meaningful and effective engagement during project design and delivery.	1. The project must be informed by consultation, including with relevant local, State and Commonwealth government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses and the community. 2. The Proponent must document the consultation process and demonstrate how the project has responded to the inputs received. 3. The Proponent must describe the timing and type of community consultation proposed during the design and delivery of the project, the mechanisms for community feedback, the mechanisms for keeping the community informed, and procedures for complaints handling and resolution.		Chapter 5 (Stakeholder and community engagement), Appendix C (Overarching Community Communications Strategy) and Appendix D (Stakeholder and community engagement)

Table 2 Secretary's Environmental Assessment Requirements – Key issues

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
5. Design, Place and Movement The provision of successful places – the project is integrated with and enhances the environment where it is located, including improved accessibility and connectivity for communities. The project contributes to greener places through the enhancement and provision of green infrastructure.	1. A **design led process** that is informed, collaborative and iterative, which: (a) utilises good design processes (such as Design Excellence and Design Review); (b) utilises design experts and multidisciplinary teams; (c) considers designing with Country; (d) involves the community, user groups and other stakeholders.	Better Placed – An integrated design policy for built environment of New South Wales (Government Architect NSW, 2017) Better Placed – Aligning Movement and Place – Outline for understanding places in relation to movement infrastructure (Government Architect of NSW, 2019) Better Placed – Design Guide for Heritage - Implementing the Better Placed policy for heritage buildings, sites, and precincts (Government Architect of NSW, 2019) Sydney Green Grid – Spatial Framework and Project Opportunities	A description of the design development process including stakeholder consultation is provided in Section 7.1.3. The Designing with Country discussion paper has been considered in Section 7.3.2, and Section 3.10 of Technical Paper 5 (Aboriginal heritage).
	2. **Place design principles** that are reflective of the design objectives in Better Placed, including a focus on: (a) Performance – sustainable, adaptable and durable; (b) People – safe, comfortable and liveable (such as crime prevention through environmental design); (c) working- functional, efficient and fit for purpose; and (d) value – creating and adding value.		The design principles for the project are outlined in Section 7.1.3.
	3. **Place designs, actions and outcomes** for the project including in relation to: (a) stations as places; (b) active and public transport; (c) views and vistas; (d) interactions with airport operations (such as lighting).		Designs of the project elements are described in Chapter 7 (Project description – operation). Potential construction and operational impacts of the project on

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
	This should address maintenance of infrastructure, place and residual land; and processes to refine design (as per point 1).	(Tyrrell Studio and Office of the Government Architect 2017) Draft Greener Places – Establishing an urban Green Infrastructure policy for New South Wales (Government Architect NSW, 2017) Architect NSW – Draft for discussion, 2017) NSW State Design Review Panel Pilot Program (Government Architect, 2018) Local Character and Place Guideline (DPE, 2019) Designing with Country (GANSW, 2020)	views and vistas are assessed in Chapter 20 (Landscape and visual). Interactions with airport operations is addressed in Chapter 19 (Land use and property and Chapter 23 (Hazard and risk)
	4. **Green infrastructure design principles** that are reflective of the principles in Draft Greener Places and The Sydney Green Grid.		Green infrastructure design principles are considered in Section 2.2 of Technical Paper 9 (Landscape and visual) and Chapter 6 (Project development and alternatives)
	5. **Green infrastructure designs, actions and outcomes** for the project including in relation to: (a) green infrastructure, including enhancement of open space that supports recreation, biodiversity and waterway health; (b) how the project will achieve a net increase in tree numbers and canopy within proximity of the impacted area. (This relates to the number of trees to be cleared by the project (a tree is defined by Australian Standard 4970) that will not be covered by a biodiversity offset strategy). (c) how use of a range of local species in landscaping will improve and augment biodiversity outcomes. Visual representations of the project from key locations to illustrate the project must be provided.		Demonstration of how the project will not preclude future provision of open space and will achieve a net increase in tree numbers and canopy is included in Appendix E (Design Guidelines). Visual representations of the project are shown as photomontages in Section 20.4. Artist's impressions of project elements are also presented in Chapter 7 (Project description – operation).
6. Transport and Traffic Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained.	1. **Construction transport and traffic** (vehicle, pedestrian and cyclists), Including: (a) commitments made in Section 8.2.3 of the Scoping Report: (b) private property access; and (c) construction worker parking and the availability of public parking in residential and commercial/business districts.	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2007) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002) Cycling Aspects of Austroads Guides (Austroads, 2014)	Private property access impacts are discussed in Section 9.5.1. Construction worker parking and availability of public parking in residential and commercial/ business districts is discussed in Section 9.5.1.
	2. **Operational transport**, including: (a) commitments made in Section 8.2.3 of the Scoping Report; (b) access routes to stations and interchanges and anticipated demand for kiss and ride facilities, active transport facilities and bus services;		Refer to Table 3 of this appendix for Scoping Report requirements. Access routes to stations and interchanges and anticipated demands are discussed in Section 9.6.1 and Section 9.6.2.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and future transport corridors.	(c) severance of current and integration of potential future local movement corridors;	NSW Bicycle Guidelines v 1.2 (RTA, 2005) Planning Guidelines for Walking and Cycling (DIPNR, 2004)	Severance of current and integration of potential future local movement corridors is discussed in Section 9.6.1 and Section 9.6.2.
	(d) permanent modification to the existing road network, public transport and active transport facilities; and		Permanent modification to the existing road network, public transport and active transport facilities is discussed in Section 9.5.
	(e) property and business access and on-street parking in existing commercial, industrial and residential areas.		Property and business access and on-street parking in existing commercial, industrial and residential areas in Section 9.6.1 and Section 9.6.2.
7. Noise and Vibration Construction noise and vibration (including airborne noise, ground-borne noise and blasting) is effectively managed to minimise adverse impacts on acoustic amenity. Increases in noise emissions and vibration affecting nearby properties and other sensitive receivers during operation of the project are effectively managed to protect the amenity and well-being of the community. Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise	1. **Construction noise and vibration**, including: (a) commitments made in Section 8.3.3 of the Scoping Report; (b) in accordance with relevant NSW noise and vibration guidelines;	*Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) *German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures* *Assessing Vibration: a technical guideline* (DEC, 2006) *Interim Construction Noise Guideline* (DECCW, 2009) *Noise Policy for Industry* (EPA, 2017) Rail Infrastructure Noise Guideline (EPA, 2013) NSW Road Noise Policy (DECCW, 2011)	Refer to Table 3 of this appendix for Scoping Report requirements. The construction assessment was undertaken in accordance with relevant NSW noise and vibration guidelines. These are outlined in Section 10.3. The relevant criteria identified in these guidelines is also outlined in Section 10.4.
	(c) the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).		Heritage items have been identified in Section 10.4.8 and potential impacts considered in Section 10.6.1. Potential vibration impacts on Aboriginal heritage items is also assessed in Section 13.6.1. Potential vibration impacts on the structural integrity of non-Aboriginal heritage items is assessed in Section 12.6 and Section 12.7.
	2. Demonstration that **blast impacts** can comply with the current guidelines, if blasting is required.		Blasting is not currently proposed as part of the Project. As such, demonstration of these impacts has not been undertaken as part of this assessment.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage.	3. **Operation noise and vibration**, including: (a) commitments made in Section 8.3.3 of the Scoping Report; (b) in accordance with relevant NSW noise and vibration guidelines;		The operational assessment was undertaken in accordance with relevant NSW noise and vibration guidelines. These are outlined in Section 10.3. The relevant criteria identified in these guidelines is also outlined in Section 10.4.
8. Biodiversity The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity. Offsets and/or supplementary measures are assured which are equivalent to any residual impacts of project construction and operation.	1. Where **biodiversity** impacts are not addressed through relevant strategic conservation planning, the assessment must be undertaken in accordance with s7.9 of the Biodiversity Conservation Act 2016 (BC Act), the Biodiversity Assessment Method (BAM), and be documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must: (a) include information in the form detailed in s6.12 of the BC Act, cl6.8 of the Biodiversity Conservation Regulation 2017 and the BAM; (b) be submitted with all digital spatial data associated with the survey and assessment as per Appendix 10 of the BAM; (c) be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the BC Act; and (d) include details of the measures proposed to address offset obligations.	Biodiversity Assessment Method (OEH, 2017) Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013 (DPI, 2013) Threatened Species Survey and Assessment Guidelines Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003) Aquatic Ecology in Environmental Impact Assessment – EIA Guideline (Marcus Lincoln Smith 2003) Freshwater threatened species distribution maps (www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps	The Biodiversity Development Assessment Report (BDAR) (refer to Technical Paper 3 (Biodiversity Development Assessment Report)) has been prepared in accordance with s7.9 of the BC Act and includes information detailed in s6.12 of the Act, cl6.8 of the *Biodiversity Conservation Regulation 2017* and the BAM. The team who prepared the BDAR, accredited under the BAM, are listed in Table 3.1 of Technical Paper 3 (Biodiversity Development Assessment Report). An offset strategy is presented in Section 12.2.3 of Technical Paper 3 (Biodiversity Development Assessment Report).
	2. Impacts on biodiversity values not covered by relevant strategic conservation planning or the BAM must be assessed, such as 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).		Impacts on aquatic species listed under the FM Act are addressed in Section 11.5 and 11.6.
	3. The EIS must identify whether the project, or any component of the project, would be classified as a **Key Threatening Process (KTP)** in accordance with the listings in the BC Act, FM Act and the *Environmental Protection* and the *Biodiversity Conservation Act 2000* (EPBC Act).		The KTP which apply to the project are discussed in Section 11.6.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
9. Heritage The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of items of environmental heritage and Aboriginal objects and places. The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage and Aboriginal objects and places.	1. Identify direct and/or indirect impacts (including cumulative impacts) to the heritage significance of: (a) **Aboriginal places, objects and cultural heritage values**, as defined under the *National Parks and Wildlife Act 1974* and in accordance with the principles and methods of assessment identified in the current guidelines; (b) **environmental heritage**, as defined under the *Heritage Act 1977*; and (c) items listed on the State, National and World Heritage lists; (d) heritage items and conservation areas identified in environmental planning instruments applicable to the project area; (e) heritage items in Section 170 Heritage and Conservation Register; (f) potential heritage items and archaeological potential	Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) Aboriginal Cultural Heritage Consultation requirements for proponents (DECCW, 2010) Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010) NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998) Aboriginal site recording form Aboriginal site impact recording form Aboriginal Heritage Information Management System site registration form Care agreement application form Criteria for the assessment of excavation directors (NSW Heritage Council, 2011) NSW Heritage Manual (Heritage Office and Department of Urban	Potential direct and/or indirect impacts on Aboriginal heritage including archaeological potential are assessed in Section 13.5. Potential direct and/or indirect impacts on non-Aboriginal heritage including potential heritage items and areas of archaeological potential are assessed in Section 12.5 and Section 12.6. Potential cumulative impacts to heritage are assessed in Chapter 24 (Cumulative impacts).
	2. Where impacts to **State or locally significant heritage items** are identified, the assessment must include: (a) relevant commitments made in Section 8.3.3 of the Scoping Report; (b) consistency of the project against conservation policies of any relevant conservation management plan; (c) 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); and		Refer to Table 3 of this appendix for Scoping Report requirements. A consistency review of the project against relevant conservation policies and management plans is provided in Chapter 6 of Technical Paper 4 (Non-Aboriginal heritage). Relevant conservation management plans are listed in Section 12.4.2. The qualifications of the team who led archaeological investigations for this assessment are outlined in section 1.6 of Technical Paper 4 (Non-Aboriginal heritage).
	3. Where harm to historical archaeology is identified, the assessment must include an appropriate mitigation strategy. In the event that harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology must be prepared to guide excavation.		Potential impacts on Aboriginal archaeology are assessed in Section 13.5. Additional field work including test excavation for the Aboriginal heritage assessment is described in Section 13.3.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
		Affairs and Planning, 1994) Assessing Heritage Significance (NSW Heritage Office, 2001) The Australia ICOMOS Burra Charter Archaeological Assessment (Heritage Office & Department of Urban Affairs and Planning, 1996) Assessing Significance for Historical Archaeological Site and 'Relics' (Heritage Branch, Department of Planning, 2009) Designing with Country (GANSW, 2020) Better Placed – Design Guide for Heritage – Implementing the Better Placed policy for heritage building, sites, and precincts (Government Architect of NSW, 2019) Heritage principles in the Draft Western Sydney Aerotropolis Plan – specifically LV8 & LV9 (Western Sydney Planning Partnership, 2019)	Mitigation measures to guide test excavation activities are outlined in Section 13.7. Archaeological Research Design report in preparation.
	4. Where impacts to **Aboriginal places, objects and cultural heritage values** are identified, the assessment must include the preparation of an ACHAR and relevant commitments in Section 8.6.3 of the Scoping Report.		The Aboriginal Cultural Heritage Assessment Report forms Technical Paper 5 (Aboriginal heritage). Chapter 13 (Aboriginal heritage) provides a summary of Technical Paper 5 (Aboriginal heritage). Refer to Table 3 of this appendix for Scoping Report requirements.
	5. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010).		The qualifications of the team who led archaeological investigations for this assessment are outlined in section 1.5 of Technical Paper 5 (Aboriginal heritage).
	6. Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the current guidelines.		Consultation carried out for the Aboriginal heritage assessment is described in Section 13.3.
10. Flooding The project minimises adverse impacts on flooding characteristics.	1. Assessment of **flood behaviour** during construction and operation for a range of modelled flood events up to the probable maximum flood (taking into account climate change) including: (a) any detrimental increases in the potential flood affectation of other properties, assets and infrastructure;	NSW Government's Floodplain Development Manual (Department of Natural Resources, 2005)	Impacts on flood levels, velocity and duration for properties, assets and infrastructure surrounding the project are addressed in Section 14.5 and 14.6

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.	(b) consistency (or inconsistency) with applicable Council floodplain risk management plans;	PS 07-003 New guideline and changes to section 117 direction and EP&A Regulation on flood prone land Practical Consideration of Climate Change - Flood risk management guideline (DECC, 2007)	Consistency with applicable Council floodplain risk management plans is discussed in Section 14.6.1
	(c) compatibility with the flood hazard of the land;		Compatibility with the flood hazard of the land is discussed in Section 14.5 and Section 14.6
	(d) compatibility with the hydraulic functions of flow conveyance in flood ways and storage areas of the land;		Hydrology impacts are addressed in Section 14.5 and 14.6
	(e) downstream velocity and scour potential;		Downstream velocity and scour potential are included in Section 14.5 and 14.6
	(f) impacts the development may have upon existing community emergency management arrangements for flooding; and		Impacts upon existing community emergency management arrangements are discussed in Section 14.6
	(g) any impacts the development may have on the social and economic costs to the community as consequence of flooding.		Social and economic costs of flooding are discussed in Section 14.6
11. Water - Hydrology Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised. The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems including estuarine and marine water (if applicable) are maintained (where values are achieved) or improved and maintained (where	1. Assessment of **surface and groundwater resources** (including reliance by users and for ecological purposes) likely to be impacted by the project, including rivers, streams, estuaries and wetlands as per the Biodiversity Assessment Method (BAM), groundwater and groundwater dependent ecosystems and an assessment of stream order.	Framework for Biodiversity Assessment – Appendix 2 (OEH, 2014) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) NSW Aquifer Interference Policy (DPI, 2012) Risk assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water, 2012)	The surface and groundwater resources likely to be impacted by the project are addressed in Section 14.4 and Section 4.2 of Technical Paper 7 (Groundwater)
	2. Assessment of **surface and groundwater hydrology** in accordance with the current guidelines, including: (a) natural processes within rivers, wetlands, estuaries, and floodplains that affect the health of the fluvial, riparian, estuarine system and landscape health (such as modified discharge volumes, durations and velocities), aquatic connectivity and access to habitat for spawning and refuge		The assessment of surface and groundwater hydrology is provided in Section 14.5 and 14.6, Section 11.5 and 11.6 and Section 15.5 and 15.6
	(b) impacts from any permanent and temporary interruption of groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, ecosystems and species, groundwater users and the potential for settlement, impacts on connectivity between groundwater sources (aquifers);		Impacts from any permanent and temporary interruption of groundwater flow are addressed in Section 15.5 and 15.6. Implications for groundwater dependent surface flows, ecosystems and species is discussed in Section 11.5 and 11.6.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
values are not achieved). Sustainable use of water resources.	(c) changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources	Controlled Activities on Waterfront Land (DPI, 2018) Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines (WaterNSW, 2020)	Changes to environmental water availability and flows are addressed in Section 15.5 and 15.6
	(d) direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses		Direct or indirect increases of erosion, siltation, removal of riparian vegetation or a reduction in the stability of river banks or watercourses is addressed in Section 14.5 and 14.6
	(e) minimising the effects of proposed stormwater and wastewater management during construction and operation on natural hydrological attributes (such as volumes, flow rates, management methods and re-use options) and on the conveyance capacity of existing stormwater systems where discharges are proposed through such systems; and		Proposed stormwater and wastewater management is provided in Section 14.7
	(f) water take (direct or passive) from all sources with estimates of annual volumes during construction.		Water take during construction is discussed in Section 15.5 and Section 5.4 of Technical Paper 7 (Groundwater)
	3. Mapping along the tunnel alignment to show interaction of the proposal with the hydrological resource.		Mapping showing the interaction with the hydrological resource is provided in Appendix A of Technical Paper 7 (Groundwater)
12. Water - Quality The project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time where they are currently not being achieved, including downstream of the project to the extent	1. Assessment of **Water Quality**, including: (a) identifying the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated trigger values or criteria for the identified environmental values;	NSW Water Quality and River Flow Objectives at http://www.environment.nsw.gov.au/ieo/ Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) Australian and New Zealand Guidelines for Fresh Water Quality (2018) Approved Methods for the Sampling and Analysis of	NSW Water Quality Objectives and environmental values for the receiving waters relevant to the project are addressed in Section 14.3.1
	(b) identify and estimate the quality and quantity of pollutants that may be introduced into the water cycle by source and discharge point and describe the nature and degree of impact that any discharge(s) may have on the receiving environment, including consideration of all pollutants that pose a risk of non-trivial harm to human health and the environment;		The identification and estimation of the quality and quantity of pollutants is addressed in Section 14.5 and 14.6
	(c) identify the rainfall event that the water quality protection measures will be designed to cope with;		The rainfall event that the water quality protection measures will be designed to cope with is identified in Section 14.7

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
of the project impact including estuarine and marine waters (if applicable).	(d) assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes;	Water Pollutants in NSW (DECC, 2008) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008)	Water quality impacts are addressed in Section 14.5 and 14.6
	(e) demonstrate how construction and operation of the project will, to the extent that the project can influence, ensure that: – where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and – where the NSW WQOs are not currently being met, activities will work toward their achievement over time;		Performance outcomes related to how the project will meet NSW WQOs are provided in Section 14.7
	(f) justify, if required, why the WQOs cannot be maintained or achieved over time;		Performance outcomes related to achieving NSW WQOs are provided in Section 14.7
	(g) demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented;		Measures to avoid or minimise water quality impacts are addressed in Section 14.7
	(h) identify sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments; and		Sensitive receiving environments are identified in Section 14.5 and 14.6
	(i) identify proposed monitoring locations, monitoring frequency and indicators of surface and groundwater quality.		Surface and groundwater monitoring are addressed in Section 14.7 and 15.7.3
13. Soils and Contamination The environmental values of land, including soils, subsoils and landforms, are protected. Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	1. Verify the risk of **acid sulfate soils** (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, and in the area likely to be impacted by, the project.	Acid Sulfate Soils Assessment Guidelines (DoP, 2008) Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee, 1998) Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land, (DUAP & EPA, 1998) Guidelines for Consultants Reporting on Contaminated Sites (OEH, reprinted 2011)	Acid sulfate soils risks are addressed in Section 16.5.
	2. **Land contamination** and identify if remediation of the land is required, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where assessment and/or remediation is required, the EIS must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.		Existing contamination and potential ecological and human health risks are addressed in Sections 16.5.1 and 16.5.2, and in Section 4.1.7 and 4.2.7 of Technical Paper 8 (Contamination). Further assessment and/or remediation required for areas of environmental concern is outlined in Section 16.7.2.
	3. Determine the presence, extent and severity of **soil salinity** within the project area and the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology and native vegetation.		The presence, extent and severity of salinity, and the potential for salinity in groundwater and surface water, is

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
		Guidelines for the NSW Site Auditor Scheme (DEC, 2006) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015) Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets (http://www.environment.nsw.gov.au/salinity/solutions/urban.htm) which includes *Site Investigations for Urban* Salinity (DLWC, 2002) Landslide risk management guidelines presented in Australian Geomechanics Society (2007) Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) Other guidelines made or approved under section 105 of the *Contaminated*	addressed in Section 14.5 and Section 16.5. The impacts of the project on soil salinity and how it may affect groundwater and hydrology is assessed in Sections 14.5, 15.5 and 16.5 for construction, and Sections 14.6, 15.6 and 16.6 for operation.

Key Issue and Desired Performance Outcome	Requirement (specific assessment requirements in addition to the general requirement above)	Current Guidelines	Where addressed in the Environmental Impact Statement
		Land Management Act 1997	
14. Sustainability and Climate Change Risk The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources. Conservation of natural resources is maximised. The project is designed, constructed and operated to be resilient to the future impacts of climate change.	1. The **sustainability of the project** in accordance with the Infrastructure Sustainability Council of Australia (ISCA) *Infrastructure Sustainability Rating Tool* and recommend an appropriate target rating for the project.	Infrastructure Sustainability Rating Tool Scorecard relating to energy and carbon for large infrastructure projects, ISCA Australian Government's Climate Change Impacts and Risk Management – A Guide for Business and Government (2006) AS/NZS 3100:2009 Risk Management – Principles and Guidelines	The sustainability approach for the project is outlined in Section 17.3.1
	2. The risk and vulnerability of the project to **climate change** in accordance with the current guidelines.		The climate change risk assessment for the project is summarised in Section 17.5
15. Other Issues	Social, economic, air quality, waste and resources, hazards and risk, greenhouse gas assessments should be undertaken in accordance with the commitments in section 8 and section 9 of the Scoping Report.	National Airports Safeguarding Framework (NASF) (DITRDC, 2019)	Refer to Table 3 of this appendix for Scoping Report requirements

Scoping Report requirements

The SEARs include references to the assessment requirements set out in the Sydney Metro – Western Sydney Airport Scoping Report (Sydney Metro, 2020). These requirements and where they are addressed in this Environmental Impact Statement, are outlined in Table 3.

Table 3 Scoping Report requirements (off-airport)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
Transport	A traffic and transport technical report will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the report: • *Guide to Traffic Management – Part 3 Traffic Studies and Analysis* (Austroads, 2007) • *Guide to Traffic Generating Developments Version 2.2* (RTA, 2002) • *NSW Bicycle Guidelines v1.2* (RTA, 2005). The methodology for the assessment will include: • background document and data review including: — a review of background documentation relevant to the assessment, including traffic assessments for other committed and funded transport infrastructure projects with publicly available traffic assessment documents — establishment of the current traffic and transport environment in the study area — identify key traffic and transport metrics (e.g., road traffic volumes, mid-block and intersection levels of service) — review existing baseline traffic data — determine future year traffic and transport operating conditions with and without the Project (years 2026 and 2036) — consultation with Transport for NSW and other relevant government agencies to confirm the approach to the assessment. • an assessment of construction traffic impacts including: — determination of the transport impacts during the construction phases of the Project, including traffic, on-street parking impacts, bus operations, spoil movements, pedestrians, park & ride facilities and active transport — assessment of construction impacts of the Project on the surrounding road network for a peak construction year (2022 or 2023). This would include SIDRA intersection modelling at key existing intersections around the proposed construction sites during the AM and PM weekday peak hours — identification of the need to close, divert or reconfigure the road network to facilitate the construction of the Project — assessment of cumulative impacts of the construction of the Project with other major infrastructure projects in the study area. • an assessment of operational traffic impacts including: — determination of future year traffic and transport operating conditions with and without the Project e.g. road layouts, kiss and ride facilities, park and ride facilities, connecting public transport (bus) services, pedestrian and cycle links — an assessment of the operational impacts of the Project on the surrounding road network for two future operational year scenarios including opening year (2026) and future year (2036). This would include undertaking	Chapter 9 (Transport) and Technical Paper 1 (Transport)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	SIDRA intersection modelling at key existing intersections around the station precincts and stabling and maintenance facility during the AM and PM weekday peak hours to determine the level of service. The future year assessments would take into consideration planned future road infrastructure affected by the operation of the stations where known — qualitative assessment of cumulative impacts of the operation of the Project with other major infrastructure projects in the study area — identify pedestrian and cycle network standards to be incorporated into the station precinct designs.	
Noise and vibration	A noise and vibration technical report will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the report: • *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) • *Assessing Vibration: a technical guideline* (DEC, 2006) • *Interim Construction Noise Guideline* (DECCW, 2009) • *Noise Policy for Industry* (EPA, 2017) • *Sydney Metro Construction Noise and Vibration Strategy* (Sydney Metro, 2018) • *Rail Infrastructure Noise Guideline* (EPA, 2013) • The Transport for NSW *Environmental Noise Management Manual* 2001 • *NSW Road Noise Policy* (DECCW, 2011) • *Development Near Rail Corridors and Busy Roads – Interim Guideline* (DoP, 2008) • The Transport for NSW *Noise Mitigation Guideline* 2015 • The Transport for NSW *Noise Criteria Guideline* 2015 • *German Standard DIN 4150-3: Structural Vibration – effects of vibration on structures* • *Airports (Environment Protection) Regulations, 1997 Schedule 4—Excessive noise—guidelines.* The methodology for the assessment will include the following: • noise monitoring and site survey including: — review of the off-airport environment to determine the nearest noise sensitive receivers and define Noise Catchment Areas (NCAs) — undertake a combination of attended and unattended noise and vibration monitoring to establish background and ambient noise levels — identify noise receiver types, land use (including known, planned land use) and existing noise mitigation • construction noise and vibration assessment including: — develop assessment criteria based on the background noise monitoring results — predict construction noise and vibration levels for major construction activities — assess noise and vibration levels in accordance with adopted assessment criteria — assess potential construction road traffic noise impacts — recommend mitigation strategies to control construction noise and vibration — a qualitative discussion on the potential cumulative construction noise impacts due to concurrent or subsequent construction on other committed major projects based on publicly available information. • operational rail airborne noise assessment including:	Chapter 10 (Noise and vibration) and Technical Paper 2 (Noise and vibration)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— determine noise trigger levels in accordance with relevant guidelines — develop an approach to consider future land use change and noise sensitive development that would be near the rail corridor — develop a 3D computer model in SoundPLAN (or equivalent) software of the existing and proposed noise environments — predict noise levels at sensitive receivers with and without the Project — assess the predicted noise levels at sensitive receivers and identify mitigation measures — a qualitative assessment of the cumulative impacts of rail operational noise with operational noise from other committed major projects based on publicly available information. • Operational rail ground-borne noise and vibration assessment including: — identify noise and vibration sensitive receivers including residential, heritage items, utilities and other sensitive structures in the Project area — develop an operational rail ground-borne noise and vibration model — predict and assess operational rail ground-borne noise and vibration levels — where exceedances of the ground-borne noise and vibration criteria are identified, recommend appropriate mitigation measures — identify residual impacts. • operational noise and vibration assessment for stabling and maintenance facility, stations and substations including: — confirm the noise trigger levels applicable to the proposed fixed infrastructure based on relevant guidelines — identify a list of noise sources — develop a 3D computer noise model for the likely industrial noise sources associated with the fixed infrastructure — predict noise levels at sensitive receivers due to the proposed fixed infrastructure and assess the predicted noise levels at sensitive receivers against the established trigger levels — identify appropriate reasonable and feasible noise mitigation — identify residual impacts. • operational road traffic noise assessment including: — where there are expected changes in road traffic noise due to the Project (and a road traffic noise assessment is triggered), a road traffic noise assessment will be undertaken. It is anticipated that this will occur for new park and ride facilities (and associated new roads), and in instances of road closures and diversions to accommodate the new rail — a road noise model will be generated in accordance with relevant guidelines — assessment of equivalent and maximum noise levels would be undertaken as required by the Road Noise Policy (RNP) — assessment of predicted road noise levels and reasonable and feasible mitigation.	
Biodiversity	A biodiversity technical report will be prepared to assess potential impacts where the Project may affect land that has not been classified as 'certified' under the Biodiversity Certification Order. The following guidelines will be considered during the preparation of the report: • *Biodiversity Certification Order (2007)* • *Biodiversity Assessment Methodology* (BAM) 2017	Chapter 11 (Biodiversity) and Technical Paper 3 (Biodiversity Development Assessment Report)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	• *NSW Biodiversity Offsets Policy for Major Projects* (OEH,2014) • *Framework for Biodiversity Assessment* (OEH, 2014) • *Policy and Guidelines for Fish Habitat Conservation and Management – Update 2013* (DPI, 2013) • *EPBC Act Significant Impact Guidelines (Department of Sustainability, Environment, Water, Population and Communities October 2009) and* • *Environmental offset policy (Department of Sustainability, Environment, Water, Population and Communities October 2012).* The methodology for the assessment will include: • desktop searches and data review including: — a review of the potential threatened species, communities and/or populations that have the potential to occur — a review of the locally occurring broad scale vegetation mapping. • biodiversity surveys (provided site access is available) with reference to relevant Commonwealth species survey guidelines and the BAM, including: — validation of existing broad-scale vegetation mapping and align vegetation types recorded with corresponding Plant Community Types (PCTs) — determination of the nature and condition of vegetation identified within the study area — random meanders to identify and/or assess the likelihood of threatened species likely to utilise the study area — opportunistic observations of animals and signs of animal activity (e.g. feeding signs, scats) — parallel field traverses targeting threatened flora species in winter and spring — targeted Anabat and nocturnal surveys in areas of potential fauna habitat — targeted Cumberland Plain Snail searches — vegetation integrity surveys in accordance with the BAM to assess native vegetation, threatened ecological communities, vegetation integrity, and habitat suitability for threatened species. • preparation of a Biodiversity Development Assessment Report (BDAR) including: — calculation of the ecosystem credits and species credits that measure the impact of the development on biodiversity values — if required preparation of a Biodiversity Offset Strategy (BOS) — consideration of Condition 8 and 11 of the Sydney Region Growth Centres Biodiversity Certification Order (2007). • an assessment of impacts of the Project on MNES and Commonwealth land under the EPBC Act via the usual referrals and approvals processes under the EPBC Act, including specific reference to the Commonwealth policy for Strategic Assessments Policy Statement for EPBC Act Referrals *(Department of Sustainability, Environment, Water, Population and Communities, 2013)*.	
Non-Aboriginal heritage	A non-Aboriginal heritage impact assessment will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the report: • *Criteria for the assessment of excavation directors* (NSW Heritage Council 2011) • *NSW Heritage Manual* (Heritage Office and Department of Urban Affairs and Planning, 1994) • *Assessing Heritage Significance* (NSW Heritage Office, 2001) • *Statement of Heritage Impact* (NSW Heritage Office 2009)	Chapter 12 (Non-Aboriginal heritage) and Technical Paper 4 (Non-Aboriginal heritage)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	• *The Australia ICOMOS Burra Charter*. The methodology for the assessment will include the following: • desktop searches and background data review • field survey (provided site access is available) including: — focused survey on listed items and areas of archaeological potential identified in desktop searches and data review — a preliminary assessment of significance of potential unlisted items based on visual observations. • reporting including: — description of heritage items and assessment of significance (as per listings where relevant). A significance assessment under the NSW Heritage Council criteria and any requirements of the Commonwealth Environment Minister will be undertaken for unlisted items — preparation of an impact assessment including a preliminary archaeological impact assessment. Direct, indirect and cumulative impacts would be addressed — provision of mitigation measures to address residual impacts that cannot be avoided through project design development. • input to project design development to avoid heritage impacts where possible.	
Aboriginal heritage	An Aboriginal Cultural Heritage Assessment Report (ACHAR) will be prepared as part of the Environmental Impact Statement and, where relevant, the requirements of the Commonwealth Environment Minister. The ACHAR will identify further detail on both known and potential areas of Aboriginal heritage in relation to the Project and will outline the consultation undertaken during the preparation of the assessment. It will also identify heritage constraints and will recommend further site investigations (if required) and appropriate mitigation and management measures aimed at avoiding or minimising potential impacts. The following guidelines will be considered during the preparation of the ACHAR: • *Guide to investigating, assess and reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) • *Aboriginal Cultural Heritage Consultation requirements for proponents* (DECCW, 2010) • *Code of Practice for archaeological investigation of Aboriginal objects in NSW* (DECCW, 2010) • *NSW Skeletal Remains: Guidelines for Management of Human Remains* (Heritage Office, 1998) • *Criteria for the assessment of excavation directors* (NSW Heritage Council, 2011) • *NSW Heritage Manual* (Heritage Office and Department of Urban Affairs and Planning, 1994) • *Assessing Heritage Significance* (NSW Heritage Office, 2001) • *The Australia ICOMOS Burra Charter*. The methodology for the ACHAR will include: • desktop searches and data review including: — searches of the AHIMS database and other relevant heritage registers (including World, National, State, Commonwealth and Local Environmental Plans) to identify Aboriginal places and objects, as defined under the *National Parks and Wildlife Act 1974*, the *Standard Instrument – Principal Local Environmental Plan and the Heritage Act 1977* — desktop review of relevant Aboriginal archaeological assessment reports relevant to the study area	Chapter 13 (Aboriginal heritage) and Technical Paper 5 (Aboriginal heritage)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— desktop review of the existing environment, with specific consideration to its Aboriginal archaeological implications. • Aboriginal community consultation including: — A program of Aboriginal community consultation in accordance with the former OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. This will include identification, notification and registration of Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the study area — Presentation of information about the Project will be provided to all Registered Aboriginal Parties (RAPs) along with the draft assessment methodology, for comment and feedback. • Targeted site inspections (provided site access is available) covering both known Aboriginal sites and areas of potential within the study area. Inspections will be undertaken by RAP representatives and two suitably qualified archaeologists. These works will be undertaken in accordance with section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010) • reporting and recommendations including: — completion of an ACHAR defining constraints through mapping of known site curtilages and areas of archaeological sensitivity, based on the results of desktop research and targeted site inspections — qualitative assessment of the cumulative impacts of the construction and operation of the Project in combination with other major projects in the vicinity of the environmental study area.	
Land use and property	A desktop land use assessment will be undertaken for the Environmental Impact Statement for the off-airport environment. The assessment would consider the following: • existing land uses • current property ownership • likely future land use based on review of the Draft WSAP, the Greater Penrith to Eastern Creek Growth Area and other strategic planning documents • direct property and land use impacts during construction and operation • positive impacts on land use and property including the facilitation of broader land use planning initiatives and potential opportunities for urban development around stations • mitigation and management measures to minimise the impacts and maximise the benefits of the Project on property and land use.	Chapter 19 (Land use and property)
Social and economic	A social impact assessment technical report will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the report: • *Social Impact Assessment Guidelines* (DPE, 2017) • The Transport for NSW *Impact Assessment Practice Note: Socio-economic Assessment* 2013. The methodology for the assessment will include the following: • desktop searches and background data review including: — review existing conditions in LGAs to establish a base case against which the potential impacts will be assessed — review relevant and best practice guidelines and policies for social impact assessment (refer above)	Chapter 21 (Social and economic) and Technical Paper 10 (Social and economic)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— development of study areas (local precincts) based on ABS statistical data to capture areas of potential impacts, such as areas that community members would travel from to access stations during operations and construction zones that may result in impacts such as noise, vibration and traffic impacts — review community consultation that was carried out by Transport for NSW as part of the corridor protection process and consider ongoing feedback provided from consultation during the development of the Environmental Impact Statement for the Project. • reporting including: — preparation of an assessment of potential impacts and opportunities associated with the Project during construction and operation. The impact assessment will include technical outputs such as traffic and transport, environmental impact such as air quality, visual and cultural heritage issues which have an impact on liveability. The assessment will determine business, economic and land use impacts for each LGA, with a general overview for the study area — preparation of potential mitigation and management measures for each impact, that are practical the social environment in each local precinct.	
Flooding, hydrology and water quality	A hydrology and flooding technical report will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the report: • *Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia* (Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2016) • *Floodplain Development Manual, the management of flood liable land (NSW Government* (Department of Infrastructure, Planning and Natural Resources (DIPNR), April 2005) • *Review of Australian Rainfall and Runoff Design Inputs for NSW* (OEH, 2019) • *Hawkesbury Nepean Valley Flood Risk Management Strategy* (Infrastructure NSW, 2017) • *NSW Government, Floodplain Risk Management Guideline, Practical Considerations of Climate Change* (OEH, 2006) • *New guideline and changes to section 117 direction and EP&A Regulation on flood prone land* (DPE, 2007) • *Australian & New Zealand guidelines for fresh water quality* (Australian Government Initiative, 2018) • *Guidelines for controlled activities on waterfront land* (DPI 2012). The methodology for the assessment will include: • desktop searches and background data review • development of a detailed description of the existing flooding and hydrology environment including: — identification of floodplains and areas subject to floodplain management plans — identification of existing constraints and floodplain management practices, water quality management practices as well as future climate conditions — development of a criteria to assess impacts in accordance with floodplain management guidelines and Australian and New Zealand Environment and Conservation Council (ANZECC) water quality guidelines. • assessment of potential impacts and reporting including an assessment of the potential impact of the Project on flood behaviour, local hydrologic systems and water quality based on: — flood behaviour modelling and mapping — consideration of available water quality information	Chapter 14 (Flooding, hydrology and water quality) and Technical Paper 6 (Flooding, hydrology and water quality)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— consideration of any impacts arising from the construction of Western Sydney International Stage 1 • development of site-specific mitigation measures.	
Landscape and visual	A landscape character and visual impact assessment technical report will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the landscape character and visual impact assessment: • *AS4282-1997 Control of the obtrusive effects of outdoor lighting* • *Better Placed, a strategic design policy for the built environment of NSW* (Government Architect NSW, 2017) • *Creativity Guidelines for transport systems* (TfNSW 2016) • *Crime prevention and the assessment of development applications* (DUAP, 2001) • *Crime Prevention through Environmental Design* (CPTED) (Queensland Government, 2007) • *Disability (Access to Premises – Buildings) Standards 2010* • *Discussion Paper, Evaluating Good Design* (Government Architect NSW, 2018) • *Good Urban Design, Better Placed* (Government Architect NSW, 2018) • *Technical guideline for Urban Green Cover in NSW* (OEH, 2015) • *Technical guideline for Urban Green Cover in NSW Healthy Urban Development Checklist* (NSW Health, 2009). The methodology for the assessment will include: • desktop searches and background data review, including: — identification of the existing visual environment — description of the desired future character of the off-airport environment based on strategic planning initiatives. • assessment and reporting including: — identification of landscape character zones — consideration of relevant planning requirements and policies — identification of the landscape and visual sensitivity of the off-airport environment — assessment of potential landscape character impacts during construction and operation — identification of the sensitivity of specific views to the site — identification of representative views to the Project — assessment of visual impacts of the Project using representative viewpoints and photomontages — assessment of potential night time visual impact of the Project during construction and operation — identification of mitigation measures to reduce landscape character and visual impacts.	Chapter 20 (Landscape and visual) and Technical Paper 9 (Landscape and visual)
Local business	A business impact assessment will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the assessment: • *Social Impact Assessment Guidelines* (DPE, 2017) • The Transport for NSW *Impact Assessment Practice Note: Socio-economic Assessment* 2013. The methodology for the assessment will include: • desktop searches and background data review • identification of a study area based on ABS statistical data • description of existing business environment characteristics	Chapter 21 (Social and economic) and Technical Paper 10 (Social and economic)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	• review of relevant planning policies and major development applications to establish the future economic character of the environment • review of community consultation undertaken to date and consider ongoing feedback provided from consultation during the development of the Environmental Impact Statement for the Project • impact assessment and reporting including: — identification and analysis of the likely changes to the existing business environment — identification of direct and indirect impacts of the Project on businesses — assessment of the significance of impacts with consideration to consequence (duration, spatial extent and severity) and sensitivity. • development of management and mitigation measures.	
Air quality	An air quality assessment will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the assessment: • *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC, 2005) • *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (DEC, 2005) • *Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW* (DEC, 2006) • *Guidance on the assessment of dust from demolition and construction, (UK Institute of Air Quality Management's* (IAQM) 2014). The methodology for the assessment will include: • desktop searches and background data review • description of the background air quality environment • identification of potential sensitive receivers likely to be impacted by emissions to air from the Project • a qualitative assessment of construction air quality impacts in accordance with Guidance on the assessment of dust from demolition and construction, (IAQM, 2014) • a qualitative discussion of operational air quality impacts • consideration of cumulative construction air quality impacts • recommendation of mitigation and management measures to minimise potential impacts.	Chapter 22 (Air quality)
Contamination	A contamination assessment will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the assessment: • *National Environment Protection (Assessment of Site Contamination) Measure* (National Environment Protection Council, 2013) • *Managing Urban Stormwater – Soils and Construction* (referred to as the Blue Book) (Landcom, 2004) • *Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land* (Department of Urban Affairs and Planning and Environment Protection Authority, 1998) • *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* (Department of Environment and Climate Change, 2009). The methodology for the assessment will include: • desktop searches and background data review including: — a review of previous contamination assessments (where available)	Chapter 16 (Soils and contamination) and Technical Paper 8 (Contamination)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— a review of historical aerial photography of the Project area (to identify potential contamination sources along and/or adjacent to the Project). • an assessment of contamination risk based on the source-pathway-receptor model to identify risks to human health and/or the environment • identification of low, medium, high and very high risk sites including recommendations for additional investigations and/or management based on the site risk rating.	
Soils	A soils assessment will be prepared as part of the Environmental Impact Statement. The following guidelines will be considered during the preparation of the assessment: • *Acid Sulfate Soils Assessment Guidelines* (Department of Planning, 2008) • *Managing Urban Stormwater – Soils and Construction* (referred to as the Blue Book) (Landcom, 2004). The methodology for the assessment will include: • desktop searches and background data review • an assumption of the use of standard methods for sediment management during construction in accordance with the Blue Book (Landcom, 2004) • identification of the potential to disturb acid sulfate soils and the associated impacts • Consideration of the potential impacts associated with erosion and sedimentation.	Chapter 16 (Soils and contamination) and Technical Paper 8 (Contamination)
Hazard and risk	A desktop hazard and risk assessment will be undertaken for the Project and mitigation measures will be proposed, where appropriate. 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, 2011) • *International Standard (ISO/IEC 31010) Risk Management – Risk Assessment Technique* • *Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)* (National Transport Commission, 2007) • *Code of Practice for the Safe Removal of Asbestos 2nd edition* (National Occupational Health and Safety Commission, 2005) • *Storage and Handling of Dangerous Goods Code of Practice* (NSW WorkCover, 2005).	Chapter 23 (Hazard and risk)
Waste and resources	A desktop waste and resource assessment will be undertaken as part of the Environmental Impact Statement. Relevant legislation and guidelines would include: • *Waste Avoidance and Recovery Act 2001* • *Waste Classification Guidelines* (EPA, 2014). The methodology for the assessment will include: • a review of the likely waste streams and volumes during construction and operation, including spoil, wastewater and demolition materials • a review of the likely resources required during construction and operation, including energy, fuel and steel • a review of the Project against the Project sustainability plan (once finalised) • development of management strategies to adequately address waste and resource use during construction and operation. Measures would include:	Chapter 17 (Sustainability, climate change and greenhouse gas) and Chapter 18 (Resource management)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	— managing construction waste through the waste hierarchy established under the Waste Avoidance and Recovery Act 2001 (i.e. avoidance of waste, resource recovery, disposal of waste) — establishing targets for the beneficial reuse of spoil, wastewater and other construction wastes in accordance with the Project's sustainability plan — developing procedures for the assessment, handling, stockpiling and disposal of potentially contaminated materials and wastewater, in accordance with the Waste Classification Guidelines (EPA, 2014) — identifying opportunities to reduce the Project's demand on electricity and other resources.	
Groundwater and geology	An assessment of groundwater and geology impacts will be prepared as part of the Environmental Impact Statement. The methodology for the assessment will include: • baseline hydrogeological assessment including: — review of NSW Government legislation, standards and guidelines relevant to the Project — review of publicly available information relevant to the assessment of groundwater impacts — review of historic Project specific geotechnical and groundwater reports. • production of a conceptual model and analytical assessment including a qualitative estimate of groundwater inflows and groundwater levels (the assessment would not include numerical modelling) • qualitative assessment of potential hydrogeological impacts to receptors such as groundwater users, infrastructure, groundwater dependent ecosystems and groundwater quality • recommendation of mitigation measures.	Chapter 15 (Groundwater and geology) and Technical Paper 7 (Groundwater)
Greenhouse gas	A greenhouse gas assessment would be prepared for the Environmental Impact Statement. The following legislation and guidelines will be considered during the preparation of the note: • *The National Greenhouse and Energy Reporting Act 2007* • *NSW Climate Change Policy Framework* (OEH ,2016) • *Environment and Sustainability Policy Framework* (TfNSW, 2013) • *Environment and Sustainability Policy* (Sydney Metro, 2016). The methodology for the assessment will include: • a summary of sustainability initiatives and opportunities to reduce greenhouse gas emissions during design, construction and operation • a summary of greenhouse gas calculation results from construction and operational energy consumption and associated greenhouse gas emissions of the Project.	Chapter 17 (Sustainability, climate change and greenhouse gas)
Sustainability	A sustainability assessment would be prepared for the Environmental Impact Statement. The following legislation and guidelines will be considered during the preparation of the note: • The *National Greenhouse and Energy Reporting Act 2007* • NSW Climate Change Policy Framework (OEH, 2016) • Environment and Sustainability Policy Framework (TfNSW, 2013) • Environment and Sustainability Policy (Sydney Metro, 2016). The methodology for the assessment will include: • assessment of the Project against the current guidelines including targets and strategies to improve in use of water, energy and transport	Chapter 17 (Sustainability, climate change and greenhouse gas)

Reference	Scoping Report requirements (off-airport)	Where addressed in the Environmental Impact Statement
	• an assessment of potential impacts of climate change on the Project including increased intensity and frequency of rainfall events, and increase in extreme heat days • a high level summary of sustainability initiatives and opportunities to improve sustainability during design, construction and operation • consideration of how the Project would achieve a best practice level of performance using market leading sustainability rating tools (for example, Infrastructure Sustainability Council of Australia (ISCA), Green Star, or equivalent) during design, construction and operation.	
Cumulative impacts	The cumulative impact assessment for the Project will consider the interaction of the Project's impacts with other known or planned development within or in the vicinity of the Project footprint. The assessment will consider the cumulative impacts of: • developments or activities where construction has commenced and will continue during the construction period of Sydney Metro Greater West • developments or activities that are approved under planning legislation but where construction is yet to commence • proposed developments that are reasonably certain to progress (i.e. are under assessment for planning approval or have committed funding). Potential project developments or activities for inclusion in the cumulative impact assessment will be identified from the following sources: • a review of the Western Sydney International EIS and associated plans including construction plan • a review of other major infrastructure project details on the NSW Government Major Projects website • a review of relevant local council development application registers • consultation with government agencies, relevant councils and other key stakeholders • a review of strategic planning documents such as: — *Future Transport Strategy 2056* — Western Sydney Infrastructure Plan (WSIP).	Chapter 24 (cumulative impacts)

Environmental Planning and Assessment Regulation 2000, Part 3 of Schedule 2 checklist

Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (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.

Table 4 Environmental Planning and Assessment Regulation 2000 (NSW), Part 3, Schedule 2 checklist

Requirement	Where addressed
6. Form of the environmental impact statement	
An environmental impact statement must contain the following information:	
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: i. in respect of which the development application is to be made, or ii. on which the activity or infrastructure to which the statement relates is to be carried out	Certification
d. a description of the development, activity or infrastructure to which the statement relates	Certification
e. an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule	Certification
f. a declaration by the person by whom the statement is prepared to the effect that: i. the statement has been prepared in accordance with this Schedule, and ii. the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and iii. that the information contained in the statement is neither false nor misleading.	Certification
7. 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 27 (Synthesis)
b. a statement of the objectives of the development, activity or infrastructure	Chapter 2 (Strategic need and justification)
c. an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure	Chapter 6 (Project development and alternatives)
d. an analysis of the development, activity or infrastructure, including:	
i. a full description of the development, activity or infrastructure, and	Chapter 7 (Project description – operation) Chapter 8 (Project description – construction)
ii. a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed	Chapter 9 (Transport) to Chapter 24 (Cumulative impacts)

Requirement		Where addressed
	description of those aspects of the environment that are likely to be significantly affected, and	
iii.	the likely impact on the environment of the development, activity or infrastructure, and	Chapter 9 (Transport) to Chapter 24 (Cumulative impacts)
iv.	a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Chapter 25 (Environmental management and mitigation) and Chapter 27 (Synthesis)
v.	a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,	Chapter 4 (Planning and assessment process) and Appendix B (Statutory approvals framework)
e.	a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv)	Chapter 27 (Synthesis)
f.	the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).	Chapter 2 (Strategic need and justification)
2.	Subclause (1) is subject to the environmental assessment requirements that relate to the environmental impact statement.	Refer to Table 1 and Table 2 of this appendix
3.	Subclause (1) does not apply if:	
a.	the Secretary has waived (under clause 3 (9)) the need for an application for environmental assessment requirements in relation to an environmental impact statement in respect of State significant development, and	Not applicable
b.	the conditions of that waiver specify that the environmental impact statement must instead comply with requirements set out or referred to in those conditions.	Not applicable
4.	The principles of ecologically sustainable development.	Chapter 27 (Synthesis) and Chapter 28 (Conclusion)