

21 Draft Statement of Commitments

This chapter outlines the draft commitments proposed to avoid, manage, mitigate, offset and/or monitor the potential environmental impacts of the CBD Metro project. Any consortium or contractor selected to undertake further planning, design, construction and/or operation phases of the CBD Metro would be required to undertake all works in accordance with these commitments.

The Director-General's requirements

The Environmental Assessment must include a draft Statement of Commitments (SoC), incorporating or otherwise capturing measures to avoid, minimise, manage, mitigate, offset and/or monitor impacts identified in the impact assessment sections of the Environmental Assessment. The SoC must clearly articulate the desired environmental outcome of the commitment. The SoC must be achievable, measurable (with respect to compliance), and time-specific, where relevant.

21.1 Overview

The Environmental Assessment for the CBD Metro recommends a range of measures to avoid, manage, mitigate, offset and/or monitor the environmental impacts of the project during pre-construction, throughout construction and into the operational phase (refer Chapters 9 to 19).

These measures have informed the development of the draft Statement of Commitments (SoC) that would be implemented as part of the construction and operation of the project (refer Table 21.1). The draft SoC aims to specify what environmental outcomes would be achieved. The SoC is presented in a format that is readily auditable and transparent.

The draft SoC may be revised in response to submissions to the Environmental Assessment and/or further design development. The final SoC would be considered by the Department of Planning in assessing the project. Should approval be granted by the Minister for Planning, the final SoC may inform the Conditions of Approval.

Following project approval, the finalised SoC would guide subsequent phases of the proposed development. It is intended that any consortium or contractor selected to undertake planning, design, construction and/or operation of the CBD Metro would be required to undertake all works in accordance with the final SoC and the Conditions of Approval.

21.2 Document and management structure for the commitments

The draft Statement of Commitments requires documentation preparation and the implementation of a management structure as detailed in the following listings.

Design stage commitments

- 1) A sustainability plan and strategies for:
 - Adaptation to climate change.
 - Greenhouse gas emissions and energy use.
 - Minimisation of resource use and recycling.
 - Water management and flooding.
 - Biodiversity.
 - Community benefit.
 - Sustainable procurement.
- 2) Establishment of agency project coordination committee.
- 3) Establishment of a design review panel.
- 4) Station and facility urban design plans.
- 5) Public art plan.
- 6) Environmental management for design compliance.
- 7) Geotechnical and settlement management.

Construction stage commitments

- 1) Demolition and other early works.
- 2) Assistance to affected businesses.
- 3) Stakeholder and community involvement.
- 4) Environmental management strategy, with strategies for:
 - Heritage management.
 - Spoil management (including contaminated spoil and acid sulfate soil).
 - Waste management.
 - Noise and vibration.
 - Construction air quality management.
 - Construction water management.
 - Carbon/energy management.
 - Compliance tracking.
 - Site-specific construction method statements.
- 5) Traffic and transport management.

Operational commitments

- 1) Sustainability strategy.
- 2) Environmental management, including:
 - Carbon and energy management.
 - Water resources management.
 - Waste management.
 - Noise and vibration management.

Table 21.1 Draft Statement of Commitments

Outcome	Ref #	Commitment	Project phase
Sustainable design and construction			
Governance			
Sustainability is embedded in project design and decision making.	1	A Sustainability Plan will be developed and implemented for the project. It will include: a. Overview of the sustainability policy framework in NSW and Australia. b. Objectives and strategies for, as a minimum: – Adaptation to climate change. – Greenhouse gas emissions and energy use. – Minimisation of resource use and recycling. – Water management. – Biodiversity. – Community benefit. c. A methodology for embedding sustainability initiatives into the design development and construction process, including: – A sustainability initiatives database that tracks the identification and implementation of sustainability initiatives. – A specific sustainability review as part of each design package. – Guidelines to enable innovation in design and construction. d. A monitoring and reporting framework. e. Engagement of a Sustainability Manager with appropriate qualifications, experience and technical resources. f. A list of roles, responsibilities and resourcing. g. A listing of sustainability matters in the project issue registers and risk register. h. A Sustainable Procurement Strategy identifying opportunities to reduce the volume and carbon footprint of the amount of resources required to construct and operate the project.	Design and construction
Adaptation to climate change			
A design and finish that can adapt to the effects of climate change.	2	a. Hydrology and drainage design at the Rozelle stabling and maintenance depot will address current predictions of future sea level rise, increased rainfall intensity and storm surge, due to climate change. b. Resilient finishes and materials to withstand likely future solar radiation will be used where practicable. c. Station and rolling stock ventilation systems will be designed for future peak temperatures.	Design



Outcome	Ref #	Commitment	Project phase
Greenhouse gas emissions and energy use			
Contributions to climate change are minimised by reducing the energy consumption and greenhouse gas emissions of the project.	3	a. Operational emissions will be partially offset by purchasing a component of renewable energy for all operational energy. b. Construction emissions will be partially offset by purchasing a component of renewable energy for all grid-supplied construction electrical energy. c. Strategies to lower the embodied energy of concrete will be investigated and implemented, where reasonable and feasible. d. Metro trains will use regenerative braking to reduce traction energy demand, thereby boosting the energy efficiency. e. Demand management measures will be implemented to reduce building energy consumption.	Design and construction
Resource minimisation/recycling			
Resources are used to their maximum efficiency over the project lifecycle.	4	a. Where reasonable and feasible, fill material for the Rozelle stabling and maintenance depot site will be sourced from spoil arising from the project. b. All stations will have facilities for on-site waste separation. c. Strategies to optimise the use of recycled steel in concrete reinforcement will be investigated and implemented, where reasonable and feasible.	Design and construction
Water management and flooding			
Water is managed to maximise its beneficial use. The risk of flooding is minimised.	5	a. Rozelle stabling and maintenance depot will capture rainwater to supply the depot's non-potable requirements. b. Rozelle stabling and maintenance depot will aim to recycle 95 per cent of train wash water. c. Rozelle stabling and maintenance depot will have water-sensitive urban design features, including permeable paving and vegetated swales. d. Water-efficient fixtures and fittings will be utilised across the project. e. Construction water will be recycled where practicable.	Design and construction
Biodiversity			
Enhanced habitat for native fauna.	6	Native species will be used in preference to introduced species in landscaping.	Design and construction

Outcome	Ref #	Commitment	Project phase
Community benefit			
A project that provides maximum benefit to the community.	7	a. Passengers will be provided with access to real-time transit information. b. There will be a high quality public domain around stations.	Design and construction
Sustainable office design			
Green building design and operation at the Rozelle stabling and maintenance depot.	8	a. The offices and rolling stock buildings at Rozelle stabling and maintenance depot will be designed to a 5 Star Green Star Office Design and Office Interiors Rating and NABERS 4.5 star performance.	Design and Construction
Cumulative impacts and interactions			
A coordinated agency response to infrastructure development.	9	a. The Proponent will work with the Department of Planning (DoP) and other transport agencies to establish and contribute to a Central Project Coordination Committee that includes a regular forum meeting throughout the design and construction period. The aim of the committee will be to provide strategic input into the management and coordination of concurrent major projects so as to minimise potential cumulative impacts arising during construction. The committee will also identify complimentary activities that may benefit from a whole-of-government approach to planning, design and/or construction. b. It is proposed that construction traffic changes and impacts will be monitored by a Traffic and Transport Liaison Group.	Construction
Project design principles			
A design that is consistent and fully integrated within its urban context and urban form.	10	a. A Design Review Panel will be established to review the design of stations and associated precinct works. b. The Design Review Panel will comprise independent specialist expertise in architecture, urban design, transport and sustainability.	Design, construction and operation



Outcome	Ref #	Commitment	Project phase
Station plans that consider all aspects of the project.	11	a. The Proponent will ensure that station plans are reviewed in response to project changes. Station plans will address: - Development of the land, including development for integrated transport facilities such as bus or other transport interchanges. - Traffic and parking arrangements. - Pedestrian links and access facilities. - Retail and commercial development associated with metro railway stations. - Public domain amenities and improvements. - Station design and amenity. - Other matters ancillary to the operation of metro stations and any associated transport or other facilities. b. The Proponent will ensure that consultation has occurred with other relevant public authorities when preparing a station plan or making amendments to a plan. c. These plans will be provided to the Minister for Planning and other relevant public authorities in connection with the exercise by the Minister or authorities of statutory functions relating to the subject land.	Design
Integrated design at Central Station.	12	A joint design group chaired by Sydney Metro will be established with RailCorp to further develop and resolve the integrated design issues at Central Station. The Proponent will submit the agreed detailed design, including staging, to Department of Planning for information.	Detailed design
Integrated design at Town Hall Square Station.	13	A joint design group chaired by Sydney Metro will be established with City of Sydney Council to further develop and resolve the integration of Town Hall Square Station with Council's proposal for a public space. The Proponent will submit the agreed detailed design, including staging, to DoP for information.	Detailed design
Developments that comply with council development controls.	14	<u>Residual Development – general approach</u> Residual development on land acquired for the project will be subject to relevant planning controls, including relevant LEPs and DCPs (e.g. FSR, height and setback controls). The project will be designed and constructed to allow for future development. Approval for development sites will be sought in accordance with the <i>Environmental Planning & Assessment Act 1979</i> .	Pre-construction, construction and operation
	15	<u>Development on eastern construction site at the Metro Barangaroo-Wynyard Station (integrated with station complex)</u> The development of a future commercial building above eastern construction site at Metro Barangaroo-Wynyard Station will be subject to further approval from the relevant approval authority, or delegate.	Pre-construction, construction and operation

Outcome	Ref #	Commitment	Project phase
	16	<u>Interim uses</u> Following construction of the project, the Proponent will manage any vacant construction sites before transferring them to third parties for redevelopment in the longer term. Where residual development may not occur in conjunction with operation of the project, the Proponent will provide interim uses with the aim of activating street frontages. Interim activities undertaken as part of the project, including retail/commercial uses, will be implemented in consultation with the relevant local Council.	Pre-construction, construction and operation
Non-indigenous heritage			
Impacts on non-indigenous heritage items are minimised.	17	Where new built elements associated with the metro project are adjacent to significant heritage buildings or conservation areas, the design of these elements will be guided by established principles for contextual design, such as those set out in the publication <i>Design in Context</i> (NSW Heritage Office and Royal Australian Institute of Architects).	Pre-construction
Public art strategy			
Attractive public domain area, with greater sense of community interaction.	18	A Public Art Plan will be developed in consultation with local councils and the Arts Council of NSW. It will be implemented to ensure that: • The passenger experience is enhanced. • Public art is integrated into station design. • Public art is used to enhance public spaces. • An ongoing arts and cultural program is established for the operational phase of the project.	Design
Geotechnical and settlement management			
Adoption of settlement management strategy to minimise risk of ground settlement during construction.	19	a. A Geotechnical and Settlement Management Strategy will be prepared and implemented to ensure that geotechnical conditions are modelled and the likely effects of any groundwater drawdown is considered as part of the detailed design development process. This strategy will include a process for ensuring that full details of existing and approved excavations, basements, tunnels and other subsurface structures are identified. b. Settlement criteria for individual sensitive utility structures (including CityRail tunnels and the Cross City Tunnel, brick sewers, gas, electricity and telecommunication services) will be determined in consultation with the relevant authorities and owners prior to the start of tunnelling in the vicinity of these structures.	Design
	20	Groundwater levels and ground settlement will be monitored. Monitoring locations and durations will be determined from the detailed geotechnical model.	Construction



Outcome	Ref #	Commitment	Project phase																		
Operational noise and vibration design																					
Ground-borne noise and vibration– train operations																					
Vibration levels during train passbys do not cause disturbance to building occupants.	21	A ground-borne vibration goal of 106 dB _v (0.2 mm/s) will be adopted as a design goal for residential receivers. Higher levels will be adopted for commercial and industrial receivers.	Design																		
Minimisation of ground-borne noise levels at nearby sensitive receivers.	22	<table><tr><td colspan="2">The following limits for ground-borne noise will be adopted for nearby sensitive receivers.</td></tr><tr><td>Receiver</td><td>Noise trigger level (dBA_{L_{Amax}}_(slow))</td></tr><tr><td>Residential – night-time (10pm to 7am)</td><td>35 dBA</td></tr><tr><td>Schools, educational institutions, places of worship¹</td><td>40 dBA to 45 dBA</td></tr><tr><td>Retail areas¹</td><td>50 dBA to 55 dBA</td></tr><tr><td>General office areas¹</td><td>45 dBA</td></tr><tr><td>Private offices and conference rooms¹</td><td>40 dBA</td></tr><tr><td>Theatres¹</td><td>35 dBA</td></tr><tr><td colspan="2">¹When in use.</td></tr></table>	The following limits for ground-borne noise will be adopted for nearby sensitive receivers.		Receiver	Noise trigger level (dBA _{L_{Amax}} _(slow))	Residential – night-time (10pm to 7am)	35 dBA	Schools, educational institutions, places of worship ¹	40 dBA to 45 dBA	Retail areas ¹	50 dBA to 55 dBA	General office areas ¹	45 dBA	Private offices and conference rooms ¹	40 dBA	Theatres ¹	35 dBA	¹ When in use.		Design
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Minimisation of ground-borne noise levels at nearby sensitive receivers	23	The track design will incorporate moderately resilient and/or highly resilient rail support systems to achieve compliance with the ground-borne noise design goals.	Design																		

Outcome	Ref #	Commitment	Project phase
Airborne noise– train operations			
Minimisation of airborne noise levels at nearby sensitive receivers.	24	For residential receivers, schools, educational institutions and places of worship, the 'noise trigger' levels 'Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects' (DECC) will be adopted as design limits for the operation of the project. All reasonable and feasible measures will be implemented to meet the limits.	Design
Minimisation of general train noise and any curve squeal noise (which may be generated from the curved underground sections).	25	The portal extensions near Rozelle stabling and maintenance depot will be internally lined with acoustically absorptive material.	Design
Minimisation of general train noise and any curve squeal noise (which may be generated from the curved underground sections).	26	During the detailed design stage, the risk of curve flanging and curve squeal will be considered at locations where the curve radius is less than about 300 metres, and reasonable and feasible measures will be taken to ensure that noise and vibration levels are within specified limits.	Design
Minimisation of noise within rolling stock and stations.	27	Measures to address noise levels within rolling stock and stations will be identified and implemented where reasonable and feasible.	Design



Outcome	Ref #	Commitment	Project phase
Airborne noise – train stabling and maintenance			
Minimisation of airborne noise levels at nearby residential receivers.	28	For residential receivers, the operational noise goals specified in 'Industrial Noise Policy' (DECC) will be adopted as design limits for noise from Rozelle stabling and maintenance depot. All reasonable and feasible measures will be implemented to meet the limits.	Design
Minimisation of alarm system noise levels at nearby residential receivers.	29	All audible alarm systems within Rozelle stabling and maintenance depot will be non-tonal.	Design
Airborne noise – ancillary facilities			
Minimisation of airborne noise levels from ancillary facilities at sensitive receivers.	30	For steady noise emissions from tunnel ventilation equipment and other ancillary equipment, the operational noise goals specified in 'Industrial Noise Policy' (DECC) will be adopted as design limits. All reasonable and feasible measures will be implemented to meet the limits.	Design
Minimisation of airborne noise levels from ancillary facilities at sensitive receivers.	31	For noise breakout from the ventilation shafts and service facilities during train passbys, adopt airborne noise limits (external) of L _{max} (Fast) 55 dBA at residential facades and L _{max} (Fast) 65 dBA at commercial facades. All reasonable and feasible measures will be implemented to meet the limits.	Design

Outcome	Ref #	Commitment	Project phase
Demolition and early works strategy			
Identification of the environmental and transport management measures that will enable demolition and early works to progress in advance of project works.	32	A Demolition and Early Works Strategy will be prepared to address the project works that are to commence prior to the finalisation of the Construction Environmental Management Plan. This strategy will be certified by the Environmental Management Representative and shall include: a. Overview of construction activities. b. Identification of any additional approvals and other statutory responsibilities. c. Notification of adjacent residents and businesses. d. Specific hours of work. e. Measures to avoid and/or control the occurrence of environmental impacts. f. Measures to avoid and/or control the occurrence of traffic, transport and road network impacts. A copy of this Strategy will be submitted to DoP prior to the commencement of demolition and other early construction works.	Pre-construction
Minimisation of noise impacts from demolition.	33	Where practicable, the demolition of buildings will commence with internal works. External walls will be left intact as long as possible to minimise noise and dust impacts and maximise opportunities for the recycling of building waste.	Construction
Assistance to affected businesses			
Minimisation of impacts on affected businesses during construction.	34	A Business Management Strategy will be prepared and implemented to minimise impacts on businesses adjacent to major construction sites during construction. It will include measures to maintain vehicular and pedestrian access during business hours and the visibility of the business appropriate to its reliance on such. The strategy will include: a. Business management plans for each construction site, identifying affected businesses and associated management strategies. b. A Retail Support Program to provide assistance to small retail businesses adversely impacted by construction. The program will be administered by a Retail Advisory/Support Panel to be established by the Proponent. The program will have appropriate specialist representatives and report to the CEO of Sydney Metro.	Pre-construction



Outcome	Ref #	Commitment	Project phase
Stakeholder and community involvement during construction			
Stakeholders and the community are well informed about the project.	35	A strategy for stakeholder and community involvement will be implemented throughout the delivery of the project. It will include: c. A full-time Stakeholder and Community Relations Manager, with support from Community Liaison Officers. d. Provision of a Construction Stakeholder and Community Involvement Plan (SCIP), which will provide procedures for: – Regular communication with the Environmental Representative and government stakeholders including, but not limited to, DECCW, DoP, RTA, RailCorp and relevant local councils. – The regular dissemination of information to the community regarding the progress of the project and notifying stakeholders and community of upcoming project activities and impacts (particularly with regard out of hours work and potential noise and vibration). – The holding of public displays, local events and activities. – Establishing the means by which the community stakeholders can discuss or provide feedback to the construction team, including regular information sessions at or near the construction sites. – Responding to any enquires or feedback from the community and stakeholders in relation to the environmental management and delivery of the project. – Receiving and managing complaints consistent with AS 4269 Complaints Handling, including provision for a 24-hour 1800 contact number. – Managing site visits. – Managing property inspections. – Establishing community focus groups to provide input on aspects of the project such as landscaping and noise mitigation. e. The Proponent will appoint an Independent Stakeholder and Community Liaison Representative for the duration of construction to provide advice on communications, review of the SCIP and facilitation and reporting of any community meetings. f. A website will be established to provide electronic information associated with the construction of the project. Each major construction site will have a designated contact person to enable public contact during construction in relation to conditions of approval.	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
Construction environmental management			
Clear definition of environmental management activities during construction.	36	An Environmental Management System (EMS) consistent with the principles of ISO 14001, will be documented in a Construction Environmental Management Plan (CEMP). The CEMP outlining the environmental protection measures to mitigate the impact of construction activities and identify opportunities to provide environmental benefit, such as resource use minimisation, will be prepared prior to construction and submitted to the Director-General of the DoP for approval. In particular, the CEMP will document: a. The statutory and policy framework for the environmental management of the project. b. Roles, responsibilities and resourcing of key project personnel. c. An environmental risk and opportunities matrix. d. Environmental key performance indicators (KPIs) and targets. e. The environmental management documentation structure. This will include the scoping of various sub-plans (refer below) to the CEMP, including: - Carbon/energy Management Sub-Plan. - Construction Water Management Sub-Plan. - Construction Noise and Vibration Management Sub-Plan. - Landscape Management Sub-Plan. - Heritage Management Sub-Plan. - Construction Waste Management Sub-Plan. - Spoil Management Sub-Plan (including management of contaminated material and acid sulfate soils). - Construction Air Quality Management Sub-Plan. f. A matrix of environmental issues against each construction site and the requirement to produce site-specific Environmental Construction Method Statements (refer below) and a template ECMS. g. The Environmental Management System, will include: - A documentation preparation and management system incorporating reporting/ review requirements of Sydney Metro and the Environmental Representative. - A Compliance Tracking Program with procedures for non-conformance, corrective and preventive action. - Procedures for inspections and auditing. - Procedures for incident and emergency response. - Environmental inductions and training requirements.	Pre-construction and construction



Outcome	Ref #	Commitment	Project phase
Identification of site-specific environmental measures that implement the sub-plans.	38	Environmental Construction Method Statements (ECMSs) will be prepared and implemented in accordance with the matrix included in the CEMP to document all environmental management measures to be implemented on each construction site. Each ECMS shall be endorsed by the Environmental Representative prior to implementation. ECMSs will be: - Plan-based, with relevant environmental aspects covered in separate tables that clearly indicate at which construction phase the measures apply. - Prepared to include a site layout and locality plan that clearly shows significant trees, heritage items, spoil waste management areas, and noise, dust and water monitoring locations. - Prepared for all sites including, but not limited to: - Central Station. - Town Hall Station. - Martin Place Station. - Barangaroo-Wynyard Station. - Barangaroo Pedestrian Link. - Pymont Station. - White Bay Station. - Rozelle Station. - Rozelle stabling and maintenance depot. - Tunnelling activities.	Pre-construction
Independent review and reporting of environmental compliance.	39	The Proponent will appoint suitably qualified and experienced Environmental Representatives – independent of the project design and construction personnel – to advise the Proponent on environmental compliance matters, undertake regular inspections of construction sites and undertake other activities as specified in the SoC and the CEMP.	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
Heritage management			
A documented construction management plan for non-indigenous heritage with project-wide and site-specific measures.	40	A Heritage Management Sub-Plan will be prepared and implemented and will include as a minimum: a. Statement of heritage management objectives. b. Review of the statutory and policy framework and application to the project. c. Register of directly and indirectly affected heritage items. d. Identification of required consultation, approvals and process for obtaining the approvals. e. Management measures to be applied across the project, and site-specific measures, for documentation in the respective ECMS. It will include the adoption of vibration testing to develop safe working distances to heritage items for various construction activities. f. Identification of site-specific heritage management plans and a program of works and investigations. These plans could apply to individual items or items within a precinct. g. Monitoring and reporting against the sub-plan. h. Roles and responsibilities of contractors, including training and pre-construction induction requirements. i. Separate contingency plans for indigenous and non-indigenous heritage.	Pre-construction
Increased awareness of non-indigenous heritage by people working on the project.	41	An overview of all relevant affected heritage sites and mitigation and management measures will be included in site inductions and these sites will be marked on plan(s) within the ECMS.	Construction
Minimisation of impacts to heritage structures	42	Work on heritage buildings and sites will be monitored during construction to ensure the minimum disturbance to significant fabric, with a mandatory reporting requirement on completion, and use of suitable construction methods, especially for demolition and salvage of significant materials and components.	Construction
Increased awareness of indigenous heritage by people working on the project.	43	All personnel working on site will be trained about their responsibilities under the <i>National Parks and Wildlife Act 1974</i> and the procedure to follow in the event an indigenous item is discovered.	Construction



Outcome	Ref #	Commitment	Project phase
Minimisation of impacts to indigenous heritage	44	During construction, if any previously unidentified relics are identified, stop-work procedures will be implemented and an indigenous heritage specialist consulted. Work in the affected areas will not resume until any required approvals have been received.	Construction
Spoil management			
Beneficial reuse of spoil from the project, where possible.	45	A Spoil Management Sub-Plan will be developed and implemented in accordance with the CEMP. It will include as a minimum: - Statement of spoil management objectives. - Review of the statutory and policy framework as relevant to the project. - Description of expected spoil volumes by source and category, including categories for reuse. - A documented spoil management hierarchy as follows: - On-site reuse/recycling, for example as fill material. - Beneficial reuse as engineering fill on other approved construction sites, including identification of those sites. - Off-site recycling for use in construction after processing (e.g. crushing) including the identification of sites. - Disposal to landfill, including the identification of sites. - Spoil management targets. - Alternative transport investigation to reduce road traffic movements (see 48 below). - Methodologies for on-site spoil handling, testing – including for contamination and acid sulfate soil (ASS) – and transportation. - Monitoring and reporting, including extraction volumes and reuse and disposal locations. - Roles and responsibilities, including identification of project personnel to oversee the implementation of the sub-plan. - Contingency plans for managing ASS. - Contingency plan for managing contaminated spoil, including the development of Remedial Action Plans and engagement of a NSW accredited site auditor, if required. - A plan for extracting, storing and reusing Yellow Block sandstone.	Pre-construction

Outcome	Ref #	Commitment	Project phase
Conservation of Yellow Block sandstone for reuse off site.	46	Where Yellow Block sandstone of appropriate standard for extraction is accessible, the method of excavation will be via cutting in manageable blocks to allow for removal, storage and reuse in consultation with the Department of Commerce.	Pre-construction and construction
High target for reuse and recycling virgin excavated natural material.	47	A target of 100 per cent reuse or recycling (on or off-site) of virgin excavated natural material (VENM) will be adopted for the project.	Construction
Minimisation of impacts from transporting spoil.	48	The Proponent will consider further the options of barging spoil and using disused rail infrastructure to transport spoil to appropriate sites. This assessment will not only have regard to program constraints and practicable access to rail and barge by the project's source sites but also the ability of receptor sites to transfer from those transport modes.	Pre-construction
Protection of the environment, workers and public.	49	Further assessment of potential contamination will be undertaken, to assess the extent or presence of contamination or hazardous materials within the project construction footprint.	Pre-construction



Outcome	Ref #	Commitment	Project phase
Construction waste management			
Documented waste management strategy.	50	A Construction Waste Management Sub-Plan will be prepared and implemented in accordance with the CEMP, and will include as a minimum: a. Statement of waste management objectives. b. Review of the statutory and policy framework as relevant to the project. c. Description of the hierarchy for sustainable waste management (avoid/reuse/recycle/ resource recovery/disposal) in accordance with NSW Government’s Waste Avoidance and Resource Recovery Strategy 2007. d. Waste stream analysis for each site and each phase of the construction. e. Waste management KPIs and targets for each site and across the project. f. Management measures to be applied across the project with site specific management measures to be incorporated in the relevant ECMS. g. Centralised reporting and auditing of waste volumes and disposal destination. h. Roles and responsibilities, including the provision of a dedicated Waste Manager for the project. i. A procedure for implementation of the Sustainable Procurement Strategy, documented as part of the Sustainability Plan.	Pre-construction and construction



Outcome	Ref #	Commitment	Project phase
Construction traffic and transport			
Minimisation of disruption to traffic and pedestrian environment during construction. Maximisation of construction-related road safety.	51	A Construction Traffic Management Plan and Traffic Control Plans will be prepared consistent with the Framework Traffic Management Plan (FTMP) and site specific Traffic Management Plans. The FTMP is one of a series of management plans that has been developed for the construction of the CBD Metro. The four levels of traffic and transport construction related documentation are therefore as follows: a. Framework Traffic Management Plan b. Traffic Management Plans c. Construction Traffic Management Plans (CTMP) d. Traffic Control Plans (TCP). The CTMPs and TCPs will address the following: a. Measures to protect pedestrians and maintain surface public transport services throughout the CBD. b. Measures to manage traffic flows through and surrounding the construction and spoil haulage routes, including regulatory and direction signposting, line-marking and variable message signs. c. Any mitigation measures to improve the efficiency of traffic and pedestrian movement and conditions. d. Local and regional traffic impacts. e. Cumulative impacts of multiple construction sites to build the CBD Metro.	Pre-construction
Relevant transport authorities are well informed of project activities.	52	A Traffic and Transport Liaison Group will be formed to ensure that all relevant traffic management authorities, including the RTA and relevant councils, are aware of the proposed construction activities, upcoming works and related transport implications and have the opportunity to comment on the mitigation measures proposed prior to the start of construction.	Pre-construction
Construction noise and vibration			
Minimisation of potential noise and vibration impacts at sensitive receiver locations.	53	Noise and vibration trigger levels will be adopted for the project. Where these trigger levels are exceeded or expected to be exceeded, the Proponent will: a. Identify additional management measures where reasonable and feasible. b. Increase monitoring at affected sensitive receivers. c. Notify and consult with landowners and occupants, to identify appropriate mitigation, in accordance with need. (Refer to noise strategy being developed and implemented.)	Pre-construction and construction



Outcome	Ref #	Commitment	Project phase				
Minimisation of potential noise impacts at sensitive receiver locations.	54	The following airborne construction noise management trigger levels (LAeq 15 minute) will be adopted for the project:	Pre-construction and construction				
		Sensitive receiver	Time				
			When in use	Daytime 7.00am-6.00pm (Monday to Friday) 8.00am-1.00pm (Saturday)	Evening 6.00pm-10.00pm	Night-time 10.00pm-7.00am	
		Residential	N/A	RBL or LA90 Background +10 dBA	RBL or LA90 Background + 5 dBA	RBL or LA90 Background + 5 dBA	
		Commercial	70dBA	N/A	N/A	N/A	
		Schools/child care centres	55dBA	N/A	N/A	N/A	
		Places of worship	50dBA ¹	N/A	N/A	N/A	
		¹ The NML is 60 dBA if windows in the facility are fixed (i.e. cannot be opened)					



Outcome	Ref #	Commitment	Project phase
Identification and management of noise and vibration impacts during construction.	55	A Construction Noise and Vibration Management Sub-Plan will be prepared and implemented. It will include as a minimum: a. Objectives for construction noise and vibration management. b. Noise and vibration trigger levels to be adopted by the project. c. Noise and vibration impact assessment process, including the preparation of individual site specific noise impact statements (NIS) for each ECMS and for regenerated noise from shaft sinking, cavern excavation and tunnelling. The sub-plan will provide a template for the NIS. d. Mitigation and management strategies, to be applied across the project, for example: – Standard management practices for all works. – Management for works which are likely to be close to, or marginally exceeding, established trigger levels for the project. – Management for works which are likely to significantly exceed established trigger levels for the project. e. Blast management strategy (if blasting is proposed). f. Monitoring and reporting of noise and vibration levels. g. Roles, responsibilities and resourcing.	Construction
Minimisation of potential ground-borne noise impacts at sensitive receiver locations.	56	For underground excavation works, the ground-borne noise trigger levels (internal) will be LAeq 40 dBA during the evening period and 35 dBA during the night-time period.	Pre-construction and construction



Outcome	Ref #	Commitment	Project phase
Guidelines to provide safe vibration levels for occupants.	57	In relation to human comfort, the following trigger levels will be adopted for the project: - Continuous vibration (typically from TBM and roadheader operations). - Residential – 0.2 mm/s (daytime) and 0.14 mm/s (night-time). - Commercial offices – 0.4 mm/s. - Continuous intermittent vibration (such as from rock breakers or similar operations). 0.2 mm/s (daytime). - Impulsive vibration (such as from demolition and piling). - Residential – 6 mm/s (daytime). - Commercial office – 13 mm/s.	Pre-construction and construction
Guidelines to provide safe vibration levels to prevent minor cosmetic damage to various structures and impact on occupants.	58	In relation to damage to surface structures, a vibration trigger level of 7.5 mm/s at a residence or vibration-sensitive receiver will be adopted for the project. The trigger level provides a threshold for further assessment and/or monitoring.	Pre-construction and construction
Minimisation of potential noise impacts at sensitive receiver locations.	59	Noise mitigation will be adopted for construction activities where reasonable and feasible, to meet noise trigger levels or where noise goals are likely to be exceeded.	Construction
Minimisation of noise and vibration levels at nearby sensitive receivers.	60	At station construction sites, demolition works will be undertaken during the daytime period (7.00am-6.00pm Monday to Friday, and 8.00am-1.00pm Saturday) where practicable. If outside these times, all reasonable and feasible mitigation measures will be used.	Construction

Outcome	Ref #	Commitment	Project phase
Minimisation of the potential of sleep disturbance as a result of noise from construction activities.	61	Where night-time works are required, the DECCW's 'Sleep disturbance screening criterion' will be adopted as the screening level at which further analysis will be undertaken if exceedances are predicted. If required, all reasonable and feasible mitigation measures will be implemented.	Construction
Construction air quality			
Identification and management of air quality impacts during construction	62	A Construction Air Quality Management Sub-Plan will be prepared and implemented, and will include as a minimum: a. Objectives for air quality management. b. Statutory and policy framework, including relevant criteria and goals.	Pre-construction
Identification and management of air quality impacts during construction	63	a. Management measures will be applied across the project with site-specific measures to be incorporated in ECMS, including: - Implementation of a construction ventilation system utilising bag filters where required. Bag filters will be dampened prior to emptying. - Sealing of all spoil handling areas with hardstand or equivalent. - Erection of solid hoardings around spoil and other dust-generating material handling sites, if practicable. b. Monitoring against the sub-plan and reporting. c. Dust contingency plan to address where observed dust levels are elevated or dust-related complaints are received.	Construction



Outcome	Ref #	Commitment	Project phase
Construction water management			
Minimisation of potable water demand during construction.	64	A Construction Water Management Sub-Plan will be prepared and implemented, and will include as a minimum: a. Objectives for construction water management with particular respect to minimising potable water use and maximising rainwater harvesting and recycling opportunities. b. Statutory and policy framework. c. Relevant criteria and goals for discharge, marine works (where required) and water reuse. d. Management measures to be applied across the project with site-specific measures to be incorporated in ECMS, including: – Practices consistent with the requirements of Managing Urban Stormwater: Soils and Construction (Landcom 2004). – Description of water treatment plant(s), controls and water quality requirements (e.g. for ancillary construction facilities and tunnelling operations). – Water recycling opportunities to be incorporated into ECMSs. e. Roles and responsibilities. f. Monitoring and reporting. g. Spill management and other contingency plans, including incident response.	Pre-construction
Construction carbon and energy management			
Minimisation of contributions to climate change by reducing the greenhouse gas emissions of the project and by increasing public transport patronage.	65	A Construction Carbon and Energy Management Sub-Plan will be prepared and implemented and will include as a minimum: a. Objectives. b. Statutory and policy framework, including compliance matters in relation to <i>Energy Efficiency Opportunities Act 2006</i> (EEO) and National Greenhouse and Energy Reporting System (NGERS). c. Roles and responsibilities. d. Conducting awareness programs as part of induction for all site personnel regarding energy conservation methods. e. Targets and KPIs. f. Energy-to-carbon calculation methodology. g. Baseline energy demand and analysis – ongoing through each project phase.	Design and pre-construction

Outcome	Ref #	Commitment	Project phase
Minimisation of energy demand of the project.	66	Energy reduction measures will be applied across the project (site-specific management measures will be incorporated in the ECMS), including: a. Selection of equipment with consideration of energy efficiencies. b. Use of energy-efficient site lighting. c. Incentives for construction workers to use public transport, green travel plan targets and incentives. d. Sourcing of material from the Sydney region, where possible, to avoid transport-related energy consumption. e. Modular construction, where practicable. f. Dematerialisation of surface finishes, where practicable. g. Use of prefabricated components, where practicable. h. Green site office selection/fitout. i. Centralised monitoring and reporting of energy usage data.	Design and pre-construction
Ecology management			
Minimisation of disturbance to local flora and fauna.	67	Prior to commencement of construction significant trees (based on species or age and size) that may be affected during construction will be identified and appropriate management measures incorporated into the relevant ECMS. Measures to be considered include, but are not limited to, fencing, ongoing maintenance and pruning. Any tree removal within or adjacent to construction sites will be subject to further assessment and approval by the Proponent. Consultation with the local council will be undertaken where relevant.	Construction
Reduced spread of weeds.	68	All weeds will be removed in accordance with the <i>Noxious Weeds Act 1993</i> .	Construction



Outcome	Ref #	Commitment	Project phase
Reinstatement of disturbed areas.	69	A Landscape Management Sub-Plan will be prepared in consultation with relevant local councils and will address: - Tree protection measures. - Monitoring during construction. - Replanting. - Reinstatement of relevant sites. - Post-construction monitoring. In accordance with the Landscape Management Plan: - Revegetation and landscape planting will be undertaken in all public spaces, as appropriate. Locally indigenous species will be planted in preference to introduced species. Revegetation and landscaping activities will be undertaken progressively, where possible, and in consultation with the affected landowner. - Construction sites at Belmore Park, Rozelle and White Bay will be reinstated to their pre-construction state as soon as practicable following completion of construction.	Pre-construction
Visual amenity			
Minimal light spill.	70	Lighting around construction sites will be specifically designed to reduce light spill to nearby residents, while still meeting public and worker safety requirements and maintaining visibility.	Construction
Social and economic			
Capacity-building and generation of skilled employment.	71	- As a component of the employment to be generated, the project will meet the NSW Government publication 'Training Management Guidelines' (February 2009). The guideline target covers apprentices and trainees registered under the NSW Apprenticeship and Traineeship Act 2001 and will be calculated for the project on the basis of the total number of tradespersons employed in all trades by the contractor and subcontractors. - The project will take advantage of the NSW Government's Green Skills program which is directed at apprentices and trainees requiring skills in green buildings, energy and water efficiency, recycling, and horticulture; as well as business administration trainees requiring skills in environmental advisory services, green procurement, environmental auditing accounting and design. - The NSW Government publication 'Aboriginal Participation in Construction Guidelines' (January 2007) aims to support and encourage more employment and business opportunities for Aboriginal people on government construction projects. The project will meet the requirements of the guidelines for Category 3 projects.	Construction

Outcome	Ref #	Commitment	Project phase
Property impacts			
Risks of damage to property are identified and managed.	72	A property risk management plan for property damage will be implemented, including: a. Risk assessments by qualified and experienced geotechnical and construction engineering experts for properties at risk of damage. b. Consultation with property owners to advise on the timing, scope and methodology for the inspection, and of the process for making a property damage claim. c. Preparation and provision to owners, of building condition inspection reports. d. A register of all properties inspected. e. Prior to substantial construction commencing, an Independent Property Impact Assessment Panel, approved by the Director-General, will be established. Either the affected property owner or the Proponent may refer any unresolved disputes arising from the potential and/or actual physical property impacts to the panel for resolution. All costs incurred in establishing and implementing the panel shall be borne by the Proponent. The purpose of the Assessment Panel shall not be to address impact on property values, nor address issues otherwise covered under the Land Acquisition (Just Terms) Compensation Act 1991. f. Any damage to property resulting from the construction of the project will be rectified at no cost to the owner in a timely fashion.	Construction and operation
Operational sustainability management			
Sustainability is embedded in the operations of the project.	73	A Sustainability Plan will be developed and implemented for the operation of the project. This will include: a. Documentation of a sustainability corporate governance framework, including a review of sustainability drivers to identify those that are material to the operation of the metro. b. Objectives and strategies for, as a minimum: – Adaptation to climate change. – Greenhouse gas emissions and energy use. – Minimisation of resource use and recycling. – Water management. – Community benefit. – Economic vitality. c. A methodology for embedding sustainability initiatives into the operation of the project. d. Monitoring and reporting. e. Roles, responsibilities and resourcing, including securing a full-time sustainability manager.	Operation



Outcome	Ref #	Commitment	Project phase
Sustainability is embedded in the operations of the project.	73	A Sustainability Plan will be developed and implemented for the operation of the project. This will include: - Documentation of a sustainability corporate governance framework, including a review of sustainability drivers to identify those that are material to the operation of the metro. - Objectives and strategies for, as a minimum: - Adaptation to climate change. - Greenhouse gas emissions and energy use. - Minimisation of resource use and recycling. - Water management. - Community benefit. - Economic vitality. - A methodology for embedding sustainability initiatives into the operation of the project. - Monitoring and reporting. - Roles, responsibilities and resourcing, including securing a full-time sustainability manager. - Inclusion of sustainability matters in project risk register. - A Sustainable Procurement Strategy for suppliers and materials. - Publicly available web-based reporting of sustainability performance.	Operation
Operational environmental management			
A high level of environmental performance and continually improve.	74	An Environmental Management System (EMS) consistent with the principles of ISO 14001 for operation will be documented in an Operational EMP (OEMP). The OEMP will address: - Identification of the statutory and other obligations which the Proponent is required to fulfil, including all licences/approvals and consultations/agreements required from authorities and other stakeholders, and key legislation and policies which control the operation of the project. - Monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental performance of the project during its operation, including a description of potential site impacts, performance criteria, specific tests and monitoring requirements, protocols (e.g. frequency and location) and procedures to follow. - Steps to ensure compliance with all plans and procedures. - Notification of adjacent residents and businesses prior to planned maintenance activities and complaints-handling procedures. - Strategies for the main environmental system elements including, but not limited to: carbon and energy, water resources, noise, water quality, access and traffic, groundwater, settlement, waste/resource management/removal/disposal, hydrology and flooding, visual screening, landscaping and	Operation

Outcome	Ref #	Commitment	Project phase
A high level of environmental performance and continually improve.	74	An Environmental Management System (EMS) consistent with the principles of ISO 14001 for operation will be documented in an Operational EMP (OEMP). The OEMP will address: a. Identification of the statutory and other obligations which the Proponent is required to fulfil, including all licences/approvals and consultations/agreements required from authorities and other stakeholders, and key legislation and policies which control the operation of the project. b. Monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental performance of the project during its operation, including a description of potential site impacts, performance criteria, specific tests and monitoring requirements, protocols (e.g. frequency and location) and procedures to follow. c. Steps to ensure compliance with all plans and procedures. d. Notification of adjacent residents and businesses prior to planned maintenance activities and complaints-handling procedures. e. Strategies for the main environmental system elements including, but not limited to: carbon and energy, water resources, noise, water quality, access and traffic, groundwater, settlement, waste/resource management/removal/disposal, hydrology and flooding, visual screening, landscaping and rehabilitation, hazards and risks, and energy use, resource use and recycling. f. Development of sub-plans for the management of: – Energy. – Water resources. – Waste. – Noise and vibration.	Operation



Operational carbon management			Commissioning
Minimisation of contributions to climate change by reducing the greenhouse gas emissions of the project and increasing public transport patronage.	75	An Operational Energy Management Sub-Plan will be prepared within two years of approval or as otherwise agreed. The Operational Energy Management Sub-Plan will identify methods for the ongoing monitoring and reporting of energy use and the means to reduce energy demand on a periodic basis, where practicable. A component of energy supply should be sourced from accredited 'Green Power'. The sub-plan would also identify the compliance requirements of the <i>National Greenhouse and Energy Reporting Act 2007</i> and <i>Energy Efficiency Operations Act 2006</i> .	
Operational waste management			Commissioning
Minimisation of waste generation. Maximisation of opportunities for recycling by passengers and workers.	76	An Operational Waste Management Sub-Plan will be developed and implemented during the operation of the project in accordance with the NSW Government's <i>Waste Avoidance and Resource Recovery Strategy 2007</i> to minimise waste during the operation of the project.	
Operational water management			Commissioning
Minimisation of potable water demand during operation.	77	An Operational Water Management Sub-Plan will be developed and implemented to address the management of groundwater inflows, wash water and deluge water. Opportunities for recycling and reuse of wastewater will be considered. Relevant water quality guidelines, including ANZECC (2000), will be used to identify requirements for water quality prior to discharge to stormwater or directly to receiving waters.	
Operational noise and vibration management			Pre-commissioning
Management of operational noise and vibration impacts.	78	An Operational Noise and Vibration Management Sub-Plan will be prepared prior to commissioning. The plan will document: • Relevant criteria. • Design mitigation and management measures. • Commissioning plan. • Monitoring and reporting requirements.	

Maintenance of ground-borne noise goals within the design goals on a long-term basis.	79	a. Wheel and track maintenance procedures will be adopted to ensure that source vibration levels are within the specified limits. b. Monitoring systems will be implemented to measure the condition of the wheels and track. A track grinding machine, or other methods, will be used to restore the track condition to specified limits when required. If wheel flats or other wheel defects do occur, these will be rectified using a wheel lathe or other measures to return the wheel condition to an acceptable degree of smoothness. A permanent wheel monitoring station will be established to detect wheel flats.	Operation
Assessment of compliance with the ground-borne noise design goals.	80	Compliance monitoring will be undertaken at the commencement of train operations at selected receiver locations to determine if any additional feasible and reasonable mitigation measures are required.	Commissioning and operation



