Table 1.1 Final 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

Outcome	Ref #	Commitment	Project phase
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
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 energy emissions offset by purchasing 100 per cent renewable energy. b. Construction energy emissions partially offset by purchasing 20 per cent renewable 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

Outcome	Ref #	Commitment	Project phase
Biodiversity			
Enhanced habitat for native fauna.	6	Native species will be used in preference to introduced species in landscaping where appropriate.	Design and construction
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	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 establish a Central Project Coordination Committee (CPCC) with the Department of Planning (DoP) and other agencies as required The CPCC will: – Provide strategic input into the management and coordination of concurrent major projects so as to minimise potential cumulative impacts arising during construction. – Will also identify complimentary activities that may benefit from a whole-of-government approach to planning, design and/or construction. a. The CPCC shall meet no less than monthly. Invited authorities will have no more than two delegates and delegates must be vested with decision making powers on behalf of the authority.	Design and Construction

Outcome	Ref #	Commitment	Project phase
Integration with major events organisers and management of impacts on events.	9A	An Events Management Strategy will be prepared and implemented to minimise impacts on cultural / special events adjacent to major project construction sites during construction. The strategy will include: a. Consultation procedures with local Councils, the CPCC, Events NSW, Tourism NSW and event proponents. b. Individual event management plans for each significant event, identifying potential impacts and associated management strategies. c. Procedures for modifying working hours and construction activities for significant and/or sensitive events, such as Anzac Day Services. d. Procedures for modifying the location and layout of events. e. Communication protocols for advising the public of changes to events and construction activities.	Construction
An integrated construction strategy for metro and the Barangaroo Development.	9B	A Barangaroo Construction Management Committee will be established between the proponent and the Barangaroo Delivery Authority (BDA) as a working group to the CPCC. The Committee will be established to coordinate construction activities at Barangaroo and manage cumulative impacts. The committee will identify strategies for: a. Traffic management b. Pedestrian access c. Spoil management (including disposal and reuse) and contamination d. Stakeholder consultation e. Site amenity with regard to presentation hoardings, fencing and site offices f. Early return of the metro construction site to BDA	Design and construction

Outcome	Ref #	Commitment	Project phase
Integration of metro design, construction and operations with RailCorp activities.	9C	The proponent and RailCorp will enter into an Interface Agreement for the project. The interface agreement will include: a. Approval, certification and endorsement processes by RailCorp prior to the commencement of works. b. Requirements for: – geotechnical and structural modelling and reporting – noise and vibration monitoring and reporting – electrolysis reporting – transformer substations and high voltage cable routes – Stormwater and waterborne contaminants management c. Survey information including the vertical and horizontal relationship of the proposed Works with regard to existing and proposed rail infrastructure. d. Monitoring during excavation, tunnelling and construction phases. e. Detailed requirements for drawings and other design information. f. A process to establish rail safety plans including instrumentation and the monitoring regime. g. Detailed service searches from RailCorp. h. Any blasting approvals required. i. A joint inspection process for the rail infrastructure and property in the vicinity of the project. j. A process to develop a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS). k. A process to resolve impacts on RailCorp designated parking areas for emergency or maintenance access to critical rail infrastructure. l. A process to resolve and monitor changes impacting pedestrians, passengers, cyclists, taxi and kiss-and-ride during construction and fit-out m. A process to prepare and submit Rail Safety Plans (RSP) as required that meet RailCorp's requirements prior to the commencement of works. n. The requirement for Specifications for Emergency Management System hardware for the end state, and detailed Emergency Management Plans or Protocols. o. A management plan to address the impacts associated with access disruptions to the loading dock and other back of house facilities at Central Station. p. A process to ensure that any proposal to remove the slip lane at the Pitt Street/Eddy Avenue intersection has written agreement from RailCorp as this will impact on RailCorp Emergency Response Group facilities. q. Dispute resolution process developed in consultation with the Director General NSWTI.	Design, construction and operation

Outcome	Ref #	Commitment	Project phase
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
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
High quality design outcomes for all stations, structures, depot and public domain.	11A	The proponent will demonstrate the achievement of high quality design of the stations, structures, depot and public domain through: a. Application of the principles and directions contained in the Sydney Metro Station Plans and Urban Design and Master Planning Report. b. Providing a report that: – Documents how the design (overall project design and the design of individual elements) addresses the design principles and directions. – Provides advice on agency and council consultation in the preparation of the designs. – Provides advice on how the design has responded to feedback from the Design Review Panel. – Is submitted to the Department of Planning prior to commencement of construction of above ground structures.	Design

Outcome	Ref #	Commitment	Project phase
Minimised overshadowing from buildings at Rozelle and Pyrmont.	11B	The design of new buildings at Pyrmont and Rozelle Stations will specifically consider measures to minimise overshadowing on adjoining residential properties at 9.00 a.m., noon and 3.00 pm on 21 June.	
Identification of management issues that will enable the successful construction and delivery of the Barangaroo Wynyard Precinct.	11C	The proponent will establish a joint design group with NSWTI, BDA, RailCorp, RTA and City of Sydney to further develop and resolve the integrated design issues associated within the Barangaroo Wynyard Precinct. This strategy will describe: a. The surface pedestrian enhancements works directly associated with the construction and operation of the project and the Barangaroo Pedestrian Link (BPL). b. The design and integration for the proposed project structures located on the Barangaroo site. c. Construction access arrangements, including: the opportunity to keep open, for as long a period as can practicably be achieved, that section of the Kent Street tunnel from Kent Street to Clarence Street; access arrangements to CityRail's Wynyard Station; and the maintenance of public access and setbacks to the waterfront at Barangaroo. d. Investigations into the feasibility of an alternative alignment for the BPL along the alignment of the existing Kent Street tunnel.	
Integrated design at Central Station.	12	Sydney Metro will establish a joint design group 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	Sydney Metro will establish a joint design group with City of Sydney Council and other parties as required 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 (eg. 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 *Environmental Planning & Assessment Act 1979*.	Design, construction and operation

Outcome	Ref #	Commitment	Project phase
	15	Development on eastern construction site at the Metro Barangaroo-Wynyard Station (integrated with station complex) 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.	Design, construction and operation
	16	Interim uses 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.	Design, construction and operation
Heritage			
Provision of heritage input into the design process	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 *Design in Context* (NSW Heritage Office and Royal Australian Institute of Architects).	Pre-construction
	17A	A Heritage Interpretation Strategy will be developed, for indigenous and non-indigenous heritage, by a suitably qualified heritage consultant to inform station design. The proponent will engage an independent heritage architect to review all design plans that affect a heritage item and validate that the design complies with a relevant Heritage Interpretation Strategy and any approved Conservation Management Plan.	Design
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, local community, local Aboriginal stakeholders, the business community and key stakeholders 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

Outcome	Ref #	Commitment	Project phase
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, stations and other subsurface structures are identified. b. Settlement criteria for individual sensitive utility structures (including CityRail tunnels, stations 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
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 design limits of 103dBV (0.14mm/s) for the night-time period and 106dBV (0.2mm/s) for the daytime period will be adopted at residential receivers. b. For critical working areas such as hospital operating theatres and precision laboratories, vibration design limits of 100 dBV (0.1mm/s) will be adopted. c. For offices, schools, educational institutions and places of worship, vibration design limits of 112 dBV (0.4mm/s) will be adopted. d. For workshops, vibration design limits of 118 dBV (0.8mm/s) will be adopted. e. Vibration limits are based on the maximum 1s RMS vibration level, not to be exceeded over any 24hr period and are based on the preferred continuous vibration levels in the 'Assessing Vibration: a technical guideline' (DEC, 2006).	Design
Minimisation of ground-borne noise levels at nearby sensitive receivers.	22	The following limits for ground-borne noise will be adopted for nearby sensitive receivers.	Design
		Receiver / **Noise trigger level ($dBA_{LAmax\ (slow)}$[2])**	
		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	

Outcome	Ref #	Commitment		Project phase
		General office areas[1]	45 dBA	
		Private offices and conference rooms[1]	40 dBA	
		Theatres[1]	35 dBA[3]	
		[1] When in use. [2] LA_{MAX} refers to the maximum noise level not to be exceeded over any 24hr period and is measured using slow response setting on a sound l level meter. [3] 35dBa or lower level subject to further assessment for the Lyric Theatre		
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 the greatest extent practicable, to achieve compliance with the ground-borne noise design limits.		Design
Airborne noise– train operations				
Minimisation of airborne noise levels at nearby sensitive receivers.	24	For residential receivers, schools, educational institutions, hospitals, passive and active recreation areas, and places of worship, the 'noise trigger' levels in the *'Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects'* (DECCW) 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 to ensure, to the greatest extent practicable, that the air-borne noise limits are achieved.		Design

Outcome	Ref #	Commitment	Project phase
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
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' (DECCW) and applicable INP Application Notes will be adopted as design limits for noise from the Rozelle stabling and maintenance depot.	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' (DECCW) will be adopted as design limits. All reasonable and feasible measures will be implemented to meet the limits.	Design

Outcome	Ref #	Commitment	Project phase
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 $L_{Amax(Fast)}$ 55 dBA at residential facades and $L_{Amax(Fast)}$ 65 dBA at commercial facades. All reasonable and feasible measures will be implemented to meet the limits.	Design
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

Outcome	Ref #	Commitment	Project phase
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 Small Business Owners Support Program to provide assistance to small retail business owners 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
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: a. Identification of necessary staffing resources. b. 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.	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
		c. 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. d. 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.	
Construction environmental management			
Clear definition of environmental management activities during design and 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 Yellow Block sandstone, 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.	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
		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. h. An environmental design management procedure to ensure design compliance with the Statement of Commitments and the Project Approval.	
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: a. Plan-based, with relevant environmental aspects covered in separate tables that clearly indicate at which construction phase the measures apply. b. 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. c. Prepared for all sites including, but not limited to: – Central Station. – Town Hall Station. – Martin Place Station. – Barangaroo-Wynyard Station. – Barangaroo Pedestrian Link. – Pyrmont 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 regularly monitored and reported by a heritage specialist during construction to ensure the minimum disturbance to significant fabric and ensure 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 *National Parks and Wildlife Act 1974* 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: a. Statement of spoil management objectives. b. Review of the statutory and policy framework as relevant to the project. c. Description of expected spoil volumes by source and category, including categories for reuse. d. 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 (eg crushing) including the identification of sites. – Disposal to landfill, including the identification of sites. e. Spoil management targets. f. Alternative transport investigation to reduce road traffic movements (see 48 below). g. Methodologies for on-site spoil handling, testing – including for contamination and acid sulfate soil (ASS), in areas identified as posing a potential ASS risk – and transportation.. h. Monitoring and reporting, including extraction volumes and reuse and disposal locations. i. Roles and responsibilities, including identification of project personnel to oversee the implementation of the sub-plan. j. Contingency plans for managing ASS. k. Contingency plan for managing contaminated spoil, including the development of Remedial Action Plans and engagement of a NSW accredited site auditor, if required. l.	Pre-construction

Outcome	Ref #	Commitment	Project phase
Conservation of Yellow Block sandstone for reuse off site.	46	a. The proponent will prepare a plan for extracting, storing and reusing Yellow Block sandstone in agreement with the Department of Commerce. • Where Yellow Block sandstone is found on site the proponent will undertake extraction, transporting and storage in accordance with Plan.	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), identified through detailed Waste Classification Assessment, will be adopted for the project.	Construction
Minimisation of impacts from transporting spoil.	48	The Proponent will undertake a feasibility assessment of barging spoil and using disused rail infrastructure to transport spoil to appropriate sites. The assessment will have regard to program constraints and practicable access to rail and barge by the project's source sites.	Pre-construction
Protection of the environment, workers and public.	49	a. Further assessment of potential contamination will be undertaken, to assess the extent or presence of contamination or hazardous materials within the project construction footprint. b. Remediation Action Plans with Site Auditor approval will be prepared where required.	Pre-construction
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.	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
		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.	
Construction traffic and transport			
Minimisation of disruption to traffic and transport movements. Minimisation of impacts on access to properties.	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 project.	Pre-construction
Relevant transport authorities are well informed of project activities.	52	a. A Traffic and Transport Liaison Group will be established to ensure that all relevant transport authorities and councils are aware of the proposed construction activities, upcoming works and related transport implication. The TTLG will progress key traffic and transport decisions during construction and undertake the consultation functions, which would otherwise occur at forums such as council traffic committees. b. The TTLG shall meet no less than fortnightly, unless otherwise agreed. Invited transport authorities and councils will have no more than two delegates and delegates must be vested with decision making powers on behalf of the authority and council.	Pre-construction

<table>
<tr><th>Outcome</th><th>Ref #</th><th>Commitment</th><th>Project phase</th></tr>
<tr><td colspan="4">Construction noise and vibration</td></tr>
<tr><td colspan="4">Construction noise and vibration goals</td></tr>
<tr><td>Minimisation of potential noise and vibration impacts at sensitive receiver locations.</td><td>53</td><td colspan="2">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.)</td><td>Pre-construction and construction</td></tr>
<tr><td>Minimisation of potential noise impacts at sensitive receiver locations.</td><td>54</td><td colspan="2">The following airborne construction noise management trigger levels (LAeq 15 minute) will be adopted for the project:
<table>
<tr><th>Sensitive receiver</th><th colspan="4">Time</th></tr>
<tr><td></td><td>When in use</td><td>Daytime
7.00am-6.00pm (Monday to Friday)
8.00am-1.00pm (Saturday)</td><td>Evening
6.00pm-10.00pm</td><td>Night-time
10.00pm-7.00am</td></tr>
<tr><td>Residential</td><td>N/A</td><td>RBL or LA90 Background +10 dBA</td><td>RBL or LA90 Background + 5 dBA</td><td>RBL or LA90 Background + 5 dBA</td></tr>
<tr><td>Commercial</td><td>70dBA</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Schools/child care centres</td><td>55dBA</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Places of worship</td><td>50dBA[1]</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td colspan="5">[1] The NML is 60 dBA if windows in the facility are fixed (i.e. cannot be opened)</td></tr>
</table></td><td>Pre-construction and construction</td></tr>
</table>

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: Objectives for construction noise and vibration management. a. Noise and vibration trigger levels to be adopted by the project. b. 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. c. 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. d. A blast management strategy (if blasting is proposed), which identifies: – Details of blasting to be undertaken. – Potential noise and vibration sensitive sites, including heritage items and RailCorp operational assets. – Noise and vibration criteria. – Requirements for asset protection. – Program of trial blasts. – Management measures including timing. – Noise and vibration criteria – Monitoring e. Provisions for stakeholder and community consultation including approval requirement of RailCorp. f. Monitoring and reporting of noise and vibration levels. g. Roles, responsibilities and resourcing. h. Reference and application of *Interim Construction Noise Guideline (DECCW, 2009)*. i. The requirements of the Sydney Metro's Construction Noise and Vibration Strategy	Pre-construction and construction

Outcome	Ref #	Commitment	Project phase
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 $L_{Aeq,\ 15\ minutes}$ 40 dBA during the evening period and 35 dBA during the night-time period.	Pre-construction and construction
Guidelines to provide safe vibration levels for occupants.	57	In relation to human comfort, the following trigger levels (maximum 1s RMS vibration level) 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.	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. All vibration levels relating to potential building damage refer to the Peak vibration level.	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

Outcome	Ref #	Commitment	Project phase
Minimisation of noise and vibration levels at nearby sensitive receivers.	60	At project 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
Minimisation of the potential of awakening reactions as a result of noise from construction activities during the night-time period at residential receivers.	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. Statutory and policy framework b. Objectives for air quality management. c. Relevant criteria and goals. d. Monitoring against the sub-plan and reporting. a. Dust contingency plan to address where observed dust levels are elevated or dust-related complaints are received.	Pre-construction

Outcome	Ref #	Commitment	Project phase
	63	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.	Construction
Construction water management			
Minimisation of potable water demand during construction. No impact on the water quality of surrounding surface or underground watercourses.	64	A Construction Water Management Sub-Plan will be prepared and implemented, and will include as a minimum: e. Objectives for construction water management with particular respect to minimising potable water use and maximising rainwater harvesting and recycling opportunities. f. Statutory and policy framework. g. Relevant criteria and goals for discharge, marine works (where required) and water reuse, including an assessment of groundwater quality to determine the requirement to treat contaminated groundwater prior to discharge or reuse. h. 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 (eg for ancillary construction facilities and tunnelling operations). – Water recycling opportunities to be incorporated into ECMSs. i. Roles and responsibilities. j. Monitoring and reporting. k. Spill management and other contingency plans, including incident response.	Pre-construction

Outcome	Ref #	Commitment	Project phase
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 *Energy Efficiency Opportunities Act 2006* (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
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 construction
Ecology management			
Minimisation of disturbance to local flora and fauna.	67	Prior to commencement of construction significant (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

Outcome	Ref #	Commitment	Project phase
Reduced spread of weeds.	68	All weeds will be removed in accordance with the *Noxious Weeds Act 1993*.	Construction
Reinstatement of disturbed areas.	69	A Landscape Management Sub-Plan will be prepared in consultation with relevant local councils and will address: a. Tree protection measures. b. Monitoring during construction. c. Replanting. d. Reinstatement of relevant sites, including Public Domain and use of salvaged materials. e. Post-construction monitoring. In accordance with the Landscape Management Plan: f. Revegetation and landscape planting will be undertaken in all public spaces, as appropriate. Locally indigenous species will be planted in preference to introduced species where appropriate. Revegetation and landscaping activities will be undertaken progressively, where possible, and in consultation with the affected landowner.	Design and construction
Visual amenity			
Minimal light spill.	70	Lighting around construction sites will be specifically designed to minimise 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	a. 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. b. 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. c. The project will meet the requirements of the guidelines for Category 3 projects in the NSW Government publication 'Aboriginal Participation in Construction Guidelines' (January 2007).	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
		f. Inclusion of sustainability matters in project risk register. g. A Sustainable Procurement Strategy for suppliers and materials. h. Publicly available web-based reporting of sustainability performance.	
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: 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 (eg 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			
Minimisation of contributions to climate change by reducing the greenhouse gas emissions of the project.	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 *National Greenhouse and Energy Reporting Act 2007* and *Energy Efficiency Operations Act 2006*.	Commissioning

Outcome	Ref #	Commitment	Project phase
Operational waste management			
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 *Waste Avoidance and Resource Recovery Strategy 2007* to minimise waste during the operation of the project.	Commissioning
Operational water management			
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.	Commissioning
Operational noise and vibration management			
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.	Pre-commissioning
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

Outcome	Ref #	Commitment	Project phase
Assessment of compliance with the ground-borne noise design goals.	80	The Operational Noise and Vibration Management Plan will provide an assessment, based on compliance monitoring, of the ground-borne noise and vibration levels after opening and nominally 2 years and 7 years after opening. Should any of these assessments indicate a clear trend for noise and/or vibration levels to exceed the design limits, reasons for these exceedances shall be identified and the operator shall implement further feasible and reasonable mitigation measures.	Commissioning and operation
Integrate the project with existing transport infrastructure, facilities and operations.	81	The proponent will commit to integrate the project with station precincts and existing transport networks, and: a. Achieve transport integration outcomes for Metro Line 1 (Stage 1) customers. b. Coordinate Metro Line 1 (Stage 1) rail operations with services of other transport operators and authorities. c. Integrate Metro Line 1 (Stage 1) station infrastructure with other transport facilities within the metro station interchange and precinct. d. Monitor integration of transport infrastructure and operations. e. Identify and respond to change within station precincts and transport operations.	Commissioning and operation