PART

D

STATEMENT OF COMMITMENTS, JUSTIFICATION AND CONCLUSIONS

PART D STATEMENT OF COMMITMENTS, JUSTIFICATION AND CONCLUSIONS

19. Draft statement of commitments

DGRs	Where addressed in the EA
A draft statement of commitments incorporating or otherwise capturing measures to avoid, minimise, manage, mitigate, offset and/or monitor impacts identified in the impact assessment sections of the EA. The statement of commitments must clearly articulate the desired environmental outcome of the commitment. The statement of commitments must be achievable, measurable (with respect to compliance), and time-specific, where relevant.	Chapter 19 Section 19.1

19.1 Draft statement of commitments

This chapter outlines the draft statement of commitments (SoCs) proposed by Transport NSW to avoid, minimise, manage, mitigate, offset and/or monitor impacts identified in the environmental assessment (EA) for the project. Transport NSW intends to achieve the outcomes and actions detailed in the draft SoCs.

The project mitigation measures (presented in Part C1 and Part C2) have informed the development of the draft SoCs that would be implemented as part of the project's design, construction and operation (refer Table 19.1). The draft SoCs specifies certain environmental outcomes to be achieved. In some instances, greater detail as to how those outcomes would be achieved is provided in the mitigations and management measures sections in Part C1 and Part C2.

The draft SoCs includes:

- an outcome to be achieved
- details of the commitment
- timing of when the commitment would apply — design (pre-construction), construction or operation.

The draft SoCs may be revised in response to public submissions to the EA and/or design changes made before final submission to the Department of Planning. The final SoC would be considered by the Department of Planning in assessing the project. Should approval be granted by the Minister for Planning, conditions of approval would pay regard to the final SoCs.

Following project approval, the finalised commitments would guide the next phases of the proposed development. The construction contractor and operating provider selected to undertake further planning, design, construction and/or operation phases of the proposed upgrade would be required to undertake all works in accordance with the final SoCs and Conditions of Approval.

Table 19.1 Draft statement of commitments

Outcome	Ref. number	Commitment/mitigation measures	Timing
Environmental management			
Clear definition of environmental management activities during construction	1	A construction environmental management plan(s) (CEMP) would be prepared in accordance with the *Environmental Management Plan Guideline* (DIPNR, 2003). The CEMP(s) would be endorsed by an independent environmental management representative (ERM) before construction begins.	Design and Construction
Ongoing best practice environmental management	2	The ongoing management of environmental issues associated with the project's operation and maintenance would use an environmental management system and standard operation procedures.	Operation
Independent review and reporting of environmental compliance	3	The proponent would appoint a suitably qualified and experienced Environmental and Sustainability Representative — independent of the project design and construction personnel — to advise on environmental compliance matters, implement the sustainability management plan (SMP) and associated initiatives, make regular inspections of construction sites and other activities as specified in the SoC and the CEMP(s).	Construction
Design development			
Optimisation of final design	4	Detailed design of the GreenWay shared path, including additional connection points with the public domain, would take place in consultation with a community and stakeholder forum comprising representatives of the GreenWay group, including local councils, members of the community and Bicycle NSW.	Design
Communication processes and stakeholder management			
A clear framework for the effective delivery of community and stakeholder involvement	5	A community and stakeholder involvement plan (CSIP) would be established before construction begins. The plan would then be implemented throughout the project's delivery. The plan would include, but not be limited to: a) identification of community and other stakeholders to be informed/consulted as part of the project b) details of procedures and mechanisms that would be used to regularly inform the community and other stakeholders of the project's progress and issues of interest to the community c) details of how property owners directly affected by the project would be consulted throughout the project d) processes to receive and manage feedback and complaints e) project phone, email and mail contact details (including a 24-hour contact number for urgent enquiries/complaints) Details would be provided for community-based forums that would be held to address key community and environment issues of interest/concern. The community would be encouraged to participate in community-based forums to help identify further opportunities to improve project outcomes and/or reduce the impacts associated with the project.	Construction

Outcome	Ref. number	Commitment/mitigation measures	Timing
Sustainability			
Achieving sustainable outcomes	6	An SMP would be developed and implemented for the project to guide design development, construction activities and operations. It would 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: ▪ sustainability initiatives database that tracks the identification and implementation of sustainability initiatives ▪ 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 during design and construction. After the project was completed, the role of sustainability management would be allocated to an appropriately trained member of the operational staff. f. List of roles, responsibilities and resourcing. g. List of sustainability matters in the project issue registers and risk register. h. Sustainable Procurement Strategy that would identify opportunities to reduce the volume and carbon footprint of the amount of resources required to construct and operate the project. Specific initiatives identified in the SMP would be incorporated into the CEMP and operator's EMS to ensure their implementation during each stage of the project.	Design, construction and operation

Outcome	Ref. number	Commitment/mitigation measures	Timing
Traffic and transport			
Minimise impact of commuter traffic and parking	7	Following the first year of operation, the assumptions in the final commuter parking study would be tested, including on-site monitoring. This would occur in consultation with local councils and Roads and Traffic Authority (RTA), where relevant, and would review: ▪ kiss-and-ride provision at each stop ▪ any unexpected impacts on on-street parking provision for local residents. Mitigation measures such as parking schemes would be developed as required.	Operation
Minimise impact of construction traffic on the road network	8	Any change to construction traffic access routes as identified in this EA would be subject to further assessment, in consultation with the RTA and councils.	Construction
Minimise impact of road closures during construction	9	Temporary road closures required to construct the project would be managed and coordinated so that impacts to local roads are minimised, in consultation with the relevant council and the RTA.	Construction
Minimise impacts on Parramatta Road	10	A detailed construction methodology for crossing the Parramatta Road (including works required to raise the bridge), would be developed in consultation with the RTA with the aim of minimising traffic and pedestrian disruptions.	Construction
Noise and vibration			
Minimisation of construction potential noise impacts at sensitive receiver locations	11	Noise mitigation would be adopted for construction activities where reasonable and feasible; to meet noise management levels (as outlined in Chapter 11) or where noise goals are likely to be exceeded. Where all feasible and reasonable practices have been applied and noise would still be more than 5 dBA above the noise-affected level, work would be scheduled to provide respite periods from the noisiest activities. The duration and noise level of the works would be clearly explained to all residents who would be affected.	Construction
Minimise amenity impacts of construction	12	Construction activities would be restricted to the following hours: ▪ 7:00 am to 6:00 pm Monday to Friday ▪ 8:00 am to 1:00 pm Saturdays ▪ no work on Sundays or public holidays. Except for the following: ▪ Any works that do not cause noise emissions to be more than 5 dBA higher than the RBL (background) noise level at any nearby residential property or other noise sensitive receiver. ▪ Any other works required outside these hours to achieve a better environmental outcome and considered essential to the project, as agreed by Transport NSW, and with suitable notification to the community.	Construction

Outcome	Ref. number	Commitment/mitigation measures	Timing
		▪ The delivery of plant, equipment and materials that is required outside these hours, as requested by Police or other authorities for safety reasons, and with suitable notification to the community. ▪ Works required during low traffic peak periods (i.e. night-time) when road closures are necessary to complete the works. ▪ Works required by utility service providers, or where impacts to services cannot be otherwise reasonably managed. ▪ Emergency work to avoid the loss of lives, property and/or prevent environmental harm.	
Minimisation of construction potential noise impacts at sensitive receiver locations	13	At sites where construction noise exceeds 75 dBA, site-specific construction noise and vibration management plans (CNVMPs) would be developed during detailed design.	Construction
Assessment of compliance with the operational noise goals	14	At locations identified as experiencing potential exceedances of project noise goals, the need for mitigation would be determined on the basis of attended measurements after operations started.	Operation
Minimise operational noise impact	15	Between the hours of 10:00 pm and 7:00 am, warning bells should only be used where in the opinion of the driver, it is considered to be a danger to public safety.	Operation
Heritage			
Protection of heritage assets	16	A heritage management plan (HMP) would be prepared before construction and incorporated into the CEMP. The HMP would assess the heritage impact mitigation and management requirements in relation to ▪ the Parramatta Road underbridge, and the potential for resulting impacts on Hawthorne Canal and Battle Bridge ▪ works near the Lewisham Railway Viaducts, the Lewisham Sewage Aqueduct and Hawthorne Canal.	Design and construction.
Protection of heritage assets	17	An interpretation strategy that recognises the historical and technical significance of the disused Rozelle goods line corridor and its role in the development of industries and urban growth would be developed as part of the HMP. The strategy should identify relevant stories and images that would encourage an understanding of the goods line for users of the Sydney light rail.	Design

Outcome	Ref. number	Commitment/mitigation measures	Timing
Ecology			
Biodiversity enhancement	18	A flora and fauna management would be prepared before construction and incorporated into the CEMP.	Design and Construction
Biodiversity enhancement	19	Where revegetation is proposed, the species selected should integrate with existing bushcare sites. Species selection should reference local government species lists.	Design
	20	The final locations of bushcare sites would be determined in consultation with the Inner West Environmental Group (IWEG).	Design
Minimisation of disturbance to local flora and fauna	21	Before construction begins, significant trees (based on species or age and size) that may be affected during construction would be identified and appropriate management measures incorporated into the CEMP. Measures to be considered include, but are not limited to, fencing, ongoing maintenance and pruning. Any tree removal within or next to construction sites would be subject to further assessment and approval by the proponent. The local council would be consulted where relevant.	Construction
Reduced spread of weeds	22	Weed management would take place in accordance with the *Noxious Weeds Act 1993.*	Construction and operation
Visual impact, landscaping and urban design			
Minimising construction impacts	23	Where construction compounds and access roads would be visible from surrounding areas, visual screening would be implemented, as appropriate.	Construction
Enhancing urban design outcomes	24	A landscape and urban design strategy would be developed during detailed design. Issues to be addressed in the strategy include: ▪ consistency with sustainable design principles ▪ design of retaining walls for maximum potential to integrate with the surrounding land use, and to minimise visual impact ▪ minimising the use of shotcrete, and developing strategies to reduce its visual impact ▪ design of stop locations to address urban design objectives to integrate with surrounding urban context ▪ design of a lighting strategy to consider light spill to adjoining properties, especially where these are residential properties ▪ where the GreenWay shared path is located close to residential dwellings, provisions for the creation or retention of privacy for those residents.	Design

Outcome	Ref. number	Commitment/mitigation measures	Timing
Energy demand and greenhouse gas			
Contributions to climate change are minimised by reducing the energy consumption and greenhouse gas emissions of the project	25	Opportunities would be investigated to reduce energy demand and associated greenhouse gas emissions during construction and operations. Measures to be investigated during detailed design would include, for construction: ▪ using energy efficient plant and equipment ▪ using materials with low embodied energy including use of low energy cement-substitute produces in concrete manufacture ▪ using energy-efficient site lighting. ▪ providing incentives for construction workers to use public transport, green travel plan targets and incentives. ▪ using modular construction, where practicable ▪ sourcing material from the Sydney region, where possible, to avoid transport-related energy consumption. During operation: ▪ using energy efficient lighting at light rail stops ▪ generating renewable energy using photovoltaic cells on stop roofs where possible.	Design, construction and operation
Climate change adaptation			
A design and finish that can adapt to the effects of climate change	26	Hydrology and drainage design would address current predictions of future sea level rise, increased rainfall intensity and storm surge, due to climate change.	Design
	27	Resilient finishes and materials to withstand likely future solar radiation would be used where practicable.	Design
Hydrology			
Surface water and flooding	28	Any flood mitigation required for the project would be finalised during detailed design, taking into consideration the assumptions on future rainfall contained within *Climate Change in Australia: impacts, adaptation and vulnerability* (CSIRO, 2007) or any successive Australian Government-endorsed climate change data.	Design
Contaminated land			
Safe remediation of the site	29	Potential contamination would be further assessed in the form of a Phase 2 assessment, to identify the extent or presence of contamination or hazardous materials within the project construction footprint.	Construction
	30	Contaminated material identified during the Phase 2 assessment would be managed, classified and disposed of appropriately in accordance with all relevant legislation and guidelines, including the *Protection of the Environment Operations Act 1997, the Waste Avoidance* and *Resource Recovery Act 2001* and *Waste Classification Guidelines* (DECC 2008).	Construction

Outcome	Ref. number	Commitment/mitigation measures	Timing
Public safety and security			
Crime Prevention Through Environmental Design (CPTED) guidelines are adopted in future design development to address potential impacts on public safety and security	31	All construction compounds and work areas would be fenced off to prevent public access during construction.	Construction
	32	NSW Police CPTED and other relevant guidelines would be applied to all elements of the project to guide the design of appropriate lighting, fencing of the rail corridor, security measures (including surveillance cameras), graffiti management, help points at stops and other issues.	Design

19.2 Construction environmental management framework

19.2.1 Construction environmental management plan

A construction environmental management plan (CEMP) would be prepared for the construction phase of the project. The CEMP would provide a centralised mechanism through which all potential environmental impacts relevant to the project would be managed. It would also outline a framework of procedures and controls for managing environmental impacts during construction. An environmental management system (EMS) consistent with the principles of ISO 14001 would be documented in the CEMP.

If the light rail and GreenWay components of the project are delivered independently, a CEMP would be prepared for each of these components.

The CEMP(s) would be prepared by the selected construction contractor(s) and endorsed by an independent environmental management representative (EMR) to be appointed by Transport NSW. The EMR and the construction contractor(s) would be responsible for monitoring. The EMR and Transport NSW would regularly monitor compliance against the CEMP(s), Minister's Conditions of Approval (MCoA) and SoCs.

The CEMP(s) would outline how environmental mitigation measures identified in this EA would be incorporated during the project's construction stage. The CEMP(s) would document mechanisms for demonstrating compliance with the MCoA, other relevant project approvals and the SoCs.

The CEMP(s) would focus on the following specific construction issues (as identified in the Director-General's Requirements — DGRs):

- construction compounds and ancillary facilities management
- noise and vibration management
- traffic and access management
- earthworks management (including stockpile, water and soil and air quality management)
- waste management (including contaminated land, materials and energy management).

The CEMP(s) would also address the following construction issues

- flora and fauna management
- heritage management
- utilities and services
- hazards and risk management.

The CEMP(S) would be based on the structure suggested in the *Environmental Management Plan Guideline* (DIPNR 2003) and as summarised in Table 19.2.

Table 19.2 CEMP structure

Chapter	Description
Chapter 1 — Background	
1.1	*Project introduction and description* — would provide an overview of the project background and description.
1.2	*Purpose of the CEMP* —would outline the CEMP's purpose with respect to managing environmental performance during construction.
1.3	*Objectives of the CEMP* — would document and determine the CEMP's objectives to outline what it aims to achieve.
1.4	*Construction environmental management framework* —would outline the environmental management framework being implemented on the project and explain how the CEMP relates to other management plans within this framework. It would list the management plans.
1.5	*Environmental policy* — a project environmental policy would be devised, based on the Transport NSW environmental policy, and included as part of the CEMP
Chapter 2 — Statutory and regulatory requirements	
2.1	*Relevant legislation summary* — would summarise relevant legislation.
2.2	*Compliance obligations* — would be listed and cross-referenced to relevant MCoA and SoC to where the plan (and/or other project management plans) addresses conditions.
2.3	*Approvals and licensing requirements* — would provide a table summarising the required approvals and licensing requirements for the project.
Chapter 3 — Project description and operations	
3.1	*Project location* —would provide a description of the project's location, including maps of the project in its local context.
3.2	*Construction activities* —would provide a description of the types of construction activities that would be involved in completing the project.
3.3	*Construction program* — would provide the construction program for the project.
3.4	*Construction footprint* — would provide maps outlining the construction footprint and a definition of the boundaries. This would generally be in accordance with the approved construction footprint described in the project EA.
3.5	*Construction compound sites* — would identify the compound sites for the project and describe permitted activities within them. This would generally be in accordance with the approved construction compound sites described in the project EA.
3.6	*Access points and construction traffic routes* — would locate construction access points and the construction traffic routes on maps. This would generally be in accordance with the approved construction access points and traffic routes described in the project EA.
3.7	*Temporary worksites* — would discuss temporary worksites and provide the procedure for establishing and managing them.
3.8	*Construction working hours* — would define standard construction working hours and describe the types of works that may occur outside of these hours (e.g. night works) and the procedure for working outside of these hours.
3.9	*Construction equipment* — would provide an overview of typical plant and equipment to be used during the project and identify any specific equipment that would not to be used.

Chapter	Description
Chapter 4 — Environmental roles and responsibilities	
4.1	*Organisation chart* — the project team organisation chart would be provided.
4.2	*Roles and responsibilities* — would specify the roles and responsibilities for implementing the CEMP, construction environmental management framework and the individual responsibilities for the implementation of this CEMP. Roles and responsibilities addressed would be provided for the following: ▪ environmental management representative ▪ project manager ▪ environment manager ▪ site supervisors ▪ project engineer ▪ community relations manager ▪ site workers ▪ subcontractors.
4.3	*Project communications* —would detail the project communications that would be required to transfer information between the project team during construction. It would list requirements for project team communications, including: ▪ informal communications regarding CEMP requirements and environmental performance ▪ project meetings ▪ tool-box discussions (as required) to address specific environmental issues.
4.4	*Environment awareness training and site inductions* — would give the details for the level of environmental awareness and environmental induction training that would be required for construction workers.
4.5	*Environmental risk assessment* — would include an environmental risk and opportunities matrix.
Chapter 5 — Reporting	
5.1	*Environmental reporting* — would detail the following reporting protocols required of the construction contractor: ▪ daily diaries ▪ weekly summary reports ▪ monthly summary reports.
5.2	*Environmental incidents reporting* — would document a system for reporting environmental incidents, documenting them, responding to them and implementation practices to prevent reoccurrence. It would detail the requirement for notifying government agencies, such as DECCW, following specific types of incidents.
Chapter 6 — Implementation and monitoring	
6.1	*Monitoring requirements* — would detail the activities and locations that would require monitoring throughout the construction phase of the project.
6.2	*Monitoring program* —would provide a schedule for the monitoring requirements, indicating the required frequency of monitoring and responsibility for monitoring activities.
6.3	*Environmental incident management, emergency contacts and response* — would provide procedures for reporting all near misses and incidents associated with the project, which are required to be developed in consultation with Transport NSW (or its delivery agency). It would also document emergency contacts and response procedures.
6.4	*Environmental complaints reporting* — would identify the procedures for recording and addressing complaints about the project's environmental management.

Chapter	Description
6.5	*Environmental auditing* —would describe the requirements for periodic auditing of the implementation and on-going effectiveness of the CEMP. Auditing would include both internal and external auditing requirements, such as the scope of monitoring required, frequency of reporting and a review of responsibilities.
6.6	*CEMP review* —would describe a process to review the CEMP, including identifying whether environmental controls/procedures/monitoring continue to be applicable to the project for monitoring and mitigation purposes.

Management plans would be prepared for each of the key construction issues (as identified in the DGRs) to supplement the CEMP(s). Sections 19.2.2 to 19.2.6 provide an overview of the plans and the key management objectives that would be used in addressing these key issues, and the overarching strategies that would be implemented to meet these objectives.

The key construction issue plans would be developed through a coordinated process involving relevant stakeholders, including relevant government agencies, local councils, utility service providers and landowners (where appropriate). The resourcing, implementation responsibilities, monitoring, review and reporting requirements for the plans would be consistent with those outlined above for the CEMP.

19.2.2 Construction compounds and ancillary facilities management plan

The construction compounds and ancillary facilities plan would set out details to establish and manage site compounds, including stockpile areas, and other ancillary facilities required to construct the project. The plan would supplement in greater detail the information provided in the main body of the CEMP. The objectives and strategies of the construction compounds and ancillary facilities management plan would include:

- *Objective:* minimise impacts of construction compounds and ancillary facilities on nearby land uses.

  Strategy to address: locate, construct and operate construction compounds and ancillary facilities away from sensitive land uses and receivers wherever practical and feasible.

- *Objective:* manage stockpile areas to minimise potential pollution of watercourses, groundwater and the atmosphere.

  Strategy to address: appropriate siting and implementation of appropriate material management practices to ensure minimal run-off and air emissions (dust) from construction compounds and ancillary facilities.

- *Objective:* minimise the clearance of vegetation required to construct the project.

  Strategy to address: when locating or constructing compounds, use previously cleared areas or those that are not identified as important vegetative areas.

- *Objective*: minimise the visual impact of construction compounds and ancillary facilities.

  Strategy to address: locate construction compounds and ancillary facilities such that their visual impact on adjoining and sensitive receivers is minimal, or screen facilities to minimise impact.

19.2.3 Construction noise and vibration management plan

The construction noise and vibration management plan (CNVMP) would set out details to manage potential noise and vibration issues resulting from the project's construction. Construction works would be undertaken in accordance with the requirements identified in the *Protection of the Environment Operations Act 1997* for noise and vibration and in accordance with the guidelines established for the project and detailed in Chapter 11.

The objectives of the CNVMP would include:

- *Objective*: keep the community informed of construction activities, in particular noise generating activities that may result in impacts upon adjoining landholders.

  Strategy to address: develop and implement the community and stakeholder involvement plan (CSIP). This would aim to inform the local community on a regular basis of the potential noise impact as a result of construction activities and when key construction activities would take place (e.g. through community project newsletter/letterbox drop).

- *Objective*: minimise construction noise and vibration impacts on adjoining landholders.

  Strategy to address: implement appropriate noise mitigation measures as identified within the EA, including limiting the use of noisy machinery in the one location at a given time and allowing noise impacts to be spread across the whole of the project area.

  Strategy to address: when feasible schedule noisy construction activities during daytime hours. Minimise the duration of high noise generating activities and schedule respite periods.

  Strategy to address: undertake targeted noise monitoring throughout the construction phase.

- *Objective*: minimise vibration impacts upon local structures and nearby infrastructure and services, including heritage structures.

  Strategy to address: write a dilapidation report before structural works start on the site, including heritage sites that could be damaged by construction works, and once works have been completed.

  Strategy to address: limit the use of plant and machinery that results in excessive vibrations as far as practical, and minimise its use in one part of the construction site for extended periods of time.

In addition to the overall CNVMP, site-specific management plans would be prepared for each of the following specific works:

- where noise from construction works would exceed 75 dBA
- each temporary worksite that is required outside the identified construction boundary.

19.2.4 Construction traffic management plan

The construction traffic management plan (CTMP) sets out how traffic and transport would be managed. The CTMP's objectives and strategies would be to:

- *Objective:* minimise traffic impacts on the general local community.

  Strategy to address: inform the local community on a regular basis of the potential impact on traffic as a result of construction activities and when key construction activities would take place (e.g. through community project newsletter/letterbox drop).

- *Objective:* minimise environmental impacts due to construction traffic and parking.

  Strategy to address: minimise the number of vehicles required to travel to and from the site (where practical) by encouraging active and public transport methods.

  Strategy to address: identify preferred routes of travel used by site workers to/from the work sites and areas for parking.

- *Objective:* minimise the impacts on existing traffic flows roads near the project.

  Strategy to address: coordinate delivery of materials to ensure that they do not occur at one time and (where possible) during off-peak times.

- *Objective:* minimise construction vehicle routes on public roads.

  Strategy to address: identify permissible construction vehicle routes that may be used to access the construction site within the management plan and CEMP.

- *Objective:* minimise potential safety risks to construction personnel and general motorists as a result of vehicle movements associated with the project.

  Strategy to address: restrict access to and from the construction site at nominated access points and position appropriately qualified workers at each access point. Ensure warning signs are readily visible around nominated access points.

Ongoing consultation with relevant councils and the Roads and Traffic Authority (RTA) would occur throughout the construction program and details of the requirements for this consultation would be included in the CTMP.

In addition to the overall CTMP, individual site management plans would be prepared for each of the following specific works:

- night work road closures required for the project (such as the closure of Parramatta Road)
- each temporary worksite that is required outside the identified construction boundary.

19.2.5 Earthworks management plan

The earthworks management plan would set out details for earthworks, stockpiling, erosion and sedimentation, soil and water management, and air quality management. Construction works would be undertaken in accordance with the requirements identified in the *Protection of the Environment Operations Act 1997.*

The earthworks management plan's objectives would include:

- *Objective:* minimise water quality impacts from construction of the project.

  Strategy to address: complete works within the project area in a timely manner and rehabilitate and/or re-establish sites as soon as possible to minimise exposure of disturbed areas.

  Strategy to address: provide sediment and filter traps and other soil and erosion control devices around project works and site compounds and ancillary facilities to prevent contaminated run-off leaving the site.

- *Objective:* minimise air quality (dust) impacts on surrounding landholders.

  Strategy to address: use air quality monitoring during the project's construction to identify and develop additional mitigation measures if monitoring levels exceed required standards.

- *Objective:* minimise the disposal of excavated materials associated with the project's construction.

  Strategy to address: where possible, re-use excavated materials as fill material on other parts of the project. Dispose of excess spoil in accordance with relevant DECCW environmental guidelines.

- *Objective:* minimise the disbursement of contaminated materials to the surrounding receiving environment and ensure effective management of potentially contaminated materials associated with the project's construction.

  Strategy to address: areas of potential contamination concern would be identified and works in these areas managed to minimise disturbance or, if not appropriate, then managed in accordance with relevant contaminated land and waste guidelines.

  Strategy to address: excavate pre-classified contaminated materials and transfer directly into haulage trucks for off-site disposal to minimise on-site stockpiling of contaminated materials.

  Strategy to address: develop procedures for the assessment, handling and stockpiling of potentially contaminated materials before and during the works, in accordance with NSW DECC (2008), *Waste Classification Guidelines.*

  Strategy to address: develop a contingency plan for unexpected hazards that may be encountered during construction and excavation works.

19.2.6 Waste management plan

The waste management plan (WMP) would set out details to manage materials, contaminated land and energy. The plan would outline that waste disposal would be managed in accordance with the *Waste Classification Guidelines Parts 1 and 2* (DECC, 2008), the *Waste Avoidance and Resource Recovery Act 2001* and other relevant policies and guidelines.

The WMP's objectives would include:

- *Objective:* minimise the amount of construction waste generated during the project's construction.

  Strategy to address: apply the waste hierarchy of avoid, minimise, re-use/recycle, and dispose during construction.

  Strategy to address: opportunities would be investigated to maximise re-use of construction spoil on the project, including cut/fill balance during design.

  Strategy to address: any materials that could not be recycled or re-used would be disposed of at appropriately licensed waste facilities.

- *Objective:* assess, manage and dispose of contaminated materials in accordance with relevant guidelines.

  Strategy to address: pre-classify contaminated materials in-situ through phase 2 contamination investigations undertaken during detailed design, in accordance with NSW DECC (2008), *Waste Classification Guidelines.*

  Strategy to address: waste identified as contaminated would be removed by a licensed contractor under current WorkCover NSW and DECCW guidelines.

- *Objective:* minimise energy consumption and waste during construction.

  Strategy to address: maximise energy efficiency in construction operations, both in plant and equipment usage and in construction facilities design and operation.

19.2.7 Heritage management plan

The heritage management plan (HMP) framework has been discussed in Section 12.5.1. The HMP would guide construction within the vicinity of a potentially affected heritage items and provide details on protective measures and monitoring requirements for specific heritage items. The detailed HMP would be prepared in accordance with heritage best practice and Heritage Branch guidelines. The HMP would be finalised in accordance with heritage best practice and Heritage Branch guidelines and in consultation with Department of Planning (Heritage Branch) and Sydney Water.

The objectives of the heritage management plan include:

- *Objective:* minimise or avoid impacts to heritage items in the vicinity of the project, particularly in reference to the State heritage items.

  Strategy to address: the former Mungo Scott Flour mills siding would be retained and integrated into the detailed design of the project

  Strategy to address: detailed design and engineering adjacent to the Leichhardt (Charles Street) underbridge, Leichhardt (Marion Street) underbridge and Lilyfield (Catherine Street) overbridge should ensure that impacts to their original fabric are minimised, if not avoided

- *Objective:* to guide construction in the vicinity of heritage items.

  Strategy to address: any excavation works near the Lewisham Sewage Aqueduct, Lewisham Railway Viaducts, Battle Bridge, the Hawthorne Canal Hawthorne Canal or the two former flour mills should be undertaken with archaeological supervision.

  Strategy to address: undertake vibration monitoring of identified heritage items during construction in accordance with heritage best practice standards. Modify construction methods if measured vibration levels are found to have the potential to cause structural damage.

  Strategy to address: avoid street names in cement paving on Marion Street during the construction of the signalised intersection and the protection of other street names in cement paving and stone terracing and steps south of Old Canterbury Road and north of Summerhill Street) during construction.

- *Objective:* preserve the original fabric and historic significance of the Parramatta Road underbridge, Battle Bridge and Hawthorne Canal during construction works associated with raising the bridge.

  Strategy to address: develop detailed construction methodology for bridge raising works in consultation with heritage specialist to ensure that there are minimal impacts to the original historic fabric, clear delineation between extant and new fabric and materials whilst maintaining existing proportions of the bridge and its relationship to its environment.

- *Objective:* create an awareness of the former use and history of the rail corridor.

  Strategy to address: develop an Interpretation Strategy in accordance with Section 12.5.2 that recognises the historical and technical significance of the Rozelle Goods Line and its role in the development of industries and urban growth.

  Strategy to address: construction contractor(s) would be briefed on the heritage provisions and the significance of the identified items adjacent to and within the vicinity of the project.

20. Project justification

This chapter provides the justification for the project, taking into consideration the objectives of the *Environmental Planning and Assessment Act 1979* and ecologically sustainable development principles.

DGRs	Where addressed in the EA
Project justification — identify alternatives to the preferred project considered and justify the project taking into consideration the objectives of the *Environmental Planning and Assessment Act 1979*	Section 4.2, Chapters 5 and 20

20.1 Strategic need for the project

The strategic need for the project is presented in Chapter 4. This section provides a summary of the strategic need for the project given its specific relevance to its justification.

Sydney's population is expanding at a rapid rate and is expected to reach six million by 2036 (Department of Planning 2010). This rate of growth represents a significant upwards shift in population projections since the publication of the *Sydney Metropolitan Strategy* (Department of Planning 2005). The existing population places considerable pressure on the transport (road, rail and bus) network and infrastructure and, as a result, there is already a need to improve Sydney's transport network capacity, efficiency and reliability to respond to and accommodate the projected population growth.

The extension of the existing light rail system has been identified in the *Sydney Metropolitan Strategy Review* (Department of Planning 2010) and *Metropolitan Transport Plan* (NSW Government 2010) as a key element within Sydney's improved transport network to respond to and assist in accommodating population growth in a sustainable manner.

Specifically, the project is needed to:

- Provide an alternative sustainable transport option for existing and future populations and to promote a mode shift from private vehicles to light rail transport. This would help reduce greenhouse gas emissions and potential air, noise and other environmental impacts in the future.
- Provide a new orbital route connecting neighbourhoods, tourist destinations and workplaces.
- Provide better integration of public transport networks.
- Deliver a reliable alternative transport option.
- Provide infrastructure to promote active transport (walking and cycling).

20.2 Meeting project objectives

Transport NSW has developed key project objectives (refer Section 1.2) that align with the NSW Government's overarching strategic objectives for metropolitan transport.

Through design development and determination of construction and operation phase mitigation measures, the key project objectives would be achieved. The project can be justified on the basis of its ability to meet the key project objectives.

20.3 Project justification having regard for the objects of the EP&A Act

20.3.1 Relevance to the project

Table 20.1 identifies the objectives of the *Environmental Planning and Assessment Act 1979* and their relevance to the project.

Table 20.1 Objectives of the *Environmental Planning and Assessment Act 1979* and relevance to the project

Objective	Comment
(a) (i) To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, waters, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment	The project design and management measures detailed in this environmental assessment (EA) would allow for the proper management, development and conservation of natural and artificial resources. One of the project's main objectives is to provide improved public transport access and connections between where people live, work and visit, in particular within the Inner West and between the Inner West and the Sydney CBD, which would help promote the social and economic welfare of this community. It is recognised there would be some impact on natural and artificial areas (such as existing local open space areas) as a result of the project; however, this would not be significant at a regional level.
(a) (ii) To encourage the promotion and co-ordination of the orderly economic use and development of land	The project would form an important element in the metropolitan transport targets the NSW Government set in *the Metropolitan Transport Plan* for improving public transport alternatives within Sydney.
(a) (iii) To encourage the protection, provision and co-ordination of communication and utility services	Existing utilities and services within the project corridor would be protected as far practicably possible during the project's construction.
(a) (iv) To encourage the provision of land for public purposes	The development of the GreenWay shared path alongside the light rail corridor is a significant public space. The project would encourage the future provision of additional land for public purposes within Sydney's Inner West. Future potential bushcare sites within the project would also provide a significant public purpose following liaison with IWEG. It is envisaged councils would then manage these spaces.
(a) (v) To encourage the provision and co-ordination of community services and facilities	It is anticipated the project would provide the benefit of improving access to other community services and facilities throughout the Inner West and in the Sydney CBD, and would not adversely affect the community's ability to access services and facilities in the local area.

Objective	Comment
(a) (vi) To encourage the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities and their habitats	A majority of the project would be constructed within the existing, disused Rozelle goods line rail corridor, which is an area of heavily disturbed land. As such, the project would minimise impacts on the environment, including threatened species, populations and ecological communities and their habitats. However, since the corridor's former use ended, some vegetation with habitat value has established. To manage this issue, additional measures have been proposed in this EA to manage impacts during and after construction.
(a) (vii) To encourage ecologically sustainable development	Chapter 8 provides a detailed account of the project's approach to sustainability in project design and delivery. Furthermore the principles of ecologically sustainable development have been considered for the project (refer to Table 20.2).
(a) (viii) To encourage the provision and maintenance of affordable housing	While not directly relevant to the project, providing increased public transport access to various Inner West suburbs could improve accessibility to potential affordable housing sites.
(b) To promote the sharing of responsibility for environmental planning between different levels of government in the State	It is envisaged each of the councils would manage the proposed bushcare sites and GreenWay shared path. Transport NSW has developed the project in consultation with local councils and the GreenWay Steering Committee.
(c) To provide increased opportunity for public involvement and participation on environmental planning and assessment	The project development process has involved extensive consultation with relevant parties and this would continue in the detailed design, construction and operation phases. Community involvement in the planning and assessment of the project is described in Chapter 3.

20.3.2 Principles of ecologically sustainable development

Ecologically sustainable development (ESD) is development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The principles of ESD have been an integral consideration for the project. This includes the effective integration of economic and environmental considerations in all decision-making processes.

The proponent is committed to providing the project in an environmentally responsible manner and managing or eliminating any risks that may lead to an adverse effect on the environment. The ESD principles and objectives would be continuously assessed throughout each phase of the project as more information becomes available. Details of how the principles of ESD have been incorporated into the project are provided in Table 20.2.

Table 20.2 Incorporation of ESD principles in the project

ESD principle	Comment
Precautionary principle	A precautionary approach has been applied throughout the project's development. A number of specialist studies have evaluated, with a measure of scientific certainty, the risk of environmental damage and how to avoid impact where possible (refer to Part C1 and Part C2 of this EA and Volume 2). An environmental risk analysis has also been part of this EA (refer to Chapter 18). The environmental risk analysis and the EA as a whole have not identified any threats of serious or irreversible environmental damage.
Inter-generational equity	Issues that have potential long-term implications, such as consumption of non-renewable resources, waste disposal, greenhouse gas emissions, removal of vegetation, land use changes and impacts on visual amenity, have been considered in this EA and the impacts minimised through design considerations and identifying various management measures, as described in Part C1 and Part C2 of the EA. When the project starts operating (subject to approval), it would deliver inter-generational equity by: ▪ Improving access between various areas in Sydney, in particular the Inner West LGAs of Ashfield, Leichhardt and Marrickville. An accessible, reliable and affordable public transport alternative would give a broad range of socio-economic groups that live within a reasonable distance of the nominated light rail stops the ability to move within the city. ▪ Enhancing the region's future environmental quality by promoting the increased use of public transport, via the light rail and alternative (cycling and walking) transport options through providing the GreenWay shared path.
Conservation of biological diversity and ecological integrity	A key objective of the project is to minimise adverse impacts on and to enhance the area's environmental values. Conservation of biological diversity and ecological integrity has been considered during concept design (including siting stop locations and the GreenWay shared path) and through identifying and incorporating bushcare sites into the project. Impacts have been avoided and minimised where possible. Potential impacts on the Grey-headed Flying-fox and Eastern Bentwing-bat have been identified as the only potential threatened flora or fauna species likely to occur within the project corridor. Previous surveys also identified the presence of the Long-nosed Bandicoot, which is listed as an Endangered population within inner western Sydney under the *Threatened Species Conservation Act 1995*; a significant impact on these threatened species and populations is not expected.
Improved valuation and pricing of environmental resources.	Environmental and social issues were considered in the strategic planning and establishment of the need for the project, and in consideration of options. The value placed on environmental resources is evident in the extent of the planning, environmental investigations and design of management measures. Ongoing and detailed design of the project would include further commitment to the recognition of the value of reducing environmental impacts.

20.4 Key impacts of the project

The project is expected to have environmental, social and economic benefits for the Inner West region of Sydney, as well as for the wider metropolitan area. The project's key beneficial impacts would comprise:

- *Reactivation of a disused asset* — the project would reactivate the disused Rozelle goods line corridor. Through the development of an integration strategy, information on the former use and history of the rail corridor would be portrayed to the local community.
- *Enhanced urban connectivity* — new stop locations would connect communities along the corridor, while new access paths across the corridor would improve linkages between communities on either side.
- *Increased sustainable travel options* — the project would provide the infrastructure for and encourage sustainable travel with greater use of public and active transport. This could reduce traffic congestion and greenhouse gas emissions.
- *Improved transport network integration* — the project would improve the integration of public transport networks by linking existing radial corridors and by facilitating interchanges with bus and heavy rail transport options.
- *Increased public space and recreation areas, promotion of healthier lifestyles* — the project would provide increased recreational activity infrastructure through providing a dedicated pedestrian and cycle shared path between the Cooks River and Iron Cove; which would encourage healthier lifestyles and more sustainable travel options.
- *Improved visual amenity* — the project can provide the opportunity to upgrade the existing landscaping along the route. Especially within the rail corridor and areas surrounding proposed stops, the vegetation is overgrown and contains a high percentage of exotic species. Post-construction there is the opportunity to landscape such areas to improve visual amenity and privacy for local residents.
- *Operational ecological and social impacts* — the project would dedicate new bushcare sites along the corridor, which would promote fauna habitat, increase connectivity and improve the condition of vegetated communities along the project. Bushcare sites would be established and maintained through community involvement.

Despite this, some adverse impacts are unavoidable due to the nature of the proposal. These adverse impacts would comprise:

- *Construction phase impacts on adjacent land uses* — this would include noise and vibration amenity (refer Chapter 11), visual amenity (refer Chapter 14), social disruption (refer Section 17.1.) and traffic/transport amenity (refer Chapter 10). These issues are considered to be manageable with the effective implementation of standard construction environmental management measures.

- *Construction phase impacts on traffic and access* — impacts to traffic would be associated with heavy vehicle traffic, increased traffic on local roads, potential traffic diversions and full and partial road closures (refer Chapter 10). These impacts are considered manageable with the effective implementation of standard mitigation measures.

- *Operational phase impacts on local resident parking* — impacts to local resident parking would be associated with commuters driving their vehicles to the new light rail stops and parking on local streets. This potential impact is considered minor.

- *Noise and vibration impacts associated with construction of the project* — construction noise and vibration impacts would be largely manageable by applying standard noise mitigation measures and developing a construction noise and vibration management plan (CNVMP). However, based on worst case construction scenarios (e.g. some piling and earthworks close to sensitive receivers), significant exceedances of construction noise goals could occur at some receivers (refer Section 11.3.2). These impacts would be expected to be short-term in duration.

- *Noise and vibration impacts associated with operation of the project* — long-term impacts resulting from operating the project are anticipated to be minimal and contained within limited areas. These impacts would be mitigated using a range of at-source, noise path and at receiver measures.

- *Direct and indirect impacts on historic heritage items* — these impacts are considered to be manageable by the detailed design considering the original fabric and historic significance of such items and implementing proposed management measures during construction.

- *Impacts to threatened biodiversity* — the project is not considered to cause a significant impact on any threatened species or endangered population. Although some vegetation would be lost, future bushcare sites would be identified.

- *Direct and indirect impacts on the visual environment* — visual impacts of the stops and GreenWay shared path would be managed through design development and by implementing urban design and landscape management measures.

Overall, the benefits of the proposal are considered to outweigh the adverse impacts, considering the proposed implementation of management commitments and mitigation measures by Transport NSW during the further design and construction stages, and the operator during the operational stages.

20.4.1 Significance of the environmental impacts

As discussed above, the project is expected to have environmental, social and economic benefits for both the Inner West region of Sydney and potentially the wider metropolitan region. Despite this, some adverse impacts, would be experienced, including some that would be unavoidable due to the nature of the project.

The project's design has tried to reduce environmental impact throughout the process, while the environmental risk analysis process (refer Section 18) and the investigations as part of this EA have identified mitigation measures to apply during the construction and operation phases.

The key potential impacts that are likely to be associated with the project's construction and/or operation are discussed in Section 20.4.1. These impacts would be minimised through implementing the proposed impact mitigation measures described in Chapters 9–16, as well as management commitments and mitigation measures detailed in the draft SoCs (refer Chapter 19) and Section 19.2. With the adoption of these measures, the benefits of the project are considered to significantly outweigh the adverse impacts.

Other non-key environmental issues associated with the project are described in Chapter 17. These impacts are not likely to be significant and would be managed through applying standard environmental management and the proposed mitigation measures. Management commitments to address these issues are detailed in the draft SoCs (refer Chapter 19).

21. Conclusions

21.1 Overall conclusions

This environmental assessment (EA) has been prepared in accordance with Part 3A of the *Environmental Planning and Assessment Act 1979*. In particular, it addresses the requirements of the Director-General of the NSW Department of Planning (issued on 11 August 2010) and addresses each of the issues raised. The EA also includes consideration of the issues raised by the community and stakeholders during the development of the project and completion of the EA.

This EA has confirmed the project has a strong justification for proceeding, considering the significant regional transport, social and economic benefits it would provide for the existing communities within Sydney's Inner West.

The project would form part of the NSW Government's aim to increase the patronage of public transport and active transport (cycling and walking) options within the Sydney metropolitan region and make alternative transport options more reliable. It would also help the NSW Government deliver transport options around which urban densities can increase to meet the population targets set for the Inner West of Sydney within the *Sydney Metropolitan Strategy*. The adverse consequences of not proceeding with the proposal would be significant in the long term for the existing rail network's capacity, road network congestion, and poor accessibility for existing residents and businesses within the local area.

The project is expected to have significant environmental, social and economic benefits for the Inner West region of Sydney, as well as the wider metropolitan area. However, some adverse impacts would be unavoidable due to the nature of the project. Noise, visual and traffic impacts would occur, particularly during the project's construction. These are expected to reduce in the long term once the project starts operating and proposed mitigation measures are implemented.

Various measures and commitments are recommended to avoid and/or manage the identified impacts associated with the project's construction and operation. These would be incorporated in the final CEMP(s) and operator's environmental management system (EMS), as the detailed design of project progresses. This is reflected in the draft statement of commitments presented in Section 19.1.

Provided the measures and commitments specified in this EA are applied and adhered to during the project's construction and operational, it's overall environmental impacts are considered to be manageable.

21.2 Next steps

Transport NSW is seeking approval from the Minister for Planning for the construction and operation of the SLRE Stage 1 and GreenWay shared path between Iron Cove and the Cooks River (the project). The next steps in the process are as follows:

- Exhibit the EA for a minimum of 30 days and invite the community and stakeholders to make submissions.
- Consider the submissions. Submissions received by the Director-General would be provided to the proponent (Transport NSW) and any relevant public authorities. The proponent may then be required to prepare and submit one or more of the following:
  - a submissions report, responding to issues raised in the submissions
  - a preferred project report, outlining if any significant changes to the project design are proposed and how these changes would minimise environmental impacts
  - a revised statement of commitments.
- Once the submission period has been finalised, the Director-General of the Department of Planning would prepare a detailed report on the project to assist the Minister for Planning in deciding whether to grant approval to carry out the project.
- The Minister for Planning determines whether to approve or disapprove the carrying out of the project. A set of approval conditions would be provided to Transport NSW, who would then be required to comply with these conditions for the construction and operation of the project.

Consultation with the community and other interested stakeholders would continue throughout the detailed design and construction phases of the project.

An electronic copy of the documentation would also be made available on the Department of Planning's website (www.planning.nsw.gov.au) and Transport NSW's website (www.transport.nsw.gov.au). Comments on the EA or the project can be made through an online submission at the Department of Planning's website or through a written submission to:

Sydney Light Rail Extension (Stage 1) — Inner West Extension Environmental Assessment
Department of Planning
Major Infrastructure Assessments NSW Department of Planning
22–33 Bridge Street
SYDNEY NSW 2000.

22. References

Abbs, D & Rafter, T November 2008, *Impact of Climatic Variability and Climate Change on Rainfall Extremes in Western Sydney and Surrounding Areas: Component 4 — Dynamical Downscaling.*

AMBS 2007, *Fauna study, Marrickville LGA.*

Andren, H 1994. 'Effects of habitat fragmentation on birds and mammals in landscapes with different proportions of suitable habitat: a review', *Oikos*, vol. 71, pp. 355-66.

Australian and New Zealand Environment and Conservation Council (ANZECC) 2000, *Guidelines for Fresh and Marine Water Quality.*

Ashfield Municipal Council November 2006, *Strategic Plan 2006–2010 Ashfield Towards 2010.*

Australian Greenhouse Office 2006, *Climate Change Impacts & Risk Management: A Guide for Business and Government, viewed November 11* www.climatechange.gov.au/impacts/publications/risk-management.html>.

Biosis Research 2010, *Preliminary ecological assessment: Sydney Light Rail Extension, Stage 1.*

Canadell, JG, Le Quéré, C, Raupach, MR, Field, CB, Buitehuis, ET, Ciais, P, Conway, TJ, Gillett, NP, Houghton, RA & Marland, G 2007, 'Contributions to accelerating atmospheric CO2 growth from economic activity, carbon intensity, and efficiency of natural sinks', *Proceedings of the National Academy of Sciences, 104*: pp. 18866–18870.

Catharinus, F, Jaarsma, A, Langevelde, F & Botma, H 2006, 'Flattened fauna and mitigation: Traffic victims related to road, traffic, vehicle, and species characteristics', *Transportation Research*, vol. D, no. 11, pp. 264–76.

CSIRO 2006, *Infrastructure and Climate Change Risk Assessment for Victoria.*

CSIRO 2007, *Climate Change in Australia — Technical Report.*

CSIRO 2010, *Extreme temperature data.*

CSIRO & Bureau of Meteorology 2007, *Climate Change in Australia — Technical Report 2007.*

Department of Climate Change 2007a, Australian National Greenhouse Accounts; State and Territory Greenhouse Gas Inventories 2007 www.climatechange.gov.au/~/media/publications/greenhouse-acctg/state_territory_inventory.ashx.

Department of Climate Change 2007b, *Transport Sector Greenhouse Gas Projections.*

Department of Climate Change 2009a, *National Greenhouse Gas Inventory; accounting for the Kyoto target May 2009.*

Department of Climate Change 2009b, *State and Territory Greenhouse Gas Inventories 2007.*

Department of Environment and Conservation 2004, *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities (Working Draft).*

Department of Environment and Conservation 2005, *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW.*

Department of Environment and Climate Change 2006, *Commercial and Industrial Guidelines Contaminated Sites: Guidelines for the NSW Site Auditor Scheme.*

Department of Environment and Climate Change 2008, *Waste Classification Guidelines Part 1 and Part 2.*

Department of Environment, Climate Change and Water November 2009, *Action for Air.*

Department of Environment, Climate Change and Water NSW 2010, *NSW Climate Impact Profile: The impacts of climate change on the biophysical environment of New South Wales* www.environment.nsw.gov.au/resources/climatechange/10171climateimpactprof.pdf.

Department of the Environment and Heritage 2006a, *EPBC Act Policy Statement 1.1 Significant Impact Guidelines.*

Department of the Environment and Heritage 2006b, *Climate Change Impacts & Risk Assessment: A Guide to Business and Government.*

Department of Infrastructure Planning and Natural Resources 2003, *Environmental Management Plan Guideline.*

Department of Land and Water Conservation 1997, *Acid Sulfate Soil Risk Map — Edition Two.*

Department of Planning December 2005, *Metropolitan Strategy, City of Cities — A Plan for Sydney's Future.*

Department of Planning December 2007, *Draft South Subregional Strategy.*

Department of Planning December 2008, *Draft Inner West Subregional Strategy.*

Department of Planning 2010, *New South Wales State and Regional Population Projections, 2006–2036:*

Environment Protection Authority 1999, *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes.*

GHD 06 July 2010a, *Report for Sydney Light Rail — Inner West Extension Study — UPR1 Risk Assessment of Parramatta Road Underbridge.*

GHD July 2010b, *Sydney Light Rail Inner West Extension Study — Final Report.*

Heritage Office and Department of Urban Affairs & Planning 1996, *NSW Heritage Manual*

Inner West Environment Group 2010, *GreenWay Bushcare Management Plan.*

Intergovernmental Panel on Climate Change on Climate Change, I. P. (2007), *Fourth Assessment Report: Climate Change 2007: The AR4 Synthesis Report, Geneva: IPCC.*

JBA Urban Planning Consultants May 2010, *Part 3A Preliminary Environmental Assessment Cruise Passenger Terminal Wharves No.4 and No.5 White Bay.*

Krone, O, Langgemach, T, Sömmer, P & Kenntner, N 2000, 'Causes of mortality in White-tailed Sea Eagles from Germany', paper presented to *Proceedings Swedish Society for Nature Conservation, Stockholm, Sweden*.

Landcom 2004, *The Blue Book — Managing Urban Stormwater: Soils and Construction.*

Leichhardt Council May 2007, *Leichhardt 2020+ Strategic Plan — Foundations for the Future, Shifts in Thinking.*

Leichardt Council 2009, *State of the environment report 2008-2009.*

Leigh, RJ 2007, 'Hail storm — one of the costliest natural hazards' *Coastal Cities Natural Disasters Conference, Sydney*, 20–21 February, 2007.

Leary, T, Kwok, A, Khan, B & Ibbetson, P unpublished, 'Yuppie bandicoots of inner west Sydney — in hiding or urban renewal?'

Leslie, M, Leplastrier, M & Buckley, B 2008, 'Estimating future trends in severe hailstorms over the Sydney Basin: A climate modelling study (2007)' *Atmospheric Research* 87 pp. 37–51, Elsevier.

Longcore, T & Rich, C 2004, 'Ecological Light Pollution', *Frontiers in Ecology and the Environment*, vol. 2, no. 4, pp. 191–8.

Lucas et al. 2007, *Bushfire Weather in South East Australia: Recent Trends and Projected Climate Change Impacts.*

Marrickville Shire Council December 2005, *Marrickville Council Strategic Plan 2006–2011 — Planning for our future.*

Marrickville Shire Council 2009, *Cooks River to Iron Cove GreenWay Master Plan and Coordination Strategy.*

McLuckie, D, Lord, D & Gibbs J, 2006, 'Climate Change — the Future is Uncertain. Practical Consideration of Climate Change in Flood Risk Management in NSW', *46th Annual FMA Conference*, Lismore, March 2006.

NSW Greenhouse Office November 2005, *NSW Greenhouse Plan.*

NSW Government 2006, *State Plan — A New Direction for NSW.*

NSW Government February 2010a. *Metropolitan Transport Plan — Connecting the City of Cities.*

NSW Government March 2010b, *New South Wales State Plan.*

NSW Government May 2010c, *New South Wales Bike Plan.*

NSW Scientific Committee 2001, *Final determination to list the clearing of native vegetation as a key threatening process.*

Pells Sullivan Meynink on behalf of RailCorp July 2010, *Phase 1 environmental assessment.*

Roads and Traffic Authority 2003, *RTA's Traffic Control at Work Sites Manual.*

Roads and Traffic Authority 2005, *Shotcrete Design Guidelines.*

Sanabria, LA & Cechet, RP 2007, 'Monte-Carlo modeling of Severe Wind Gust', *Proceedings of the Modelling and Simulation Society of Australia and New Zealand (MSSANZ), Queenstown NZ, December 2007 MODSIM,* pp. 1695–1701.

Schwartz, A & Henderson, RW 1991, *Amphibians and Reptiles of the West Indies: descriptions, distributions, and natural history.*

Soil Conservation Service of NSW 1983, *Sydney Soil Landscapes Series Sheet 9130 (1:100,000).*

Stormwater Committee, 1999, *Urban Stormwater Best Environmental Management Practices Guidelines.*

Sydney Super Yacht Marine Pty Ltd 2009, *Facilities associated with Sydney Super Yacht Marina — Project Description and Application.*

The Environment Works Pty Ltd for the NSW Roads and Traffic Authority February 2010, *Strategic Concepts for a Cooks River to Iron Cove Shared Path: Towards a GreenWay Trail for the Metro Sydney Strategic Cycle Network, Draft Final Report.*

Transport Infrastructure Development Corporation 2009, *Sustainable Design Guidelines for Stations, Commuter Car Parks and Maintenance Facilities.*

Tozer, M, Turner, K, Simpson, C, Keith, D, Beukers, P, MacKenzie, B, Tindall, D & Pennay, C 2006, *Native Vegetation of Southeast NSW: A Revised Classification and Map for the Coast and Eastern Tablelands. Version 1.0*

Transport NSW July 2010a, *Sydney Light Rail Extension — Stage 1 Inner West Extension: Preliminary Environmental Assessment.*

Transport NSW July 2010b, *Sydney Light Rail Extension — Stage 1 Inner West Extension: Product Definition Report.*

Transport NSW July 2010c, *Review of Environmental Factors: Rozelle Goods Line — Rail Track Maintenance and Reconstruction.*

Vace J, Teng J, Post D, Chiew F, Perraud J-M & Kirono D, 2008, *Future climate change and runoff projections (2030) for NSW and ACT*, NSW Department of Water & Energy.

Wells, P, Woods, JG, Bridgewater, G & Morrison, H 1999, *Wildlife Mortalities on railways: Monitoring methods and mitigations strategies.*

World Business Council for Sustainable Development & World Resources Institute 2004, *The Greenhouse Gas Protocol*: *a Corporate Accounting and Reporting Standard*, <www.ghgprotocol.org/files/ghg-protocol-revised.pdf>.