

# 7 Environmental management

## 7.1 Environmental management plans

Environmental safeguards and management measures outlined in Table 7-1 below would minimise the identified potential adverse environmental impacts of the proposal on the surrounding environment.

A construction environmental management plan (CEMP) has been prepared for the Inner West Busway along Victoria Road project. The environmental management of this proposal would be in accordance with this plan.

The measures described, and any additional measures specified in the RTA's Decision Report would be incorporated into an environmental management action plan as part of that CEMP. The action plan(s) would be developed in accordance with the specifications set out in RTA QA Specification G35 – Environmental Protection (Management Plan) and would be provided to the RTA Senior Environmental Officer, Sydney Region, before the commencement of any site works.

## 7.2 Summary of safeguards and management measures

Table 7-1 Summary of environmental safeguards and management measures

Environmental aspect	Safeguard
Soils and geology	<ul style="list-style-type: none"> <li>• Prior to construction sub surface soil samples would be taken and analysed to determine the nature of any fill material.</li> <li>• All activities at White Bay would be undertaken in accordance with a Contaminated Site Management Plan.</li> <li>• A geotechnical engineer would monitor the piling works at Henley Marine Drive and the rock excavation at White Bay.</li> <li>• Erosion and sedimentation controls such as silt bags or sediment traps would be installed at nearby stormwater drains and around stockpiles before the commencement of works to prevent sediment-laden runoff entering the local stormwater system.</li> <li>• Regular maintenance and checking of the erosion and sedimentation controls would be undertaken. Sediment would be cleared from behind barriers where required, and all controls would be managed in order to work effectively at all times.</li> <li>• Stockpiles would be designed, established, operated and decommissioned in accordance with the RTA's Stockpile Management Procedures 2001 to ensure all materials are adequately contained and not mobilised through wind or water.</li> <li>• Any material transported onto pavement surfaces would be swept and removed at the end of each work shift.</li> <li>• The sites would be restored at the completion of the works in that area.</li> <li>• Any contaminated materials and other solid and liquid wastes generated during construction would be handled, stored, classified and disposed of in accordance with DECCW environmental waste guidelines.</li> <li>• Any excess spoil would be tested, classified and appropriately disposed of at a suitably licensed facility.</li> </ul>

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## Water quality

- Clean flows would be separated from dirty water collected on site.
- Silt socks or similar would be established at all stormwater inlets near the painting locations.
- Stockpiles would be designed, established, operated and decommissioned in accordance with the RTA's Stockpile Management Procedures 2001, to ensure all materials are adequately contained and not mobilised through wind or water.
- Where potential contamination has been identified stockpiles would be removed from the area at the end of each shift or covered so as to ensure no contaminated soil laden water is washed from the site.
- An emergency spill kit would be kept at all work sites at all times and all staff made aware of its location and inducted in emergency response procedures.
- Refuelling of all equipment would be performed in an appropriately bunded, impervious area.
- Should major repairs or servicing of any equipment be required, it would be taken off site and serviced in an appropriate and controlled area.
- No vehicle wash downs would be undertaken on site.
- The location of environmental controls would be detailed on the environmental work method statements (EWMS) for the work sites.

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## Noise and vibration

- The noise and vibration impacts for the proposal would be managed in accordance with the approach described in the Construction Vibration and Noise Management Plan prepared for the Inner West Busway along Victoria Road project.
  - Works would be conducted in accordance with the Interim Construction Noise Guideline (DECC, 2009) to ensure feasible and reasonable mitigation measures are carried out.
  - Construction plans would show all noise-sensitive receivers in the construction corridor.
  - All machinery and equipment would be switched off when not in use.
  - All machines would be maintained in good working condition, with particular attention to exhaust silencers, engine covers and other noise reduction devices where available and feasible.
  - Vehicle movements to and from the work site would be kept to a minimum.
  - Best management practices would be adopted that are consistent with the RTA's Environmental Noise Management Manual, 2001 (RTA, 2001).
  - Only one vibration source would be in operation within 40 metres of a residential or other sensitive building at any time.
  - Works would be preferentially scheduled during daytime hours to minimise the extent and duration of construction activities during the night.
  - Works would be scheduled to minimise the cumulative impact of noise associated with the construction of elements of the
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Inner West Busway project, particularly the night roadwork activities.

- Where night works are required works would be programmed so that residential premises would not be affected on more than two consecutive nights where practicable. Where this is not possible, additional feasible and reasonable measures would be implemented that may include temporary attenuation, respite periods and modifying work activities.
- Works would be programmed to minimise impacts on commercial properties where practicable.
- No less than five days before the works commence, the local community would be notified in writing of the proposed works, the location, type of works and the timing.
- Residents affected by night works would be informed of the time, type and duration of noise generating works.
- A complaints hotline would be established and noise complaints actioned and recorded in a database.

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#### Traffic and transport

- Provision for traffic during construction would be in accordance with RTA QA Specification G10 – Control of Traffic, which in turn requires compliance with the RTA Traffic Control at Work Sites Manual.
  - All closures and diversions would be approved by the RTA's Transport Management Centre and managed through a traffic control plan.
  - Pedestrians would be excluded from the work site and appropriate detours put in place.
  - Signage in accordance with approved traffic management plans would be used to advise of changes to traffic conditions.
  - No less than five days before the works commence, the affected community would be notified of any proposed lane closures or other changes to traffic and parking conditions.
  - Access to properties would be maintained at all times or alternative arrangements provided.
  - The local community would be advised of changes to parking during construction and operation of the cycle path through the Wrights Road closure.
  - Traffic Control Plans would be prepared and approved in consultation with State Transit Authority (STA) to manage any bus movements required during the works at Wrights Road and Lyons Road.
  - Consultation with bus operators would be undertaken to advise them of changes during construction and operation to the bus turning bay at Lyons Road.
  - The White Bay bus stop would be temporarily relocated to a location determined in consultation with STA.
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Visual amenity	<ul style="list-style-type: none"> <li>• The work sites would be kept tidy and rubbish free.</li> <li>• Works would be completed in the shortest duration possible and all equipment removed from the area on completion of the works.</li> <li>• The sites would be returned to their original condition as far as practicable.</li> <li>• As a minimum, the existing chain-link fencing would be reinstated along the eastern edge of the widened shared-use path at White Bay. The use of clear screens as a replacement for this fencing would be investigated.</li> <li>• Any lighting used would be directed away from residential premises where possible and light hoods used where practicable.</li> <li>• Appropriate mitigation measures, such as hoardings, would be used to reduce visual impacts on The Cove at Drummoyne café.</li> </ul>
Social and economic	<ul style="list-style-type: none"> <li>• Consultation with the operators of The Cove at Drummoyne café to ensure that impacts to the café amenity are minimised where practicable.</li> <li>• Drivers and site staff will be educated regarding ways to minimise noise. Acoustic and visual shielding will be implemented where appropriate.</li> <li>• Where possible, undertaking work on the shared-use ramp at the same time as the bridge works to minimise the length of time residents, businesses and the community are exposed to construction impacts.</li> <li>• As part of the Inner West Busway along Victoria Road project, work will be carried out to minimise the visual impact of the new bridge over Iron Cove on The Cove at Drummoyne café. This work includes the construction of a deck area on the side of the café furthest from the works.</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• A project arborist would be engaged to document, advise and monitor the management of the fig tree. The arborist's involvement would include but not be limited to: <ul style="list-style-type: none"> <li>– Preparing a tree management plan.</li> <li>– Establishing a tree protection zone (TPZ).</li> <li>– Undertaking approved canopy pruning.</li> <li>– Monitoring and providing advice regarding works within the TPZ.</li> <li>– Establishing a monitoring and management program following construction.</li> </ul> </li> </ul>
Aboriginal heritage	<ul style="list-style-type: none"> <li>• All personnel working on site would be made aware of their legal obligations to protect Aboriginal cultural materials.</li> <li>• In the event that any unknown Aboriginal objects or items are located during the construction work, all work in the vicinity would cease until specialist Aboriginal heritage advice is received.</li> </ul>
Non-Aboriginal heritage	<ul style="list-style-type: none"> <li>• Sandstone kerbing removed during the proposed works would be reinstated or reused where feasible (eg in landscaping). Archival recording of the setting will be undertaken prior to removal.</li> </ul>

	<ul style="list-style-type: none"> <li>• Workers would be made aware of legal obligations in relation to heritage items.</li> <li>• A work method statement would be prepared before the commencement of works. This would be a working document that outlines practical methods to avoid or minimise impacts on the identified heritage items.</li> <li>• Identified heritage items would be clearly marked on construction plans.</li> <li>• Care would be taken to avoid impacts to any heritage items in the vicinity of the proposed works.</li> <li>• If heavy plant and equipment (such as excavators and rock hammers) are required, vibration monitoring would be undertaken to maintain safe working distances to heritage items to minimise potential vibration impacts.</li> <li>• The sandstone elements of the retaining wall outside The Cove at Drummoyne café would be protected by keeping the footings of the ramp at a distance from the sandstone retaining wall, and avoiding any damage to the stonework.</li> <li>• Any accidentally dislodged sandstone elements of the Henley Marine Drive retaining wall would be replaced after the completion of the works.</li> <li>• Fencing installed along the eastern edge of the cantilevered path would be designed so as to not reduce visibility and sight lines to, from and past the White Bay Power Station below its current level.</li> <li>• The construction boundary fence would be offset from the Staff Canteen and Administration Building to avoid damage to the heritage fabric and impacting on the visual appearance of these buildings. A project archaeologist would be engaged to consider the detailed design and construction methodology and determine the need for an exception or exemption prior to any works occurring where relics may be uncovered.</li> <li>• Intrusive development works (localised excavations) would, where possible, avoid areas of potential archaeological remains, especially those associated with historically significant occupation such as the Post Office, Bank, School, and c1880 Bridge Hotel.</li> <li>• Should any material of archaeological or potential archaeological significance be unearthed during excavation where the archaeologist is not on site, work would cease until specialist heritage advice has been obtained.</li> <li>• Where deemed necessary by the archaeologist and in consultation with the construction manager, the Department of Planning heritage branch would be informed of significant finds.</li> </ul>
Air quality	<ul style="list-style-type: none"> <li>• Any material transported onto pavement surfaces would be swept and removed at the end of the working day.</li> <li>• Dust generating work would be stopped during periods of high wind.</li> </ul>
Waste minimisation and management	<ul style="list-style-type: none"> <li>• All waste would be treated in accordance with the RTA Waste Minimisation &amp; Management Guidelines (RTA 1998).</li> </ul>

	<ul style="list-style-type: none"> <li>• All surplus soils and wastes generated from the proposal would be classified and disposed of at an appropriately licensed facility. Receipts of disposal would be obtained and made available on request.</li> <li>• All working areas would be maintained, kept free of rubbish and cleaned up at the end of each working day.</li> <li>• The resource management hierarchy principles of the Waste Avoidance and Resource Recovery Act 2001 (WARR Act) would be adopted as follows: <ul style="list-style-type: none"> <li>– Avoid unnecessary resource consumption as a priority.</li> <li>– Avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling, and energy recovery).</li> <li>– Disposal is undertaken as a last resort.</li> </ul> </li> </ul>
Demand on resources	<ul style="list-style-type: none"> <li>• Materials would be sourced locally where possible.</li> </ul>
Cumulative environmental effects	<ul style="list-style-type: none"> <li>• Where practicable, certain construction activities associated with this proposal and the Inner West Busway along Victoria Road would be combined to minimise the duration of impacts and to avoid returning to the same work site multiple times.</li> <li>• To reduce the potential for cumulative impacts, Leichhardt and City of Canada Bay councils would be consulted before the commencement of the works to ensure that the works would not unfavourably coincide with other construction activities within the area.</li> </ul>
Climate change	<ul style="list-style-type: none"> <li>• The environmental performance of vehicles would be considered in the selection of site vehicles.</li> <li>• Site plant and equipment would be regularly serviced and operators trained in how to most efficiently operate plant/equipment.</li> <li>• Energy (fuel/electrical) efficiency would be considered when selecting equipment.</li> <li>• Reuse of on site (excavated and/or existing pavement) materials would be considered where materials are suitable and their reuse feasible.</li> <li>• Low greenhouse intensity materials would be considered as alternatives to conventional materials where appropriate.</li> <li>• Locally sourced materials would be used where feasible.</li> </ul>

## 7.3 Consideration of environmental factors

### 7.3.1 EP&A Act Clause 228 factors

Clause 228 of the *Environmental Planning and Assessment Regulation 2000* prescribes a series of matters that are to be taken into consideration when considering the impact of an activity on the environment under Part 5 of the EP&A Act.

To assist the RTA in its consideration of environmental impacts under Sections 111 and 112 of the EP&A Act, the factors prescribed in Clause 228(2) of the Regulation are assessed in Table A-1 of Appendix A.

### 7.3.2 Commonwealth EPBC Act matters

To assist the RTA in its decision on whether to refer the proposal to the Commonwealth Minister for the Environment, Heritage and the Arts under the EPBC Act, matters of national environmental significance and impacts on Commonwealth land are assessed in Table A-2 of Appendix A.