Title: Review of Environmental Factors, Milsons Point Railway Station Concourse and Ennis Road Upgrade

Author: This report has been prepared by Christopher Ashworth, JBA Planning.

This report has been reviewed by Kirk Osborne, JBA Planning.
Executive summary

Proposal overview

NSW Roads and Maritime Services (RMS) proposes to upgrade the Milsons Point railway station concourse and Ennis Road, Milsons Point. The proposal would involve upgrades to elements of the Sydney Harbour Bridge heritage item as listed in the National Heritage List and the NSW State Heritage Register.

RMS, as owner of the Sydney Harbour Bridge, is bound to comply with the conservation policies as set out in Chapter 7 of the *Sydney Harbour Bridge Conservation Management Plan July 2007* particularly as they relate to maintenance and repairs.

The proposal

RMS proposes to undertake works to the Milsons Point station concourse and roadworks on Ennis Road, Milsons Point (the proposal). The proposal would upgrade and revitalise the Milsons Point railway station precinct to improve the amenity and safety of rail commuters, rail staff and the general public. The proposal would also involve traffic control works on Ennis Road, to reconfigure parking and improve pedestrian facilities, access and amenity in the Ennis Road precinct.

The proposal comprises two distinct elements, which are:

- Upgrades to the Milsons Point railway station concourse.
- Ennis Road roadworks.

Milsons Point station concourse

The works proposed to the Milsons Point station concourse include:

- Demolition of existing RailCorp facilities including the ticket office, station offices, toilets and other partitioned spaces.
- Partial demolition of the disused former tram station steps situated behind the dry cleaner tenancy (in order to accommodate the new ticket office and Station Master's office).
- Construction of a new ticket office, Station Master's office and new staff amenities.
- Relocation of ticket barriers.
- Installation of new toilets for railway commuters within the ticketed area.
- Upgrades to the station concourse to comply with the Building Code of Australia (BCA) and the Premises Standards of the Australian Government's *Disability Discrimination Act 1992* (DDA):
  - The removal of the current floor tiles throughout the concourse and replacement with a sealed honed/polished slip resistant concrete finish.
  - Regrading of the existing ramp at the eastern end of the concourse to 1:14.
  - The relocation and re-framing of the existing glazed wall in order to provide improved access width to the lift.
  - The provision of new accessible public toilets to be provided beyond the ticket barriers.
• Refurbishment of the awning over the station concourse entrance on Ennis Road.
• Upgrade of lighting within the concourse.

The works proposed to the station concourse are detailed on the architectural drawings prepared by Hassell Ltd and included as Appendix A.

**Ennis Road**

The works proposed to Ennis Road include:

• Road pavement works including re-sealing and line marking.
• Reconfiguration of on street parking to provide:
  o 27 standard spaces.
  o Five taxi spaces.
  o Three loading spaces.
  o Six kiss and ride spaces (drop off points for public transport users).
• Work along the entire length of Ennis Road, including:
  o New paving consisting of asphalt with precast concrete bands.
  o Footpath widening, up to six metres in parts to accommodate potential future outdoor dining.
  o New kerb and guttering.
  o Alterations to existing pit channels and stormwater inlets. No new stormwater pipes or lines would be required.
• New street lighting, comprising 14 lamp posts which would be installed in the following locations:
  o Along the length of Ennis Road (nine).
  o On Broughton Street in proximity to the Burton Street Tunnel (three).
  o The intersection with Broughton Street (two).
• New lighting on the pedestrian pathway between Ennis Road and McDougall Street.
• Construction of a pedestrian plaza and vehicle access to the car park at the northern end of Ennis Road.
• Installation of roadside furniture including public benches, bins and bollards.
• Provision of bicycle racks outside Bay 11.
• Landscaping works along Ennis Road, including the removal of approximately 14 trees.
• Provision of 18 street trees (Oriental Plane tree) along the eastern side of Ennis Road.

The proposal is detailed on the Landscape Drawings and discussed within the Design Report prepared by Tract Consultants (refer to Appendix C).

The proposal objectives are to:

• Carry out essential remedial works to protect important heritage items against physical deterioration.
• Provide improved amenity and pedestrian capacity for rail commuters, through the upgrade of the Milsons Point railway station concourse.
• Refurbish the station concourse in accordance with the strategic concept developed during community consultation.
• Ensure the station concourse can achieve compliance with the requirements of applicable Australian Standards, the Building Code of Australia (BCA) and the Premises Standards of the Australian Government’s Disability Discrimination Act 1992 (DDA).
• To enhance the streetscape along Ennis Road in order to provide the local community with improved access, amenity and safety.
• Improve pedestrian access between Broughton Street and Ennis Road.
• To appropriately reconfigure on-street parking.
• To maintain and enhance the ‘Kirribilli Village’ atmosphere of the locality.

In addition to the works proposed within this REF, which are to be assessed under Part 5 of the Environmental Planning and Assessment Act, 1979 (EP&A Act), a separate Development Application (DA) has been lodged with North Sydney Council which seeks consent under Part 4 of the EP&A Act to refurbish the Bays at 2-28 Ennis Road and provide a short stay car-park (parking of three hours or less) within the under-croft space in the northern portion of that site.

This REF does not seek approval for development addressed in the DA as those works, whilst complementary, are independent of the Milsons Point railway station concourse and Ennis Road upgrade addressed in this REF. In addition, the environmental impacts arising from the DA are the subject of a Statement of Environmental Effects (SEE), which has been lodged with North Sydney Council, being the consent authority for that separate proposal.

Need for the proposal

Milsons Point Railway Station Concourse

There is a need to undertake upgrade and refurbishment works to the station concourse in order to protect the significance of the building, which forms part of the National Heritage Place Listing for the Sydney Harbour Bridge and the State Heritage Register Listing for the Sydney Harbour Bridge, approaches and viaducts (road and rail) and the Milsons Point railway station group listing. RMS is of the opinion that the best way of maintaining the heritage values of the concourse is to allow minor modification so that it can continue to provide an historical function in an appropriate manner.

The current station concourse area and station facilities are also in need of modernisation and upgrading as the existing facilities are aged and in poor condition. In addition, pedestrian analysis has determined that the ticket barriers within the station concourse are operating at a Grade D Level of Service (restricted and reduced walking speed for most pedestrians). More generally, there is a need to provide improved commuter amenity and additional pedestrian capacity through the station concourse.

Ennis Road roadworks

The Ennis Road roadworks comprise traffic control works, the reconfiguration of car parking, and the provision of improved pedestrian facilities access and amenity in the Ennis Road precinct. The roadworks proposed for Ennis Road would further consolidate Ennis Road (and the Bays) as an important heritage precinct.
Options considered

The proposal is considered essential work in upgrading and revitalising the Milsons Point railway station precinct. Given the nature of the proposal and its location, there are limited alternative options to the proposed designs. The proposal is site specific and therefore only two refurbishment options could be considered, along with a third ‘do nothing’ option. The ‘do nothing’ option would not provide the improved environmental outcomes sought and provided by the proposal.

Statutory and planning framework

The State Environmental Planning Policy (Infrastructure) 2007 applies to the proposal. Clause 79 and clause 94 of ISEPP permit development on any land for the purposes of rail infrastructure facilities and for the purposes of a road or road infrastructure facilities. As the proposal is for the purpose of rail infrastructure facilities and a road and road infrastructure facilities, it can be assessed under Part 5 of the Environmental Planning and Assessment Act, 1979 (EP&A Act). Development consent from Council is not required.

The Milsons Point station concourse is listed on the State Heritage Register as part of the 'Sydney Harbour Bridge, approaches and viaducts (road and rail)' listing and the Milsons Point railway station group listing. RMS will seek a separate approval from the Heritage Council of the NSW Office of Environment and Heritage (OEH) for approval under Section 60 of the Heritage Act 1977.

Community and stakeholder consultation

Consultation in relation to the proposal has been undertaken with North Sydney Council, RailCorp, Housing NSW, the Heritage Council of OEH, and the community to inform the early design. The community consultation program comprised of the following:

- The distribution of flyers.
- The establishment of an enquiry telephone line and email address.
- Workshops with the community.
- An information stall at the Kirribilli General Market.
- The display of posters in key locations.
- The establishment of an information page on the RMS website.

This REF will be displayed for community input. Any submissions received will be considered in finalising the details of the proposal.

Environmental impacts

This REF has identified a range of positive environmental impacts associated with the proposal. These relate to the achievement of the proposal objectives to increase the safety and amenity of the precinct.
As the proposal includes the upgrade and refurbishment of an existing rail infrastructure facility and road in an established urban area, the proposal has no direct impacts upon the local ecology of the site. Although approximately 14 street trees would be removed, they are immature and their potential to provide habitat is limited. This REF demonstrates that the proposal would deliver substantial environmental improvements in terms of:

- The built form of the concourse.
- Heritage conservation.
- Access for people with a disability.
- Urban design.
- Socio-economic opportunities.

Despite this, potential negative impacts of the proposal (generally of a temporary nature) may arise during the construction and operational phases, including:

- A reduction in accessibility to Ennis Road during construction.
- The generation of waste during construction.
- Reductions in air quality during construction.
- The generation of construction noise.
- The loss of toilets from the non-ticketed area of the concourse.
- The loss of 15 parking spaces from Ennis Road.
- Closure of existing retail tenancies in the station concourse.
- Removal of around 14 street trees.

The assessment of potential impacts on items of heritage significance has identified that the proposal would involve the removal or alteration of some original fabric of heritage significance. A Statement of Heritage Impact (SOHI) has been prepared by Clive Lucas Stapleton and Partners and is included as Appendix D. The report concludes that the proposal is sympathetic to the original fabric, resulting in the minimisation of any impacts on the historical and architectural significance of the site.

Justification and conclusion

The proposal is needed in order to protect heritage significance, and increase the amenity, safety and efficiency of the station concourse. The proposal is also needed to undertake traffic control works on Ennis Road to reconfigure parking and improve pedestrian facilities, access and amenity in the Ennis Road precinct.

The preparation of this REF represents the culmination of extensive community and public authority consultation that has occurred from the proposal inception. The consultation period has demonstrated that there is a great deal of public support for the proposal.

This REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the activity. The REF found that while there may be minor and localised impacts as a result of the proposed works, they are not considered to result in significant environmental impacts or to be of such a nature or extent as to be regarded as unacceptable. The safeguards and mitigation measures detailed within this REF would ameliorate or minimise these expected impacts. Overall, the REF finds that any negative impacts are outweighed by the longer term positive impacts of the proposal.
Display of the Review of Environmental Factors

This REF is on display for comment from 7 March 2012 for a minimum of 30 days. The documents can be accessed in the following ways:

Internet
The documents will be available as PDF files on the RMS website at http://www.rms.nsw.gov.au/.

Display
The review of environmental factors can be viewed at the following location:

North Sydney Council
200 Miller Street
North Sydney  NSW  2060

How can I make a submission?
To make a submission on the proposal, please send your written comments to:

Mr Steve Swain
RMS Project Manager
Milsons Point Railway Station Concourse and Ennis Road Upgrade
NSW Roads and Maritime Services
Level 13, 101 Miller Street
North Sydney  NSW  2060

Submissions must be received by 5 April 2012.

Privacy information
All information included in submissions is collected for the sole purpose of assisting in the assessment of this proposal. The information may be used during the environmental impact assessment process by relevant RMS staff and its contractors.

Where the respondent indicates at the time of supply of information that their submission should be kept confidential, the RMS will attempt to keep it confidential. However there may be legislative or legal justification for the release of the information, for example under the Government Information (Public Access) Act 2009 or under subpoena or statutory instrument.

The supply of this information is voluntary. Each respondent has free access at all times to the information provided by that respondent but not to any identifying information provided by other respondents if a respondent has indicated that the representation should be kept confidential.

Any respondent may make a correction to the information that they have provided by writing to the same address the submission was sent.

The information will be held by the Roads and Maritime Services, RMS North Sydney Office, 101 Miller Street, North Sydney 2060  NSW.
What happens next?

Following the submissions period, RMS will collate submissions. Acknowledgement letters will be sent to each respondent. The details of submission authors will be retained and authors will be subsequently advised when project information is released.

After consideration of community comments RMS would determine whether the proposal should proceed as proposed, or whether any alterations to the proposal are necessary. The community will be kept informed regarding this RMS determination.

If the proposal is approved, RMS would proceed with a public request for proposals to construct the project.

If you have any queries, please contact the RMS project manager on 02 8588 5323.
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document status .................................................................................. ii</td>
</tr>
<tr>
<td>Executive summary .................................................................................. i</td>
</tr>
<tr>
<td>1  Introduction .................................................................................... 1</td>
</tr>
<tr>
<td>1.1 Proposal identification .................................................................. 1</td>
</tr>
<tr>
<td>1.2 Refurbishment of the Ennis Road bays ......................................... 4</td>
</tr>
<tr>
<td>1.3 Purpose of the report .................................................................... 5</td>
</tr>
<tr>
<td>2  Need and options considered ................................................................ 6</td>
</tr>
<tr>
<td>2.1 Strategic need for the proposal ..................................................... 6</td>
</tr>
<tr>
<td>2.2 Existing environment and infrastructure ........................................ 8</td>
</tr>
<tr>
<td>2.3 Proposal objectives ........................................................................ 18</td>
</tr>
<tr>
<td>2.4 Alternatives and options considered ............................................ 19</td>
</tr>
<tr>
<td>2.5 Preferred option ............................................................................ 22</td>
</tr>
<tr>
<td>2.6 Design refinements .......................................................................... 23</td>
</tr>
<tr>
<td>3  Description of the proposal ................................................................ 25</td>
</tr>
<tr>
<td>3.1 The proposal ................................................................................... 25</td>
</tr>
<tr>
<td>3.2 Design parameters .......................................................................... 32</td>
</tr>
<tr>
<td>3.3 Construction activities .................................................................... 34</td>
</tr>
<tr>
<td>3.4 Ancillary facilities .......................................................................... 37</td>
</tr>
<tr>
<td>3.5 Public utility adjustment ............................................................... 38</td>
</tr>
<tr>
<td>4  Statutory and planning framework .................................................... 39</td>
</tr>
<tr>
<td>4.1 State Environmental Planning Policies ........................................... 39</td>
</tr>
<tr>
<td>4.2 Local Environmental Plans ............................................................. 39</td>
</tr>
<tr>
<td>4.3 Other relevant legislation ............................................................... 40</td>
</tr>
<tr>
<td>4.4 Commonwealth legislation ............................................................. 40</td>
</tr>
<tr>
<td>4.5 Confirmation of statutory position ................................................... 41</td>
</tr>
<tr>
<td>5  Stakeholder and community consultation ........................................ 42</td>
</tr>
<tr>
<td>5.1 Consultation strategy ....................................................................... 42</td>
</tr>
<tr>
<td>5.2 Community involvement .................................................................... 42</td>
</tr>
<tr>
<td>5.3 ISEPP consultation .......................................................................... 45</td>
</tr>
<tr>
<td>5.4 Government agency and stakeholder involvement ........................... 46</td>
</tr>
<tr>
<td>5.5 Aboriginal community involvement ................................................ 48</td>
</tr>
<tr>
<td>5.6 Ongoing or future consultation ....................................................... 48</td>
</tr>
<tr>
<td>6  Environmental assessment ................................................................... 49</td>
</tr>
<tr>
<td>6.1 Non-Aboriginal heritage ................................................................... 49</td>
</tr>
<tr>
<td>6.2 Aboriginal heritage .......................................................................... 59</td>
</tr>
<tr>
<td>6.3 Socio-economic issues ...................................................................... 60</td>
</tr>
<tr>
<td>6.4 Traffic and transport ........................................................................ 73</td>
</tr>
<tr>
<td>6.5 Landscape, visual and urban design ................................................ 76</td>
</tr>
<tr>
<td>6.6 Waste .............................................................................................. 83</td>
</tr>
<tr>
<td>6.7 Noise and vibration ......................................................................... 85</td>
</tr>
</tbody>
</table>
6.8 Air quality .......................................................................................................................................... 89
6.9 Water quality ..................................................................................................................................... 90
6.10 Climate change ................................................................................................................................. 92
6.11 Ecology ........................................................................................................................................... 93
6.12 Cumulative impacts ......................................................................................................................... 95
7 Environmental management .................................................................................................................. 102
7.1 Environmental management plans (or system) ................................................................................ 102
7.2 Summary of safeguards and management measures ........................................................................ 102
7.3 Licensing and approvals .................................................................................................................... 109
8 Conclusion ........................................................................................................................................... 110
8.1 Justification ........................................................................................................................................ 110
8.2 Objects of the EP&A Act ..................................................................................................................... 112
8.3 Ecologically sustainable development ............................................................................................... 113
8.4 Conclusion .......................................................................................................................................... 114
Certification ............................................................................................................................................. 115
9 References ............................................................................................................................................. 116
## Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title and Description</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>Architectural Drawings</td>
<td>Hassell Ltd</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Landscape Plans and Report</td>
<td>Tract Consultants Pty Ltd</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Consideration of clause 228(2) factors and matters of national environmental significance</td>
<td>JBA Planning Pty Ltd</td>
</tr>
<tr>
<td>Appendix D</td>
<td>Statement of Heritage Impact</td>
<td>Clive Lucas Stapleton and Partners Pty Ltd</td>
</tr>
<tr>
<td>Appendix E</td>
<td>Community Consultation Documentation</td>
<td></td>
</tr>
<tr>
<td>Appendix F</td>
<td>ISEPP Consultation Correspondence</td>
<td>JBA Planning Pty Ltd and North Sydney Council</td>
</tr>
<tr>
<td>Appendix G</td>
<td>Accessibility Report</td>
<td>Accessibility Solutions (NSW) Pty Ltd</td>
</tr>
<tr>
<td>Appendix H</td>
<td>Traffic Impact Assessment</td>
<td>Arup Pty Ltd</td>
</tr>
<tr>
<td>Appendix I</td>
<td>Landscape Character and Visual Impact Assessment</td>
<td>Tract Consultants Pty Ltd</td>
</tr>
<tr>
<td>Appendix J</td>
<td>Construction Noise and Vibration Management Report</td>
<td>Acoustic Studio</td>
</tr>
</tbody>
</table>
I Introduction

1.1 Proposal identification

The NSW Roads and Maritime Services (RMS) (formerly the Roads and Traffic Authority NSW) proposes to upgrade the Milsons Point railway station concourse and Ennis Road (the proposal). The proposal is described in detail in Chapter 3 of this REF and architectural drawings are provided in Appendix A.

The proposal is part of a program of works to upgrade the Sydney Harbour Bridge. The Milsons Point railway station concourse upgrade is needed to improve the amenity and safety of rail commuters, rail staff and the general public and to maintain the building in accordance with the Sydney Harbour Bridge Conservation Management Plan (CMP). The Ennis Road upgrade is needed for traffic control works including to reconfigure parking and improve pedestrian facilities, access and amenity in the Ennis Road precinct.

In addition to the works proposed within this REF, a separate development application (DA) has been lodged with North Sydney Council which seeks consent under Part 4 of the EP&A Act to refurbish the Bays at 2-28 Ennis Road and provide a short stay car-park (refer to Chapter 1.2 of this REF). The works proposed in the DA, whilst complementary, are independent of the works proposed within this REF.

The proposal is located in the suburb of Milsons Point within the North Sydney local government area (LGA) and in the RMS Sydney region. The eastern edge of Ennis Road forms the north-eastern border of Milsons Point and Kirribilli. Milsons Point Railway Station and Ennis Road are situated approximately 400 metres south-east of the North Sydney central business district (CBD) and approximately two kilometres north of the Sydney CBD. The proposal is within an established commercial/retail precinct known as 'Kirribilli Village'. The location of the proposal is shown in Figure 1 and the area of direct impact (the site) is shown on Figure 2.

The station concourse forms part of the National Heritage Listing for the Sydney Harbour Bridge and is also listed on the State Heritage Register as part of the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ listing and the Milsons Point Railway Station Group listing. Accordingly, a separate approval will be sought from the Heritage Council of the NSW Office of Environment and Heritage (OEH) for approval under Section 60 of the Heritage Act 1977.

The key features of the Milsons Point station concourse upgrade include:

- Demolition of existing RailCorp facilities including the ticket office, station offices, toilets and other partitioned spaces.
- Partial demolition of the disused former tram station steps situated behind the dry cleaner tenancy (in order to accommodate the new ticket office and Station Master's office).
- Construction of a new ticket office, Station Master's office and new staff amenities.
- Relocation of ticket barriers.
- Installation of new toilets for railway commuters within the ticketed areas.
• Upgrades to the station concourse to comply with the Building Code of Australia (BCA) and the Premises Standards of the Australian Government’s Disability Discrimination Act 1992 (DDA):
  o The removal of the current floor tiles throughout the concourse and replacement with a sealed honed/polished slip resistant concrete finish.
  o Regrading of the existing ramp at the eastern end of the Concourse to 1:14.
  o The relocation and re-framing of the existing glazed wall in order to provide improved access width to the lift.
  o The provision of new accessible public toilets to be provided beyond the ticket barriers.
• Refurbishment of the awning over the station concourse entrance on Ennis Road.
• Upgrade of lighting within the concourse.

Key features of the Ennis Road upgrade include:

• Road pavement works including re-sealing and line marking.
• Reconfiguration of on street parking to provide:
  o 27 standard spaces.
  o Five taxi spaces.
  o Three loading spaces.
  o Six kiss and ride spaces (drop off points for public transport users).
• Work along the entire length of Ennis Road, including:
  o New paving consisting of asphalt with precast concrete bands.
  o Footpath widening up to six metres in parts to accommodate future outdoor dining.
  o New kerb and guttering.
• Alterations to existing pit channels and stormwater inlets. No new stormwater pipes or lines would be required.
• New street lighting, comprising 14 lamp posts which would be installed in the following locations:
  o Along the length of Ennis Road (nine).
  o On Broughton Street in proximity to the Burton Street Tunnel (three).
  o The intersection with Broughton Street (two).
• New lighting on the pedestrian pathway between Ennis Road and McDougall Street.
• Construction of a pedestrian plaza and vehicle access to the car park at the northern end of Ennis Road.
• Installation of roadside furniture including public benches, bins and bollards.
• Provision of bicycle racks outside Bay 11.
• Landscaping works along Ennis Road, including the removal of approximately 14 trees.
• Provision of 18 street trees (Oriental Plane tree) along the eastern side of Ennis Road.

A temporary construction compound would be established at the northern end of Ennis Road. Refer to Chapter 3.3 for further information about the construction facilities.

The proposal is anticipated to take up to 18 months, with commencement subject to the receipt of funding and decision by RMS to proceed with the proposal.
Figure 1- The general location of the proposal (marked by the red dot)
(Source: Google Maps)
1.2 Refurbishment of the Ennis Road bays

In addition to the proposal, RMS is undertaking further works to upgrade the Sydney Harbour Bridge, including the refurbishment of the commercial premises at 2-28 Ennis Road, known as the Ennis Road bays. The refurbishment works to the Ennis Road bays are subject to a separate development application (DA), which has been lodged with North Sydney Council, to be assessed under Part 4 of the Environment Planning and Assessment Act 1979 (EP&A Act).

The separate DA seeks approval for the following development at 2-28 Ennis Road:

- Demolition works (removal of internal stud walls, internal modifications to original fabric, minor alterations to facades and modification of stairs and doorways).
- Facade and awning restoration works (eastern and western facades).
- Internal and external refurbishment works to the Ennis Road Bays.
• Installation of a new electricity substation.
• Provision of a short stay car park (parking of three hours or less) within the under-croft space in the northern portion of the bays.
• Provision of an elevator at the Broughton Street/Greenway Drive intersection, providing access to Ennis Road above.
• Minor street upgrades to Greenway Drive.

The proposal and DA works are independent and could be implemented separately. As both proposals are part of an overall concept strategy for the revitalisation of the Ennis Road precinct, it is appropriate for them to be undertaken at the same time.

1.3 Purpose of the report

This review of environmental factors has been prepared by JBA Planning on behalf of RMS. For the purposes of the proposal, RMS is the proponent and the determining authority under Part 5 of the EP&A Act.

The purpose of the REF is to describe the proposal, to document the likely impacts of the proposal on the environment, and to detail protective measures to be implemented.

The description of the proposal and associated environmental impacts have been undertaken in context of clause 228 of the Environmental Planning and Assessment Regulation 2000, the Threatened Species Conservation Act 1995 (TSC Act), the Fisheries Management Act 1994 (FM Act), and the Australian Government’s Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). In doing so, this REF helps to fulfil the requirements of section 111 of the EP&A Act, that the RMS examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

The findings of this REF are to be considered when assessing:

• Whether the proposal is likely to have a significant impact on the environment and, therefore, the necessity for an environmental impact statement for the proposal to be prepared and approval to be sought from the Minister for Planning and Infrastructure under Part 5.1 of the EP&A Act.
• The significance of any impact on threatened species as defined by the TSC Act and/or FM Act, in section 5A of the EP&A Act and therefore the requirement for a Species Impact Statement.
• The potential for the proposal to significantly impact a matter of national environmental significance or Commonwealth land and the need to make a referral to the Australian Government Department for Sustainability, Environment, Water, Population and Communities for a decision by the Australian Minister for Sustainability, Environment, Water, Population and Communities on whether assessment and approval is required under the EPBC Act.
2 Need and options considered

2.1 Strategic need for the proposal

There is a need to undertake remedial works to the station concourse to protect the heritage significance of the building and to improve the amenity and safety of rail commuters, rail staff and the general public. The proposed works are part of the ongoing management and maintenance of the Sydney Harbour Bridge.

The current concourse area and station facilities are in need of modernisation and upgrading as the existing facilities are aged and in poor condition. Pedestrian analysis has determined that the ticket barriers within the concourse are operating at a Grade D level of service (being restricted and reduced walking speed for most pedestrians). More generally, there is a need to provide improved commuter amenity and additional pedestrian capacity through the concourse.

The Ennis Road upgrade is needed to improve pedestrian facilities, access and amenity in the Ennis Road precinct.

2.1.1 NSW 2021 A plan to make NSW number one

NSW 2021 is a long-term plan to deliver services in NSW that sets clear priorities to guide government decision-making and resource allocation.

NSW 2021 is based around five strategies to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability, and strengthen our local environment and communities. The Plan includes goals such as 'grow patronage on public transport by making it a more attractive choice', 'invest in critical infrastructure', 'improve road safety', and 'build liveable centres'. The Plan also aims to focus growth around existing transport hubs.

The proposal aims to:

- Encourage patronage on public transport by improving amenity and safety of rail commuters, rail staff and the general public at Milsons Point railway station concourse.
- Facilitate investment in the critical infrastructure of the Sydney Harbour Bridge by upgrading the Milsons Point railway station concourse.
- Improve road safety by improving the pedestrian environment in Ennis Road.
- Enhance the 'liveability' of Milsons Point and Kirribilli by facilitating the provision of improved railway infrastructure and pedestrian facilities. This would complement the refurbishment of the Ennis Road bays, to be assessed separately under Part 4 of the EP&A Act.

Milsons Point Railway station concourse

The proposal to upgrade the station concourse is consistent with the general objectives of NSW 2021 as it would upgrade an existing railway station to modern standards in order to improve efficiency and amenity.
Ennis Road roadworks

The proposal to upgrade Ennis Road is also consistent with the general objectives of the Plan as it would improve road safety, and complement the refurbishment of the Ennis Road Bays (proposed in the DA to North Sydney Council) and their operation as a commercial/retail/business centre in close proximity to an existing transport hub.

2.1.2 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney aims to provide an integrated planning framework to manage Sydney's growth to 2036. The Metropolitan Plan for Sydney 2036 includes strategies to effectively link Sydney's land use planning with its transport network.

The proposal is consistent with the general objectives of the Metropolitan Plan for Sydney as it would improve the amenity and efficiency of an existing transport hub and would complement an associated development (which is being separately assessed under Part 4 of the EP&A Act) that would encourage growth in proximity to a railway station.

2.1.3 Inner North Subregional Strategy

The Draft Inner North Subregional Strategy is applicable to the North Sydney LGA. The Strategy sets actions for the subregions of the metropolitan area in order to ensure local delivery of the objectives set out within the Metropolitan Plan for Sydney. It includes strategies to effectively link land use planning in the Inner North with its transport network.

The proposal is consistent with Action B 4.2 as it would represent an investment in transport infrastructure within the Inner North, and would improve the Ennis Road precinct which would contribute to the economic vitality of Milsons Point and Kirribilli Village.


2020 Vision is a strategic document that provides a framework for North Sydney LGA to improve sustainability by 2020. It provides goals and objectives to improve the LGA environmentally, economically, and socially.

The proposal is consistent with and supports many of the objectives outlined in the 2020 Vision through:

- Preservation and upgrade of a significant heritage item.
- Strengthening of a public transport hub in order to encourage use of public transport.
- Providing improvements to the station concourse and Ennis Road to encourage community safety.

2.1.5 Sydney Harbour Bridge Conservation Management Plan

The Sydney Harbour Bridge is listed on the National Heritage List and the State Heritage Register. The Sydney Harbour Bridge Conservation Management Plan (CMP) was prepared by Godden Mackay Logan Pty Ltd in 2007, and was endorsed
by the NSW Heritage Council in 2007 for a period of five years. The CMP provides a framework for the ongoing care and management of the Bridge, including decisions about its conservation, use and development. The proposal is in accordance with the CMP, which outlines that RMS has an obligation to maintain the building in accordance with the policies within. Refer to Chapter 6.1 for further information on non-Aboriginal heritage.

2.2 Existing environment and infrastructure

Milsons Point railway station concourse

The existing layout of the station concourse is illustrated in Figure 3 below.

Figure 3 - The existing layout of the Milsons Point railway station concourse
Source: Hassell
The eastern portion of the concourse is sloped at a grade of 1:54, falling towards Ennis Road. This grade is not compliant with the requirements of the BCA and Premises Standards of the DDA.

Six commercial tenancies are situated in the concourse (refer to Figures 4-8). The businesses operating from these tenancies are:

- Take away food outlet.
- Dry cleaner.
- Shoe repair shop.
- Small goods store.
- Sandwich outlet.
- Florist.

Figure 4 - The take-away tenancy situated in the north eastern portion of the station concourse
Figure 5 - Shoe repair and small goods shops in the north eastern portion of the station concourse

Figure 6 - Sandwich outlet in the north eastern portion of the station concourse
The station concourse is accessed from the east via an entrance point between Bays 14 and 16 of Ennis Road and from the west via an entrance point in Bradfield Park, Alfred Street.

The dry cleaner tenancy protrudes into the concourse, resulting in a narrowing effect of the concourse (refer to Figure 7). A further tenancy (florist) is situated on the southern side of the eastern end of the concourse (refer to Figure 8).

Figure 7 - The dry cleaning tenancy situated in the north eastern portion of the station concourse
Figure 8 - The florist tenancy situated in the south eastern portion of the station concourse

RailCorp ticket sales and the station office are also situated on the southern side of the concourse (refer to Figure 9). Male and female toilet facilities are provided on either side of the RailCorp offices, with female facilities situated on the western side and male facilities on the eastern side. There are currently no separate staff amenities. A switch room and a high voltage area are situated adjacent to the florist retail tenancy and the male toilet facilities.
The ticket barriers are situated on the northern side of the station concourse (refer to Figure 10), opposite the RailCorp ticket offices and female bathroom facilities. Within the ticketed area, stairs situated behind the northern wall at the western end of the concourse provide access to the platforms above. Less mobile rail passengers can access a lift to the platforms via a glass corridor leading to the northwestern corner of the concourse.

The location of the RailCorp facilities, including the ticket and station offices on the southern side of the station concourse, and the ticket barriers and platform access on the northern side, causes conflicting pedestrian traffic flow.
Public payphones are situated along the northern wall in close proximity to the western entrance. A large billboard for the purposes of advertising is situated on the southern wall, along with RailCorp passenger information posters.

Stairs leading to the disused former tram station are concealed behind the sandwich outlet and small goods tenancies.

The general condition of the station concourse, retail tenancies, toilet facilities and the awning above the eastern entrance to Milson’s Point railway station concourse is deteriorated and requires refurbishment.

**Ennis Road roadworks**

Ennis Road runs in a north-south direction for approximately 330 metres. It is situated adjacent and to the east of Milsons Point railway station concourse.

2-28 Ennis Road (illustrated in Figures 11 and 12) is the only building fronting Ennis Road and is situated on the western side of the Ennis Road carriageway. It is on the eastern side of the Bradfield Highway and under the Cahill Expressway Northern Approach. 2-28 Ennis Road is known as the Ennis Road bays and forms part of the original fabric of the Sydney Harbour Bridge, as designed by Dr. J.J.C. Bradfield.
Figure 11 - The southern portion of Ennis Road, looking north

Figure 12 - The northern portion Ennis Road, looking south
The bays at the southern end of Ennis Road accommodate a number of retail and commercial uses, however the bays at the northern end of Ennis Road are currently vacant. An under-croft at the far northern end of Ennis Road is currently in use as an RMS car park (refer to Figure 13) and is fenced and secured. An electricity substation is situated in this area, which is proposed to be demolished and relocated as part of the separate DA to North Sydney Council.

![Figure 13 - The car park in the under-croft at the northern end of Ennis Road.](image)

The southern portion of Ennis Road is situated adjacent to, but elevated above Broughton Street. Similarly, the Cahill Expressway is situated above the Ennis Road bays, in an elevated position above Ennis Road. The northern portion of Ennis Road is elevated above, and adjacent to, Greenway Drive and the Greenway Flats.

A sketch is provided at Figure 14, to illustrate the position of Ennis Road in relation to the surrounding roads and streets.
The southern end of Ennis Road creates a T-intersection with Broughton Street. This is a signal controlled intersection.

There are a range of parking restrictions along Ennis Road including five minute parking, metered parking (30 minutes to eight hours), loading zone, taxi zone and mail zone. There is a pedestrian crossing directly in front of the station concourse and a roundabout approximately half way along Ennis Road. A small number of street trees are planted on the eastern side of Ennis Road.

The surface condition of the road is varied and of mixed composition. The southern part of Ennis Road is a bitumen surface and the northern part is a concrete surface. The width of the carriageway is generally between 12 metres and 13.5 metres. The width of the northern end of Ennis Road gradually reduces to a 'pinch point', where the footpath provides pedestrian and cycle only access to McDougall Street, Kirribilli as illustrated in Figure 15.
2.3 Proposal objectives

The objectives of the proposal are to:

- Carry out essential remedial works to protect important heritage items against physical deterioration.
- Provide improved amenity and pedestrian capacity for rail commuters, through the upgrade of the Milsons Point railway station concourse.
- Refurbish the station concourse in accordance with the strategic concept developed during community consultation.
- Ensure the station concourse upgrade achieves compliance with the requirements of applicable Australian Standards, the BCA and the Premises Standards of the DDA.
- Enhance the streetscape along Ennis Road in order to provide the local community with improved access, amenity and safety.
- Improve pedestrian access between Broughton Street and Ennis Road.
- Appropriately reconfigure on-street parking to accommodate the proposed northern plaza.
- Maintain and enhance the 'Kirribilli Village' atmosphere of the locality.
2.4 Alternatives and options considered

2.4.1 Methodology for selection of preferred option

RMS recognised that the Milsons Point Railway Station Concourse was functionally obsolete and pedestrian access was impeded by the existing layout. RMS (as owner) advised RailCorp in 2007 of its proposals to improve the concourse. At the same time, RMS also recognised that pedestrian and traffic access in Ennis Road required improvement.

Options for both components were considered as part of the design development process (refer to section 2.4.2).

2.4.2 Identified options

The proposal is required to maintain and upgrade the Milsons Point railway station concourse and to upgrade Ennis Road. The site has a number of constraints that must be fully considered in the design options, including:

- The presence of original fabric of high heritage significance.
- A statutory requirement for the concourse to achieve compliance with the requirements of applicable Australian Standards, the BCA and the Premises Standards of the DDA.
- RailCorp requirements.

Given the site constraints, the nature of the proposal and the location of the site, there are limited alternative options. Two refurbishment options for the station concourse and Ennis Road were considered, along with a third 'do nothing' option. These are described below.

*Do nothing option*

The 'do nothing' option, would result in the station concourse facilities and Ennis Road infrastructure remaining unchanged and requiring ongoing maintenance.

*Option 1*

The key features of option 1 are summarised below.

**Milsons Point railway station concourse:**

- Relocating the amenities to the ticketed area.
- Relocating the existing Station Manager's office from the southern side of the concourse to the northern side of the concourse.
- Relocating the existing glazed wall protruding into the concourse.
- Reducing the stair width to the platforms by approximately 1.6 metres.
- Maintaining existing access to the ticket barriers directly off the concourse.
- The demolition of the Station Manager's office to allow for future retail development.
- Relocating the Station Managers office adjacent and at an angle to the existing ticket barriers (facing south west).
Ennis Road roadworks:

- Widening the western footpath.
- Provision of additional street furniture and lighting.
- Resealing of the road surface.
- Provision of a turning circle at the termination point of Ennis Road.
- Construction of angled parking on the eastern side of Ennis Road.

Option 2

The key features of option 2 are summarised below.

Milsons Point railway station concourse:

- Relocating the amenities to the ticketed area.
- Maintaining the existing stair width to the platforms.
- Relocating the ticket barriers to the eastern portion of the concourse away from the central concourse area.
- Demolition of the Station Manager's office to allow for future retail development.
- Relocating the Station Manager's office to the eastern portion of the concourse.
- Partial demolition of the stair to the former tram platform.

Ennis Road roadworks:

- Widening the western footpath.
- Provision of additional street furniture and lighting.
- Resealing of the road surface.
- Provision of a pedestrian plaza at the northern end of Ennis Road.
- Generally maintaining existing on-street parking arrangements in the remainder of Ennis Road.

2.4.3 Analysis of options

Each of the options were analysed for their advantages and disadvantages and how each performed against the project objectives.

Do nothing option

The 'do nothing' option would not meet the proposal objectives and would not result in any improvement to the station concourse or Ennis Road. It is not considered an appropriate option for the following reasons:

- Sydney Harbour Bridge is listed on the National and State Heritage registers and RMS has an obligation to maintain the precinct in accordance with the Sydney Harbour Bridge Conservation Management Plan (CMP).
- A number of components within the station concourse are not compliant with the provisions of the BCA and the Premises Standards of the DDA and require upgrade.
- The 'do nothing' option would not provide the local community with improved access, amenity and safety.
• Ongoing maintenance would still be required.

The do nothing option was discounted and is not considered further.

Options 1 and 2

Milsons Point railway station concourse

Design options 1 and 2 for the station concourse were similar owing to the site constraints outlined below:

• Fixed location of Milsons Point railway station concourse.
• Heritage significance of the station concourse and the Sydney Harbour Bridge.
• RailCorp operation and design requirements.
• The need to ensure safe pedestrian access through the station concourse and to the platform at all times during the construction phase.

In particular, the operational and design requirements of RailCorp dictate the location of the ticketing and office space, amenities and the lift to the station platforms, constraining on the flexibility of the layout design.

Consultation with Railcorp identified that option 1 for the station concourse was not suitable due to the following disadvantages:

• The narrow width between the southern concourse wall and the ticket barriers in option 1 would lead to an unacceptable obstruction of the station concourse.
• The station manager’s office in option 1 may not have complied with access regulations.
• Reduction in width of the stairs to the platform.

The following advantages and disadvantages were identified for Option 2 for the station concourse:

• No reduction in the width of the heritage stairs accessing the train platform however the lower half of the stair to the former tram station would need to be removed.
• Substantially improve pedestrian circulation in the area in front of the existing ticket windows.
• Improved layout for the station manager's office.
• Improved access to the ticketed area.
• Improved RailCorp staff amenities.
• Re-grading of the access ramp from Ennis Road to comply with access regulations.
• Option 2 best meets the project objectives.
Ennis Road roadworks

The options for landscaping on Ennis Road were generally similar owing to the existing site constraints, however there were differences between the Ennis Road options in terms of traffic management and car parking arrangements. Additional criteria were identified to select the preferred option for the Ennis Road upgrade component of the proposal. These are:

- Minimise any loss of on-street parking.
- Maintain an on-street loading zone.
- Increase pedestrian amenity along Ennis Road.
- Improve safety and security at the northern end of Ennis Road.
- Provide a quality streetscape commensurate with the refurbished Ennis Road bays.

Council also requested that the existing pedestrian crossing and roundabout in Ennis Road be retained in the current locations to ensure delivery vehicles can easily exit the street and pedestrian access to the station concourse is maintained.

The analysis of the Ennis Road roadworks found the following:

- Option 2 was considered to result in a more 'pedestrian friendly' outcome.
- The additional parking provided in the under-croft in Option 2 was preferable to providing angled parking on Ennis Road in Option 1.
- Option 1 and 2 both provided substantial improvements in terms of street furniture and lighting.
- Option 2 better maintains existing on-street parking arrangements on Ennis Road.
- Option 2 best meets the proposal objectives (refer to Chapter 2.3).

Option 2 is therefore considered to be the only viable option that would achieve the project objectives and the requirements of the community and Council.

2.5 Preferred option

The preferred option selected is Option 2 for both the station concourse and Ennis Road.

Option 2 best meets the project objectives in that it:

- Includes essential remedial works to protect important heritage items against physical deterioration.
- Complements the refurbishment of the Ennis Road bays for their adaptive re-use.
- Provides improved amenity and pedestrian capacity for rail commuters, over that which would be achieved by Option 1.
- Would refurbish the station concourse and allow for further design development during community consultation.
- Ensures the station concourse can achieve compliance with the requirements of applicable Australian Standards, the BCA and the Premises Standards of the DDA.
- Allows for the future activation of the station concourse by providing space which could be used for retail purposes (any retail uses would be subject to a
future, separate DA).

- Enhances the streetscape along Ennis Road to provide the local community with improved access, amenity and safety, over that which would be achieved by Option 1.
- Provides an appropriate on-street parking configuration.
- Maintains and enhances the 'Kirribilli Village' atmosphere of the locality.

In addition, Option 2 would provide a layout that would meet Railcorp requirements and improve conditions for commuters, in that:

- Toilets for rail commuters are relocated to the ticketed side of the station operational area and can be better controlled and maintained in accordance with current RailCorp policy.
- Separate staff toilets would be provided.
- Updating of all facilities can be achieved without interruption to day to day Station operations.
- Passenger access to train information, ticketing and general flows through the station is improved.
- Additional ticket gates can be installed.

2.6 Design refinements

Following conclusion of the initial community consultation period and an iterative design refinement process informed by consultations with North Sydney Council (Council), Housing NSW, RailCorp and the Heritage Branch of the OEH, a concept design that meets the project objectives and takes into account the issues raised by the community and Council has been developed.

The design refinements are summarised below:

- Improved pedestrian circulation within the Concourse, achieved through the reconfiguration of the ticket barriers and RailCorp facilities.
- Improved disabled access between the concourse and the platforms by relocating and re-framing the glazed wall to increase the access width to the lift.
- Reducing the slope of the concourse for wheelchair users by regrading the existing ramp at the eastern end of the concourse to 1:14.
- Use of non-slip flooring within the station concourse (removal of the current floor tiles throughout the concourse and replacement with a sealed honed/polished slip resistant concrete finish).
- Provision of new toilet facilities within the concourse.
- Improved landscaping.
- Provision of additional street trees.
- Improved street lighting.
- Improvements to the footpath surfacing on Ennis Road.
- Amendments to footpaths.
- The provision of additional garbage bins along Ennis Road.
- The provision of benches close to Greenway Flats.

The final scheme is illustrated within the Architectural Drawings prepared by Hassell included as Appendix A.

The refined preferred option has been developed based on the 'integration' principle.
of ecologically sustainable development, whereby any economic, social and environmental impacts were considered to be acceptable compared to the other options considered. In particular the refined preferred option:

- Is the result of extensive consultation with the community and Council.
- Is economically viable.
- Best meets the project objectives.
- Balances the requirements of Council and the community within the site constraints.

A detailed description of the refined concept design (the proposal) is provided in Chapter 3.
3 Description of the proposal

3.1 The proposal

The proposal comprises two distinct elements, which are:

- Upgrades to the Milsons Point railway station concourse.
- Ennis Road roadworks.

Milsons Point railway station concourse

The works proposed to the Milsons Point station concourse include:

- Closure of the existing tenancies and commuter toilets.
- Demolition of existing RailCorp facilities including the ticket office, toilets, retail tenancies, station offices and other partitioned spaces.
- Construction of a new ticket office, station master's office and new staff amenities.
- Partial demolition of the disused former tram station steps situated behind the dry cleaner tenancy, to accommodate the new ticket office and station master's office.
- Relocation of ticket barriers to the northern portion of the concourse, positioned to facilitate east-west pedestrian traffic flow.
- The provision of one additional ticket barrier.
- Installation of one accessible and two standard unisex toilets for railway commuters, to be located within the ticketed area of the station.
- Installation of two staff toilets (one male one female) within the station offices.
- Upgrades to the station concourse to a design that is compliant with the BCA and the Premises Standards of the DDA, including:
  - Removal of the current floor tiles throughout the concourse and replacement with a sealed honed/polished slip resistant concrete finish.
  - Regrading of the existing ramp at the eastern end of the concourse to 1:14 with handrails, rest landings and tactile ground surface indicators in accordance with AS1428.1 and AS1428.4.1 to satisfy Part D3.3 and Part D3.8 of the BCA and the DDA.
  - Provision of adequate access and circulation spaces in the 'ticketed area', including the approach to the elevator and a new unisex accessible toilet in accordance with AS1428.1 to satisfy Parts D3.3 and F2.4 of the BCA and DDA Premises Standards.
  - Reconfiguration of the RailCorp offices and amenities in order to provide appropriate doorway access, level threshold entry, internal ramps and sanitary facilities in accordance with AS1428.1 to satisfy Parts D3.3 and F2.4 of the BCA and DDA Premises Standards.
  - Relocation and re-framing of the glazed wall in order to provide improved access width to the lift.
  - Provision of new accessible public toilets to be provided beyond the ticket barriers.
- Refurbishment (removal and replacement) of the awning over the station concourse entrance on Ennis Road.
- Upgrade of lighting within the station concourse.
The works proposed to the station concourse are detailed in Figure 16 and in the architectural drawings prepared by Hassell Ltd included as Appendix A.

Figure 16 - Works proposed within the station concourse

Source: Hassell
Ennis Road roadworks

The Ennis Road roadworks include:

- Road pavement works and re-sealing of the entire Ennis Road carriageway.
- Reconfiguration of on street parking to provide:
  - 27 standard spaces.
  - Five taxi spaces.
  - Three loading spaces.
  - Six kiss and ride spaces (for public transport users).
- Footpath works along the entire length of Ennis Road, including:
  - New paving consisting of asphalt with precast concrete bands.
  - Footpath widening up to six metres in parts with a minimum width of two metres.
  - New kerb and guttering.
  - Alterations to existing pit channels and stormwater inlets. No new stormwater pipes or lines would be required.
- New street lighting, comprising 14 lamp posts which would be installed in the following locations:
  - Along the length of Ennis Road (nine lamp posts).
  - On Broughton Street in proximity to the Burton Street Tunnel (three lamp posts).
  - At the intersection with Broughton Street (two lamp posts).
- New lighting of the pedestrian pathway between Ennis Road and McDougall Street.
- Installation of road side furniture including public benches and bins along Ennis Road.
- Construction of a pedestrian plaza and vehicle access ramps to the car park at the northern end of Ennis Road.
- Provision of bollards in proximity to the public plaza and the existing pedestrian crossing.
- Provision of around six bicycle racks outside Bay 11.
- Landscaping works along Ennis Road, including the removal of approximately 14 immature trees and planting of 18 street trees (Oriental Plane tree) along the eastern side of Ennis Road.
- Retention of the existing pedestrian crossing and roundabout.
- Retention of the existing street furniture located opposite to the Ennis Road concourse entrance.

A temporary construction compound would be established at the northern end of Ennis Road in the location identified in Figure 17 below. The site compound would likely include materials storage and accommodation, site office, toilets, parking for site vehicles, a vehicle wash down area, fuel storage containers and fencing/hoarding.
The Ennis Road component of the proposal is shown on the Landscape Drawings provided at Figures 18, 19 and 20 below and in Appendix B.
Figure 18 - Proposed works along Ennis Road.
Source: TRACT
Figure 19 - Proposed works along Ennis Road.
Source: TRACT
Figure 20 - Proposed works along Ennis Road.
Source: TRACT
3.2 Design parameters

3.2.1 Design criteria

The proposed upgrades to Milsons Point Railway Station and Ennis Road seek to provide a safe, efficient public domain which meets the needs of commuters and the local community by:

- Providing safe access along Ennis Road to the station concourse.
- Improving pedestrian access between Broughton Street and Ennis Road.
- Improving pedestrian and road safety on Ennis Road.
- Providing an improved environment for cyclists, pedestrians and motorists, public transport and commuters.
- Assist in the development of Kirribilli as a local village by providing better access and improved amenity.
- Enhancing the sense of place.

The specific design criteria adopted for the proposal is outlined below. The design criteria have been derived from an analysis of the site and locality. The design criteria aim to respect the intrinsic and special qualities of Kirribilli, including its heritage significance, character and distinctive features.

The design criteria for the station concourse are:

- Provide upgraded station facilities.
- Rationalise spaces within the concourse.
- Improve pedestrian circulation.
- Carry out works in accordance with the Sydney Harbour Bridge CMP.
- Achieve compliance with the requirements of applicable Australian Standards, the BCA and the DDA.

The design criteria for the Ennis Road works are:

- Upgrade the Ennis Road carriageway.
- Provide new kerbs and guttering and widened footpaths.
- Maintain existing road facilities, including:
  - The roundabout.
  - The on-street loading zone.
  - Improve pedestrian amenity.
  - Provide improved street furniture.
  - Provide improved street lighting.
  - Provide on street parking.
  - Improve safety and security at the northern end of the proposal.
  - Achieve increased public amenity through the provision of hard landscaping treatments (e.g. paving) and soft landscaping treatments (e.g. soils and planting).

The following design principles set out in Beyond the Pavement - RTA Urban Design Policy, Procedures and Design Principles (RTA, July 2009) have guided the development of the designs:

- Contribute to urban structure and revitalisation.
- Fitting with the built fabric.
- Connecting modes and communities.
• Incorporating heritage and cultural contexts.
• Creating self-explaining road environments.
• Achieving integrated and minimal maintenance design.

3.2.2 Constraints

Milsons Point railway station concourse

The design options for the upgrades to the station concourse are limited due to the following:

• Fixed location of the Milsons Point station concourse.
• Heritage significance of the station and Sydney Harbour Bridge.
• Station operation and design requirements of RailCorp.
• Need to ensure pedestrian access through the concourse to the station at all times during the construction phase.

Ennis Road roadworks

The design options for the works to Ennis Road are limited due to the following:

• Nature of Ennis Road as an established street in an established neighbourhood.
• Positioning of Ennis Road in relation to surrounding streets (elevated above and positioned below adjacent roads and streets).
• Road having a singular point of vehicle access.
• Heritage significance of adjacent buildings.
• Need to maintain pedestrian access to Milsons Point station at all times during the construction phase.
• Need to protect existing infrastructure and utilities.

3.2.3 Landscaping and roadside furniture

Landscaping works would include the removal of 14 trees along the length of Ennis Road and the provision of 18 street trees (Oriental Plane tree) along the eastern side of Ennis Road. There are currently eight mature trees situated on Ennis Road, each of which generally exceeds six metres in height. None of these trees are proposed to be removed during the Ennis Road roadworks. Removal of trees and the planting of new trees would be undertaken in accordance with the North Sydney Council Street Tree Strategy 2006.

As described in Chapter 3.1, the proposal includes the retention of street furniture opposite the station entrance on Ennis Road, and the provision of new street furniture in various locations along Ennis Road. All new items of street furniture would be of a similar design to that found in the vicinity of the proposal, and the wider North Sydney Local Government Area.
3.3 Construction activities

3.3.1 Work methodology

Before works commence, the contractor would be required to develop a works program for approval by RMS. The final work methodology would be identified during the detailed design, however given the scope of works outlined above, it is expected that construction activities would comprise of the following:

**Milsons Point Railway station concourse**

- Preliminary works, including:
  - Installation of erosion, sediment control and environmental management measures in accordance with an Erosion and Sediment Control Plan to be prepared prior to the commencement of works.
  - Erection of directional signage in accordance with a Construction Environmental Management Plan to be prepared prior to the commencement of works.
  - Erection of hoardings or fences to secure demolition and construction areas, ensure pedestrian safety, and protect existing infrastructure and retained trees.

- Demolition works, as illustrated in the Demolition Plans prepared by Hassell and included within the Architectural Drawings at Appendix A, including but not limited to:
  - Establishment of partitions to facilitate safe access for pedestrians and rail commuters.
  - Closure of shops within the concourse as negotiated or required to complete the demolition works.
  - Demolition of existing RailCorp facilities including ticket office, Station offices and other partitioned spaces.
  - Partial demolition of the disused steps situated behind the dry cleaner tenancy in order to accommodate the new ticket office and Station Master's office.
  - Removal of the existing floor tiles.
  - Removal of the existing awning above the eastern concourse entrance for the purposes of refurbishment.

- Refurbishment of the eastern awning over the eastern station concourse entrance at Ennis Road (to be similar in design to the existing awning over the western concourse entrance).

- Connection to utility services in the Ennis Road bays (which are to be upgraded as part of the DA to North Sydney Council).

- Construction works, as illustrated in the proposed floor plans included within the Architectural Drawings at Appendix A, including but not limited to:
  - Construction of a new ticket office, Station Master's office and new staff amenities.
  - Relocation of ticket barriers.
  - Installation of new toilets for railway commuters, to be located within the ticketed areas.
  - Regrading of the existing ramp at the eastern end of the concourse to 1:14.
  - Provision of a sealed honed/polished slip resistant concrete finish floor.
  - Relocation and re-framing of the glazed wall.
• Upgrade of the lighting within the station concourse.
• Amendments to the layout of services.
• Finishing works (painting, plastering and the like).
• Decommission of the site compound.

Works within the concourse would be progressed gradually, with work areas being partitioned off in stages.

Ennis Road roadworks

• Preliminary works including:
  o Installation of erosion, sediment control and environmental management measures in accordance with an Erosion and Sediment Control Plan to be prepared prior to the commencement of works.
  o Erection of directional signage in accordance with a Construction Environmental Management Plan to be prepared prior to the commencement of works.
  o Erection of hoardings or fences to secure construction areas, ensure pedestrian safety and protect existing infrastructure.
  o Marking of trees to be removed.

• Demolition works, as illustrated in the Demolition Plans at Appendix A, including but not limited to removal of:
  o Existing kerbs.
  o Existing driveways.
  o A number of existing trees on the eastern footpath.
  o Existing planters outside bay 11.
  o Existing road surface.
  o Trees.

• Construction works, as illustrated in the Architectural Drawings at Appendix A, including but not limited to:
  o Regrading of road surfaces.
  o Provision of new pit channels, stormwater inlets and related stormwater works.
  o Construction of new footpaths.
  o Construction of access to car parking area.
  o Line marking, including for new parking and loading and kiss and ride bays and signposting.
  o Finishing works (road markings and the like).

• Landscaping works, as illustrated in the Landscape Plans included at Appendix B; including but not limited to:
  o Construction of a plaza area at the northern end of Ennis Road.
  o Installation of bollards between the pedestrian plaza and the termination point of Ennis Road.
  o Installation of street lighting along Ennis Road.
  o Installation of benches on the eastern footpath.
  o Provision of planter beds around the perimeter of the under-croft car park.
  o Planting of trees along the eastern footpath of Ennis Road.
  o Modification of the existing garden beds in the southern portion of Ennis Road.
The existing pedestrian crossing and roundabout on Ennis Road would be maintained. Following the completion of construction and landscaping works, the site compound would be decommissioned.

3.3.2 Construction hours and duration

Working hours would generally be restricted in accordance with the Department of Environment, Climate Change and Water *Interim Construction Noise Guideline, July 2009* (DECCW, 2009) to:

- Between 7.00am and 6.00pm, Monday to Friday.
- Between 8.00am and 1.00pm Saturdays.
- No work or deliveries on Sunday and/or public holidays.

If work is required to be undertaken outside these standard hours, the procedures outlined in the *RTA Environmental Noise Management Manual 2001* (ENMM) (RTA 2001) including those in *Practice Notes vii –Roadworks Outside of Normal Working Hours* would be followed to ensure out of hours works are appropriate and that any disruption to neighbours is minimised. This would include notifying the local community of any works planned to be undertaken outside the standard hours.

3.3.3 Plant and equipment

The following indicative list of construction plant and equipment would typically be required for the proposal. The final plant and equipment requirements would be determined during detailed design.

- Concrete saws.
- Hydraulic hammers.
- Vibratory rollers.
- Haul trucks and other heavy transport.
- Asphalt miller.
- Asphalt paving plant.
- Excavators.
- Graders.
- Water carts.
- Bitumen spraying plant.
- Line marking equipment.
- Chainsaws.
- Air compressors.

3.3.4 Earthworks

Earthworks would be required along Ennis Road, principally involving the removal of the existing road surface and the regrading of the area. Approximately 210 cubic metres of concrete and bitumen would be excavated and removed from Ennis Road and replaced with new asphalt.
3.3.5 Source and quantity of materials

Where possible, materials such as concrete, asphalt and steel would be sourced from a local licensed supplier. In addition, RMS would aim to reuse excess material from other road projects within a reasonable proximity to the proposal.

3.3.6 Traffic management and access

Throughout the construction phase, vehicles travelling to and from the proposal would be required to use Ennis Road. These movements would predominantly involve the delivery of materials and rubbish removal. It is expected that Ennis Road would be briefly closed whilst resurfacing works close to the Broughton Street intersection are carried out (approximately one to two days). It is anticipated that works would progress from this point in a northerly direction, allowing Ennis Road to remain partially open at all other times during the construction phase.

Throughout construction, access to ticketing and the station platform would be maintained at all times. To facilitate this, the following measures would be undertaken:

- Hoardings or screens would be erected in areas where the proposal would impact on pedestrian walkways to ensure pedestrian safety.
- Works within the station concourse would be progressed gradually, with work areas being partitioned off in stages. The building contractor would be required to develop a works program for approval by RMS.

A traffic management plan to be followed throughout the construction phase would be prepared in accordance with the *RTA Traffic Control at Worksites Manual* (RTA, 2010) and RTA Specification G10 – Control of Traffic. The traffic management plan would be reviewed by RMS prior to completion.

Any disruption to access would be notified in advance in accordance with the document *RTA Community Participation and Communication. A resource manual for staff. March 2010*.

3.4 Ancillary facilities

As illustrated on the Architectural Drawings included as Appendix A and in Figure 17 above, the site compound (approximately 1,500 m²) would be situated at the northern end of Ennis Road. All materials would be stored within the site compound in proximity to the site office and within the site boundary. The contractor would erect a scaffolding or screen system, when carrying out works. The compound site would operate during the working hours described in Chapter 3.3.2 and will include a site office and potable amenities.

It is anticipated that demolition and construction activities would be carried out by a single contractor, and at the same time as those complementary works proposed in the DA to North Sydney Council. Accordingly, a single site compound is proposed to be used for both proposals.
3.5 Public utility adjustment

The only public utility adjustments proposed within this REF relate to the provision of new pit channels and stormwater inlets arising from the Ennis Road roadworks. The separate DA for the refurbishment of the Ennis Road Bays (submitted to North Sydney Council under Part 4 of the EP&A Act) includes within its scope of works a proposal to demolish an existing substation located in the RMS car park and build a new substation within the proposed short stay car park.
4 Statutory and planning framework

4.1 State Environmental Planning Policies

4.1.1 State Environmental Planning Policy (Infrastructure) 2007

*State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 79 of ISEPP permits development on any land for the purpose of rail or rail infrastructure facilities to be carried out by or on behalf of a public authority without consent. Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the proposal is for upgrade works to the Milsons Point railway station concourse and for Ennis Road roadworks and is to be carried out by or on behalf of RMS, it can be assessed under Part 5 of the *Environmental Planning and Assessment Act, 1979*. Development consent from Council is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act, 1974* and does not affect land or development regulated by the *State Environmental Planning Policy (State and Regional Development) 2011* or *State Environmental Planning Policy (Transitional Major Projects) 2005*.

The proposal does not include any works or uses for retail purposes. Any future proposals for retail uses within the station concourse would be the subject of further environmental assessment.

Part 2 of the ISEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. Consultation, including consultation as required by ISEPP (where applicable), is discussed in Chapter 5 of this REF.

4.2 Local Environmental Plans

4.2.1 North Sydney Local Environmental Plan 2001

The *North Sydney Local Environmental Plan 2001* (LEP 2001) guides development within all areas of the North Sydney Local Government Area (LGA). Ennis Road is zoned 'Road' and the station concourse is partially zoned ‘Road’ and ‘Railway’. Table 1 outlines the objectives and permissibility of the proposed works in each zone.
Table 1: Land use zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Objectives</th>
<th>Permissibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>a) identify land used for railway purposes, and</td>
<td>Permissible with consent</td>
</tr>
<tr>
<td></td>
<td>b) minimise the adverse effects of railway use of this land on adjoining land.</td>
<td></td>
</tr>
<tr>
<td>Railway</td>
<td>(a) identify land used for railway purposes, and</td>
<td>Permissible with consent</td>
</tr>
<tr>
<td></td>
<td>(b) minimise the adverse effects of railway use of this land on adjoining land.</td>
<td></td>
</tr>
</tbody>
</table>

As discussed in Chapter 4.2.1 consent requirements under the *North Sydney Local Environmental Plan 2001* do not apply to the proposal as it can be assessed under Part 5 of the *Environmental Planning and Assessment Act, 1979*. Development consent from Council is not required.

### 4.2.2 Draft North Sydney Local Environmental Plan 2009

The draft *North Sydney Local Environmental Plan 2009* (Draft LEP) is based on the State wide ‘Standard Instrument LEP template’. Under the Draft LEP the station concourse and Ennis Road are proposed to be rezoned to SP2 Infrastructure with the purposes specified on the land zoning map to be railway and classified road. The objectives of this zone are:

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

The proposal would be permissible with development consent within the SP2 zone in the Draft LEP. As discussed in Chapter 4.2.2 consent requirements under the draft *North Sydney Local Environmental Plan 2009* do not apply to the proposal as it can be assessed under Part 5 of the *Environmental Planning and Assessment Act, 1979*. Development consent from Council is not required.

### 4.3 Other relevant legislation

#### 4.3.1 Heritage Act 1977

The *Heritage Act 1977* applies to the proposal due to impacts to the station concourse which is listed as an item of State Heritage Significance. The item is listed under the State Heritage Register (SHR) as the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ and the ‘Milsons Point Railway Station Group’. Accordingly under Section 60 of the *Heritage Act*, approval would be sought from the Heritage Council of the OEH prior to any impact to these items.

### 4.4 Commonwealth legislation

#### 4.4.1 Environment Protection and Biodiversity Conservation Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a referral is required to the Australian Government for proposed actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land. These are considered in Chapter 6.1 and Appendix C of this REF.
The Sydney Harbour Bridge and its approaches are listed on the Australian National Heritage Register. Ennis Road and the station concourse are within the listed boundary for this item.

A Statement of Heritage Impact (SOHI) has been prepared (refer to Appendix D). The assessment concluded that the proposal would not cause negative impacts or detract from the national values of the Sydney Harbour Bridge and that a referral to the Department of Sustainability, Environment, Water, Population and Communities is not required.

4.4.2 Commonwealth Disability Discrimination Act 1992

The Disability Discrimination Act 1992 (DDA) prohibits unlawful discrimination in the provision of access to public buildings. However, the DDA does not provide any prescriptive design specifications.

The Premises Standards 2010 set performance requirements and provides references to technical specifications to ensure dignified access to, and use of, buildings for people with a disability. The standards clarify the general non-discrimination provisions of the DDA in relation to the design construction and management of buildings. The relevant Standard for the DDA is Design for Access and Mobility AS 1428.1 ‘general requirements for access - new building work’ and AS1428.4.1 ‘tactile ground surface indicators for orientation of people with vision impairment’.

The proposal would improve accessibility for members of the public with mobility issues and would ensure the affected public areas comply with relevant Australian Standards, the BCA and the Premises Standards of the DDA.

4.5 Confirmation of statutory position

The proponent and determining authority for the proposal is RMS. ISEPP provides that the proposal may be carried out without consent from Council and is therefore subject to assessment under Part 5 of the EP&A Act.

An approval under Section 60 of the Heritage Act 1977 would be obtained from the Heritage Council of the OEH prior to any impact to items listed under the State Heritage Register.
5 Stakeholder and community consultation

5.1 Consultation strategy

A consultation plan was prepared and implemented to provide stakeholders with ongoing information, and the opportunity to provide feedback about the proposal and the separate application to refurbish the Ennis Road bays as proposed in the DA to North Sydney Council. The consultation plan identified stakeholders and developed a strategy of engagement. Documents related to the consultation plan are included as Appendix E.

The aims of the consultation plan were to:

- Provide general information about the planning approval processes being undertaken.
- Gather information from stakeholders to contribute to the proposals.
- Provide opportunities for discussion with those stakeholders most affected by the proposals.

Between 13 December 2010 and 9 May 2011 activities were undertaken to invite members of the public to submit their ideas about the proposals to the project team. Issues raised were taken into consideration and as a result, a number of design changes were adopted (refer to Chapter 2.6).

A detailed description of the consultation activities undertaken to date is provided in Chapter 5.2.1 below. The issues relating to this proposal that were raised during consultation, and where these issues are addressed in this REF are summarised in Chapter 5.2.2 below.

5.2 Community involvement

5.2.1 Consultation activities

*Information flyers*

To date, two flyers have been produced and distributed.

Flyer 1 introduced the proposal and outlined the scope and timing for the planning approval process. In December 2010, the flyer was delivered to the letter boxes of residents and businesses within 800 metres of the proposal. It was also distributed during meetings, workshops and the information stalls held at the Kirribilli general markets and was available at the Kirribilli neighbourhood centre.

Flyer 2 was distributed in late April 2011 to the letter boxes of residents and businesses within 800 metres of the proposal. The flyer invited the community to provide feedback on the proposal and gave the opportunity for discussions with the project team to address any concerns raised. No additional comments were received following the issue of the second flyer.

The flyers were also on display at the following locations:

- The community notice board under the Burton Street Bridge.
- The notice boards of the Kirribilli Neighbourhood Centre.
- North Sydney Council chambers.
**Information posters**

An information poster was produced that provided detailed graphical information about the station concourse and the Ennis Road bays. The poster provided historical information about the site and outlined the scope of the proposal. The poster also invited community feedback and provided contact information.

An A0 size poster was on display in the window of Bay 5 for the duration of the community consultation period. A second A0 size poster was provided at the Kirribilli Market stall (refer to Chapter 5.1.6).

An A3 size poster was on display at the following locations:

- The community notice board under the Burton Street Bridge.
- The notice boards of the Kirribilli Neighbourhood Centre.
- North Sydney Council chambers.

**Website**

Since the commencement of the communication strategy RMS has provided information relating to the proposals on its website. The website includes:

- Details of the proposal and the separate application to refurbish the Ennis Road bays as proposed in the DA to North Sydney Council.
- An invitation to provide feedback.
- Updates on the proposals.
- Frequently asked questions and answers.
- Details of where to find more information.

**Information telephone line/email address**

A project information telephone line and email address was operational from 13 December 2010 to 9 May 2011. All enquiries regarding the proposal were logged, including the source of enquiry, the nature of the enquiry and the response provided.

**Information stalls**

An information stall was at the Kirribilli general market over two market days on Saturday, 22 January 2011 and Saturday, 26 February 2011. Staff at the information stall provided general information regarding the planning approvals process and canvassed the views of visitors with regard to the existing conditions of the site and potential outcomes.

Approximately 100 persons were provided with information concerning the proposal via the information stalls held at Kirribilli general markets.

Visitors to the first stall were informed of proposal and that it was at the concept stage. Visitors were invited to provide formal feedback regarding how the proposals should be developed by completing a short questionnaire. In total, 30 questionnaires were completed at the first market day held on Saturday, 22 January 2011.
Information sessions/workshops

Three information sessions/workshops were held with stakeholders at Bay 5, Ennis Road, as follows:

- On 9 February 2011 a workshop was held for residents of the Greenway Flats. 12 persons attended the workshop, including:
  - Seven Greenway residents.
  - One North Sydney Councillor (Councillor Christie).
  - Two North Sydney Council staff (community access and safety).
  - Two members of the public (non Greenway residents).
- On 24 February 2011 a workshop was held with the existing tenants of the Ennis Road properties. Eight people attended the workshop representing six of the affected businesses.
- On 26 February 2011 a workshop was held with persons who had expressed an interest in the proposal at the Kirribilli General Market information stall on Saturday 22 January 2011. Five people attended the workshop.

5.2.2 Issues raised

Table 2 presents a summary of the issues raised during community consultation period, and where these issues are addressed in this report.

Table 2: Issues raised during community consultation

<table>
<thead>
<tr>
<th>Issue category</th>
<th>Issue Summary of issue raised</th>
<th>Where addressed in this REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need and options</td>
<td>Station concourse requires refurbishment</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>Need and options</td>
<td>Refurbishments to the concourse are not required.</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>Non-Aboriginal heritage</td>
<td>The heritage significance of the site should be preserved</td>
<td>Chapter 3 and Chapter 6.1</td>
</tr>
<tr>
<td>Non-Aboriginal heritage</td>
<td>The concourse design should be preserved</td>
<td>Chapter 3 and Chapter 6.1</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Station concourse toilets require upgrading.</td>
<td>Chapter 3, Chapter 6.3 and Chapter 6.12</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Improve access in the station concourse, including for wheelchairs, to the lift and to address congestion and conflicts between shoppers and commuters.</td>
<td>Chapter 3, Chapter 6.3 and Chapter 6.12</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>The station concourse layout could be improved</td>
<td>Chapter 3 and Chapter 6.3</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>The station concourse lift is inadequate</td>
<td>Chapter 3 and Chapter 6.3</td>
</tr>
<tr>
<td>Socio-economic and transport</td>
<td>There is bicycle/pedestrian conflict on Ennis Road.</td>
<td>Chapter 6.2, Chapter 6.3 and Chapter 6.4</td>
</tr>
<tr>
<td>Socio-economic and visual impacts</td>
<td>The proposal should be in keeping with Kirribilli Village</td>
<td>Chapter 3, Chapter 6.3, and Chapter 6.5</td>
</tr>
<tr>
<td>Visual impacts</td>
<td>Footpath and street lighting should be improved</td>
<td>Chapter 3 and Chapter 6.5</td>
</tr>
</tbody>
</table>

In addition, a range of comments were received relating to the design of the proposal. These have been taken into consideration and resulted in design changes including those described in Chapter 2.6. Refer to Chapters 2 and 3 for further detail.
5.3 ISEPP consultation

ISEPP sets out consultation requirements for public authorities proposing works that do not require development consent. The proposal may involve the installation of a temporary structure on, or the temporary and short term enclosing of a public place (being Ennis Road) and may also involve works that are not minor or inconsequential to the surface of a footpath or road that is under Council's management. Therefore, the consultation requirements under Clause 13 of ISEPP are triggered.

A meeting with Council staff was held on 19 April 2011 and a letter was sent to North Sydney Council on 10 June 2011, which outlined the scope of works proposed under Part 5 of the EP&A Act for the purposes of the proposal and invited Council to comment.

The main issues raised by Council in response to the letter, as relevant to this REF are summarised below:

The REF should be clear that the proposal is related to the DA to refurbish the Ennis Road bays

This REF clearly identifies that the proposal, while separate to, would complement the refurbishment of the Ennis Road bays (proposed within the DA to North Sydney Council) by providing increased amenity through landscaping, pavement upgrades and the provision of a pedestrian plaza. The proposed refurbishment of the Ennis Road Bays would reactivate existing commercial floor space for future retail/office/service uses. Any future use of the Bays would be subject to a separate DA to North Sydney Council. This is discussed in further detail in Chapter 1.2 of this REF.

The reactivation of the commercial floor space within the Ennis Road bays would have a significant impact upon Kirribilli Village.

The refurbishment of the Ennis Road bays is proposed within a separate DA to North Sydney Council. Chapter 6.9 of the statement of environmental effects included within that application addresses all potential impacts of that proposal. No significant impacts on Kirribilli Village are identified. The cumulative impacts of the proposal and the works proposed in the separate DA to North Sydney Council are discussed in Chapter 6.12.

The Review of Environmental Factors should clearly state if the works are reliant on the approval of the DA to refurbish the Ennis Road Bays submitted to North Sydney Council.

The proposal and DA works are independent and could be implemented separately. However, as both proposals are part of an overall program of works for the Sydney Harbour Bridge it is appropriate for them to be undertaken at the same time.
Council raises no objection to the upgrade of Milsons Point railway station concourse subject to a detailed assessment of heritage issues and consistency with the Draft Sydney Harbour Bridge Conservation Management Plan 2010 (CMP) and other relevant documentation.

The proposal has been assessed against the existing Sydney Harbour Bridge CMP which was endorsed by the NSW Heritage Council in 2007 for a period of five years. The endorsed 2007 CMP is the relevant document against which the proposal should be assessed, not the working draft 2010 CMP. A Statement of Heritage Impact (SOHI) has been prepared and is included as Appendix D. The SOHI assesses the proposal against the policies contained within the CMP and concludes that there would be no impact upon the significance of any heritage item. This is discussed in further detail in Chapter 6.1.

The Bridge is listed as a heritage item on the NSW State Heritage Register as well as the National Heritage List and is therefore subject to the EPBC Act and Heritage Act.

The SOHI includes an assessment of the potential impact of the proposal on matters of national environmental significance and the environment of Commonwealth land (refer to Appendix D). The assessment concluded that the proposal would not cause negative impacts or detract from the national values of the Sydney Harbour Bridge. Therefore, a referral to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities is not required.

As addressed in Chapter 1.1, the station concourse is listed as an item of State Heritage Significance as part of the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ listing and ‘Milsons Point Railway Station group listing’. Accordingly, an application will be made to the NSW Heritage Council for approval under Section 60 of the Heritage Act.

The ISEPP consultation letter submitted to Council, and Council’s response, are included as Appendix F.

5.4 Government agency and stakeholder involvement

North Sydney Council

A briefing session was held on 11 April 2011 at North Sydney Council Chambers. Members of the project team met with the Mayor and Councillors to present the proposal and outline the approvals and assessment process.

Councillors were generally supportive of the proposal, in particular the following aspects:

- Widening the footpaths and providing opportunities for outdoor seating.
- Increasing opportunities to enliven the street and locality.
- Provision of new retail opportunities.
- Returning the Milsons Point station awning to its original condition.
- Maintaining an appropriate amount of parking and loading on Ennis Road.
- The preservation of the roundabout to allow vehicles to turn easily.
- The improvement of amenity and safety at the northern end of Ennis Road.
The Councillors commented on the proposed change to the location of the station toilets within the station concourse to beyond the ticket barriers. In particular, concern was raised that the proposal to move the toilets may reduce the number of publicly accessible toilets and result in negative impacts on the Kirribilli Markets.

The proposed relocation of the toilets to the ticketed area of Milsons Point station is in accordance with RailCorp's safety and operational requirements and is consistent with current policy for the provision of toilets in railway stations. The toilets are for rail commuters and are therefore located within the ticketed area. It is noted that the organisers of the Kirribilli Markets hire portable toilets on market days, and public toilets (including an accessible toilet) are available on Fitzroy Street, approximately 180 metres south of the concourse. Issues relating to the Kirribilli markets, and the provision of toilets are addressed further in Chapters 6.3 and 6.12.

The Councillors also discussed different possible layouts of equipment and facilities in the station concourse. The proposed positioning of facilities is in accordance with RailCorp's current policy for the provision of facilities within railway stations.

On 19 April 2011, a further meeting was held with North Sydney City Council planning staff and engineers at North Sydney Council Chambers to provide an update on the proposal.

**RailCorp**

RailCorp were formally notified of the proposal on 12 November 2009. Since then, ongoing consultation with RailCorp has been undertaken to ensure that the proposed designs meet RailCorp requirements and that the design is consistent with RailCorp policy with regard to the layout of railway stations. RailCorp wrote to RMS on 1 February 2011 to advise that they approved of Option 2 (the preferred option) (refer to Chapter 2.4.3).

**Housing NSW**

Consultation with Housing NSW has been undertaken, with the aim to achieve a mutually agreeable design that would improve connections between Ennis Road and the adjoining Greenway site. Four meetings have taken place between October 2009 and February 2011.

**Office of Environment and Heritage**

Following development of the concept design, members of the project team met with staff of the Heritage Branch of the OEH. This meeting included a site inspection and briefing and discussed the scope of works proposed, sought feedback on the proposal and identified the matters requiring specific focus in the SOHI.

The SOHI has been undertaken in accordance with OEH guidelines (refer to Appendix D).
5.5 Aboriginal community involvement

In accordance with the *RTA Procedure for Aboriginal Cultural Heritage Consultation and Investigation 2008*, the RMS Aboriginal cultural and heritage advisor was consulted about the proposal and investigated the potential for any potential impacts to Aboriginal cultural heritage objects and places.

The investigation concluded that there would be no potential impacts on Aboriginal cultural heritage arising from the proposal. This is discussed further in Chapter 6.2.

5.6 Ongoing or future consultation

This REF will be publicly displayed at North Sydney Council Chambers and on RMS’s website. This would occur during the public exhibition period of the RMS’s separate DA to refurbish the Ennis Road bays. A submissions report will be prepared following the public display of the REF to consider and address any submissions received during the public display period.

The community would be informed of any major design changes to the proposal. The following ongoing consultation would be undertaken:

- Ongoing updates during the planning phase and the construction period to the immediately affected community including RailCorp customers and the travelling public generally.
- Consultation with community stakeholders to assist in managing impacts during construction.
- Ongoing meetings with RailCorp, North Sydney Council, Housing NSW and the Heritage Council as required.
- Ongoing updates as required on the project website.

Ongoing consultation would be undertaken in accordance with the *RTA Community participation and communications: A resource manual for staff* (RTA 2010).
6 Environmental assessment

This Chapter of the REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposal. All aspects of the environment potentially impacted upon by the proposal are considered. This includes consideration of the factors specified in the guideline *Is an EIS required?* (DUAP 1999 as required under clause 228(1)(b) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). The factors specified in clause 228(2) of the EP&A Regulations are also considered in Appendix C. Site-specific safeguards are provided to ameliorate the identified potential impacts.

6.1 Non-Aboriginal heritage

The following summarises the findings of the heritage assessment prepared by Clive Lucas, Stapleton and Partners in June 2011, included as Appendix D.

6.1.1 Methodology

A desktop assessment was undertaken to identify items of known and potential non-Aboriginal heritage value in the vicinity of the proposal. This included searches of relevant heritage registers and databases.

Numerous site visits were conducted throughout 2010 and 2011, including two site visits with staff from the Heritage Branch. A statement of heritage impacts was prepared with consideration to the NSW Heritage Office guideline, *Statements of Heritage Impact* (revised 2002) including a historic overview of the development of the Sydney Harbour Bridge, Ennis Road and Milsons Point railway station.

6.1.2 History

Milson’s Point station was originally to be called ‘Kirribilli station’ and was opened in 1932 as an integral part of the Harbour Bridge scheme. It was designed as the western half of a matching pair with a second train station on the eastern side of the northern approaches. In the event, the latter was used as a tram station.

The station is entered via a generously proportioned pedestrian subway (the station concourse) linking Arthur Street with Ennis Road. Prominence was given to the Arthur Street entrance as evidenced by the illuminated pressed metal awning, the architectural surround and flanking lights. The Ennis Road awning is integrated with three flanking shops at either side which were present from the date of the bridge opening.

Inside the station concourse, the central part was widened to accommodate the original parcels and booking office, Station Master’s office and staff rooms, waiting rooms and toilets. Two symmetrically placed staircases originally gave access to the train and tram stations.

The spaces in the archways and bays at Ennis Road were originally left open, apart from six bays at the entrance to Milson’s Point station, which were fitted out as shops in 1932. Other bays were enclosed between 1936 and 1941 to designs by the architect and planner A.J. Brown, using reinforced concrete beams and columns in conjunction with steel windows. Later the remainder of the spaces along Ennis Road...
were enclosed using similar construction but a more elaborate design. Between 1949 and 1966 the remaining bays in Ennis Road were enclosed and fitted out for a variety of uses.

Throughout the history of the Milsons Point railway station, changes have been made to the original fabric, most notably:

- Demolition of the original waiting room.
- Dismantling of the tram platform.
- Rendering and painting over original tiling.

6.1.3 Existing environment

The Sydney Harbour Bridge is identified as being an item of National heritage value for its historic, aesthetic and social significance and for its association with persons of importance. The approaches to the bridge have been identified as having National heritage significance for having a high degree of creative or technical achievement.

Milsons Point station has state heritage significance and is listed on the State Heritage Register. It is an essential component of the northern approaches to the Sydney Harbour Bridge. The form and detail of the station concourse are significant as part of the overall design and specifications for the bridge. The Milsons Point station retains a number of original features and decorative elements from its original construction phase including the platform building and entrance way awning from the Alfred Street side at Milsons Point.

Table 3 identifies the heritage listings for Milsons Point railway station concourse and the Ennis Road bays which front on to Ennis Road, Milsons Point.

Table 3: Relevant heritage lists and registers

<table>
<thead>
<tr>
<th>Heritage list/register</th>
<th>Name of item</th>
<th>Item number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statutory Listings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Heritage List (NHL)</td>
<td>Sydney Harbour Bridge</td>
<td>S49</td>
</tr>
<tr>
<td>NSW State Heritage Register</td>
<td>Sydney Harbour Bridge, Approaches and Viaducts (road and rail)</td>
<td>00781</td>
</tr>
<tr>
<td></td>
<td>Milsons Point Railway Station Group</td>
<td>01194</td>
</tr>
<tr>
<td>S170 Register State Rail Authority</td>
<td>Sydney Harbour Bridge (Rail Property Only)</td>
<td>00781</td>
</tr>
<tr>
<td>North Sydney Local Environmental Plan 2001</td>
<td>Sydney Harbour Bridge and Approach Viaducts</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>2-4 Ennis Road Bays</td>
<td>0030</td>
</tr>
<tr>
<td>Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (NSW)</td>
<td>Sydney Harbour Bridge including approaches and viaducts (road and rail)</td>
<td>67</td>
</tr>
<tr>
<td><strong>Non Statutory Listings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Register of the National Estate</td>
<td>Sydney Harbour Bridge (Bradfield Highway)</td>
<td>1857</td>
</tr>
<tr>
<td>Register of the National Trust of Australia (NSW)</td>
<td>Sydney Harbour Bridge</td>
<td>-</td>
</tr>
</tbody>
</table>
Other heritage items and conservation areas identified within the vicinity of the proposal include:

- 18-50 Jeffreys Street, Kirribilli.
- 11-17 Broughton Street, the Fantasia preschool.
- 7-9 Broughton Street, St John the Baptist Church.
- Greenway Flats, corner of Broughton and McDougall Streets, Kirribilli.
- 40-42 Kirribilli Avenue, Kirribilli.
- 38 Pitt Street, Kirribilli.
- 41-45 Pitt Street, Kirribilli.
- Careening Cove Conservation Area.
- Lavender Bay Conservation Area.
- Kirribilli Conservation Area.

The locations of these heritage items are illustrated below in Figure 21.

![Figure 21 - Items of heritage significance in the vicinity of the proposal.](Source: North Sydney Council)
Milsons Point railway station concourse is a component of the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ and the Milsons Point Railway Station Group State heritage register listings. The station concourse is also within the curtilage of the Sydney Harbour Bridge, National heritage listing (refer to Figure 22).

Figure 22 - The Sydney Harbour Bridge National Heritage Listing curtilage

Source: Commonwealth
Ennis Road is adjacent to the Ennis Road bays at 2-28 Ennis Road which also form part of the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ State heritage register listing and the National heritage listing for this item.

Ennis Road is also adjacent to Greenway Flats, which is listed as an item of local heritage significance in the North Sydney Local Environmental Plan 2001.

6.1.4 Policy setting

The *Sydney Harbour Bridge Conservation Management Plan 2007* (CMP) was endorsed by the NSW Heritage Council in 2007 for a period of five years. The CMP provides statements of significance which summarise the National and State heritage values of the bridge (refer to Appendix D). The CMP also provides a framework for the bridge’s ongoing care and management, including decisions about its conservation, use and development, and provides a reference for development activities.

The station concourse forms part of the Sydney Harbour Bridge and is managed in accordance with the guiding principles contained within the CMP.

6.1.5 Potential impacts

The statement of heritage impacts assesses the potential impacts of the proposal on:

- National heritage values.
- State heritage values (with consideration to the CMP).
- Local heritage values.

The assessment of impacts on National heritage values found that the proposal would not alter, modify, damage or degrade the technical significance of the northern approaches of the Sydney Harbour Bridge and would not have a significant impact on the National heritage values of the Sydney Harbour Bridge. A referral to the Australian Government Department for Sustainability, Environment, Water, Population and Communities under the EPBC Act is not required.

The assessment of impacts on the State heritage values is summarised in Table 4 below.
<table>
<thead>
<tr>
<th>Area</th>
<th>Proposal</th>
<th>Assessment of potential impacts</th>
</tr>
</thead>
</table>
| Bay 15 | Reorganisation of station concourse. Demolish original ticket offices, male and female toilets and adjacent rooms to southern side of concourse. Ticket offices etc. are to be relocated to the rear (west) of Bay 14. Infill between central support columns with new shop fronts to alignment of original wall on the southern side. | The proposal would have an impact on fabric of high heritage significance in the station concourse and would result in the loss of some original fabric. This would contravene CMP policies 13.4 and 13.6. The ticket offices etc. form part of the original structure and finishes of Milsons Point station. The relocation of the original service areas of the station to the northern side of the concourse would result in a loss of the original spaces, fabric, finishes and structure in this area. The justification for this heritage impact is described below.  
- Consolidation of all staff facilities to the northern side of the concourse.  
- Improved circulation and security for rail staff.  
- Relocation of staff facilities would incorporate a separate Station managers office (in accordance with current RailCorp Guidelines).  
- Staff ablution facilities would be upgraded and be separate from the public facilities.  
- Day to day staff facilities would be better secured and the circulation within those facilities improved.  
- Communications room capacity would be improved.  

New shop fronts would be aligned with the original wall to interpret the original concourse space. Three central support columns would be retained, with their original tiled finish.  

All original tiling would be retained and conserved to the central support columns. Consideration should be given to finishing off the tiling with rounded tiled corners where new openings are cut. New finishes should be sympathetic in colour and form to existing and should be identifiable as new. |
| Bay 15 | Removal of the existing shops to the northern side of station concourse (sandwich outlet, small goods and shoe repairs) to accommodate rail passenger circulation. | Consistent with CMP Policy 13 - Integrity of Original Design.  
This would result in restoration of the original concourse space, and would provide the following benefits for station users:  
- The usable clear width of the station concourse would be improved by about 40 per cent.  
- Public toilets would be relocated to the “paid” side of the station operational area and would be better controlled and maintained in accord with current... |
### Area | Proposal | Assessment of potential impacts
--- | --- | ---

#### RailCorp policy.
- Updating of facilities would be achieved without interruption to day to day station operations.
- The accretion of advertising, information displays and other physical obstructions through the concourse would be removed.
- Passenger access to train information, ticketing and general flows through the station would be improved.
- Additional ticket gates could be installed.
- The quality of retail space within the concourse would be improved with access to the majority of any tenant space being restricted to Ennis Road.

Original tiling still exists (at least in part) to the northern wall of the concourse located behind the existing shops. All original tiling would be retained and conserved. New finishes should be sympathetic in colour and form to existing and should be identifiable as new.

| Bay 15 | Demolish existing shop enclosures (take away food shop and kiosk) located on the northern side of concourse entrance. | Consistent with CMP Policy 13 - *Integrity of Original Design.*
Overall, this part of the proposal is beneficial to the heritage significance of the station concourse through the removal of intrusive and detracting fabric and elements within a significant space.

| Bays 14 and 15 (Only works proposed within this REF) | Demolish existing walls between Bays 14 and 15 and inside Bay 14 to make way for new rail offices. | The demolition of walls would have an impact on fabric of high heritage significance resulting in the loss of original fabric. It contravenes CMP Policies 13.4 and 13.6.

The justification for this impact is given above where the reorganisation of the concourse is discussed. It is recommended that more original walls be kept where it suits the proposed rail offices layout.

| Bay 15 (Only works proposed within this REF) | Reconstruct display windows to north side of Bay 15 with new door to Bay 14.
Retain existing display windows and reconstruct one additional display window to southern wall of Bay 15. | The retention of the existing display windows on the southern side of the concourse, reconstruction of one display window on the southern side of the concourse and reconstruction of display windows on the north side of the concourse would compensate to some extent for the associated demolition of walls.

It would reinstate some lost original features and improve interpretation of the original concourse design and functions. It would provide an opportunity for additional interpretation material within the display windows.
<table>
<thead>
<tr>
<th>Area</th>
<th>Proposal</th>
<th>Assessment of potential impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay 15</td>
<td>Insert new central handrail to Bay 15 and regrade entry ramp and replace floor tiles with polished concrete.</td>
<td>Consistent with CMP Policy 21 – <em>Changes due to operational requirements</em>&lt;br&gt;The new handrail and ramp gradients would be required to meet current standards of access. The heritage impact would be negligible. &lt;br&gt;Existing floor tiles were probably added in the mid to late 20th century. They are of little heritage significance. On removal of these tiles an early or original finish may be uncovered. Should this floor covering be found to have heritage significance, its retention and/or reconstruction should be considered. Areas of tiled walling on either side of the ramps revealed by the changed ramp slopes should be repaired to match existing.</td>
</tr>
<tr>
<td>Bay 15</td>
<td>Removal of later addition ticket barrier and relocation to northern wall. Gate to be rebated into wall.</td>
<td>Minimal heritage impact as these are later additions of little heritage significance.</td>
</tr>
<tr>
<td>Bay 15</td>
<td>Demolish glazed balustrade and stainless steel hand rail to western end of concourse and replace with new glazed screen and handrail.</td>
<td>Minimal heritage impact as these are later additions of little heritage significance.</td>
</tr>
<tr>
<td>Bay 15</td>
<td>Demolish portion of original support wall to western end of concourse (adjacent to lift). Install new public male, female and accessible toilets to the east of existing lift.</td>
<td>The proposal would result in a negative impact on fabric of high heritage significance in the station concourse This wall is part of the original structure to Milson’s Point Station. The justification for this demolition is that access to public facilities and lift access to the station platform would be improved in accordance with the soon to be introduced version of AS1428 – 2009. The proposal would result in improved public access as is appropriate for the ongoing operation of the station. Only part of the wall would be removed.</td>
</tr>
<tr>
<td>Bay 15</td>
<td>New lighting to concourse ceiling</td>
<td>The proposal would result in a positive impact on the heritage significance of the station concourse. The existing florescent tube lighting</td>
</tr>
<tr>
<td>Area</td>
<td>Proposal</td>
<td>Assessment of potential impacts</td>
</tr>
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</tr>
<tr>
<td></td>
<td></td>
<td>detracts from the concourse’s appearance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The ceiling over the tram stairs retains evidence of the original light fittings (as seen in historic photos). It is proposed to reinstate some lighting based on the original design and some lighting fixtures of a contemporary design but in keeping with the character of the place.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is recommended that positioning and design of the proposed reconstructed lighting should be based on physical and photographic evidence.</td>
</tr>
<tr>
<td>Bays 14 and 15 (Only works proposed within this REF)</td>
<td>To the rear (west) of the existing tenancies in Bay 14 is located the original access stair to the tram station leading from ground level to first floor level. It is proposed to demolish the lower part of the stair in order to accommodate the relocated ticket office and railway employees’ services and offices on the northern side of the concourse.</td>
<td>The proposal would result in an impact on fabric of high heritage significance in the station concourse, resulting in the loss of original fabric. Although not accessible or visible to the public, the stairs are part of the original structure of Milson’s Point station, when it also operated as a tram station.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The stairs are redundant and are currently not seen by the public. The impact has been minimised by retaining the upper part of the stairs located to the rear (west) of Bays 15 and 16 which would remain above the ceiling of the new offices.</td>
</tr>
<tr>
<td>Bay 15</td>
<td>Entry awning to Milsons Point Station to be restored based on original drawings including lighting, supporting brackets, pressed metal ceiling and fascia and signage.</td>
<td>Consistent with Policy 13.5- Integrity of Original Design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>These works would involve the reconstruction of lost original decorative features. This would result in a clearer interpretation of the early Milsons Point Station eastern entry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Details of the original awning details would be based on photographic, documentary and physical evidence and the conservation and restoration work would be undertaken by appropriate specialist personnel in compliance with Policy 15.</td>
</tr>
</tbody>
</table>

While the proposal involves the removal of some original fabric in localised areas, this has been assessed and found to be capable of being carried out in a sympathetic manner, resulting in minimisation of impacts on the historical or architectural significance of the station concourse (refer to Appendix D). The internal modifications of the station concourse would rationalise the use of space, improve access and provide upgrades that would comply with Australian Standards, the BCA and the Premises Standards of the DDA. The proposal would provide new facilities and restore some of the existing facilities. Ongoing maintenance would be undertaken to prevent further deterioration and dilapidation of the existing fabric. Accordingly, the proposal is deemed to be justifiable and the potential impacts are found to be acceptable.
Approval would need to be obtained from the Heritage Council under Section 60 of the Heritage Act, 1977 prior to any impact on the State heritage register listed items. The SOHI assessed the potential impacts of the proposal on the heritage significance of the Ennis Road bays, the Greenway Flats and other nearby items of heritage significance and concludes that the proposal would not negatively impact on the heritage significance of these items.

6.1.6 Safeguards and management measures

The non-Aboriginal heritage safeguards would include, but not be limited to, the following measures:

- Approval would be obtained from the Heritage Council under Section 60 of the Heritage Act, 1977 prior to any impact on the State heritage register listed items and the works carried out in accordance with the Section 60 conditions of approval.
- A suitably qualified heritage architect would be engaged to provide advice during the detailed design and construction of the proposal.
- The original walls within the station concourse would be preserved wherever possible.
- The original fabric of the existing display windows on the south wall of the station concourse and the original reeded top with capping to the northern wall of the station concourse would be retained and conserved.
- All original tiling within the Milsons Point railway station concourse not affected by the proposal would be retained and conserved. Consideration would be given to finishing off the tiling with rounded tiled corners where new openings are cut. New finishes would match the existing colour and form but be identifiable as new.
- Should works to the station concourse floor reveal an early or original finish, work in the area of the find would cease immediately and the RMS Senior Environmental officer and RMS Senior environmental specialist (heritage) would be contacted. Works in the vicinity of the find would not recommence until the Senior environmental specialist has advised on the heritage value and associated protection of the find including consideration of the retention and/or reconstruction of the floor finish.
- All existing display windows on the south wall of the station concourse would be retained and conserved.
- Air vent grilles located above display windows on the north and south walls would be retained and conserved.
- Chrome reeded top with capping to the north wall (currently painted over) would be retained and conserved.
- The awning on the Ennis Road entry to the station concourse would be refurbished based on photographic, documentary and physical evidence. The conservation and restoration work would be designed, documented and supervised on site by a heritage architect and undertaken in compliance with Policy 15 of the Sydney Harbour Bridge Conservation Management Plan 2007.
- Prior to construction archival photographic records and measured drawings would be prepared, in accordance with the NSW Heritage Office guideline How to prepare archival records of heritage items (Heritage Office, 1998) and would detail the areas to be demolished within the Milsons Point railway station concourse, including the former tram station stairs.
• If an item (or suspected item) of non-Aboriginal heritage is discovered, the RMS Unexpected archaeological finds procedure would be implemented. All work in the area of the find would cease immediately and the RMS Senior regional environmental officer and the RMS Senior environmental specialist (heritage) would be contacted. Works in the vicinity of the find would not recommence until the heritage value and associated protection and any approval requirements have been determined. RMS would notify OEH if any item (or suspected item) of non-Aboriginal heritage is found during construction to determine the appropriate course of action.

6.2 Aboriginal heritage

6.2.1 Methodology

The Aboriginal cultural heritage investigations have been carried out in accordance with the *RTA Procedure for Aboriginal cultural heritage consultation and investigation* (RTA, 2008).

A search of the Aboriginal Heritage Information Management System (AHIMS) database was completed and the RMS Aboriginal cultural heritage advisor was consulted.

6.2.2 Existing environment

No known Aboriginal sites or objects are located within or immediately near the proposal. One item of Aboriginal heritage significance (an object) is located approximately 220 metres west of the proposal. The RMS Aboriginal cultural and heritage advisor found that the area is heavily disturbed by previous development activities.

6.2.3 Potential impacts

The proposal is largely confined to an existing infrastructure asset and it is noted that there would be no impact on natural ground level or native vegetation.

No Aboriginal heritage issues or constraints were identified. The RMS Aboriginal cultural heritage officer for the Sydney region has advised that the proposal would have no impact on known Aboriginal culture and heritage objects.

The due diligence process outlined at Chapter 8 of *DECCW Due diligence code of practice for the protection of Aboriginal objects in New South Wales* (DECCW 2010) has been followed for the proposal and it has been determined that an application for an Aboriginal Heritage Impact Permit is not required. Safeguards have been proposed (see below) to address any unexpected finds.

6.2.4 Safeguards and management measures

In the event that potential Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find would cease and the RMS Aboriginal cultural heritage advisor, Sydney region and the Senior regional environmental officer would be contacted immediately. Works in the vicinity of the find would not re-commence until clearance had been received from those RMS officers.
6.3 Socio-economic issues

6.3.1 Methodology

Research was undertaken by RMS and the project team in November 2010 which identified key stakeholder groups with commercial and/or social interests in the proposal.

In addition, an Accessibility Report has been prepared by Access Solutions (NSW) Pty Ltd and has been included as Appendix G. The report provides an accessibility review of the proposal to refurbish the station concourse to determine if it would provide appropriate access for people with disabilities.

A pedestrian capacity analysis was undertaken by Halcrow Pacific Pty Ltd in 2007, to assess the existing performance of Milsons Point railway station concourse and provide an indicative assessment of preliminary upgrade designs.

6.3.2 Existing environment

The proposal is located in the North Sydney local government area and is on the border of Milsons Point and Kirribilli. Data obtained from the Australian Bureau of Statistics indicate that North Sydney LGA had a population of 56,809 in June 2010. Around half of the population was between the ages of 25 – 44 years old.

The 2006 census found that around 35 per cent of people from Kirribilli travel to work via car, 32 per cent via train, 17 per cent walk to work and 11 per cent take the ferry. In Milsons Point around 43 per cent travel to work by rail, 34 per cent by car and around 16 per cent walk to work.

Milsons Point railway station is located on the northern line and the north shore, western line. The station concourse provides a pedestrian linkage between Milsons Point and Kirribilli.

North Sydney Development Control Plan 2002 (DCP) describes Kirribilli Village as “a compact, lively area with a community centre, local shops and outdoor cafes that serve the needs of the local community. The village is surrounded by a diverse range of land uses including dwellings, education, transport, maritime activities and community facilities”.

The following conclusions about community values were drawn from the consultation process in relation to the community response to the proposal:

- Overall, respondents reacted positively to the proposal.
- The majority of respondents agree the concourse needs to be refurbished.
- The community is aware of, and is affected by, disabled access issues within the concourse.
- The heritage values of the site are important to many stakeholders.

Businesses

Six retail businesses operate from the tenancies in the station concourse. These provide the following services to the local and commuting community:

- Sandwich shop.
- Small goods store.
- Shoe repair service.
- Dry cleaners.
- Florist.
- Take-away food.

Many of the tenancies are in a poor condition as demonstrated in Figures 23 and 24 and include alterations and additions that the statement of heritage impacts (Appendix D) identifies as being intrusive and detracting fabric within a significant space.

The concourse provides a pedestrian connection between Alfred Street and Ennis Road and connects Milsons Point to Kirribilli. As such the concourse also serves non-rail users. Both rail commuters and non-rail users use the concourse shops and the toilet facilities as they can be directly accessed off the concourse and are not within the ticketed (or paid area) of the station.

In addition to those businesses operating within the proposal area, there are approximately 70 retail and commercial businesses operating on Alfred and Broughton Streets in the vicinity of the Ennis Road precinct. The majority of these businesses operate as food retailers (cafe's, restaurants and the like), with the remainder being retail stores and service providers.

In addition to the above, the Kirribilli Markets are organised by the Kirribilli Neighbourhood Centre and are held twice per month in the Burton Street Tunnel and the Bradfield Park Bowling Green. The markets offer approximately 220 stalls, from which participants sell a range of goods including new and used apparel, home wares, arts and crafts, and take away food.

![Figure 23 - Retail tenancies within the Milsons Point railway station concourse](image-url)
Parking

Ennis Road provides access and parking for rail customers and for customers of shops in the concourse, on Ennis Road and in Kirribilli Village and Milsons Point. Vehicular access to Ennis Road is via Broughton Street, near the intersection of Burton Street. Ennis Road is a no-through road and is therefore only accessible to vehicles from the south. Parking is available on both sides of Ennis Road and comprises a total of 54 spaces being:

- 42 standard spaces.
- Five taxi spaces.
- Two loading spaces.
- Five kiss and ride spaces (drop-off/pick-up).

On-street parking in close proximity to the retail tenancies at the southern end of Ennis Road is generally short term, with 10 minute parking except during the hours of 6am-11am, when this area is a loading zone. Kiss and ride, taxi and half hour parking is provided between the pedestrian crossing and the roundabout. The remainder of the street is eight hour metered parking. All parking is unrestricted after 6pm.

An RMS car park is situated within an under-croft area at the northern end of Ennis Road. The car park is fenced and secured.

On street car parking is also available on Broughton Street, Alfred Street and the wider area, and an additional taxi rank is provided on Alfred Street.
Pedestrians and cyclists

The station concourse provides east-west pedestrian access, providing linkage between Milsons Point and Kirribilli. The eastern access to the concourse is between Bays 14 and 16 of Ennis Road, Kirribilli (refer to Figure 25) and the western access is located at Bradfield Park, Alfred Street, Milsons Point (refer to Figure 26).

Figure 25 - The eastern entrance to the Milsons Point railway station concourse
The eastern portion of the concourse is sloped at a grade of 1:54, falling away from Alfred Street. As shown in Figure 7 in Chapter 2.2, the dry cleaner tenancy protrudes into the concourse, narrowing the pedestrian space at that location.

The RailCorp ticket sales and the station office are situated opposite the ticket barriers and platform access. As a result commuters buying tickets need to cross the concourse to access the railway platform, creating conflict with pedestrians travelling through the concourse between Kirribilli and Milsons Point.

The railway platform can be accessed by stairs or via a lift, however the current access arrangements were identified as inadequate during the consultation process.

The pedestrian capacity analysis found that the existing station concourse was operating at a grade A/B level of service (being free circulation/minor pedestrian conflicts) and the ticket barriers were operating at a grade D level of service (being restricted and reduced walking speed for most pedestrians).

Pedestrian access to Ennis Road and the station concourse is possible from a number of locations. A pedestrian pathway provides access from McDougall Street in the north (refer to Figure 27). Three stairways provide access from Greenway Flats in the east, one from the northern portion of the building (refer to Figure 28), a second in the south (refer to Figure 29), and a third which connects Ennis Road with Greenway Drive at the intersection of Broughton Street (refer to Figure 30). Footpaths along Ennis Road are typically uneven and require resurfacing works. The western footpath becomes narrow at the northern end of Ennis Road.
Figure 27 - The McDougall Street pathway as viewed from the termination point of Ennis Road

Figure 28 - Stairs between Ennis Road and the northern portion of Greenway Flats
Figure 29 - Stairs between Ennis Road and the southern portion of Greenway Flats

Figure 30 - Stairs between Ennis Road and Greenway Drive
Pedestrians may also access Ennis Road from Broughton Street in the south (refer to Figure 31), or from Alfred Street in the west, via the station concourse (refer to Figure 26 above). A non-signalised pedestrian crossing is provided immediately outside the Ennis Road concourse entrance and a signalised pedestrian crossing is provided at the Alfred Street entrance.

Milsons Point railway station concourse and Ennis Road are accessible to cyclists travelling between High Street in the north and Broughton Street in the south, via the McDougall Street walkway (refer to Figure 27). There are no marked bicycle routes along Ennis Road, however an informal bicycle route exists along Broughton Street. Ennis Road is used by cyclists travelling between High Street in the north and Broughton Street in the south, via the McDougall Street pathway, however this is not a formal designated bicycle route and results in conflict between pedestrians and cyclists.

Figure 31- The Ennis Road/Broughton Street intersection

6.3.3 Policy Setting

The Premises Standards 2010

The Premises Standards 2010 set performance requirements and provides references to technical specifications to ensure dignified access to, and use of, buildings for people with a disability. They clarify the general non-discrimination provisions of the DD Act in relation to the design construction and management of buildings.
The relevant standard for the DD Act is *Design for Access and Mobility AS 1428.1 'general requirements for access - new building work'* and *AS1428.4.1 'tactile ground surface indicators for orientation of people with vision impairment'*. The proposal has been designed to meet these standards.

**Building Code of Australia**

The Building Code of Australia (BCA) aims to ensure that buildings are suitable for use by the community in terms of:

- Structural adequacy.
- Safety (including from fire).
- Health.
- Amenity.

Part D3 of the BCA provides the minimum standards in relation to access for people with disabilities. The proposal has been designed in accordance with the BCA.

### 6.3.4 Potential impacts

#### Construction

The proposal would require closure of existing shops within the concourse prior to commencement of the construction phase. The current tenants of the Milsons Point station concourse have been advised of the proposal and that it would result in the closure of the existing tenancies. It is proposed to phase the concourse construction works to enable the progressive closure of shops. Existing tenants may or may not be offered a lease in the refurbished concourse following completion of the proposal.

The construction works would require temporary changes to access arrangements along the concourse and to the station platforms. Rail commuters are likely to experience some intensification of existing congestion in the concourse during construction, due to the erection of hoardings and partitions which would narrow the pedestrian space, and the presence of construction workers. However, during the construction works safe public access through the concourse and to the lift and station platforms would be maintained.

The total construction timeframe for the proposal would be approximately 12-18 months. Therefore disruptions to pedestrians and rail users would be short term until completion of the construction works, which would provide a long term improvement of access at the station concourse.

During the Ennis Road upgrade there would be short term impacts to pedestrians, cyclists and road users due to temporary footpath and road closures. Pedestrian access to the station concourse from Alfred Street would be maintained at all times, however access from Ennis Road may be impacted in the event that Ennis Road is required to close for one or two days while resurfacing works are carried out in the proximity of the Broughton Street intersection.

For short periods during construction, direct access from the Greenway Flats and the McDougall Street pathway to Ennis Road may not be possible. However, access from the Greenway Flats to Ennis Road would still be possible via the Ennis Road/Broughton Street intersection and users of the McDougall Street pathway could use Broughton Street as an alternative. These short term alternative routes would not
increase travel times to unacceptable levels and signage would be provided to direct pedestrians to alternative routes.

Works to Ennis Road would be undertaken in stages to ensure that access to the station concourse is maintained during the majority of the construction phase. This would include reduced vehicular access to facilitate passenger drop off/pick up at the station whenever possible.

As Ennis Road is a no-through road, and as a number of the Ennis Road bays are currently vacant traffic impacts arising from the proposal, including partial road closures during construction, are expected to be minimal. Tenancies within the concourse mainly provide for commuters passing through Milsons Point railway station, rather than passing vehicular trade. In the event that it is possible for tenancies to remain open during construction, these businesses may be impacted by a loss of parking on Ennis Road. However, on-street parking is available in other nearby streets.

It is possible that Car parking spaces on Ennis Road may presently be used by customers of businesses on Broughton and Burton Streets. Accordingly, the proposed reduction in the overall provision of car parking spaces on Ennis Road may negatively impact upon these businesses. However, the report provided by ARUP and included as Appendix H finds that Ennis Road represents only a very small proportion of time restricted parking and that there is sufficient parking available in the wider area, lessening any potential impacts associated with this aspect of the proposal.

Potential impacts on the Kirribilli Markets would be as follows:

- During construction access to the markets for patrons arriving via rail would be maintained as Milsons Point railway station would remain operational throughout the construction phase.
- The loss of on-street parking along Ennis Road during construction is unlikely to result in any significant impact given that the markets are held on the Milsons Point side of the Sydney Harbour Bridge and that the event is in close proximity to a major rail station with frequent services and near bus stops on Alfred Street, Milsons Point.
- Patrons and stall holders of the Kirribilli Markets may be impacted upon by the closure of the existing concourse toilets and relocation of the toilets to within the ticketed area of the station concourse. However, public toilets (including an accessible toilet) are available on Fitzroy Street, Milsons Point approximately 180 metres south of the concourse entrance, and portable toilets are provided by the organisers of the markets.

Overall, the potential impacts of the proposal on the Kirribilli Markets are acceptable.

The construction phase of the proposal would result in impacts upon the amenity of the surrounding area. These are addressed in the following Chapters of this REF:

- Traffic and transport - Chapter 6.4
- Landscape, visual and urban design - Chapter 6.5
- Noise and vibration - Chapter 6.7
- Air quality - Chapter 6.8
Operational
Access Solutions has reviewed the proposal and have determined that it would provide equitable access, readily comply with Australian Standards, and satisfy the requirements of the BCA and the DDA Premises Standards.

The provision of the pedestrian plaza at the northern end of Ennis Road and upgrades to the roads and footpaths would formalise pedestrian and cyclist movements along Ennis Road, which currently does not have sufficient facilities for cyclists and pedestrians and does not clearly demarcate between spaces for pedestrians and spaces for vehicles. The proposed arrangement, which would incorporate public benches, garden beds and paving would clearly identify the northern plaza as a space for pedestrians, thereby encouraging cyclists to slow down. This would substantially improve upon an existing safety issue.

The upgraded station concourse would provide a range of positive socio-economic benefits. It is expected that the proposal would provide increased amenity, including for people with disabilities as follows:

- Pedestrian congestion on the concourse would be reduced.
- Passenger circulation would be improved.
- Alterations and additions within the station concourse that have been identified as being intrusive would be removed.
- Upgrade works would be carried out in a manner that is sympathetic to the original design and the heritage values of the concourse.
- New toilets/amenities would be provided for rail commuters and staff.
- The concourse would be compliant with the requirements of the BCA and the DDA Premises Standards.
- The concourse pedestrian environment for non-rail users would be improved.

During community consultation, public comments on the design were invited and taken into consideration by the design team. Suggestions that have subsequently been incorporated into the proposal include:

- Improved station facilities in the Milsons Point railway station concourse.
- Improved accessibility for people with a disability.
- Improvements to the footpath on Ennis Road.
- Improved landscaping along Ennis Road.
- Preservation of the heritage character of the precinct.

Discussion of the design refinements is included in Chapter 2.6.

The proposal would have positive socio-economic impacts including by improving the existing amenity for customers, RailCorp staff, commuters and the public.

The proposal does not include upgrades to the retail tenancies within the station concourse, and would result in the closure of the existing retail tenancies. It is anticipated that retail tenancies would be provided in the concourse in the future in the area currently occupied by the ticket offices and toilet facilities. This would be subject to a further environmental assessment in the future.

Leases for all of the existing tenancies in the station concourse have expired and the tenancies are currently occupied on a month to month basis. All tenants would be managed in accordance with requirements of the Retail Leases Act 1994.
tenants would be selected by the head lessee, therefore those retail businesses that are required to close down may or may not be offered new tenancy opportunities.

Businesses owners that are required to vacate the tenancies may have difficulties finding similar alternative tenancies in the Milsons Point/Kirribilli area and may need to relocate to other suburbs and/or adapt their business to suit a different trade environment. All tenants have been advised of the proposed works to allow the maximum time for businesses to plan for closure of the tenancies. RMS will continue to advise tenants of the proposal including to notify tenants of when they will be required to vacate premises as soon as this information is known. During construction, closure of the tenancies would be staged wherever possible to minimise impacts on the existing retail businesses.

The station concourse toilets are currently within the non-ticketed area of the concourse and are used by commuters, rail staff and also by the public. This has raised safety and hygiene concerns for rail staff and commuters. To address these concerns, toilets for rail commuters would be provided in the ticketed area of the station. Separate amenities would be provided for staff. No toilets would be accessible from the non-ticketed area of the concourse.

The relocation of the existing toilets to the ticketed area of the concourse may impact on non-rail users. In particular patrons of the Kirribilli Markets currently use the toilets in the concourse (in addition to the public toilets provided on Fitzroy Street located approximately 180 metres to the south of the station concourse, and the portable toilets provided by the event organisers). However, new toilets are proposed in the DA to North Sydney Council to refurbish the Ennis Road bays. As this is part of a separate proposal this is discussed further in the cumulative impacts in Chapter 6.12.

Overall, the revitalisation of Ennis Road and the station concourse is anticipated to attract additional people into the vicinity of the Kirribilli Markets, which may provide an increase in patrons to the benefit of stall holders. Therefore, the potential impacts of the operational phase of the proposal upon the Kirribilli Markets are considered to be acceptable.

The proposal would result in loss of 15 car parking spaces from Ennis Road as described in Table 5 below.

Table 5: Existing and proposed on-street car parking provision on Ennis Road

<table>
<thead>
<tr>
<th>Type of Parking Space</th>
<th>Existing On-Street Parking</th>
<th>Proposed On-Street Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Space</td>
<td>42</td>
<td>27</td>
</tr>
<tr>
<td>Taxi Space</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Loading Space</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Kiss and Ride Space</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

Although a reduction in on street parking is proposed, the traffic report prepared by ARUP finds that there is sufficient parking elsewhere in the vicinity of the site to mitigate the overall impact of this aspect of the proposal. Whilst it is acknowledged that the reduction in car parking proposed in this REF may be considered a negative impact, it should be noted that a short stay, off-street car park is included as part of the scope of works in the DA submitted to North Sydney Council which would provide an additional 22 standard car parking spaces in the vicinity of the site. However, as this is a component of a separate proposal, this is addressed in the cumulative impacts (Chapter 6.12).
Overall, the proposal would result in improved pedestrian amenity and road conditions along Ennis Road and would:

- Minimise any loss of on-street parking.
- Maintain an on-street loading zone.
- Increase pedestrian amenity along Ennis Road including by widening the western footpath and providing additional street furniture and lighting.
- Provide a pedestrian plaza at the northern end of Ennis Road.

Improvements in pedestrian amenity along Ennis Road and surrounding the station have the potential to increase pedestrian activity in the area and increase public transport patronage by delivering an improved urban environment. In addition, the provision of an additional kiss and ride space in a convenient location outside the station would encourage the use of public transport.

The existing pedestrian crossing in Ennis Road would be maintained.

6.3.5 Safeguards and management measures

Construction

- Prior to construction a Staging Plan would be prepared to ensure minimal inconvenience to businesses, rail commuters, residents and road users.
- Prior to the commencement of work, RMS would notify the Council and occupier of any land within 40 metres of the property boundaries of the proposal, including tenants in the station concourse and the Ennis Road bays, providing a description of the proposal and the expected dates for commencement and completion of construction works and details of the construction program.
- Local residents and businesses would be notified prior to works commencing and would be kept regularly informed of construction activities and parking arrangements during the construction process.
- Existing tenants will be notified prior to works commencing and when they are required to vacate the premises. Closure of tenancies would be staged wherever possible to minimise impacts to existing businesses.
- During construction, road users, pedestrians and cyclists would be informed of changed conditions including likely disruptions to access.
- Residents would be informed prior to any interruptions to utility services that may be experienced as a result of utilities relocation.
- A complaints-handling procedure would be included in the CEMP and would include a commitment that complaints received shall be recorded and responded to within 24 hours. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaint can be avoided or minimised. The complainant would be advised of the result of the review including what actions were taken.
- A complaints register would be included in the CEMP and would include a register of all complaints received and the means of resolution of those complaints. The complaints register shall be made available to Council on request.
- A site notice board would be located at the main entrance to the subject site in a prominent position and would include the following:
  - 24 hour contact person for the project.
  - Telephone and facsimile numbers and email address.
  - Site activities and time frames.
- Hoardings or screens would be erected in areas where the proposal would impact on pedestrian walkways, to ensure pedestrian safety.
- Works and would be undertaken in stages to minimise inconvenience to pedestrians, commuters, motorists and cyclists.
- A works program would be prepared in consultation with RailCorp.
- Any disruption to access would be notified in advance in accordance with RTA’s Community participation and communications: A Resource manual for staff (RTA 2010).
- Existing pedestrian facilities would be retained where feasible.
- Disruptive works such as footpath works along the trafficked pavement would be scheduled to take place generally outside of peak commuting periods to minimise road user delays.

**Operational**

- All aspects of the proposal would provide equitable access to readily comply with Australian Standards and the requirements of the BCA and the DDA Premises Standards.
- The surface of any material used or proposed to be used for the paving of thoroughfares, the plaza and the like would comply with AS/NZ 4586:2004 (including amendments) ‘Slip resistance classification of new pedestrian surface materials’.
- Milsons Point railway station concourse would be properly maintained to ensure it is clean, safe and fit for use at all times.
- Parking restrictions along Ennis Road would be determined by the North Sydney Traffic Committee.

### 6.4 Traffic and transport

A Traffic impact assessment was prepared by ARUP Pty Ltd in May 2011, and is included at Appendix H. As part of their assessment, ARUP undertook a traffic survey at the Broughton Street/Ennis Road intersection, and used SIDRA intersection analysis software in order to predict future traffic movements in this location. In addition, the assessment outlines the existing parking arrangements along Ennis Road and assesses the potential impacts of the proposal.

#### 6.4.1 Existing environment

**Traffic**

Ennis Road is a two-directional no-through road, situated adjacent to Milsons Point railway station on the eastern side of the Bradfield Highway and the Cahill Expressway. It intersects with Broughton Street just south of the entry to Milsons Point station. The road is predominantly used by visitors to the tenancies on Ennis Road, rail commuters (kiss and ride), taxis, and service and delivery vehicles.

The Ennis Road/Broughton Street intersection currently functions at a grade A (good operation) level of service (LOS), with 1046 traffic movements per hour in the AM peak (223 movements in Ennis Road) and 911 traffic movements per hour in the PM peak (178 movements in Ennis Road).
Transport

The site is in the immediate vicinity of Milsons Point station, which provides rail access to Hornsby and Epping (via the northern line) and Berowra, Penrith and Richmond (via the north shore and western line). All train lines provide access to and from the Sydney Central Business District.

Bus services operate along Alfred Street, Milsons Point, providing access between McMahons Point and the lower north shore. The McMahons Point to Kirribilli loop service is also available from this location, providing convenient access to the Kirribilli Ferry Wharf. No bus services stop or travel along Ennis Road.

The Circular Quay to Neutral Bay loop ferry service is available from Kirribilli Ferry Wharf, which is situated approximately 400 metres south-east of the proposal on Olympic Drive.

6.4.2 Potential impacts

Construction

It is estimated that Ennis Road would be completely closed to vehicles, pedestrians and cyclists for only one or two days whilst resurfacing works close to the Broughton Street intersection are carried out. During this short period, no on-street parking, including the kiss-and-ride zone, loading zone, and taxi spaces would be available on Ennis Road. Alternative on-street parking and taxi spaces are available on surrounding streets including Broughton Street and Alfred Street. Ennis Road would remain at least partially open throughout the rest of the construction phase to ensure taxis and private vehicles are able to pick up and drop off rail passengers in close proximity to the station concourse. It is anticipated that the road works would be completed within a three to four week period.

In the event that some shops on Ennis Road or the concourse remain open during part of the construction phase, vehicles may not be able to access the existing loading zone on Ennis Road. An alternative loading zone is available on Burton Street, approximately 40 metres from the western entrance of the concourse.

Throughout the construction phase, vehicles travelling to and from the proposal would be required to use Ennis Road. These movements would predominantly involve the delivery of materials and rubbish removal. It is estimated that there may be up to 26 deliveries per day.

As Ennis Road is a no through road, impacts on the local traffic network during construction would be minor. Surrounding streets would not be closed during construction.

The use of Broughton Street would be maintained throughout the construction phase. There would be limited traffic impacts as a result of the movement of construction vehicles along Broughton Street, the hauling of construction materials and service and workforce vehicles.

Potential impacts caused by construction vehicle traffic would include:

- Increased travel times on Broughton Street due to a reduced speed limit around the construction site.
- Increased travel times due to truck and construction machinery movement.
Temporary partial or complete closure of Ennis Road during construction.

There would be no impacts on rail services during the construction period as Milsons Point station would remain open throughout construction and pedestrian access would be maintained. No changes to RailCorp’s timetabling of services would be required. Other modes of public transport including buses and ferries would remain unaffected by the proposal.

Rail commuters may experience some intensification of existing congestion in the concourse during construction, due to the erection of hoardings and partitions which would narrow the pedestrian space, and the presence of construction workers. Potential impacts upon pedestrian access are addressed in Chapter 6.3.

Operational
The proposal would result in an improvement to the road condition, surfacing and marking, and improved demarcation between areas for vehicular and pedestrian traffic. The widening of the footpath would narrow the carriageway, serving to calm traffic along Ennis Road for the benefit and safety of pedestrians.

Additional traffic generation would predominantly be an impact of the separate development to refurbish the Ennis Road bays and their subsequent use for commercial and retail purposes, rather than the proposal that is the subject of this REF. Notwithstanding this, the proposal would complement the management of traffic arising from the refurbishment of the Ennis Road Bays. Accordingly, this is discussed in the cumulative impacts in Chapter 6.12.

6.4.3 Safeguards and management measures

Design
- The existing roundabout in Ennis Road would be maintained, ensuring delivery vehicles can easily exit the street.

Construction
- Throughout construction, access to ticketing and the Milsons Point railway station platform would be maintained at all times.
- The proposal would be undertaken in stages to minimise inconvenience to rail commuters and road users.
- Any disruption or change to pedestrian and traffic access would be notified to the affected community in advance in accordance with RMS’s Community Participation and Communication: A Resource Manual for Staff 2010.
- A detailed Traffic Management Plan would be prepared in accordance with the RMS’s Traffic Control at Work Sites Manual 2003 and approved by the RMS prior to implementation, to provide a comprehensive and objective approach to minimise any potential impacts on road network operations during construction.
- The Traffic Management Plan would include such measures as providing safe access points to work areas from the adjacent road network, safety barriers where necessary, imposing temporary speed restrictions when necessary, maintaining adequate sight distance, and displaying prominent warning signage.
- The main site office and initial accommodation would be accessed via Ennis Road. All materials would be stored within the site boundary and the contractor would erect a scaffolding or screen system, when carrying out works.
A thoroughfare for emergency vehicles would be maintained at all times. Prior to construction consultation would be undertaken with the NSW Police Service, the Fire Brigade, and Ambulance Service to determine the most appropriate means of minimising impacts to emergency access during construction. The emergency access arrangements would be incorporated into the traffic management plan prior to approval by RMS.

Prior to construction, RailCorp would be consulted on the traffic management measures to be incorporated into the Traffic Management Plan.

Disruptive works such as the re-surfacing of the road, would be scheduled to take place generally outside of peak commuting periods to minimise road user delays.

Approval for road occupancy would be obtained for any lane closures or road traffic changes.

If neighbouring streets need to be closed temporarily during construction, alternative access would be provided via other local roads. Any detours would be clearly signposted and the community would be informed in advance through community updates and newspaper notices.

During construction, warning signage would be erected to indicate trucks entering/trucks turning for approaching vehicles.

Appropriate permits would be obtained should road closure(s) be required for the transportation of any over-sized loads to the proposal.

6.5 Landscape, visual and urban design

6.5.1 Methodology

The following assessment was undertaken in accordance with the RMS ‘Guidelines for landscape character and visual impact assessment’. The potential landscape, visual and urban design impacts are limited to the Ennis Road streetscape as the works to the Milsons Point station concourse are largely internal to the building. Tract Consultants has also undertaken a Landscape Character and Visual Impact Assessment (refer to Appendix I).

6.5.2 Existing environment

The proposal is located within the existing corridor along Ennis Road. The area is considered visually ‘busy’ but high in sensitivity because of the proximity to the Sydney Harbour Bridge state heritage register listed item. A number of elements on Ennis Road contribute to poor visual amenity, including:

- Vacant and/or dilapidated tenancies.
- Uneven footpaths.
- Patchwork road/footpath surfacing.
- Irregular street trees.
- Poor street lighting.
- Visually dominant fencing of the RMS car park.
- Dilapidated street furniture.

Views into Ennis Road from the surrounding areas are limited due to the elevated position of Ennis Road above Broughton Street and Greenway Drive and below the Cahill Expressway Northern Approach. Accordingly, any visual impacts would be generally confined to Ennis Road and Broughton Street and to residential properties overlooking the site.
The streetscape along Ennis Road comprises a mixture of mature native and exotic tree species. Street tree planting is predominately on the eastern side of Ennis Road. The mature trees are in variable condition and include a range of species including Casuarina sp., Melaleuca sp., Callistemon sp. and Pinus sp. These plantings have been supplemented with exotic deciduous tree planting of Honey Locust, (Gleditsia triacanthos). The Honey Locust trees are relatively small and have not reached a scale to substantially contribute to the streetscape character.

Figure 32 - Ennis Road as viewed from the Broughton Street/Cres Place intersection.

6.5.3 Policy setting

Beyond the Pavement – RTA Urban Design Policy, Procedures and Design Principles

The RMS policy, ‘Beyond the Pavement’ seeks to produce positive urban design outcomes while minimising the impacts from infrastructure on natural, built and cultural environments. The policy states that the planning and design of road infrastructure should be governed by the following principles:

- Contribute to urban structure and revitalisation.
- Fitting with the built fabric.
- Connecting modes and communities.
- Fitting with the landform.
- Responding to natural pattern.
- Incorporating heritage and cultural contexts.
- Designing roads as an experience in movement.
- Creating self-explaining road environments.
- Achieving integrated and minimal maintenance design.
6.5.4 Potential impacts

Construction
During construction there would be a temporary reduction in visual amenity due to the erection of hoardings, the undertaking of works, including removal of trees, the establishment of a site compound and the presence of construction equipment.

Operational
The proposal has been designed to activate Ennis Road by improving pedestrian access and connections to and from the adjoining residential areas.

The key urban design elements of the proposal are:

- The footpath would be widened where possible by approximately two metres on the western side of Ennis Road. The proposed widening would occur north of the proposed kiss and ride parking.
- A northern plaza is proposed at the terminus of Ennis Road. The existing northern pedestrian linkage would be improved through the creation of this pedestrian zone.
- The awning to the Milsons Point station entrance is proposed to be restored.
- The eastern garden bed at the pedestrian connection of Ennis Road with Broughton Street is proposed to be adjusted to improve pedestrian access and visibility.
- The existing seating area opposite the station concourse entrance is proposed to be retained with additional seats and bicycle racks to be provided.
- The design proposes to partially relocate the western kerb of Ennis Road to create increased pedestrian areas. Garden beds are proposed to be introduced to the western side between parking spaces.
- Drainage is proposed to be adjusted to accommodate pavement realignments. New pit channels would be provided and existing storm water inlet pits would be relocated to align with the new kerbs.
- New light fixtures are proposed along the streetscape. The lights and fittings would meet Australian Standards for public domain luminance. Improved lighting would extend along the shared pathway north of the Ennis Road terminus.
- The proposed paving would be simple and robust and constructed from asphalt with highlight bands of precast concrete paving.
- The installation of new materials and plantings would be consistent with the North Sydney Council Public Domain Strategy 2005.

A Landscape Plan has been prepared by Tract Consultants and is included as Appendix B. The Plan is also illustrated in Figures 33, 34 and 35 below.
Figure 33 - Proposed works along Ennis Road.
Source: TRACT
Figure 34 - Proposed works along Ennis Road.
Source: TRACT
Figure 35 - Proposed works along Ennis Road.
Source: TRACT
The visual exposure of the proposal would be predominantly to traffic (pedestrians, cyclists and vehicular) residential and commercial/industrial properties. The proposal could be viewed from Ennis Road, Broughton Street, Greenway Flats and the elevated Sydney Harbour Bridge access stair. As illustrated in Figure 32, lines of sight from the east into Ennis Road are generally obscured owing to the sites elevated position.

The proposal involves the removal of approximately 15 trees along the length of Ennis Road. The majority of mature trees on Ennis Road would be retained. Those street trees to be removed are all Honey Locust (*Gleditsia triacanthos*). The trees removed would be replaced with Oriental Plane trees (*Plantanus orientalis*), consistent with the *North Sydney Council Public Domain Strategy, 2005*. The *Platanus* trees have been selected for their known contribution to the streetscape when mature. *Platanus* trees generally survive and thrive in urban environments and are known to provide an even tree canopy. They are identified by North Sydney Council as an example of cost effective urban forest. All plantings would be maintained for a period of 13 weeks after installation to ensure plant establishment occurs and low maintenance species would be selected.

Council is currently undertaking tree removal along Ennis Road, including some of those proposed to be removed as part of the proposal.

The proposal would be of moderate visual impact because the magnitude of change is low. No views would be blocked or interrupted by the proposal. It is considered that the replacement of the existing trees and other landscaping would have a positive visual impact on the surrounding area, as the trees that would be planted would be more mature than those proposed to be removed.

Overall, the proposal would have a minor visual impact and would result in benefits in safety and amenity.

### 6.5.5 Safeguards and management measures

#### Design
- Existing vegetation would be retained where possible.
- The proposal's urban design principles would be integrated throughout the detailed design and construction of the proposal

#### Construction
- Works would be carried out in a manner that would minimise visual impacts to the surrounding community and users of Milsons Point station, including that the site would be kept tidy and orderly.
- The compound site would be fenced, screened and kept tidy. All materials would be stored within the site boundary. Appropriate tree protection measures would be put in place prior to any works on the site.
- Appropriate tree protection measures would be put in place prior to any works on the site.
- Trees with limbs overhanging the construction sites would not be removed unless absolutely necessary for safety or construction reasons.
- Any overhanging limbs would be cut back where possible.
- Tree protection fences would be installed around trees or groups of trees to be retained and located within 10 metres of any temporary construction compounds.
• Vehicles, machinery or stockpiles would not be placed beneath canopies of trees.
• Care would be taken to avoid impacting on the root zone of trees within the construction area that are to be retained. Consideration would be given to the use of smaller, more manoeuvrable equipment to minimise the width of the disturbance corridor and protect street trees.

**Operational**
• Materials and plantings would be consistent with the *North Sydney Council Public Domain Strategy 2005*.
• Where required materials and colours selected would be in accordance with the requirements of the Sydney Harbour Bridge Conservation Management Plan 2007.
• A number of existing trees would be replaced with *Platanus sp.* (Plane trees), in keeping with the dominant street tree species in the commercial precincts of North Sydney. Eighteen new *Platanusorientalis var. digitata* are proposed along the eastern edge of Ennis Road. They would be planted at regular intervals of seven to eight metres to achieve a continuous canopy.
• Mature planting (generally five metres high with an 80 millimetre trunk diameter) would be used in order to ensure the longevity of the proposed trees. The trees would be planted in structural soil pits to encourage early establishment.
• All proposed garden beds would be constructed with new soil profiles and mulched.
• New garden bed planting would consist of low maintenance species as detailed in the landscape architects report.
• All soft landscape would be maintained for a period of 13 weeks after installation to ensure plant establishment had taken place.

### 6.6 Waste

#### 6.6.1 Potential impacts

**Construction**
The precise quantities of each type of waste would be determined during detailed design and construction works, however at this stage it is estimated that 210 cubic metres of concrete and bitumen would be excavated and removed from Ennis Road.

• Green waste.
• Bricks, concrete, timber, plasterboard and metals.
• Bitumen, concrete and asphalt from removal of existing pavements.
• Building wastes created from the demolition of existing structures.
• Oil, grease and other liquid wastes from the maintenance of construction plant and equipment.
• General waste from the site office.

Due to the age of the building there is potential for contaminated materials to be present within the building materials of the station concourse. Potential contaminants would include:

• Asbestos materials.
• Synthetic Mineral Fibre (SMF) materials.
• Polychlorinated Biphenyls (PCB’s).
• Lead paint.
Operational
The proposal would not increase the volume of waste produced on the subject site during the ongoing operation of the station concourse.

6.6.2 Safeguards and management measures

Construction
- Prior to construction a hazardous materials inspection would be undertaken by a suitably qualified and accredited inspection body of the station concourse and Ennis Road.
- A hazardous materials management plan would be prepared that clearly identifies the actions, roles and responsibilities to reduce the potential for health effects to hazardous material.
- If any contaminated materials or hazardous substances (for example, asbestos, polychlorinated biphenyls, synthetic mineral fibre, lead dusts, paint containing lead and ozone depleting substances) are encountered during demolition and construction then safe work method statements and appropriate documented practices would be implemented in accordance with the hazardous materials management plan.
- Any contaminated materials or hazardous substances would be classified first and then stored, transported and disposed of in accordance with OEH requirements at an OEH licensed waste facility.
- The handling of asbestos and asbestos work would be carried out in accordance with the following documents published by the Safe Work Australia:
  - ‘Guide to the Control of Asbestos Hazards in Buildings and Structures’.
  - ‘Code of Practice for the Safe Removal of Asbestos’.
- WorkCover NSW would be contacted if the quantity of bonded asbestos removal exceeds 10 m2.
- All waste would be managed and disposed of in accordance with the Waste Avoidance and Resource Recovery Act 2001. The OEH Waste Classification Guidelines 2008 would be used to classify the different types of waste.
- Any bulk garbage bins delivered by authorised waste contractors would be placed and kept within the property boundary.
- Non-recyclable waste and containers would be regularly collected and disposed of at a licensed landfill or other licensed disposal sites in the area.
- Where available, recyclable site and construction waste would be recycled in accordance with the NSW Government’s “Waste Reduction and Purchasing Policy (WRAPP guidelines)”. Waste oil would be sent to approved recyclers.
- No burning or burying of wastes would be permitted on site.
- Cleaning out of batched concrete mixing plant would not be permitted within the site.
- A Construction/Demolition Waste Management Plan would be prepared in order to ensure resources are conserved and construction waste is processed and disposed of in a responsible manner. The plan would aim to:
  - Avoid waste, through the careful selection of materials.
  - Reuse waste, on site where possible or via a recycling facility.
  - Recycle waste, though an off-site recycling facility.
  - Dispose of non-recyclable material at a licensed waste facility.
- A suitable waste management contractor would be appointed prior to works commencing. During construction, waste material would be separated on site into recycling bins and general refuse bins would be provided for smaller
quantities of non-recyclable material. These bins would automatically be
sorted at the waste contractor's depot in order to salvage any further
recyclable material overlooked on the subject site.
- The worksite would be left tidy and rubbish free each day prior to leaving site
and at the completion of the works.

Operational
The proposal would not increase the volume of waste produced on the subject site
during the ongoing operation of the station concourse. As such, the previous waste
management procedures would be maintained.

6.7 Noise and vibration

6.7.1 Methodology
A Construction Noise and Vibration Management Report has been prepared by
Acoustic Studio and is included as Appendix J. The assessment considers the
existing acoustic environment and provides recommendations on the extent of
acoustic treatments and mitigation measures required to ensure that the predicted
level of noise intrusion on the surrounding area is acceptable.

To quantify the existing ambient noise environment in and around the Ennis Road
Bays, noise monitoring was conducted on 21 March 2011. Noise measurements
were taken on the western facade of Bay 5 directly adjacent to the Sydney Harbour
Bridge roadway and inside Bay 5.

In addition, long term unattended noise monitoring was conducted at 5-11 Greenway
Drive (Greenway Flats) between the periods of Tuesday 22nd November to Monday
28th November 2011. This location was selected to best represent the nearest
residential noise sensitive receivers. Data which has been affected by rain and any
other extraneous noise has been excluded.

6.7.2 Existing environment
The existing noise environment on Ennis Road is affected by its proximity to the
major arterial road network, being the Sydney Harbour Bridge approach lanes which
typically have significant and continuous traffic flows. Accordingly, the ambient and
background noise levels are generally dominated by continuous traffic flow. Other
influences include natural environmental noises (i.e. birds).

Background noise levels at the Greenway residencies were measured as follows:
- 54dBA during the night (between 10pm and 7am).
- 62dBA during the day (7am to 6pm).
- 61dBA during the evening (6pm to 10pm).

Ambient noise levels at the Greenway residencies were measured as follows:
- 61dBA during the night (between 10pm and 7am).
- 65dBA during the day (7am to 6pm).
- 64dBA during the evening (6pm to 10pm).

The outside external road traffic noise recorded for the Ennis Road Bays was 81dBA
and the internal noise levels were measured at 54dBA.
6.7.3 Policy setting

The following legislation and guidelines are relevant to the proposal:

- **DECCW Interim Construction Noise Guidelines, 2009.**
- **DECCW Environmental Noise Control Manual, 1994.**
- **DECCW Assessing Vibration: a technical guideline, 2006.**
- **Protection of Environment Operations Act 1997.**

**Noise**

The **DECCW Interim Construction Noise Guideline** (INCG) recommends standard hours for construction works as follows:

- Between 7.00am and 6.00pm, Monday to Friday.
- Between 8.00am and 1.00pm Saturdays.
- No work or deliveries on Sunday and/or public holidays.

The ICNG suggests construction noise management levels for nearby residences, that aim to minimise the likelihood of annoyance caused to noise sensitive receivers. This is determined to be the overall single figure background noise level, representing each assessment period over the whole assessment period, plus 10 dB during recommended standard hours and plus 5 dB outside standard hours. The noise criteria as provided in Table 6 below.

Table 6: Residential noise criteria for airborne noise

<table>
<thead>
<tr>
<th>Period</th>
<th>Rating Background Level, dBA</th>
<th>Criteria Leq(15min) dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended standard hours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday-Friday 7am - 6pm</td>
<td>59</td>
<td>Rating Background Level + 10</td>
</tr>
<tr>
<td>Saturday 8am-1pm</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td><strong>Outside recommended standard hours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday-Friday 6pm-7am</td>
<td>43</td>
<td>Rating Background Level + 5</td>
</tr>
<tr>
<td>Saturday 10pm-7am</td>
<td>49</td>
<td></td>
</tr>
</tbody>
</table>

The INCG also provides construction noise management levels for commercial and industrial premises. The relevant criteria for these premises are as follows:

- Industrial premises - 75dB(A) external.
- Offices and retail outlets - 70dB(A) external.

**Vibration**

The ICNG also recommends ground-borne noise management levels at residences affected by nearby construction activities. Ground-borne noise is noise generated by vibration transmitted through the ground into a structure and can be more noticeable than airborne noise. The ground-borne noise levels presented below are for evening and night-time periods only, as the objectives are to protect the amenity and sleep of occupants during the more sensitive time periods.

- Evening (6pm - 10pm) - 40dB(A) internal.
- Night (10pm to 7am) - 35dB(A) internal.
6.7.4 Potential impacts

Construction

Noise

The potential construction noise impacts are associated with the noise generated from demolition and construction activities within the station concourse, and in relation to the streetscape and road works on Ennis Road. The works have the potential to impact upon the amenity of nearby sensitive receivers, in particular, nearby residential properties.

The existing Ennis Road surface comprises concrete and bitumen sections. The works would comprise removal of segmented concrete and laying a new bitumen surface and new kerb and guttering. It is anticipated the existing concrete road surface would be broken up using concrete breaking excavators and removed from the site via dump trucks. This phase of work would take approximately one week.

The road surface would then be rolled and compacted and a new asphalt surface laid using an asphalt paver vehicle. It is estimated this would take approximately two weeks.

The existing bitumen surface would be scabbled and resurfaced. The re-asphalting of the existing bitumen road pavement would take approximately one week. It is expected that the total duration of road works would be approximately four weeks.

According to the Construction Noise and Vibration Management Report, road construction noise is expected to exceed the relevant criteria during standard hours when works are localised nearest to the receiver locations, with identified activities generating up to 81dB(A) (exceedance of 12dB(A)) at the property boundary.

Building construction noise arising from the concourse works is not expected to exceed the relevant criteria for any sensitive receivers, however works to refurbish the Ennis Road Bays (which are likely to occur at the same time) are anticipated to result in noise exceedances at the Greenway Flats, the residential areas bounded by Broughton and Willoughby Streets, and commercial properties on Broughton Street. These impacts are addressed in Chapter 6.6 of the Statement of Environmental Effects included in the separate DA to North Sydney Council.

In accordance with the DECCW, Interim Construction Noise Guideline, 2009 if the construction period is to last longer than three weeks, demolition and construction noise would be limited to a level of background plus 10 dB(A) and LAeq 75 dB(A) during recommended standard hours (Monday to Saturday 7 am to 7 pm with no work on Sundays or public holidays) and a construction noise level of background plus 5 dB(A) outside standard hours.

Vibration

A detailed vibration assessment has not been carried out at this stage, as actual vibration levels experienced will be dependent upon site characteristics and specific equipment used. However, based on the scope of works and associated equipment required, there is potential for vibration impacts particularly to the adjacent heritage items.
Potential sources of perceptible vibration include:

- Concrete breaking excavators and asphalt rotomills used to lift the existing road surface.
- Rollers and compactors used to resurface the existing road.
- Truck movements

Operational
The noise impacts of the proposal are generally limited to the construction phase of the proposal. The upgrades to the Ennis Road precinct are forecast to result in a small increase in traffic movements, however the proposal would result in an improvement to the road surface. The widening of the footpath would narrow the carriageway, serving to calm traffic for the benefit of pedestrians and residents. The predominant source of background noise would be train noise and traffic noise generated by vehicles by the Sydney Harbour Bridge.

The refurbished Milsons Point concourse would continue to be a pedestrian environment and would not generate any new noise impacts.

6.7.5 Safeguards and management measures

Construction

Noise

- Quieter equipment would be selected where possible and operated in a quiet and efficient manner.
- On site noise management measures would be implemented, where feasible and reasonable, including using existing or temporary barriers for shielding noise, avoiding the use of reversing alarms and strategically locating plant and equipment.
- Work activities would be scheduled to minimise noise impacts as far as possible.
- Prior to construction commencing, a Construction Management Plan would be prepared. The Construction Management Plan would provide the framework within which construction activities would be completed. Works would be carried out in a manner that would minimise disruption to the surrounding community and users of Milsons Point Railway Station.
- Working hours are to be restricted in accordance with the DECCW Interim Construction Noise Guideline. This is in order to ensure works occur outside of more sensitive times (i.e. during daylight hours). Working hours are to be in accordance with:
  - Between 7.00am and 6.00pm, Monday to Friday.
  - Between 8.00am and 1.00pm Saturdays.
  - No work or deliveries on Sunday and/or public holidays.
- If work is required to be undertaken outside these hours, or on Sundays or public holidays, the procedures outlined in the RMS's Practice Note VII would be followed to ensure out of hours works are appropriate and that any disruption to neighbours is minimised.
- The contractor would use the best available techniques not entailing excessive cost to meet OEH’s construction noise and vibration requirements as far as practicable.
- All reasonable practical steps would be undertaken to reduce noise and vibration from the subject site.
- The following general noise management measures would be followed:
- Plant and equipment would be properly maintained.
- Equipment would be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power levels are not exceeded.
- Where possible, plant would be strategically positioned on site to reduce the emission of noise to the subject site, surrounding neighbourhood and to site personnel.
- Unnecessary noise would be avoided when carrying out manual operations and operating plant.
- Any equipment not in use for extended periods during construction work would be switched off.

**Vibration**

- Prior to the commencement of the construction stage, a preliminary vibration assessment would be carried out of each key vibration generating activity (if vibration is considered to be an issue).

### 6.8 Air quality

#### 6.8.1 Potential impacts

Air quality is highly dependent on the processes of wind, temperature inversions and rainfall. North Sydney has a temperate climate with warm to hot summers and cool to mild winters. The extreme heats of summer are generally moderated by cooling sea breezes. The strongest winds generally come from the west and south-east. Strong winds can also be experienced from the north-east sea breeze.

Air pollution generally arises from natural processes, such as dust storms and from human activities such as motor vehicles and industrial process. Air pollutants may take the form of solid particles, liquid droplets or gases.

**Construction**

Particulate emissions from construction have the potential to affect amenity and, in extreme cases, health. The proposed works involve a range of works that have the potential to cause dust impacts on surrounding sensitive land uses within the locality. Potential dust generating activities to occur on subject site include:

- Works involved in the removal of part of the existing pavement and access ramp.
- Preparatory ground works.
- Removal of vegetation.
- Landscaping works.
- Transportation and stockpiling of spoil and construction materials.
- Engineering activities associated with the road and pavement works.

The total amount of dust generated would be varied and dependent on the types of operations being carried out, the exposure of work areas, the speed and type of machinery used and the prevailing meteorological conditions on each day.
6.8.2 Safeguards and management measures

Construction
To mitigate potential impacts on air quality, practical measures would be taken on site in order to prevent any significant deterioration in air quality, including:

- All construction plant, equipment and vehicles to be properly maintained and operated so as to alleviate excessive exhaust emissions.
- Areas of open excavation would be kept to a minimum.
- Waste loads leaving the subject site are to be covered at all times.
- Mud deposited on the road network due to truck movements to and from the site would be either prevented or cleaned up immediately.
- All dust generating construction activities are to cease during high wind conditions unless operations can be controlled by localised water spraying or other control means.
- Spraying of paint and other materials with the potential to become airborne particulates would only be undertaken in still or light wind conditions.
- Continual visual monitoring of the subject site to be undertaken by site management to ensure that works do not generate unacceptably high levels of dust.

Overall, given the relatively minor amount of demolition works required and the mitigation measures that are to be put in place, it is not anticipated that the proposal would adversely affect the local or regional air quality.

6.9 Water quality

6.9.1 Existing environment
The proposal site is situated on the eastern side of a ridge line that falls towards Neutral Bay, approximately 300 metres to the east. Stormwater runoff is channelled via kerb guttering into the local stormwater drainage network which eventually drains directly to Sydney Harbour.

The majority of the proposal site is of non-porous surface e.g. road pavement and hardstand areas for pedestrian movements. Water quality in the proposal site is affected by urban stormwater runoff including litter, hydrocarbons, heavy metals, sediments, silt, nutrient loads and other contaminants. The deposit of pollutants is currently mitigated through the use of stormwater pollution traps.

According to the Australian Bureau of Meteorology, the nearest weather station at Observatory Hill, Sydney records an average rainfall of 1213 mm per year, with January to July being the wettest months.

6.9.2 Potential impacts

Construction
The proposed construction activities such as pavement works, line-marking, landscaping including tree removal, demolition and upgrade to the station concourse, delivery of materials and transport and storage of waste would have the potential to degrade water quality within Sydney Harbour. During construction, pollutants such as sediment and construction waste, including hazardous materials to be removed from the station concourse, have the potential to enter Sydney Harbour, particularly during high rainfall events.
Spillages may occur during construction including spillage of fuel during refuelling and leakage of hydraulic and lubricating oil from plant and equipment or rinse water from plant washing. Any spilled liquids and materials would have the potential to enter the local drainage system and Sydney Harbour.

These potential impacts would be avoided and minimised through the implementation of the safeguards and management measures identified below.

**Operational**

The management of stormwater during the operational phase would be unchanged from the existing condition. Urban runoff would continue to enter the stormwater system via kerbs and guttering. Traffic flows around the site are expected to largely remain the same as a result of the proposal resulting in little or no change to the existing level of pollutants being emitted into the stormwater system. Street furniture along Ennis Road would include rubbish bins for the collection and disposal of litter.

Predicted increases in traffic levels would principally arise due to works proposed in the separate development application to refurbish the Ennis Road bays. If that separate development proceeds, traffic levels are expected to be only marginally greater than when the RTA laboratories were in operation, therefore there would only be a marginal increase in pollutants arising from motor vehicles.

### 6.9.3 Safeguards and management measures

**Construction**

- The proposal would be undertaken in line with *RMS Temporary stormwater drainage for road construction Dec 2011, RMS Code of Practice for Water Management and the RMS Water Policy*.
- An Erosion and Sediment Control Plan would be developed for the proposal.
- Construction works are to be undertaken in line with *RMS Guideline for Construction Water Quality Monitoring*.
- All fuels, chemicals, and liquids would be in an impervious bunded area within the compound site.
- The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas within the compound site.
- Vehicle wash downs and/or concrete truck washouts would be undertaken within a designated bunded area of an impervious surface or undertaken off-site.
- Machinery would be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery.
- If required, the Erosion and Sediment Control Plan would include details of sediment control and measures to control the flow of stormwater around the site.
- Disturbed surfaces would be reinstated as soon as possible.
- Erosion and sedimentation control measures would not be removed until disturbed areas have stabilised.
- Any damage from construction to the ground surface shall be restored to pre-construction condition on completion of works.
6.10 Climate change

6.10.1 Existing environment

The Intergovernmental Panel on Climate Change have produced global climate change projections. In Australia, both the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau of Meteorology have produced regional downscaled projections for Australia from these projections. In 2008 the NSW Government published refined climate change projections for each region in NSW, including the Sydney region. This work was carried out by researchers at the Climate Change Research Centre.

The projected regional climatic changes by 2050 for the NSW Sydney region show that “spring and summer rainfall is projected to increase, while winter rainfall is projected to decrease. Sea levels will rise, changing flood patterns and affecting the coast. An increase in maximum temperatures is projected for this region. The increase is projected to be greater in winter and spring than in summer and autumn”. (NSW Climate Change Action Plan - Summary of Climate Change Impacts: Sydney Region, DECCW, October 2008).

Some regional changes are predicted to include changes in temperature as days are projected to be hotter over all seasons (1 to 3 degrees Celsius). The greatest increases are projected for winter (2 to 3 degrees Celsius), and the smallest in summer (1 to 1.5 degrees Celsius).

Increased rainfall in summer and autumn, along with evaporation increases for all seasons, may occur. This, combined with changes in rainfall, is projected to make conditions in winter and spring drier. Along the coast, storm events and sea level rises are projected to exacerbate coastal erosion, as well as subsequent inundation of low lying areas. Sea level is projected to rise up to 40 centimetres above the 1990 mean sea level by 2050 and by 90 centimetres by 2100.

6.10.2 Potential impacts

Construction

The proposal is consistent with the general sustainability objectives being sought by the Australian and New South Wales Governments in building development. In particular the following environmental benefits are achieved during the construction phase:

- The retention of the existing structure’s embodied energy.
- The protection of the heritage structure.
- The conservation of raw building materials associated with a new build.
- The prevention of emissions that would have arisen during the transportation of materials for a new build.
- A substantial reduction in the amount of demolition materials being sent to landfill.

Notwithstanding the above, the construction phase would result in greenhouse gas emissions being produced. It is expected that the greenhouse gases that would be released would be carbon dioxide and nitrous oxide generated from liquid fuel use in plant and vehicles (diesel and petrol) in construction, disposal and transport of materials.
Operational
The proposal would support ongoing use of public transport patronage by upgrading the station concourse, including to improve access for people with a disability and providing an improved urban environment in close proximity to Milsons Point railway station.

6.10.3 Safeguards and management measures

Construction
- The delivery of materials with full loads would be undertaken from local suppliers where possible and cost effective.
- Appropriate sized construction equipment, plant and vehicles would be used.
- Frequent servicing of equipment would be undertaken to make sure they are running optimally, and down time is minimised (which can reduce time disturbance and access areas).
- Intelligent vehicle use, such as not leaving the engine idle when not in use, would be promoted.
- Energy efficiency and related carbon emissions of vehicle and plant equipment would be considered, where possible.
- Recycling of waste would be undertaken where possible.
- Material and waste supply and departure scheduling would be undertaken to optimise fuel use and minimise required vehicle trips.

In addition to the above, when detailed design proposals are prepared and work methods determined, RMS would assess alternative construction proposals with the view to seeking the most efficient construction solution for works to Ennis Road and Milsons Point concourse.

Operational
- Energy-efficient lighting would be used where appropriate to reduce energy consumption in the long-term.

6.11 Ecology

6.11.1 Methodology
A search of the National Parks and Wildlife Service Atlas of New South Wales Wildlife has been undertaken to determine if any threatened flora or fauna species have been recorded within the vicinity of the proposal. The Landscape Character and Visual Impact Assessment identifies the tree species present along Ennis Road (refer to Appendix I).

6.11.2 Existing environment
The station concourse and Ennis Road are situated within a highly modified and disturbed urban environment with limited vegetation, generally being street trees and vegetation in garden beds in and around the vicinity of the site.

The street trees on Ennis Road are comprised of a mixture of mature native and immature exotic tree species. The mature trees are in variable condition and include a range of species including *Casuarina sp.*, *Melaleuca sp.*, *Callistemon sp.* and *Pinus sp.* These plantings have been supplemented with exotic deciduous tree planting of *Honey Locust, Gleditsia triacanthos*. The existing trees are disparate and unevenly spread, which serves to contribute to a disjointed streetscape. Council is currently undertaking tree removal along Ennis Road, a number of which were proposed to be
removed as part of the proposal. Those street trees to be removed are all Honey Locust (*Gleditsia triacanthos*).

**Threatened species**

The *Atlas of New South Wales Wildlife* search found:

There are no recorded sightings of threatened flora species in the vicinity of the subject site. Three threatened fauna species have been recorded in the vicinity of the proposal:

- Red-crowned toadlet (*Pseudophryne australis*) which is listed as vulnerable under the Threatened Species Conservation Act, 1995 (TSC Act).
- Powerful owl (*Ninox strenua*) which is listed as vulnerable under the TSC Act.
- Eastern bent-wing bat (*Miniopterus schreibersii oceanensis*) which is listed as vulnerable under the TSC Act.

**6.11.3 Potential impacts**

The proposal would involve the removal of 14 introduced Honey Locust trees. Refer to section 6.5 of this REF for assessment of the visual impacts resulting from removal of these trees. The potential impacts on the fauna species recorded in the vicinity of the proposal are considered below.

The red-crowned toadlet record is in the vicinity of Neutral Bay. This species is likely to be associated with ephemeral or intermittent low order drainage lines with a build-up of litter or other debris within heath or eucalypt forest on sandstone. Suitable habitat for this species is not present and impact as a result of the proposal is unlikely.

The powerful owl forages across forested, wetland and rainforest habitats and requires hollow trees for nesting. The proposal is located within a highly urbanised area and would involve the removal of immature street trees. No suitable habitat is present and impact on this species as a result of the proposal is unlikely.

The eastern bent-wing bat mainly roosts in caves, but has been known to roost in manmade structures e.g. bridges, buildings, culverts. These bats have two known roosting sites in the North Sydney precinct, at Balls Head and at Primrose Park. The bats are occasionally recorded at other sites around the harbour, including in the Neutral Bay area, and these records were of foraging bats that have dispersed from known or other roosting sites. A recent investigation into the potential presence of foraging and roosting eastern bent-wing bats at Neutral Bay wharf found that the bats foraged in nearby parks, but not at the wharf and that in general, the bats prefer reasonably densely treed sites where there is little or no night lighting (White, 2012). Eastern bent-wing bats are expected to forage in parklands in Milsons Point and Kirribilli and may potentially forage at Ennis Road. It is considered that as the proposal would only remove (and subsequently replace) 14 immature and scattered street trees, there may be a minor short term impact on foraging habitat. Roosting habitat for this species is unlikely to be present.

The proposal is not expected to have any significant impact on any threatened species, endangered ecological communities, populations or their habitats as listed under the Threatened Species Conservation Act, 1997 or the Environmental Biodiversity Protection Conservation Act, 1999.
6.11.4 Safeguards and management measures

**Construction**

- If any eastern bent-wing bats or other threatened flora or fauna species are encountered during construction, works would immediately stop and the RMS Senior environmental officer, Sydney region would be contacted to advise on the appropriate actions and when works may re-commence.
- If any native fauna are encountered on site during the works, a licensed wildlife carer e.g. from WIRES would be contacted to rescue and relocate the animal.

6.12 Cumulative impacts

Cumulative environmental impacts can be defined as the combined effect of individual impacts generated by the proposal, in addition to the impacts of other activities in the area. These may include current and future road works and local land development that could result in ongoing or amplified impacts on the environment and the community.

In addition to the works proposed within this REF (to be assessed under Part 5 of the EP&A Act), a separate DA to be assessed under Part 4 of the EP&A Act has been lodged with North Sydney Council which seeks consent to refurbish the bays at 2-28 Ennis Road and provide a short stay car-park (parking of three hours or less) within the under-croft space in the northern portion of that site. The proposal and DA works are independent and could be implemented separately. However, both proposals are part of an overall program of works for the Sydney Harbour Bridge and are likely to be undertaken at the same time. Accordingly, the cumulative impact of the different components of the proposal described in this REF and the proposed development as detailed in the DA to North Sydney Council is provided below.

Potential cumulative issues include:

- Non Aboriginal heritage
- Socio-economic issues
- Traffic and transport
- Landscape, visual and urban design
- Waste
- Noise
- Air quality
- Water quality
- Climate change

The proposed refurbishment of the Ennis Road Bays included within the scope of works being proposed under the separate DA to North Sydney Council would provide refurbished retail/office/service space. This would allow for future business and jobs opportunities which have been lost due to the current poor standard of the Ennis Road Bays. These future businesses and jobs would be provided in close proximity to a railway station, in accordance with the objectives of the *Metropolitan Plan for Sydney 2036*.

The re-vitalisation of Ennis Road as a vibrant and active part of the Kirribilli Village would contribute to the economic growth of the locality, provide opportunities for new and/or revitalised businesses and enable residents and commuters to access new retail and business services in the future. As part of early investigations into possible
development options for the site, the then RTA commissioned Dimas Strategic Research to undertake an assessment of the market potential for retail facilities in the Ennis Road bays.

The Dimas report found that in general, there is a lack of retail facilities provided throughout the Milsons Point trade area, particularly in the suburbs of Milsons Point, Kirribilli and Lavender Bay. Estimated retail expenditure per primary trade area resident is $18,337 per annum – some 37 per cent higher than the Sydney metropolitan benchmark. Spending levels are high across all retail categories and particularly so on food catering, which is 76.7 per cent greater than in the Sydney metropolitan benchmark which indicates a propensity by residents in the area to dine in restaurants and cafes and to purchase takeaway food.

The retail mix within the primary trade area presently consists of ten retailers in the Ennis Road bays, six retailers in the Milsons Point station concourse as well as specialty shop traders in Broughton and Burton Streets. These retailers primarily cater for the convenience and daily needs of area residents and commuters. No significant supermarket facilities exist in the area and considerable retail spending occurs outside the primary trade area because of the minimal retail offerings currently available within the primary trade area.

6.12.1 Potential impacts

Construction
The following cumulative impacts may potentially arise during construction:

- Impact on the heritage values of the Sydney Harbour Bridge.
- Impact on businesses.
- A reduction in accessibility to Ennis Road.
- Generation of construction waste.
- Reductions in air quality during construction.
- Generation of construction noise.

The potential for impacts on the Sydney Harbour Bridge has been assessed in both the REF and the DA. Overall the two separate proposals would result in the protection of an important heritage item against physical deterioration. The safeguards and management measures identified in both documents would apply to minimise and manage the cumulative impacts to the heritage value of the Sydney Harbour Bridge and section 60 approvals would be sought from the Heritage Council of the Office of Environment and Heritage for the works proposed in both the REF and the DA.

A total of around 16 business tenancies would be affected by closure as a result of the works proposed in both the REF and the SEE. The existing tenants of the Ennis Road bays and the station concourse occupy premises via monthly tenancies and prior to or during construction would be required to vacate to facilitate the upgrades and refurbishments. Other retailers within the primary trade area may be potentially impacted by some reduction on their annual turnovers due to reduced accessibility and car parking along Ennis Road during construction, however any initial impact would be considered temporary and the increased comparison shopping is likely to result in increased turnovers. The safeguards and management measures identified in both the REF and the DA would apply to minimise and manage the cumulative impacts on businesses.
Building works construction noise associated with the Ennis Road bays refurbishment would be in addition to the construction noise associated with the Ennis Road upgrade. Construction noise is expected to exceed the relevant construction noise criteria during standard hours when works are localised nearest to the Greenway Flats, with identified activities generating up to 88dB(A) (exceedance of 19dB(A)) at the property boundary. This is in addition to the roadworks proposed in this REF that are expected to generate up to 81dB(A) (exceedance of 12dB(A)) when works are localised nearest to sensitive receivers.

Safeguards and management measures in the REF and the DA to attenuate the noise levels arising from both proposals, include:

- The selection of quieter equipment where possible.
- Carrying out works during the prescribed standard hours.
- Ensuring the noisiest pieces of equipment are not used simultaneously.
- Limiting the number of site vehicles in operation at any one time.
- The erection of screens where reasonable and feasible.

The generation of demolition and construction noise is an unavoidable aspect of the proposal and of the separate DA. However, through the application of the safeguards and management measures outlined in this REF and the separate DA for the refurbishment of the bays, the cumulative noise and vibration impacts of both proposals can be appropriately managed to minimise any impacts upon sensitive noise receivers.

As discussed in Chapter 3.1 a site compound situated at the northern end of Ennis Road is proposed to be used for both projects. All materials and wastes would be stored within the site compound in proximity to the site office and within the site boundary. The contractor would erect a scaffolding or screen system, when carrying out works and the compound site would operate during the working hours described in Chapter 6.7.

The safeguards and mitigation measures described in the REF and the separate DA would be adequate to minimise the potential construction impacts on the environment including on socio-economic issues, traffic and transport, landscape, visual and urban design, waste, noise and vibration, air quality, water quality, climate change and ecology. Accordingly, the cumulative construction impacts of the proposal and the schedule of works proposed in the DA are considered to be acceptable.

Operational
The following cumulative impacts may potentially arise during operation of the proposal:

- Business opportunity.
- Improved access.
- Change to car parking arrangements.
- Ennis Road would accommodate traffic arising from the use of the refurbished Ennis Road bays.
- The loss of the existing commuter toilets from the station concourse.
The Dimas report found that the potential future retail opportunities for Ennis Road identified include:

- A supermarket of 1500 m² – 2000 m².
- A fresh food oriented mini-major tenancy adjacent to a supermarket would strengthen the retail food offering.
- Ennis Road also has the potential as a retail food destination for local residents.
- The provision of a range of services, many of which have traditionally been available at Ennis Road but are not presently available.

As there is a shortage of retail tenancies within the primary trade area, the proposed re-activation of retail space in Ennis Road and the Milsons Point station concourse would benefit existing retail traders. This would occur through increased comparison shopping between new Ennis Road retailers and established Kirribilli retail traders resulting in an increase in sector turnovers.

The proposal and the proposed development under the DA would provide strong environmental benefits to adjoining residents. The two projects would re-vitalise a largely vacant, important heritage building. Local residents and pedestrians in Broughton Road would also benefit from the new passenger lift proposed in the DA, providing stair free access between Greenway Drive and Ennis Road. Railway commuters would also benefit as the refurbishment of the concourse would deliver substantial amenity upgrades and would provide the opportunity for a vastly improved retail experience for commuters and shoppers.

The proposal would result in loss of 15 car parking spaces from Ennis Road. The DCP recommends maximum car parking provision rates based on location and land use. Although DCP 2002 does not apply to the proposal, it does apply to the refurbishment of the Ennis Road bays proposed in the separate DA to North Sydney Council. The on-street car parking along Ennis Road would complement the functions of the refurbished bays, therefore the car parking provisions of the DCP have been considered in this assessment. The amendments to the on-street parking on Ennis Road are detailed in Table 7 below.

Table 7: Existing and proposed on-street car parking provision on Ennis Road

<table>
<thead>
<tr>
<th>Type of parking space</th>
<th>Existing on-street parking</th>
<th>Proposed on-street parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Space</td>
<td>42</td>
<td>27</td>
</tr>
<tr>
<td>Taxi Space</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Loading Space</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Kiss and Ride Space</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

The combination of the proposal and the car park proposed in the separate DA to refurbish the Ennis Road bays would have the cumulative effect of providing an additional 22 standard car parking spaces overall, which would be a positive outcome for businesses within Kirribilli Village.
The car park proposed in the DA is illustrated in Figure 36 and would provide:

- 37 standard spaces.
- 1 disabled space.
- 1 small rigid vehicle loading space.
- 1 medium rigid vehicle loading space.

![Figure 36 - The proposed car park at the northern end of Ennis Road (proposed in the separate DA to North Sydney Council).](image-url)

In total, 81 publicly available car parking spaces (including 64 standard spaces) would be provided following the completion of both the proposal that is the subject of this REF and the proposed development that is the subject of the DA lodged with North Sydney Council.

ARUP reported that the proposed total provision of 64 standard public parking spaces (27 on-street and 38 off-street) aligns well with the intentions of the DCP 2002 which requires a balance between providing for some 'drive in' trade but also looks to promote non-car modes for access. Although DCP 2002 does not apply to the proposal, the proposed on-street parking provision is appropriate given the immediate proximity of Milsons Point Railway Station, which has a good walk in catchment.

Traffic generation would predominantly arise due to the refurbishment of the Ennis Road bays and their subsequent use for commercial and retail purposes, rather than the proposal that is the subject of this REF. Notwithstanding this, the proposal would complement the management of traffic arising from the refurbishment of the Ennis Road Bays.

As demonstrated in Table 8, the Ennis Road/Broughton Street intersection currently functions at a grade A (good operation) Level of Service (LOS), with 1046 traffic movements per hour in the AM peak and 911 traffic movements per hour in the PM peak.
Table 8: Traffic movement summary

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Level of Service</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>A (good operation)</td>
<td>1101</td>
<td>911</td>
</tr>
<tr>
<td>Previous (prior to the closure of the RTA laboratories)</td>
<td>A (good operation)</td>
<td>1145</td>
<td>1003</td>
</tr>
<tr>
<td>Following completion of the proposals, and the refurbishment of the Ennis Road Bays.</td>
<td>A (good operation)</td>
<td>1156</td>
<td>1094</td>
</tr>
</tbody>
</table>

As shown above, modelling has also been undertaken to incorporate the anticipated traffic movements generated by the potential end uses of the refurbished bays and station concourse.

The modelling of all three scenarios has demonstrated that the Ennis Road/Broughton Street intersection formerly functioned at a grade A LOS prior to the decommissioning of the RMS laboratories and is predicted to continue to do so following the proposal. Accordingly, ARUP state that the anticipated increase in traffic levels resulting from the proposal is acceptable.

The existing station concourse toilets are in a dilapidated condition and need to be replaced. The proposal would involve the demolition of the existing toilet facilities within the concourse, and the construction of two unisex toilets and one disabled access toilet. As the toilets in this proposal are intended for rail commuters, they are appropriately located in the ticketed area.

Although the existing toilets are for the use of rail commuters, these facilities are also used by visitors to the Kirribilli Markets and the general public. A number of alternative toilets are provided in the vicinity of the site, including accessible public toilets on Fitzroy Street, approximately 180 metres south of the concourse. In addition, the organisers of the Kirribilli Markets provide portable toilets on market days.

In addition to the toilets proposed in the ticketed area, toilets are proposed in the separate DA to North Sydney Council. Those toilets would be available for customers and staff of the Ennis Road bays, and comprise two unisex accessible toilets, two unisex stalls, one male WC room (comprising four urinals and one stall) and one female WC room (comprising six stalls).

Overall, the cumulative impact of the proposal and the separate DA to upgrade the Ennis Road bays would increase the number of toilets provided for rail commuters and for customers and staff of the Ennis Road Bays. These facilities would be constructed to a modern standard and would improve amenity.

Safety and crime prevention for commuters will be improved through improved lighting in the concourse and along Ennis Road. The streetscape works to Ennis Road would also improve amenity and attract people into the area, thereby increasing passive surveillance. Further pedestrian safety near the walk-way at the northern end of Ennis Road would be improved by new lighting and the provision of a clear glazed screen.
• would improve safety for late night rail commuters.
• Improved commuter experience by providing a practical and functional railway station concourse with appropriate lay-out for ticketing areas, toilets and staff facilities.
• New toilets/amenities would be provided for rail commuters and staff.
• Pedestrian congestion on the concourse would be reduced and passenger circulation improved.
• Pedestrian facilities, access, safety and amenity would be improved along Ennis Road. The proposed streetscape works to Ennis Road would improve amenity and attract people into the area, thereby increasing passive surveillance.

The cumulative effect of the proposal and the proposed development under the DA to North Sydney Council, would provide benefits in terms of increasing the functionality, safety and amenity of the precinct and restoring a significant heritage item. Taking into consideration the positive and negative cumulative impacts, the proposal is considered acceptable and does not give rise to any significant adverse cumulative impacts.

6.12.2 Safeguards and management measures

• The proposed works would be appropriately staged with the separate DA to minimise impacts to the environment and the community.
7 Environmental management

This Chapter describes how the proposal would be managed to reduce potential environmental impacts throughout detailed design, construction and operation. A summary of the site-specific environmental safeguards provided in Chapter 6, and the licence and/or approval requirements required prior to construction are also listed.

7.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed these management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Project Environmental Management Plan (PEMP) and a Contractors Environmental Management Plan (CEMP) would be prepared to describe safeguards and management measures identified. These plans would provide a framework for establishing how these measures would be implemented and who would be responsible for their implementation.

The plans would be prepared prior to construction of the proposal and reviewed and certified by the Roads and Maritime Services Senior Environmental Officer, Sydney region, prior to the commencement of any on-site works. The CEMP would be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP and PEMP would be developed in accordance with the specifications set out in the QA Specification G36 – Environmental Protection (Management System) and the QA Specification G38 – Soil and Water Management (Soil and Water Plan).

7.2 Summary of safeguards and management measures

Environmental safeguards outlined in this document would be incorporated into the detailed design phase and construction of the project. These safeguards would minimise any potential adverse impacts arising from the proposal on the surrounding environment. All safeguards described in this REF would be incorporated into the contractor’s environmental management plan (CEMP). These are summarised in Table 9.

Table 9: Summary of site specific environmental safeguards.

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<th>No.</th>
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<th>Environmental safeguards</th>
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<tbody>
<tr>
<td>1</td>
<td>Non Aboriginal Heritage</td>
<td>Approval would need to be obtained from the Heritage Council under Section 60 of the Heritage Act, 1977 prior to any impact on the State heritage register listed items and the works carried out in accordance with the Section 60 conditions of approval.</td>
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<tr>
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<td></td>
<td>A suitably qualified heritage architect would be engaged to provide advice during the detailed design and construction of the proposal.</td>
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<td></td>
<td>The original walls within the station concourse would be preserved wherever possible.</td>
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<td>The original fabric of the existing display windows on the south wall of the station concourse and the original reeded top with capping to the northern wall of the station concourse would be retained and conserved.</td>
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<td></td>
<td>All original tiling within the Milsons Point railway station concourse not affected by the proposal would be retained and conserved. Consideration would be given to finishing off the tiling with rounded tiled corners where new openings are cut. New finishes would match the existing colour and form but be identifiable as new.</td>
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<td></td>
<td>Should works to the station concourse floor reveal an early or original finish, work in the area of the find would cease immediately and the Senior regional environmental officer would be contacted. Works in the vicinity of the find would not recommence until the Senior regional environmental officer has advised on the heritage value and associated protection of the find including consideration of the retention and/or reconstruction of the floor finish.</td>
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<td></td>
<td>All existing display windows on the south wall of the station concourse would be retained and conserved.</td>
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<td></td>
<td>Air vent grilles located above display windows on the north and south walls would be retained and conserved.</td>
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<td></td>
<td>Chrome reeded top with capping to the north wall (currently painted over) would be retained and conserved.</td>
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<td></td>
<td>The awning on the Ennis Road entry to the station concourse would be refurbished based on photographic, documentary and physical evidence. The conservation and restoration work would be designed, documented and supervised on site by a heritage architect and undertaken in compliance with Policy 15 of the Conservation Management Plan.</td>
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<td>Archival photographic records and measured drawings would be prepared, in accordance with the NSW Heritage Office guideline <em>How to prepare archival records of heritage items</em> (Heritage Office, 1998) and would detail the areas to be demolished within the Milsons Point railway station concourse, including the former tram station stairs.</td>
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<td></td>
<td>If an item (or suspected item) of non-Aboriginal heritage is discovered, the RMS draft Unexpected finds procedure (RTA, 2011) would be implemented including that all work in the area of the find would cease immediately and the Senior regional environmental officer would be contacted. Works in the vicinity of the find would not recommence until the heritage value and associated protection and any approval requirements have been determined. RMS would notify OEH if any item (or suspected item) of non-Aboriginal heritage is found during construction to determine the appropriate course of action.</td>
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<tr>
<td>2</td>
<td>Aboriginal Heritage</td>
<td>In the event that potential Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find would cease and the RMS Aboriginal cultural heritage advisor, Sydney region and the Senior regional environmental officer would be contacted immediately. Works in the vicinity of the find would not re-commence until clearance had been received from those RMS officers.</td>
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<tr>
<td>3</td>
<td>Socio-economic</td>
<td>Prior to construction a Staging Plan would be prepared to ensure minimal inconvenience to businesses, rail commuters, residents and road users.</td>
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<td>Prior to the commencement of work, RMS would notify the Council and occupier of any land within 40 metres of the property boundaries of the proposal, including tenants in the station concourse and the Ennis Road bays, providing a project description and the expected dates for commencement and completion of construction works and details of the construction program.</td>
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<td>Local residents and businesses would be notified prior to works commencing and would be kept regularly informed of construction activities and parking arrangements during the construction process.</td>
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<td>Existing tenants will be notified to works commencing and when they are required to vacate the premises. Closure of tenancies would be staged wherever possible to minimise impacts to existing businesses.</td>
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<td>During construction, road users, pedestrians and cyclists would be informed of changed conditions including likely disruptions to access.</td>
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<td>Residents would be informed prior to any interruptions to utility services that may be experienced as a result of utilities relocation.</td>
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<td>A complaints-handling procedure would be included in the CEMP and would include a commitment that complaints received shall be recorded...</td>
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<td>and responded to within 24 hours. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaint can be avoided or minimised. The complainant would be advised of the result of the review including what actions were taken.</td>
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<td>A complaints register would be included in the CEMP and would include a register of all complaints received and the means of resolution of those complaints. The complaints register shall be made available to Council on request.</td>
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</table>
|     | A site notice board would be located at the main entrance to the subject site in a prominent position and would include the following:  
  - 24 hour contact person for the project.  
  - Telephone and facsimile numbers and email address.  
  - Site activities and time frames. |
<p>|     | Hoardings or screens would be erected in areas where the proposal would impact on pedestrian walkways, to ensure pedestrian safety. |
|     | Works would be undertaken in stages to minimise inconvenience to pedestrians, commuters, motorists and cyclists. |
|     | A works program would be prepared in consultation with RailCorp. |
|     | Any disruption to access would be notified in advance in accordance with RMS’s Community Involvement Practice Notes and Resource Material 1998. |
|     | Existing pedestrian facilities would be retained where feasible. |
|     | Disruptive works such as footpath works along the trafficked pavement would be scheduled to take place generally outside of peak commuting periods to minimise road user delays. |
|     | All aspects of the proposal would provide equitable access to readily comply with Australian Standards and the requirements of the BCA and the DDA Premises Standards. |
|     | The surface of any material used or proposed to be used for the paving of thoroughfares, the plaza and the like would comply with AS/NZ 4586:2004 (including amendments) ‘Slip resistance classification of new pedestrian surface materials’. |
|     | Milsons Point Railway Station Concourse would be properly maintained to ensure it is clean, safe and fit for use at all times. |
|     | Parking restrictions along Ennis Road would be determined by the North Sydney Traffic Committee. |
| 4   | Traffic and Transport   | The existing roundabout in Ennis Road would be maintained, ensuring delivery vehicles can easily exit the street. |
|     | Throughout construction, access to ticketing and the Milsons Point railway station platform would be maintained at all times. |
|     | The proposal would be undertaken in stages to minimise inconvenience to rail commuters and road users. |
|     | Any disruption or change to pedestrian and traffic access would be notified to the affected community in advance in accordance with RMS’s Community Participation and Communication: A Resource Manual for Staff 2010. |
|     | A detailed Traffic Management Plan would be prepared in accordance with the RMS’s Traffic Control at Work Sites Manual 2003 and approved by the RMS prior to implementation, to provide a comprehensive and objective approach to minimise any potential impacts on road network operations during construction. |
|     | The Traffic Management Plan would include such measures as providing safe access points to work areas from the adjacent road network, safety barriers where necessary, imposing temporary speed restrictions when necessary, maintaining adequate sight distance, and displaying prominent warning signage. |
|     | The main site office and initial accommodation would be accessed via Ennis Road. All materials would be stored within the site boundary and the contractor would erect a scaffolding or screen system, when carrying out works. |
|     | A thoroughfare for emergency vehicles would be maintained at all times. Prior to construction consultation would be undertaken with the NSW... |</p>
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<td>Police Service, the Fire Brigade, and Ambulance Service to determine the most appropriate means of minimising impacts to emergency access during construction. The emergency access arrangements would be incorporated into the traffic management plan prior to approval by RMS.</td>
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<td>Prior to construction, RailCorp would be consulted on the traffic management measures to be incorporated into the Traffic Management Plan.</td>
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<td>Disruptive works such as the re-surfacing of the road, would be scheduled to take place generally outside of peak commuting periods to minimise road user delays.</td>
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<td>Approval for road occupancy would be obtained for any lane closures or road traffic changes.</td>
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<td>If neighbouring streets need to be closed temporarily during construction, alternative access would be provided via other local roads. Any detours would be clearly signposted and the community would be informed in advance through community updates and newspaper notices.</td>
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<td>During construction, warning signage would be erected to indicate trucks entering/trucks turning for approaching vehicles.</td>
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<td>Appropriate permits would be obtained should road closure(s) be required for the transportation of any over-sized loads to the proposal.</td>
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<td>5</td>
<td>Landscape, Visual and Urban Design</td>
<td>Existing vegetation and resources are retained where possible.</td>
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<td>The proposal’s urban design principles would be integrated throughout the detailed design and construction of the proposal.</td>
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<td>Works would be carried out in a manner that would minimise visual impacts to the surrounding community and users of Milsons Point station.</td>
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<td>The compound site would be fenced, screened and kept tidy. All materials would be stored within the site boundary.</td>
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<td>Appropriate tree protection measures would be put in place prior to any works on the site.</td>
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<td>Trees with limbs overhanging the construction sites would not be removed unless absolutely necessary for safety or construction reasons.</td>
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<td>Any overhanging limbs would be cut back where possible.</td>
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<td>Tree protection fences would be installed around trees or groups of trees to be retained and located within 10 metres of any temporary construction compounds.</td>
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<td>Vehicles, machinery or stockpiles would not be placed beneath canopies of trees.</td>
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<td>Care would be taken to avoid impacting on the root zone of trees within the construction area that are to be retained. Consideration would be given to the use of smaller, more manoeuvrable equipment to minimise the width of the disturbance corridor and protect street trees.</td>
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<td>Materials and plantings would be consistent with the North Sydney Council Public Domain Strategy 2005.</td>
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<td>Where required materials and colours selected would be in accordance with the requirements of the Sydney Harbour Bridge Conservation Management Plan.</td>
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<td>A number of existing trees would be replaced with Platanus sp. (Plane trees), in keeping with the dominant street tree species in the commercial precincts of North Sydney. Eighteen new Platanusorientalis var. digitata are proposed along the eastern edge of Ennis Road. They would be planted at regular intervals of seven to eight metres to achieve a continuous canopy.</td>
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<td>Mature planting (generally five metres high with an 80 millimetre trunk diameter) is proposed to be used in order to ensure the longevity of the proposed trees. The trees would be planted in structural soil pits to encourage early establishment.</td>
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<td>The Platanus would reach a larger size at maturity than the Gleditsia and contribute to the scaling of the streetscape. The Platanus are also deciduous and would provide residents and visitors with solar access during winter.</td>
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<td>The materials selected would achieve a simple and unified design along Ennis Road and its elements, which would minimise maintenance and associated costs in the long term.</td>
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<td>The design of the public domain would make pedestrian areas more legible and encourage cyclists to slow down.</td>
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<td>All proposed garden beds would be constructed with new soil profiles and mulched.</td>
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<td>New garden bed planting would consist of low maintenance species as detailed in the landscape architects report.</td>
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<td>Structural soil pits are proposed to be installed at each new tree position to ensure that the trees would reach their optimum size.</td>
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<td>All soft landscape would be maintained for a period of 13 weeks after installation to ensure plant establishment had taken place.</td>
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<td>6</td>
<td>Waste</td>
<td>Prior to construction a hazardous materials inspection would be undertaken by a suitably qualified and accredited inspection body of the station concourse and Ennis Road.</td>
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<td>A hazardous materials management plan would be prepared that clearly identifies the actions, roles and responsibilities to reduce the potential for health effects to hazardous material.</td>
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<td>If any contaminated materials or hazardous substances (for example, asbestos, polychlorinated biphenyls, synthetic mineral fibre, lead dusts, paint containing lead and ozone depleting substances) were encountered during demolition and construction then safe work method statements and appropriate documented practices would be implemented in accordance with the hazardous materials management plan.</td>
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<td>Any contaminated materials or hazardous substances would be classified first and then stored, transported and disposed of in accordance with OEH requirements at an OEH licensed waste facility.</td>
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<td>The handling of asbestos and asbestos work would be carried out in accordance with the following documents published by the Safe Work Australia: ‘Guide to the Control of Asbestos Hazards in Buildings and Structures’. ‘Code of Practice for the Safe Removal of Asbestos’.</td>
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<td>The Regulation requires licensed contractors to contact WorkCover NSW for each bonded asbestos removal project of 10m2 or more.</td>
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<td>All waste would be managed and disposed of in accordance with the Waste Avoidance and Resource Recovery Act 2001. The OEH Waste Classification Guidelines 2008 would be used to classify the different types of waste.</td>
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<td>The precise quantities of each type of waste would be determined during detailed design and construction works, however at this stage it is estimated that 210 cubic metres of concrete and bitumen would be excavated and removed from Ennis Road.</td>
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<td>All waste generated by the project, shall be beneficially reused, recycled or directed to a waste facility lawfully permitted to accept the materials in accordance with the OEH Waste Classification Guidelines 2008 and the Protection of the Environment Operations Act 1997. Any bulk garbage bins delivered by authorised waste contractors would be placed and kept within the property boundary.</td>
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<td>Non-recyclable waste and containers would be regularly collected and disposed of at a licensed landfill or other licensed disposal sites in the area.</td>
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<td>Where available, recyclable site and construction waste would be recycled in accordance with the NSW Government’s “Waste Reduction and Purchasing Policy (WRAPP guidelines)”. Waste oil would be sent to approved recyclers.</td>
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<td>No burning or burying of wastes would be permitted on site.</td>
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<td>Cleaning out of batched concrete mixing plant would not be permitted within the site.</td>
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<td>A Construction/Demolition Waste Management Plan would be devised in order to ensure resources are conserved and construction waste is processed and disposed of in a responsible manner. The plan would aim to:</td>
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|     |                        | • Avoid waste, through the careful selection of materials.  
|     |                        | • Reuse waste, on site where possible or via a recycling facility.  
|     |                        | • Recycle waste, though an off-site recycling facility.  
|     |                        | • Dispose of non-recyclable material at a licensed waste facility.  
|     | A suitable waste management contractor would be appointed prior to works commencing. During construction, waste material would be separated on site into recycling bins and general refuse bins would be provided for smaller quantities of non-recyclable material. These bins would automatically be sorted at the waste contractor’s depot in order to salvage any further recyclable material overlooked on the subject site.  
|     | Contamination of the site during construction works would be avoided.  
|     | The worksite would be left tidy and rubbish free each day prior to leaving site and at the completion of the works. After demolition, the site is to be left free of debris that may harbour vermin.  
|     | The proposal would not increase the volume of waste produced on the subject site during the ongoing operation of the station concourse. As such, the previous waste management procedures would be maintained.  
| 7   | Noise and Vibration    | Quieter equipment would be selected where possible and operated in a quiet and efficient manner.  
|     | On site noise management measures would be implemented, including using existing or temporary barriers for shielding noise, avoiding the use of reversing alarms and strategically locating plant and equipment.  
|     | Work activities would be scheduled to minimise noise impacts.  
|     | Prior to construction commencing, a Construction Management Plan would be prepared. The Construction Management Plan would provide the framework within which construction activities would be completed. Works would be carried out in a manner that would minimise disruption to the surrounding community and users of Milsons Point Railway Station.  
|     | Working hours are to be restricted in accordance with the Office of Environment and Heritage’s Interim Construction Noise Guideline. This is in order to ensure works occur outside of more sensitive times (i.e. during daylight hours). Working hours are therefore restricted to:  
|     | • Between 7.00am and 6.00pm, Monday to Friday.  
|     | • Between 8.00am and 1.00pm Saturdays.  
|     | • No work or deliveries on Sunday and/or public holidays.  
|     | If work is required to be undertaken outside these hours, or on Sundays or public holidays, the procedures outlined in the RMS’s Practice Note VII would be followed to ensure out of hours works are appropriate and that any disruption to neighbours is minimised. If work is required to be undertaken on Sundays or public holidays, prior permission would be sought from North Sydney Council.  
|     | The contractor would use the best available techniques not entailing excessive cost to meet OEH’s construction noise and vibration requirements as far as practicable.  
|     | In accordance with the Interim Construction Noise Guideline, if the construction period is to last longer than three weeks, demolition and construction noise would be limited to a level of background plus 10 dB(A) and LAeq 75 dB(A) during recommended standard hours (Monday to Saturday 7 am to 7 pm with no work on Sundays or public holidays) and a construction noise level of background plus 5 dB(A) outside standard hours.  
|     | All reasonable practical steps shall be undertaken to reduce noise and vibration from the subject site.  
|     | Where possible construction noise would be attenuated with the use of screening, acoustic enclosures, engine silencing and substitution by alternative processes to reduce noise emission levels from typical construction equipment.  
|     | The following general noise management measures would be followed:  
|     | • Plant and equipment would be properly maintained.  
<p>|     | • Equipment would be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power |</p>
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<td>levels are not exceeded.</td>
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<td>- Where possible, plant would be strategically positioned on site to reduce the emission of noise to the subject site, surrounding neighbourhood and to site personnel.</td>
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<td>- Unnecessary noise would be avoided when carrying out manual operations and operating plant.</td>
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<td>- Any equipment not in use for extended periods during construction work would be switched off.</td>
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<td>Good relations with people living and working in the vicinity of the construction site would be established at the beginning of the project and be maintained throughout the project. Any complaints would be registered, and then addressed seriously and expeditiously.</td>
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<td>Prior to the commencement of the construction stage, a preliminary vibration assessment be carried out of each key vibration generating activity (if vibration is considered to be an issue).</td>
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<td>8</td>
<td>Air Quality</td>
<td>All construction plant, equipment and vehicles to be properly maintained and operated so as to alleviate excessive exhaust emissions.</td>
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<td>Areas of open excavation would be kept to a minimum.</td>
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<td>Vehicles leaving the subject site are to be hosed down.</td>
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<td>Waste loads leaving the subject site are to be covered at all times.</td>
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<td>Mud deposited on the road network due to truck movements to and from the site would be either prevented or cleaned up immediately.</td>
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<td>All dust generating construction activities are to cease during high wind conditions unless operations can be controlled by localised water spraying or other control means.</td>
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<td>The burning of waste materials and the lighting of fires is to be strictly prohibited on the subject site at all times.</td>
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<td>Spraying of paint and other materials with the potential to become airborne particulates would only be undertaken in still or light wind conditions.</td>
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<td>Continual visual monitoring of the subject site to be undertaken by site management to ensure that works do not generate unacceptably high levels of dust.</td>
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<td>9</td>
<td>Water Quality</td>
<td>The proposal would be undertaken in line with RMS Temporary stormwater drainage for road construction Dec 2011, RMS Code of Practice for Water Management and the RMS’s water policy.</td>
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<td>An Erosion and Sediment Control Plan would be developed for the proposal.</td>
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<td>Construction works are to be undertaken in line with RMS’s Guideline for Construction Water Quality Monitoring.</td>
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<td>All fuels, chemicals, and liquids would be stored at least 50 metres away from any waterways or drainage lines and would be stored in an impervious bunded area within the compound site.</td>
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<td>The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas within the compound site.</td>
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<td>Vehicle wash downs and/or concrete truck washouts would be undertaken within a designated bunded area of an impervious surface or undertaken off-site.</td>
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<td>Machinery would be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery.</td>
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<td>If required, the Erosion and Sediment Control Plan would include details of sediment control and measures to control the flow of stormwater around the site.</td>
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<td></td>
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<td>Disturbed surfaces would be reinstated as soon as possible.</td>
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<td></td>
<td></td>
<td>Erosion and sedimentation control measures would not be removed until disturbed areas have stabilised.</td>
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<td></td>
<td></td>
<td>Any damage from construction to the ground surface shall be restored to pre-construction condition on completion of works.</td>
</tr>
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<td>10</td>
<td>Climate Change</td>
<td>The delivery of materials with full loads would be undertaken from local suppliers where possible.</td>
</tr>
</tbody>
</table>
|     |        | Appropriate sized construction equipment, plant and vehicles would be
<table>
<thead>
<tr>
<th>No.</th>
<th>Impact</th>
<th>Environmental safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequent servicing of equipment would be undertaken to make sure they are running optimally, and down time is minimised (which can reduce time disturbance and access areas).</td>
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<td>Intelligent vehicle use, such as not leaving the engine idle when not in use, would be promoted.</td>
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<td>Energy efficiency and related carbon emissions of vehicle and plant equipment would be considered, where possible.</td>
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<td></td>
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<td>Recycling of waste would be undertaken where possible.</td>
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<td></td>
<td></td>
<td>Material and waste supply and departure scheduling would be undertaken to optimise fuel use and minimise required vehicle trips.</td>
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<td>When detailed design proposals are prepared and work methods determined, RMS would assess alternative construction proposals with the view to seeking the most efficient construction solution for works to Ennis Road and Milsons Point concourse.</td>
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<td></td>
<td></td>
<td>Energy-efficient lighting would be used where appropriate to reduce energy consumption in the long-term.</td>
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<tr>
<td></td>
<td>Ecology</td>
<td>If any eastern bent-wing bats or other threatened flora or fauna species are encountered during construction, works would immediately stop and the RMS Senior environmental officer, Sydney region would be contacted to advise on the appropriate actions and when works may re-commence.</td>
</tr>
<tr>
<td></td>
<td>Ecology</td>
<td>If any native fauna are encountered on site during the works, a licensed wildlife carer e.g. from WIRES would be contacted to rescue and relocate the animal.</td>
</tr>
<tr>
<td></td>
<td>Cumulative Impacts</td>
<td>The proposed works would be appropriately staged with the separate SEE to limit impacts to the environment and the community.</td>
</tr>
</tbody>
</table>

### 7.3 Licensing and approvals

The Station Concourse is listed as an item of State Heritage Significance as part of the ‘Sydney Harbour Bridge, approaches and viaducts (road and rail)’ listing. Accordingly, an application will be made under Section 60 of the Heritage Act, 1977 which seeks approval from the NSW Heritage Council.
8 Conclusion

This Chapter provides the justification for the proposal taking into account its biophysical, social and economic impacts, the suitability of the subject site and whether or not the proposal is in the public interest. The proposal is also considered in the context of the principles of ecologically sustainable development as defined in Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

8.1 Justification

The proposal is justified in that:

The Milsons Point station concourse upgrade would upgrade and refurbish an item of state heritage significance in a sympathetic manner. The proposal would be undertaken in accordance with the Sydney Harbour Bridge Conservation Management Plan July 2007 and in accordance with the conditions of a section 60 approval under the Heritage Act, 1977 to be sought from the Heritage Council of the Office of Environment and Heritage.

The proposal would improve access for less mobile members of the community by ensuring the station concourse is compliant with the requirements of applicable Australian Standards, Building Code of Australia (BCA) and the Premises Standards of the Australian Government's Disability Discrimination Act 1992. The proposal would enhance Ennis Road and provide the local community with improved access, amenity and safety.

The proposal would have minor to moderate impacts to the environment and the community but would be undertaken in accordance with the safeguards and management measures identified in this REF to minimise and mitigate possible impacts. Overall, no significant impacts to the environment or the community are identified and the beneficial effects of the proposal are considered to considerably outweigh the negative impacts.

The following sections consider the justification of the proposal in relation to social and economic factors, biophysical factors and the public interest.

Social factors

Social factors contributing to the justification of the proposal include:

- The maintenance and refurbishment of a State heritage structure and surrounding precincts and protection against physical deterioration.
- Alterations and additions within the station concourse that have been identified as being intrusive would be removed.
- Upgrade works would be carried out in a manner that is sympathetic to the original design and the heritage values of the station concourse.
- A refurbished station concourse in accordance with the strategic concept developed during community consultation.
- The maintenance and enhancement of the 'Kirribilli Village' atmosphere.
- The reconfiguration of the station concourse would improve circulation within the concourse and the general performance of the station.
- The proposal would improve access at Milsons Point station concourse for people with a disability.
• Improved lighting in the concourse would improve safety for late night rail commuters.
• Improved commuter experience by providing a practical and functional railway station concourse with appropriate lay-out for ticketing areas, toilets and staff facilities.
• New toilets/amenities would be provided for rail commuters and staff.
• Pedestrian congestion on the concourse would be reduced and passenger circulation improved.
• Pedestrian facilities, access, safety and amenity would be improved along Ennis Road. The proposed streetscape works to Ennis Road would improve amenity and attract people into the area, thereby increasing passive surveillance.
• Additional street lighting would contribute to increased illumination at the northern end of Ennis Road.
• Opportunities for passive recreation through the provision of the pedestrian plaza.
• Improved pedestrian access between Broughton Street and Ennis Road.
• An appropriate on-street car parking configuration.
• Potential increase in commuters using rail services due to the upgraded facilities and access.
• The concourse would be compliant with the requirements Building Code of Australia (BCA) and the Premises Standards of the Australian Government's Disability Discrimination Act 1992.
• The proposal would support ongoing use of public transport patronage by improving the station concourse and providing an improved urban environment in close proximity to Milsons Point railway station.

Biophysical factors
Biophysical factors contributing to the justification of the proposal include:

• Oriental Plane trees (*Plantanus orientalis*) would be planted along Ennis Road, consistent with the North Sydney Council Public Domain Strategy, 2005. Platanus trees have been selected for their known contribution to the streetscape when mature. Platanus trees generally survive and thrive in urban environments and are known to provide an even tree canopy.

Economic factors
The proposal involves upgrade to the Milsons Point railway station concourse to maintain and refurbish a state heritage register listed item to preserve its heritage values and maintain practical and safe use. The proposal would reduce maintenance costs.

It would also provide appropriate access for people with a disability and assist in supporting public transport patronage by making it available to more of the community and improving the service.

Public interest
The proposal would be in the public interest as it would contribute to improving access for people with a disability to the public transport network. The proposal would contribute to improved public infrastructure and would enhance the amenity of Kirribilli Village.
## 8.2 Objects of the EP&A Act

<table>
<thead>
<tr>
<th>Object</th>
<th>Comment</th>
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<tbody>
<tr>
<td>5(a)(i) To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.</td>
<td>The proposal would contribute to the proper management, development and heritage conservation of the Milsons Point railway station concourse, which is a part of the Sydney Harbour Bridge State Heritage Register item and National Heritage List item and the Ennis Road precinct, which is a part of Kirribilli Village. The proposal would promote the social and economic welfare of the community by improving access for people with a disability through the station concourse and to the rail services. The proposal would contribute to a better environment by improving the pedestrian safety and amenity of Ennis Road. See chapter 6 for further details.</td>
</tr>
<tr>
<td>5(a)(ii) To encourage the promotion and co-ordination of the orderly economic use and development of land.</td>
<td>The proposal would involve the upgrade of existing transport infrastructure to ensure safe, ongoing use. It would also improve the amenity of the Ennis Road precinct.</td>
</tr>
<tr>
<td>5(a)(iii) To encourage the protection, provision and co-ordination of communication and utility services.</td>
<td>The proposal would not impact on the provision or coordination of communication and/or utility services. Relevant utility providers have been consulted during the development of the proposal.</td>
</tr>
<tr>
<td>5(a)(iv) To encourage the provision of land for public purposes.</td>
<td>The proposal would upgrade the Milsons Point station concourse and Ennis Road including to improve accessibility for people with a disability. The Ennis Road upgrade would provide improved pedestrian facilities including a pedestrian plaza.</td>
</tr>
<tr>
<td>5(a)(v) To encourage the provision and co-ordination of community services and facilities.</td>
<td>The proposal would upgrade the Milsons Point station concourse to improve pedestrian access to the railway platform and between the suburbs of Milsons Point and Kirribilli, including to improve access for people with a disability. The Ennis Road upgrade would improve pedestrian facilities.</td>
</tr>
<tr>
<td>5(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.</td>
<td>The proposal would be undertaken in a highly disturbed, urban environment and would not impact on biodiversity values. The proposal site is not considered to have habitat suitable for any threatened flora and fauna and vegetation removed as a result of the proposal are introduced street trees. Refer to section 6.11 for further information.</td>
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<tr>
<td>5(a)(vii) To encourage ecologically sustainable development.</td>
<td>Ecologically sustainable development is considered in Section 8.3 below.</td>
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<td>5(a)(viii) To encourage the provision and maintenance of affordable housing.</td>
<td>Not relevant to the proposal.</td>
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<tr>
<td>5(b) To promote the sharing of the responsibility for environmental planning between different levels of government in the State.</td>
<td>Not relevant to the proposal.</td>
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</tbody>
</table>
5(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.

The community consultation carried out assisted the development of the proposal and is detailed in chapter 5 of this REF. This REF will be displayed for community input. Any submissions received will be considered in finalising the details of the proposal. Further consultation would be carried out prior to commencement of construction and throughout the construction period.

8.3 Ecologically sustainable development

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

8.3.1 Precautionary principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment. This REF has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

8.3.2 Intergenerational equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations through the provision of improved rail infrastructure in the station concourse and an improved streetscape along Ennis Road.

The proposal would benefit both existing and future generations including by:

- Maintaining a state heritage listed item for future generations to enjoy and implementing safeguards and management measures to protect environmental values.
- Improving access at Milsons Point station concourse for people with a disability.
- Improved customer experience as a result of upgrading the station concourse.
- Improved Ennis Road streetscape and pedestrian access, safety and amenity.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this REF.
8.3.3 Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

8.3.4 Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. The primary focus of the proposal is to upgrade the station concourse to modern standards, including to provide access for people with a disability and to improve the functionality and amenity of Ennis Road. The proposal includes the upgrade of existing road and rail infrastructure, which would ensure continued use into the future. Accordingly, proposal makes use of existing resources, eliminating the requirement to procure the materials required to construct a new facility. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented.

8.4 Conclusion

The proposal is subject to assessment under Part 5 of the EP&A Act. This REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposal (in accordance with section 111 of the EP&A Act).

This assessment has found that while there may be impacts as a result of the proposal, they are not considered to be of sufficient significance, either in nature or extent as to be regarded as unacceptable. On balance, the beneficial outcomes that would arise from the proposal substantially outweigh any negative impacts that may arise and mitigation and management measures detailed in this REF would ameliorate or minimise any expected impacts.

The environmental impacts of the proposal, including cumulative impacts, are not considered to be significant and no aspect of the proposal is likely to significantly affect the environment, accordingly it is not necessary for an environmental impact statement to be prepared and approval to be sought for the proposal from the Minister for Planning and Infrastructure under Part 5.1 of the EP&A Act. The proposal is unlikely to affect threatened species, populations or ecological communities or their habitats, within the meaning of the Threatened Species Conservation Act 1995 or Fisheries Management Act 1994 and therefore a Species Impact Statement is not required. The proposal is also unlikely to affect Commonwealth land, or have a significant impact on any matters of national environmental significance and therefore a referral to the Australian Minister for Sustainability, Environment, Water, Population and Communities is not required.
Certification

This review of environmental factors provides a true and fair review of the proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposal.

Kirk Osborne
Principal Planner, JBA Planning
Date:

I have examined this review of environmental factors and the certification by Kirk Osborne and accept the review of environmental factors on behalf of the Roads and Maritime Services.

Paul Gregory
Manager, Property Sales and Leasing
Date:
9 References


## Terms and acronyms used in this REF

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AHIMS</td>
<td>Aboriginal Heritage Information Management System</td>
</tr>
<tr>
<td>BCA</td>
<td>Building Code of Australia</td>
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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<tr>
<td>CEMP</td>
<td>Contractor's Environmental Management Plan</td>
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<td>CMP</td>
<td>Conservation Management Plan</td>
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<tr>
<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
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<tr>
<td>DA</td>
<td>Development Application</td>
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<tr>
<td>db(A)</td>
<td>A-weighted decibels. An expression of the relative loudness of sounds in air as perceived by the human ear.</td>
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<td>DCP</td>
<td>Development Control Plan</td>
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<tr>
<td>DECCW</td>
<td>Department of Environment, Climate Change and Water</td>
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<td>DLEP</td>
<td>Draft Local Environmental Plan</td>
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<tr>
<td>DP&amp;I</td>
<td>Department of Planning &amp; Infrastructure</td>
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<tr>
<td>DUAP</td>
<td>Department of Urban Affairs and Planning</td>
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<tr>
<td>EIA</td>
<td>Environmental impact assessment</td>
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<td>EP&amp;A Act</td>
<td>Environmental Planning and Assessment Act 1979 (NSW). Provides the legislative framework for land use planning and development assessment in NSW</td>
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<tr>
<td>EP&amp;A Regulation</td>
<td>Environment Planning and Assessment Regulation 2000</td>
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<tr>
<td>ESD</td>
<td>Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased</td>
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<tr>
<td>FM Act</td>
<td>Fisheries Management Act 1994 (NSW)</td>
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<td>Heritage Act</td>
<td>Heritage Act 1977 (NSW)</td>
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<tr>
<td>ISEPP</td>
<td>State Environmental Planning Policy (Infrastructure) 2007</td>
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<tr>
<td>LAeq</td>
<td>Equivalent Continuous Level. The equivalent continuous sound which would contain the same sound energy as a</td>
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<tr>
<td>LGA</td>
<td>Local Government Area</td>
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<tr>
<td>LoS</td>
<td>Level of Service. A qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers.</td>
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<tr>
<td>NPW Act</td>
<td>National Parks and Wildlife Act 1974 (NSW)</td>
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<tr>
<td>NSW</td>
<td>New South Wales</td>
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<tr>
<td>OEH</td>
<td>Office of Environment and Heritage</td>
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<td>PACHI</td>
<td>Procedure for Aboriginal Cultural Heritage Investigation</td>
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<td>PCB</td>
<td>Polychlorinated Biphenyl</td>
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<tr>
<td>REF</td>
<td>Review of Environmental Factors</td>
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<tr>
<td>RMS</td>
<td>Roads and Maritime Services</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>RTA</td>
<td>Roads and Traffic Authority</td>
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<td>SMF</td>
<td>Synthetic Mineral Fibres</td>
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<td>SOHI</td>
<td>Statement of Heritage Impact</td>
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<tr>
<td>TSC Act</td>
<td><em>Threatened Species Conservation Act 1995 (NSW)</em></td>
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<tr>
<td>WRAPP</td>
<td>Waste Reduction and Purchasing Policy</td>
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</table>