



Transport  
for NSW

# Arncliffe Station Upgrade

## Determination Report



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# Glossary and abbreviations

<b>BCA</b>	Building Code of Australia
<b>CBD</b>	Central Business District
<b>CEMP</b>	Construction Environmental Management Plan
<b>CoA</b>	Condition of Approval
<b>CNVMP</b>	Construction Noise and Vibration Management Plan
<b>CPTED</b>	Crime Prevention Through Environmental Design
<b>DDA</b>	<i>Disability Discrimination Act 1992 (Commonwealth)</i>
<b>DSFAPT</b>	Disability Standards for Accessible Public Transport
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
<b>EP&amp;A Regulation</b>	<i>Environmental Planning and Assessment Regulation 2000 (NSW)</i>
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
<b>Infrastructure SEPP</b>	<i>State Environmental Planning Policy (Infrastructure) 2007</i>
<b>LEP</b>	Local Environmental Plan
<b>LGA</b>	Local Government Area
<b>NSW</b>	New South Wales
<b>OEH</b>	NSW Office of Environment and Heritage
<b>Proponent</b>	A person or body proposing to carry out an activity under Part 5 of the EP&A Act – in this instance, Transport for NSW.
<b>Proposed Activity</b>	The construction and operation of the Arncliffe Station Upgrade
<b>REF</b>	Review of Environmental Factors
<b>Roads and Maritime</b>	NSW Roads and Maritime Services (formerly Roads and Traffic Authority)
<b>Sydney Trains</b>	Sydney Trains are the rail operator that services the different needs of Sydney and intercity customers. Sydney Trains is tasked with delivering metropolitan rail customers with a better service.
<b>Section 60</b>	When a place is listed on the State Heritage Register (SHR) or affected by an interim heritage order, the approval of the Heritage Council of NSW is required for any major work. This approval is made on the approved form which is known as a Section 60 for approval to carry out a Section 57(1) activity to an item or land listed on the SHR or to which an Interim Heritage Order applies.
<b>TAP</b>	Transport Access Program
<b>Transport for NSW</b>	Transport for NSW (the Proponent)
<b>TTAIA</b>	Traffic Transport and Access Impact Assessment

# Executive summary

## Overview of Proposed Activity

Transport for NSW is responsible for improving the customer experience of transport services, transport policy and regulation, planning and program administration, procuring transport services, and infrastructure and freight.

Transport for NSW is the Proponent for the Arncliffe Station Upgrade (the 'Proposed Activity'), which is consistent with the objectives of the Transport Access Program (TAP). The TAP is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

The Proposed Activity would provide a number of improved features to provide an accessible station and improved interchange facilities. The development of the design has considered the existing heritage values of Arncliffe Station which is listed on the State Heritage Register, RailCorp's Section 170 Heritage and Conservation Register and the heritage schedule of the *Rockdale Local Environmental Plan 2011*.

Transport for NSW, as the Proponent for the Proposed Activity, has prepared a Review of Environmental Factors (REF) that details the scope of works and environmental impacts associated with the Proposed Activity. The REF was prepared by Transport for NSW in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and clause 228 of the *Environmental Planning and Assessment Regulation 2000*. During the preparation of the REF and design development, Transport for NSW met with the Heritage Division of the NSW Office of Environment and Heritage (OEH) on 24 July 2014 and 12 December 2014 regarding the Proposal.

The Arncliffe Station Upgrade REF was placed on public display from Thursday 19 February to Thursday 12 March 2015, with 15 submissions received, including a submission from Rockdale City Council and the Heritage Division of OEH. An application under Section 60 of the *Heritage Act 1977* application was submitted to the Heritage Division of OEH, which was placed on public display from Wednesday 4 March 2015 to Wednesday 25 March 2015. No submissions were received in response to the public display of the application.

## Modifications to Proposed Activity

Design modifications have been made to the Proposed Activity since the REF was placed on public display. These modifications were made in response to comments received from the Heritage Division and are discussed in Section 4.1.

## **Purpose of this report**

The purpose of this Determination Report is for Transport for NSW, as the Proponent of the Arncliffe Station Upgrade, to determine whether or not to proceed with the Proposed Activity. Transport for NSW must make a determination in accordance with the provisions of Part 5 of the EP&A Act.

## **Conclusion**

Based on the assessments in the REF and a review of the submissions received from the community and stakeholders, it is recommended that the Proposed Activity be approved, subject to the mitigation measures included in the REF, the proposed Conditions of Approval, and the Conditions of Approval issued by the Heritage Division of OEH through the Section 60 application process. Transport for NSW will continue to liaise with the community and other stakeholders as the Proposed Activity progresses through detailed design and into the construction phase.

# 1 Introduction

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## 1.1 Background

Transport for NSW is the NSW Government's lead transport agency that ensures planning and policy is fully integrated across all modes of transport in NSW. It manages a multi-billion dollar budget allocation for rail, bus, ferry and taxi services and related infrastructure in NSW.

Transport for NSW is responsible for improving the customer experience of transport services, transport policy and regulation, planning and program administration, procuring transport services, infrastructure and freight.

On 23 April 2012, the Minister for Transport announced the Transport Access Program (TAP). The program provides a better experience for public transport customers across the State by ensuring infrastructure improvements are delivered in a coordinated and integrated way.

TAP ensures the integrated planning and delivery of works with the aim of providing:

- stations that are accessible to people with a disability, those who are less mobile and parents with prams
- modern buildings and facilities for all modes that meet the needs of a growing population
- modern interchanges that support an integrated network and allow seamless transfers between all modes for all customers
- safety improvements including extra lighting, help points, fences and security measures for car parks and interchanges, including stations, bus stops and wharves
- signage improvements so customers can more easily use public transport and transfer between modes at interchanges
- other improvements and maintenance such as painting, new fencing and roof replacements.

The Proposed Activity has been developed to be consistent with the objectives of TAP.

## 1.2 Arncliffe Station Upgrade

Arncliffe Station is located on the T4 Eastern Suburbs and Illawarra Line about eight kilometres south-west of the Sydney central business district (CBD) and is within the Rockdale Local Government Area (LGA). The station is located within the Arncliffe town centre and is surrounded by residential and commercial premises.

Arncliffe Station does not currently provide equitable access to station platforms, or meet key requirements of the Disability Standards for Accessible Public Transport (DSAPT) or the Commonwealth *Disability Discrimination Act 1992* (parking). The platform is currently accessible by stairs only. There are no lifts or ramps and the existing arrangement is not suitable for the users of any wheeled vehicles (bicycles, prams, pushchairs/wheelchairs) or older people with reduced mobility.

The Arncliffe Station Upgrade is required to improve access to the station, commuter car park and surrounding pedestrian areas to provide equitable access. The upgrade would also improve customer facilities and amenity. The improvements would provide an improved customer experience for existing and future users of the station.

Transport for NSW is the Proponent for the Arncliffe Station Upgrade (or 'Proposed Activity'). The specific objectives of the Proposed Activity are to:

- provide a station that is accessible to customers with disabilities, who are less mobile and parents/ carers with prams
- improve customer facilities
- improve customer amenity
- improve the transport interchange area through improvements to the existing bus stop and new formalised kiss and ride/ taxi zones and upgrade bicycle facilities
- enhance connections to the adjacent pedestrian and bicycle network
- be sympathetic to the heritage significance and ongoing heritage values of the station.

### 1.3 Review of Environmental Factors

A Review of Environmental Factors (REF) was prepared by Transport for NSW in accordance with sections 111 and 112 of the *Environmental Planning and Assessment 1979* (EP&A Act), and clause 228 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), to ensure that Transport for NSW takes into account to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the Proposed Activity.

The Arncliffe Station Upgrade REF provides information on the scope of works and environmental impacts associated with the Proposed Activity. The REF concluded that the Proposed Activity would not have a significant impact on the environment and that, should the Proposed Activity proceed, the likely impacts would be appropriately managed in accordance with the mitigation measures outlined in the REF. The REF is included at **Appendix A**.

The Arncliffe Station Upgrade REF was placed on public display from Thursday 19 February to Thursday 12 March 2015, with 16 submissions received, including a submission from Rockdale City Council. Issues raised in these submissions are addressed in Section 3.4 of this report.

### 1.4 Purpose of this Determination Report

In order to proceed with the Proposed Activity, the Secretary, Transport for NSW must make a determination in accordance with Part 5 of the EP&A Act (refer Figure 1).

The purpose of this Determination Report is to address the following to allow for a determination of the Proposed Activity:

- assess the environmental impacts with respect to the Proposed Activity, which are detailed in the environmental impact assessment
- identify mitigation measures to minimise potential environmental impacts
- determine whether potential environmental impacts are likely to be significant
- address whether the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) apply to the Proposed Activity.



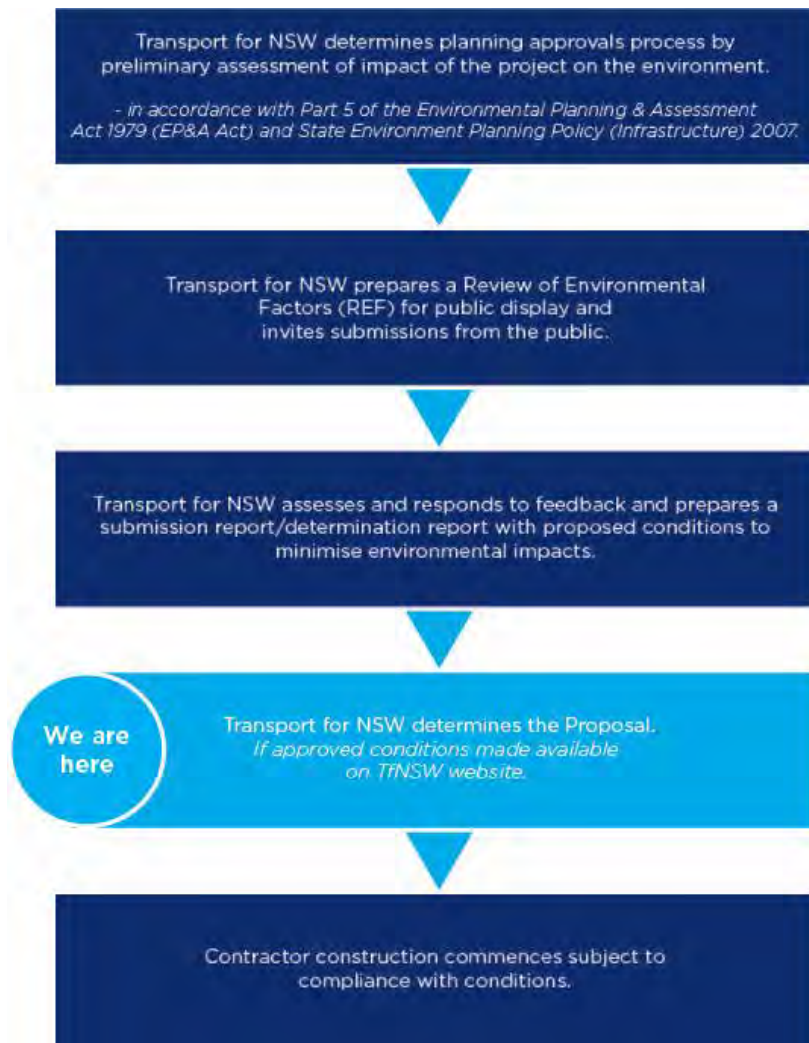


Figure 1: Planning approval process

## 2 Description of Proposed Activity

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### 2.1 Description of Proposed Activity in the REF

The Proposal involves an upgrade of Arncliffe Station which would improve accessibility and amenities for customers.

The Proposal would include a number of improved features to provide an accessible station and improved interchange facilities. It would include the following key elements:

- new structure with four lifts near the existing footbridge to provide access from both sides of the station and to each of the island platforms
- new canopy awning and security screens installed along the length of the existing footbridge
- new canopy awnings installed on Platforms 2 and 3 between the new lifts and existing platform buildings
- new concrete deflection walls protecting piers to the southern side of the outer main footbridge protecting piers
- upgrade of existing stairs, signage and associated tactile indicators
- new family accessible toilets installed on each island platform
- provision of new bus and taxi shelters and a new kiss and ride area on Firth Street
- two new accessible parking spaces in the commuter car park located to the east of the station with an accessible footpath to the lift
- bicycle racks installed on both sides of the station
- landscaping works
- minor restoration to heritage structures
- CCTV upgrade
- services relocation/upgrades
- construction of a new section of retaining wall along the rail boundary, immediately north of the western entrance to the station
- partial demolition of a vacant shop located immediately to the south of the existing station entry stairs on Firth Street to allow space for the lift structure and required clearances
- replacement of a power transformer located within the rail corridor off Arncliffe Street north of the platforms in order to achieve the additional power supply for the new lifts
- potential for the existing 33 kV aerial cables (that run along the eastern side of the corridor boundary) to be undergrounded.

Subject to planning approval, construction is expected to commence in May 2015 and will take approximately 18 months to complete.

# 3 Consultation and assessment of submissions

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## 3.1 Consultation undertaken prior to display of the REF

Details of consultation undertaken with State and Local Government stakeholders is outlined below.

### Sydney Trains

Sydney Trains has been consulted throughout the development of the Proposed Activity regarding the design of the station and interchange, and the potential impacts to station operations. Detailed system functional requirements have been developed in consultation with relevant Sydney Trains stakeholders and incorporated into the design.

### Heritage Division

Transport for NSW held meetings with the Heritage Division on 24 July 2014 and 12 December 2014 regarding the design development of the Proposed Activity.

### Rockdale City Council

An initial meeting was held with Rockdale City Council on 19 September 2014 regarding the Proposed Activity, where Council was provided with an overview of the options for the Proposed Activity.

Additional meetings with Council were held on 10 December 2014 and 27 January 2015 and 4 February 2015 regarding the ongoing design development of the Proposed Activity.

### Roads and Maritime Services

Consultation with Roads and Maritime Services has been undertaken regarding use of the Burrows Street site as a temporary compound and commuter car park.

## 3.2 Consultation during public display of the REF

The Arncliffe Station Upgrade REF was placed on public display from Thursday 19 February 2015 to Thursday 12 March 2015. Consultation activities undertaken for the public display included:

- distribution of 2500 flyers to local households located within approximately 1km from the station and 3000 flyers to railway customers at the station, outlining the Proposal and inviting feedback on the REF
- advertisements for the REF public display were published in local newspapers (St George and Sutherland Shire Leader) on Tuesday 24 and Thursday 26 February 2015 providing a summary of the Proposed Activity, information on where to view the REF and how to provide feedback
- installation of posters at Arncliffe station with the above mentioned information, including a link to the Transport for NSW website and NSW Government *Have Your Say* website
- door knocks on Firth Street and a meeting at the Scots Club on 26 February 2015

- project information, including a copy of the REF and supporting technical studies were published on the Transport for NSW website and NSW Government *Have Your Say* website, and hard copies of the REF were displayed at:
  - Rockdale City Council
  - Arncliffe Library
  - Transport for NSW Community Information Centre, Ground Floor, 388 George Street Sydney.

A letter, along with details on how to make a submission, was sent to Rockdale City Council as per the consultation requirements under clauses 13 and 14 of the Infrastructure SEPP.

Following the public display of the REF, Council requested an on-site meeting on 27 March 2015 which was attended by representatives of Council and Transport for NSW. Comments raised by Council at this meeting and responses from Transport for NSW are presented in Section 3.4.

### **3.3 REF submissions**

A total of 15 submissions on the REF were received by Transport for NSW, including one from Rockdale City Council. Submissions included feedback on a range of issues in relation to the Proposed Activity. Feedback was reviewed and categorised into the following key issues:

- accessible parking spaces
- lighting and security in the vicinity of the station
- parking for patrons of the Scots Club
- bicycle racks
- toilet location
- construction impacts
- heritage conservation
- canopies
- an additional northern entrance to the station
- location of Opal card readers
- the station footbridge shop.

### 3.4 Analysis and response to submissions

#### Community submissions

The following table outlines issues raised in community submissions, along with Transport for NSW's response.

Issue No.	Submission No.	Issue/s raised	Transport for NSW response
<b>1 General</b>			
1.1	ASU1 ASU2 ASU3 ASU4 ASU6 ASU7 ASU8 ASU9 ASU10 ASU11	Support for the Arncliffe Station Upgrade.	Noted.
1.2	ASU7	The Arncliffe Station Upgrade should have greater priority over the Arncliffe Pedestrian Link.	Work on the Arncliffe Pedestrian Link project has already commenced. The Arncliffe Station Upgrade (the Proposed Activity) will be commencing in May 2015. Transport for NSW has committed to provide both projects to the community in the most efficient timeframes possible.
1.3	ASU9	Agrees that Option 3 is the most appropriate option.	Noted.
1.4	ASU14	Would like to know when construction would commence and end.	As noted in the REF, subject to approval, construction is expected to commence in May 2015 and is expected to take approximately 18 months to complete.
<b>2 Traffic, transport and access</b>			
2.1	ASU2	Would like to see more accessible parking close to the station. Currently at Wollie Creek, there is one accessible parking space which is not very close to the station.	Two accessible parking spaces will be provided in the commuter car park located on the eastern side (Burrows Street) of the station. These spaces will be situated along the southern end of the car park and will be connected to the lift via a new DDA compliant pathway.

Issue No.	Submission No.	Issue/s raised	Transport for NSW response
2.2	ASU5	Would like another entrance on the northern side of the station.	<p>One of the key objectives of the Proposed Activity is to improve accessibility for customers using Arncliffe Station, a station that is listed on the State Heritage Register.</p> <p>The concept design has been developed taking into consideration the heritage significance of the station, and this includes utilising the existing entrances to the station.</p> <p>The provision of an additional entrance on the northern side is outside the scope of the Proposed Activity, and if undertaken, would have the potential to impact negatively on the heritage features of the station and on station security.</p> <p>The Proposed Activity, as described in the REF, fulfills the objectives of improving access to the station.</p>
2.3	ASU6	Suggests providing an alternative to the stairs at the street exits, such as an escalator or a ramp, due to the steepness of the stairs making it difficult for the elderly to use them.	<p>Transport for NSW as a provider of public transport infrastructure and services must comply with the standards as specified in the DSFAPT. The lift satisfies this requirement by providing equal access.</p> <p>Four lifts will be installed as part of the Proposed Activity; two lifts will provide access between the street and the station concourse and two will provide access between the concourse and the platforms. The lifts will assist customers who have difficulty using the stairs, and therefore there is no need for the stairs to be replaced by a ramp or escalator.</p> <p>Provision of a DDA-compliant ramp at this location would be likely to require expansion of the interchange area leading to encroachment into the public roadway.</p>

Issue No.	Submission No.	Issue/s raised	Transport for NSW response
<b>3 Station amenities / services</b>			
3.1	ASU2 ASU8	Would like more lighting along the walkway known as 'the arcade', in the park, and in the neighbourhood on the eastern side of the station, and CCTV in the neighbourhood on the eastern side of the station.	<p>The safety and security of the station precinct would be improved by the Proposed Activity due to the improved provision of lighting, CCTV and other safety devices. A further Security Workshop would be carried out at the detailed design stage and would be attended by Rockdale City Council, Sydney Trains, NSW Police and Transport for NSW.</p> <p>Lighting and CCTV along the 'arcade', the park and neighbourhood is located on land managed and/or owned by Rockdale City Council. Upgrades to lighting and CCTV outside of the project area are not part of the Proposed Activity.</p> <p>However, improved lighting for the station and commuter car park and improved CCTV coverage, which is proposed as part of the station upgrade, is likely to improve visibility and safety along the section of 'the arcade' immediately adjacent to the station.</p>
3.2	ASU8	Can the bicycle racks be on the western side (Firth Street) of the station as the eastern side is not well lit and attracts vandals and graffiti.	<p>As per the REF, bicycle racks with improved lighting and CCTV surveillance will be provided on both sides of the station.</p> <p>Refer also to response to 3.1 above.</p>
3.3	ASU8	There should be Wayfinding signage on the eastern side of the station to assist people find their way to the station.	Wayfinding signs will be provided on both sides of the station as part of the station upgrade.
3.4	ASU8	Would like toilets on Platforms 1/2.	New family-accessible toilets will be available on each island platform.
3.5	ASU12	Could not see the location of the Opal card readers on the planning documents. Suggests Opal card readers be placed in convenient locations for customers using the stairs and lifts.	Opal card readers will be provided in locations that are easily accessible by commuters using the lifts or the stairs. Locations will be determined at the detailed design stage.

Issue No.	Submission No.	Issue/s raised	Transport for NSW response
3.6	ASU14	The owner of the shop on the station concourse hopes his shop would not be not impacted by the Proposed Activity.	<p>A Pedestrian Management Plan would be prepared to minimise construction impacts to the shop. There are no plans for the footbridge (and the shop) to be closed during construction (other than for very short-term periods) and no disruption to the operation of the shop is anticipated.</p> <p>Should there be any temporary changes to the existing arrangement required during construction, consultation with the relevant stakeholders would be undertaken prior to the work being undertaken. See Condition of Approval (CoA) 48.</p> <p>Construction impacts such as noise and dust would be managed in accordance with the CEMP and Transport for NSW Construction Noise Strategy.</p>

#### **4 Construction impacts**

4.1	ASU13	Concern raised over the proposed changes to parking and traffic management during construction. Comments that members of the Arncliffe Scots Sports and Social Club currently have trouble finding parking opposite the club due to commuters taking up the all-day parking spaces, and concern over further difficulty finding parking during construction.	<p>The existing commuter car park (which has capacity for approximately 30 parking spaces) will be closed for the duration of the construction period for the safety of customers and staff.</p> <p>The closure of the commuter car park would allow for the construction of the new lift and two accessible parking spaces and for construction vehicles to enter and exit the construction site.</p> <p>Alternative commuter parking would be provided on part of the Roads and Maritime Services owned land off Burrows Street (Burrows Street compound), opposite the Scots Club.</p>
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Issue No.	Submission No.	Issue/s raised	Transport for NSW response
4.1 (cont.)			<p>This parking would be also available to members of the Scots Club, however it is anticipated that the peak use of the Club would occur at non commuter peak times. All other existing parking areas on local roads near the club would continue to be available to the public during construction unless otherwise approved following further assessment.</p> <p>A Construction Traffic Management Plan (CTMP) would be prepared to manage potential traffic impacts during construction.</p>
4.2	ASU13	Concern over truck movements near the Scots Club.	<p>A Construction Traffic Management Plan (CTMP) would be prepared by the Contractor, and must be approved by Transport for NSW in order to manage potential traffic impacts during construction.</p>
4.2	ASU13	Concern over construction noise and dust impacts.	<p>Potential construction noise impact would be managed in accordance with the requirements of the TfNSW <i>Construction Noise Strategy</i>. A Construction Noise and Vibration Management Plan (CNVMP) will be prepared prior to the commencement of works.</p> <p>The CNVMP would take into consideration measures for reducing the source noise levels of construction equipment by construction planning and equipment selection, where practicable.</p> <p>The contractor will also be required to implement air quality mitigation measures during construction. Such measures are part of Transport for NSW's Standard Conditions for the project, and include actions such as dust suppression by covering or applying water to exposed surfaces, appropriately covering loads on trucks, and minimising emissions from construction vehicles.</p>

Issue No.	Submission No.	Issue/s raised	Transport for NSW response
<b>5 Heritage conservation</b>			
5.1	ASU4	Appreciates that the Proposed Activity has taken into consideration the heritage significance of the station and that the station buildings and heritage features will be retained.	Noted.
5.2	ASU12	Suggests having canopies over the existing stairways. Identifies that Rockdale Station is also a heritage listed station but has canopies over its stairs.	<p>Arncliffe Railway Station is listed on the State Heritage Register. Construction activities for the Proposed Activity is subject to approval from the NSW Heritage Council.</p> <p>The heritage significance of the station design has been taken into consideration during the design development, which has included advice from an experienced heritage conservation architect, and feedback from the Heritage Division.</p> <p>Based on the individual heritage values of Arncliffe Station, it is proposed that canopies not be provided over the stairs to avoid adverse impacts to the heritage significance of the item. Canopies are provided between the lifts and the platform buildings, enabling wet weather access for commuters.</p>

## Rockdale City Council submission

Following an on-site meeting with representatives from Rockdale City Council and Transport for NSW, the following response was received on 31 March 2015. The following table outlines the issues raised by Rockdale City Council in their submission along with Transport for NSW's response.

Issue number.	Issue/s raised	Transport for NSW response
<b>1.</b>	<b>Maintenance</b>	
1.1	Council expressed concern on the future maintenance of the new facilities proposed as part of the Proposed Activity. Council requested a formal submission from Transport for NSW on maintenance items.	Noted. Transport for NSW will provide a formal submission showing the demarcation of property and maintenance boundaries and a list of maintenance items, for discussion with Council, prior to operation. See 4.5 below.
<b>2.</b>	<b>Western side of the station</b>	
2.1	Council noted its Heritage Kerb Policy which advises that all sandstone and brick kerbs are to be retained. Footpath levels are also a concern.	Noted. The kerb alignment is subject to detailed design. Should the kerb be realigned, the existing sandstone kerb will be removed, washed, stored and reinstated to form the new kerb alignment. The detailed design process will involve investigation of the footpath level issues raised. See CoA 49.
2.2	Council expressed concern on lane width to accommodate through traffic between the new bus/taxi zone and the centreline of Firth Street.	A Road Safety Audit will be undertaken at the start of detailed design and will include a survey to verify that the design has allowed for sufficient lane width to accommodate through traffic between a proposed realigned bus/taxi zone and the centreline of Firth Street. See CoA 45.
2.3	The location of the existing timber power poles in Firth Street may also be an issue if the footpath is widened.	Noted. There is sufficient width between the power poles and relocated kerb line to meet standards. Should the footpath be widened, the position of the power poles will be assessed individually during detailed design. See CoA 49.
2.4	Council has no objections to the removal of some of the trees along the Firth Street boundary to accommodate the proposed new bus/taxi shelters.	Noted.
2.5	The new shelters are to be provided by Adshel, final design to be subject to agreement with Council. Council will require at least two shelters at the bus stop and one shelter for the taxi stop.	Noted. Council will be consulted in regard to the final design of the shelters.

Issue number.	Issue/s raised	Transport for NSW response
2.6	With regard to the proposed widening of the footpath on the northern side of the Belmore Street Pedestrian Crossing, the existing brown coloured decorative fencing should match the existing fencing on site.	Noted. This will be investigated during detailed design.
2.7	Plans relating to the Firth Street bus/ taxi drop off zone to be submitted to Traffic Committee for endorsement.	Noted. Council's Traffic Committee will be provided with detailed plans prior to installing signage.
2.8	Buses in Firth Street to turn easily into Belmore Street without the need for a three-point-turn.	Noted. The bus zone will be located behind the taxi drop off zone to allow for ease of turning into Belmore Street. Swept paths will be confirmed as part of the Road Safety Audit which will be undertaken at the start of detailed design. See CoA 45.
2.9	Street lighting to be in accordance with standard Ausgrid poles and lanterns.	Lighting associated with the station entrance and interchange will be finalised in detailed design and will be designed in accordance with applicable standards. See CoA 47.
2.10	The existing footpath surface which currently comprises a mix of asphalt with brick banding is to be maintained.	Noted. This will be investigated during detailed design.
<b>3. Eastern side of the station</b>		
3.1	Council requests that drainage between the existing parking area and the footbridge incorporate Water Sensitive Urban Design (WSUD) standards to reduce runoff and also improve the quality of the runoff which will flow into Council's stormwater system.	Noted. This forms part of Transport for NSW's Sustainability criteria and will be considered during detailed design.
3.2	The entrance onto the new pathway is to be designed in accordance with the RMS guidelines to cater for pedestrians and cyclists off the existing pathway off Burrows Road.	Noted. This will be considered during detailed design.
3.3	Signage to be installed at the Burrows Street and Eden Street footpath entrances should clearly direct rail customers to the station.	Noted. Transport for NSW wayfinding signage is to be provided and will direct customers to the station.

Issue number.	Issue/s raised	Transport for NSW response
<b>4.</b>	<b>General</b>	
4.1	Lighting along footpaths on both sides of the station to meet standards.	Lighting associated with the station entrance and interchange will be finalised in detailed design and will be designed to meet Sydney Trains and applicable standards. See CoA 47.
4.2	The CCTV cameras which are to be installed and directed into this new area should be incorporated into the existing internal security of Arncliffe Station system.	Noted. The CCTV coverage will be reviewed and finalised during detailed design. All CCTV cameras installed will be monitored by Sydney Trains and will not form part of Council's CCTV system.
4.3	Additional/enhanced lighting to be connected to the station electricity supply.	Lighting supply forms part of detailed design. Lighting upgrades within the station boundary (e.g. car park lighting, lighting at entry stairs) will be drawn from the station electricity supply. Supply of lighting in the new shelters would be confirmed during detailed design. See CoA 47.
4.4	Opportunities to reuse existing Council street furniture to be investigated. Otherwise, furniture is to be carefully removed and transported to the Bexley Works Depot.	Noted. See CoA 49.
4.5	Council requires a formal agreement on operation and maintenance of interchange infrastructure on Council land.	Transport for NSW has contacted Rockdale City Council to commence the process of establishing an agreement specifying property and ownership, operation & maintenance arrangements for the Arncliffe Station Upgrade project.

### 3.5 Future consultation

Should Transport for NSW proceed with the Proposed Activity, consultation activities would continue, including consultation with Rockdale City Council regarding design development. In addition Transport for NSW would notify residents, businesses and community members in the lead up to and during construction. The consultation activities would help to ensure that:

- local council has an opportunity to provide feedback on the detailed design
- the community and stakeholders are notified in advance of any upcoming works, including changes to pedestrian or traffic access arrangements and out of hours construction activities
- accurate and accessible information is made available
- a timely response is given to issues and concerns raised by the community
- feedback from the community is encouraged, considered and responded to.

The Transport for NSW Project Infoline (1800 684 490), Construction Response Line (1800 775 465) and email address ([projects@transport.nsw.gov.au](mailto:projects@transport.nsw.gov.au)) would continue to be available during the construction phase. Targeted consultation methods, such as use of letters, notifications, signage and verbal communications, would continue to occur. The Transport for NSW website would also include updates on the progress of construction.

# 4 Design modifications

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## 4.1 Design modification based on feedback from the Heritage Division

As part of the Proposed Activity, an application under Section 60 of the *Heritage Act 1977* was submitted to the Heritage Division of OEH (Heritage Division). Following the public display of the REF, the Section 60 application was approved subject to Conditions of Approval ('Section 60 CoAs'). The Section 60 CoAs are included in **Appendix C**.

In response to the feedback received from the Heritage Division during the application process, a number of design changes have been made to the Proposed Activity from that described in the in the REF. These design changes are outlined below.

The design changes include:

- **Reduction of the entry signage:** The extended blades with station identification at the entries have been reduced substantially with the station 'T-sign' now fixed to the remaining concrete structural column. The scaled down entrance sign design is considered to have a positive visual impact due to reduced bulk and scale.
- **Reduced height of lift shafts:** The internal clearance of the lifts from the concourse floor has been reduced to meet the minimum height achievable while complying with applicable standards. The lower height of the lift shafts will improve the view of the station looking south from the platforms, resulting in a positive visual impact.
- **Reduction in visual scale of the horizontal overhead element:** The top horizontal truss member has been partially concealed by the roof structure and has been visually reduced in appearance by the addition of a slender fascia in front of the beam. The design modifications would improve the appearance of the new structure and have a positive visual impact.
- **New elements more transparent and visually light:** The balustrade along the southern glass wall of the footbridge has been removed from the design and replaced with a subtle darker grey handrail that provides for safety during maintenance activities. The new footbridge canopy roof has been modified to create a separation between it and the heritage booking office roof, allowing use of glass on the concourse canopy to improve the natural light that may reach the heritage building. The proposed design modification results in a positive outcome due to the reduced visual impact.
- **Detailing and choice of material more sympathetic to heritage:**
  - A mid grey colour palette for all new work has been selected
  - Column sizes for the platform canopies have been reduced to provide a more slender structure
  - The platform canopy column base is now flush with the platform surface, with only the footing plate and bolt heads above ground
  - Platform canopies have had their interface with platform heritage building roofs detailed with a glazed strip and overlap for continuous weather protection
  - The throw screens directly over the tracks have been visually minimised by changing the throw screen material to expanded mesh/netting.

- The high throw screen on stairs to Platform 3-4 has been removed. To meet station security and safety requirements, the western balustrade on stairs to Platform 3-4 will be raised to an appropriate height to deter trespass to the platform roof canopy below.

The proposed design changes are considered to be minor and are viewed as having no additional negative impacts on the environment. Overall, the proposed design changes have a positive visual impact and are considered more sympathetic to the heritage values of the state-significant station.

#### **4.2 Addendum to the Statement of Heritage Impact based on feedback from the Heritage Division**

Subsequent to the submission of the Section 60 application, the Heritage Division requested further advice and detail on the archaeological potential of the site. This was prepared as an Addendum to the Statement of Heritage Impact and submitted to the Heritage Division on 31 March 2015. Refer to **Appendix D**.



## 5 Consideration of environmental impacts

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The REF and Determination Report have been examined and considered, as follows:

### ***Environmental Planning and Assessment Act 1979***

The REF addresses the requirements of section 111 of the EP&A Act. In considering the Proposed Activity, all matters affecting or likely to affect the environment are addressed in the REF, the Determination Report and associated documentation.

In accordance with the checklist of matters for consideration contained in clause 228 of the EP&A Regulation, an assessment against these matters is provided in Appendix 2 of the REF.

The likely significance of the environmental impacts of the Proposed Activity has been assessed. The Proposed Activity is not likely to significantly affect the environment (including critical habitat) or threatened species, populations of ecological communities, or their habitats.

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

As part of the consideration of the Proposed Activity, all matters of National Environmental Significance (NES) and any impacts on Commonwealth land for the purposes of the EPBC Act have been assessed. A summary of this assessment is provided in Appendix 1 of the REF.

It is considered that the Proposed Activity described in the REF is not likely to have a significant impact on any Commonwealth land and is not likely to have a significant impact on any NES matters.

### ***Heritage Act 1977***

Arncliffe Railway Station is listed on the State Heritage Register, RailCorp's Section 170 heritage and Conservation Register and the heritage schedule of the *Rockdale Local Environmental Plan 2011* (LEP). The Proposed Activity would be undertaken within the curtilage of this item. The Proposed Activity aims to ensure equitable access outcomes are achieved in a way that conserves important heritage values and minimises impacts on heritage significance.

A Section 60 approval is required under the *Heritage Act 1977* for the Proposed Activity. A Section 60 application to the Heritage Division of OEH was submitted on 18 February 2015 and approved on 7 April 2015.

The Section 60 approval and the conditions issued by the Heritage Division are attached as **Appendix C** and will be implemented as part of the Proposed Activity.

### **Other legislation**

The REF and Determination Report have been prepared with regard to all relevant Commonwealth and NSW legislation. Statutory considerations for the Proposed Activity are discussed in more detail in Chapter 4 of the REF.

## 6 Conditions of Approval for Arncliffe Station Upgrade

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If approved, the Proposed Activity will be allowed to proceed subject to compliance with the Conditions of Approval included in **Appendix B** of this Determination Report.

## 7 Conclusion

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Transport for NSW is responsible for improving the customer experience of transport services, transport policy and regulation, planning and program administration, procuring transport services, and infrastructure and freight.

Transport for NSW is the Proponent for the Arncliffe Station Upgrade, which is consistent with the objectives of the TAP. The TAP is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

Based on the assessments in the REF it is concluded that the Proposed Activity is not likely to significantly affect the environment (including critical habitat) or threatened species, populations of ecological communities, or their habitats. Additionally, the proposed Conditions of Approval within this Determination Report would further strengthen the mitigation and management of key impacts of the Proposed Activity.

It is also considered that the Proposed Activity does not trigger the approval regime under Part 3 of the EPBC Act.

In considering the environmental impacts, proposed mitigation and broader project benefits it is recommended that the Proposed Activity be approved. The approval should be subject to the mitigation measures within the REF and the Conditions of Approval contained in this Determination Report.

ENVIRONMENTAL IMPACT ASSESSMENT

**Arncliffe Station Upgrade**

REVIEW OF ENVIRONMENTAL FACTORS & DETERMINATION REPORT

APPROVAL

I, DAVID GAINSFORD, as delegate for the Secretary, Transport for NSW, state as follows:

1. I have examined and considered the Proposed Activity in the Arncliffe Station Upgrade Review of Environmental Factors (February 2015) and Arncliffe Station Upgrade Determination Report (April 2015) in accordance with section 111 of the *Environmental Planning and Assessment Act 1979*.
2. I determine on behalf of Transport for NSW (the Proponent) that the Proposed Activity may be carried out in accordance with the Conditions of Approval in this Determination Report, consistent with the proposal described and mitigated in the Arncliffe Station Upgrade Review of Environmental Factors (February 2015) as amended by the mitigation and management measures included in the Conditions of Approval.



David Gainsford  
Technical Director, Planning and Environment Services  
Transport Projects  
Transport for NSW

Date: 28/4/15.

# **Appendix A**

## Arncliffe Station Upgrade Review of Environmental Factors (Transport for NSW, February 2015)

Please refer to the REF on the Transport for NSW Website.  
<http://www.transport.nsw.gov.au/projects-tap/current-works/arncliffe>

## **Appendix B**

# Arncliffe Station Upgrade Conditions of Approval (April 2015)

# Conditions of Approval

## For Arncliffe Station Upgrade

Note: These Conditions of Approval must be read in conjunction with the final mitigation measures in the REF.

### Schedule of acronyms and definitions used:

<b>CECR</b>	Construction Environmental Compliance Report
<b>CEMP</b>	Construction Environmental Management Plan
<b>CLP</b>	Community Liaison Plan
<b>CoA</b>	Condition of Approval
<b>CPTED</b>	Crime Prevention Through Environmental Design
<b>dBA</b>	decibels (A-weighted scale)
<b>ECM</b>	Environmental Controls Map
<b>EIA</b>	Environmental Impact Assessment
<b>EPA</b>	NSW Environment Protection Authority
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPL</b>	Environment Protection Licence issued by the Environmental Protection Authority under the <i>Protection of the Environment Operations Act 1997</i>
<b>EMR</b>	Environmental Management Representative
<b>EMS</b>	Environmental Management System
<b>ISO</b>	International Standards Organisation
<b>OEH</b>	NSW Office of Environment and Heritage
<b>OOHW</b>	Out of hours works protocol
<b>PES</b>	Transport for NSW Planning, Environment and Sustainability
<b>PCSR</b>	Pre-Construction Sustainability Report
<b>PECM</b>	Pre-Construction Environmental Compliance Matrix
<b>POCR</b>	Pre-Operational Compliance Report
<b>PMEIA</b>	Transport for NSW Principal Manager, Environmental Impact Assessment (or nominated delegate)
<b>PMEM</b>	Transport for NSW Principal Manager, Environmental Management (or nominated delegate)
<b>PMS</b>	Transport for NSW Principal Manager, Sustainability (or nominated delegate)
<b>RBL</b>	Rating Background Level
<b>REF</b>	Review of Environmental Factors
<b>Roads and Maritime</b>	NSW Roads and Maritime Service
<b>Transport for NSW</b>	Transport for NSW
<b>TMP</b>	Traffic Management Plan
<b>UDLP</b>	Urban Design and Landscaping Plan

**Construction** Includes all work in respect of the Project other than survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys or other activities determined by the Environmental Management Representative to have minimal environmental impact such as minor access roads, minor adjustments to services/utilities, establishing temporary construction sites (in accordance with this approval), or minor clearing (except where threatened species, populations or ecological communities would be affected).

**Contamination** The presence in, on or under land or any other aspect of the environment of a substance at a concentration above the concentration at which the substance is normally present in, on or under land or any other aspect of the environment in the same locality.

**Designated Works** Includes tunnelling, blasting, piling, excavation or bulk fill or any vibratory impact works including jack hammering and compaction, for Construction.

**Emergency Work** Includes works to avoid loss of life, damage to external property, utilities and infrastructure, prevent immediate harm to the environment, contamination of land or damage to a heritage (indigenous or non-indigenous) item.

**Environmental Impact Assessment (EIA)** The documents listed in Condition 1 of this approval.

**Environmental Management Representative (EMR)** An independent environmental representative appointed to the project or a delegate nominated by Transport for New South Wales.

**Noise Sensitive Receiver** In addition to residential dwellings, noise sensitive receivers include, but are not limited to, pre-schools and day care facilities, educational institutions (e.g. school, TAFE college), health care facilities (e.g. nursing home, hospital), recording studios and places of worship/religious facilities (e.g. church).

**Project** The construction and operation of the Arncliffe Station Upgrade works as described in the Environmental Impact Assessment.

**Proponent** A person or body proposing to carry out an activity under Part 5 of the EP&A Act - in this instance, Transport for NSW.

**Reasonable and Feasible** Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the New South Wales and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.



No.	Type
	<b>General</b>

**1. Terms of Approval**

The Project shall be carried out generally in accordance with the:

- a) Environmental Impact Assessment (EIA) (including all identified mitigation measures); and
- b) Conditions of Approval.

In the event of an inconsistency between these conditions and the EIA, these conditions will prevail to the extent of the inconsistency.

The EIA for this Project comprises the following documents:

Document	Author	Date
Arncliffe Station Upgrade – Review of Environmental Factors	Transport for NSW	February 2015
Arncliffe Station Upgrade – Determination Report	Transport for NSW	April 2015

**2. Project Modifications**

Any modification to the Project as approved in the EIA would be subject to further assessment. This assessment would need to demonstrate that any environmental impacts resulting from the modifications have been minimised. The assessment shall be subject to approval by a person with delegated authority in Transport for NSW.

**3. Statutory Requirements**

These conditions do not relieve the Proponent of the obligation to obtain all other licences, permits, approvals and land owner consents from all relevant authorities and land owners as required under any other legislation for the Project. The Proponent shall comply with the terms and conditions of such licences, permits, approvals and permissions.

**4. Pre-Construction Environmental Compliance Matrix**

A pre-construction environmental compliance matrix (PECM) for the Project (or such stages of the Project as agreed to by the Environmental Management Representative (EMR)) shall be prepared detailing compliance with all relevant conditions prior to commencement of construction. The PECM shall also include details of approvals, licences and permits required to be obtained under any other legislation for the Project.

The PECM shall include details demonstrating how the design and construction of the Project will be in compliance with Transport for NSW's *NSW Sustainable Design Guidelines Version 3.0 (7TP-ST-114)*.

The Proponent shall:

- a) submit a copy of the PECM to the EMR and Principal Manager, Sustainability (PMS) for review. The EMR and PMS are to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the PECM
- b) upon completion of the EMR and PMS review period, submit a copy of the PECM to the PMEM for approval, at least 14 days (or within such time as otherwise agreed to by the PMEM) prior to commencement of construction of the Project.

No.	Type
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5.	<b>Construction Environmental Compliance Report</b>
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The Proponent shall prepare a construction environmental compliance report (CECR) which addresses the following matters:

- a) compliance with the construction environmental management plan (CEMP) and these conditions
- b) compliance with the TfNSW *Sustainable Design Guidelines Version 3.0* compliance checklist (7TP-FT-249)
- c) compliance with any approvals or licences issued by relevant authorities for construction of the Project
- d) implementation and effectiveness of environmental controls (the assessment of effectiveness should be based on a comparison of actual impacts against performance criteria identified in the CEMP)
- e) environmental monitoring results, presented as a results summary and analysis
- f) details of the percentage of waste diverted from landfill and the percentage of spoil beneficially reused
- g) number and details of any complaints, including summary of main areas of complaint, actions taken, responses given and intended strategies to reduce recurring complaints (subject to privacy protection)
- h) details of any review and amendments to the CEMP resulting from construction during the reporting period
- i) any other matter as requested by the Principal Manager, Environmental Management (PMEM).

The Proponent shall:

- i. submit a copy of the CECR to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the CECR
- ii. submit a copy of the CECR to the PMEM (or nominated delegate) for approval upon completion of the EMR review period
- iii. make publicly available a copy of the CECR by posting the CECR on the Transport for NSW website within 7 days of approval of the CECR by the PMEM.

The first CECR shall report on the first six months of construction and be submitted within six weeks of expiry of that period (or at any other time interval agreed to by the PMEM). CECRs shall be submitted no later than six months after the date of submission of the preceding CECR (or at other such periods as requested by the PMEM) for the duration of construction.

No.	Type
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**6. Pre-Operation Compliance Report**

A pre-operation compliance report (POCR) for the Project shall be prepared, prior to commencement of operation of the Project. The POCR shall detail compliance with all the conditions and the TfNSW *Sustainable Design Guidelines Version 3.0* compliance checklist (7TP-FT-249) (refer to condition 39).

The Proponent shall:

- a) submit a copy of the POCR to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the POCR.
- b) upon completion of the EMR review period submit a copy of the POCR to the PMEM (or nominated delegate) and PMS for approval. The POCR is to be provided to the PMEM and PMS at least one month prior to the scheduled operation of the Project (or such time as otherwise agreed to by the PMEM).

**Communications**

**7. Community Liaison Plan**

The Proponent shall develop and implement a community liaison plan (CLP) to engage with government agencies, relevant councils, landowners, community members and other relevant stakeholders (such as utility and service providers, bus companies and businesses). The CLP shall provide a single, consistent consultation framework for proactive communications management for the duration of the construction period. The CLP shall comply with the obligations of these conditions and should include, but not necessarily be limited to:

- a) details of the protocols and procedures for disseminating information and liaising with the community and other key stakeholders about construction activities (including timing and staging) and any associated impacts during the construction period
- b) details of the community liaison team appointed to manage and implement the plan
- c) stakeholder and issues identification and analysis
- d) identification of opportunities where community feedback will be sought throughout the project (including sustainability initiatives)
- e) procedures for dealing with complaints or disputes and response requirements, including advertising the 24 hour construction response line number
- f) details (including a program) of training for all employees, contractors and sub-contractors on the requirements of the CLP.

Sub-plans to the CLP will be developed as required. These sub-plans will detail site-specific consultation and communication requirements for construction works that impact residents, other stakeholders and businesses. They will also identify further mitigation measures and processes to reduce construction impacts.

The CLP shall be prepared to the satisfaction of the Technical Director Project Communications at least 14 days prior to the commencement of construction and implemented, reviewed and revised as appropriate during construction of the Project.

No.	Type
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**8. Community Notification and Liaison**

The local community shall be advised of any activities related to the Project with the potential to impact upon them.

Prior to any site activities commencing and throughout the Project duration, the community is to be notified of works to be undertaken, the estimated hours of construction and details of how further information can be obtained (i.e. contact telephone number/email, website, newsletters etc) including the 24 hour construction response line number.

Construction-specific impacts including information on traffic changes, access changes, detours, services disruptions, public transport changes, high noise generating work activities and work required outside the nominated working hours shall be advised to the local community at least 7 days (and no more than 10 days (unless required by the Principal's Representative)) prior to such works being undertaken or other period as agreed to by the Technical Director Project Communications or as required by Environment Protection Authority (EPA) (where an Environment Protection Licence (EPL) is in effect).

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**9. Website**

The Proponent shall provide electronic information (or details of where hard copies of this information may be accessed by members of the public) related to the Project, on dedicated pages within its existing website, including:

- a) a copy of the documents referred to under condition 1 of this approval
- b) a list of environmental management reports that are publicly available
- c) details of construction information
- d) 24 hour contact telephone number for information and complaints.

Detailed updates of work progress and construction activities shall be regularly provided on the website.

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**10. Complaints Management**

The Proponent shall set up a 24 hour construction response line number.

Details of all complaints received during construction are to be recorded on a complaints register.

A verbal response to phone enquiries on what action is proposed to be undertaken is to be provided to the complainant within 2 hours during all times construction is being undertaken and within 24 hours during non-construction times (unless the complainant agrees otherwise). A detailed written response is to be provided to the complainant within 7 calendar days. Responses to written complaints (email/letter) should be provided within 48 hours of receipt of the communication.

Information on all complaints received during the previous 24 hours and response times shall be forwarded to the EMR each working day.

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No.	Type
<b>Property</b>	
11.	<p data-bbox="387 302 715 331"><b>Property Condition Surveys</b></p> <p data-bbox="387 353 1318 483">Subject to landowner agreement, property condition surveys shall be completed prior to piling, excavation or bulk fill or any vibratory impact works including jack hammering and compaction (Designated Works) in the vicinity of the following buildings/structures:</p> <ul style="list-style-type: none"> <li data-bbox="387 506 1353 568">a) all buildings/structures/roads within a plan distance of 50 metres from the edge of the Designated Works</li> <li data-bbox="387 591 1345 721">b) all heritage listed buildings and other sensitive structures within 50 metres from the edge of the Designated Works unless otherwise determined following geotechnical and vibration assessment as endorsed by a qualified geotechnical engineer and as approved by the PMEM as not likely to be adversely affected.</li> </ul> <p data-bbox="387 743 1353 909">Property condition surveys need not be undertaken if a risk assessment indicates buildings/structures/roads will not be affected as determined by a qualified geotechnical and construction engineering expert with appropriate registration on the National Professional Engineers Register prior to commencement of Designated Works.</p> <p data-bbox="387 931 1342 1028">Selected potentially sensitive buildings and/or structures shall first be surveyed prior to the commencement of the Designated Works and again immediately upon completion of the Designated Works.</p> <p data-bbox="387 1050 1353 1180">All owners of assets to be surveyed, as defined above, are to be advised of the scope and methodology of the survey and the process for making a claim regarding property damage within a reasonable time (not less than 14 days) prior to commencement of the surveys.</p> <p data-bbox="387 1202 1281 1265">A copy of the survey(s) shall be given to each affected owner. A register of all properties surveyed shall be maintained.</p> <p data-bbox="387 1288 1334 1384">Any damage to buildings, structures, lawns, trees, sheds, gardens etc as a result of construction activity direct and indirect (i.e. including vibration and groundwater changes) shall be rectified at no cost to the owner(s).</p>
<b>Environmental Management</b>	
12.	<p data-bbox="387 1451 679 1480"><b>Environmental Induction</b></p> <p data-bbox="387 1503 1350 1599">Prior to the commencement of construction, all contractors shall be inducted by the Proponent on the key Project interfaces and associated environmental risks and procedures.</p>
13.	<p data-bbox="387 1624 815 1653"><b>Environmental Management System</b></p> <p data-bbox="387 1675 1339 1771">Construction works shall be undertaken in accordance with the Proponent's environmental management system (EMS) which has been accredited as ISO14001 compliant.</p>

No.	Type
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14.	<b>Environmental Management Representative</b>
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Prior to the commencement of construction, the PMEM shall appoint an EMR who is independent of the design and construction personnel of the Project, for the duration of the construction period for the Project.

The EMR shall provide advice to the PMEM in relation to the environmental compliance and performance of the Project. The EMR shall have responsibility for:

- a) considering and advising the Proponent on matters specified in these conditions and compliance with such
- b) reviewing and where required by the PMEM, providing advice on the Project's induction and training program for all persons involved in the construction activities and monitoring implementation
- c) periodically auditing the Project's environmental activities to evaluate the implementation, effectiveness and level of compliance of on-site construction activities with authority approvals and licences, the CEMP and associated plans and procedures, including carrying out site inspections weekly, or as required by the PMEM;
- d) reporting weekly to the Proponent (unless otherwise requested by the PMEM)
- e) issuing a recommendation to the Proponent for work to stop immediately, if in the view of the EMR circumstances so require. The stop work recommendation may be limited to specific activities if the EMR can easily identify those activities
- f) requiring reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts
- g) reviewing corrective and preventative actions to ensure the implementation of recommendations made from the audits and site inspections
- h) providing reports to the Proponent on matters relevant to the carrying out of the EMR role as necessary
- i) where required by the PMEM, providing advice on the content and implementation of the CEMP and Environmental Controls Map (ECM) in accordance with the conditions.

The EMR shall be available during construction activities to inspect the site(s).

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No.	Type
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**15. Construction Environmental Management Plan**

The Proponent shall prepare a CEMP prior to commencement of construction which addresses the following matters:

- a) traffic and pedestrian management (in consultation with the relevant roads authority)
- b) noise and vibration management, including Transport for NSW's *Construction Noise Strategy (7TP-ST-157)* and the EPA's *Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009)*
- c) water and soil management including Transport for NSW's *Water Discharge and Reuse Guideline (7TP-ST-146)*
- d) air quality management (including dust suppression)
- e) indigenous and non-indigenous heritage management
- f) flora and fauna management
- g) storage and use of hazardous materials
- h) contaminated land (including acid sulphate soils)
- i) weed management
- j) waste management
- k) light spill
- l) sustainability initiatives
- m) environmental incident reporting and management procedures including Transport for NSW's *Environmental Incident Classification and Reporting Procedure (9TP-PR-105)*
- n) non-compliance and corrective/preventative action procedures.

The CEMP shall:

- i. comply with the conditions of approval, conditions of any licences, permits or other approvals issued by government authorities for the Project, all relevant legislation and regulations, and accepted best practice management
- ii. be prepared in accordance with the *Guideline for Preparation of Environmental Management Plans (Department Infrastructure, Planning and Natural Resources, 2004)*
- iii. include a site specific environmental policy.

The Proponent shall:

- 1. consult with government agencies and relevant service/utility providers as part of the preparation of the CEMP
- 2. submit a copy of the CEMP to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the CEMP
- 3. submit a copy of the CEMP to the PMEM (or nominated delegate) for approval upon completion of the EMR review period, at least 14 days prior to commencement of construction (or such time as is otherwise agreed to by the PMEM)
- 4. review and update the CEMP at minimum 6-monthly intervals, and in response to any actions identified as part of the EMR's audit of the document
- 5. ensure updates to the CEMP are made within 7 days of the completion of the review or receipt of actions identified by any EMR audit of the document, and be submitted to the EMR for approval.

The CEMP must be approved by the PMEM prior to the commencement of construction work associated with the Project.

No.	Type
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<b>16.</b>	<b>Environmental Controls Map</b>
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The Proponent shall prepare an ECM in accordance with Transport for NSW's Guide to Environmental Control Map (3TP-SD-015), prior to the commencement of construction for implementation for the duration of construction. The ECM is to be endorsed by the EMR and may be prepared in stages as set out in the CEMP.

The Proponent shall submit a copy of the ECM to the EMR for review and endorsement. The EMR is to be given a minimum period of 7 days to review and endorse the ECM. Following receipt of the EMR's endorsement, the ECM shall be submitted to the PMEM (or nominated delegate) for approval, at least 14 days prior to commencement of construction (or such time as is otherwise agreed to by the PMEM).

The ECM shall be prepared as a map – suitably enlarged (e.g. A3 size or larger) for mounting on the wall of a site office and included in site inductions, supported by relevant written information.

Updates to the ECM shall be made within 7 days of the completion of the review or receipt of actions identified by any EMR audit of the document, and be submitted to the EMR for approval.

<b>Hours of Work</b>	
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<b>17.</b>	<b>Standard Construction Hours</b>
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Construction activities shall be restricted to the hours of 7:00 am to 6:00 pm (Monday to Friday); 8:00 am to 1:00 pm (Saturday) and at no time on Sundays and public holidays except for the following works which are permitted outside these standard hours:

- a) any works which do not cause noise emissions to be more than 5 dBA higher than rating background level (RBL) at any nearby residential property and/or other noise sensitive receivers
- b) the delivery of plant, equipment and materials which is required outside these hours as requested by police or other authorities for safety reasons and with suitable notification to the community as agreed by the PMEM
- c) Emergency Work to avoid the loss of lives, property and/or to prevent environmental harm
- d) any other work as agreed by the PMEM (or nominated delegate), in accordance with Transport for NSW's *Out of Hours Work Application* (9TP-FT-079/080), and considered essential to the Project, or as approved by EPA (where an EPL is in effect).

Any work undertaken outside of the standard construction hours shall be subject to approval in accordance with Transport for NSW's *Construction Noise Strategy* (7TP-ST-157) and Transport for NSW's *Out of Hours Work Application* (9TP-FT-079/080).



No.	Type
<b>Noise and Vibration</b>	
<b>18.</b>	<b>High Noise Generating Activities</b>
	<p>Rock breaking or hammering, jack hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel and any other activities which result in impulsive or tonal noise generation shall only be scheduled between the following hours unless otherwise agreed to by the PMEM (or nominated delegate), or as approved by EPA (where relevant to the issuing of an EPL), unless inaudible at nearby residential properties and/or other noise sensitive receivers:</p>
	<ul style="list-style-type: none"> <li>a) 8:00am to 12:00pm, Monday to Saturday</li> <li>b) 2:00pm to 5:00pm Monday to Friday.</li> </ul>
<b>19.</b>	<b>Construction Noise and Vibration</b>
	<p>Construction noise and vibration mitigation measures shall be implemented through the CEMP, in accordance with Transport for NSW's <i>Construction Noise Strategy</i> (7TP-ST-157) and the EPA's <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009). The mitigation measures shall include, but not be limited to:</p>
	<ul style="list-style-type: none"> <li>a) details of construction activities and an indicative schedule for construction works</li> <li>b) identification of construction activities that have the potential to generate noise and/or vibration impacts on surrounding land uses, particularly sensitive noise receivers. This includes further assessment of airborne noise impacts associated with tunnel construction</li> <li>c) detail what reasonable and feasible actions and measures shall be implemented to minimise noise impacts (including those identified in the REF)</li> <li>d) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints</li> <li>e) an out of hours work protocol (OOHWP) for the assessment, management and approval of works outside the standard construction hours identified in condition 17 of this approval, including a risk assessment process which deems the out of hours activities to be of low, medium or high environmental risk, is to be developed. All out of hours works are subject to approval by the EMR and/or PMEM or nominated delegate), or as approved by EPA (where relevant to the issuing of an EPL). The OOHWP should be consistent with Transport for NSW's <i>Construction Noise Strategy</i> (7TP-ST-157) and Transport for NSW's <i>Out of Hours Work Application</i> (9TP-FT-079/080).</li> <li>f) a description of how the effectiveness of actions and measures shall be monitored during the proposed works, clearly indicating the frequency of monitoring, the locations at which monitoring shall take place, recording and reporting of monitoring results and if any exceedance is detected, the manner in which any non-compliance shall be rectified.</li> </ul>

No.	Type
20.	<p data-bbox="384 248 592 282"><b>Vibration Criteria</b></p> <p data-bbox="384 304 1353 367">Vibration (other than from blasting) resulting from construction and received at any structure outside of the Project shall be limited to:</p> <ul style="list-style-type: none"> <li data-bbox="384 389 1286 452">a) for structural damage vibration <i>German Standard DIN 4150:Part 3 - 1999: Structural Vibration in Buildings: Effects on Structures</i></li> <li data-bbox="384 474 1353 573">b) for human exposure to vibration – the acceptable vibration values set out in the <i>Environmental Noise Management Assessing Vibration: A Technical Guideline</i> (Department of Environment and Conservation, 2006).</li> </ul> <p data-bbox="384 595 1294 622">These limits apply unless otherwise approved by the PMEM through the CEMP.</p>
21.	<p data-bbox="384 640 735 674"><b>Non-Tonal Reversing Beepers</b></p> <p data-bbox="384 696 1353 790">Non-tonal reversing beepers (or an equivalent mechanism) shall be fitted and used on all construction vehicles and mobile plant regularly used on site (i.e. greater than one day) and for any out of hours work.</p>
22.	<p data-bbox="384 808 839 842"><b>Noise Impact on Educational Facilities</b></p> <p data-bbox="384 864 1353 1025">Potentially affected pre-schools, schools, universities and any other affected permanent educational institutions shall be consulted in relation to noise mitigation measures to identify any noise sensitive periods (e.g. exam periods). As much as reasonably possible noise intensive construction works in the vicinity of affected educational buildings are to be minimised.</p>
23.	<p data-bbox="384 1043 767 1077"><b>Operational Noise and Vibration</b></p> <p data-bbox="384 1099 555 1128">Not applicable</p>
24.	<p data-bbox="384 1146 887 1180"><b>Operational Noise Compliance Monitoring</b></p> <p data-bbox="384 1202 555 1232">Not applicable</p>
25.	<p data-bbox="384 1249 456 1283"><b>Piling</b></p> <p data-bbox="384 1305 1353 1400">Wherever practical, piling activities shall be completed using non-percussive piles. If percussive piles are proposed to be used, approval of the EMR or PMEM shall be obtained prior to commencement of piling activities.</p>
<b>Contamination and Hazardous Materials</b>	
26.	<p data-bbox="384 1469 555 1503"><b>Duty to Notify</b></p> <p data-bbox="384 1525 1385 1680">If previously unidentified contamination is identified within the site, the Proponent is to determine whether there is a Duty to Report under section 60 of the <i>Contaminated Land Management Act 1997</i>, and notify the EPA in accordance with the EPA's <i>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (Department of Environment and Climate Change, 2009).</p>

No.	Type
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**27. Unidentified Contamination (other than Asbestos)**

If previously unidentified contamination (excluding asbestos) is discovered during construction, work in the affected area must cease immediately, and an investigation must be undertaken and report prepared to determine the nature, extent and degree of any contamination. The level of reporting must be appropriate for the identified contamination in accordance with EPA's *Guidelines for Consultants Reporting on Contaminated Sites* (OEH, 2011).

The Proponent shall:

- a) submit a copy of any contamination report to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the report
- b) submit a copy of the contamination report to the PMEM for consideration upon completion of the EMR review period. The PMEM shall determine whether consultation with the relevant council and/or EPA is required prior to continuation of construction works within the affected area.

**Note:** *In circumstances where both previously unidentified asbestos contamination and other contamination are discovered within a common area, nothing in these conditions shall prevent the preparation of a single investigation report to satisfy the requirements of both condition 27 and condition 28.*

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**28. Asbestos Management**

If previously unidentified asbestos contamination is discovered during construction, work in the affected area must cease immediately, and an investigation must be undertaken and report prepared to determine the nature, extent and degree of the asbestos contamination. The level of reporting must be appropriate for the identified contamination in accordance with relevant EPA and WorkCover Guidelines and include the proposed methodology for the remediation of the asbestos contamination. Remediation activities must not take place until receipt of the investigation report.

Works may only recommence upon receipt of a validation report from a suitably qualified contamination specialist that the remediation activities have been undertaken in accordance with the investigation report and remediation methodology.

**Note:** *In circumstances where both previously unidentified asbestos contamination and other contamination are discovered within a common area, nothing in these conditions shall prevent the preparation of a single investigation report to satisfy the requirements of both condition 27 and condition 28.*

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No.	Type
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<b>29.</b>	<b>Storage and Use of Hazardous Materials</b>
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Construction hazard and risk issues associated with the use and storage of hazardous materials shall be addressed through risk management measures, which shall be developed by the construction contractor prior to construction as part of the overall CEMP, in accordance with relevant EPA guidelines, Transport for NSW's *Chemical Storage and Spill Response Guidelines* (9TD-SD-066) and Australian and ISO standards. These measures shall include:

- a) the storage of hazardous materials, and refuelling/maintenance of construction plant and equipment to be undertaken in clearly marked designated areas that are designed to contain spills and leaks
- b) spill kits, appropriate for the type and volume of hazardous materials stored or in use, to be readily available and accessible to construction workers. Kits to be kept at hazardous materials storage locations, in site compounds and on specific construction vehicles. Where a spill to a watercourse is identified as a risk, spill kits to be kept in close proximity to potential discharge points in support of preventative controls
- c) all hazardous materials spills and leaks to be reported to site managers and actions to be immediately taken to remedy spills and leaks
- d) training in the use of spill kits to be given to all personnel involved in the storage, distribution or use of hazardous materials.

<b>Traffic and Access</b>	
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<b>30.</b>	<b>Traffic Management Plan</b>
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The Proponent shall prepare a construction traffic management plan (TMP) as part of the CEMP which addresses, as a minimum, the following:

- a) ensuring adequate road signage at construction work sites to inform motorists and pedestrians of the work site ahead to ensure that the risk of road accidents and disruption to surrounding land uses is minimised
- b) maximising safety and accessibility for pedestrians and cyclists
- c) ensuring adequate sight lines to allow for safe entry and exit from the site
- d) ensuring access to railway stations, businesses, entertainment premises and residential properties (unless affected property owners have been consulted and appropriate alternative arrangements made)
- e) managing impacts and changes to on and off street parking and requirements for any temporary replacement provision
- f) parking locations for construction workers away from stations and busy residential areas and details of how this will be monitored for compliance
- g) routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses
- h) details for relocating kiss and ride, taxi ranks and rail replacement bus stops if required, including appropriate signage to direct patrons, in consultation with the relevant bus operator. Particular provisions should also be considered for the accessibility impaired.
- i) measures to manage traffic flows around the area affected by the Project, including as required regulatory and direction signposting, line marking and variable message signs and all other traffic control devices necessary for the implementation of the TMP.

The Proponent shall consult with the relevant roads authority during preparation of the TMP, as required. The performance of all Project traffic arrangements must be monitored during construction.

No.	Type
<b>31.</b>	<b>Road Condition Reports</b>  Prior to construction commencing, the Proponent shall prepare road condition surveys and reports on condition of roads and footpaths affected by Construction. Any damage resulting from the construction of the Project, aside from that resulting from normal wear and tear, shall be repaired at the Proponent's expense.
	<b>Lighting</b>
<b>32.</b>	<b>Lighting Control</b>  Not used.  See site-specific CoA 47 below.
	<b>Flora and Fauna</b>
<b>33.</b>	<b>Replanting Program</b>  All cleared vegetation shall be replaced and/or offset in accordance with Transport for NSW's <i>Vegetation Offset Guide</i> (9TP-ST-149). All vegetation planted on-site is to consist of locally endemic native species, unless otherwise agreed by the PMEM, following consultation with the relevant council, where relevant, and/or the owner of the land upon which the vegetation is to be planted.
<b>34.</b>	<b>Removal of Trees or Vegetation</b>  Approval is required in accordance with Transport for NSW's <i>Removal or Trimming Vegetation Application</i> (9TP-FT-078) for the trimming, cutting, pruning or removal of trees or vegetation where the impact has not already been identified in the EIA for the Project.
	<b>Erosion and Sediment Control</b>
<b>35.</b>	<b>Erosion and Sediment Control</b>  Soil and water management measures shall be prepared and implemented as part of the CEMP for the mitigation of water quality and hydrology impacts during construction of the Project. The management measures shall be prepared in accordance with <i>Managing Urban Stormwater: Soils and Construction</i> 4th Edition (Landcom, 2004).
	<b>Heritage</b>
<b>36.</b>	<b>Indigenous and Non-Indigenous Heritage</b>  If previously unidentified indigenous or non-indigenous heritage/archaeological items are uncovered during construction works, all works in the vicinity of the find shall cease and appropriate advice shall be sought from a suitably qualified heritage consultant (and in consultation with the OEH Heritage Branch where appropriate). Works in the vicinity of the find shall not re-commence until clearance has been received from the heritage consultant.
	<b>Urban Design and Landscaping</b>
<b>37.</b>	<b>Urban Design and Landscaping Plan</b>  Not used.  See site-specific CoA 43 below.

No.	Type
<b>Sustainability</b>	
<b>38.</b>	<p data-bbox="387 304 639 331"><b>Sustainability Officer</b></p> <p data-bbox="387 353 1241 416">The Proponent shall appoint a Sustainability Officer who is responsible for implementing sustainability objectives for the Project.</p> <p data-bbox="387 439 1362 566">Details of the Sustainability Officer, including defined responsibilities consistent with the Proponent's sustainability objectives, included in the Project's REF, are to be submitted to the satisfaction of the PMS prior to preparation of the Pre-Construction Sustainability Report.</p>
<b>39.</b>	<p data-bbox="387 589 847 616"><b>Pre-Construction Sustainability Report</b></p> <p data-bbox="387 638 1362 736">Prior to commencement of construction, a pre-construction sustainability report (PCSR) shall be prepared to the satisfaction of the PMS. The Report shall include the following minimum components:</p> <ul style="list-style-type: none"> <li data-bbox="387 759 1291 822">a) a completed electronic checklist demonstrating compliance with the <i>NSW Sustainable Design Guidelines Version 3.0 (7TP-FT-249)</i></li> <li data-bbox="387 844 1342 907">b) a statement outlining the Proponent's own corporate sustainability obligations, goals, targets, in house tools, etc</li> <li data-bbox="387 929 1278 992">c) a section specifying any areas of innovation that will be explored and/or implemented on the Project during the course of the construction period.</li> </ul> <p data-bbox="387 1014 1377 1113">The Proponent shall submit a copy of the PCSR to the PMS for approval, at least 14 days prior to the commencement of construction (or within such time as otherwise agreed to by the PMS).</p>
<b>Additional Conditions</b>	
<b>40.</b>	<p data-bbox="387 1178 667 1205"><b>Graffiti and Advertising</b></p> <p data-bbox="387 1227 1353 1393">Hoardings, site sheds, fencing, acoustic walls around the perimeter of the site, and any structures built as part of the Project are to be maintained free of graffiti and advertising not authorised by the Proponent during the construction period. Graffiti and unauthorised advertising will be removed or covered within the following timeframes:</p> <ul style="list-style-type: none"> <li data-bbox="387 1415 1150 1442">a) offensive graffiti will be removed or concealed within 24 hours</li> <li data-bbox="387 1464 1372 1491">b) highly visible (yet inoffensive) graffiti will be removed or concealed within a week</li> <li data-bbox="387 1514 1319 1576">c) graffiti that is neither offensive or highly visible will be removed or concealed within a month</li> <li data-bbox="387 1599 1291 1662">d) any unauthorised advertising material will be removed or concealed within 24 hours.</li> </ul>
<b>41.</b>	<p data-bbox="387 1680 866 1706"><b>Authorised Water Servicing Coordinator</b></p> <p data-bbox="387 1729 564 1756">Not applicable.</p>

No.	Type
<b>Site Specific Conditions</b>	

**42. Heritage**

- a) All works shall be undertaken in accordance with the Arncliffe Station Upgrade Section 60 Approval 2015/S60/014) issued by the Heritage Division of OEH under the *Heritage Act 1977*.

In the event of an inconsistency between the Section 60 Approval, and Conditions of Approval for the Arncliffe Station Upgrade (i.e. these conditions), and/or the EIA, the Section 60 Approval will prevail to the extent of the inconsistency.

- b) Where further documentation is required to be submitted to the Heritage Division of OEH, such documentation is to be submitted to the PMEIA for review and acceptance a minimum of 21 days prior to lodgement.

**43. Urban Design and Landscaping Plan**

Prior to the finalisation of the detailed design of the Project, the Contractor shall prepare an Urban Design and Landscaping Plan (UDLP). The objective of the UDLP is to:

- a) provide a high quality urban design outcome that is complementary to the amenity and character of the immediately surrounding area; and
- b) minimise the visual impacts of the project where reasonable and feasible.

The UDLP shall address the following matters:

- i. provision of high quality materials and finishes that is complementary to the existing locality and landscape, and that minimise reflective surfaces with a preferred use of muted/less intrusive colours.

A detailed design report on the treatment/s proposed is to be provided to Transport for NSW, and is to detail how the proposed new façades would minimise impacts on fabric of the existing heritage elements of the station

- ii. maintenance procedures (including graffiti control) for walls/structures
- iii. a palette of proposed colours for specific material elements
- iv. location and design of pedestrian access, street furniture including relocated bus and taxi facilities, bicycle storage, telephones and lighting equipment
- v. integration of total water management principles into the design where appropriate
- vi. inclusion of design measures to meet Transport for NSW's *Sustainable Design Guidelines Version 3.0* (7TP-FT-249)
- vii. landscape treatments and tree planting to integrate with surrounding streetscape
- viii. plantings to conform with CPTED
- ix. ongoing vegetation maintenance agreement to be negotiated with the relevant Council
- x. any other matters which the CoAs require the UDLP to address.

The UDLP shall be prepared in consultation with the TfNSW Design and Sustainability Review Panel, TfNSW Urban Design Team and Rockdale City Council.

The UDLP shall be submitted at least 14 days prior to the commencement of permanent built works, for acceptance by the TfNSW Urban Design Team.

No.	Type
<b>44.</b>	<p data-bbox="387 248 627 286"><b>Traffic Management</b></p> <p data-bbox="387 302 1353 477">The Traffic Management Plan (TMP) (Condition 30) must include a Construction Parking Strategy that identifies any temporary changes to on-street parking during construction, and requires workers to park a minimum of 100 metres from Arncliffe Station, or within the designated spaces within the Burrows Street car park, and not within the town centre.</p>
<b>45.</b>	<p data-bbox="387 488 608 526"><b>Road Safety Audit</b></p> <p data-bbox="387 542 1385 607">A Road Safety Audit for the operation of the Project shall be undertaken as part of the detailed design process. The Road Safety Audit shall include:</p> <ul style="list-style-type: none"> <li data-bbox="387 622 946 660">a) the area within 50m of the station entrances</li> <li data-bbox="387 676 1358 775">b) a survey to verify that the design has allowed for sufficient lane width to accommodate through traffic between the proposed new bus/taxi zone and the centreline of Firth Street</li> <li data-bbox="387 790 1310 855">c) verification that the location of the bus zone allows for sufficient swept path availability for bus movements into Belmore Street.</li> </ul> <p data-bbox="387 875 1390 940">Consultation with Rockdale City Council is to be undertaken as part of the Road Safety Audit.</p> <p data-bbox="387 960 1362 1064">The Road Safety Audit is to be submitted to and accepted by the Transport for NSW Project Manager prior to completion of detailed design and the mitigation measures implemented.</p>
<b>46.</b>	<p data-bbox="387 1075 740 1113"><b>Noise and Vibration Measures</b></p> <p data-bbox="387 1128 1362 1290">Additional vibration monitoring is to be carried out during periods where vibration inducing activities are predicted to exceed the 'highly noise affected' threshold as defined in the EPA <i>Interim Construction Noise Guideline (2009)</i> or by applicable structural damage thresholds identified in German Standard <i>DIN 4150: Part 3 - 1999: Structural vibration in buildings: Effects on Structures</i>. This applies to:</p> <ul style="list-style-type: none"> <li data-bbox="387 1305 1334 1370">a) the heritage platform buildings, the heritage footbridge and station stairs, and the footbridge booking office, and</li> <li data-bbox="387 1386 1345 1451">b) commercial premises on the eastern side of Firth Street, adjacent to the station stairs (1 Firth Street and Shop 2 Arncliffe Station).</li> </ul> <p data-bbox="387 1467 1326 1570">Vibration warning devices (i.e. a device that signals by way of a buzzer or flashing light) are to be installed at the above mentioned locations to indicate when levels approach/exceed the recommended limits for structural damage.</p> <p data-bbox="387 1585 1347 1747">In circumstances where the warning device is triggered, vibration generating works must cease, and alternate management measures implemented (e.g. modification of construction methods such as using smaller pieces of equipment, establishment of larger minimum working distances) to avoid exceed of the applicable threshold, unless otherwise agreed by the PMEM.</p> <p data-bbox="387 1762 1326 1897">As far as reasonably practicable, noise and vibration intensive construction works in the vicinity of affected premises are to be minimised. Any affected commercial premises adjacent to the station stairs on the eastern side of Firth Street (1 Firth Street, and Shop 2 Arncliffe Station) shall be consulted:</p> <ul style="list-style-type: none"> <li data-bbox="387 1912 1299 1951">a) in relation to any proposed noise and vibration mitigation measures and/or</li> <li data-bbox="387 1966 1326 2031">b) to identify any noise and vibration sensitive periods when noise and vibration construction activities should be minimised where reasonable and feasible.</li> </ul>



No.	Type
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**47. Lighting scheme**

A lighting scheme for the construction and operation of the Project is to be developed by a suitably qualified lighting designer and prepared in accordance with AS 1158 “*Road Lighting*” and AS 4282 “*Control of the Obtrusive Effect of Outdoor Lighting*”. The lighting scheme shall address the following:

- a) consideration of lighting demands of different areas
- b) lighting within the station boundary to be drawn from the station electricity supply. Supply of lighting in the new shelters is to be confirmed in detailed design.
- c) strategic placement of lighting fixtures to maximise ground coverage
- d) minimising light spill from the rail corridor into adjacent visually sensitive properties by:
  - i. sensitive placement and specification of lighting to minimise any potential increase in light pollution during both construction and operation
  - ii. use of equipment that minimises the upward spread of light. Care is to be taken in selection of luminaries to ensure that appropriate units are chosen and that their location will reduce light spill and keep glare to a minimum
- e) allowing the lighting system to use low light or switch-off light settings while meeting relevant lighting Standards requirements where appropriate, and
- f) ensuring security and warning lighting is not directed at neighbouring properties.

The proposed lighting scheme is to be submitted to TfNSW as part of the design assurance process.

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**48. Access**

A Pedestrian Management Plan is to be prepared and implemented for the duration of Construction which identifies how pedestrian and transport customer movements will be managed. As a minimum, the plan is to include the following access arrangements throughout the construction period:

- a) cross corridor access is to be maintained at all times (other than during very minor disruptions), unless otherwise agreed by the PMEM
  - b) pedestrian access to the station platforms is to be maintained when trains are operational. Any pedestrian paths that would be required to be closed off will be properly hoarded and alternative safe and convenient crossing points will be provided.
  - c) access to all private properties/businesses adjacent to the works is to be maintained during construction, unless otherwise agreed in consultation with specific relevant property owners.
  - d) consultation is to occur with the Sydney Model Railway Society on any restrictions on access to their platform premises
  - e) access to the station from the temporary commuter car park is to be appropriately signposted and a Traffic Controller/s is to be engaged for any critical activities that could impact safe pedestrian access to the station.
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No.	Type
49.	<p data-bbox="384 250 1150 286"><b>Firth Street kerb design and footpath works, and street furniture</b></p> <p data-bbox="384 304 1394 367">Should the kerb in Firth Street require realignment, the existing sandstone kerb in Firth Street is to be removed, washed, stored and reinstated to form the new kerb alignment.</p> <p data-bbox="384 385 1394 448">Reinstatement of the sandstone kerbing in Firth Street and any associated impact on footpath levels is to be managed through the following process:</p> <ul style="list-style-type: none"> <li data-bbox="384 465 1394 528">a) detailed design is to investigate footpath levels and falls to ensure that appropriate drainage is maintained</li> <li data-bbox="384 546 1394 609">b) a drainage assessment is to be undertaken at detailed design to assess pipeline and pit capacity</li> <li data-bbox="384 627 1394 663">c) power poles to be relocated if necessary to meet appropriate standards.</li> </ul> <p data-bbox="384 680 1394 788">Opportunities to reuse existing Council street furniture to be investigated. Otherwise, furniture is to be carefully removed and transported to the Bexley Works Depot for future reuse.</p>

END OF CONDITIONS

## **Appendix C**

# Arncliffe Station Upgrade Section 60 Heritage Act Approval and Conditions of Approval (April 2015)

Please contact TfNSW for further information regarding Heritage  
Act conditions of approval

## **Appendix D**

# Arncliffe Station Upgrade Addendum to Statement of Heritage Impact (March 2015)

Please contact TfNSW for further information regarding the Addendum.