



Transport Access Program

# Towradgi Station Upgrade

Determination Report



*Artist's impression of the proposed Towradgi Station Upgrade, subject to detailed design*



# **Towradgi Station Upgrade – Determination Report**

**Transport Access Program**

**Ref – 6494677**

# Contents

<b>Glossary and abbreviations</b> .....	<b>4</b>
<b>Executive summary</b> .....	<b>5</b>
<b>1. Introduction</b> .....	<b>7</b>
1.1. Background.....	7
1.2. Review of Environmental Factors .....	7
1.3. Determination Report .....	7
1.4. Description of the Proposed Activity in the REF .....	9
<b>2. Consultation and assessment of submissions</b> .....	<b>11</b>
2.1. REF public display .....	11
2.2. REF submissions.....	11
2.3. Consideration and response to submissions .....	12
2.4. Future consultation .....	20
<b>3. Consideration of the environmental impacts</b> .....	<b>21</b>
3.1. NSW Environmental Planning and Assessment Act 1979 .....	21
3.2. Commonwealth Environment Protection and Biodiversity Conservation Act 1999 .....	21
<b>4. Conditions of Approval</b> .....	<b>22</b>
<b>5. Conclusion</b> .....	<b>23</b>
<b>Determination</b> .....	<b>24</b>
<b>References</b> .....	<b>25</b>
<b>Appendix A     Review of Environmental Factors</b> .....	<b>26</b>
<b>Appendix B     Conditions of Approval</b> .....	<b>27</b>

## Document control

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**Figures**

Figure 1 Planning approval process ..... 8  
Figure 2 Key features of the Proposed Activity (indicative only, subject to detailed design) . 10

**Tables**

Table 1 Response to community submissions received ..... 12  
Table 2 Response to Wollongong City Council submission received ..... 20

## Glossary and abbreviations

Term	Meaning
<b>BC Act</b>	<i>Biodiversity Conservation Act 2016 (NSW)</i>
<b>CBD</b>	Central Business District
<b>CEMP</b>	Construction Environmental Management Plan
<b>CLMP</b>	Community Liaison Management Plan
<b>CNVMP</b>	Construction Noise and Vibration Management Plan
<b>Construction Contractor</b>	The Construction Contractor for the Proposed Activity would be appointed by Transport for NSW to undertake the detailed design and construction of the Proposed Activity.
<b>CPTED</b>	Crime Prevention Through Environmental Design
<b>DDA</b>	<i>Disability Discrimination Act 1992 (Cwlth)</i>
<b>Detailed design</b>	Detailed design broadly refers to the process that the Construction Contractor undertakes (should the Proposed Activity proceed) to refine the concept design to a design suitable for construction (subject to Transport for NSW acceptance).
<b>Determination Report</b>	This document – a report prepared by Transport for NSW to assess and address certain matters to allow for a determination of the Proposed Activity under, and in accordance with Division 5.1 of the EP&A Act.
<b>DSAPT</b>	<i>Disability Standards for Accessible Public Transport (2002)</i>
<b>EIS</b>	Environmental Impact Statement
<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 (Cwlth)</i>
<b>Infrastructure SEPP</b>	<i>State Environmental Planning Policy (Infrastructure) 2007 (NSW)</i>
<b>LEP</b>	Local Environmental Plan
<b>LGA</b>	Local Government Area
<b>NES</b>	Matters of 'National Environmental Significance' under the EPBC Act
<b>NSW</b>	New South Wales
<b>Proponent</b>	A person or body proposing to carry out an activity under Division 5.1 of the EP&A Act – in this instance, Transport for NSW.
<b>Proposed Activity</b>	The construction and operation of the Towradgi Station Upgrade
<b>REF</b>	Review of Environmental Factors
<b>TAP</b>	Transport Access Program
<b>Transport for NSW</b>	Transport for NSW (the Proponent)

# Executive summary

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## Overview of Proposed Activity

Transport for NSW is the Proponent for the Towradgi Station Upgrade (the 'Proposed Activity'), which is part of the Transport Access Program. The Transport Access Program is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure. The program provides:

- stations that are accessible to people with disabilities, are less mobile, parents/carers with prams, and customers with luggage
- 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 transport modes for all customers
- safety improvements including extra lighting, lift alarms, fences and security measures at stations.

Towradgi Station has been identified for an accessibility upgrade as it does not currently meet key requirements of the *Disability Standards for Accessible Public Transport (DSAPT)* or the Commonwealth *Disability Discrimination Act 1992 (DDA)*. The proposed upgrade works would provide:

- a new footbridge over the rail corridor connecting the platforms of the station including two lifts and two sets of stairs
- new footpaths to connect Towradgi Road and Weber Crescent to the station and the new footbridge
- modification of the existing station building layout for the provision of a new family accessible toilet
- two accessible parking spaces and a kiss and ride zone on Weber Crescent
- new platform shelters and minor regrading and widening of the station platforms
- a new Station Systems Equipment Room (SSER) building
- new platform edge tactiles

Transport for NSW, as the Proponent for the Proposed Activity, has undertaken a Review of Environmental Factors (REF) that details the scope of work and environmental impacts associated with the Proposed Activity. The REF was prepared by pitt&sherry on behalf of 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 (EP&A Regulation)*.

No modifications have been made to the Proposed Activity since the REF was prepared, however modifications may be considered during the detailed design phase. Should design modifications be required as a result of the detailed design process, these modifications would be assessed to determine consistency with the Proposed Activity (as approved), including significance of impact on the environment. Additional mitigation measures and/or consultation would be undertaken where necessary.

## **Purpose of this report**

The purpose of this Determination Report is for Transport for NSW, as the Proponent of the Towradgi Station Upgrade, to comply with its obligations under Division 5.1 of the EP&A Act and determine whether or not to proceed with the Proposed Activity. Transport for NSW must make a determination in accordance with the provisions of Division 5.1 of the EP&A Act.

This report also presents a summary of the submissions provided during the public display of the REF, and Transport for NSW's response to the issues and comments raised in these submissions.

## **Conclusion**

Based on the assessments in the REF, consideration of the submissions received, it is recommended that the Proposed Activity be approved, subject to the mitigation measures included in the REF and the proposed Conditions of Approval (refer Appendix B). 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

The Transport Access Program is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure. The program provides:

- stations that are accessible to people with disabilities, are less mobile, parents/carers with prams, and customers with luggage
- modern buildings and facilities that meet the needs of a growing population
- modern interchanges that support an integrated network and allow seamless transfers for all customers
- safety improvements including extra lighting, lift alarms, fences and security measures at stations.

Towradgi Station has been identified for an accessibility upgrade as it does not currently meet key requirements of the *Disability Standards for Accessible Public Transport (DSAPT)* or the Commonwealth *Disability Discrimination Act 1992 (DDA)*. The station entrances and pedestrian footpaths are not compliant with the DSAPT. There are no accessible parking spaces, no lift facilities and inadequate Tactile Ground Surface Indicators (TGSIs) to platforms and interchange facilities.

Transport for NSW is the Proponent for the Towradgi Station Upgrade (referred to as the 'Proposed Activity' for the purposes of this document). Also refer to Section 1.4 for a description of the Proposed Activity.

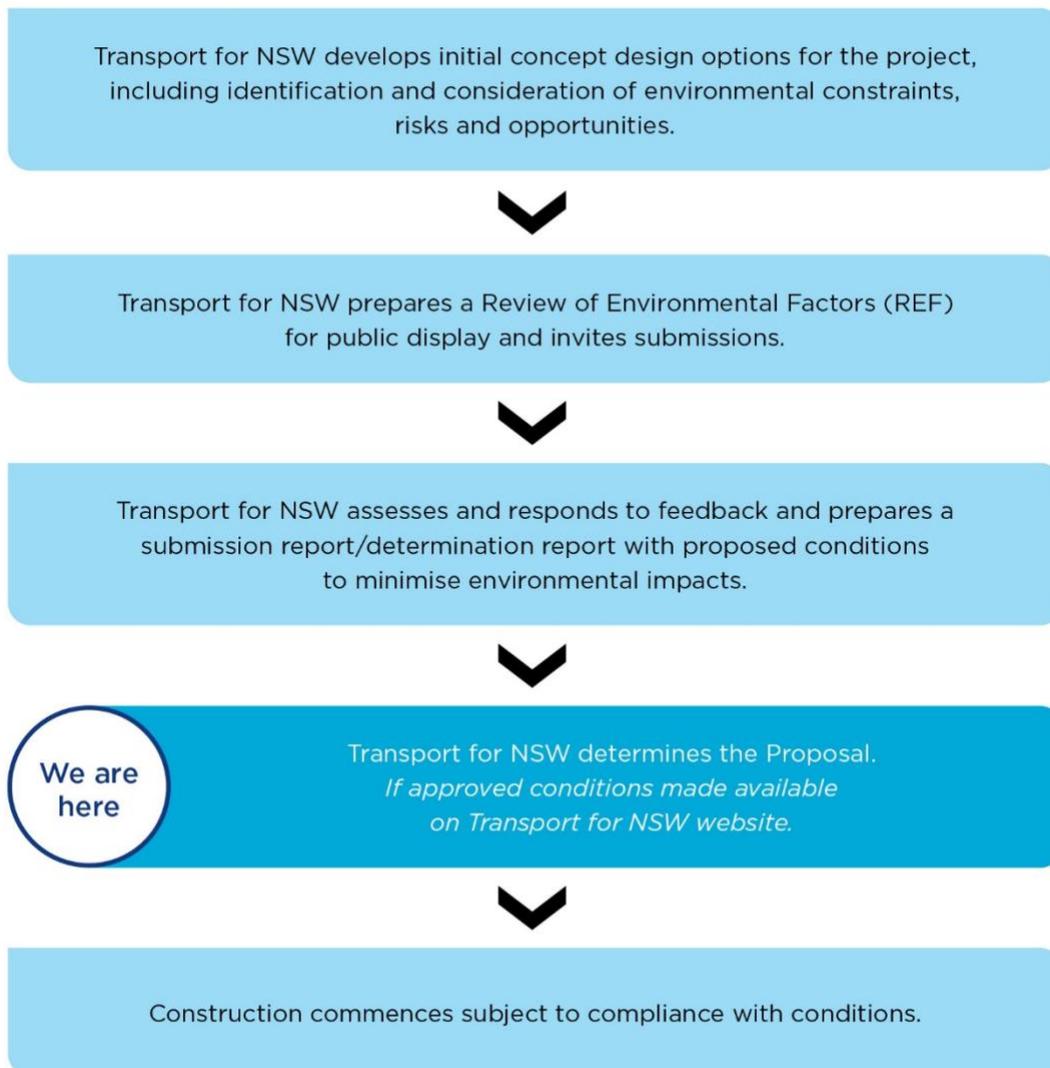
## 1.2. Review of Environmental Factors

A Review of Environmental Factors (REF) has been prepared by pitt&sherry on behalf of Transport for NSW in accordance with Sections 5.5 and 5.7 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 REF is included at Appendix A.

The Towradgi Station Upgrade REF was placed on public display from 20 July 2020 to 3 August 2020, with 13 submissions received. Issues raised in these submissions are addressed in Section 2.3 of this report.

## 1.3. Determination Report

Prior to proceeding with the Proposed Activity, the Secretary for Transport for NSW must make a determination in accordance with Division 5.1 of the EP&A Act (refer Figure 1).



**Figure 1 Planning approval process**

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

- present a summary of the submissions received during the public display of the REF and Transport for NSW’s response to the issues and comments raised in these submissions
- assess the environmental impacts with respect to the Proposed Activity, which are detailed in the environmental impact assessment (and any proposed modifications, as detailed and assessed in this Determination Report)
- 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.

This report has been prepared having regard to, among other things, the objectives of Transport for NSW under the *Transport Administration Act 1988*.

## **1.4. Description of the Proposed Activity in the REF**

The Proposed Activity is located in the suburb of Towradgi in the Wollongong City Council Local Government Area (LGA). Towradgi is approximately five kilometres north of Wollongong and 60 kilometres south west of the Sydney Central Business District (CBD).

Towradgi Station is on the South Coast Line providing public transport links between Sydney and Port Kembla. The station consists of two platforms located on either side of the tracks. Towradgi Station does not currently meet key requirements of the DSAPT or the DDA. The access points and ramps to the station platforms are not compliant with the DSAPT. There are no lift facilities, and the existing pedestrian footpaths that connect with the road network are not compliant with the requirements of the DDA.

The Proposed Activity would provide safe and equitable access to the platforms and to the pedestrian network surrounding the station. Customer facilities and amenities would also be improved. The upgrade would also assist in supporting growth in public transport use and would provide an improved customer experience for existing and future users of the station.

A detailed description of the Proposed Activity is provided in Chapter 3 of the Towradgi Station Upgrade REF. The Proposed Activity would provide:

- a new footbridge over the rail corridor connecting the platforms of Towradgi Station including two lifts and two sets of stairs
- new footpaths to connect Towradgi Road and Weber Crescent to the station and the new footbridge
- replacement of the existing toilet within the station building with a new family accessible toilet
- provision of two accessible parking spaces and a kiss and ride zone on Weber Crescent
- removal of existing platform shelters and the provision of new platform shelters
- minor regrading and widening of the station platforms
- a new Station Systems Equipment Room (SSER) building
- new platform edge tactiles

A schematic outlining the key features of the Proposed Activity is provided in Figure 2.

The need for, and benefits of the Proposed Activity are outlined in Chapter 2 of the REF.

Construction is expected to commence in mid-2021 and take around 18 months to complete.

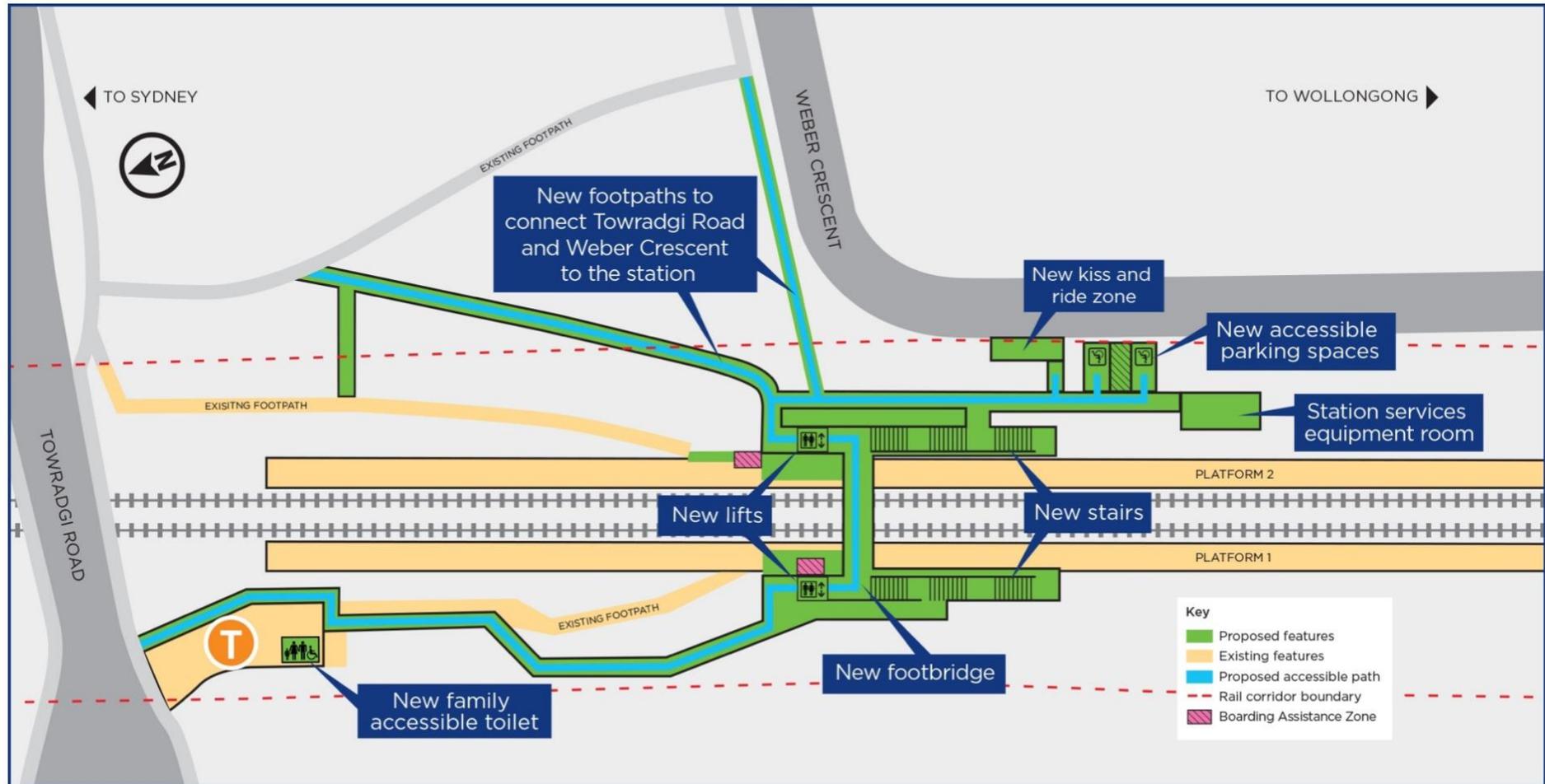


Figure 2 Key features of the Proposed Activity (indicative only, subject to detailed design)

## 2. Consultation and assessment of submissions

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### 2.1. REF public display

The Towradgi Station Upgrade REF was placed on public display from 20 July 2020 to 3 August 2020 on the Transport for NSW corporate website.

Under normal circumstances, printed copies of the REF would have been available at various locations, however due to impacts of COVID-19, the REF was available online in digital format only with printed copies available upon request.

A range of other community consultation activities were undertaken for the public display which included:

- distribution of around 120 flyers to customers at the station and provision of 200 flyers to staff on 20 July 2020
- flyers were letterbox dropped within 500 metres of Towradgi Station on 20 July 2020
- project signage at Towradgi Station
- Doorknock of residents located within 200 metres of Towradgi Station on the 21 July 2020
- public display of the REF online
- advertising in the Illawarra Mercury on 21 July and 28 July 2020 outlining the scope of the Proposed Activity, information on where to view the REF and specialist studies on the Transport for NSW website, along with details on how to make a submission
- creation of a dedicated project webpage on the Transport for NSW corporate website, including an integrated form for provision of feedback
- a geo-targeted social media post on the Transport for NSW Facebook page
- a briefing to Wollongong City Council officers on 9 July 2020
- a letter outlining the scope of the Proposed Activity, information on where to view the REF and specialist studies on the Transport for NSW website, along with details on how to make a submission was sent to Wollongong City Council. The letter also sought Council's feedback regarding particular aspects of the Proposed Activity in accordance with the consultation requirements under clause 13 and 15A of *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP).

### 2.2. REF submissions

A total of 13 submissions were received by Transport for NSW. Community submissions are addressed in Table 1, while the submission received from Wollongong City Council is addressed in Table 2.

Submissions included feedback on a range of issues in relation to the Proposed Activity. The key issues raised were:

- support for the Proposed Activity and improving accessibility at the station
- questions regarding the need for the new footbridge
- impacts to the visual amenity of the area
- impacts to Weber Park due to vegetation removal and access to the park during construction

- changes to the existing footpaths in Weber Park and potential changes to parking on Weber Crescent

## 2.3. Consideration and response to submissions

### Community submissions

Table 1 Response to community submissions received

No.	Submission no.	Issue/s raised	Transport for NSW response
<b>1</b>	<b>General</b>		
1.1	TOW002 TOW004 TOW005 TOW006 TOW011	Support for the Proposed Activity.	Support for the Proposed Activity is noted.
1.2	TOW001	Support for the inclusion of accessible parking spaces on Weber Crescent.	Support for accessible parking spaces is noted.
1.3	TOW008	Support for upgrades to the toilet facilities, CCTV, lighting, handrails and signage.	Support noted.
1.4	TOW003 TOW008 TOW009	Questions the need to spend funds on Towradgi Station and suggests upgrading other stations such as Unanderra Station.	<p>Transport for NSW determines the priority of upgrades using evidence-based criteria, including:</p> <ul style="list-style-type: none"> <li>• current and future patronage</li> <li>• the needs and demographics of customers who use the location</li> <li>• whether important services such as hospitals or educational facilities are nearby</li> <li>• cumulative impacts of other construction projects</li> <li>• the accessibility of other nearby transport interchanges and facilities.</li> </ul> <p>The list of upgrades is regularly reviewed so the people of NSW can have confidence that upgrades are delivered where they are needed most.</p> <p>Upgrades to Unanderra Station are also proposed. For more information on current station upgrades visit the Transport for NSW website (<a href="https://www.transport.nsw.gov.au/projects/current-projects/unanderra-station-upgrade">https://www.transport.nsw.gov.au/projects/current-projects/unanderra-station-upgrade</a>).</p>

No.	Submission no.	Issue/s raised	Transport for NSW response
1.5	TOW001 TOW003 TOW008 TOW009	Disagrees that the footbridge at Towradgi Station is needed due the presence of ramps to access platforms.	The footpaths leading to the station platforms and the footpath across Towradgi Road overbridge are not DSAPT compliant as they have grades in excess of 1:14. That is, the current paths are too steep. DSAPT compliant ramps must have a grade of 1:14 or less.  It is Transport for NSW best practice to install lifts and stairs where the level difference to access the station is greater than two metres. A new footbridge is required to connect platforms 1 and 2.
1.6	TOW008	Disagrees that the widening of the platforms is needed as Towradgi Station does not have a high patronage.	Platform 1 and 2 are proposed to be widened between the station entry point, Boarding Assistance Zone and the lift. The localised platform widening is proposed to ensure compliance with safety standards, which specify the clearance required around waiting zones to allow the passing of wheelchairs.
1.7	TOW010	Recommend adopting mid-platform bridge approach on all similar train stations to minimise length of walks.	Multiple design options are developed for each station upgrade under the TAP program to meet the objectives of the Project. Each option is assessed using a multi-criteria analysis to identify the preferred option. Customer experience is a key consideration in selecting an option. A site -specific design is selected to meet each Project's objectives.
1.8	TOW011	Queries whether existing footpaths will be retained.	The existing footpaths to access the station platforms would be retained.
1.9	TOW011	Request increased frequency of trains through Towradgi Station.	The frequency of trains at the station is outside the scope of the Proposed Activity. This feedback will be passed on to Sydney Trains.
1.10	TOW011	Recommends monitors showing next train time and stops, train network map and WiFi be installed at all train stations.	The installation of passenger information systems are outside the scope of the Proposed Activity. This recommendation will be passed onto the Wayfinding department in Transport for NSW.
1.11	TOW012	Query regarding the height of footbridge and stairs.	The lift shaft would be approximately eight metres above ground level. The stairs on both sides of the station would meet the footbridge approximately 2.5 metres above ground level.
1.12	TOW008	Questions the need to establish parking spaces on	Two accessible parking spaces and a kiss and ride zone would be

No.	Submission no.	Issue/s raised	Transport for NSW response
		Weber Crescent when it seems it is rarely used for parking by commuters.	established on Weber Crescent to meet DSAPT and DDA requirements and to provide easy access to the proposed station entrance and footbridge.
1.13	TOW012	Issue with lack of consultation during development of Proposed Activity.	<p>Multiple design options were developed for the Towradgi Station upgrade to meet the objectives of the TAP program. Each option was assessed using a multi-criteria analysis to identify the preferred option, the Proposed Activity.</p> <p>The consultation strategy that was developed, having regard to the requirements of the planning process, ensures that stakeholders, customers and the community are informed of the Proposed Activity and have the opportunity to provide feedback.</p> <p>A full description of the consultation activities undertaken is provided in Section 2.1 of this report.</p> <p>The Towradgi Station Upgrade project team would be available at all times during the project lifecycle via the Project Infoline channels (1800 684 490 / <a href="mailto:projects@transport.nsw.gov.au">projects@transport.nsw.gov.au</a>).</p>
<b>2</b>	<b>Design</b>		
2.1	TOW006 TOW011	Request that new platform shelters are rain and windproof to protect commuters from adverse weather.	The Proposed Activity includes new canopies on each platform as noted in Section 3.1 of the REF. The design of these canopies would be further refined during detailed design to minimise direct impacts from severe storms and strong winds.
2.2	TOW006	Request all new footpaths are above ground to avoid flooding.	The proposed footpaths would be designed and constructed to ensure adequate drainage to avoid ponding. Stormwater and drainage arrangements for the Proposed Activity would be confirmed during the detailed design phase.
2.3	TW006	Request inclusion of handrails on footbridge which are sandblasted back to bare metal and repainted with metal primer/ undercoat then top coated to avoid deterioration of paintwork.	Materials and finishes for the Proposal have been selected based on the criteria of durability, low maintenance and cost effectiveness, to minimise visual impacts, and to be aesthetically pleasing. Handrails would be polished stainless steel.
2.4	TOW007	Request to include a cycleway on the pedestrian bridge.	The focus of the Proposed Activity is to improve accessibility at the station,

No.	Submission no.	Issue/s raised	Transport for NSW response
			<p>in accordance with DDA and DSAPT. The proposed lifts would be able to accommodate a bike so that cyclists would not need to use the stairs.</p> <p>Cycling infrastructure along Towradgi Road is not currently considered within the scope of the Proposed Activity. This feedback will be passed on to Wollongong City Council, who manage Towradgi Road.</p>
2.5	TOW008	Requests inclusion of Opal Card vending machine on both platforms.	No Opal top up facilities are proposed to be installed at the station as part of the Proposed Activity. This feedback will be shared with the relevant team within Transport for NSW for further consideration.
2.6	TOW010 TOW011	Requests toilets are included on both platforms for ease of use.	The Proposed Activity includes upgrading the existing toilet within the station building to accommodate one unisex family accessible toilet. As this toilet would be accessible via the proposed lifts and footbridge, an additional toilet is not proposed to be constructed on Platform 2 as part of the Proposed Activity. Furthermore, the patronage numbers at the station do not require the addition of another toilet.
2.7	TOW011	Request inclusion of bubblers on both platforms.	The inclusion of bubblers at the station is not currently proposed. However, a drinking water bottle filling tap would be considered during the detailed design phase.
2.8	TOW011	Request the proposed footpaths avoid sharp corners in favour of smooth, rounded alignments.	The alignment of the proposed footpaths has been selected to accommodate on-site constraints, avoid impacts to existing vegetation and to improve accessibility.
2.9	TOW012	Suggest considering widening the footpath on Towradgi Road overbridge to accommodate pedestrians safely as this may minimise visual and noise impacts to surrounding residents.	<p>Widening of the Towradgi Road overbridge to include a compliant pedestrian walkway would require significant construction work. To ensure the footpath is compliant, it would need to be raised and widened as the overbridge arches steeply.</p> <p>To deliver ramps with a compliant grade connected to the widened overbridge, a significant amount of space would be required. It is Transport for NSW's practice to install lifts where the level difference to access the station platforms is above two metres. To establish lifts,</p>

No.	Submission no.	Issue/s raised	Transport for NSW response
			<p>the station platforms would need to be extended to meet the overbridge. This Proposed Activity was selected as it provided:</p> <ul style="list-style-type: none"> <li>• better customer experience including shorter more direct travel from the proposed accessible parking spaces and kiss and ride zone</li> <li>• better integration with Weber Crescent and existing footpaths from Towradgi road</li> <li>• lower security risks due to shorter connections to open public areas with passive surveillance</li> <li>• better constructability and reduced construction environmental impacts.</li> </ul>
<b>3</b>	<b>Traffic and Transport</b>		
3.1	TOW011	Request additional parking to be included on Weber Crescent as it would be safer to use Weber Crescent for picking up and dropping off, and would avoid congestion on Towradgi Road. Council works near Towradgi Road overbridge may also reduce parking availability on Towradgi Road.	<p>The Proposed Activity includes a new kiss and ride and two accessible parking spaces on Weber Crescent. The Proposal may reduce the number of vehicles using Towradgi Road, as the parking on Weber Crescent would become closer to the station entrance. This would likely have a minor impact on the smaller roads, and a negligible impact on the larger road network.</p> <p>The current demand for parking on Weber Crescent is below the available capacity of unrestricted on-street parking. Therefore no additional parking is required on Weber Crescent. Furthermore, commuter car parking is outside the scope of the Proposed Activity.</p>
<b>4</b>	<b>Noise and Vibration</b>		
4.1	TOW012	Queries whether a noise abatement plan would be developed for the Proposed Activity.	Noise and vibration impacts from the Proposed Activity are discussed in Section 6.3 of the REF. Prior to the start of the works, a Construction Noise and Vibration Management Plan (CNVMP) would be prepared and implemented as detailed in section 7.1 of the REF. During operation of the Proposed Activity

No.	Submission no.	Issue/s raised	Transport for NSW response
			noise levels would remain similar to existing conditions including minor additional noise from the operation of the lifts. Noise from operation of the lifts would be inaudible to nearby sensitive receivers.
4.2	TOW012	Expressed concern that people would congregate on the proposed footbridge and due to the raised height, the noise would be more likely to carry. This would result in increased noise impact to neighbouring properties during operation.	The proposed footbridge is not intended as a point of congregation but an accessible pathway between the two platforms. It is not anticipated that commuters would linger on the footbridge or that noise impacts from commuters would increase as a result of the Proposed Activity.
<b>5</b>	<b>Landscape and visual amenity</b>		
5.1	TW001 TW012	Expressed concern that the design would be appear tall and obtrusive and wouldn't blend with the surrounding environment. Recommend adopting a design with lower impact to neighbouring properties.	<p>The new tall elements of the Proposed Activity, including the lift shafts, footbridge and stairs, would increase the visual presence of the railway corridor. The design of the Proposed Activity would have a moderate to low visual impact on the surrounding environment, however it is considered to be compatible with the existing rail infrastructure at the station.</p> <p>The following options would be considered during detailed design to reduce the visual impacts:</p> <ul style="list-style-type: none"> <li>planting fast growing tree species with good screening characteristics to replace vegetation removed along the rail corridor where necessary</li> <li>select colours for the proposed lift shafts and footbridge that respond to the background colour tones of the existing landscape to reduce the prominence of the new structures.</li> </ul> <p>Further exploration of materials and finishes would be undertaken during detailed design.</p>
5.2	TW006	Request appropriate paint colour scheme is selected to improve aesthetic	<p>As detailed in Section 6.2 of the REF, the materials and colours selected would be sympathetic to the surrounding environment.</p> <p>Landscaping and vegetation would be utilised to minimise visual amenity impacts where possible.</p>

No.	Submission no.	Issue/s raised	Transport for NSW response
			<p>The design would be further refined throughout the detailed design process and include the following (refer to Condition of Approval 30):</p> <ul style="list-style-type: none"> <li>• development and implementation of an Urban design and landscape design plan which addresses integration with surrounding built form</li> <li>• development and implementation of a Public Domain Plan which would address materials, finishes and colour schemes.</li> </ul>
5.3	TOW012	Queries what privacy screening would be included in footbridge design	<p>Screening provided on the proposed footbridge is for safety purposes, and would be designed to enable passive surveillance. Subject to detailed design, privacy and security screening on the footbridge would be further considered.</p> <p>Fast growing tree species with good screening characteristics would be planted to replace vegetation removed along rail corridor where necessary. Planting for screening purposes along the western boundary of rail corridor would be considered during detailed design.</p>
<b>6.</b>	<b>Biodiversity</b>		
6.1	TW001	Query whether the upgrade will result in the removal of any native trees, impacting native birdlife in the area.	<p>The Proposed Activity has been designed to minimise impacts to existing vegetation whilst still meeting the objectives of the Project. Six trees from the western side of the station and two trees from the eastern side of the station would likely be removed.</p> <p>No habitat features were identified in the Proposal area and the area is considered to constitute marginal foraging habitat for a range of highly mobile fauna species including native birds that may utilise the site as part of a much larger foraging range (refer to Section 6.4 of the REF and, Towradgi Station Arboricultural Impact Assessment prepared by Eco Logical Australia).</p> <p>All cleared vegetation shall be offset in accordance with Transport for NSW's <i>Vegetation Offset Guide</i>. All</p>

No.	Submission no.	Issue/s raised	Transport for NSW response
			trees identified for removal would be offset with a minimum of 36 trees. All vegetation planted on-site would consist of locally endemic native species.
6.2	TW006	Request to avoid impact to existing large trees as they are historic.	<p>Eight native trees would likely be removed for the Proposed Activity. Of these trees, two are considered large and four are considered medium under <i>Transport for NSW's Vegetation Offset Guide</i>. These trees are not heritage listed (Eco Logical 2020).</p> <p>Disturbance of vegetation would be limited to the minimum amount necessary to construct the Proposed Activity.</p> <p>All cleared vegetation shall be offset in accordance with Transport for NSW's <i>Vegetation Offset Guide</i>. All trees identified for removal would be offset with a minimum of 36 trees. All vegetation planted on-site would consist of locally endemic native species.</p>
<b>7.</b>	<b>Socio-economic</b>		
7.1	TW001	Negative impact to Weber Park which is tree lined and highly utilised by children in the local community for play and exercise.	<p>A portion of Weber Park would be temporarily occupied during the construction phase, however access through the park would be maintained. This impact on the community is expected to be relatively short term in nature.</p> <p>A new footpath is proposed through the park and two native trees would likely be removed from the western boundary of the park due to the construction of the proposed footbridge. The functionality of the park and the majority of the trees would not be impacted by the operation of the Proposed Activity.</p>

## Other stakeholder submissions

Table 2 Response to Wollongong City Council submission received

Issue no.	Issue/s raised	Transport for NSW response
<b>1</b>	<b>General</b>	
1.1	Support the improvements to access at Towradgi station and appreciate development of improved access to the station.	Support for the Proposed Activity is noted.
<b>2</b>	<b>Traffic, transport and access</b>	
2.1	Noted that the access to the station is being moved from Towradgi Road to Weber Crescent. Concerns that this will have changes to the footpaths in Weber and potential changes to the parking on Weber Crescent.	The pedestrian footpaths within Weber Park and works within Weber Crescent would be subject to detailed design. Consultation with Wollongong City Council would be ongoing during the detailed design phase with respect to potential changes to the footpaths within the park and parking on Weber Crescent.

### 2.4. Future consultation

Future consultation activities would continue, including consultation with Wollongong City Council and other stakeholders 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 and other stakeholders have 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.

The [Transport for NSW email address](mailto:projects@transport.nsw.gov.au)<sup>1</sup> and Transport for NSW Infoline (1800 684 490) would continue to be available during the construction phase. A 24-hour Construction Response Line would be established for any urgent construction-related issues. Targeted consultation methods, such as use of letters, notifications, signage and verbal communication, would continue to occur. The [Transport for NSW project website](https://www.transport.nsw.gov.au/projects/current-projects/towradgi-station-upgrade)<sup>2</sup> would also include updates on the progress of construction.

<sup>1</sup> [projects@transport.nsw.gov.au](mailto:projects@transport.nsw.gov.au)

<sup>2</sup> <https://www.transport.nsw.gov.au/projects/current-projects/towradgi-station-upgrade>

### **3. Consideration of the environmental impacts**

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#### **3.1. NSW Environmental Planning and Assessment Act 1979**

The REF addresses the requirements of Section 5.5 of the EP&A Act. In considering the Proposed Activity, all matters affecting or likely to affect the environment are addressed in the REF and the Determination Report and associated documentation.

In accordance with the checklist of matters pursuant to clause 228(3) of the EP&A Regulation, an assessment is provided in Chapter 6 and Appendix B of the REF.

In respect of the Proposed Activity an assessment has been carried out regarding potential impacts on critical habitat, threatened species, populations or ecological communities or their habitats, under Section 5.7 of the EP&A Act.

The likely significance of the environmental impacts of the Proposed Activity has been assessed in accordance with the then NSW Department of Planning's 1995 best practice guideline *Is an EIS Required?*<sup>3</sup> 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. Accordingly, an environmental impact statement under Division 5.2 of the EP&A Act is not required.

#### **3.2. Commonwealth 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. In relation to NES matters, this evaluation has been undertaken in accordance with Commonwealth Administrative Guidelines on determining whether an action has, will have, or is likely to have a significant impact. A summary of the evaluation is provided in Chapter 6 and Appendix A 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 matters of NES.

<sup>3</sup> Refer to the National Library of Australia's 'Trove' website  
<http://trove.nla.gov.au/work/7003034?selectedversion=NBD11474648>

## **4. Conditions of Approval**

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If approved, the Proposed Activity would proceed subject to the Conditions of Approval included at Appendix B.

## 5. Conclusion

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Having regard to the assessment in the REF, consideration of the submissions received, it can be 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. Consequently, an environmental impact statement (EIS) is not required to be prepared under Division 5.2 of the EP&A Act.

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

The environmental impact assessment (REF and Determination Report) is recommended to be approved subject to the proposed mitigation and environmental management measures included in the Conditions of Approval (refer to Appendix B).

# Determination

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## TOWRADGI STATION UPGRADE

### APPROVAL

I, Louise Sureda, as delegate of the Secretary, Transport for NSW:

1. Have examined and considered the Proposed Activity in the *Towradgi Station Upgrade Review of Environmental Factors* (July 2020) and the *Towradgi Station Upgrade Determination Report* (September, 2020) in accordance with Section 5.5 of the NSW *Environmental Planning and Assessment Act 1979*.
2. 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 (September, 2020), consistent with the Proposed Activity described in the *Towradgi Station Upgrade Review of Environmental Factors* (July, 2020).



Louise Sureda  
Director Planning, Environment and Sustainability  
Environment and Sustainability  
Safety, Environment and Regulation  
**Transport for NSW**

Date: 11 September 2020

## References

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Bitzios Consulting 2020, Towradgi Station Upgrade Transport Access Program Traffic Impact Assessment, Sydney

Eco Logical Australia 2020, *Towradgi Station Arboricultural Impact Assessment*, Sydney

Envisage Consulting, 2020, *Towradgi Station Landscape Character and Visual Impact Assessment*, Sydney

Muller Acoustic Consulting 2020, *Towradgi Station Upgrade Noise and Vibration Impact Assessment*, Sydney

pitt&sherry, 2020, *Towradgi Station Upgrade Review of Environmental Factors*, Sydney

# Appendix A      Review of Environmental Factors

Please refer to the Transport for NSW website to access the Towradgi Station Upgrade REF (Desksite 6480784):

<https://www.transport.nsw.gov.au/projects/current-projects/towradgi-station-upgrade>

# Appendix B      Conditions of Approval

## CONDITIONS OF APPROVAL

### Towradgi Station Upgrade

Note: these Conditions of Approval must be read in conjunction with the final mitigation measures in the Towradgi Station Upgrade Review of Environmental Factors.

#### Schedule of acronyms and definitions used:

Acronym	Definition
ADEIA	Transport for NSW Associate Director Environmental Impact Assessment (or nominated delegate)
ADEM	Transport for NSW Associate Director Environmental Management (or nominated delegate)
ADSPD	Transport for NSW Associate Director Sustainability, Planning and Development (or nominated delegate)
AFC	Approved For Construction
CECR	Construction Environmental Compliance Report
CEMP	Construction Environmental Management Plan
CIR	Contamination Investigation Report
CLMP	Community Liaison Management Plan
CMP	Contamination Management Plan
CoA	Condition of Approval
dBA	Decibels (A-weighted scale)
ECM	Environmental Controls Map
EIA	Environmental Impact Assessment
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPL	Environment Protection Licence issued by the Environmental Protection Authority under the <i>Protection of the Environment Operations Act 1997</i> .
EMR	Environmental Management Representative
EMS	Environmental Management System
HIS	Heritage Interpretation Strategy
ISCA	Infrastructure Sustainability Council of Australia
ISO	International Standards Organisation
OEH	(Former) NSW Office of Environment and Heritage
ONVMP	Operational Noise and Vibration Management Plan
OOHWP	Out of Hours Works Protocol
PECM	Pre-Construction Environmental Compliance Matrix
POCR	Pre-Operational Compliance Report
RBL	Rating Background Level
REF	Review of Environmental Factors
SMP	Sustainability Management Plan
Transport for NSW	Transport for NSW

<b>Acronym</b>	<b>Definition</b>
<b>TMP</b>	Traffic Management Plan
<b>UDLP</b>	Urban Design and Landscaping Plan

<b>Term</b>	<b>Definition</b>
<b>Construction</b>	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 Transport for NSW ADEM to have minimal environmental impact such as minor access roads, minor adjustments to services/utilities, establishing temporary construction compounds (in accordance with this approval), or minor clearing (except where threatened species, populations or ecological communities would be affected, unless otherwise agreed by the ADEM).
<b>Contamination</b>	The presence in, on or under land of a substance at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.
<b>Designated Works</b>	Includes tunnelling, blasting, piling, excavation or bulk fill or any vibratory impact works including jack hammering and compaction, for Construction.
<b>Emergency Work</b>	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 (Aboriginal or non-Aboriginal) item.
<b>Environmental Impact Assessment (EIA)</b>	The documents listed in Condition 1 of this approval.
<b>Environmental Management Representative (EMR)</b>	An independent environmental representative appointed to the Project or a delegate nominated by Transport for NSW.
<b>Feasible</b>	A work practice or abatement measure is feasible if it is capable of being put into practice or of being engineered and is practical to build given project constraints such as safety and maintenance requirements.
<b>Noise Sensitive Receiver</b>	In addition to residential dwellings, noise sensitive receivers include, but are not limited to, hotels, entertainment venues, pre-schools and day care facilities, educational institutions (e.g. schools, TAFE colleges), health care facilities (e.g. nursing homes, hospitals), recording studios, places of worship/religious facilities (e.g. churches), and other noise sensitive receivers identified in the Environmental Impact Assessment.
<b>Project</b>	The construction and operation of the Towradgi Station Upgrade as described in the Environmental Impact Assessment.
<b>Proponent</b>	A person or body proposing to carry out an activity under Division 5.1 of the EP&A Act – in the case of the Project, Transport for NSW.
<b>Reasonable</b>	Selecting reasonable measures from those that are feasible involves making a judgment to determine whether the overall benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the measure.

## CoA Condition

### General

#### 1. Terms of Approval

The Project shall be carried out generally in accordance with the environmental impact assessment (EIA) for this Project, which comprises the following documents:

- a) *Towradgi Station Upgrade – Review of Environmental Factors* (pitt&sherry, July 2020)
- b) *Towradgi Station Upgrade – Determination Report* (pitt&sherry, September 2020).

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

#### 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 under delegated authority by TfNSW, and any additional requirements from the assessment of the Project modification must be complied with.

#### 3. Statutory Requirements

These conditions do not remove any 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 terms and conditions of such licences, permits, approvals and permissions must be complied with at all times.

### Communications

#### 4. Community Liaison Management Plan

A Community Liaison Management Plan (CLMP) shall be prepared and implemented to engage with government agencies, relevant councils, landowners, community members and other relevant stakeholders (such as utility and service providers, bus companies, Taxi Council and businesses). The CLMP shall comply with the obligations of these conditions and should include, but not necessarily be limited to:

- a) a comprehensive, project-specific analysis of issues and proposed strategies to manage issues through the duration of the Project
- b) details of the communication tools (traditional and digital) and activities that will be used to inform and engage the community and stakeholders
- c) a program for the implementation of community liaison activities relating to key construction tasks with strategies for minimising impacts and informing the community
- d) policies and procedures for handling community complaints and enquiries, including the Contractor's nominated 24 hour contact for management of complaints and enquiries
- e) analysis of other major projects/influences in the area with the potential to result in cumulative impacts to the community and strategies for managing these.

The CLMP shall be prepared to the satisfaction of the Director Community Engagement (or nominated delegate) prior to the commencement of construction and implemented, reviewed and revised as appropriate during the construction of the Project.

#### 5. 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 seven days prior to such works being undertaken or other period as agreed to by the Director

## CoA Condition

Community Engagement or as required by the Environment Protection Authority (EPA) (where an Environment Protection Licence (EPL) is in effect).

### 6. Website

Project information shall be made available to members of the public, either on dedicated pages on the TfNSW/Project website or details provided as to where hard copies of this information may be accessed. Project information to be provided includes:

- 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) 24 hour contact telephone number for information and complaints.

All documents uploaded to the website must be compliant with the *Web Content Accessibility Guidelines Version 2.0*.

### 7. Complaints Management

A 24 hour construction response line number shall be established and maintained for the duration of construction.

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 two hours during all times construction is being undertaken and within 24 hours during non-construction times (unless the complainant agrees otherwise). A verbal response to written complaints (email/letter) should be provided within 48 hours of receipt of the communication. A detailed written response is to be provided to the complainant within seven calendar days for verbal and/or written complaints.

Information on all complaints received during the previous 24 hours shall be forwarded to the Environmental Management Representative (EMR) each working day.

## Environmental Management

### 8. Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) shall be prepared prior to the commencement of construction which addresses the following matters, as a minimum:

- a) traffic and pedestrian management (in consultation with the relevant roads authority)
- b) noise and vibration management
- c) water and soil management
- d) air quality management (including dust suppression)
- e) Aboriginal and non-Aboriginal heritage management
- f) biodiversity management
- g) storage and use of hazardous materials
- h) contaminated land management (including acid sulphate soils)
- i) weed management
- j) waste management
- k) bushfire risk
- l) environmental incident reporting and management procedures
- m) non-compliance and corrective/preventative action procedures
- n) details of approvals, licences and permits required to be obtained under any other legislation for the Project.

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

## CoA Condition

- ii. comply with the relevant requirements of *Environmental Management Plan Guideline – Guideline for Infrastructure Projects* (NSW Department of Planning Industry and Environment, 2020)
- iii. include a pre-construction environmental compliance matrix for the Project (or such stages of the Project as agreed to by the EMR) that details compliance with all relevant conditions and mitigation measures
- iv. include an Environmental Policy.

In preparing the CEMP the following shall be undertaken:

1. consultation with government agencies and relevant service/utility providers (as required)
2. a copy of the CEMP submitted to the EMR for review
3. a copy of the CEMP submitted to the Associate Director Environmental Management (ADEM) for approval upon completion of the EMR review period
4. review and update the CEMP at regular 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 seven 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 ADEM prior to the commencement of construction work associated with the Project.

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### 9. Environment Personnel

Suitably qualified and experienced environmental management personnel shall be available and be responsible for implementing the environmental objectives for the Project, including undertaking regular site inspections, preparation of environmental documentation and ensuring the Project meets the requirements of the Environmental Management System (EMS).

Details of the environmental personnel, including relevant experience, defined responsibilities and resource allocation throughout the project (including time to be spent on-site/off-site) are to be submitted for the approval of the ADEM, at least 21 days prior to commencement of construction of the Project (or such time as otherwise agreed by the ADEM).

Any adjustments to environmental resource allocations (on-site or off-site) are to be approved by the ADEM.

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### 10. Environmental Management Representative

Prior to the commencement of construction, the ADEM shall appoint an EMR for the duration of the construction period for the Project.

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

- a) considering and advising TfNSW on matters specified in these conditions and compliance with such
- b) reviewing and where required by the ADEM, 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 ADEM
- d) reporting weekly to TfNSW, or as required by the ADEM
- e) issuing a recommendation 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

## CoA Condition

- g) reviewing corrective and preventative actions to ensure the implementation of recommendations made from the audits and site inspections
- h) providing reports to TfNSW on matters relevant to the carrying out of the EMR role as necessary
- i) where required by the ADEM, providing advice on the content and implementation of the CEMP and Environmental Controls Map (ECM) in accordance with the conditions
- j) reviewing and approving updates to the CEMP.

The EMR shall be available during construction activities to inspect the site(s) and be present on-site as required.

### 11. Environmental Controls Map

An Environmental Controls Map (ECM) shall be prepared and implemented in accordance with TfNSW's *Guide to Environmental Controls Map* (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.

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

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 seven days of the completion of the review or receipt of actions identified by any EMR audit of the document and submitted to the EMR for approval.

## Hours of Work

### 12. Standard Construction Hours

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 5dBA higher than the rating background level (RBL) at any nearby residential property and/or other noise sensitive receivers
- b) out of hours work identified and assessed in the EIA or the approved Out of Hours Work Protocol (OOHWP)
- c) 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 ADEM
- d) Emergency Work to avoid the loss of lives, property and/or to prevent environmental harm
- e) any other work as agreed by the ADEM and considered essential to the Project, or as approved by EPA (where an EPL is in effect).

## Traffic, Transport and Access

### 13. Traffic Management Plan

A construction Traffic Management Plan (TMP) shall be prepared as part of the CEMP which addresses, as a minimum, the following matters:

- 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

## CoA Condition

- 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 customers, 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.

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

### 14. Road Condition Reports

Prior to construction commencement, road condition surveys and reports on the condition of roads and footpaths to be affected by construction shall be prepared. 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.

### 15. Road Safety Audit

A Road Safety Audit shall be undertaken as part of the detailed design process and on completion of construction. The Road Safety Audit shall include but not be limited to detailed assessment of sight distances for vehicles and the new kiss and ride zone and mitigation measures proposed.

The Road Safety Audit is to be submitted to and accepted by TfNSW. The findings of the Road Safety Audit shall be provided to Wollongong City Council for information.

### 16. Detailed design

Additional line marking and signage on Weber Crescent shall be investigated as part of detailed design

## Noise and Vibration

### 17. Construction Noise and Vibration

Construction noise and vibration mitigation measures shall be implemented through the CEMP, in accordance with TfNSW's *Construction Noise and Vibration Strategy* (ST-157) and the EPA's *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009). The mitigation measures shall include, but not limited to:

- a) details of construction activities and an indicative schedule for construction works
- b) identification of construction activities that have the potential to generate noise and/or vibration impacts on surrounding land uses, particularly sensitive noise receivers
- c) detail what reasonable and feasible actions and measures shall be implemented to minimise noise impacts (including those identified in the EIA)
- 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 and vibration complaints
- e) an Out of Hours Work Protocol (OOHWP) for the assessment, management and approval of works outside the standard construction hours identified in Condition 12 of this approval, including a risk assessment process which deems the out of hours

## CoA Condition

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 ADEM or as approved by EPA (where relevant to the issuing of an EPL). The OOHWP should be consistent with the TfNSW *Construction Noise and Vibration Strategy* (ST-157)

- f) a description of how the effectiveness of actions and measures shall be monitored during the proposed works, identification of 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.

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### 18. Vibration Criteria

Vibration (other than from blasting) resulting from construction and received at any structure outside of the Project shall be limited to:

- a) for structural damage vibration – British Standard BS 7385-2:1993 Evaluation and measurement for vibration in buildings Part 2 and German Standard DIN 4150:Part 3 – 1999: Structural Vibration in Buildings: Effects on Structures
- b) for human exposure to vibration – the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006) which includes British Standard BS 6472-2:1992 Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz).

These limits apply unless otherwise approved by the ADEM through the CEMP.

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### 19. Non-Tonal Reversing Beepers

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.

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### 20. High Noise Generating Activities

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 not be undertaken for more than three hours, without a minimum one hour respite period unless otherwise agreed to by the ADEM, or as approved by EPA (where relevant to the issuing of an EPL).

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### 21. Property Condition Survey

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:

- a) all buildings/structures/roads within a plan distance of 25 metres from the edge of the Designated Works

Property condition surveys need not be undertaken if a risk assessment indicates that selected buildings/structures/roads identified in (a) and (b) 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.

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.

All owners of assets to be surveyed, as defined above, are to be advised (at least 14 days prior to the first survey) of the scope and methodology of the survey, and the process for making a claim regarding property damage.

A copy of the survey(s) shall be given to each affected owner. A register of all properties surveyed shall be maintained.

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).

**Contamination and Hazardous Materials****22. 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 relevant EPA guidelines, including the *Guidelines for Consultants Reporting on Contaminated Sites* (Office of Environment and Heritage, 2011).

A copy of any contamination report shall be submitted to the EMR for review. The EMR is to be given a minimum period of seven days to review.

A revised copy of the report shall be submitted to the ADEM for consideration upon completion of the EMR review period. The ADEM 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 21 and Condition 22.*

**23. 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 a 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, Safe Work Australia and SafeWork NSW 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 21 and Condition 22.*

**24. Storage and Use of Hazardous Materials**

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 prior to construction as part of the overall CEMP, in accordance with relevant EPA guidelines, TfNSW's *Chemical Storage and Spill Response Guidelines* (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 are to be undertaken in clearly marked designated areas 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 are 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 are 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.

## CoA Condition

### Erosion and Sediment Control

#### 25. Erosion and Sediment Control

Soil and water management measures shall be prepared, implemented and maintained as part of the CEMP for the mitigation of water quality impacts during construction of the Project. The management measures shall be prepared in accordance with *Managing Urban Stormwater: Soils and Construction Volume 1 4th Edition* (Landcom, 2004).

### Heritage Management

#### 26. Aboriginal and Non-Aboriginal Heritage

If previously unidentified Aboriginal or non-Aboriginal heritage/archaeological items are uncovered during construction works, the procedures contained in the TfNSW *Unexpected Heritage Finds Guideline* (SD-115) shall be followed and all works in the vicinity of the find shall cease. The EMR shall be immediately notified to co-ordinate a response, which may include seeking appropriate advice from a suitably qualified and experienced Heritage Advisor (in consultation with Heritage NSW, and/or the Energy, Environment and Science Group of the Department of Planning, Industry and Environment, as applicable). Works in the vicinity of the find shall not re-commence until clearance has been received from TfNSW and/or the Heritage Advisor.

### Flora and Fauna

#### 27. Removal of Trees or Vegetation

Separate approval, in accordance with TfNSW's *Removal or Trimming of Vegetation Application* (FT-078), is required 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. The trimming, cutting, pruning or removal of trees or vegetation shall be undertaken in accordance with the conditions of that approval.

#### 28. Replanting Program

All cleared vegetation shall be offset in accordance with TfNSW's *Vegetation Offset Guide* (ST-149). All vegetation planted on-site is to consist of locally endemic native species, unless otherwise agreed by the ADEM, following consultation with the relevant council, where relevant, and/or the owner of the land upon which the vegetation is to be planted.

### Lighting

#### 29. 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 Lighting for Roads and Public Spaces* and *AS 4282 Control of the Obtrusive Effects of Outdoor Lighting*. The lighting scheme shall address the following as relevant:

- a) consideration of lighting demands of different areas
- a) strategic placement of lighting fixtures to maximise ground coverage
- b) use of LED lighting
- c) minimising light spill by directing lighting into the station
- d) control systems for lighting that dim or switch-off lights settings according to the amount of daylight the zone is receiving
- e) motion sensors to control low traffic areas
- f) allowing the lighting system to use low light or switch off light settings while meeting relevant lighting Standards requirements, and
- g) ensuring security and warning lighting is not directed at neighbouring properties.

The proposed lighting scheme is to be submitted to TfNSW's technical (design) team for acceptance. oval of Trees or Vegetation

Separate approval, in accordance with TfNSW's *Removal or Trimming of Vegetation Application* (DMS-FT-078), is required for the trimming, cutting, pruning or removal of trees or vegetation

## CoA Condition

where the impact has not already been identified in the EIA for the Project. The trimming, cutting, pruning or removal of trees or vegetation shall be undertaken in accordance with the conditions of that approval.

### Urban Design and Landscaping

#### 30. Urban Design and Landscaping Plan

An Urban Design and Landscaping Plan (UDLP) for the Project shall be prepared and submitted to TfNSW for endorsement by the Precincts and Urban Design Team. The UDLP is to address the fundamental design principles as outlined in '*Around the Tracks*' – *urban design for heavy and light rail* (TfNSW, Interim 2016). At a minimum, the UDLP shall:

- h) demonstrate a robust understanding of the Project site through a comprehensive site analysis to inform the design direction, demonstrate connectivity with street networks, transport modes, active transport options, and pedestrian distances
- i) identify opportunities and challenges
- j) establish site-specific principles to guide and test design options
- k) demonstrate how the preferred design option responds to the design principles established in *Around the Tracks*, including consideration of Crime Prevention through Environmental Design Principles.

The UDLP is to include the Public Domain Plan for the chosen option and shall provide analysis of the:

- I) landscape design approach including design of pedestrian and bicycle pathways, street furniture, interchange facilities, new planting and opportunities for public art
- II) materials schedule including materials and finishes for proposed built works, colour schemes, paving and lighting types for public domain, fencing and landscaping
- III) an Artist's Impression or Photomontage to communicate the proposed changes to the precinct.

The following design guidelines are available to assist and inform the UDLP for the Project:

- a) *TAP Urban Design Plan Guidelines* (TfNSW, Draft 2018)
- b) *Commuter Car Parks Urban Design Guidelines* (TfNSW, Interim 2017)
- c) *Managing Heritage Issues in Rail Projects Guidelines* (TfNSW, Interim 2016)
- d) *Creativity Guidelines for Transport Systems* (TfNSW, Interim 2016)
- e) *Water Sensitive Urban Design Guideline SD-106* (TfNSW, 2017).

Endorsement of the Urban Design and Landscaping Plan will demonstrate compliance with the Conditions of Approval in the Review of Environmental Factors (REF) Determination Report.

The Urban Design Plan and Landscaping Plan shall be:

- I. Prepared prior to concept design and finalised
- II. Prepared in consultation with Local Council and relevant stakeholders
- III. Prepared by a registered Architect and/or Landscape Architect

### Sustainability

#### 31. Sustainability Officer

A suitably qualified and experienced Sustainability Officer shall be appointed who is responsible for implementing the sustainability objectives for the Project. Details of the Sustainability Officer including defined responsibilities, duration and resource allocation throughout the appointment are to be submitted to the satisfaction of the Associate Director Sustainability, Planning & Development (ADSPD) prior to the preparation of the Sustainability Management Plan.

## CoA Condition

### 32. Sustainability Management Plan

A Sustainability Management Plan (SMP) which details the approach to managing sustainability requirements and opportunities during design and construction shall be prepared. The SMP shall include the following as a minimum:

- a) a completed electronic checklist demonstrating compliance with the Infrastructure Sustainability Council of Australia (ISCA) scorecard demonstrating credits targeted to meet an Infrastructure Sustainability Rating Scheme (v1.2) of Excellent.
- b) a statement outlining the Construction Contactor's own corporate sustainability policies, obligations, goals, targets and commitments
- c) a description of the processes and methodologies for encouraging and identifying innovative sustainability outcomes on the Project, and the areas targeted for innovative sustainable solutions to be explored and/or implemented on the Project
- d) the approach to the identification of opportunities to reduce carbon emissions, energy use and embodied lifecycle impacts of the Project. This should include a summary of initiatives proposed for implementation to meet energy and carbon management objectives and targets
- e) the approach to sustainable procurement including how procurement processes have taken in to account the principles of *ISO 20400: 2017 – Sustainable Procurement* in the selection of all materials, products and services
- f) a description of the processes, standards and procedures for undertaking climate change risk assessments and strategies for mitigation of risks associated with climate change and extreme weather events.

A copy of the SMP shall be submitted to the ADSPD at least 30 days prior to the commencement of construction, for approval (or such time as is otherwise agreed by the ADSPD).

### 33. Infrastructure Sustainability Council of Australia (ISCA) Ratings

The Project shall be registered with the Infrastructure Sustainability Council of Australia (ISCA), and shall aim to achieve a minimum 'Infrastructure Sustainability Rating Tool' (v1.2) 'Excellent' rating 'for the 'Design', and 'As-Built' components of the Project.

## Site Specific Conditions

34. The following site specific components would be investigated as part of the detailed design phase:

- a) privacy and security screening on the footbridge
- b) planting tall screening vegetation along the western boundary of the rail corridor in consultation with adjacent residential receivers
- c) increased density of plant numbers and width of planting area south and east of the proposed Station Systems Equipment Room and selection of quick growing, native plant species with good screening characteristics
- d) planting advanced size specimen plant species along Weber Crescent near the proposed car spaces to create a more attractive initial outcome for residents with close views of the Proposal site
- e) planting quick growing tree species with good screening characteristics to replace vegetation removed along rail corridor where necessary
- f) select colours for the proposed lift shafts and footbridge that respond to the background colour tones of the existing landscape to reduce the prominence of the new structures
- g) explore opportunities for a drinking water bottle filling tap on each platform.

END OF CONDITIONS