

REVIEW OF ENVIRONMENTAL FACTORS

DETERMINATION REPORT FOR GLENWOOD PEDESTRIAN LINK

November 2018

Project:	Glenwood Pedestrian Link
Division:	Sydney Metro Northwest
Document:	Determination Report for Glenwood Pedestrian Link Review of Environmental Factors
Date:	31 October 2018
Status:	Final
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Reference number:	SM-18-00173071
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Version:	Date:	Description:
Rev 1	25/09/2018	First Draft for Review
Rev 2	26/09/2018	Final Draft for Approval
Rev 3	04/10/2018	Minor amendments to Final Draft for Approval
Rev 4	30/10/2018	Minor amendments to Final Draft for Approval
Rev 5	31/10/2018	Final for Approval


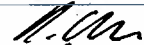

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1. Introduction

1.1. Sydney Metro

Sydney Metro is Australia's biggest public transport project. A new standalone railway, this 21st century network will deliver 31 metro stations and 66km of new metro rail for Australia's biggest city – revolutionising the way Sydney travels.

Services start in the first half of 2019 using Sydney's new-generation of fully-automated metro trains.

From Sydney's booming North West region, metro rail will run under Sydney Harbour, through new underground stations in the CBD and beyond to the south west.

Customers won't need a timetable when Sydney Metro opens – they'll just turn up and go.

When Sydney Metro is extended into the CBD and beyond in 2024, there will be ultimate capacity for a metro train every two minutes in each direction under the city – a level of service never before seen in Sydney.

Sydney's new metro railway will have a target capacity of about 40,000 customers per hour, similar to other metro systems worldwide. Sydney's current suburban system can reliably carry 24,000 people an hour per line.

Sydney Metro, together with signalling and infrastructure upgrades across the existing Sydney rail network, will increase the capacity of train services entering the Sydney CBD – from about 120 an hour today to up to 200 services beyond 2024. That's an increase of up to 60 per cent capacity across the network to meet demand.

Sydney Metro has two core components:

- Stage 1: Sydney Metro Northwest – formerly the 36km North West Rail Link. This \$8.3 billion project is now under construction and will open in the first half of 2019 with a metro train every four minutes in the peak. Tunnelling has finished and construction is progressing rapidly; and
- Stage 2: Sydney Metro City & Southwest – a new 30km metro line extending metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the capacity to run a metro train every two minutes each way through the centre of Sydney.

1.2. Background

Bella Vista Station is one of the stations being delivered as part of Sydney Metro Northwest. Bella Vista Station is located on the eastern side of Old Windsor Road within The Hills Local Government Area (The Hills LGA). The station is currently under construction and will serve the Norwest Business Park, local schools and surrounding residential areas, and future development within proximity of the station precinct. Due to a historical focus on auto-oriented planning, the station will be delivered into an environment with a number of significant access constraints imposed by the surrounding street network.

A pedestrian bridge is being constructed across Old Windsor Road between the southern station entry and the existing shared path on the western side of Old Windsor Road to facilitate improved pedestrian access across Old Windsor Road. The pedestrian bridge is located approximately 100 metres north of Celebration Drive. The bridge will land adjacent to the southern entry of Bella Vista Station on the eastern side of Old Windsor Road, and adjacent to the Emmanuel Baptist Church and Trades Norwest Anglican Senior College on the western side.

It is proposed to construct a pedestrian and bicycle link between Swansea Court/Sharrock Avenue and the existing shared path along Old Windsor Road to provide walking and cycling

access to the new pedestrian bridge and Bella Vista Station from the Glenwood residential area. The proposal is related however does not form part of the existing Sydney Metro Northwest project.

A Review of Environmental Factors (REF) was produced and publicly exhibited for a period of six weeks between 6 April and 18 May 2018, documenting the likely impacts of the proposal on the environment and the proposed mitigation measures to be implemented. This REF is attached in **Appendix A**. For the purposes of these works Sydney Metro is the proponent and determining authority under Part 5, Division 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

2. Proposal

2.1. Overview

The proposal aims to provide a dedicated link to improve pedestrian and cyclist access between the Glenwood residential area and the existing Old Windsor Road shared path, in order to improve pedestrian and cycle access for the Glenwood community to the new Bella Vista station and pedestrian bridge.

The proposal would comprise the following key elements:

- Acquisition and demolition of a residential property (1 Swansea Court, Glenwood)
- Construction of a 2.5 metre wide shared path (for pedestrians and cyclists) between the Old Windsor Road shared path and Swansea Court, approximately 50 metres in length
- Regrading a section of the existing shared path along Old Windsor Road (to 1 in 20 grade)
- Installation of a new 1.5 metre wide footpath on the eastern side of Sharrock Avenue between Swansea Court and Nixon Street
- Installation of a new 1.5 metre wide footpath on the southern side of Cramer Place between Swansea Court and Glenwood Park Drive
- Utility relocations where required
- Installation of retaining walls along Old Windsor Road shared path
- Landscaping and lighting.

Provision for parking management and CCTV would be considered, in consultation with Blacktown City Council.

The proposal would provide new 1.5 metre wide footpaths to provide connections to the existing pedestrian footpath network. These are shown in Figure 4-1 of the REF. Currently footpaths are only provided on the western side of Sharrock Avenue and the northern side of Cramer Place within the vicinity of the proposed pedestrian link.

An artist's impression of the preferred concept design for the proposed pedestrian link is shown in the REF at Figure 4-2 and Figure 4-3. An indicative cross section of the proposed pedestrian link is provided in Figure 4-4 and Figure 4-5 in the REF.

2.2. Strategic need for the proposal

Glenwood is separated from Bella Vista Station by Old Windsor Road, a wide state arterial road. The development of Glenwood as a largely residential community has resulted in few access points between Old Windsor Road and the residential streets in Glenwood. Fencing and noise barriers present pedestrian access constraints for nearly one kilometre along Old Windsor Road, limiting opportunities for Glenwood residents to access the station despite

living in close proximity. Formal pedestrian access points between Glenwood and Old Windsor Road currently only exist at Emmanuel Terrace, Arnold Place and Miami Street (refer to Figure 1-3 in the REF). Despite the access improvements delivered by the new pedestrian bridge, there will be no households within a 10 minute walk of the station via formal pedestrian access routes. This also produces an inequitable access situation for residents of the Blacktown Local Government Area (Blacktown LGA) in contrast with those residing in The Hills LGA suburb of Bella Vista. Hence, further work is required to provide better and more convenient access to the pedestrian and cycle bridge across Old Windsor Road from the Glenwood residential area.

2.3. Location

The proposal would be located in Glenwood, within the Blacktown LGA.

The pedestrian link would be constructed to provide a connection between the shared path running adjacent to the western side of Old Windsor Road and Glenwood residential area at Swansea Court/Sharrock Avenue. The proposed location would require the acquisition and demolition of a residential property.

The proposed pedestrian link site is situated approximately 100 metres north of the pedestrian bridge over Old Windsor Road, which lands adjacent to the Emmanuel Baptist Church.

Figure 1-3 in the REF outlines the location of the proposal in relation to its surrounding suburbs.

The 'proposal site' refers to the area that would be directly impacted by the proposal. For the purpose of this assessment, the proposal site is defined as:

- 1 Swansea Court, Glenwood
- Approximately 50 metres length of the shared path on the western side of Old Windsor Road
- Approximately 220 metres of grassed nature strip on the southern side of Cramer Place
- Approximately 75 metres of grassed nature strip on the eastern side of Sharrock Avenue.

An overview of the proposal site is shown in Figure 1-4 of the REF.

2.4. Options Considered

Three options were considered for the proposal location. These are shown on Figure 3-1 in the REF and described below.

Option 1: North

This option would comprise the construction of a pedestrian link to the north of the Old Windsor Road pedestrian bridge, into Swansea Court or Sharrock Avenue.

Option 2: South

This option would comprise the construction of a pedestrian link to the south of the Old Windsor Road pedestrian bridge, into Vanessa Circuit or Maley Grove.

Option 3: Church/School

This option would provide a formalised pedestrian link through the Emmanuel Baptist Church and Trades Norwest Anglican Senior College grounds. Informal access currently occurs through these properties.

2.4.1. Preferred option

The preferred option for the pedestrian link (the proposal) consists of a 2.5 metre wide shared path extending from Swansea Court to the Old Windsor Road shared path. The proposed pedestrian link would feature:

- A 1 in 14 gradient pathway with handrails to comply with accessibility standards
- The pedestrian link would be approximately 50 metres long
- New trees and low plantings would be provided and would be selected to ensure clear visibility through the pedestrian link
- Adjustments to the existing three metre wide shared path on Old Windsor Road. Regrading of the shared path below the existing fence line to reduce privacy impacts on neighbouring properties
- New hedge planting would also provide screening to neighbouring properties
- Kerb ramps would be provided across Swansea Court to provide pram, wheelchair and bicycle access, and footpaths would be extended along the southern side of Cramer Place and the eastern side of Sharrock Avenue to connect into the existing footpath network at safe crossing locations.

An overview of the concept design for the preferred option is provided in Figure 3-6 and described in detail in Chapter 4 of the REF.

3. Review of Environmental Factors

Potential impacts associated with the proposal were identified in the REF as follows:

- As a new access point to Bella Vista Station and T-Way services, there may be additional commuter parking and pick-up/drop-off pressures on streets adjacent to the proposal, including Sharrock Avenue, Swansea Court, Cramer Place, Nixon Street and Adrian Street. These streets will require appropriate parking management measures to allow safe access to the link such that local amenity is not adversely impacted.
- During construction, the proposal would result in a perceptible but a temporary noise level increase for residential receivers in proximity to the proposal. Construction works would be carried out within standard construction hours (7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturday) where possible. Two residential receivers were identified with potential for a noise level increase of 6 to 7 dBA during operation due to the potential increase in road traffic noise levels associated with the removal of existing screening (removal of the residential dwelling and boundary wall). Community updates would be provided and construction and operational noise management controls put in place to mitigate potential impacts.
- Temporary visual impacts would occur during construction. The site would be enclosed by fencing, and the removal of street trees and vegetation within the proposal site would open up views between Swansea Court and Old Windsor Road. Construction of the proposal is expected to temporarily reduce visual amenity for residents and road/street users in close proximity to the proposal site itself. The change from a residential property to an open space will provide some amenity improvements including opening-up views from the upper storey of the adjacent properties, providing green space and landscaping. Once opened, the pedestrian link would provide a permanent outlook onto open space where there is currently a residential dwelling. On balance, this would result in no major changes to visual amenity from the adjacent residential area.
- The proposal would be developed within a previously disturbed/developed area. No remnant vegetation would be impacted or removed during the proposal's construction.

Several native plantings within the proposal's area are likely to require removal and replacement. Up to 20 planted Eucalypts and Lomandras located to the rear of 63 and 67 Sharrock Avenue and 1, 3 and 5 Swansea Court may require removal during the regrading of Old Windsor Road shared path. The area surrounding the pathway would be landscaped and revegetated with native plants. There would be some additional vegetation within the proposal site following construction and more potential habitat and foraging material for fauna. The proposal would have some limited overall benefit on biodiversity once completed.

4. Consultation

During the exhibition period, stakeholders, community members and government agencies (including NSW Government agencies and local councils) had the opportunity to comment on the REF. Stakeholders and the community were invited to view the REF, attend community information sessions and make submissions. The following sections outline the activities that were undertaken during the public exhibition of the REF.

Contact mechanisms for the proposal were established before the commencement of the exhibition period. Community members and stakeholders were able to direct their enquiries to:

- Enquiries phone line: 1800 019 989
- Email: info@metronorthwest.com.au
- Sydney Metro, PO Box K659, Haymarket NSW 1240.

4.1.1. Proposal newsletter

A proposal newsletter was sent to all residents in Glenwood. The newsletter provided an overview of the proposal and invited people to view the REF, attend a community information session and make a submission.

The newsletter was delivered on 5 April 2018 to the whole suburb of Glenwood - about 4500 residences and businesses. Newsletters were also made available at the community information sessions and the REF exhibition locations.

4.1.2. Newspaper advertising

The public display of the REF was advertised in the Blacktown Advocate and the Rouse Hill Times on Wednesday 11 April and Wednesday 2 May respectively. The advertisements provided notification to the community about the proposal and gave details regarding the community information sessions.

In addition, Sydney Metro team members doorknocked households in the streets closest to the proposal site on Wednesday 4 and Thursday 5 April 2018, providing the newsletter and advising residents of the first community information session.

4.1.3. Community information sessions

Three community information sessions were held during the public exhibition of the REF. These sessions were held at the Glenwood Village Shopping Centre on:

- Wednesday 11 April 2018 (4:00pm to 7:00pm)
- Saturday 5 May 2018 (10:00am to 2:00pm)
- Thursday 10 May 2018 (4:00pm to 7:00pm).

Full details of the sessions were advertised in the Blacktown Advocate and the Rouse Hill Times and included in the community newsletter. Copies of the REF document, notification

newsletter and enlarged design diagrams were available for consultation. A number of project team members including representatives from the transport and environmental planning teams were available at each of these sessions to answer questions regarding the proposal and the process for making submissions.

The information sessions were attended by around 208 members of the local residential and business communities.

4.2. Submissions

Sydney Metro received submissions from a range of stakeholders including government agencies/representatives, special interest groups and the community. Submissions were received up until 18 May 2018.

A total of 51 submissions were received. Of these submissions, four were responses from government agencies/representatives, comprising:

- One submission from Blacktown City Council
- One submission from Roads and Maritime Services
- Two submissions from the Member for Greenway, the Hon Michelle Rowland MP on behalf of two residents.

One submission was received from a community group, Bike North. The other 46 submissions (from 43 individuals) were received from the community, including one petition with 160 signatures (representing 96 households). The petition typically contained signatures from concentrated areas (i.e. neighbouring streets) around the proposal within Glenwood.

The issues raised in each submission have been identified and collated in the Submissions Report (see **Appendix B**), and corresponding responses to the issues raised have been provided. Responses to the issues raised by Blacktown City Council and Roads and Maritime Services are presented separately to the community responses.

An overall breakdown of the submissions in terms of support or objection are as follows:

- Eighteen submissions supported the proposal (36%)
- Twenty three submissions objected to the proposal (45%). Of these objections, 19 were individual respondents, one was a petition, one was from Blacktown City Council and two objections were received through the Member for Greenway, the Hon Michelle Rowland, on behalf of two individuals
- Ten respondents provided no objection or support for the proposal (19%).

The majority of the submissions received raised concerns regarding the traffic and parking impacts of the proposal. Despite the number of objections, it is considered that these impacts can be managed through parking management measures as outlined in the forthcoming Sydney Metro Northwest Parking Management Strategy. Traffic and parking conditions on the streets within the vicinity of the proposal will be monitored by Sydney Metro over a 2 year period and will also help inform the consideration of any parking management measures to be implemented. Parking management of local streets is the responsibility of local government. Sydney Metro will continue to consult with Blacktown City Council as the results of the traffic and monitoring program become available.

4.3. Proposed future engagement

Community and stakeholder engagement activities would continue prior to and during construction of the pedestrian link. All community and stakeholders would be provided with project updates by the following means:

- Community update to notify residents and stakeholders of the outcome of the REF determination process. This update will be distributed via targeted letterbox drop and uploaded to the project website
- Works notifications, including out-of-hours works schedule, distributed via targeted letterbox drops, email and uploaded to the project website
- Updates to the project website sydneymetro.info
- Clear signage at construction site
- Doorknocking properties where required
- Stakeholder meetings and briefings
- Channels for the community to contact the project team including a 24-hour project information phone line, email and post
- Project email list (subscription based)
- Complaints management process
- Community Place Manager for direct community and stakeholder contact.

5. Determination

5.1. Purpose of this Determination Report

In order for the Proposed Activity to proceed, Sydney Metro must make a determination in accordance with Part 5 Division 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act). Determination is the last step prior to construction on the Planning Approval Process shown in Figure 1.

The objectives of this Determination Report are to:

- Assess the environmental impacts in respect of the Proposed Activity, which are detailed in the REF;
- Determine the significance of those impacts; and
- Consider the relevant matters under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) in respect to the Proposed Activity.

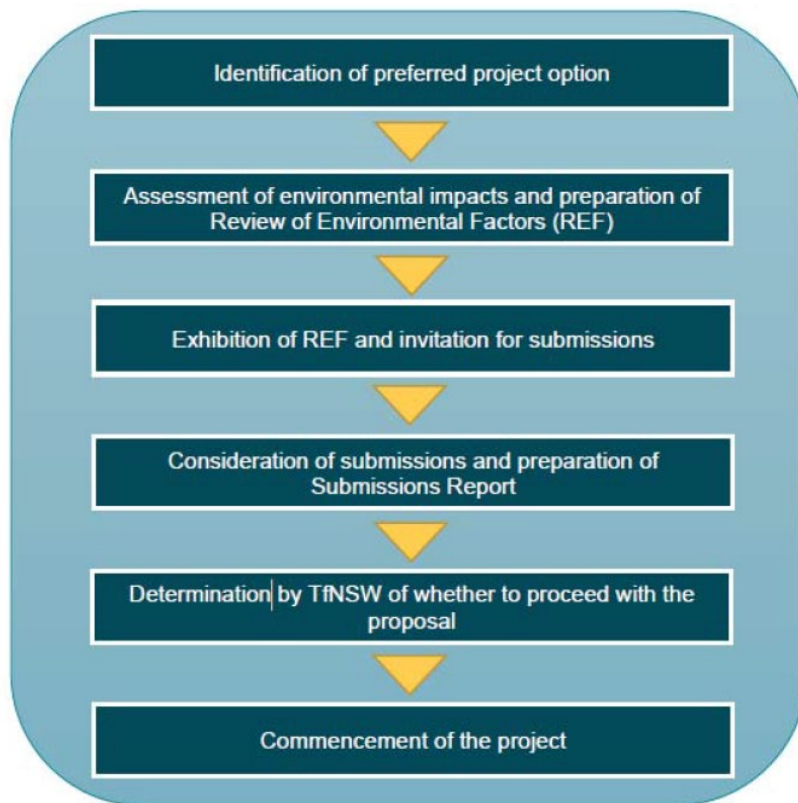


Figure 1 Planning Approval Process

6. Statutory and planning framework

6.1. NSW legislation and regulations

The REF has been examined and considered under the following NSW planning instruments.

6.1.1. Environmental Planning and Assessment Act (EP&A Act) 1979

The proposal comprises an 'activity' for the purposes of Part 5, Division 5.1 of the EP&A Act by reason of clause 79 of *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP). Specifically, Clause 79 of ISEPP outlines that the proposal is permissible without the need for development consent when carried out by a public authority.

As the determining authority for the purposes of Part 5, Division 5.1 of the Act, Sydney Metro must:

- (a) Examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity, in accordance with section 5.5 of the EP&A Act
- (b) Determine whether or not the activity is likely to significantly affect the environment or is likely to significantly affect threatened species, populations and ecological communities in accordance with section 5.7 of the EP&A Act.

Chapter 7 of the REF assesses the likely effect of the proposal on the environment and threatened species, populations and ecological communities. In considering the provisions of sections 5.5 and 5.7 of the EP&A Act, no significant impact on the environment or threatened species is considered likely and therefore neither an EIS, nor an SIS is required.

6.1.2. State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) is the key environmental planning instrument which determines the permissibility of the proposal and which part of the EP&A Act an activity or development may be assessed.

Clause 79 of ISEPP allows for the development of 'rail infrastructure facilities' by or on behalf of a public authority without consent on any land (i.e. assessable under Part 5, Division 5.1 of the EP&A Act). Clause 78 defines 'rail infrastructure facilities' as including elements such as 'pedestrian and cyclist facilities'.

Consequently, development consent is not required for the proposal which is classified as a rail infrastructure facility, however the environmental impacts of the proposal are required to be assessed under the provisions of Part 5, Division 5.1 of the EP&A Act.

Part 2 of ISEPP contains provisions for public authorities to consult with local councils and other agencies prior to the commencement of certain types of development. Chapter 3 of the REF discusses the consultation undertaken under the requirements of ISEPP.

It is noted that ISEPP prevails over all other environmental planning instruments except where *State Environmental Planning Policy (Major Development) 2005*, *State Environmental Planning Policy No 14 – Coastal Wetlands* or *State Environmental Planning Policy No 26 – Littoral Rainforest* applies.

The proposal does not require consideration under these SEPPs and therefore they do not require further consideration as part this REF.

6.2. Commonwealth legislation

6.2.1. Environment Protection and Biodiversity Conservation Act (EPBC) 1999

The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as 'matters of national environmental significance' (MNES).

Under the EPBC Act, any action that has, would have, or is likely to have a significant impact on a matter of national environmental significance or on Commonwealth land, triggers the EPBC Act and may require approval from the Commonwealth Minister for Environment.

An action may include a project, development, undertaking, activity, or series of activities. If the Commonwealth Minister for Environment determines that an approval is required under the EPBC Act, the proposed action is deemed to be a 'controlled action'. It must then undergo assessment and approval under the EPBC Act before the action is carried out. The Act provides that a proponent of an action that may be, or is, a controlled action must refer the proposal to the Minister for the Minister's decision as to whether the action is a controlled action.

There are no MNES located within the general area of the proposal, as confirmed in the REF. An EPBC Act referral is therefore not required.

6.2.2. Disability Discrimination Act 1992

The Commonwealth Government DDA (Commonwealth Government, 1992) aims to eliminate disability discrimination as far as reasonably practical. TfNSW promotes DDA compliance across all its proposals. As such, the proposal has been designed to comply with

accessibility standards to provide pedestrian and public transport access for people with mobility issues.

7. Environmental Management

7.1. Environmental management plans

Sydney Metro has a Construction Environmental Management Framework (CEMF). The framework sets out the environmental, stakeholder and community management documentation to be developed by the contractors relevant to their scope of works. It provides a linking document between the planning approval documentation and the construction environmental management documentation to be developed by the contractor.

It is envisaged that this document would form the basis of the proposed Construction Environmental Management Plan (CEMP) for the proposal. The CEMP would provide a centralised mechanism through which all potential environmental impacts would be managed. The CEMP would document mechanisms for demonstrating compliance with the commitments made in the REF, the Submissions Report and other relevant statutory approvals.

The proposed contractor would be appointed to undertake the construction of the proposal during detailed design and would undertake a CEMP based on the requirements of the CEMF.

7.2. Monitoring

Sydney Metro is currently monitoring traffic and parking conditions in the vicinity of the proposal as part of a wider traffic and parking monitoring program for all Sydney Metro Norwest stations. Sydney Metro will continue to monitor traffic and parking conditions for another 12 months following the commencement of Sydney Metro services.

In addition, Sydney Metro will monitor pedestrian and cyclist demand between the Glenwood residential area and the Bella Vista Station precinct over the same time period.

Sydney Metro will provide recommendations to Council regarding appropriate management measures.

7.3. Operational management

During operation of the proposal, further traffic and parking management measures may be required to minimise impacts on residents living within the vicinity of the proposal. Sydney Metro will continue to monitor traffic and parking conditions for 12 months after the opening of the proposal and concurrent with the operation of Sydney Metro services. Sydney Metro will consult with Council on the results of the monitoring including recommendations for appropriate mitigation and management measures (if required) such that any residual impacts are consistent with the REF.

Maintenance of the asset once complete would be carried out on a regular basis and would include the periodic maintenance of the lawns, vegetation and footpaths, removal of rubbish and graffiti where required.

8. Conditions of approval

The Determination is subject to compliance with the Conditions of Approval (CoA) below.

No.	Impact	Safeguard/management measure	Responsibility	Timing
NV1	Noise and Vibration	Investigation of at property treatment for two residential receivers, identified in Figure 7-2 of the REF for the facades taking into account the use of the rooms in those areas.	Sydney Metro	Detailed design
NV2	Noise and Vibration	A CEMP should be prepared prior to construction activities commencing and implemented through all construction activities. A Construction Noise and Vibration Management Plan (CNVMP) would be included in the CEMP to provide the framework and mechanisms for the management and mitigation of all potential noise and vibration impacts from the project. The CNVMP would be expected to include procedures for dealing with potential impacts during out of hours works.	Construction contractor	Pre-construction
NV3	Noise and Vibration	The project should apply all feasible and reasonable work practices to meet the Noise Management Levels (NMLs), where possible, and inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels, duration of noise generating construction works, and contact details during construction.	Construction contractor	Pre-construction, construction
NV4	Noise and Vibration	Avoid the coincidence of noisy plant working simultaneously close together and adjacent to sensitive receptors to reduce noise emissions.	Construction contractor	Construction
NV5	Noise and Vibration	Equipment which is used intermittently is to be shut down when not in use.	Construction contractor	Construction
NV6	Noise and Vibration	<p>All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include:</p> <ul style="list-style-type: none"> ▪ All relevant project specific and standard noise and vibration mitigation measures ▪ Relevant licence and approval conditions ▪ Permissible hours of work ▪ Any limitations on high noise generating activities ▪ Location of nearest sensitive receivers ▪ Construction employee parking areas ▪ Designated loading/unloading areas and procedures ▪ Site opening/closing times (including deliveries) ▪ Environmental incident procedures. 	Construction contractor	Construction
NV7	Noise and Vibration	<ul style="list-style-type: none"> ▪ No swearing or unnecessary shouting or loud stereos/radios on site. ▪ No dropping of materials from height; throwing of metal items; and slamming of doors. ▪ No excessive revving of plant and vehicle engines ▪ Controlled release of compressed air. 	Construction contractor	Construction

No.	Impact	Safeguard/management measure	Responsibility	Timing
NV8	Noise and Vibration	A noise monitoring program is to be carried out for the duration of the works in accordance with the CNVMP and any approval and licence conditions.	Construction contractor	Construction
NV9	Noise and Vibration	<p>Attended vibration measurements are required at the commencement of vibration generating activities to confirm that vibration levels satisfy the criteria for that vibration generating activity.</p> <p>Where there is potential for exceedances of the criteria further vibration site law (ie the site-specific reduction in vibration level with distance) investigations would be undertaken to determine the site-specific safe working distances for that vibration generating activity. Continuous vibration monitoring with audible and visible alarms would be conducted at the nearest sensitive receivers whenever vibration generating activities need to take place inside the applicable safe-working distances.</p>	Construction contractor	Construction
NV10	Noise and Vibration	High noise and vibration generating activities may only be carried out in continuous blocks, not exceeding 3 hours each, with a minimum respite period of one hour between each block.	Construction contractor	Construction
NV11	Noise and Vibration	Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site.	Construction contractor	Construction
NV12	Noise and Vibration	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours' work.	Construction contractor	Construction
NV13	Noise and Vibration	Stationary noise sources would be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained where necessary.	Construction contractor	Construction
T1	Traffic, transport and access	<p>Implement a CTMP developed in consultation with and to meet the reasonable requirements of the relevant road authority and transport operator(s). The plan shall include but not be limited to:</p> <ul style="list-style-type: none"> ▪ A routine CTMP ▪ A Parking Management Plan ▪ An Incident Response Plan ▪ Mechanisms for monitoring, reviewing and amending this plan. 	Construction contractor	Pre-construction
T2	Traffic, transport and access	<p>Construction vehicles (including staff vehicles) shall be managed to:</p> <ul style="list-style-type: none"> ▪ Minimise parking or queuing on public roads and non-associated sites ▪ Minimise the use of local roads (through residential streets and town centres) to gain access to construction sites and compounds ▪ Minimise traffic past schools and child care centres, particularly during opening and closing periods ▪ Adhere to the nominated heavy vehicle routes identified in the CTMP. 	Construction contractor	Construction
V1	Landscape and visual	Retain and protect hedges along east and west neighbouring property boundaries where possible.	Contractor	Detailed design

No.	Impact	Safeguard/management measure	Responsibility	Timing
V2	Landscape and visual	Reinstate the vegetated corridor along the Old Windsor Road shared path with semi-mature tree stock to ensure timely establishment and visual screening	Contractor	Detailed design
V3	Landscape and visual	Trees within the site to be semi-mature tree stock to ensure timely establishment and visual screening	Contractor	Detailed Design
V4	Landscape and visual	Design of property fencing to be designed to screen views and reduce the potential for overlooking into private property.	Contractor	Detailed Design
V5	Landscape and visual	All works equipment and materials will be contained within designated boundaries of the worksite	Contractor	Construction
V6	Landscape and visual	Location of a site toilet to be located with consideration of views from key living and entertaining areas of adjacent properties	Contractor	Construction
V7	Landscape and visual	The construction area will be left tidy at the end of each day	Contractor	Construction
V8	Landscape and visual	Dust and dirt will be regularly cleaned from the road surface.	Contractor	Construction
B1	Biodiversity	As a precautionary measure, ensure a qualified ecologist would be on call during the removal of the amenity vegetation to identify any manage wildlife that may be disturbed and/or injured. The ecologist would assess the species and then release them to the nearest suitable habitat if uninjured.	Construction contractor	Construction
B2	Biodiversity	As part of CEMP, a Vegetation Management Plan would be developed to address potential biodiversity impacts. Weed species within the study area would be managed in order to control them from further spread. Management techniques may include immediate weed removal and disposal without stockpiling, disposal of weed-contaminated soils at appropriate weed disposal facilities and to ensure that all equipment is cleaned prior to and on completion of works to ensure weeds are not introduced or spread to other locations.	Sydney Metro/ Construction contractor	Construction
B3	Biodiversity	Where possible, the vegetation removed would be replaced.	Sydney Metro/ Construction contractor	Detailed design/ construction
S1	Socio-economic, land use and property	Community Liaison Plan (to be developed by the Contractor prior to construction) would identify all potential stakeholders and the best-practice methods for consultation with these groups during construction. The Plan would also encourage feedback and facilitate opportunities for the community and stakeholders to have input into the proposal, where possible.	Contractor	Pre-construction, construction

No.	Impact	Safeguard/management measure	Responsibility	Timing
WQ1	Water quality, hydrology and drainage	Stormwater management controls would be implemented to: <ul style="list-style-type: none"> Manage runoff volumes through the use of measures to promote stormwater infiltration Minimise increases in peak flows through the use of detention and retention measures as appropriate. Treat stormwater through a range of at source and end point measures that are integrated with the urban landscape. 	Sydney Metro	Detailed design
WQ2	Water quality, hydrology and drainage	A CSWMP would be prepared to manage soil, surface water and ground water in accordance with: <ul style="list-style-type: none"> NSW Water Management Act 2000 Applicable Environment Protection Licences. Appropriate erosion control measures would be installed such as sediment fencing, temporary ground stabilisation, diversion berms or site regrading. Inspection of water quality mitigation controls (e.g. sediment fences, sediment basins) would be carried out regularly and following significant rainfall to detect any breach in performance.	Sydney Metro/Construction contractor	Pre-construction
WQ3	Water quality, hydrology and drainage	Procedures to quickly address any contaminant spill or accident would be developed and implemented during the proposal's operation.	Construction contractor	Construction
WQ4	Water quality, hydrology and drainage	<ul style="list-style-type: none"> Storage of hazardous materials such as oils, chemicals and refuelling activities would occur in bunded areas. All fuels, chemicals and hazardous liquids would be stored in accordance with Australian standards and EPA Guidelines Any refuelling undertaken on site would be undertaken in designated areas only Spill kits would be available as part of any worksite for use in case of fuels, chemical or other spill(s) which may occur during construction All spills or leakages would be immediately contained and absorbed. 	Construction contractor	Construction
C1	Soils, Geology and contamination	An Erosion and Sedimentation Control Plan would be developed and maintained for the site in accordance with Managing Urban Stormwater, Soils and Construction Guidelines (Landcom, 2004) (the Blue Book).	Construction contractor	Pre-construction
C2	Soils, Geology and contamination	Excavated material would be reassessed for reuse as backfill material, prior to removal. If all material unable to be used as backfill material would to be appropriately tested and classified against the <i>Waste Classification Guidelines Part 1: Classifying Waste</i> (NSW EPA, 2014) prior to being disposed of off-site (DECC, 2008).	Construction contractor	Construction
C3	Soils, Geology and contamination	Diversion of 'clean' run-off from offsite around or through the worksite without it contacting exposed soils or mixing with dirty onsite water.	Construction contractor	Construction
C4	Soils, Geology and contamination	Should any signs of contamination be identified during work within the site, the material would be tested against the National Environment Protection Council's National Environment Protection (Assessment of Site Contamination) Measure 1999, and managed accordingly.	Construction contractor	Construction

No.	Impact	Safeguard/management measure	Responsibility	Timing
WR1	Waste and Resource Management	All waste would be assessed, classified, managed and disposed of in accordance with the <i>Waste Classification Guidelines Part 1: Classifying Waste</i> (NSW EPA, 2014).	Construction contractor/Sydney Metro	Construction/operation
WR2	Waste and Resource Management	Excavated material and spoil would be beneficially reused on the project site or other sites, where feasible and reasonable, in accordance with the waste hierarchy. Recyclable wastes, including paper at site offices, would be stored separately from other wastes. Storage facilities would be secure and recyclables collected on a regular basis.	Construction contractor	Construction
WR3	Waste and Resource Management	Initial and ongoing education would be provided to staff and sub-contractors regarding the importance of appropriately managing waste.	Construction contractor/	Construction/
AQ1	Air Quality	Dust minimisation measures would be developed and implemented prior to commencement of construction.	Construction contractor	Pre-construction
AQ2	Air Quality	A mechanism for responding to complaints from the community should be put in place for the duration of the construction phase.	Construction contractor	Construction
AQ3	Air Quality	Ensure that all construction vehicles are tuned to not release excessive level of smoke from the exhaust and are compliant with OEH's Smokey Vehicles Program under the NSW POEO Act and NSW Protection of the Environment and Operations Regulations 2010.	Construction contractor	Construction
AQ4	Air Quality	<ul style="list-style-type: none"> All vehicles carrying loose or potentially dusty material to and/or from the site would be covered. Waste or any other material would not be burnt on construction sites. Dust generating activities would be assessed during periods of strong winds and rescheduled, where required. Wind breaks, which may include site hoardings, hoardings or shade cloth wrapped temporary fencing, would be constructed, where construction works are in close proximity to sensitive receivers and where feasible and reasonable. Re-vegetating or stabilising disturbed areas would occur as soon as feasible. The proposal shall be constructed in a manner that minimises dust emissions from the site, including windblown and traffic generated dust and tracking of material onto public roads. All activities on the site shall be undertaken with the objective of minimising visible emissions of dust from the site. Should such visible dust emissions occur at any time, all feasible and reasonable dust mitigation measures shall be identified and implemented including cessation of relevant works, as appropriate, such that emissions of visible dust cease. 	Construction contractor	Construction
AQ5	Air Quality	A street-cleaning regime would be implemented to remove any dirt tracked onto roads.	Construction contractor	Construction
CC1	Climate change and greenhouse gases	Where possible, construction services and materials will be sourced locally to minimise the distance travelled and therefore emissions of vehicles accessing the site.	Construction contractor	Construction

9. Conclusion

Having regard to the assessments in the REF and the Submissions Report, it is concluded that the Proposed Activity is not likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats.

Consequently, an EIS is not required to be prepared under Part 5 Division 5.2 of the EP&A Act. It is also considered that the Proposed Activity does not trigger the approval regime under Section 75 of the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999.

The environmental impact assessment (REF and Submissions Report) is recommended to be approved subject to the proposed mitigation and management measures included in the Conditions of Approval contained in Section 8 this Determination Report.

Approval

Review of Environmental Factors: Glenwood Pedestrian Link

I, Tom Gellibrand, Acting Chief Executive, Sydney Metro- state as follows:

1. I have examined and considered the proposed Glenwood Pedestrian Link Review of Environmental Factors and Submissions Report in accordance with Part 5 Section 5.5 of the *Environmental Planning and Assessment Act 1979*.
2. I determine on behalf of the Sydney Metro (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 Review of Environmental Factors Glenwood Pedestrian Link and Submissions Report Glenwood Pedestrian Link.

Name: Tom Gellibrand

Title: Acting Chief Executive

Project: Program

Date: 5/11/18

Signature:

A handwritten signature in blue ink, appearing to read 'Tom Gellibrand', written over the signature line.

Appendix A: Review of Environmental Factors (REF) Glenwood Pedestrian Link

Appendix B: Submissions Report Glenwood Pedestrian Link