



More Trains, More Services

Mascot Substation Project

Determination Report



February 2020

Contents

Glossary and abbreviations	4
Executive summary	6
1 Introduction	9
1.1 Background.....	9
1.2 Review of Environmental Factors	9
1.3 Determination report	10
1.4 Description of the Proposal in the REF	11
2 Consultation and assessment of submissions.....	12
2.1 REF public display	12
2.2 REF submissions	12
2.3 Consideration and response to submissions	13
2.4 Future consultation	16
3 Changes to the Proposal	17
4 Consideration of the environmental impacts	18
4.1 <i>Environmental Planning and Assessment Act 1979</i>	18
4.2 <i>Environment Protection and Biodiversity Conservation Act 1999</i>	18
5 Conditions of Approval	19
6 Conclusion	20
Determination	21
References	22
Appendix A Review of Environmental Factors	
Appendix B Conditions of Approval	

Figures

Figure 1 Key features of the Proposal	7
Figure 2 Planning approval process	10
Figure 3 Proposed Mascot Substation – magnetic field results (at one metre above ground).....	15

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Glossary and abbreviations

Term	Meaning
CBD	Central Business District
CCTV	Closed-circuit television
CEMP	Construction Environmental Management Plan
CoA	Condition of Approval
Concept design	The concept design is the preliminary design presented in the REF, which would be refined by the Construction Contractor (should the Proposal proceed) to a design suitable for construction (subject to TfNSW acceptance)
Construction Contractor	The Construction Contractor for the Proposal would be appointed by TfNSW to undertake the detailed design and construction of the Proposal
DC	Direct Current
Detailed design	Detailed design broadly refers to the process that the Construction Contractor undertakes (should the Proposal proceed) to refine the concept design to a design suitable for construction (subject to TfNSW acceptance)
EMF	Electric and Magnetic Fields
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i>
HV	High Voltage
ISCA	Infrastructure Sustainability Council of Australia
LGA	Local Government Area
kV	Kilovolts
mG	milliGauss - unit of measurement of magnetic flux density (or "magnetic induction")
MNES	Matters of National Environmental Significance under the EPBC Act
NSW	New South Wales
OEH	(former) NSW Office of Environment and Heritage
Proponent	A person or body proposing to carry out an activity under Division 5.1 of the EP&A Act – in this instance, TfNSW
Proposal	The construction and operation of the Mascot Substation
REF	Review of Environmental Factors

Term	Meaning
TfNSW	Transport for NSW (the Proponent)
TGSI	Tactile ground surface indicators
Traction substation	A traction substation is an electrical substation that converts electric power to an appropriate voltage, current type and frequency to supply power to trains
V	Volts

Executive summary

Overview of Proposal

Transport for NSW (TfNSW) is the Proponent for the Mascot Substation (the Proposal), which is part of the More Trains, More Services Program. The Program is a NSW Government initiative to simplify and modernise Sydney's existing heavy rail network. The program aims to improve capacity throughout the network, with an aim to provide 'turn up and go' services for many customers in the future.

The Proposal, as outlined in the Review of Environmental Factors (REF), includes:

- a new traction substation at 166 O'Riordan Street, Mascot
- ancillary works at the substation site, including new security fencing, lighting and CCTV
- upgrading of security fencing around the existing third-party mobile antenna located behind the new substation
- operation of the Proposal.

An overview of the Proposal is shown in **Figure 1** below.



FIGURE 1: KEY FEATURES OF THE PROPOSAL



Legend

- Proposed works
- Construction compound/laydown areas
- ▲ Site access point

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TfNSW, as the Proponent for the Proposal, has prepared a REF that details the scope of works and environmental impacts associated with the Proposal. The REF was prepared by AECOM Australia Pty Ltd (AECOM) on behalf of TfNSW 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).

The need for, and benefits of, the Proposal are outlined in Chapter 2 of the REF. Construction is expected to commence in 2020 and take approximately two and a half years to complete.

Purpose of this report

The purpose of this Determination Report is for TfNSW, as the Proponent of the Mascot Substation, to determine whether or not to proceed with the Proposal. TfNSW 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 TfNSW's response to the issues and comments raised in these submissions.

Modifications to the Proposal

Should design modifications be required as a result of the detailed design process, these modifications would be assessed to determine consistency with the Approved Project, including significance of impact on the environment. Additional mitigation measures and/or consultation would be undertaken where necessary.

Conclusion

Based on the assessments in the REF, and a review of the submissions received from the community and stakeholders, it is recommended that the Proposal be approved, subject to the mitigation measures included in the REF and the proposed Conditions of Approval. TfNSW will continue to liaise with the community and other stakeholders as the Proposal progresses through detailed design and into the construction phase.

1 Introduction

1.1 Background

The More Trains, More Services Program (the Program) is about building a modern and up to date rail system that will play its part in making Sydney a more productive and liveable city. The Program is a NSW Government initiative to simplify and modernise Sydney's existing heavy rail network.

While the Program will eventually deliver benefits to the entire network, TfNSW proposes to start by targeting improvements on Sydney's busiest lines. The first lines to benefit from the program will be the T4 Eastern Suburbs and Illawarra Line, the South Coast Line and the T8 Airport and South Line. These are some of the busiest lines on the Sydney Trains network, catering for 410,000 return trips in a typical day, representing around one third of all daily Sydney Trains customers. The Program is central to delivering the NSW Government's long-term vision and commitment to the state's transport and infrastructure needs.

Future stages of More Trains, More Services will deliver a 30 percent increase in peak services on the T4 Illawarra Line, and an 80 percent increase at stations between Green Square and Wollie Creek, meaning trains at least on average every four minutes instead of every six minutes.

As part of the Program, TfNSW proposes to upgrade the power supply of the T8 Airport Line including the construction of a new substation at Mascot, which would enable an increase to the number of trains per hour that can be accommodated along this line.

During the development of the T8 Transformation Definition Design stage, it became evident that a new traction substation is required at Mascot to provide sufficient power to accommodate an increase in the number of trains. A site at 166 O'Riordan Street was identified by TfNSW as the location.

The new substation at 166 O'Riordan Street, Mascot would provide supplementary capacity of the existing functions of the traction substations feeding the T8 Airport Line traction and station power, as well as providing operational flexibility and availability of electrical feeding arrangements.

The Proposal is consistent with NSW planning strategies, including the *Future Transport Strategy 2056* (TfNSW, 2018) and the *Greater Sydney Region Plan* (Greater Sydney Commission, 2018).

1.2 Review of Environmental Factors

A Review of Environmental Factors (REF) was prepared by TfNSW in accordance with section 5.5 and section 5.7 of the EP&A Act, and clause 228 of the EP&A Regulation, to ensure that TfNSW takes into account to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the Proposal. The REF is included in **Appendix A**.

The Mascot Substation REF was placed on public display by TfNSW from Tuesday 3 December 2019 to Tuesday 17 December 2019, with five 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 Proposal, the Secretary for TfNSW must make a determination in accordance with Division 5.1 of the EP&A Act (refer **Figure 2**).

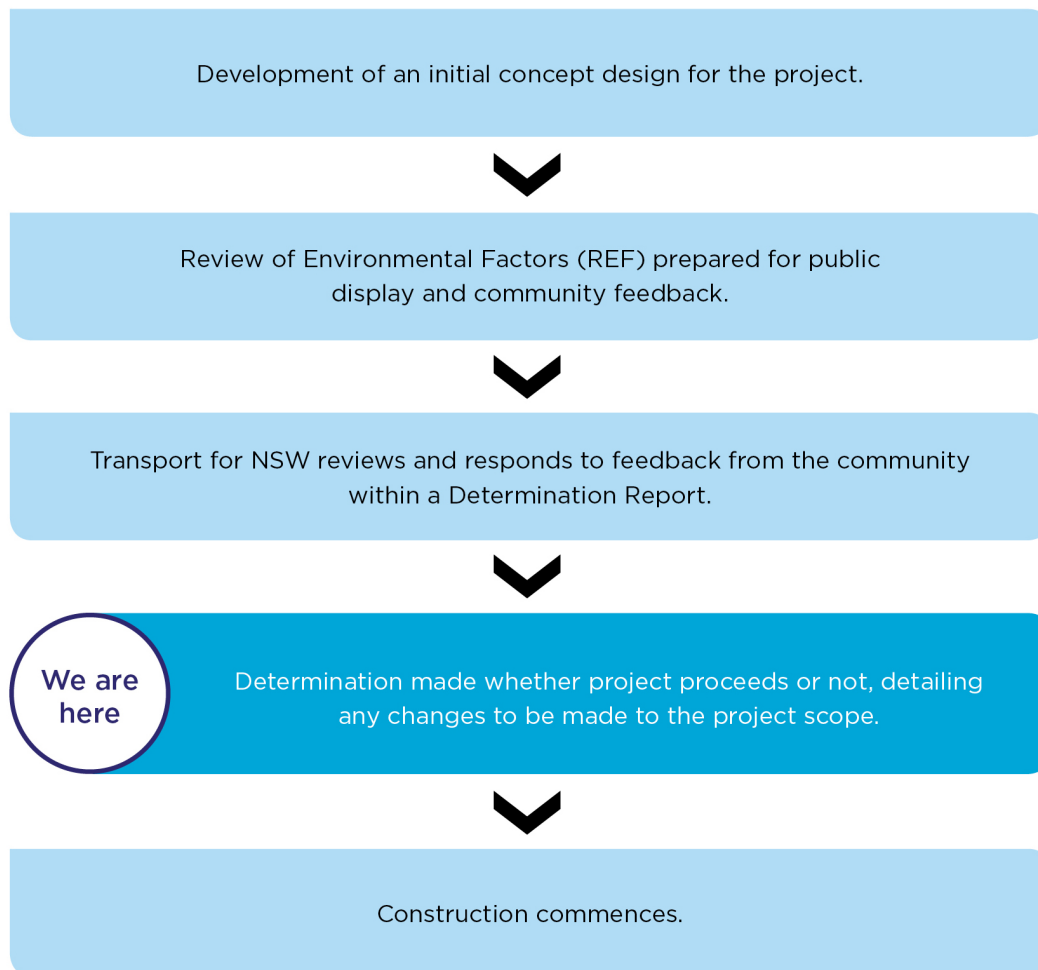


Figure 2 Planning approval process

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

- present a summary of the submissions received during the public display of the REF and TfNSW's response to the issues and comments raised in these submissions
- assess the environmental impacts with respect to the Proposal, which are detailed in the REF (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 Proposal.

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

- a) to plan for a transport system that meets the needs and expectations of the public
- b) to promote economic development and investment

- c) to provide integration at the decision-making level across all public transport modes
- d) to promote greater efficiency in the delivery of transport infrastructure projects
- e) to promote the safe and reliable delivery of public transport and freight services.

1.4 Description of the Proposal in the REF

The Proposal involves the construction of a new traction substation at 166 O’Riordan Street, Mascot. The new traction substation would provide additional power to the T8 Airport Line enabling an increase in the number of trains travelling through the T8 Airport Line tunnel. The Proposal is located approximately seven kilometres south of the Sydney CBD. The Proposal would be undertaken wholly within the suburb of Mascot in the Bayside Local Government Area (LGA).

An overview of the Proposal is provided in the Executive Summary with full details set out in Chapter 3 of the REF. In summary, the Proposal, as outlined in the REF, comprises:

- a new traction substation at 166 O’Riordan Street, Mascot. The two-level substation would accommodate the following equipment and facilities:
 - loading dock on first floor
 - a switchroom including HV and 1500 V DC switchgear
 - rectifiers
 - transformers
 - reactors
 - office space and staff amenities (including kitchenette and emergency showers)
 - batteries
 - telecommunications and control systems equipment
 - parking for two light vehicles.
- other works at the proposed substation site include:
 - establishment of temporary site compounds for storage of materials and equipment
 - removal of vegetation on the eastern boundary and south-west corner of the site
 - earthworks, excavation for cable pit and ground improvement
 - subgrade preparation for pavement
 - installation of pipes and pits for drainage and/or conduits for cables
 - construction of the new driveway with a suitable turning radius and associated works such as kerbs and gutters
 - associated works around the substation including closed circuit television (CCTV), line-marking for two light vehicles parking, boundary fencing, construction of a new exit driveway and lighting
 - upgrading of security fencing around the mobile antenna located behind the new substation.

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

Construction is expected to commence in 2020 and take approximately two and a half years to complete.

2 Consultation and assessment of submissions

2.1 REF public display

The Mascot Substation REF was on public display between Tuesday 3 December 2019 and Tuesday 17 December 2019 at two locations, as well as on the [TfNSW website](#)¹ and [Have Your Say website](#)². Community consultation activities undertaken for the public display included:

- distribution of a project update to the local community and key stakeholders outlining the Proposal and inviting feedback on the REF
- signage at the station to promote the proposed work to the local community and rail customers, outlining the Proposal and inviting feedback on the REF
- advertisement of the REF public display in local newspapers (Southern Courier and the St George and Sutherland Shire Leader) with a link to the TfNSW website that includes a summary of the Proposal and information on how to provide feedback
- consultation with Bayside Council, Sydney Trains, NSW TrainLink, TfNSW (formerly Roads and Maritime Services) and other key stakeholders
- public display of the REF at:
 - Mascot Library
2 Hatfield Street
Mascot, NSW 2020
 - Transport for NSW Office
The Gateway
241 O’Riordan Street
Mascot, NSW 2020

2.2 REF submissions

A total of five submissions were received by TfNSW. All five submissions were provided by the community. Of the five submissions, one expressed support for the Proposal.

In addition to general support for the Proposal, key issues that were raised in the submissions included:

- concerns that there would be traffic impacts as a result of the Proposal
- concerns regarding health impacts from electric and magnetic fields (EMF)
- concerns associated with financial loss due to EMF impacts
- service frequency on the T8 Airport Line.

¹ <http://www.transport.nsw.gov.au/projects/mtms>

² <https://www.nsw.gov.au/improving-nsw/have-your-say/>

2.3 Consideration and response to submissions

Support

Submission (#1) expressed support for the Proposal, stating it was a good initiative that would enable more train services on the T8 Airport Line and supports the location of the proposed substation given its distance from residential areas.

The respondent's support for the Proposal is noted.

Project clarification

Submission (#2) noted that the substation would allow for easy access, given the number of people residing in the Mascot area and the single entrance/exit locations.

Submission (#4) expressed concern that the new station would be located further away from their residence.

It is noted that the Proposal is for the provision of an electrical substation to upgrade the power supply on the T8 Airport Line, enabling an increase in the number of trains operating on this line. The Proposal consists of the construction of a new substation at Mascot. A substation is part of an electrical power generation, transmission and distribution system. The Mascot substation would transform electricity from high to low voltage for use on the rail network. As described in section 3.1 of the REF, the proposed substation would be constructed at 166 O'Riordan Street, Mascot.

The substation does not change the location of Mascot Station, nor involve any changes to pedestrian movements entering or exiting Mascot Station.

Traffic and transport

Submission (#3) expressed concerns that the Proposal would impact pedestrian access, specifically residents who live close to Mascot Station.

Section 6.1 of the REF outlines that the Proposal would generate additional vehicle traffic in the local area during construction. Construction of the Proposal is expected to cause temporary and minor disruptions to the road network and could cause temporary disruptions to existing pedestrian facilities. Disruptions during construction have the potential for increased safety risks for cyclists and pedestrians due to the potential interactions with construction plant and vehicles.

The number of construction vehicles would fluctuate depending on the construction stage. Vehicle types are expected to generally consist of light vehicles from construction workers and heavy vehicles for delivery and removal of materials, plant and equipment. Regular bus services in the vicinity of the Proposal would not be affected during construction and would continue to operate as normal. Impacts during construction would be managed through the development of a construction Traffic Management Plan (TMP) and associated Traffic Control Plans (TCP) by the Construction Contractor to ensure access to local businesses and residential properties are maintained and to minimise impacts to traffic and pedestrians.

During operation, the new electrical substation would require staff to access the site for ongoing operational and maintenance purposes. The REF determined that this would not result in any noticeable impact on the surrounding road network. The Proposal would not alter the existing pedestrian or cycling network surrounding the substation during operation.

Mitigation measures, as outlined in section 6.1.3 of the REF, would be implemented to reduce the potential for adverse traffic and pedestrian impacts associated with the proposed works during construction.

Project location

Submission (#5) expressed concern regarding EMF. The submission requested the substation be relocated away from residential receivers.

The proposed site for the traction substation at 166 O’Riordan Street was selected based on the following reasons:

- the site is owned by TfNSW
- the site is currently vacant
- the site is located in a highly urbanised/industrial environment and the Proposal would be consistent with the existing surrounding environment
- the site is zoned B5 Business Development and as such, the Proposal would be consistent with the objectives of this zone as it will support the viability of centres by providing a power supply to support the T8 Airport Line.

Concerns regarding EMF have been addressed in the following section.

Electric and magnetic fields

Submission (#5) expressed concern that the Proposal would affect the quality of life, such as health and safety of nearby residents due to the EMF produced. The submission also outlined concerns regarding socio-economic impacts and environmental impacts as a result of EMF.

Section 6.4 of the REF discusses the potential EMF impacts arising from the Proposal. The assessment has identified areas where the public or staff could be exposed to the magnetic fields of the Proposal, including inside the substation yard, near the public boundary and nearby residential buildings around the proposed Mascot Substation.

Section 6.4.1 of the REF identified that the strength of the magnetic field is greatest close to its source and diminishes rapidly with distance. The main magnetic field contribution from the substation is generated from the rectifier transformers and switchboards, which are located away from the public boundary. The possibility of adverse health effects due to the EMF associated with electrical equipment has been comprehensively studied worldwide over several decades. To date the scientific evidence does not establish that exposure to EMF found around the home, office or near power lines causes adverse health effects.

The proposed Mascot Substation was modelled to determine the likely magnetic fields at the nearest publicly accessible location to the equipment immediately adjacent to the western public boundary and southern boundary. Magnetic field levels contributed from the proposed substation at the western public boundary are considered negligible (less than 2 mG which is substantially less than the general public guideline limit of 2,000 mG). Magnetic field levels at the southern boundary are predicted to be up to approximately 50 mG. The levels are reduced to a negligible value (less than 2 mG) at 15 metres away from the southern boundary (**Figure 3**). Given this, levels in nearby residences would be negligible as they are located more than 15 metres away from the southern boundary, with the nearest residential receivers located 100 metres away.

Furthermore, mitigation measures as outlined in section 6.4.4 of the REF would be implemented to reduce the potential for EMF impacts.

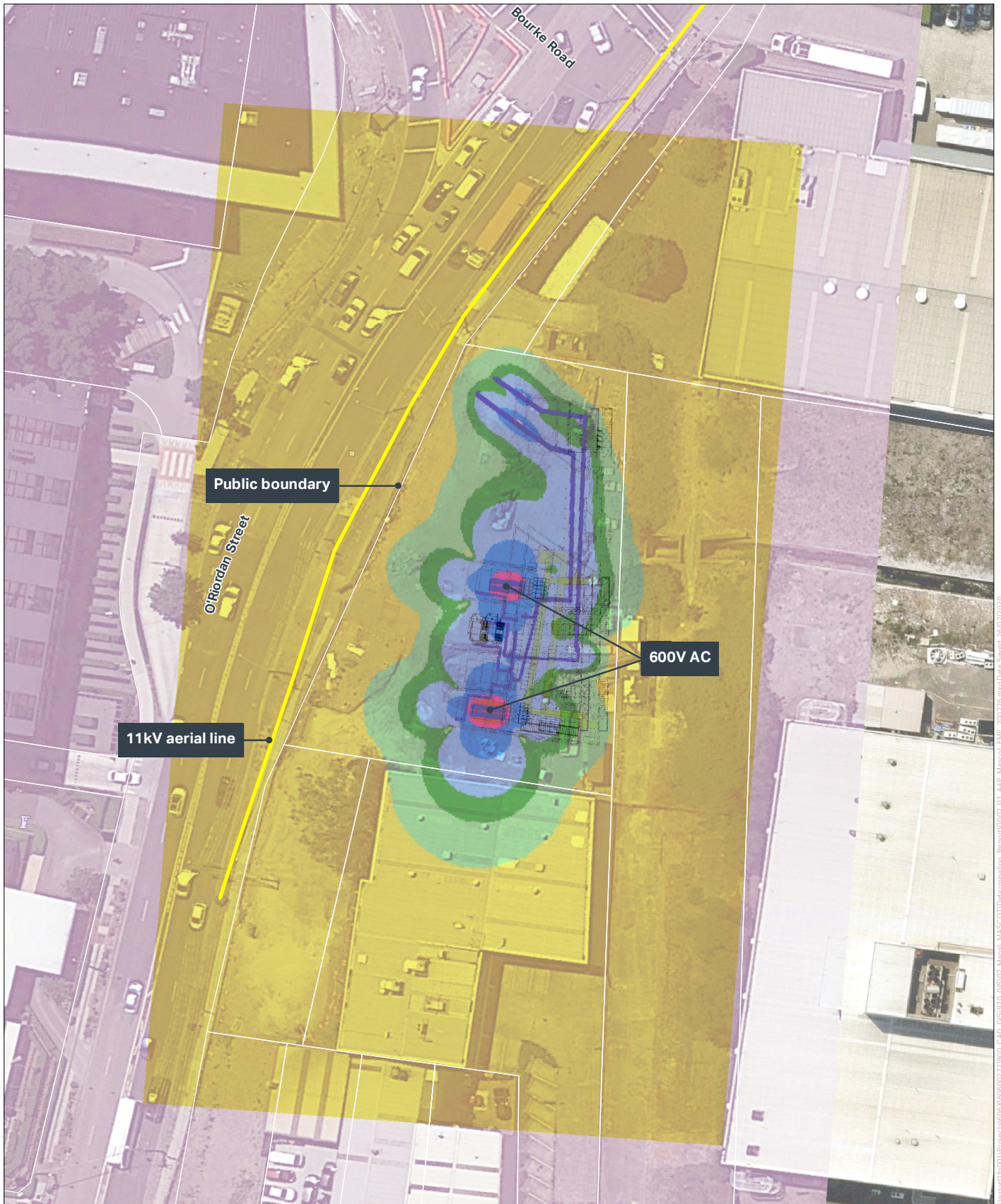


FIGURE 3: PROPOSED MASCOT SUBSTATION - MAGNETIC FIELD RESULTS (AT ONE METRE ABOVE GROUND)

AECOM



Legend

Total Magnetic Inductance (mG)	
■	< 2000
■	< 1000
■	< 500
■	< 10
■	< 5
■	< 2

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2.4 Future consultation

Should TfNSW proceed with the Proposal, communication activities would continue, including consultation with Bayside Council and other relevant stakeholders regarding design development. In addition, TfNSW would notify residents, businesses and community members in the lead up to and during construction. The consultation activities would help to ensure that:

- Bayside 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 [TfNSW email address](mailto:projects@transport.nsw.gov.au)³, TfNSW Infoline (1800 684 490) and 24-hour Construction Response Line (1800 775 465) would continue to be available during the construction phase. Targeted consultation methods, such as use of letters, notifications, signage and verbal communications, would continue to occur. The [TfNSW website](https://www.transport.nsw.gov.au/projects/current-projects/transforming-our-rail-network)⁴ would also include updates on the progress of construction.

³ projects@transport.nsw.gov.au

⁴ <https://www.transport.nsw.gov.au/projects/current-projects/transforming-our-rail-network>

3 Changes to the Proposal

As a result of the submissions received during the public display, there are no changes to the Proposal from the works as described in the REF.

4 Consideration of the environmental impacts

4.1 *Environmental Planning and Assessment Act 1979*

The REF addresses the requirements of section 5.5 of the EP&A Act. In considering the Proposal, 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 of the EP&A Regulation, an assessment is provided in Chapter 6 of the REF and Appendix B of the REF.

The likely significance of the environmental impacts of the Proposal has been assessed in accordance with the then NSW Department of Planning's 1995 best practice guideline [*Is an EIS Required?*](#)⁵ It is concluded that the Proposal is not likely to significantly affect the environment (including areas of outstanding biodiversity value) 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.

4.2 *Environment Protection and Biodiversity Conservation Act 1999*

As part of the consideration of the Proposal, all Matters of National Environmental Significance (MNES) and any impacts on Commonwealth land for the purposes of the EPBC Act have been assessed. In relation to MNES, 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 Proposal described in the REF is not likely to result in a significant impact on any Commonwealth land and is not likely to result in a significant impact on any MNES.

⁵ Refer to the National Library of Australia's 'Trove' website
<http://trove.nla.gov.au/work/7003034?selectedversion=NBD11474648>

5 Conditions of Approval

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

6 Conclusion

Having regard to the assessment in the REF and consideration of the submissions received, it can be concluded that the Proposal is not likely to significantly affect the environment (including areas of outstanding biodiversity value) or threatened species, populations of ecological communities, or their habitats. Consequently, an environmental impact statement is not required to be prepared under Division 5.2 of the EP&A Act.

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

The Proposal would contribute to the delivery of service improvements on the T8 Airport Line, including capacity, reliability and connectivity improvements for customers. The Proposal would upgrade the power supply of the T8 Airport Line including the construction of a new substation at Mascot, which would enable an increase to the number of trains per hour that can be accommodated along this line.

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 **Appendix B**).

Determination

MASCOT SUBSTATION

APPROVAL

I, LOUISE SUREDA, as delegate of the Secretary, Transport for NSW:

1. Have examined and considered the Proposal in the *Mascot Substation Review of Environmental Factors* (December, 2019) and the *Mascot Substation Determination Report* (February, 2020) in accordance with section 5.5 of the *Environmental Planning and Assessment Act 1979*.
2. Determine on behalf of Transport for NSW (the Proponent) that the Proposal may be carried out in accordance with the Conditions of Approval in this Determination Report (February, 2020), consistent with the Proposal described in the *Mascot Substation Review of Environmental Factors* (December, 2019) as amended by this Determination Report (February, 2020).



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

Date: 21.2.20

References

TfNSW (November 2018), *Chemical Storage and Spill Response Guidelines*, Sydney

TfNSW (December 2019), *More Trains, More Services Mascot Substation: Review of Environmental Factors*, Sydney

TfNSW (April 2019), *Unexpected Heritage Finds Guideline*, Sydney

TfNSW (July 2019), *Vegetation Management (Protection and Removal) Guideline*, Sydney

NSW Department of Planning (1995), *Is an EIS required?* Sydney

NSW Department of Environment, Climate Change and Water (DECCW) (September 2010), *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, Sydney

Appendix A Review of Environmental Factors

Please refer to the TfNSW website to access the Mascot Substation REF:

- Link to TfNSW, More Trains, More Services Program website:
<https://www.transport.nsw.gov.au/projects/more-trains-more-services>

Appendix B Conditions of Approval

CONDITIONS OF APPROVAL

Mascot Substation

Note: these conditions of approval must be read in conjunction with the final mitigation measures in the *Mascot Substation Review of Environmental Factors* (December, 2019).

Schedule of acronyms and definitions used

Acronym	Definition
ADEIA	Associate Director Environmental Impact Assessment (or nominated delegate)
ADEM	Associate Director Environmental Management (or nominated delegate)
ADSPD	Associate Director, Sustainability, Planning & Development (or nominated delegate)
CECR	Construction Environmental Compliance Report
CEMP	Construction Environmental Management Plan
CLMP	Community Liaison Management Plan
CoA	Conditions of Approval
dBA	Decibels (A-weighted scale)
ECM	Environmental Controls Map
EIA	Environmental Impact Assessment
EMR	Environmental Management Representative
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPL	Environment Protection Licence issued by the Environment Protection Authority under the <i>Protection of the Environment Operations Act 1997</i> .
ISO	International Standards Organisation
OEH	former NSW Office of Environment and Heritage
OOHWP	Out of Hours Works Protocol
PCSR	Pre Construction Sustainability Report
PDP	Public Domain Plan
PECM	Pre-construction environmental compliance matrix
POCR	Pre-operational compliance report
RBL	Rating Background Level

Acronym	Definition
REF	Review of Environmental Factors
TfNSW	Transport for NSW
TMP	Traffic Management Plan
UDP	Urban Design Plan

Term	Definition
Construction	Includes all work in respect of the Project, other than survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, or other activities determined by the TfNSW 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).
Contamination	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.
Designated Works	Includes tunnelling, blasting, piling, excavation or bulk fill or any vibratory impact works including jack hammering and compaction, for Construction.
Emergency Work	Includes works to avoid loss of life, damage to external property, utilities and infrastructure, prevent immediate harm to the environment, contamination of land or damage to a heritage (indigenous or non-indigenous) item.
Environmental Impact Assessment (EIA)	The documents listed in Condition 1 of this approval.
Environmental Management Representative	An independent environmental representative appointed to the Project or a delegate nominated by Transport for NSW.
Noise Sensitive Receiver	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.
Reasonable and feasible	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.
the Project	The construction and operation of the Mascot Substation as described in the Environmental Impact Assessment.
the Proponent	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.

CoA number	Condition
	General
1	<p>Terms of Approval</p> <p>The Project shall be carried out generally in accordance with the environmental impact assessment (EIA) for this Project, which comprises the following documents:</p> <ul style="list-style-type: none"> a) <i>Mascot Substation – Review of Environmental Factors</i>, (TfNSW, December 2019) b) <i>Mascot Substation – Determination Report</i>, (TfNSW, February 2020) <p>In the event of an inconsistency between these conditions and the EIA, these conditions will prevail to the extent of the inconsistency.</p>
2	<p>Project Modifications</p> <p>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. The Proponent shall comply with any additional requirements from the assessment of the Project modification.</p>
3	<p>Statutory Requirements</p> <p>These conditions do not relieve the Proponent of the obligation to obtain all other licences, permits, approvals and land owner consents from all relevant authorities and land owners as required under any other legislation for the Project. The Proponent shall comply with the terms and conditions of such licences, permits, approvals and permissions.</p>
4	<p>Pre-Construction Environmental Compliance Matrix</p> <p>A Pre-Construction Environmental Compliance Matrix (PECM) for the Project (or such stages of the Project as agreed to by the Associate Director Environmental Management (ADEM)) shall be prepared detailing compliance with all relevant conditions and mitigation measures prior to commencement of construction. The PECM shall also include details of approvals, licences and permits required to be obtained under any other legislation for the Project.</p> <p>A copy of the PECM shall be submitted to the ADEM for approval, at least 21 days prior to commencement of construction of the Project (or within such time as otherwise agreed to by the ADEM).</p>
5	<p>Construction Environmental Compliance Report</p> <p>The Proponent shall prepare a construction environmental compliance report (CECR) which addresses the following matters:</p> <ul style="list-style-type: none"> (a) compliance with the construction environmental management plan (CEMP) and these conditions (b) compliance with Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability Rating Scheme (v1.2) (c) compliance with any approvals or licences issued by relevant authorities for construction of the Project (d) implementation and effectiveness of environmental controls (the assessment of effectiveness should be based on a comparison of actual impacts against performance criteria identified in the CEMP) (e) environmental monitoring results, presented as a results summary and analysis (f) details of the percentage of waste diverted from landfill and the percentage of spoil beneficially reused (g) number and details of any complaints, including summary of main areas of complaint, actions taken, responses given and intended strategies to reduce recurring complaints (subject to privacy protection)

CoA number	Condition
	<p>(h) details of any review and amendments to the CEMP resulting from construction during the reporting period</p> <p>(i) any other matter as requested by the ADEM.</p> <p>The Proponent shall:</p> <p>i) submit a copy of the CECR to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the CECR</p> <p>ii) submit a copy of the CECR to the ADEM (or nominated delegate) for approval upon completion of the EMR review period.</p> <p>The first CECR shall report on the first six months of construction and be submitted within 21 days of expiry of that period (or at any other time interval agreed to by the ADEM). CECRs shall be submitted no later than six months after the date of submission of the preceding CECR (or at other such periods as requested by the ADEM) for the duration of construction.</p>
6	<p>Pre-Operation Compliance Report</p> <p>A pre-operation compliance report (POCR) for the Project shall be prepared, prior to commencement of operation of the Project. The POCR shall detail compliance with all conditions of approval, licences and permits required to be obtained under any other legislation for the project.</p> <p>The Proponent shall:</p> <p>(a) submit a copy of the POCR to the EMR for review. The EMR is to be given a minimum period of 7 days to review and provide any comments to the Proponent in relation to the POCR.</p> <p>(b) upon completion of the EMR review period submit a copy of the POCR to the ADEM (or nominated delegate) for approval. The POCR is to be provided to the ADEM at least one month prior to the scheduled operation of the Project (or such time as otherwise agreed to by the ADEM).</p>
7	<p>Graffiti and advertising</p> <p>Hoardings, site sheds, fencing, acoustic walls around the perimeter of the site, and any structures within the project footprint or built as part of the Project are to be maintained free of graffiti and advertising not authorised by the Proponent during the construction period. Graffiti and unauthorised advertising will be removed or covered within the following timeframes:</p> <p>(a) offensive graffiti will be removed or concealed within 24 hours</p> <p>(b) highly visible (yet inoffensive) graffiti will be removed or concealed within a week</p> <p>(c) graffiti that is neither offensive or highly visible will be removed or concealed within a month</p> <p>(d) any unauthorised advertising material will be removed or concealed within 24 hours.</p>
	<p>Communications</p>
8	<p>Community Liaison Management Plan</p> <p>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:</p> <p>(a) details of the protocols and procedures for disseminating information and liaising with the community and other key stakeholders about construction activities (including timing and staging) and any associated impacts during the construction period</p> <p>(b) stakeholder and issues identification and analysis</p>

CoA number	Condition
	<p>(c) procedures for dealing with complaints or disputes and response requirements, including advertising the 24 hour construction response line number</p> <p>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 construction of the Project.</p>
9	<p>Community Notification and Liaison</p> <p>The local community shall be advised of any activities related to the Project with the potential to impact upon them.</p> <p>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.</p> <p>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 Community Engagement or as required by the Environment Protection Authority (EPA) (where an Environment Protection Licence (EPL) is in effect).</p>
10	<p>Website</p> <p>The Proponent shall provide electronic information (or details of where hard copies of this information may be accessed by members of the public) related to the Project, on dedicated pages within its existing website, including:</p> <ul style="list-style-type: none"> (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. <p>All documents uploaded to the website must be compliant with the <i>Web Content Accessibility Guidelines Version 2.0</i>.</p>
11	<p>Complaints Management</p> <p>The Proponent shall set up a 24 hour construction response line number.</p> <p>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.</p> <p>Information on all complaints received during the previous 24 hours shall be forwarded to the TfNSW Community Engagement Manager and the TfNSW Environment and Planning Manager each working day.</p>
	<p>Environmental Management</p>
12	<p>Construction Environmental Management Plan</p> <p>A Construction Environmental Management Plan (CEMP) shall be prepared prior to commencement of construction which addresses the following matters, as a minimum:</p> <ul style="list-style-type: none"> (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)

CoA number	Condition
	<p>(e) indigenous and non-indigenous heritage management (f) flora and fauna management (g) storage and use of hazardous materials (h) contaminated land management (including acid sulphate soils) (i) weed management (j) waste management (k) sustainability (l) environmental incident reporting and management procedures (m) non-compliance and corrective/preventative action procedures.</p> <p>The CEMP shall:</p> <p>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</p> <p>ii) comply with the relevant requirements of <i>Guideline for Preparation of Environmental Management Plans</i> (Department of Infrastructure, Planning and Natural Resources, 2004)</p> <p>iii) include an Environmental Policy.</p> <p>The Proponent shall:</p> <ol style="list-style-type: none"> 1. consult with government agencies and relevant service/utility providers as part of the preparation of the CEMP 2. submit a copy of the CEMP to EMR for review 3. submit a copy of the CEMP to the ADEM (or nominated delegate) for approval 4. review and update the CEMP at regular intervals, and in response to any actions identified as part of the EMRs 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 audit of the document, and be submitted to the ADEM for approval. <p>The CEMP must be approved by the ADEM prior to the commencement of construction work associated with the Project.</p>
13	<p>Environment Personnel</p> <p>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).</p> <p>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 within such time as otherwise agreed to by the ADEM).</p> <p>Any adjustments to environmental resource allocations (on-site or off-site) are to be approved by the ADEM.</p>
14	<p>Environmental Management Representative</p> <p>Prior to the commencement of construction, the Proponent shall appoint an EMR for the duration of the construction period for the Project.</p> <p>The EMR shall provide advice to the Proponent in relation to the environmental compliance and performance of the Project. The EMR shall have responsibility for:</p> <p>(a) considering and advising the Proponent on matters specified in these conditions and compliance with such</p>

CoA number	Condition
	<ul style="list-style-type: none"> (b) reviewing and, where required by the Proponent, 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 the Proponent, or as required by the ADEM (e) issuing a recommendation to the Proponent for work to stop immediately, if in the view of the EMR circumstances so require. The stop work recommendation may be limited to specific activities if the EMR can easily identify those activities (f) requiring reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts (g) reviewing corrective and preventative actions to ensure the implementation of recommendations made from the audits and site inspections (h) providing reports to the Proponent on matters relevant to the carrying out of the EMR role as necessary (i) where required by the 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. <p>The EMR shall be available during construction activities to inspect the site(s) and be present on-site as required.</p>
15	<p>Environmental Controls Map</p> <p>The Proponent shall prepare an environmental controls map (ECM) in accordance with TfNSW's <i>Guide to Environmental Controls Map (3TP-SD-015)</i> 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.</p> <p>The Proponent shall submit a copy of the ECM to the EMR for review and endorsement. The EMR is to be given a minimum period of 7 days to review and endorse the ECM. Following receipt of the EMR's endorsement, the ECM shall be submitted to the ADEM (or nominated delegate) for approval, at least 14 days prior to commencement of construction (or such time as is otherwise agreed to by the ADEM).</p> <p>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.</p> <p>Updates to the ECM shall be made within 7 days of the completion of the review or receipt of actions identified by any EMR audit of the document, and be submitted to the EMR for approval.</p>
	<p>Hours of Work</p>
16	<p>Standard Construction Hours</p> <p>Construction activities shall be restricted to the hours of 7.00am to 6.00pm (Monday to Friday); 8.00am to 1.00pm (Saturday) and at no time on Sundays and public holidays except for the following works which are permitted outside these standard hours:</p> <ul style="list-style-type: none"> (a) any works which do not cause noise emissions to be more than 5 dBA 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

CoA number	Condition
	<p>to the community as agreed by the ADEM</p> <p>(d) Emergency Work to avoid the loss of lives, property and/or to prevent environmental harm</p> <p>(e) any other work as agreed by the ADEM (or nominated delegate) and considered essential to the Project, or as approved by the EPA (where an EPL is in effect).</p>
17	<p>High Noise Generating Activities</p> <p>Rock breaking or hammering, jack hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel and any other activities which result in impulsive or tonal noise generation shall 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 the EPA (where relevant to the issuing of an EPL), unless inaudible at nearby residential properties and/or other noise sensitive receivers.</p>
	<p>Noise and Vibration</p>
18	<p>Construction Noise and Vibration</p> <p>Construction noise and vibration mitigation measures shall be implemented through the CEMP, in accordance with TfNSW's <i>Construction Noise and Vibration Strategy</i> (7TP-ST-157) and the EPA's <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009). The mitigation measures shall include, but not be limited to:</p> <ul style="list-style-type: none"> (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 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 16 of this approval, including a risk assessment process which deems the out of hours activities to be of low, medium or high environmental risk, is to be developed. All out of hours works are subject to approval by the ADEM, or as approved by the EPA (where relevant to the issuing of an EPL). The OOHWP should be consistent with TfNSW's Construction Noise and Vibration Strategy (7TP-ST-157) (f) a description of how the effectiveness of actions and measures shall be monitored during the proposed works, clearly indicating the frequency of monitoring, the locations at which monitoring shall take place, recording and reporting of monitoring results and if any exceedance is detected, the manner in which any non-compliance shall be rectified.
19	<p>Vibration Criteria</p> <p>Vibration (other than from blasting) resulting from construction and received at any structure outside of the Project shall be limited to:</p> <ul style="list-style-type: none"> (a) for structural damage vibration – British Standard 7385 Part 2-1993 Evaluation and measurement for vibration in buildings Part 2 (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). <p>These limits apply unless otherwise approved by the ADEM through the CEMP.</p>

CoA number	Condition
20	<p>Piling</p> <p>Wherever practical, piling activities shall be completed using non-percussive piles. If percussive piles are proposed to be used, approval of the ADEM shall be obtained prior to commencement of piling activities.</p>
21	<p>Non-Tonal Reversing Beepers</p> <p>Non-tonal reversing beepers (or an equivalent mechanism) shall be fitted and used on all construction vehicles and mobile plant regularly used on site (i.e. greater than one day) and for any out of hours work.</p>
22	<p>Property condition surveys</p> <p>Subject to landowner agreement, property condition surveys shall be completed prior to piling, excavation or bulk fill or any vibratory impact works including jack hammering and compaction (Designated Works) in the vicinity of the following buildings/structures:</p> <ul style="list-style-type: none"> (a) all buildings/structures/roads within a plan distance of 50 metres from the edge of the Designated Works (b) all heritage listed buildings and other sensitive structures within 100 metres from the edge of the Designated Works. <p>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.</p> <p>Selected potentially sensitive buildings and/or structures shall first be surveyed prior to the commencement of the Designated Works and again immediately upon completion of the Designated Works.</p> <p>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.</p> <p>A copy of the survey(s) shall be given to each owner. A register of all properties surveyed shall be maintained.</p> <p>Any damage to buildings, structures, lawns, trees, sheds, gardens, etc. as a result of construction activity direct and indirect (i.e. including vibration and groundwater changes) shall be rectified at no cost to the owner(s).</p>
	<p>Flora and Fauna</p>
23	<p>Replanting program</p> <p>All cleared vegetation shall be offset in accordance with TfNSW's <i>Vegetation Offset Guide</i> (9TP-SD-087). 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.</p>
24	<p>Removal of trees or vegetation</p> <p>Separate approval, in accordance with TfNSW's <i>Application for Removal or Trimming of Vegetation</i> (9TP-SD-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.</p>

CoA number	Condition
	Contamination and Hazardous Materials
25	<p>Duty to Notify</p> <p>If previously unidentified contamination is identified within the site, the Proponent is to determine whether there is a Duty to Report under section 60 of the <i>Contaminated Land Management Act 1997</i>, and notify the EPA in accordance with the EPA's <i>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (Environment Protection Authority, 2015).</p>
26	<p>Unidentified Contamination (other than asbestos)</p> <p>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 a 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 relevant EPA guidelines, including <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (OEH, 2011).</p> <p>The proponent shall:</p> <ul style="list-style-type: none"> (a) submit a copy of any contamination report to the EMR for review. The EMR is to be given a minimum period of seven days to review and provide any comments to the Proponent in relation to the report. (b) submit a copy of the report 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. <p>Note: <i>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 26 and Condition 27.</i></p>
27	<p>Asbestos Management</p> <p>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 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.</p> <p>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.</p> <p>Note: <i>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 26 and Condition 27.</i></p>
28	<p>Storage and Use of Hazardous Materials</p> <p>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 <i>Chemical Storage and Spill Response Guidelines</i> (9TP-SD-066) and Australian and ISO standards. These measures shall include:</p> <ul style="list-style-type: none"> a) the storage of hazardous materials, and refuelling/maintenance of construction plant and equipment to be undertaken in clearly marked designated areas that are designed to contain spills and leaks

CoA number	Condition
	<ul style="list-style-type: none"> 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.
29	<p>Contamination investigation</p> <p>If recommended by a Stage 1 preliminary site investigation report, a Stage 2 detailed site investigation shall be undertaken prior to construction commencing. The assessment shall generally be undertaken in accordance with:</p> <ul style="list-style-type: none"> (a) <i>The National Environment Protection (Assessment of Site Contamination) Amendment Measure (NEPM) 2013</i> (b) <i>Contaminated Sites - Sampling Design Guidelines (EPA, 1995)</i> (c) <i>AS4482 (2005) Guide to the investigation and sampling of sites with potentially contaminated soil (2005).</i> <p>The report shall be prepared in accordance with the DECCW's <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (Office of Environment and Heritage, 2011). The report shall include a preliminary waste classification in accordance with the NSW EPA <i>Waste Classification Guidelines</i> (EPA, 2014).</p> <p>Specific requirements for further investigation, remediation or management of any contamination within the identified areas recommended in the Stage 2 Detailed Site Investigation shall be included in the CEMP as appropriate.</p>
30	<p>Contamination Management Plan</p> <p>Specific requirements for further investigation, remediation and management of any potential contamination within the identified areas recommended in the Phase 2 contamination assessment shall be included in a contamination management plan (CMP) as appropriate.</p>
	<p>Erosion and Sediment Control</p>
31	<p>Erosion and Sediment Control</p> <p>Soil and water management measures shall be prepared and implemented as part of the CEMP for the mitigation of water quality and hydrology impacts during construction of the Project. The management measures shall be prepared in accordance with <i>Managing Urban Stormwater: Soils and Construction - Volume 1</i>, 4th Edition (Landcom, 2004).</p>
	<p>Groundwater</p>
32	<p>If a licence is required for the management of groundwater, the licence must be obtained from the Office of Water prior to the commencement of the subject activity.</p>
	<p>Lighting</p>
33	<p>Lighting scheme</p> <p>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 "<i>Road Lighting</i>" and AS 4282 "<i>Control of the Obtrusive Effect of Outdoor Lighting</i>". The lighting scheme shall address the following as relevant:</p> <ul style="list-style-type: none"> (a) consideration of lighting demands of different areas

CoA number	Condition
	<ul style="list-style-type: none"> (b) strategic placement of lighting fixtures to maximise ground coverage (c) use of LED lighting (d) minimising light spill by directing lighting into the station and platform (e) control systems for lighting that dim or switch-off lights settings according to the amount of daylight the zone is receiving (f) motion sensors to control low traffic areas (g) allowing the lighting system to use low light or switch off light settings while meeting relevant lighting Standards requirements, and (h) ensuring security and warning lighting is not directed at neighbouring properties. <p>The proposed lighting scheme is to be submitted to and endorsed by the TfNSW Technical Design Team.</p>
	Sustainability
34	<p>Sustainability officer</p> <p>The Proponent shall appoint a suitably qualified and experienced sustainability officer who is responsible for implementing sustainability objectives for the Project.</p> <p>Details of the sustainability officer, including defined responsibilities, duration and resource allocation throughout the appointment consistent with the Proponent's sustainability objectives are to be submitted to the satisfaction of the ADSPD prior to preparation of the pre-construction sustainability report (PCSR).</p>
35	<p>Pre-construction sustainability report</p> <p>Prior to commencement of construction, a PCSR shall be prepared to the satisfaction of the ADSPD. The Report shall include the following minimum components:</p> <ul style="list-style-type: none"> (a) completed ISCA Scorecard demonstrating credits targeted to meet an ISCA Infrastructure Sustainability Rating Scheme (v1.2) Design and As Built, Excellent Rating (b) a statement outlining the Proponent's own corporate sustainability obligations, goals, targets, in house tools, etc. (c) a section specifying a process to identify and progress innovation initiatives on the project as appropriate. The process should identify any areas of innovation that are currently being explored and/or implemented on the Project. <p>The Proponent shall submit a copy of the PCSR to the ADSPD for approval, at least 14 days prior to the commencement of construction (or within such time as otherwise agreed to by the ADSPD).</p>
	Urban design and landscaping
36	<p>Urban Design Plan</p> <p>An Urban Design Plan (UDP) is to be submitted to TfNSW and endorsed by the Precincts and Urban Design team during detailed design. The UDP is to address the fundamental design principles as outlined in <i>'Around the Tracks' – urban design for heavy and light rail, TfNSW, Interim 2016</i>. The UDP shall:</p> <ul style="list-style-type: none"> (a) demonstrate a robust understanding of the site through a comprehensive site analysis to inform the design direction, demonstrate connectivity with street networks, transport modes, active transport options, and pedestrian distances (b) identify opportunities and challenges (c) establish site specific principles to guide and test design options (d) demonstrate how the preferred design option responds to the design principles established in <i>'Around the Tracks'</i>, including consideration of Crime Prevention through Environmental Design Principles

CoA number	Condition
	<p>The UDP is to include the Public Domain Plan (PDP) for the chosen option and will provide analysis of the:</p> <ol style="list-style-type: none"> 1) landscape design approach including design of pedestrian and bicycle pathways, street furniture, interchange facilities, new planting and opportunities for public art 2) materials schedule including materials and finishes for proposed built works, colour schemes, paving and lighting types for public domain, fencing and landscaping 3) an Artist's Impression or Photomontage to communicate the proposed changes to the precinct. <p>The following design guidelines are available to assist and inform the UDP for the Proposal:</p> <ol style="list-style-type: none"> 1. <i>TAP Urban Design Plan, Guidelines</i>, TfNSW, Draft 2018 2. <i>Commuter Car Parks, urban design guidelines</i>, TfNSW, Interim 2017 3. <i>Managing Heritage Issues in Rail Projects Guidelines</i>, TfNSW, Interim 2016 4. <i>Creativity Guidelines for Transport Systems</i>, TfNSW, Interim 2016 5. <i>Water Sensitive Urban Design Guidelines for TfNSW Projects</i>, 2016
	Traffic and Access
37	<p>Traffic Management Plan</p> <p>The Proponent shall prepare a construction traffic management plan (TMP) as part of the CEMP which addresses, as a minimum, the following:</p> <ol style="list-style-type: none"> (a) ensuring adequate road signage at construction work sites to inform motorists and pedestrians of the work site ahead to ensure that the risk of road accidents and disruption to surrounding land uses is minimised (b) maximising safety and accessibility for pedestrians and cyclists (c) ensuring adequate sight lines to allow for safe entry and exit from the site (d) ensuring access to railway stations, businesses, entertainment premises and residential properties (unless affected property owners have been consulted and appropriate alternative arrangements made) (e) managing impacts and changes to on and off street parking and requirements for any temporary replacement provision (f) parking locations for construction workers away from stations and busy residential areas and details of how this will be monitored for compliance (g) routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses (h) details for relocating kiss-and-ride, taxi ranks and rail replacement bus stops if required, including appropriate signage to direct patrons, in consultation with the relevant bus operator. Particular provisions should also be considered for the accessibility impaired. (i) measures to manage traffic flows around the area affected by the Project, including as required regulatory and direction signposting, line marking and variable message signs and all other traffic control devices necessary for the implementation of the TMP. <p>The Proponent shall consult with the relevant roads authority during preparation of the TMP, as required. The performance of all Project traffic arrangements must be monitored during construction.</p>
38	<p>Road condition reports</p> <p>Prior to construction commencement, the Proponent shall prepare road condition surveys and reports on the condition of roads and footpaths affected by construction. Any damage resulting from the construction of the Project, aside from that resulting from normal wear and tear, shall be repaired at the Proponent's expense.</p>

CoA number	Condition
39	<p>Road safety audit</p> <p>A Road Safety Audit would be undertaken as part of the detailed design process. The Road Safety Audit would include specific assessment of items including access to the new substation building from O’Riordan Street.</p> <p>The Road Safety Audit is to be submitted to and endorsed by TfNSW. Any recommendations made in the Audit relating to Bayside Council matters outside the project scope and boundary would be provided to Council for their recommendation and or action.</p>
	<p>Heritage Management</p>
40	<p>Indigenous and non-Indigenous heritage</p> <p>If previously unidentified Indigenous or non-Indigenous heritage/archaeological items are uncovered during construction works, the procedures contained in the TfNSW <i>Unexpected Heritage Finds Guideline</i> (3TP-SD-115) shall be followed and all works in the vicinity of the find shall cease.</p> <p>The TfNSW Environment and Planning Manager 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 where appropriate). Works in the vicinity of the find shall not re-commence until clearance has been received from TfNSW and/or the heritage advisor.</p>

END OF CONDITIONS