

Transport
for NSW

Mona Vale Road East Upgrade

Addendum review of environmental
factors

March 2023



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Acknowledgement of Country

Transport for NSW acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.



Prepared by bd infrastructure and Transport for NSW.



Transport
for NSW



bd infrastructure

Executive summary

The proposed modification

Transport for NSW (Transport) proposes to modify the Mona Vale Road East Upgrade project by adjusting the approved project boundary to construct a vegetated mound which is proposed to replace an approved 1.5-metre-high vertical concrete traffic barrier at Ingleside. The modified project would involve:

- Adjustment to the approved project boundary to accommodate the larger footprint required for the modified design, resulting in the need for property acquisition of existing road reserves owned by local government and NSW Government departments (Transport, Northern Beaches Council and Department of Planning and Environment). No additional private property would be purchased as a result of the proposed modification.
- Clearing of existing vegetation to the south of Mona Vale Road (near the western end of the project limit) to allow for construction of the mound.
- Use of existing materials excavated from the Mona Vale Road Upgrade site (along with additional materials to be brought in) to construct landscaped batter.
- Planting along the roadside and rear faces with native shrubs and grasses.
- Extension of three newly installed drainage lines to outlet at the new toe of batter. The alignment of two pipes would remain the same and they would outlet to the same area (bushland) and catchment. The third pipe would outlet further east of its original alignment into government owned land (bushland).

Background

A review of environmental factors (REF) was prepared for the Mona Vale Road East Upgrade on 24 July 2015 (referred to in this addendum REF as the 'project REF'). The project REF was placed on public display between 29 July 2015 and 28 August 2015 for community and stakeholder comment. A submissions report dated 11 December 2015 was prepared to respond to issues raised. The project REF was determined on 7 December 2015. Further to the approved project, addendum REFs dated December 2017 and August 2021 have been prepared.

Need for the proposed modification

The strategic need for the proposed modification is considered consistent with section 2.1 of the project REF.

The proposed modification responds to opportunities to improve urban design outcomes for the project that have arisen since the determination of the project REF and subsequent addendums. In proceeding with the proposed modification, the project would improve visual amenity, reduce the risk of graffiti, and reduce environmental impacts associated with off-site disposal of excavated materials.

Proposal objectives

Section 2.3 of the project REF (volume one) identifies the proposal objectives that apply to the proposed modification. These include:

- Objective 1: Provide a safe road environment that reduces the frequency and severity of crashes
- Objective 2: Reduce congestion on Mona Vale Road between Manor Road, Lane Cove Road and Foley Street during peak periods
- Objective 3: Reduce delays on Mona Vale Road between Manor Road and Foley Street during peak periods

- Objective 4: Deliver infrastructure that provides effective network performance for at least the minimum term of ten years after opening
- Objective 5: Improve access to bus services. Strengthen integration between land use and all other modes of road use
- Objective 6: Contribute to safe and effective pedestrian and cycling infrastructure, that supports local and State Government initiatives for active transport
- Objective 7: To provide the best economic outcome and deliver a positive benefit-cost ratio
- Objective 8: Minimise impacts to the local environment including adjacent bushland, whilst enhancing urban design and transport outcomes.

Options considered

Proceeding with the approved project without modification is considered consistent with the 'do nothing' option, which was discarded because the proposed modification is better aligned with the project objectives. The proposed modification was selected as the preferred option as it is seen to improve the outcomes of the approved project, in accordance with Objective 8 of the project REF (minimise impacts to the local environment including adjacent bushland, whilst enhancing urban design and transport outcomes), as the proposed modification involves:

- Construction of a landscaped mound, largely through use of existing excavated materials from the locality, rather than introduction of artificial materials
- Improved visual and urban design outcome for residents and motorists
- Reduced graffiti risk
- No negative impact to the other objectives 1 – 7 listed in the project REF.

Statutory and planning framework

The proposed modification is categorised as development for the purpose of a road and is being carried out by or on behalf of a public authority. Under section 2.109 of SEPP (Transport and Infrastructure), the proposed modification is permissible without consent. The proposed modification is not State significant infrastructure or State significant development. The proposed modification can be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (NSW). Consent from Council is not required.

A referral to Australian Government Department of Climate Change, Energy, the Environment and Water under the EPBC Act is not required.

Community and stakeholder consultation

Transport has undertaken targeted consultation with affected residents, property owners, businesses, and Council throughout the duration of the project. The wider community have been informed of project updates via website content and newsletters distributed via letterbox.

The addendum REF will not be publicly displayed for comment; however, it will be made publicly available on the project webpage on the Transport for NSW website.

Specifically in relation to the proposed modification, Transport consulted with government landowners (Northern Beaches Council, Department of Planning and Environment) whose property would require approved entry and acquisition due to the proposed project boundary adjustment, Ausgrid in relation to potential impacts to their assets and neighbouring residents.

The land under the ownership of The Northern Beaches Council is zoned 'Road Reserve' and does not need land acquisition. Northern Beaches Council have approved entry into the road reserve for these works.

Environmental impacts

The main environmental impacts for the proposed modification are:

Biodiversity

The proposed modification would result in additional clearing of native vegetation along the southern boundary of Mona Vale Road, to the east of Waratah Street. None of the native vegetation affected conforms to a threatened ecological community listed by the *Biodiversity Conservation Act 2016* (BC Act) or the *Environment Protection and Biodiversity Conservation Act 2016* (EPBC Act).

The modification is not likely to significantly impact threatened species, populations or ecological communities or their habitats, within the meaning of the BC Act or *Fisheries Management Act 1994* (FM Act) and therefore a Species Impact Statement is not required.

The modification is not likely to significantly impact threatened species, populations, ecological communities or migratory species, within the meaning of the EPBC Act.

Landscape Character and Visual Impacts

When compared to the approved project, the proposed modification offers an improved visual outcome during the operation phase as a landscaped mound is more consistent with adjacent bushland when compared to the previously proposed 1.5 metre high concrete traffic barrier.

No change to landscape character or visual impact ratings were identified by the Landscape Character and Visual Impact Assessment for the proposed modification.

Additional safeguards have been adopted to ensure visual impacts resulting from the proposed modification are minimised.

Hydrology

The design change includes extending the previously proposed drainage lines further south to accommodate the proposed mound. Flood modelling has shown that the design changes would have no material impact on the previously assessed project-related impacts on flood behaviour as the same rate and volume of stormwater runoff would discharge to the adjacent bushland. It is also noted that there would be no change to the discharge of stormwater runoff into private property. Similar to the approved design, appropriately designed scour protection measures would be incorporated on the relocated outlet headwalls.

Non-Aboriginal Heritage

The heritage items considered in the project REF are not close in proximity to the modified proposal area and are therefore not likely to be directly or indirectly impacted by the proposed modification.

No impacts are anticipated in relation to the Ruins of Power Works archaeological site.

Justification and conclusion

The proposed modification responds to opportunities to improve urban design outcomes for the project that have arisen since the determination of the project REF and subsequent addendums. In proceeding with the proposed modification, the project would have the result of improved visual amenity and a reduction of graffiti risk, costs and environmental impacts associated with off-site disposal of excavated materials. While it is acknowledged that the proposed modification could result in environmental impacts, the proposed safeguards are considered adequate as management measures to address and mitigate any potential adverse impacts.

The preferred approach is therefore to proceed with the proposed modification as described in this Addendum REF.

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Appendices

- A Consideration of section 171(2) factors and matters of National Environmental Significance and Commonwealth land
- B Statutory consultation checklists
- C Notification to neighbouring residents
- D Design

1. Introduction

1.1 Proposed modification overview

Transport for NSW (Transport) proposes to modify the Mona Vale Road East Upgrade project by adjusting the approved project boundary to construct a vegetated mound which is proposed to replace an approved 1.5 metre high concrete traffic barrier at Ingleside. The modified project would involve:

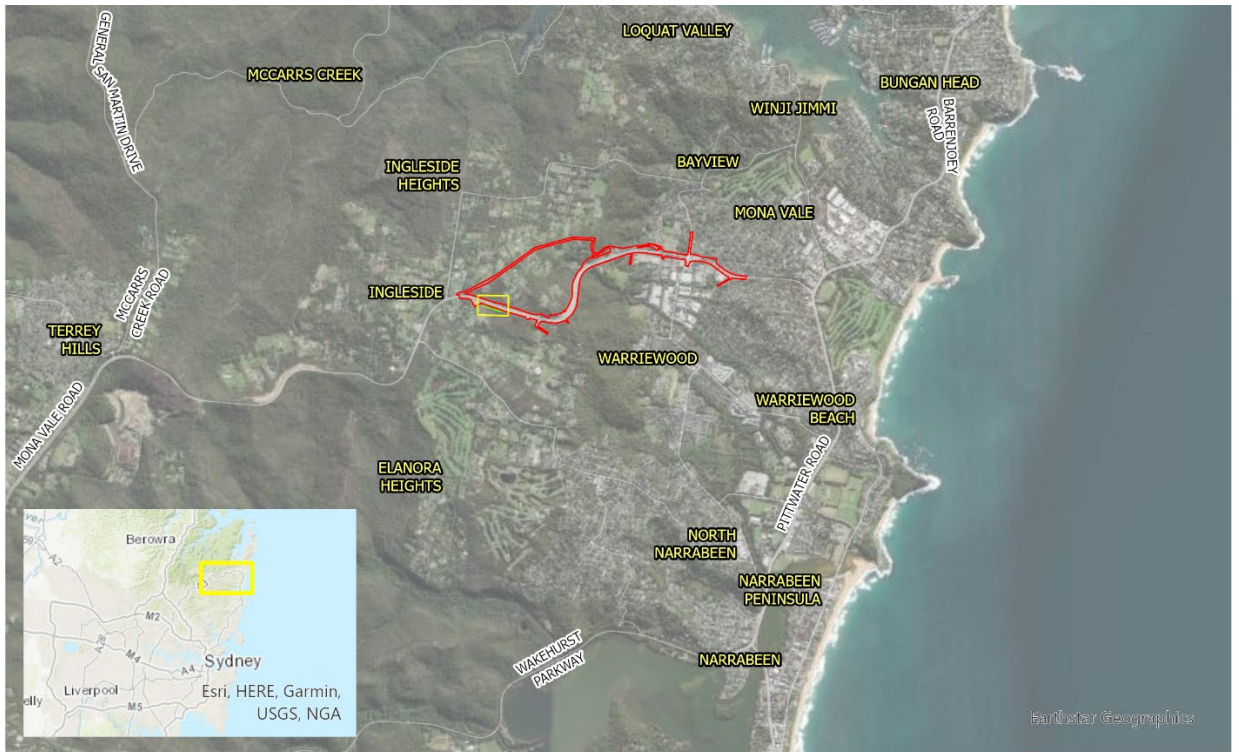
- Adjustment to the approved project boundary to accommodate the larger footprint required for the modified design, resulting in the need for property acquisition of existing road reserves owned by local government and NSW Government departments (Transport, Northern Beaches Council and Department of Planning and Environment). No additional private property would be purchased as a result of the proposed modification.
- Clearing of existing vegetation to the south of Mona Vale Road to allow for construction of the mound.
- Use of existing materials excavated from the Mona Vale Road Upgrade site (along with additional materials to be brought in) to construct landscaped batter.
- Planting along the roadside and rear faces with native shrubs and grasses.
- Extension of three newly installed drainage lines to outlet at the new toe of batter. The alignment of two pipes would remain the same and they would outlet to the same area (bushland) and catchment. The third pipe would outlet further east of its original alignment into government owned land (bushland).

The location of the proposed modification is shown in Figure 1-1 and the proposed modification is shown in Figure 1-2. Section 3 describes the proposed modification in more detail.

A Review of Environmental Factors (REF) was prepared for the Mona Vale Road East Upgrade in July 2015 (referred to in this addendum REF as the 'project REF'). The project REF was placed on public display between 29 July 2015 and 28 August 2015 for community and stakeholder comment. A submissions report dated December 2015 was prepared to respond to issues raised.

In addition to the initial Review of Environmental Factors for the project, two addendum REFs have been prepared in relation to the Mona Vale Road East Upgrade:

- First Addendum REF (referred to in this addendum REF as the '2017 Addendum REF') is dated December 2017. The 2017 Addendum REF covered various project changes including route refinements, shared path changes, site compounds / ancillary site changes and revisions to the construction methodology
- Second addendum REF (referred to in this addendum as the '2021 Addendum REF') is dated August 2021. The 2021 Addendum REF was placed on public display between 6 August 2021 and 24 September 2021 for community and stakeholder comment. A submissions report dated December 2022 was prepared to respond to issues raised. The 2021 Addendum REF covered changes to the truck arrestor bed, provision of additional pedestrian and cycle connectivity and various other design changes.



- Approved project boundary
- Modified proposal boundary
- Indicative modification location

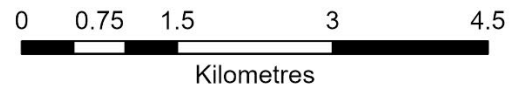
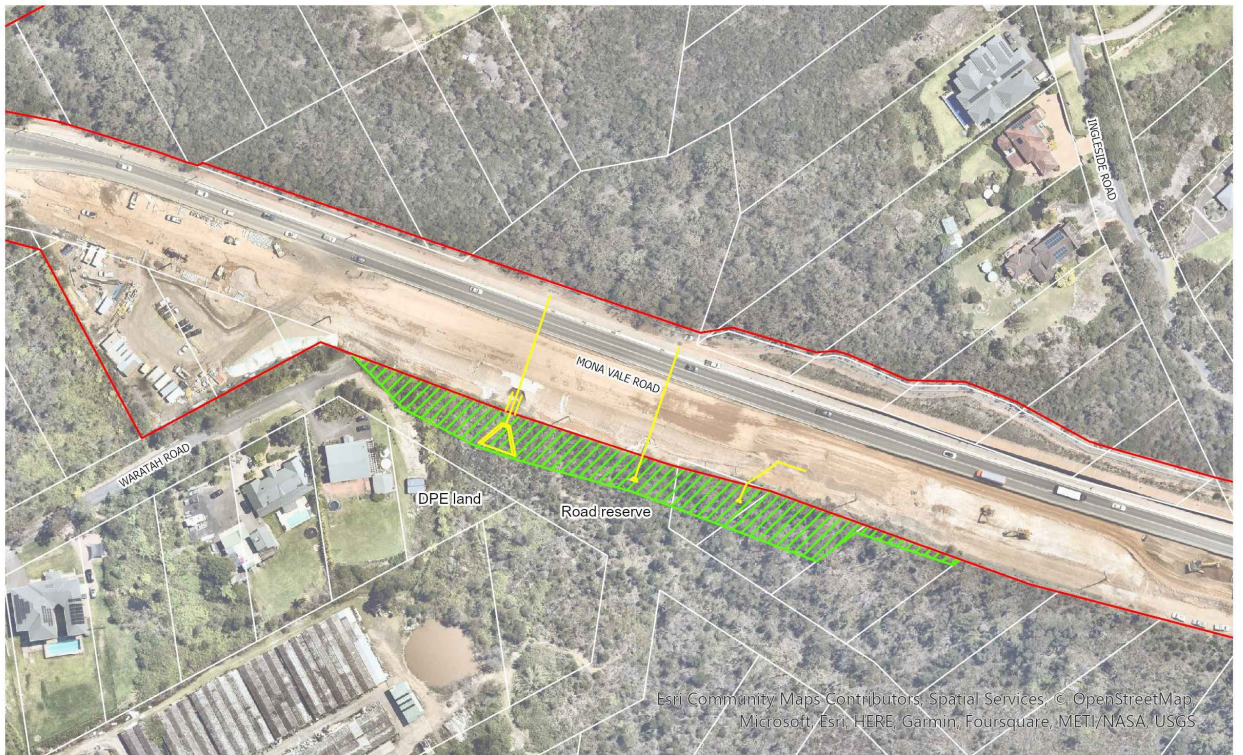


Figure 1-1: Location of the proposed modification



- Approved project boundary
 - Modified proposal boundary
 - Extended stormwater pipes and outlets
- DPE - Department of Planning and Environment

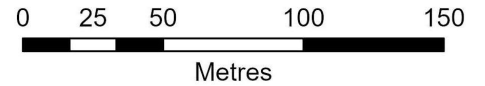


Figure 1-2: The proposed modification

1.2 Purpose of the report

This addendum review of environmental factors (REF) has been prepared by bd infrastructure on behalf of Transport for NSW. For the purposes of these works, Transport for NSW is the proponent and the determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This addendum REF is to be read in conjunction with the project REF, submissions report and subsequent addendum REFs for the project. The purpose of this addendum REF is to describe the proposed modification, to document and assess the likely impacts of the proposed modification on the environment, and to detail mitigation and management measures to be implemented.

The description of the proposed work and assessment of associated environmental impacts has been undertaken in context of section 171 of the *Environmental Planning and Assessment Regulation 2021*, *Guidelines for Division 5.1 Assessments* (DPE, 2022), the *Biodiversity Conservation Act 2016* (BC Act), the *Fisheries Management Act 1994* (FM Act), and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In doing so, the addendum REF helps to fulfil the requirements of:

- Section 5.5 of the EP&A Act including that Transport for NSW examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity\The findings of the addendum REF would be considered when assessing:
- Whether the proposed modification is likely to result in a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act
- The significance of any impact on threatened species as defined by the BC Act and/or FM Act, in section 1.7 of the EP&A Act and therefore the requirement for a Species Impact Statement or a Biodiversity Development Assessment Report
- The significance of any impact on nationally listed biodiversity matters under the EPBC Act, including whether there is a real possibility that the activity may threaten long-term survival of these matters, and whether offsets are required and able to be secured
- The potential for the proposed modification to significantly impact any other matters of national environmental significance or Commonwealth land and therefore the need to make a referral to the Australian Department of Climate Change, Energy, the Environment and Water for a decision by the Australian Government Minister for the Environment on whether assessment and approval is required under the EPBC Act.

2. Need and options considered

2.1 Strategic need for the proposed modification

Section 2 of the project REF addresses the strategic need for the project, the project objectives and the options that were considered. The proposed modification described and assessed in this addendum REF is consistent with the strategic need for the project.

The proposed modification reflects responds to opportunities to improve urban design outcomes for the project that have arisen since the determination of the project REF and subsequent addendums. In proceeding with the proposed modification, the project would have the result of improved visual amenity and a reduction of graffiti risk, costs and environmental impacts associated with off-site disposal of excavated materials.

2.2 Proposal objectives and development criteria

Section 2.3 of the project REF identifies the proposal objectives and development criteria that apply to the proposed modification.

2.3 Alternatives and options considered

2.3.1 Methodology for selection of preferred option

The proposed modification involves design refinements. In this context, it was not necessary to consider other broader options. The process of option evaluation had two stages:

- A consideration of whether the proposed changes in any configuration can be justified (do nothing).
- An evaluation of a proposed modification by reference to the project objectives and its respective impacts and benefits.

2.3.2 Identified options

Transport investigated the 'do nothing' option and the option of proceeding with the proposed modification.

2.3.3 Analysis of options

The proposed modification would have some environmental impacts; however, these have been assessed as minor (refer to the environmental assessment in Chapter 6) and can be appropriately managed with the implementation of the proposed safeguards and management measures (refer to Chapter 7).

While the 'do nothing' option would not have any incremental environmental impacts, it would not provide the improved urban design, amenity and biodiversity outcomes that would be achieved by proceeding with the proposed modification.

2.4 Preferred option

The preferred option is to proceed with the proposed modification as evaluated above in Section 2.3.3.

The preferred option addresses the identified need. The proposed modification is based on the preferred option and is described in detail in Chapter 3

3. Description of the proposed modification

3.1 The proposed modification

Transport for NSW (Transport) proposes to modify the Mona Vale Road East Upgrade project by adjusting the approved project boundary to construct a vegetated mound which is proposed to replace an approved 1.5m high concrete traffic barrier at Ingleside. The proposed modification is shown in Figure 1-2.

Key features of the proposed modification would include:

- Adjustment to the approved project boundary (up to eight metres) to accommodate the larger footprint required for the modified design, resulting in the need for property acquisition of existing road reserves owned by government departments (Transport, Northern Beaches Council and NSW Planning). No additional private property is to be purchased as a result of the proposed modification.
- Clearing of existing vegetation to the south of Mona Vale Rd to allow for construction of the mound.
- Use of existing materials excavated from the Mona Vale Road Upgrade site (along with additional materials to be brought in) to construct landscaped batter.
- Planting along the roadside and rear faces with native shrubs and grasses.
- Extension of three existing drainage lines to outlet at the new toe of batter. The alignment of two pipes would remain the same and they would outlet to the same area (bushland) and catchment. The third pipe would outlet further east of its original location into government owned land (bushland).

3.2 Design

3.2.1 Design criteria

The design criteria for the proposed modification are generally consistent with section 3.2.1 of the project REF.

3.2.2 Engineering constraints

The engineering constraints for the proposed modification are generally consistent with Section 3.2.1 of the project REF. The proposed modification involves use of existing materials onsite to construct a vegetated mound. The proposed mound would replace the approved concrete barrier and would require a larger batter area to ensure the structure is stable. The increase in footprint for the mound can be accommodated by extending the project boundary and extension of drainage elements. The proposed mound would be approximately 1.5m high, which is consistent with the height of the approved concrete barrier.

3.2.3 Main features of the modification

The main feature of the proposed modification involves the construction of a vegetated mound between the approved Mona Vale Road dual carriageway and residences at Waratah Road, Ingleside. This modification would result in improved visual amenity outcomes for the site, while still providing physical noise screening from Mona Vale Road.

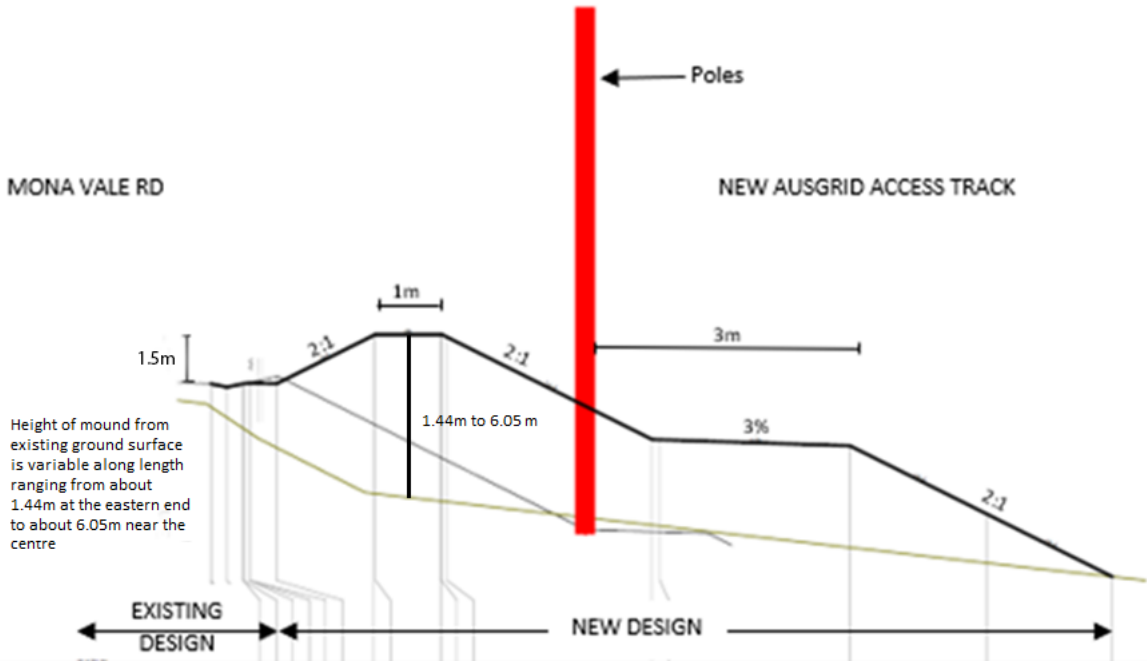


Figure 3-1: Indicative cross section of proposed mound

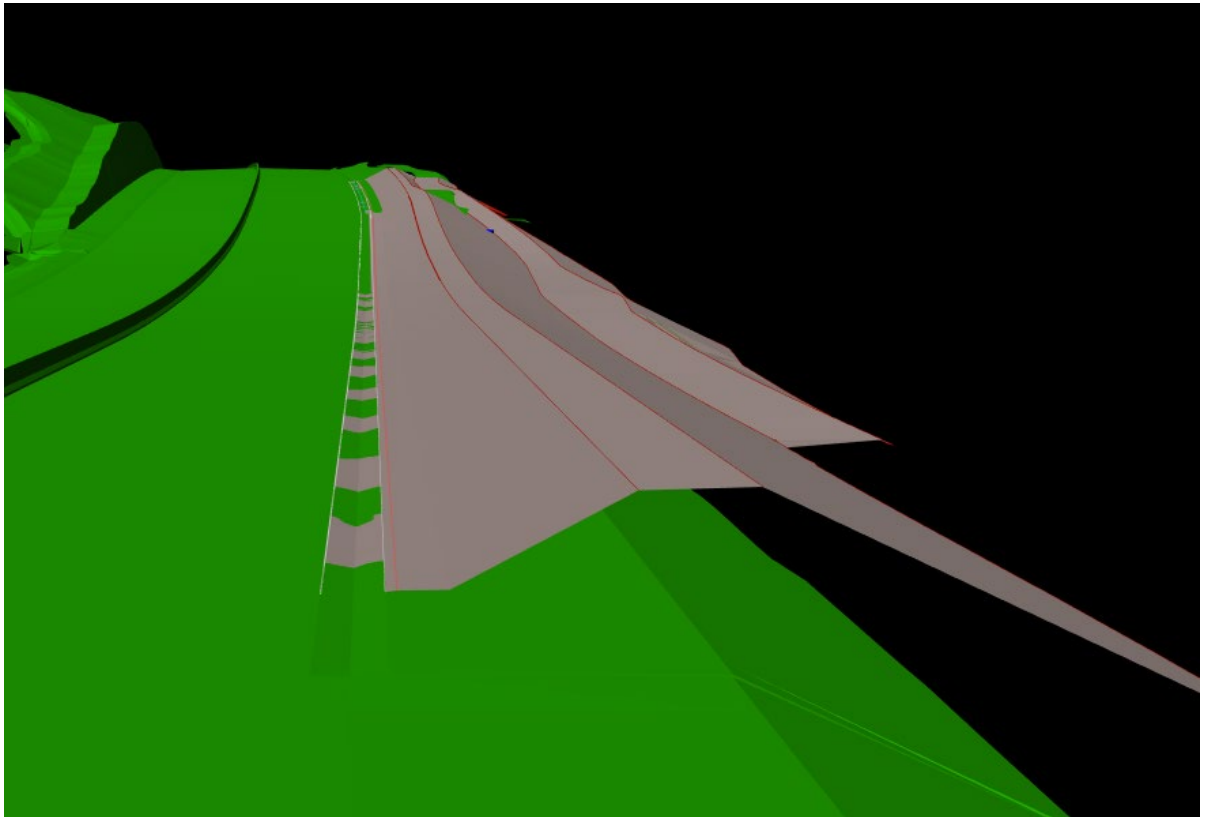


Figure 3-2: Modelled representation of proposed mound (excluding plantings)

3.3 Construction activities

3.3.1 Work methodology

The work methodology for the proposed modification would be generally consistent with the description provided in Section 3.3.3 of the project REF.

The method for construction of the vegetated mound would generally be as follows:

- Removal of existing vegetation
- Extension of stormwater drainage, including construction of concrete wing walls, aprons and scour protection at new outlet locations
- Earthworks to construct mound using materials sourced from both the site and externally
- Revegetation of mound

Construction hours would be as described in Section 3.3.4 of the project REF. It is expected that most aspects of the proposed modification would be carried out during standard construction hours. The proposed modification would not lengthen the duration of the main road upgrade works.

3.3.2 Plant and equipment

Plant and equipment would be as described in Section 3.3.5 of the project REF.

3.3.3 Earthworks

Earthworks would be generally as described in Section 3.3.6 of the project REF. Earthworks for the proposed modification would involve minor clearing of vegetation and construction of the mound.

3.3.4 Source and quantity of materials

The proposed modification seeks to avoid disposal of excess excavated materials from within the site by recycling material for the construction of a mound. In proceeding with the proposed modification, approximately 6,200m³ of material would be reused on-site, with approximately 6,400m³ of additional fill required to complete the mound.

A small quantity of other select materials would be required to address stormwater drainage modifications and construction of the Ausgrid access track. The quantities of material required would not result in a regional or local supply shortage, and none are likely to be in short supply in the foreseeable future. Materials would be sourced from local commercial suppliers where available.

Non-renewable resources such as petroleum fuels would not be used in large quantities.

3.3.5 Traffic management and access

Traffic management and access would be generally as described in Section 3.3.8 of the project REF and subsequent addendums. Access to properties would be maintained during construction.

3.4 Ancillary facilities

Ancillary facilities would be consistent with Section 3.4 of the project REF and Section 2.2.10 of the 2017 Addendum REF. Temporary amenities for workers (lunch shed, portable toilets) may be provided as needed.

3.5 Public utility adjustment

Minor adjustment to utilities is required as a result of the proposed modification. Design of the proposed mound was developed in consultation with Ausgrid with minor adjustment to the positioning of the overhead cables required to maintain necessary clearances so as to not conflict with their assets or their new access track which was approved under the 2017 Addendum REF.

3.6 Property acquisition

Modification of the project boundary to accommodate the mound would encroach on adjoining properties, all of which are owned by either Northern Beaches Council (Council) or the NSW Department of Planning and Environment (DPE). Transport has obtained permission from Northern Beaches Council. The land is zoned as road reserve and does not require acquisition. The DPE owned land will be leased by Transport initially to conduct the works associated with the proposed modification and would seek to formerly acquire the relevant lots in due course.

Table 3-1: Proposed property acquisition

Lot and DP	Portion	Acquisition type	Current owner	Land use zone
Lot 22 DP1238326	Part	Future acquisition	Government - DPE	SP2
Lot 23 in DP1238326	Part	Future acquisition	Government – DPE	SP2

4. Statutory and planning framework

4.1 Environmental Planning and Assessment Act 1979

4.1.1 State Environmental Planning Policies

State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 2 (Infrastructure) of SEPP (Transport and Infrastructure) aims to facilitate the effective delivery of infrastructure across the State.

Section 2.109 of SEPP (Transport and Infrastructure) permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the proposed modification is for a road and is to be carried out on behalf of Transport for NSW, it can be assessed under Division 5.1 of the EP&A Act. Development consent from council is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not require development consent or approval under:

- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Planning Systems) 2021
- State Environmental Planning Policy (Precincts – Central River City)
- State Environmental Planning Policy (Precincts – Eastern Harbour City)
- State Environmental Planning Policy (Precincts – Regional) 2021
- State Environmental Planning Policy (Precincts – Western Parkland City) 2021

Section 2.10 to 2.15 of SEPP (Transport and Infrastructure) contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development.

Consultation, including any consultation as required by SEPP (Transport and Infrastructure), is discussed in section 5 of this addendum REF.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

The project REF considered State Environmental Planning Policy No.44 – Koala Habitat Protection, which has now been replaced by State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP).

Chapter 4 of the Biodiversity and Conservation SEPP aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline. The Biodiversity and Conservation SEPP applies to a range of local government areas including Northern Beaches.

While the SEPP does not affect the permissibility of the proposed modification as a Division 5.1 or 5.2 assessment, consideration has been given to the proposal's impact on koala habitat. The Biodiversity Assessment Report prepared by Ecosure (refer to Appendix C of the project REF) notes that appropriate feed trees are not present. Koalas have not been previously recorded at the proposed modification site.

4.1.2 Local Environmental Plans

Pittwater Local Environmental Plan

The proposal area is, in part, on land to which the Pittwater Local Environmental Plan 2014 (Pittwater LEP) applies. Table 2-3 identifies the objectives for each of the affected zones under the Pittwater LEP.

Table 4-1: Consistency with zone objectives – Pittwater LEP

Zone	Objectives	Comment
RU2 Rural Landscape	<ul style="list-style-type: none"> To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. To maintain the rural landscape character of the land. To provide for a range of compatible land uses, including extensive agriculture. To ensure that development in the area does not unreasonably increase the demand for public services or public facilities. To minimise conflict between land uses within this zone and land uses within adjoining zones. 	Roads are permitted with consent.
SP2 Infrastructure	<ul style="list-style-type: none"> To provide for infrastructure and related uses. To prevent development that is not compatible with or that may detract from the provision of infrastructure. 	Roads are permitted with consent. The proposed modification involves works to an existing road structure within this zone.

Development for the purposes of roads is permissible with development consent in the RU2 and SP2 zones under the Pittwater LEP. As noted above, SEPP (Transport and Infrastructure) operates to remove any consent requirements.

4.2 Other relevant NSW legislation

4.2.1 Protection of the Environment Operations Act 1997

Part 3.2 of the *Protection of the Environment Operations Act 1997* (POEO Act) requires an environmental protection licence for scheduled development work and the carrying out of scheduled activities (as set out in Schedule 1 of the POEO Act), which includes road construction. The project is subject to Environment Protection Licence 21037 issued to Georgiou Group Pty Ltd.

The premise map for the EPL will be modified to include the additional area for the mound and a variation submitted to the EPA for approval.

4.2.2 Biodiversity Conservation Act 2016

The project REF considered the *Threatened Species Conservation Act 1995* which has now been repealed and replaced by the *Biodiversity Conservation Act 2016* (BC Act).

The BC Act seeks to conserve biological diversity and promote ecologically sustainable development; to prevent extinction and promote recovery of threatened species, populations and ecological communities; and to protect areas of outstanding biodiversity value.

The BC Act provides a listing of threatened species, populations and ecological communities, areas of outstanding biodiversity value, and key threatening processes.

Part 7 of the BC Act requires that the significance of the impact on threatened species, populations and endangered ecological communities listed under the BC Act or *Fisheries Management Act 1994*, are assessed using a five-part test. Where a significant impact is likely to occur, a Species Impact Statement or Biodiversity Development Assessment Report (BDAR) must be prepared.

An assessment of the potential impact on biodiversity is provided in Section 6.1.

4.2.3 Biosecurity Act 2015

Under the *Biosecurity Act 2015*, which came into effect on 1 July 2017 and repealed the *Noxious Weeds Act 1993*, 'all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable'.

The potential impacts and relevant safeguards are discussed further in Section 6.1. Appropriate biosecurity controls would be put in place for the proposed modification to minimise the risk of weed transfer.

4.3 Commonwealth legislation

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

Under the EPBC Act a referral is required to the Australian Government for proposed 'actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land'. These are considered in Appendix A and section 6 of the addendum REF.

A referral is not required for proposed road actions that may affect nationally listed threatened species, endangered ecological communities and migratory species. This is because requirements for considering impacts to these biodiversity matters are the subject of a strategic assessment approval granted under the EPBC Act by the Australian Government in September 2015.

Potential impacts to these biodiversity matters are also considered as part of section 6 of the addendum REF and Appendix A.

Findings – matters of national environmental significance (other than biodiversity matters)

The assessment of the proposed modification's impact on matters of national environmental significance and the environment of Commonwealth land found that there would be no change to the findings of the determined activity and would be unlikely to cause a significant impact on matters of national environmental significance or the environment of Commonwealth land. A referral to the Australian Department of Climate Change, Energy, the Environment and Water is not required.

4.4 Confirmation of statutory position

The proposed modification is categorised as development for the purpose of a road and/or road infrastructure facilities and is being carried out by or on behalf of a public authority. Under section 2.109 of SEPP (Transport and Infrastructure) the proposed modification is permissible without consent. The proposed modification is not State significant infrastructure or State significant development. The proposed modification can be assessed under Division 5.1 of the EP&A Act. Consent from Council is not required.

5. Consultation

5.1 Consultation strategy

The consultation strategy relevant to the proposed modification remains consistent with that outlined in Section 5.1 of the project REF.

5.2 Consultation outcomes

A range of consultation activities have been carried out with the community and affected stakeholders since the project REF, Submission Report and subsequent addendums were prepared, and following the start of construction. Transport has consulted with affected residents, property owners, businesses, Council, affected State Government agencies and interest groups, and the wider community have been informed of project updates via website content and newsletters distributed via letterbox.

In relation to the proposed modification, targeted consultation consisting of a letterbox drop has also occurred. This is detailed further in Section 5.2.1.

5.2.1 Consultation undertaken for the proposed modification

Consultation in relation to the proposed modification has been undertaken with directly affected landowners and neighbouring residents. Broader consultation has not occurred due to the low impact nature of the proposal. Consultation undertaken for the proposed modification is detailed in Table 5-1 below.

Table 5-1: Summary of consultation undertaken for the proposed modification

Affected stakeholder	Reason for consultation	Consultation outcomes
Neighbouring residents	Notified to explain the proposed design change and to provide details for further information. Amendments to the project area would bring the project boundary closer to residents and landowners on Waratah, King and Manor Roads in Ingleside.	Transport issued a notification letter to neighbouring residents to notify them of the design change and provide explanation as to why this would be an improved outcome. The letter is provided at Appendix C. One resident made an enquiry regarding the proposed landscaping of the mound and requested mature trees be planted. Transport notes this was a commitment from earlier in the project and will plant some mature vegetation as part of the landscaping works. No other comments were submitted.
Northern Beaches Council	Consulted in relation to the proposed extension of the project boundary onto their land as described in Section 3.6.	Council provided permission to undertake works on land zoned as road reserve.
Department of Planning and Environment	Consulted in relation to the proposed extension of the project boundary onto their land as described in Section 3.6.	DPE have provided permission to undertake works noting agreement that Transport will ultimately acquire the land.

Affected stakeholder	Reason for consultation	Consultation outcomes
Ausgrid	Consulted in relation to potential impacts on their assets and access track as described in Section 3.5 and shown in the cross section provided in Figure 3-1.	Design of the proposed mound was modified by Transport to cater for required clearances to overhead powerlines and access for maintenance.

5.2.2 Aboriginal community involvement

No Aboriginal community consultation has been specifically undertaken for the proposed modification. Table 5-2 summarises the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) process.

Table 5-2: Summary of the Procedure for Aboriginal Cultural Heritage Consultation and Investigation

Stage	Description
Stage 1	Initial Transport assessment
Stage 2	Site survey and further assessment
Stage 3	Formal consultation and preparation of a cultural heritage assessment report
Stage 4	Implement environmental impact assessment recommendations

5.3 Ongoing or future consultation

This addendum REF will not be placed on public exhibition; however, it will be available on the Transport website. Although community comments will not be specifically invited, any comments that are received would be considered in construction planning. The community would be kept informed of any further changes to the project resulting from this and any future consultation process. Where necessary, the following ongoing consultation would also be carried out:

- Consultation with community stakeholders to assist in managing impacts during construction
- Ongoing updates to the community during construction
- Ongoing consultation with Northern Beaches Council and other relevant government agencies
- Continuation of the 24-hour project information telephone number and project website for the duration of construction.

6. Environmental assessment

This section of the addendum REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposed modification of the Mona Vale Road East Upgrade. All aspects of the environment potentially impacted upon by the proposed modification are considered. This includes consideration of the guidelines for Division 5.1 Assessments (DPE, 2022) the factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021. The factors specified in section 171(2) of the Environmental Planning and Assessment Regulation 2021 are also considered in Appendix B.

Site-specific safeguards and management measures are provided to ameliorate the identified potential impacts.

6.1 Biodiversity

A Biodiversity Assessment Report (BAR) was prepared by Ecosure as part of the project REF to identify any threatened species, populations or communities listed under the BC Act and EPBC Act which were present or likely to occur (i.e. have a moderate to high likelihood of occurring in the project area). The assessment is provided in Appendix C of the project REF. The proposed boundary modification falls within the study area for the biodiversity assessment report and therefore the assessment for the project REF has been used to biodiversity impacts against the proposed modification.

A further assessment covering part of the site of the proposed modification (the western drainage outlet) was also carried out by EMM in June 2022. The EMM assessment has therefore also been used in evaluating the potential biodiversity impacts of the of the proposed.

6.1.1 Methodology

The methodology for Ecosure's BAR is provided in Section 6.1.1 of the project REF. The EMM assessment involved a review of relevant databases and mapping of vegetation during a site inspection conducted in April 2022. Potential habitat for threatened flora species was also considered.

6.1.2 Existing environment

The existing environment is described as per Ecosure's BAR at Appendix C of the project REF, though it is noted that construction, including the clearing of vegetation, has since commenced.

Native plant communities

No threatened ecological communities are associated with any of the Plant Community Types (PCTs) previously identified within the modified proposal area. Descriptions of the vegetation community in proximity to the proposed modification is provided below in Table 6-1.

Table 6-1: Description of vegetation communities in proximity to the proposed modification (Ecosure BAR)

Vegetation community	Dominant over storey species	Dominant mid storey species	Dominant lower storey species	Dominant ground cover species	Vegetation condition
Hornsby Sandstone Exposed Bloodwood Woodland – typical	<i>Corymbia gummifera</i> ; <i>Eucalyptus haemastoma</i> ; <i>Eucalyptus oblonga</i>	<i>Corymbia gummifera</i> (juv), <i>Eucalyptus haemastoma</i> (juv), <i>Banksia serrata</i>	<i>Leptospermum trinervium</i> , <i>Banksia ericifolia</i> , <i>Boronia ledifolia</i>	<i>Entolasia stricta</i> ; <i>Lepidosperma laterale</i> , <i>Lepyrodia scariosa</i>	Good
Hornsby Sandstone Heath-Woodland	<i>Allocasuarina distyla</i> , <i>Eucalyptus haemastoma</i> , <i>Banksia ericifolia</i>	N/A	<i>Leptospermum squarrosum</i> , <i>Dillwynia floribunda</i> , <i>Eucalyptus sp.</i> (juv)	<i>Entolasia stricta</i> , <i>Ptilothrix deusta</i> , <i>Lepidosperma laterale</i>	Good
Urban Exotic / Native	Over storey includes a variety of native and exotic species such as <i>Eucalyptus piperita</i> , <i>Eucalyptus paniculata</i> with <i>Ficus sp.</i> And camphor laurel. Severely disturbed understory.				N/A

The EMM assessment identified vegetation surrounding the western drainage outlet as confirming to Plant Community Type (PCT) 882 (Hairpin Banksia - Slender Tea-tree heath on coastal sandstone plateaux, Sydney Basin Bioregion). This PCT is not associated with a threatened ecological community listed by either the BC Act or the EPBC Act.

Threatened flora

Of the 190 plant species recorded during previous Ecosure field surveys, only one species of threatened flora was recorded within the survey area being the Angus's Onion Orchid (*Microtis angusii*). Due to its vegetative character, it was difficult at the time of the survey to determine how many individuals are present. Notwithstanding, seven stems were recorded within the survey area at two locations (one stem in on location and six stems in the other). *Microtis angusii* is listed as endangered on both the BC Act and EPBC Act. The *Microtis angusii* individuals were flagged as being close in proximity to the site of the proposed modification. Existing safeguards surrounding the protection of *Microtis angusii* are considered sufficient to address potential impacts.

Weeds

The following weeds were identified near the modified proposal area, as per Section 4.3.6 of the Ecosure assessment:

- *Acacia saligna*
- *Lantana camara*
- *Watsonia bulbifera*
- *Cortaderia seloana*
- *Lantana camara*
- *Senna septemtrionalis*
- *Solanum mauritianum*

Fauna and fauna habitat

The area is characterised by an abundance of rock outcrops, providing habitat for invertebrates, reptiles, and mammals. Open woodland and sandstone heath are the main fauna habitat types, both of these are in moderate condition with edge effects from the existing road and surrounding houses and rural properties.

No threatened fauna, or fauna habitat features were recorded within the modified proposal area.

The Ecosure assessment identified the presence of a bush rat (*Rattus fuscipes*) near the modified proposal area, as well as numerous swamp wallabies within the BAR study area. The bush rat and swamp wallaby are locally significant species.

The EMM assessment found the area near the western outlet to be dominated by dense heath vegetation. No mature trees were identified although there was widespread fallen timber part of the site. One stag was identified with a 15-20 cm diameter hollow, which provides potential roosting habitat for small mammals or birds.

The dense vegetation would provide shelter for birds, although no nests were observed during the survey, small mammals, and reptiles. There were numerous flowering species such as Banksias and Tea-tree that would provide foraging opportunities for birds and mammals. The small drainage line currently present near the western outlet would provide potential habitat for the Red-crowned Toadlet, although none were recorded during the field survey.

Migratory Species

Commonwealth listed migratory species were considered in the Appendix I of the BAR at Attachment C of the project REF. While numerous species were identified as having a low to moderate potential to occur in the local area, the nature, scale and location of the proposed modification is such that impacts on these species, or their habitats are not expected. Indirect impacts are also not expected.

6.1.3 Potential impacts

Construction

A small amount of vegetation mapped as Hornsby Sandstone Exposed Bloodwood Woodland by Ecosure would need to be removed (approximately 2,520m²). Removal of vegetation is considered minor and is necessary to facilitate the construction of the proposed mound. Existing safeguards are in place to ensure adequate management of any fauna encountered during works and to restrict clearing to the approved boundaries.

The Ecosure assessment indicates the presence of weeds in proximity to the modified proposal area. Existing safeguards are considered sufficient to prevent the spread or further introduction of weeds during the construction stage.

Operation

The mound would be revegetated with native shrubs and grasses following construction. The proposed modification would have negligible incremental impacts on native flora and fauna. Compared to the previously proposed concrete barrier, the proposed modification would not represent an additional barrier to the movement of wildlife.

Conclusion on significance of impacts

The proposed modification would result in additional clearing of native vegetation along the southern boundary of Mona Vale Road, to the east of Waratah Street. None of the native vegetation affected conforms to a threatened ecological community listed by the BC Act or EPBC Act.

The modification is not likely to significantly impact threatened species, populations or ecological communities or their habitats, within the meaning of the BC Act or FM Act and therefore a Species Impact Statement is not required.

The modification is not likely to significantly impact threatened species, populations, ecological communities or migratory species, within the meaning of the EPBC Act.

6.1.4 Safeguards and management measures

No.	Impacts	Environmental safeguards	Responsibility	Timing
B16	Red crowned toadlet habitat	Impacts on Red-crowned Toadlet habitat and existing water flow through the drainage lines immediately east of Waratah Road will be minimised by: <ul style="list-style-type: none"> Limiting the disturbance area of works Revegetating disturbed areas with native species post construction Installing scour protection at drainage outlets 	Construction contractor	Construction
B17	Mound revegetation	Species used to vegetate the proposed mound after construction will be native and selected with reference to the Landscape design guideline (Roads and Maritime Services, 2018).	Construction contractor	Construction

6.2 Landscape character and visual amenity

6.2.1 Methodology

Transport conducted a Landscape Character and Visual Impact Assessment (LCVIA) to assess the visual impacts of the proposed modification. The LCVIA took into account the anticipated impacts of the proposed modification against the approved project through consideration of changes to landscape character zones and viewpoints that were initially considered as part of the LCVIA for the project REF (refer to Appendix J of the project REF).

6.2.2 Existing environment

The existing environment is described in the LCVIA and Urban Design Study provided at Appendix J of the project REF. The proposed modification falls within landscape character zone 3 (Ingleside Plateau) as identified in the LCVIA and is of moderate visual sensitivity.

6.2.3 Potential impacts

Construction

Landscape character and visual impacts for the proposed modification would be consistent with those identified in Section 6.7.3 of the Project REF. The project REF notes that construction stage landscape character and visual impacts would be temporary and would reflect typical road construction activities. Low level clearing of vegetation would have a minor visual impact, however the proposed modification involves revegetation meaning this impact would be temporary also.

Existing safeguards are therefore considered appropriate to manage potential construction impacts.

Operation

When compared to the approved project, the proposed modification offers an improved visual outcome during the operation phase as a landscaped mound is more consistent with adjacent bushland when compared to the previously proposed concrete wall.

The LCVIA for the proposed modification included a reassessment of the following landscape character zones:

- LCZ1 – Ingleside Residential
- LCZ2 – Ingleside Valley
- LCZ3 – Ingleside Plateau
- LCZ4 – Warriewood Escarpment.

No change to landscape character impact ratings were identified as shown in Table 6-2.

Table 6-2: Landscape character impacts summary

LCZ	Original assessment	Revised assessment
LCZ1	Low	Low
LCZ2	Low	Low
LCZ3	Moderate	Moderate
LCZ4	Moderate-High	Moderate-High

The LCVIA for the proposed modification included a reassessment of the following landscape character zones:

- VP3 – Looking northeast along Waratah Road towards Mona Vale Road from within LCZ2
- VP4 – Looking west along Mona Vale Road within LCZ3
- VP6 – looking northwest towards Mona Vale Road from Ingleside Road within LCZ3.

No change to landscape character impact ratings were identified as shown in Table 6-3.

Table 6-3: Visual impacts summary

LCZ	Original assessment	Revised assessment
VP3	Low-Moderate	Low-Moderate
VP4	Moderate	Moderate
VP6	Low-Moderate	Low-Moderate

Safeguards recommended by Transport’s LCVIA have been adopted to ensure visual impacts resulting from the proposed modification are minimised.

6.2.4 Safeguards and management measures

No.	Impacts	Environmental safeguards	Responsibility	Timing
VA5	Landscape character and visual impacts	In consultation with the Transport Landscape Advisor, an optimal planting palette, soil profile and appropriate container sizes will be chosen to maximise the long-term health of the plants.	Transport for NSW	Detailed design
VA6	Landscape character and visual impacts	For early screening of the road, maintenance access track, energy utility poles and other elements from residences, native and cultivar shrub species will be planted.	Design contractor	Construction

6.3 Hydrology and flooding

6.3.1 Methodology

In 2014, Cardno prepared the Concept drainage and water quality design report (provided at Appendix E of the project REF) and the Hydraulic assessment report (provided at Appendix F of the project REF) which outline pavement drainage, cross drainage, construction water quality and operational water quality designs and requirements for the approved project. Consideration of hydrological impacts potentially resulting from the proposed modification is informed by the Cardno reports and modelling of the proposed modification by Lyall & Associates.

6.3.2 Existing environment

Section 6.3 of the REF assessed the full hydrology and flooding impacts of the project. Further hydrology and flooding technical assessment for each of the catchments was undertaken during the detailed design.

6.3.3 Potential impacts

Construction

Construction impacts are consistent with those identified in Section 6.3.3 of the project REF.

Operation

The design change as part of the proposed modification includes extending the approved drainage lines further south into the adjacent bushland. The design changes would have no material impact on the previously assessed project-related impacts on flood behaviour as the same rate and volume of runoff would discharge to the adjacent bushland. Similar to the approved design, appropriately designed scour protection measures would be incorporated on the relocated outlet headwalls. There would be no change to the discharge of stormwater runoff into private property as part of the proposed modification.

The implementation of a vegetated mound (in place of the previously proposed concrete barrier) would reduce impermeable surfaces by a small amount.

Refer to Figure 2-2 for the design of the drainage points in relation to the rest of the proposal and environmental elements.

6.3.4 Safeguards and management measures

Existing safeguards are considered adequate to address hydrological impacts. No additional measures are proposed.

6.4 Non-Aboriginal heritage

6.4.1 Methodology

The assessment approach involved a review of relevant statutory heritage registers, databases and lists, including:

- NSW Heritage management system:
 - NSW State Heritage Register
 - Local heritage items (Pittwater LEP)
 - Heritage NSW State Heritage Inventory (which includes items on the Transport for NSW Heritage and Conservation Register)
- World Heritage List
- National Heritage List
- Commonwealth Heritage List

6.4.2 Existing environment

In addition to heritage items identified in Section 6.6 of the project REF, the project is also located close to an archaeological heritage item listed on the Pittwater LEP located at 2 and 10 Manor Road, Ingleside. The Ruins of Powder Works (listing no. A2270133) belonged to a large estate in Ingleside which was intended to support the domestic manufacture of gunpowder. The powder works were constructed in 1884 and were anticipated to be a catalyst for local development, evident with the naming of Powderworks Road, which was surveyed in 1885 (Champion, S & G 2012). As the listing suggests, there is little remaining built fabric and the site's significance lies with its archaeological value.

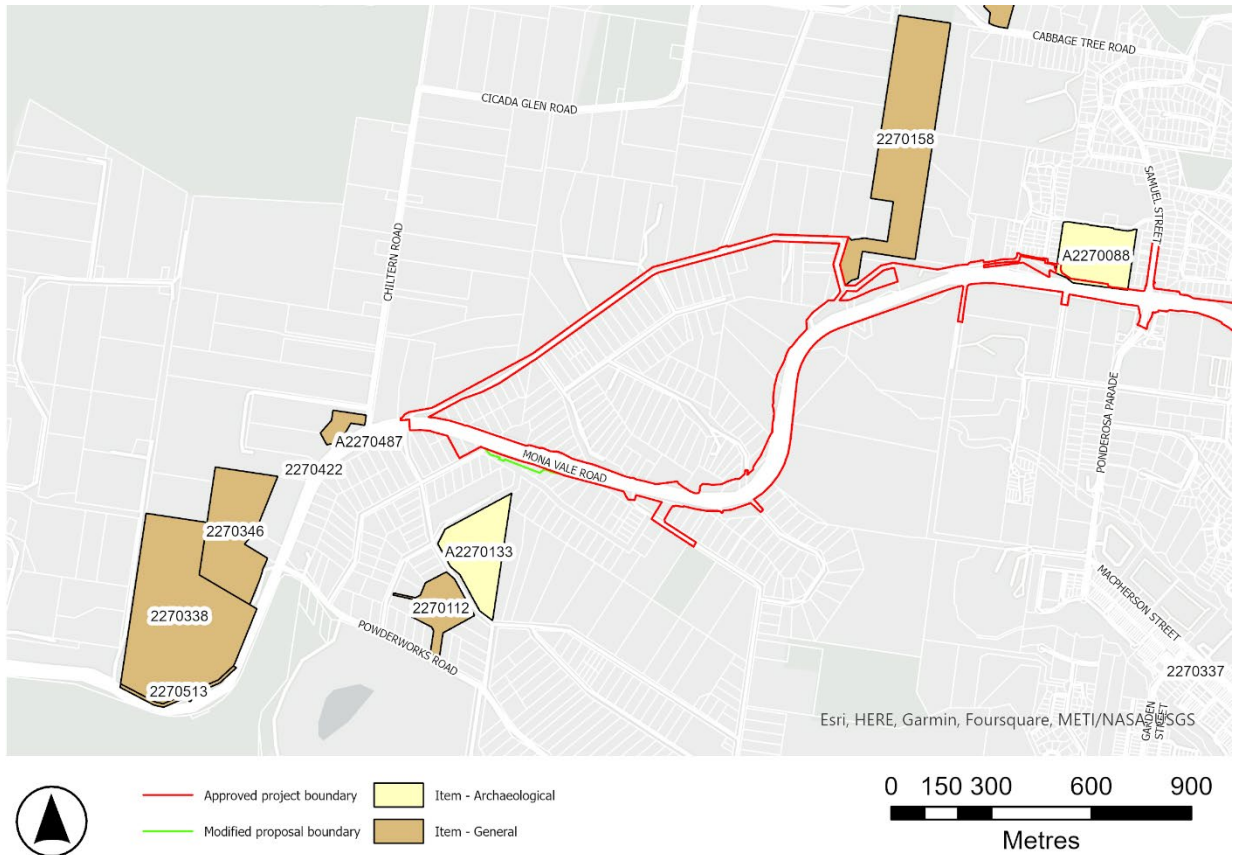


Figure 6-1: Location of nearby heritage items.

6.4.3 Potential impacts

The items considered in Section 6.6 of the project REF are not close in proximity to the modified proposal area and are therefore not likely to be directly or indirectly impacted by the proposed modification. Potential impacts in relation to the Ruins of Power Works archaeological site are considered below.

Construction

Accounting for the archaeological value of the site, any increased run-off to the Ruins of Powder works site could result in damage to heritage fabric by causing erosion and disruption of elements remaining in situ. This is unlikely to occur as run-off from the proposed modification would not be likely to impact the land on which the heritage item is located due to the topography and the orientation of slopes upon which the proposed mound and heritage item are respectively located.

Operation

The proposal would not have an impact on the heritage item during operation. Hydrological impacts are considered further in Section 6.3.

6.4.4 Safeguards and management measures

Existing safeguards (including those relating to erosion and sedimentation control) are considered adequate to address non-Aboriginal heritage impacts. No additional measures are proposed.

6.5 Other impacts

6.5.1 Existing environment and potential impacts

Environmental factor	Existing environment	Potential impacts
Traffic and transport	Refer to Section 6.4.2 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.
Noise and vibration	Refer to Section 6.8.3 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification. The proposal modification is within noise catchment area 8 as identified in the project REF. It is expected that noise and vibration occurring as a result of the construction of the proposed mound would not have a greater or noticeably different impact on sensitive receivers and therefore existing safeguards are considered sufficient. The proposed mound is expected to provide a similar level of noise attenuation (if not better due to the reduction of hard surfaces alongside the road) for surrounding receivers as the approved barrier.
Air quality	Refer to Section 6.9.2 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.
Aboriginal heritage	Refer to Section 6.5 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.
Climate change and greenhouse gases	Refer to Section 6.10.1 and Section 6.10.2 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.
Socio-economic	Refer to Section 6.11 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.
Hazards and risks	Refer to Section 6.12 of the project REF.	No changes to the potential impacts described in the project REF are expected as a result of the proposed modification.

Environmental factor	Existing environment	Potential impacts
Waste management and resource use	Refer to Section 6.13 of the project REF.	<p>The potential impacts of the proposed modification would be consistent with those described in section 6.13.1 of the project REF.</p> <p>The proposed modification assists with the reuse of excess materials excavated from the site and eliminates the need to transport and dispose of the material elsewhere reducing the carbon footprint of the project.</p> <p>Material to be used for the proposed mound would be classified accordance with the EPA's Waste Classification Guidelines (2014) and reused consistent with its classification. Refer to safeguards WR2 and WR6.</p>

6.5.2 Safeguards and management measures

Existing safeguards are considered adequate to address the impacts identified in Table 6-4. No addition measures are proposed.

6.6 Cumulative impacts

6.6.1 Potential impacts

Cumulative impacts would be considered minimal.

Minimal vegetation clearing would be required within the footprint of construction for the mound, however significant impacts on threatened species populations and/or ecological communities are not expected.

Cumulative impacts associated with the interaction of additional project related construction traffic attributable to the proposed modification with construction traffic from other projects that might be in progress concurrently are not expected. Cumulative traffic related impacts would be expected to remain unchanged from those documented in the approved project REF.

Minimising impacts of the proposed modification is the best way to address any potential cumulative effects. Various measures have been proposed as part of the approved project to address impacts and additional measures have been identified in this addendum REF to address anticipated impacts.

6.6.2 Safeguards and management measures

Existing safeguard CU-1 is considered adequate to address cumulative impacts. No additional measures are proposed.

7. Environmental management

7.1 Environmental management plans

A number of safeguards and management measures have been identified to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposed modification. Should the proposed modification proceed, these management measures would be addressed if required during detailed design and incorporated into the Contractors Environmental Management Plan (CEMP) and applied during the construction and operation of the proposed modification.

7.2 Summary of environmental safeguards and management measures

Environmental safeguards and management measures for the Mona Vale Road East Upgrade project are summarised in Table 7-1. Additional safeguards and management measures identified in this addendum REF are included in bold and italicised font. The safeguards and management measures will be incorporated into the detailed design phase of the proposed modification, and the CEMP and implemented during construction and operation of the proposed modification, should it proceed. These safeguards and management measures will minimise any potential adverse impacts arising from the proposed works on the surrounding environment. Policy and legislation have also been updated where relevant.

Table 7-1: Summary of safeguards and management measures

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
1	General	All environmental safeguards must be incorporated within the following: <ul style="list-style-type: none"> Project Environmental Management Plan Detailed design Contract specifications for the proposal Contractor's Environmental Management Plan 	Transport Project Manager	Pre-construction
2	General	A risk assessment must be carried out on the proposal in accordance with the Transport project risk assessment procedures to determine an audit and inspection program for the work. The recommendations of the risk assessment are to be implemented. A review of the risk assessment must be carried out by Transport. Any work resulting from the proposal and as covered by the REF may be subject to environmental audit(s) and/or inspection(s) at any time during their duration.	Project Manager and Environmental staff	Pre-construction
3	General	The environmental contract specification G36 – Environmental Protection (Management System) must be forwarded to the Transport Senior Environmental Officer for review at least 10 working days prior to the tender stage. A contractual hold point must be maintained until the CEMP is reviewed by the Transport Senior Environmental Officer.	Transport Project Manager	Pre-construction
4	General	The Transport Project Manager must notify the Transport Environment Officer (Sydney Region) at least five days prior to work commencing.	Transport Project Manager	Pre-construction
5	General	All businesses and residences likely to be affected by the proposed work must be notified at least five working days prior to the commencement of the proposed activities.	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
6	General	Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Construction contractor	Pre-construction and during construction as required
7	General	<i>The premise map for the EPL will be modified to include the additional area for the mound and a variation submitted to the EPA for approval.</i>	Construction contractor	Construction
B1	Impact to biodiversity	<p>A Biodiversity Management Plan (BMP) is to be prepared and included in within the CEMP.</p> <p>The BMP is to include (but not be limited to) the following:</p> <ul style="list-style-type: none"> • a site walk with appropriate site personnel including Transport representatives to confirm clearing boundaries and sensitive location prior to commencement of work • identification (marking) of the clearing boundary and identification (marking) of habitat features to be protected. E.g., use of flagging tape • a map which clearly shows vegetation clearing boundaries and sensitive areas/no go zones • incorporation of management measures identified as a result of the pre-clearing survey report, completed by an ecologist, (G40, section 2.4) and nomination of actions to respond to the recommendations made. This should include details of the measures to be implemented to protect clearing limits and no-go areas • a detailed clearing process in accordance with <i>Transport Biodiversity Guidelines</i> (2011) including requirements of Guide 1, 2, 4 & 9. • identify toolbox talks where biodiversity would be included such as vegetation clearing or work adjacent to sensitive locations • identify control/mitigation measures to prevent impacts on sensitive locations or no-go zones • a stop work procedure in the event of identification of unidentified species, habitats or populations • a nest box strategy would be developed by an ecologist, in consultation with Transport Biodiversity specialists, to compensate for the loss of tree hollows. The number and size of tree hollows to be removed would be assessed prior to clearing, with at least 70% of nest boxes installed at least one month before clearing commences, in accordance with Transport services biodiversity guidelines. 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
B2	Removal or modification of native vegetation	Onsite measures; clearing limits will be enforced and cordoned off and signposted.	Construction contractor	Pre-clearing and construction
B3	Removal of individuals of threatened species	Pre-clearing surveys for fauna will be carried out in accordance with the Transport Services Biodiversity Guidelines.	Construction contractor	Pre-clearing
B4	Predation by domestic and/or feral animals	Fauna connectivity structures and approaches to be designed to provide protective features and/or refuges to reduce potential for predation of fauna using the structure.	Design contractor	Detailed design
B5	Loss of native vegetation and fauna habitats adjacent to approved construction zone	Clearing limits will be accurately demarcated with assistance from a surveyor, and exclusion zones will be implemented beyond the demarcated area. A suitably qualified ecologist or experienced wildlife carer will be engaged to survey and handle any fauna.	Construction contractor	Pre-clearing and construction
B6	Increase in fauna fatality and injury	Pre-clearance procedures would be implemented during construction to prevent direct fauna mortality. Fauna fencing would be installed at strategic locations to reduce potential for fauna to access the road during operation, thereby reducing potential for roadkill. Should any termite mounds be encountered and require removal within the construction footprint, they would be checked for the presence of Rosenberg's goanna eggs prior to clearing. Salvage of any eggs would be carried out by appropriately experienced personnel.	Construction contractor	Detailed design and construction
B7	Loss of habitat and connectivity	A connectivity plan would be prepared by a suitably qualified and experienced ecologist during the detailed design. The plan would be developed in consultation with Transport. Biodiversity specialists and would include: <ul style="list-style-type: none"> • identification of connectivity objectives for the determined project • identification of target species for all measures • consideration of the specific connectivity requirements for each identified target species An ecologist would be engaged on site to supervise the construction of temporary and permanent fauna mitigation measures, including, but not limited to, connectivity structures and fauna fencing. Post-construction monitoring in an adaptive management framework would be carried out to determine the effectiveness of connectivity structures, which would be actively managed to facilitate movement of fauna species, particularly the Eastern Pygmy-possum.	Construction contractor	Detailed design and construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<p>A monitoring plan would be developed by a suitably qualified and experienced ecologist in consultation with Transport Services' biodiversity specialists and Northern Beaches Council, and would include:</p> <ul style="list-style-type: none"> • identification of monitoring objectives • identification of species to be monitored and suitable monitoring methods to be implemented to detect usage of connectivity structures by those species • a monitoring program for a period of up to five years following opening of the project 		
B8	Hydrological changes	Robust erosion and sediment control measures would be incorporated into the CEMP to prevent adverse impacts to Angus' onion orchid and threatened frog habitat from changes to run off.	Construction contractor	Pre-clearing and construction
B9	Weed invasion	Declared noxious weeds are to be managed according to the requirements under the <i>Noxious Weeds Act 1993</i> and <i>Guide 6 (Weed Management)</i> of the <i>Transport Biodiversity Guidelines 2011</i> .	Construction contractor	Construction
B10	Spread of disease	Construction plant will be required to be certified clean, and a hygiene protocol will be implemented to ensure the proposed modification does not result in increased risk of spreading the chytrid fungus.	Construction contractor	Construction
B11	Potential impact on threatened fauna	<p>Targeted fauna fencing at strategic locations along the road to funnel toward underpasses and connectivity structures.</p> <p>Fauna connectivity structures will consist of one dedicated fauna underpass and one fauna overpass.</p> <p>In areas that could contain the eastern pygmy-possum (woodland and sandstone heath) vegetation clearing would be undertaken as far as possible outside of the main breeding season (December – July). All vegetation clearing would be supervised by an appropriately qualified and experienced ecologist to ensure potential for harm to eastern pygmy-possums and other fauna is minimised. Vegetation would be planted to encourage crossing and reduce risk of predation. Species planted would be in accordance with the Mona Vale Road Upgrade East 100% Detail Landscape Design Report and Landscape Plans. Vegetation would be subject to ongoing maintenance by appropriately qualified bush regeneration contractors, to ensure it establishes to provide suitable habitat for the eastern pygmy-possum and other threatened fauna.</p>	Construction contractor	Pre-construction and construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		Installation and monitoring of nest boxes for up to five years, in accordance with a monitoring plan to be prepared in consultation with Transport Services' biodiversity specialists and Northern Beaches Council.		
B12	Loss of native vegetation	Design of the shared path will avoid removal of vegetation along Lane Cove Road where reasonable and feasible. If vegetation removal cannot be avoided, the footprint will be minimised, and the retention of large canopy trees will be prioritised.	Contractor	Construction
B13	Direct impacts on Angus's Onion Orchid	Removal of Angus's Onion Orchid (<i>Microtis angusii</i>) along Lane Cove Road and Ingleside Road will be avoided where reasonable and feasible. If Angus's Onion Orchid individuals are impacted by the proposed modification, offsets will be provided in accordance with the Guideline for Biodiversity Offsets (Transport Services, 2016).	Transport for NSW	Construction
B14	Impacts to Eastern Pygmy-possum, Red-crowned toadlet, and Glossy Black-Cockatoo habitat	The shared path will avoid impacts on potential Eastern Pygmy-possum, Red-crowned toadlet, and Glossy Black-Cockatoo habitat within the Katandra Bushland Sanctuary and will avoid the identified artificial dam between Walana Crescent and Lane Cove Road.	Transport for NSW	Construction
B15	Impacts to Red-crowned toadlet habitat	The extension of stormwater line and relocation of the stormwater detention basin along Ingleside Road will avoid and/or minimise impacts on Red-crowned toadlet habitat and existing water flow through the current stormwater runoff pathways.	Transport for NSW	Construction
B16	Red crowned toadlet habitat	Impacts on Red-crowned Toadlet habitat and existing water flow through the drainage lines immediately east of Waratah Road will be minimised by: <ul style="list-style-type: none"> • Limiting the disturbance area of works • Revegetating disturbed areas with native species post construction • Installing scour protection at drainage outlets 	Construction contractor	Construction
B17	Mound revegetation	Species used to vegetate the proposed mound after construction will be native and selected with reference to the Landscape design guideline (Roads and Maritime Services, 2018).	Construction contractor	Construction
SO1	Erosion and sedimentation	A Soil and Water Management Plan (SWMP) would be prepared as part of the CEMP prior to the commencement of construction. The SWMP would address the following:	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> • the Transport Code of Practice for Water Management. • the Blue Book - Managing Urban Stormwater: Soils and Construction, Volume 1 and 2 (Landcom, 2004). • Transport Technical Guidelines – Temporary Stormwater Drainage for Road Construction. The SWMP would include: <ul style="list-style-type: none"> i. stockpile management plan ii. identification of catchment and sub-catchment area high risk areas and sensitive areas. iii. sizing of each of the above areas and catchment. iv. the likely run-off from each road sub-catchment. v. direction of flow of onsite and offsite water. vi. separation of onsite and offsite water vii. stockpiles will be designed, established, operated and decommissioned in accordance with the Transport Stockpile Site Management Guideline. viii. direction of run-off and drainage points during each stage of construction. ix. dewatering plan which includes process for monitoring flocculating and dewatering water from site (i.e. any sediment basins and sumps). x. progressive site-specific Erosion and Sedimentation Control Plans (ESCPs). The ESCP is to be updated at least fortnightly. xi. a process to routinely monitor the Bureau of Meteorology weather forecasts. xii. preparation of a wet weather (rain event) plan which includes a process for monitoring xiii. potential wet weather and identification of controls to be implemented in the event of wet weather. ii. xiv. an inspection and maintenance schedule for ongoing maintenance of temporary and permanent erosion and sedimentation controls. 		
SO2	Erosion and sedimentation	<p>A Principal Erosion and Sedimentation Control Plan would be prepared during detailed design. The Principal Erosion and Sedimentation Control Plan would include:</p> <ul style="list-style-type: none"> • identify site catchment and sub-catchments, high risk areas and sensitive areas • sizing of each of the above areas and catchments • proposed staging plans for the project to ensure appropriate erosion and sediment controls measures are possible 	Transport for NSW	Detailed design

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> the likely volume of run-off from each catchment and sub catchment in accordance with the Managing Urban Stormwater: Soils and Construction, Volume 1 and 2 (Landcom, 2004). direction of water flow, both off and on site 		
SO3	Erosion and sedimentation	A soil conservationist from the Transport Erosion, Sedimentation and Soil Conservation Consultancy Services Register is to be engaged to review the proposed erosion and sedimentation controls and conduct routine inspections of the construction work.	Construction contractor	Construction
SO4	Erosion and sedimentation	All stockpiles would be designed, established, operated and decommissioned in accordance with the Transport Stockpile Management Procedures.	Construction contractor	Construction
SO5	Erosion and sedimentation	Controls would be implemented at construction zone exit points to minimise the tracking of soil and particulates onto road surface surfaces.	Construction contractor	Construction
SO6	Disturbance of contaminated land	Prior to the start of construction, additional environmental investigations will be undertaken to assess the current status of the TPH impacted soils at the truck incident site and assess if recent lane adjustment work have affected this location. Additional testing would be carried out to assess if contaminated soils have been removed or if migration of impacted areas has occurred, impacting previously unaffected areas.	Construction contractor	Pre-construction
SO7	Disturbance of contaminated land	<p>A Contaminated Land Management Plan will be prepared for the determined project and will include procedures to:</p> <ul style="list-style-type: none"> Identify potentially contaminated land for through monitoring: <ul style="list-style-type: none"> for discolouration or staining of soil bare soil patches both on-site, and off-site adjacent to site boundary visible signs of plant stress presence of drums or other waste material presence of stockpiles or fill material odours undertake further contamination assessment where necessary and advise on the need for remediation or other action. This includes further investigation of the truck roll over area and any unexpected contamination finds. divert surface runoff away from the contaminated land. 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> • manage any surface runoff contaminated by exposure to the contaminated land. • assess any requirement to notify relevant Authorities, including the EPA. • manage any remediation and subsequent validation, including any certification required. • review and update the plan. • the Contaminated Land Management Plan will contain the following: <ul style="list-style-type: none"> ○ contaminated land legislation and guidelines including any relevant licences and approvals to be obtained. ○ identification of locations of known or potential contamination and preparation of a map showing these locations. ○ identification of rehabilitation requirements, classification, transport and disposal requirements of any contaminated land within the construction footprint. ○ contamination management measures including waste classification and reuse procedures and unexpected finds procedures ○ measures to identify and appropriately manage any residual asbestos containing material located on the 1-7 Walana Crescent ancillary site. 		
SO8	Disturbance of asbestos containing materials	A classification system will be used to control the excavation, stockpiling and disposal of all potentially contaminated materials. Soils should be classified (where possible) in-situ prior to excavation or when stockpiled during excavation, depending on available time and room for stockpile areas. The same procedures will be followed for any unexpected finds.	Construction contractor	Construction
SO9	Disturbance of asbestos containing materials	<p>An Asbestos Management Plan will be prepared and implemented. Work in any area where asbestos is newly identified will cease immediately. An investigation will be carried out and report prepared to determine the nature, extent and degree of the asbestos contamination.</p> <p>The level of reporting will be in accordance with <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (Office of Environment and Heritage, 2011), any relevant WorkCover Guidelines and will include the proposed methodology for the remediation of the asbestos contamination.</p> <p>Remediation activities will not take place until receipt of the investigation report by occupational health professional. Work will only recommence upon receipt of a validation report from a suitably qualified contamination specialist that the</p>	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		remediation activities have been undertaken in accordance with the investigation report and remediation methodology		
WQ1	Concrete and other materials from construction vehicles entering waterways	Vehicle wash down will occur in a location that is bunded.	Construction contractor	Construction
WQ2	Spills during construction	All fuels, chemicals and liquids will be stored in an impervious bunded area and at least 50 metres from creek and other waterways and slopes with a gradient above 10 per cent.	Construction contractor	Construction
WQ3	Spills during construction	Refuelling of plant and equipment will occur either off-site or on relatively level ground at least 50 metres from waterways, drainage lines and sensitive areas. The refuelling machinery will have spill management equipment and there will be a person attending during the refuelling process.	Construction contractor	Construction
WQ4	Spills during construction	A Spill Management Plan would be prepared for the proposal. If a spill or incident occurs, the <i>Roads and Maritime Environmental Incident Classification and Management Procedure</i> (Transport Services, 2014) will be followed, and the Transport Contract Manager notified immediately.	Transport for NSW Construction contractor	Construction
WQ5	Pollution from road during operation	Consideration will be given to planting the level spreaders with suitable species to provide nominal water quality treatment prior to discharge.	Design contractor	Detailed design
WQ6	Spills during construction	Opportunities to improve the management of spills (such as spill basins and/or suitable block / bund locations) for the truck arrester bed and Ponderosa Parade will be investigated during detailed design.	Design contractor Transport for NSW	Detailed design
TT1	Construction traffic impacts	A traffic management plan (TMP) will be prepared prior to construction and would be included in the CEMP. The TMP would: <ul style="list-style-type: none"> • identify the traffic management requirements during construction • describe the general approach and procedures to be adopted when producing specific traffic control plans • determine temporary speed restrictions to ensure safe driving environment around work zones • provide for access to local roads and properties, including the use of temporary turnaround bays where appropriate 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> • Include methods for implementing the traffic management plan and minimising road user delays • provide for appropriate warning and advisory signposting • consider other developments in the wider area that may also be under construction, to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic • develop plans for the access to ancillary facilities and site compounds including any speed restrictions for vehicles around the sites • ancillary facilities and site compounds would not be accessed by heavy vehicles using local roads 		
TT2	Construction traffic impacts	Consultation on construction activities will occur with emergency service authorities including NSW Rural Fire Service and Fire and Rescue NSW.	Transport for NSW	Detailed design
TT3	Construction traffic impacts	A detailed construction staging plan will be developed to maintain existing peak flow capacity.	Construction contractor	Pre-construction
TT4	Access to bus services	Access to appropriate bus stop locations will be maintained during construction in consultation with bus operators. Any changes will be appropriately communicated to bus users.	Construction contractor	Pre-construction
TT5	Access to bus services	Surrounding residents and sensitive receivers are to be notified of access provisions for ancillary facilities and site compounds, times of operation and the expected duration of the construction period.	Construction contractor	Pre-construction
HH1	Impacts to known heritage values	Potential impacts of construction vibration on the Mona Vale Cemetery and the gateposts will be investigated prior to the commencement of construction. Construction methods will be selected, and safeguards will be prescribed (including vibration monitoring) to ensure there are no impacts on these items.	Construction contractor	Construction
HH2	Impacts to known heritage values	The location and heritage significance of the Mona Vale Road Cemetery and gateposts and the potential presence of the well at Lot 26 DP 654262 will be discussed with staff during site inductions and tool box talks.	Construction contractor	Construction
HH3	Unexpected finds	The <i>Standard Management Procedure: Unexpected Archaeological Finds Procedure</i> (Transport Services, 2012) is to be followed in the event of uncovering a potential historic heritage item not considered by REF.	Construction contractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
NV1	Construction noise	<p>Construction noise would be managed by a detailed Construction Noise and Vibration Management Plan (CNVMP) prepared prior to commencement of work. The management plan would consider the following as a minimum:</p> <ul style="list-style-type: none"> • identify nearby residences and other sensitive land uses • develop noise management levels consistent with the ICNG • assess the potential impact from the proposed construction methods • assess the potential impact from any proposed construction ancillary facilities or site • compound specific to the construction activities, timeframes and durations that are proposed • where management levels are exceeded examine feasible and reasonable noise mitigation • develop reactive and proactive strategies for dealing with any noise complaints • identify a site contact person to follow up complaints noise monitoring. 	Construction contractor	Pre-construction
NV2	Construction noise	During the detailed design stage of the proposal, further investigations of all feasible and reasonable mitigation options would be undertaken for affected receivers in accordance with the <i>Road Noise Policy</i> (DECCW 2011) and Transport's <i>Environmental Noise Management Manual Practice Note 4</i> (Transport 2001).	Construction contractor	Pre-construction
NV3	Construction noise	Consider construction compound layout so that primary noise sources are at a maximum distance from sensitive receivers (primarily residential receivers), with solid structures (sheds and containers) placed between sensitive receivers and noise sources (and as close to the noise sources as is practical).	Construction contractor	Construction
NV4	Construction noise	Vehicle delivery times will be scheduled where feasible to the recommended construction hours to minimise noise impacts from heavy vehicle movements and deliveries.	Construction contractor	Construction
NV5	Construction noise	Any out of hours work would comply with G36 community notification requirements and the mitigation measures specified within Transport's <i>Noise Management Manual – Practice Note VII</i> .	Construction contractor	Construction
NV6	Construction noise	<p>The environmental induction program will include specific noise and vibration issues awareness training including, but not limited to, the following:</p> <ul style="list-style-type: none"> • avoiding use of radios during work outside normal hours, where possible 	Construction contractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> avoiding shouting and slamming doors where practical, operating machines at low speed or power and switching off when not being used rather than left idling for prolonged periods minimising reversing avoiding dropping materials from height and avoiding metal to metal contact on material. 		
NV7	Construction noise	Building condition surveys will be undertaken for buildings within identified in the CNVMP. A copy of the report will be sent to the landholder.	Construction contractor	Pre-construction
NV8	Construction noise	In the case that exceedances are detected for noise and vibration monitoring, the situation would be reviewed to identify means to minimise impacts to residents and the appropriate changes made and the CNVMP updated accordingly.	Construction contractor	Construction
NV9	Operational noise	A post-construction noise monitoring program (including simultaneous traffic counts) will be carried out in accordance with Transport's Environmental Noise Management Manual within 6 to 12 months of opening once traffic flows have stabilised to verify the noise assessment. This will include monitoring of maximum noise events (Lmax).	Construction contractor	Pre-construction
NV10	Operational noise	For all at-house treatment locations, a site inspection should be undertaken to assess the type and extent of at-house treatment. The inspection should consider the building construction and other aspects identified in the Transport Noise Management Guidelines Road Noise Mitigation Guideline 2022 .	Transport for NSW	Pre-construction
VA1	Landscape character and visual impacts	Detailed design of the determined project will incorporate the design vision, objectives and mitigation measures outlined in the Landscape Character, Visual Impact Assessment and Urban Design Report where feasible. This will include consideration of screen plantings, feature plantings and design refinements for each of assessed viewpoints.	Transport for NSW Design contractor	Detailed design
VA2	Landscape character and visual impacts	An urban design contractor from the Transport panel will be engaged for the detailed design phase to ensure adequate consideration of urban design principles and objectives, and to ensure appropriate mitigation of identified impacts.	Transport for NSW Design contractor	Detailed design
VA3	Landscape character and visual impacts	The footprint for construction work will be kept to a minimum to ensure existing stands of vegetation remain intact wherever possible and to screen adjoining sensitive receivers.	Construction contractor	Construction
VA4	Construction related visual impacts	The worksite will be maintained to minimise contractor construction related visual clutter.	Construction contractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
VA5	<i>Landscape character and visual impacts</i>	<i>In consultation with the Transport Landscape Advisor, an optimal planting palette, soil profile and appropriate container sizes will be chosen to maximise the long-term health of the plants.</i>	<i>Transport for NSW</i>	<i>Detailed design</i>
VA6	<i>Landscape character and visual impacts</i>	<i>For early screening of the road, maintenance access track, energy utility poles and other elements from residences, native and cultivar shrub species will be planted.</i>	<i>Design contractor</i>	<i>Construction</i>
AQ1	Dust and emissions	<p>An Air Quality Management Plan (AQMP) would be prepared as part of the CEMP. The plan would include but not be limited to:</p> <ul style="list-style-type: none"> • A map identifying locations of sensitive receivers • Identification of potential risks/impacts due to the work/activities as dust generation activities • Management measures to minimise risk including a progressive stabilisation plan • A process for monitoring dust onsite and weather conditions • A process for altering management measures as required. 	Construction contractor	Pre-construction
AQ2	Dust and emissions	<p>The management measures within the AQMP would include but not be limited to the following:</p> <ul style="list-style-type: none"> • Vehicles transporting waste or other materials that have a potential to produce odours or dust are to be covered during transportation • Dust will be suppressed on stockpiles and unsealed or exposed areas using methods such as water trucks, temporary stabilisation methods, soil binders or other appropriate methods practices • Disturbed areas will be minimised in extent and rehabilitated progressively • Speed limits will be imposed on unsealed surfaces • Stockpiles will be located as far away from residences and other sensitive received as possible • Work (including the spraying of paint and other materials) will not be carried out during strong winds or in weather conditions where high levels of dust or air borne particles are likely to occur • Plant, vehicles and equipment will be maintained in good condition and in accordance with manufacturers' specifications • Plant and machinery will be turned off when not in use 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> No burning of any timbers or other combustible materials will occur onsite Visual monitoring of air quality will be carried out to verify the effectiveness of controls and enable early intervention Work activities will be reprogrammed if the management measures are not adequately restricting dust generation. 		
SE1	Property acquisition	All property valuations and acquisitions will be carried out in accordance with the Transport Services Land Acquisition Information Guide (Transport Services, 2014) and the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> .	Transport for NSW	Detailed design
SE2	Property acquisition	A complaint handling procedure and register will be included in the CEMP.	Construction contractor	Pre-construction Construction
SE3	Construction related disruption	Affected people will be notified of all aspects of the project prior to commencement of construction. This will include notification of time and duration of the project provision of a contact name and number.	Transport for NSW	Detailed design
SE4	Construction related disruption	Affected people will be notified of all aspects of the project prior to commencement of construction. This will include notification of time and duration of the project provision of a contact name and number.	Construction contractor	Pre-construction
SE5	Construction related disruption	Potentially affected residents and businesses will be notified of the progress of the work and advised in advance (e.g., by letterbox drop, meetings with individuals, etc) of any anticipated changes in noise emissions prior to critical stages of the work, and to explain complaint procedures and response mechanisms.	Construction contractor	Construction
SE6	Construction related disruption	Access to residences and business will be maintained during construction. Where temporary changes to access arrangements are necessary, the contractor will advise owners and tenants and consult with them in advance with regards to alternative access arrangements.	Construction contractor	Construction
SE7	Relocation costs	Transport will cover the costs of relocating specific items on the Pittwater RSL Club site, in consultation with club management.	Transport for NSW	Construction
HR1	Construction hazards and risks	Emergency response plans will be incorporated into the CEMP. This will include a bushfire risk and response plan.	Construction contractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
HR2	Debris build up on road shoulder during operation	Transport maintenance contractors will be required to maintain the road including the road shoulders.	Transport for NSW	Operation
HR3	Bushfire hazard during operation	Planning for Bush Fire Protection (NSW Rural Fire Service, 2006 2019) will be considered in finalising the landscape plan for the proposal.	Transport for NSW	Detailed design
AH1	Damage to known Aboriginal sites	Fencing and signage will be used to establish exclusion areas around nearby Aboriginal sites.	Construction contractor	Pre-construction
AH2	Damage to known Aboriginal sites	During site inductions and toolbox talks, all site staff will be made aware of the location of known Aboriginal sites and associated responsibilities under the <i>National Parks and Wildlife Act 1974</i> .	Construction contractor	Construction
AH3	Damage to known Aboriginal sites	Potential impacts of construction vibration on nearby Aboriginal sites will be investigated prior to the commencement of construction. Construction methods would be selected, and safeguards would be prescribed. Monitoring would occur where necessary.	Construction contractor	Pre-construction
AH4	Unexpected impacts on Aboriginal heritage	The Standard Management Procedure: Unexpected Archaeological Finds Procedure (Roads and Maritime, 2012) will be followed in the event of uncovering a potential Aboriginal heritage item.	Transport for NSW Construction contractor	Construction
AH5	Impacts to known Aboriginal sites	Further archaeological investigation will be carried out to confirm the location of unregistered Aboriginal site DMR5. The site will be protected during construction.	Transport for NSW Construction contractor	Construction
GG1	Greenhouse gas emissions	The use of alternate fuels and power sources for construction plant and equipment will be investigated and implemented, where appropriate.	Construction contractor	Construction
GG2	Greenhouse gas emissions	The energy efficiency and related carbon emissions will be considered in the selection of vehicle and plant equipment.	Construction contractor	Construction
GG3	Greenhouse gas emissions	Materials will be delivered as full loads and local suppliers would be used where possible to reduce construction transport emissions.	Construction contractor	Construction
GG4	Greenhouse gas emissions	Equipment will be properly maintained to ensure they are operating efficiently.	Construction contractor	Construction
WR1	Construction waste management	The following resource management hierarchy principles will be followed: <ul style="list-style-type: none"> • Avoid unnecessary resource consumption as a priority 	Construction contractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> Avoidance will be followed by resource recovery (including reuse of materials, reprocessing and recycling and energy recovery). <p>Disposal will be undertaken as a last resort (in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i>).</p>		
WR2	Construction waste management	<p>A Resource and Waste Management Plan (RWMP) would be prepared, which will include the following (as a minimum):</p> <ul style="list-style-type: none"> The type, classification, and volume of all materials to be generated and used onsite including identification of recyclable and non-recyclable waste in accordance with the EPA's Waste Classification Guidelines, 2014 Quantity and classification of excavated material generated as a result of the determined project (refer to Roads and Maritime's Waste Management Plan Fact Sheets 1-6, 2012) interface strategies for cut and fill onsite to ensure reuse where possible Strategies to 'avoid', 'reduce', 'reuse' and 'recycle' materials Classification and disposal strategies for each type of material Destinations for each resource/waste type either for onsite reuse or recycling, offsite reuse or recycling, or disposal at a licensed waste facility Details of how material would be stored and treated onsite Identification of available recycling facilities on and offsite Identification of suitable methods and routes to transport waste Procedures and disposal arrangements for unsuitable excavated material or contaminated material Site clean-up for each construction stage. 	Construction contractor	Construction
WR3	Construction waste management	Housekeeping at construction sites will be addressed regularly. This will include collection and sorting of recycling, general waste and green waste. Waste will be disposed regularly at a licensed waste facility or recycled where available.	Detailed design contractor	Detailed design
WR4	Design waste management	<p>Prepare and implement a design resource plan. As a minimum, the plan is to include the following information:</p> <ul style="list-style-type: none"> Outline the quantities and type of material that will be produced by the project 	Detailed design contractor	Detailed design

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> Outline the quantities and type of material that can be used during the detailed design Steps taken during detailed design to minimise the generation of materials such as excavated material How the design maximises the onsite reuse of any excavated materials how the design maximises the opportunities for the use of recycled materials (ensuring that the materials are fit for purpose and meet engineering performance standards) detail the quantities and type that cannot be re-used onsite. 		
WR5	Construction waste management	Procurement will endeavour to use materials and products with a recycled content where that material or product is cost and performance effective.	Construction contractor	Construction
WR6	Construction waste management	Excavated material will be reused onsite for fill where feasible to reduce demand on resources.	Construction contractor	Construction
CU1	Cumulative impacts	The CEMP will be revised to consider potential cumulative impacts from surrounding development activities as they become known.	Construction contractor	Pre-construction and construction

7.3 Licensing and approvals

All relevant licenses, permits, notifications and approvals needed for the Mona Vale Road East Upgrade and when they need to be obtained are listed in Table 7-2. Additional or changed licenses and approval requirements identified in this addendum REF are indicated by underlined and/or struck out font.

Table 7-2: Summary of licensing and approvals required

Instrument	Requirement	Timing
Section 138 of the <i>Roads Act 1993</i>	An applicable road occupancy licence would be required. A road occupancy licence allows the proponent to use a specified road space at approved times, provided certain conditions are met. The licence applies to the occupation of the “road space” only and does not imply permission or approval for the actual (physical) works being undertaken.	An applicable road occupancy licence would need to be in place prior to the commencement of construction.
Section 91B and 91F of the <i>Water Management Act 2000</i>	If groundwater extraction is required, an aquifer interference approval would be required for work under Section 91F of the <i>Water Management Act 2000</i> .	Prior to construction commencement or during construction as required.
Section 48 of the <i>Protection of the Environment Operations Act 1997</i>	The proposal would be a scheduled activity under the <i>Protection of the Environment Operations Act 1997</i> . An environment protection licence (EPL) would be required under Section 48 of this act to authorise the carrying out of scheduled development.	An EPL would be required prior to undertaking the scheduled work. Each period of 12 months (commencing from the issue of a licence) is a licence fee period for a licence. The administrative fee for any licence fee period of a licence must be paid not later than 60 days after the beginning of that licence fee period. EPL has been approved for the project. The premise boundary will be amended to include the modifications if approved.

8. Conclusion

8.1 Justification

The proposed modification responds to opportunities to improve urban design outcomes that have arisen since the determination of the project REF and subsequent addendums. In proceeding with the proposed modification, the project would have the result of improved visual amenity and a reduction of graffiti risk, costs and environmental impacts associated with off-site disposal of excavated materials. While it is acknowledged that the proposed modification could result in environmental impacts, the proposed safeguards are considered adequate as management measures to address and mitigate any potential adverse impacts.

8.2 Objects of the EP&A Act

Object	Comment
1.3(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.	The proposed modification would not have an impact on the approved project, which seeks to minimise environmental impacts.
1.3(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.	The proposed modification has been considered in relation to economic, environmental and social considerations and is considered to be of overall benefit to the approved project by reducing artificial elements thereby encouraging an ESD conscious approach to project development.
1.3(c) To promote the orderly and economic use and development of land.	The proposed modification would not have an impact on the approved project, which presents a strategic opportunity to strengthen public and private transport links between Mona Vale and strategic centres such as Macquarie Park.
1.3(d) To promote the delivery and maintenance of affordable housing.	Not relevant to the project.
1.3(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.	The proposed modification would involve removal of some existing vegetation to support the construction of the mound, however the mound would be vegetated with native shrubs and grasses. No significant biodiversity would be impacted by the proposed modification.
1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	No impacts to built or cultural heritage are anticipated as part of the proposal.
1.3(g) To promote good design and amenity of the built environment.	The proposed modification seeks to improve the design and amenity of the approved project through replacement of an approved artificial vehicle control barrier with a vegetated mound.
1.3(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Not relevant to the project.

Object	Comment
1.3(i) To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State.	The proposed modification has been developed with the involvement of various stakeholders including the Northern Beaches Council.
1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.	The proposed modification is considered to be a minor adjustment to the approved project, which was placed on public exhibition for comment.

8.3 Ecologically sustainable development

Ecologically sustainable development (ESD) is development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The principles of ESD have been an integral consideration throughout the development of the proposal.

ESD requires the effective integration of economic and environmental considerations in decision-making processes. The four main principles supporting the achievement of ESD are discussed below.

8.3.1 The precautionary principle

The precautionary principle deals with certainty in decision-making. It provides that where there is a threat of serious or irreversible environmental damage, the absence of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.

The precautionary principle has guided the assessment of environmental impacts for this assessment and the development of mitigation measures.

8.3.2 Intergenerational equity

Social equity is concerned with the distribution of economic, social and environmental costs and benefits. Intergenerational equity introduces a temporal element with a focus on minimising the distribution of costs to future generations.

The impacts of the proposal have been identified primarily short term and manageable. In supporting the delivery of the approved project, the benefits of improved amenity, safety and connectivity would be realised over the short and longer term.

8.3.3 Conservation of biological diversity and ecological integrity

The twin principles of biodiversity conservation and ecological integrity have been a consideration during the design and assessment process with a view to identifying, avoiding, minimising and mitigating impacts.

The proposed modification is not expected to have significant biodiversity impacts.

8.3.4 Improved valuation, pricing and incentive mechanisms

The proposed modification is proposed in part to reduce the cost of the approved project through removing the need to transport and dispose of excess excavated material generated during the undertaking of earthworks to construct the road upgrade.

Furthermore, the principle of internalising environmental costs into decision making requires consideration of all environmental resources which may be affected by a project, including air, water, land and living things. While it is often difficult to place a reliable monetary value on the residual, environmental and social effects of the proposed modification, the value placed on environmental resources within and around the corridor is evident in the extent

of environmental investigations, planning and design of impact mitigation measures to prevent adverse environmental impacts.

8.4 Conclusion

This addendum REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration where relevant, of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the commonwealth EPBC Act.

A number of potential environmental impacts from the proposed modification have been avoided or reduced during the design development and options assessment. The proposed modification as described in the addendum REF best meets the project objectives but would still result in some impacts on existing vegetation. Safeguards and management measures as detailed in this addendum REF would ameliorate or minimise these expected impacts. Noting this, the proposed modification would deliver improved urban design outcomes for the project, reduce costs and would be of overall environmental benefit. On balance the proposed modification is considered justified, and the following conclusions are made.

8.4.1 Significance of impact under NSW legislation

The proposed modification would not result in a change to the findings of the project REF, submissions report or subsequent addendum REFs, and would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

8.4.2 Significance of impact under Australian legislation

The proposed modification would not likely cause a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the EPBC Act. A referral to the Australian Government Department of Climate Change, Energy, the Environment and Water is not required.

9. Certification

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



Stuart Hill
Principal - Environment
bd infrastructure

3 March 2023

I have examined this addendum review of environmental factors and accept it on behalf of Transport for NSW.

Marjorie Yan
Authorised Delegate – Mona Vale Road East Upgrade
Transport for NSW

3 March 2023

10. EP&A Regulation publication requirement

Respondent	Yes/No
Does this REF need to be published under section 171(4) of the EP&A Regulation?	Yes

11. Terms and acronyms used in this addendum REF

Term /acronym	Description
BC Act	<i>Biodiversity Conservation Act 2016 (NSW).</i>
CEMP	Construction / Contractor’s environmental management plan
EIA	Environmental impact assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW).</i> Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).</i> Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
FM Act	<i>Fisheries Management Act 1994 (NSW)</i>
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
NPW Act	National Parks and Wildlife Act 1974 (NSW)
Roads and Maritime	NSW Roads and Maritime was dissolved by the Transport Administration Amendment Bill in August 2019, all function are now managed by Transport for NSW
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SEPP (Biodiversity and Conservation)	State Environmental Planning Policy (Biodiversity and Conservation) 2021
SEPP (Planning Systems)	State Environmental Planning Policy (Planning Systems) 2021
SEPP (Precincts – Central River City)	State Environmental Planning Policy (Precincts – Central River City) 2021
SEPP (Precincts – Eastern Harbour City)	State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021
SEPP (Precincts – Regional)	State Environmental Planning Policy (Precincts – Regional) 2021
SEPP (Precincts – Western Parkland City)	State Environmental Planning Policy (Precincts – Western Parkland City) 2021

Term /acronym	Description
SEPP (Resilience and Hazards)	State Environmental Planning Policy (Resilience and Hazards) 2021
SEPP (Transport and Infrastructure)	State Environmental Planning Policy (Transport and Infrastructure) 2021

12. References

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- Greater Sydney Commission 2018a, A Metropolis of Three Cities – Greater Sydney Region Plan.
- Greater Sydney Commission 2018b, North District Plan – Our Greater Sydney 2056.
- NSW Department of Planning and Environment 2022, Guidelines for Division 5.1 assessments.
- NSW Department of Planning Industry and Environment 2021, NSW BioNet Vegetation Classification Database.
- NSW Primary Industries 2013, Standard precautions and mitigation measures of the Policy and guidelines for fish habitat conservation and management Update.
- Roads and Maritime Services 2012, Procedure for Aboriginal Cultural Heritage Consultation and Investigation, Sydney.
- Roads and Maritime Services 2014a, Environmental Procedure – Management of Wastes on Roads and Maritime Services Land.
- Roads and Maritime Services 2014b, Land Acquisition Information Guide.
- Roads and Maritime Services 2016a, Guideline for Biodiversity Offsets
- Roads and Maritime Services 2016b, Construction Noise and Vibration Guideline
- Roads and Maritime Services 2016c, Shotcrete Design Guideline.
- Roads and Maritime Services 2018, Landscape Design Guideline.
- Roads and Traffic Authority 1999, Code of Practice for Water Management.
- Roads and Traffic Authority 2008, Community Involvement and Communications Resource Manual.
- Roads and Traffic Authority 2011a, Biodiversity Guidelines: Protecting and managing biodiversity in RTA projects.
- Roads and Traffic Authority 2011b, Wildlife Connectivity Guidelines for Road Projects.
- Transport for NSW 2019, Bridge Aesthetics.
- Transport for NSW 2020, Beyond the Pavement.
- Transport for NSW 2021, Noise Wall Design Guideline.
- Transport for NSW 2022a, Unexpected Heritage Items Procedure.
- Water NSW 2020, Risk Management Guidelines.

Appendix A

Consideration of section 171(2) factors and matters of National Environmental Significance and Commonwealth land

Section 171(2) checklist

In addition to the requirements of the Guidelines for Division 5.1 Assessments (DPE, 2022) as detailed in the addendum REF, the following factors, listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021, have also been considered to assess the likely impacts of the proposed modification on the natural and built environment.

Factor	Impact
<p>Any environmental impact on a community?</p> <p>Impacts anticipated by the proposed modification are consistent with the approved project during construction and would have a positive impact on the overall project once operational due to improved urban design, amenity, and biodiversity outcomes.</p>	Long-term positive.
<p>Any transformation of a locality?</p> <p>The proposed modification would not have any additional impacts on a locality to the approved project, as assessed in Section 6.2.</p>	None.
<p>Any environmental impact on the ecosystems of the locality?</p> <p>As discussed in Section 6, the proposed modification would result in an approximate additional 2,520 m² of land being cleared. However, this vegetation loss would be recovered in part as part of planting following construction of the mound.</p>	Short-term negative Long-term neutral.
<p>Any reduction of the aesthetic, recreational, scientific, or other environmental quality or value of a locality?</p> <p>The proposed modification would improve the aesthetic quality of the approved project by improving urban design outcomes for the project.</p>	Short-term positive Long-term positive.
<p>Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations?</p> <p>Section 6.2 considers visual impacts and Section 6.4 considers heritage impacts. The proposed modification would not have any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations</p>	None.
<p>Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?</p> <p>Biodiversity impacts are considered in Section 6.1. The vegetation to be cleared is not considered to be significant habitat for protected fauna.</p>	Short-term negative Long-term neutral.
<p>Any endangering of any species of animal, plant, or other form of life, whether living on land, in water or in the air?</p> <p>As discussed in Section 6.2, the proposed modification would not negatively impact any form of life to the extent in which it would become endangered.</p>	None.
<p>Any long-term effects on the environment?</p> <p>The proposed modification would reduce the environmental impact of the project by eliminating the requirement to transport and dispose of surplus excavated materials and would replace the artificial concrete barrier with a vegetated mound.</p>	Short-term positive Long-term positive.

Factor	Impact
<p>Any degradation of the quality of the environment?</p> <p>The proposed modification would improve the quality of the environment for the approved project.</p>	Positive.
<p>Any risk to the safety of the environment?</p> <p>The proposed modification would not increase the risk level of the approved project.</p>	None.
<p>Any reduction in the range of beneficial uses of the environment?</p> <p>The proposed modification would not further reduce the range of beneficial uses of the environment when compared with the approved project.</p>	None.
<p>Any pollution of the environment?</p> <p>The proposed modification is not expected to introduce any pollution into the environment.</p>	None.
<p>Any environmental problems associated with the disposal of waste?</p> <p>The proposed modification would improve waste disposal outcomes by eliminating the need to transport waste off-site. Only appropriate waste would be used on-site. Any materials identified as having a contamination risk would be adequately managed and disposed of.</p>	Short-term positive.
<p>Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?</p>	None.
<p>Any cumulative environmental effect with other existing or likely future activities?</p>	None.
<p>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</p>	None.
<p>Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1.</p> <p>The relevant strategic plans are:</p> <ul style="list-style-type: none"> • A Metropolis of Three Cities – the Greater Sydney Region Plan • North District Plan • Towards 2040 – Local Strategic Planning Statement (Council) <p>The Mona Vale Road East Upgrade is noted as a collaboration project and is identified as a strategic opportunity to better connect Mona Vale and the former Pittwater Local Government Area to centres such as Macquarie Park by private and public transport. The proposed modification does not conflict with the vision for the strategically important Mona Vale Road East Upgrade project.</p>	None – consistent.
<p>Other relevant environmental factors</p>	In considering the potential impacts of this proposal all relevant environmental factors have been considered, refer to Section 6 of this assessment.

Matters of National Environmental Significance and Commonwealth land

Under the environmental assessment provisions of the EPBC Act, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the proposed modification should be referred to the Australian Government Department of Climate Change, Energy, the Environment and Water.

Under the EPBC Act strategic assessment approval a referral is not required for proposed road actions that may affect nationally listed threatened species, populations, endangered ecological communities and migratory species. Impacts on these matters are assessed in detail as part of this addendum REF in accordance with Australian Government significant impact criteria and taking into account relevant guidelines and policies.

Factor	Impact
<p>Any impact on a World Heritage property?</p> <p>The proposed modification would not have any direct impact on a World Heritage property.</p>	Nil.
<p>Any impact on a National Heritage place?</p> <p>The proposed modification would not have any impact on a National Heritage Place.</p>	Nil.
<p>Any impact on a wetland of international importance?</p> <p>The proposed modification would not have any impact on a wetland of international importance.</p>	Nil.
<p>Any impact on a listed threatened species or communities?</p> <p>Threatened species were not recorded in the proximity of the modified proposal area, as per the Biodiversity Assessment Report at Appendix C of the project REF..</p>	Nil.
<p>Any impacts on listed migratory species?</p> <p>Some Commonwealth listed migratory species have the potential to occur in the local area. The nature, scale and location of the proposal is such that impacts on these species, or their habitats are not expected. Indirect impacts are also not expected.</p>	Not significant.
<p>Any impact on a Commonwealth marine area?</p> <p>The proposed modification would not have any impact on a Commonwealth marine area.</p>	Nil.
<p>Does the proposed modification involve a nuclear action (including uranium mining)?</p> <p>The proposed modification does not involve a nuclear action.</p>	Nil.
<p>Additionally, any impact (direct or indirect) on Commonwealth land?</p> <p>The proposed modification would not impact Commonwealth land.</p>	Nil.

Appendix B

Statutory consultation checklists

SEPP (Transport and Infrastructure) 2021

Certain development types

Development type	Description	Yes / No	If 'yes' consult with	SEPP (Transport and Infrastructure) section
Car park	Does the project include a car park intended for the use by commuters using regular bus services?	No	Local council and the occupiers of adjoining land (N/A)	Section 2.110
Bus depots	Does the project propose a bus depot?	No	Local council and the occupiers of adjoining land (N/A)	Section 2.110
Permanent road maintenance depot and associated infrastructure	Does the project propose a permanent road maintenance depot or associated infrastructure such as garages, sheds, tool houses, storage yards, training facilities and workers' amenities?	No	Local council and the occupiers of adjoining land (N/A)	Section 2.110

Development within the Coastal Zone

Issue	Description	Yes / No / N/A	If 'yes' consult with	SEPP (Transport and Infrastructure) section
Development with impacts on certain land within the coastal zone	Is the proposal within a coastal vulnerability area and is inconsistent with a certified coastal management program applying to that land?	N/A	N/A	Section 2.14

Council related infrastructure or services

Development type	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	SEPP (Transport and Infrastructure) section
Stormwater	Are the works likely to have a substantial impact on the stormwater management services which are provided by council?	No	Northern Beaches Council (N/A)	Section 2.10
Traffic	Are the works likely to generate traffic to an extent that will strain the capacity of the existing road system in a local government area?	No	Northern Beaches Council (N/A)	Section 2.10
Sewerage system	Will the works involve connection to a council owned sewerage system? If so, will this connection have a substantial impact on the capacity of any part of the system?	No	Northern Beaches Council (N/A)	Section 2.10
Water usage	Will the works involve connection to a council owned water supply system? If so, will this require the use of a substantial volume of water?	No	Northern Beaches Council (N/A)	Section 2.10
Temporary structures	Will the works involve the installation of a temporary structure on, or the enclosing of, a public place which is under local council management or control? If so, will this cause more than a minor or inconsequential disruption to pedestrian or vehicular flow?	No	Northern Beaches Council (N/A)	Section 2.10
Road and footpath excavation	Will the works involve more than minor or inconsequential excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No	Northern Beaches Council (N/A)	Section 2.10

Local heritage items

Development type	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	SEPP (Transport and Infrastructure) section
Local heritage	Is there is a local heritage item (that is not also a State heritage item) or a heritage conservation area in the study area for the works? If yes, does a heritage assessment indicate that the potential impacts to the heritage significance of the item/area are more than minor or inconsequential?	No	Northern Beaches Council (N/A)	Section 2.11

Flood liable land

Development type	Potential impact	Yes / No	If 'yes' consult with	SEPP (Transport and Infrastructure) section
Flood liable land	Are the works located on flood liable land? If so, will the works change flood patterns to more than a minor extent?	No	Northern Beaches Council (N/A)	Section 2.12
Flood liable land	Are the works located on flood liable land? (to any extent). If so, do the works comprise more than minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance	No	State Emergency Services (N/A)	Section 2.13

Public authorities other than councils

Development type	Potential impact	Yes / No	If 'yes' consult with	SEPP (Transport and Infrastructure) section
National parks and reserves	Are the works adjacent to a national park or nature reserve, or other area reserved under the <i>National Parks and Wildlife Act 1974</i> , or on land acquired under that Act?	No	DPE (N/A)	Section 2.15
National parks and reserves	Are the works on land in Zone C1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	DPE (N/A)	Section 2.15
Aquatic reserves and marine parks	Are the works adjacent to an aquatic reserve or a marine park declared under the <i>Marine Estate Management Act 2014</i> ?	No	Department of Industry (N/A)	Section 2.15
Sydney Harbour foreshore	Are the works in the Sydney Harbour Foreshore Area as defined by the <i>Sydney Harbour Foreshore Authority Act 1998</i> ?	No	Sydney Harbour Foreshore Authority (N/A)	Section 2.15
Bush fire prone land	Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional centre or group home in bush fire prone land?	No	Rural Fire Service (N/A)	Section 2.15
Artificial light	Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	No	Director of the Siding Spring Observatory (N/A)	Section 2.15

Development type	Potential impact	Yes / No	If 'yes' consult with	SEPP (Transport and Infrastructure) section
Defence communications buffer land	Are the works on buffer land around the defence communications facility near Morundah? (Note: refer to Defence Communications Facility Buffer Map referred to in section 5.15 of Lockhart LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence (N/A)	Section 2.15
Mine subsidence land	Are the works on land in a mine subsidence district within the meaning of the <i>Mine Subsidence Compensation Act 1961</i> ?	No	Mine Subsidence Board (N/A)	Section 2.15

SEPP (Precincts – Central River City) 2021 and SEPP (Precincts – Western Parkland City) 2021

Development type	Potential impact	Yes / No	If 'yes' consult with	SEPP (Transport and Infrastructure) section
Clearing native vegetation	Do the works involve clearing native vegetation (as defined in the Local Land Services Act 2013) on land that is not subject land (as defined in cl 17 of schedule 7 of the <i>Threatened Species Conservation Act 1995</i>)?	No	Department of Planning and Environment	Section 3.24

Appendix C

Notification to neighbouring residents

TRANSPORT



Name
Company
Address
Suburb State Postcode

Re: Insert Subject Line

00 Month 20YY

Dear **Name,**

In early 2020, Transport informed you that we would be installing a 1.5 metre high 340-metre-long concrete traffic barrier on top of the new road embankment on Mona Vale Road.

Transport has been working to improve the concrete barrier proposal to achieve a better project outcome by replacing the concrete barrier with an equivalent landscape mound of the same height and length.

Following collaboration and approval from Northern Beaches Council and the availability of excess material on the site, the landscape mound will now replace the concrete barrier. This will better suit the surrounding natural environment and will eliminate graffiti attacks on a concrete traffic barrier.

An Addendum Review of Environmental Factors (REF) is currently being prepared to support the new proposed landscaped mound and we will notify you when the Addendum is publicly available on our project website. The Addendum REF covers areas of urban design, flood modelling, biodiversity, and other elements that may be impacted by the proposal.

If you have any questions related to this matter, please contact our project team via email at **monavaleroad@transport.nsw.gov.au**.

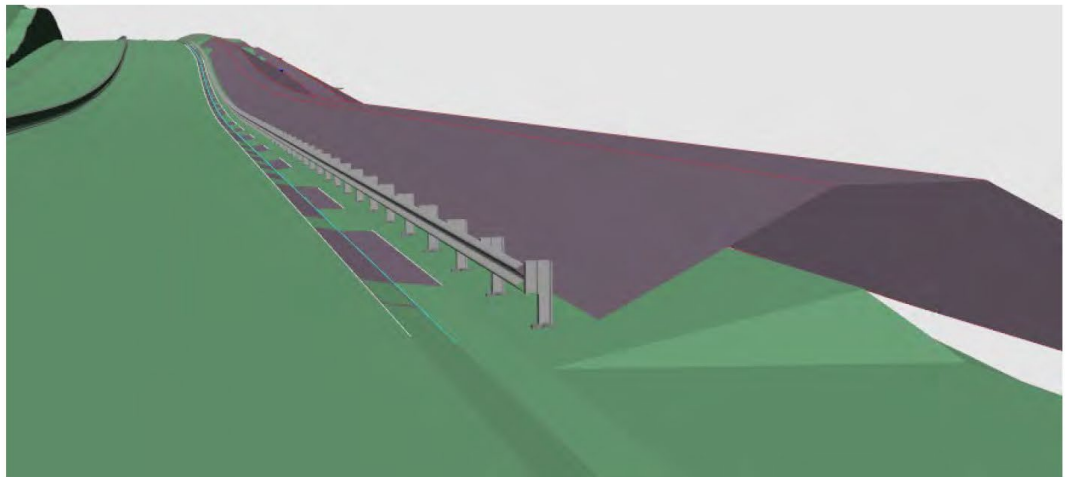
Sincerely,

Mona Vale Road East Project Team

[Type here]



Extend of 1.5m landscape Mound

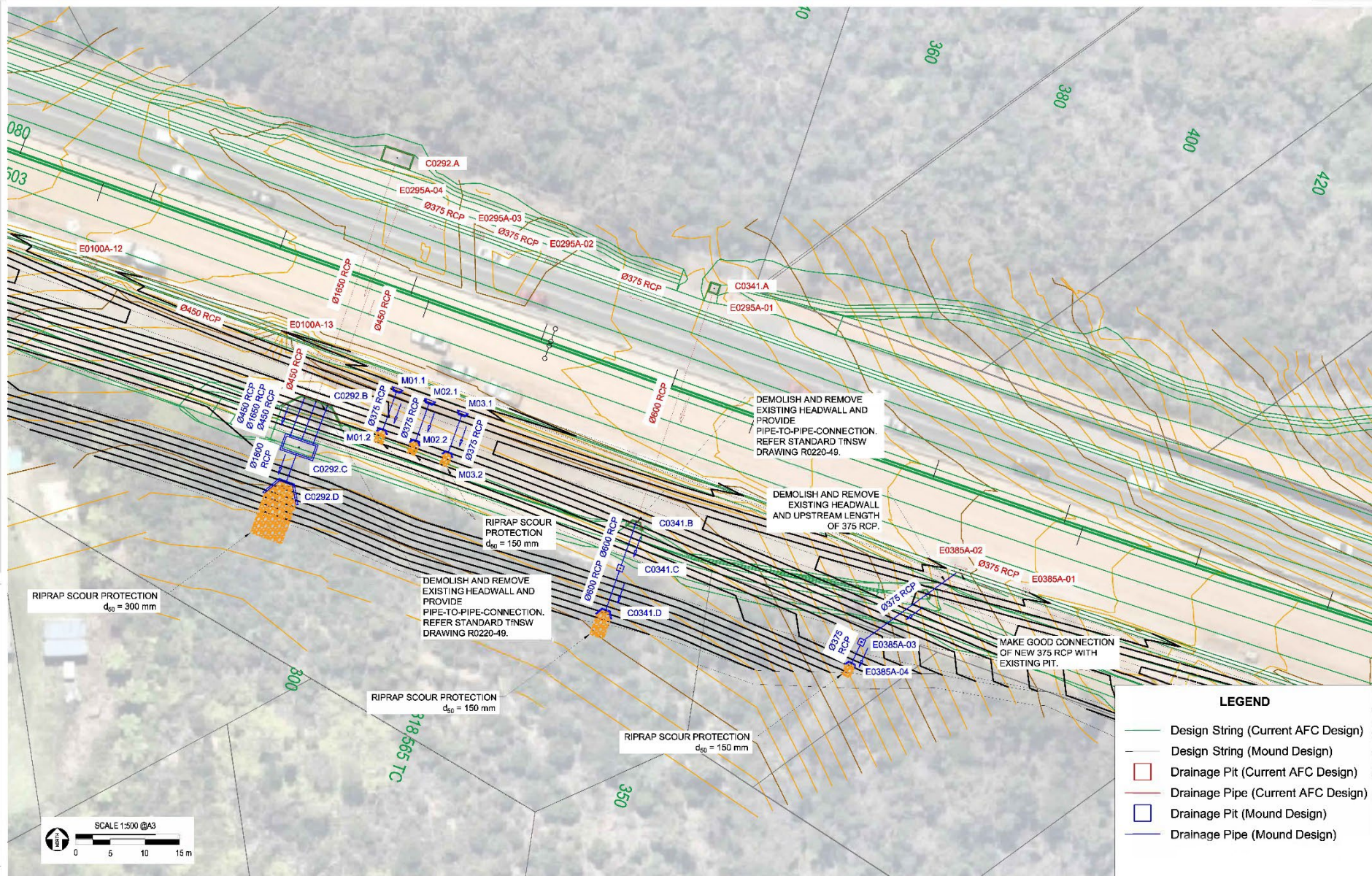


OFFICIAL

Address Line 1, Suburb NSW XXXX
GPO Address Line 1, Suburb NSW XXXX
02) 0000 0000
URL goes here

Appendix D

Design





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