



Prospect Highway Upgrade

Addendum review of environmental factors

Transport for New South Wales

June 2021



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Addendum review of environmental factors

Transport for New South Wales | June 2021

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Approval and authorisation

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Executive summary

The proposed modification

Transport for New South Wales (Transport for NSW) propose to modify the Prospect Highway upgrade (PHU) project to include additional work resulting from refinements to the approved design (proposed modification).

Key features of the proposed modification would include:

- Design refinement of noise wall SB01 which has changed in length and location along Prospect Highway
- Establishment of three electrical utility maintenance tracks on Prospect Highway
- Electrical ducting at Hampton Crescent and Stoddart Road
- Communication aerial cabling, trenching works and installation of communication pit on Ozark Street
- Minor property adjustment works at various locations on Prospect Highway and Reservoir Road
- Communication trench and pit adjustments on Reservoir Road
- Utility works along Harrod Street
- Line marking, milling and potentially resheeting on Ponds Road and Keyworth Drive
- Proposal boundary updated with most recent cadastre survey and other minor boundary adjustments.

Background

A Review of environmental factors (REF) was prepared for the Prospect Highway upgrade, referred to in this addendum REF as the project REF. The project REF was publicly displayed from June 2014 at two locations and was available on the then Roads and Maritime project website. Submissions Report was prepared to respond to issues raised. The project REF was determined September 2014.

In 2016 an addendum to the project REF, referred to in this addendum 1 REF as addendum 1, which was prepared to address changes to the approved scope of work for the Prospect Highway upgrade. Addendum 1 was determined 12 July 2016.

In 2019 an addendum to the project REF, referred to in this addendum REF as addendum 2 REF, which was prepared to address changes to the approved scope of work for the Prospect Highway upgrade. Addendum 2 was determined 11 October 2019.

Subsequent to the work considered and assessed in the project REF, addendum 1 REF and addendum 2 REF, Transport for NSW have further refined the project. These refinements/modifications involve the extension of the project REF boundary and additional works not covered under the planning approvals outlined in the project REF, addendum 1 REF or addendum 2 REF.

Need for the proposed modification

Chapter 2 of the project REF outlines the strategic need for the project, the project objectives and the options that were considered. The strategic need for the proposed modifications described and assessed in this addendum REF are consistent with the project REF, addendum 1 REF and addendum 2 REF.

The proposed modification is needed to support the main work of the PHU project. The proposed modification is needed to further refine the scope of work and construction area to support road safety and traffic improvements.

Proposal objectives

Section 2.3 of the project REF identifies the proposal objectives and development criteria that apply to the proposed modification. No additional criteria or objectives have been identified for the proposed modification.

Options considered

Transport for NSW investigated the 'do nothing' option and one other option for the proposed modification:

- 'Do nothing' option – This option involves carrying the project as described in the project REF and addendum 1 REF and addendum 2 REF, without any additional scope of work.
- Option 1 – This option involves: minor adjustments to the proposal boundary, removal of additional vegetation, noise wall design refinement, establishment of electrical utility access tracks, electrical utility ducting works, communication aerial cabling and trenching and installation of pit, property fence, and communication trench and pit adjustments, line marking milling and potentially resheeting as well as minor property works at various locations.

The 'Do nothing' option would involve no additional work outside the scope of the project REF, and addendum 1 REF and addendum 2 REF. The do nothing option does not address the identified need and would therefore only be preferred in circumstances where the costs and environmental impact of proceeding were assessed as outweighing identified benefits. That was not the case and therefore the do nothing option was not pursued further.

Option 1 would meet the specific needs and objectives of proposed modification. Option 1 supports the modifications as described above.

Statutory and planning framework

The proposed modification can be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Transport for NSW also considers clause 228 of the Environmental Planning and Assessment Regulation 2000 and matters of national environmental significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) applies to this proposal. Clause 94 of the ISEPP 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.

The proposed modification 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 Government Department of Agriculture, Water and the Environment under the *Environment Protection and Biodiversity Conservation Act 1979* (EPBC Act) is therefore not required.

Community and stakeholder consultation

The consultation strategy for the project remains as outlined in section 5.1 of the project REF. No changes to the consultation strategy were required for this addendum.

Ongoing consultation for the proposal would be carried out in accordance with the CCIP developed for the approved project noted in section 5.1 of the project REF. Consultation will include:

- Providing current proposal information through the project website and a Community Update newsletter
- Ongoing consultation with relevant stakeholders, including Blacktown City Council
- Completion of property access adjustment agreements and notification of the intent to install noise walls at locations near residential properties
- Providing the relevant stakeholders with contact details, a helpline for further information and to raise concerns, and a project information telephone number for the construction phase.

In accordance with ISEPP, Transport for NSW consulted with the National Parks and Wildlife Service (NPWS). NPWS responded by email on 31 May 2021 and advised they approved of the proposed changes to the existing designs for Prospect Highway upgrade.

Environmental impacts

Where there are additional issues this addendum REF assesses them, where there are no additional issues or issues greater than negligible beyond those considered by the project REF, addendum 1 REF and addendum 2 REF these are not assessed.

Assessment of the potential key environmental impacts associated with the proposed modification identified the following:

Traffic and transport

- Access points including existing driveways along Prospect Highway would generally be maintained during the construction period. Temporary disruptions to local access may occur during construction. Prior to any unavoidable disruption to access, consultation would be undertaken with the affected property and/or business owners.
- There would be no impact to access points along Prospect Highway during operation.

Noise and vibration

- The proposed modification would result in minor additional short term noise impact from plant and machinery such as those required for trenching works.
- The design refinement for noise wall SB01 is predicted to result in an increase in operational noise impacts to sensitive receivers, and three additional residences potentially qualifying for at-property treatment.
- Additional safeguards and management measures have been recommended for construction noise and vibration associated with additional electrical and communication utility works.

Biodiversity

- The proposed modification for electrical utility maintenance access tracks would occur mostly in the areas previously assessed in the project REF, addendum 1 REF and addendum 2 REF. This addendum provides assessment of any likely additional impacts as a result of the proposed modification.
- No potential direct impacts were identified as additional to those areas or biodiversity values assessed by the project REF and addendum 1 REF. The habitat values assessed at the location of the proposed maintenance tracks were poor with no locally native flora species and no particular habitat for locally native fauna species present.
- The proposed modification would not remove any additional CPW, threatened species or threatened species habitat.
- No additional safeguards and management measures have been recommended.

Landscape, visual amenity and urban design

- The impact of the construction work including utility ducting, trenching works and pits on the landscape and visual aspect of the project area would be minor and temporary in nature.
- Landscape and visual impacts of design refinements of a property fence would be negligible.
- The Endeavour Energy maintenance tracks would involve minor earthworks to ground level and construction of hardstand. The tracks would be confined to the ground surface and therefore would have negligible to minor visual impacts.
- Landscape and visual impacts would be reduced by design refinements of noise wall SB01 (shortened in length).
- No additional safeguards and management measures have been recommended.

Socio-economic

- Access to businesses on Stoddart Road including Homemaker Prospect and other commercial and industrial properties would be impacted as a result of the proposed electricity utility ducting works. Impacts to access have potential to delay customers entering and exiting these businesses. Any impact to trade of these businesses would be expected to be short term and minor in nature.

- Access to residences on Harrod Street, Keyworth Drive, Hampton Crescent, Ozark Street and Prospect Highway would be impacted as a result of the proposed electricity and communication utility works. Any impact residence access would be expected to be short term and minor in nature.
- These impacts would be during the construction phase only, with no impacts anticipated resulting from the operational phase of the proposal.
- No additional safeguards and management measures have been recommended.

Justification and 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.

While there would be some additional environmental impact as a consequence of the proposed modification, they would be avoided or minimised wherever possible through site specific safeguards. The beneficial effects are considered to outweigh the adverse impacts and risks associated with the proposed modification. On balance the proposed modification is considered justified.

Significance of impact under NSW legislation

The proposed modification would not result in a change to the findings of the project REF, the Submissions report, and the subsequent addendum 1 REF and addendum 2 REF, 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.

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 Agriculture, Water and the Environment is not required.

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1 Introduction

1.1 Proposed modification overview

Transport for NSW propose to modify the Prospect Highway upgrade (PHU) project to include additional work as described below resulting from refinements to the approved design (proposed modification).

A Review of environmental factors (REF) was prepared for the PHU, referred to in this addendum REF as the project REF. The project REF was publicly displayed from June 2014 at two locations and was available on the then Roads and Maritime project website. A Submissions Report was prepared to respond to issues. The project REF was determined September 2014.

In 2016 an addendum to the project REF, referred to in this addendum REF as addendum 1 REF, was prepared to address changes to the approved scope of work for the Prospect Highway upgrade. Addendum 1 was determined 12 July 2016.

In 2019 a further addendum to the project REF and addendum 1, referred to in this addendum REF as addendum 2 REF, was prepared to address changes to approved scope of works and project boundary. Addendum 2 REF was determined 11 October 2019.

Subsequent to the work described in the project REF, addendum 1 REF and addendum 2 REF, Transport for NSW have further refined the project. The refinements/modifications involve the extension of the approved project boundary and additional works not covered under the planning approvals outlined in the project REF, addendum 1 REF or addendum 2.

A comparison of the project REF, addendum 1 REF and addendum 2 REF boundary and the extended proposal area presented in this addendum REF is shown at Figure 1-1.

Key features of the proposed modification would include:

- Design refinement of noise wall SB01 which has changed in length and location along Prospect Highway
- Establishment of three electrical utility maintenance tracks on Prospect Highway
- Electrical ducting at Hampton Crescent and Stoddart Road
- Communication aerial cabling, trenching works and installation of communication pit on Ozark Street
- Minor property adjustment works at various locations on Prospect Highway and Reservoir Road
- Communication trench and pit adjustments on Reservoir Road
- Utility works along Harrod Street
- Line marking, milling and potentially resheeting on Ponds Road and Keyworth Drive
- Proposal boundary updated with most recent cadastre survey and other minor boundary adjustments.

It is noted that Prospect Highway name changes to Blacktown Road in the northern portion of the proposal area. For the purposes of this addendum 3 REF, the road corridor shall be referred to as Prospect Highway.

The proposed modifications are shown in in the below Figure 1-1 to Figure 1-9. Chapter 3 describes the proposed modification in more detail.



Figure 1-1: Location of the proposed modification

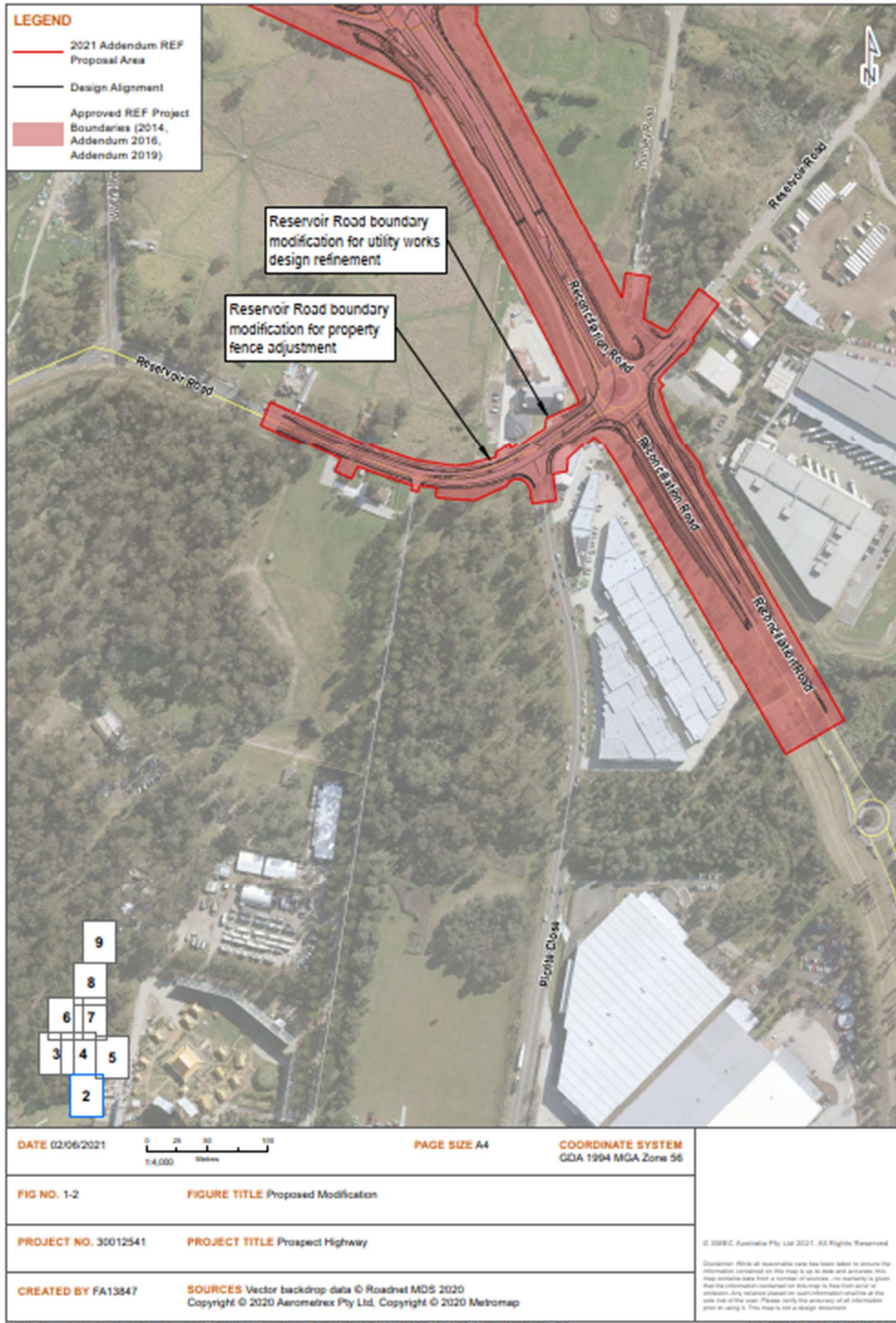


Figure 1-2 Comparison map – southern extent of the proposal area



Figure 1-3 Comparison map – western extent along the M4 Motorway and Great Western Highway

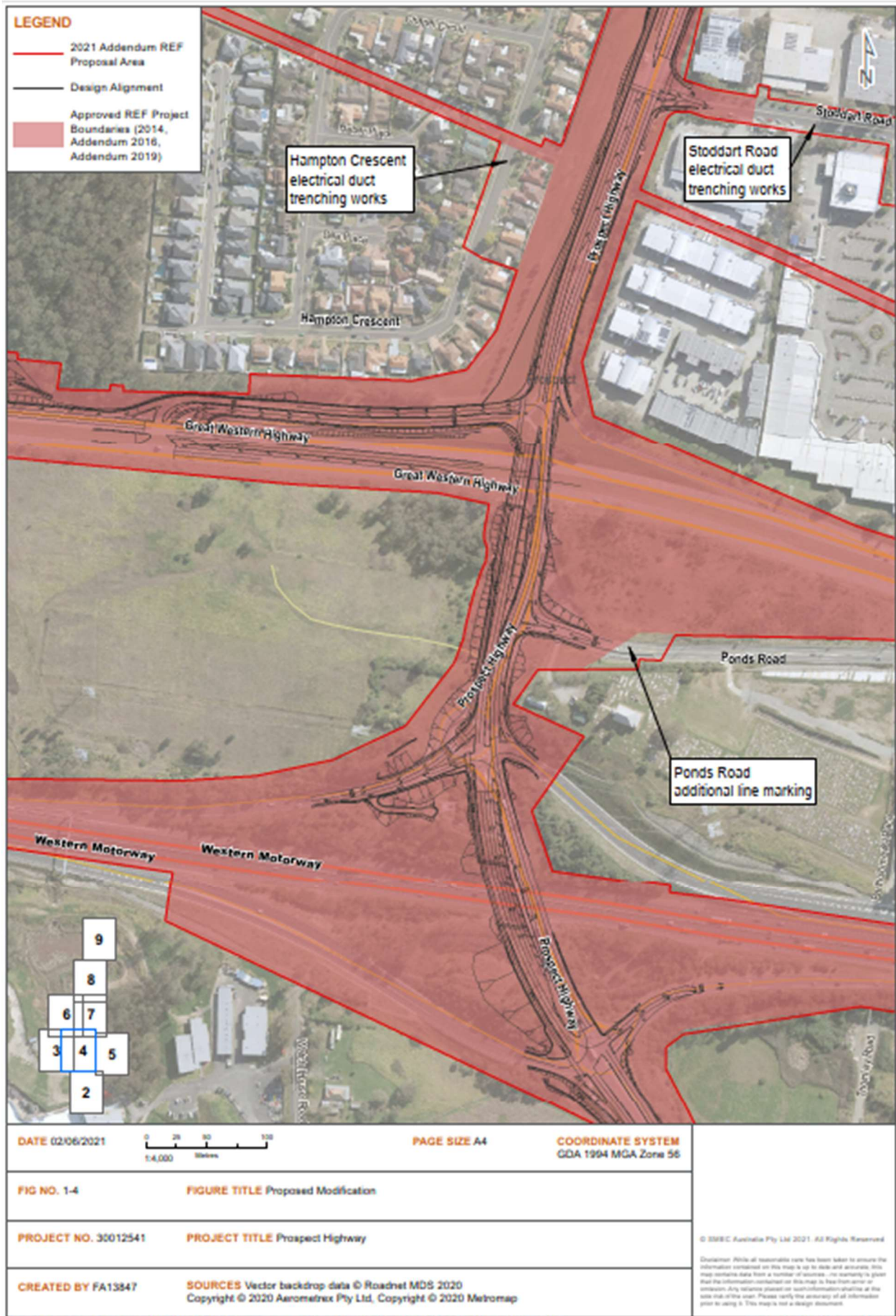


Figure 1-4 Comparison map – Prospect Highway/M4 Motorway and Prospect Highway/Great Western Highway

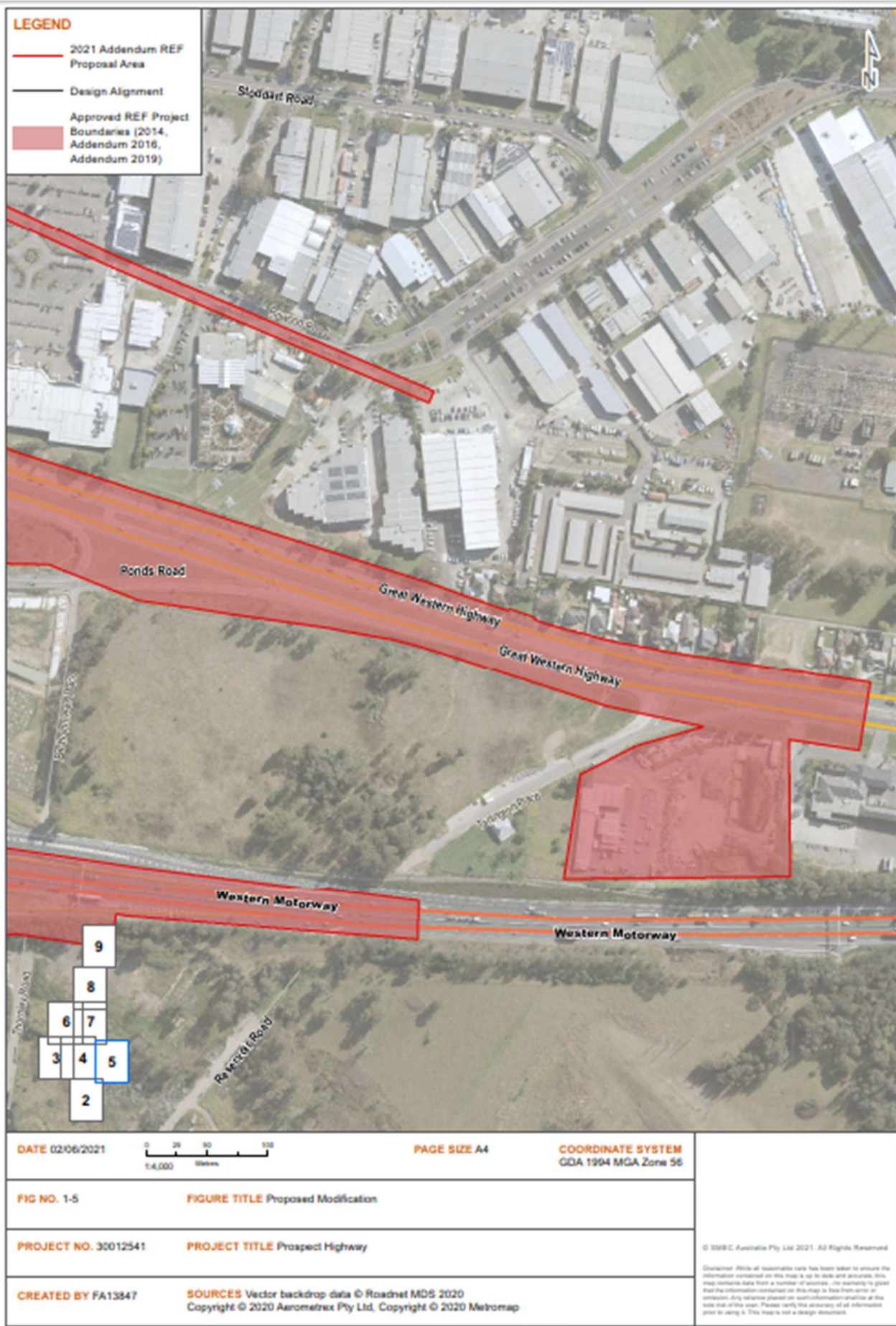


Figure 1-5 Comparison map – eastern extent of the M4 Motorway and Great Western Highway



Figure 1-6 Comparison map – western extent, Blacktown

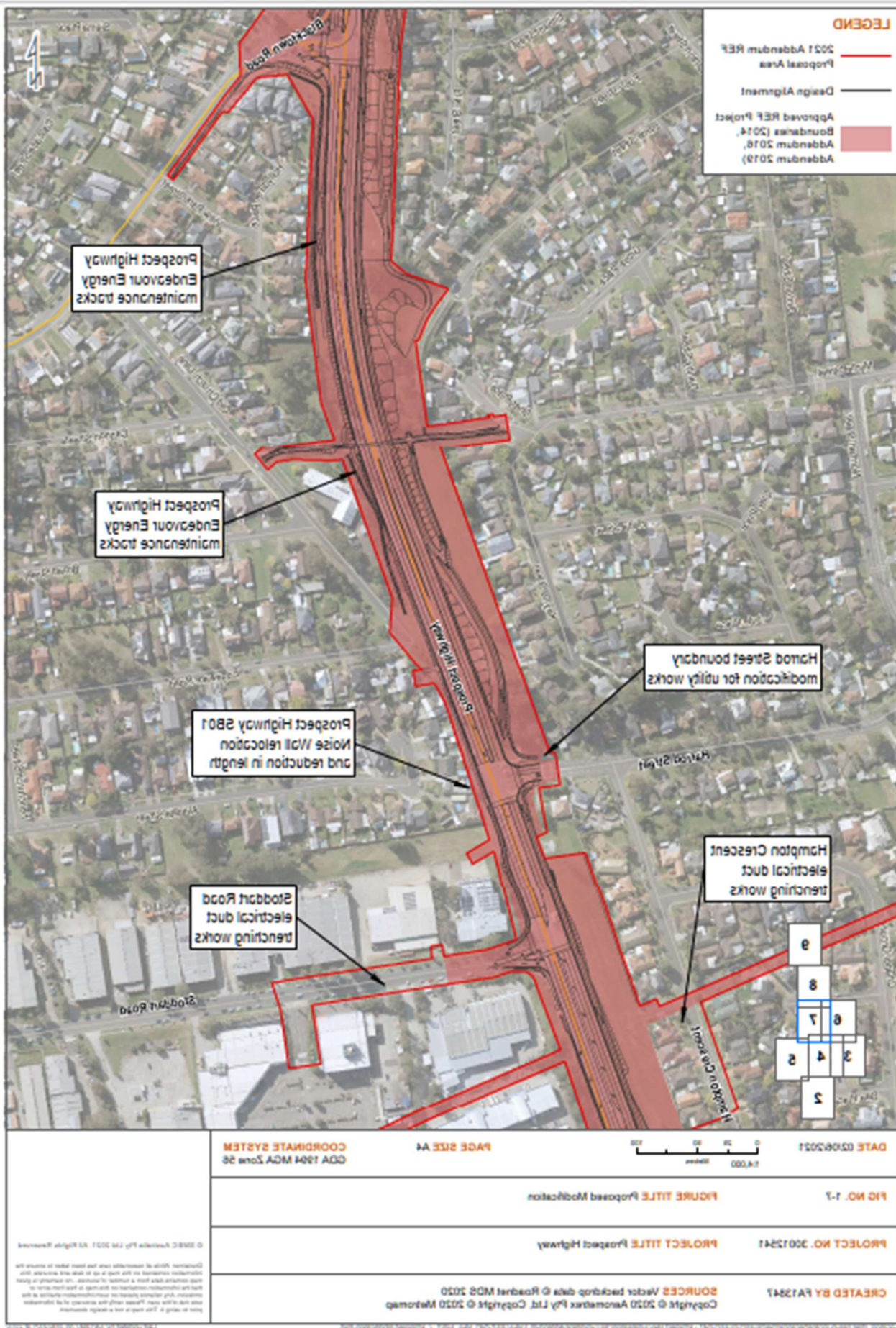


Figure 1-7 Comparison map – middle extent of the Prospect Highway alignment, Blacktown

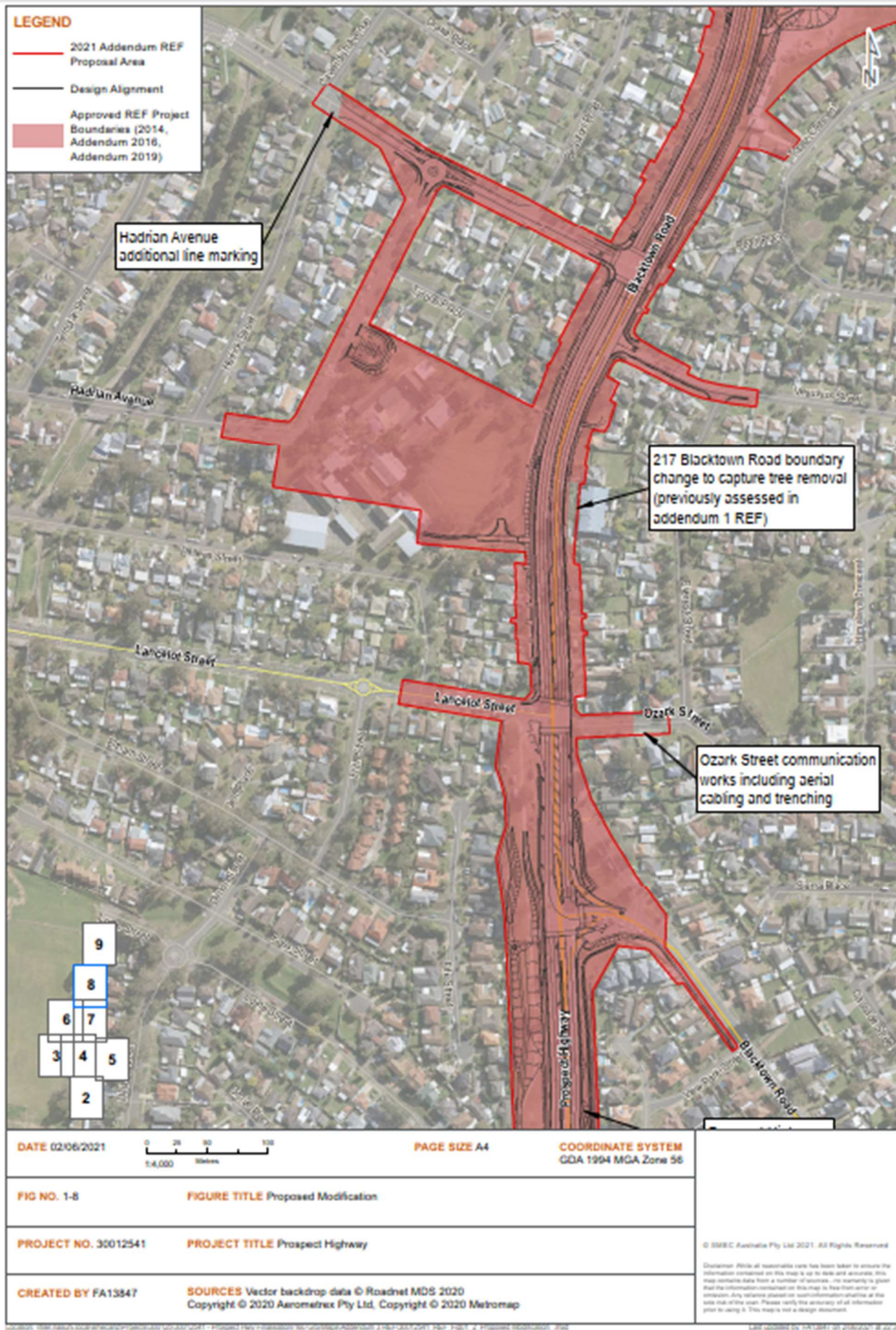


Figure 1-8 Comparison map – middle extent of Prospect Highway and Lancelot Street, Blacktown

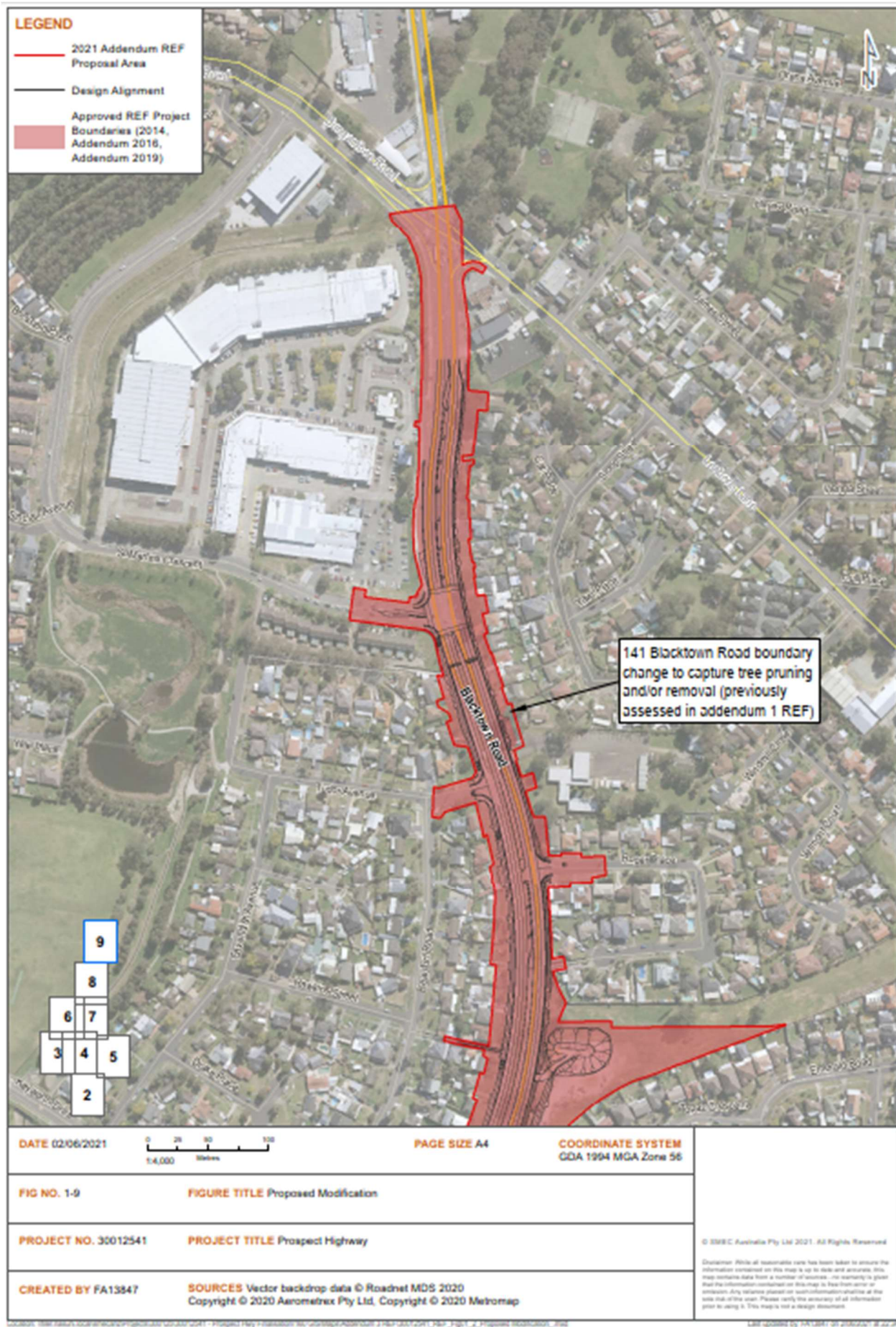


Figure 1-9 Comparison map - northern extent of proposal area

1.2 Purpose of the report

This addendum REF has been prepared by SMEC Australia Pty Ltd (SMEC) 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, addendum 1 REF and addendum 2 REF 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 clause 228 of the Environmental Planning and Assessment Regulation 2000, *Is an EIS Required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979* (*Is an EIS Required?* guidelines) (DUAP, 1995/1996), *Roads and Road Related Facilities EIS Guideline* (DUAP, 1996), 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, this 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 this 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 and Public Spaces 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 Government Department of Agriculture, Water and the Environment 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

Chapter 2 of the project REF outlines the strategic need for the project, the project objectives and the options that were considered. The strategic need for the proposed modifications described and assessed in this addendum REF are consistent with the project REF, addendum 1 REF and addendum 2 REF.

The proposed modification is needed to support the main work of the PHU project. The proposed modification is needed to further refine the scope of work and construction area to support road safety and traffic improvements.

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. These objectives remain unchanged. There are no development criteria for this proposed modification.

2.3 Alternatives and options considered

A number of the proposed design refinements have emerged as a consequence of detailed design development and constructability of some approved works, such as noise walls and access tracks.

2.3.1 Methodology for selection of preferred option

The proposed modification (as described in section 3.1) involves several changes that have arisen during detailed design and did not require consideration of other options. In this context, the process of option evaluation had two broad stages:

- A consideration of whether the proposal in any configuration could be justified. This is an evaluation of the 'do nothing' option
- An evaluation of other options by reference to the respective impacts and benefits.

2.3.2 Identified options

The following options were considered for the proposed modification:

- 'Do nothing' option – This option involves carrying the project as described in the project REF and addendum 1 REF and addendum 2 REF, without any additional scope of work.
- Option 1 – This option involves the following:
 - Design refinement of noise wall SB01 which has changed in length and location along Prospect Highway
 - Establishment of three electrical utility maintenance tracks on Prospect Highway
 - Electrical ducting at Hampton Crescent and Stoddart Road
 - Communication aerial cabling, trenching works and installation of communication pit on Ozark Street
 - Minor property adjustment works at various locations on Prospect Highway and Reservoir Road
 - Communication trench and pit adjustments on Reservoir Road
 - Utility works along Harrod Street
 - Line marking, milling and potentially resheeting on Ponds Road and Keyworth Drive
 - Proposal boundary updated with most recent cadastre survey and other minor boundary adjustments.

2.3.3 Analysis of options

'Do nothing' option

The 'Do nothing' option does not address the identified project objectives which are to provide increased capacity to cater for 2031 forecast transport growth on Prospect Highway between Reservoir Road, Prospect and St Martins Crescent, Blacktown. Consequently the 'Do nothing' option was not considered further.

Option 1

Option 1, the modification, was selected as meets the project objectives to be met which are to:

- Reduce traffic congestion currently experienced by road users
- Improve safety for current road users
- Provide increased capacity to cater for 2031 forecast transport growth on Prospect Highway between Reservoir Road, Prospect and St Martins Crescent, Blacktown.

2.4 Preferred option

Option 1, the modification, was selected as the preferred option as this enables the project objectives to be met.

3 Description of the proposed modification

3.1 The proposed modification

Transport for NSW proposes to modify the PHU to incorporate further detailed design refinements. This has resulted in the modification of the REF boundary. The proposed modification locations are shown in Figures 1-2 to 1-9. Key features of the proposed modification would include:

- Design refinement of noise wall SB01 which has changed in length and location along Prospect Highway
- Establishment of three electrical utility maintenance tracks on Prospect Highway
- Electrical ducting at Hampton Crescent and Stoddart Road
- Communication aerial cabling, trenching works and installation of communication pit on Ozark Street
- Minor property adjustment works at various locations on Prospect Highway and Reservoir Road
- Communication trench and pit adjustments on Reservoir Road
- Utility works along Harrod Street
- Line marking, milling and potentially resheeting on Ponds Road and Keyworth Drive
- Proposal boundary updated with most recent cadastre survey and other minor boundary adjustments.

3.2 Design

3.2.1 Design criteria and engineering constraints

The relevant design standards and design criteria are outlined in the project REF, addendum 1 REF and addendum 2 REF. Details relating to design standards and engineering constraints are outlined in *Prospect Highway Upgrades: Roads Detailed Design Report* (SMEC, 2016a).

3.2.2 Main features of the modification

The main features of the modification would be required to incorporate design refinements in addition to the scope of works presented in the project REF. There are no substantial changes to the design since the addendum 1 REF and addendum 2 REF. Refer to Appendix A for design plans. Details of the main features of the proposed modification are provided below.

Refinement of noise wall SB01 along Prospect Highway

Noise wall SB01 is located within the determined project boundary. As part of the scope of works presented in this addendum REF, the noise wall length would be reduced as a result of design refinement, due to constraints at the location identified in the Detailed Design assessment report. The location of the noise barrier is shown in Figure 6-1. The revised barrier is noted as being further away from the residential receivers to the east and reduced in length from 128 metres to 90 metres. The revised barrier is at the same height as the previous design of four metres.

Property adjustment works

Additional property adjustment works are required along Prospect Highway and at one location on Reservoir Road. These works would include modifications to driveways, turn around facilities, property fences, landscaping, and internal drainage. Refer to Appendix B for a complete list of proposal boundary modifications.

Line marking, milling and resheeting on Pond Road and Hadrian Ave

35 metre extension of works along Ponds Road and 10 metre extension along Keyworth Drive to tie into existing.

Utility works

Additional utility works are required along Reservoir Road, Harrod Street, Hampton Crescent, Stoddart Road and Ozark Road. The works would involve trenching, installation of ducting and cables and associated infrastructure, and reinstatement of the ground surface as it was prior to the works.

The design drawings are located at Appendix A of this addendum REF.

3.3 Construction activities

3.3.1 Work methodology

The construction methodology is described in section 3.4 of the project REF, section 3.3 of addendum 1 REF and section 3.3 of addendum 2 REF. Section 3.4 of the project REF includes the work methodology, staging, construction hours and duration and plant and equipment to complete the proposed work. There would be no change to the construction staging presented in the project REF, addendum 1 REF and addendum 2 REF.

3.3.2 Construction hours and duration

Construction hours would generally be as per the project REF, which are:

- Monday to Friday 7am to 6pm
- Saturday 8am to 1pm
- Sunday and Public Holidays, no work.

Due to the importance of maintaining through traffic on Prospect Highway, particularly during peak periods, work outside of normal hours would be required. Out-of-hours work is carried out to minimise disruptions to motorists while also reducing safety risks for workers and the travelling public.

Work outside of standard construction hours and extended construction hours would be carried out in accordance with the project Environment Protection Licence (EPL), the Interim Construction Noise Guideline (DECC, 2009) and with Transport for NSW's *Environmental Noise Management Manual Practice Note VIII*. Out-of-hours work would generally occur Sunday to Thursday. Work on Friday or Saturday nights would be avoided where possible, but circumstances could occur that may require work on these nights.

Activities carried out at night would minimise road safety risks, minimise disruption to daytime regional and local traffic flows, and minimise impacts as a consequence of utility outages. It is anticipated that some works including utility works would likely also be carried out during night hours to minimise impacts on existing traffic, transport and access. Other specific activities may require out-of-hours works and these would be determined and agreed with Transport for NSW on a case-by-case basis.

Works would be carried out in accordance with a detailed construction noise and vibration management plan required to be prepared under the project REF. This would include notifying local residents prior to any construction activities carried out outside of standard construction hours and complaints handling procedures.

It is expected that the proposed refinements would be undertaken within the contract period as described in the project REF.

3.3.3 Plant and equipment

Section 3.3 of the project REF provides a list of the plant and equipment that would be required for construction of the works. It is not anticipated that any additional plant and equipment would be required to carry out the work described in this addendum REF.

3.3.4 Earthworks

Some earthworks would be required for the construction of the proposed refinements, including trenching for the installation of communications cabling and levelling works associated with the construction of utility access tracks. The earthworks required to undertake the modifications as described in this addendum REF would be negligible in the context of earthwork volumes as required for the overall project REF.

3.3.5 Source and quantity of materials

Construction of the proposed modifications as described in this addendum REF would require various materials and pre-cast elements, many of which are described in the project REF, addendum 1 REF and addendum 2 REF.

The additional quantity of materials required by the proposed modification is negligible compared with the scope of overall project as considered by the project REF. Materials required for the proposed modification include small quantities of the following:

- General and engineered fill
- Pavement materials
- Aggregate for use in concrete and asphalt
- PVC ducting
- Sand
- Cement and concrete
- Bitumen
- Water.

A more comprehensive list of construction materials needed for the overall PHU is provided in section 5.4. of the project REF. Construction materials would be sourced from local commercial suppliers where feasible.

3.4 Traffic management and access

3.4.1 Traffic management

Generally, traffic management associated with the proposed refinements would be carried out as part of the approved project. Standard traffic management measures would be employed to minimise short-term traffic impacts that could be expected during construction. These measures would be identified in a traffic management plan (TMP) for the proposal and would be developed in line with the Transport for NSW's *Traffic Control at Work Sites Manual* (Roads and Traffic Authority, 2010) and Transport for NSW *G10 Specification for Traffic Management* (Roads and Maritime, 2011).

3.4.2 Access

Generally, access would be as detailed in the project REF.

There would potential for temporary obstruction of driveway access and traffic lanes during construction associated with utility works along portions of Harrod Street, Reservoir Road, Hampton Crescent, Stoddart Road and Ozark Street and minor property works along Prospect Highway. Access to a pedestrian underpass would likely be temporarily impacted during construction of electrical utility maintenance tracks on Prospect Highway.

It is expected that any access impacts would be minor and confined to the construction stage of the works, and all existing access would be reinstated at the operational stage of the proposal.

3.5 Ancillary facilities

Section 3.4 of the project REF, section 3.4 of addendum 1 REF and section 3.4 of addendum 2 REF provide detailed of ancillary facilities required as part of the project construction works. It is not anticipated that any additional ancillary facilities, or changes to those previously described, would be required to carry out the work described in this addendum REF.

3.6 Property acquisition

No additional acquisitions would be required to complete the works described in this addendum REF. Details of property acquisition are provided in section 3.6 of the project REF, section 3.6 of the addendum 1 REF, and section 3.6 of the addendum 2 REF.

4 Statutory and planning framework

4.1 Environmental Planning and Assessment Act 1979

4.1.1 State Environmental Planning Policies

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 94 of ISEPP 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 road infrastructure facilities and is to be carried out by 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 (Coastal Management) 2018 (CM SEPP), State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (State Significant Precincts) 2005.

As the proposal is adjacent to land reserved under the *National Parks and Wildlife Act 1974*, being the Prospect Nature Reserve, Clause 16(2) of ISEPP applies which requires Transport for NSW to consult with Department of Planning, Infrastructure and the Environment

Part 2 of ISEPP 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 consultation as required by ISEPP (where applicable), is discussed in chapter 5 of this addendum REF.

State Environmental Planning Policy (Western Sydney Parklands) 2009

State Environmental Planning Policy (Western Sydney Parklands) 2009 (WSP SEPP) aims to put in place planning controls that will enable the Western Sydney Parklands Trust to develop the Parklands into a multi-use urban parkland for the region of western Sydney.

Clause 11 of the WSP SEPP states that development for the purpose of a road is permissible without consent within the parklands if carried out by or on behalf of a public authority. Clause 12 outlines the matters which need to be considered by a consent authority for any development.

Clause 13 sets out specific requirements for bulk water supply infrastructure not to be impacted by development. The proposed modification would have a neutral impact on the quality of the water in the bulk water supply infrastructure. The work would not impact on the integrity, security and/or increase the risk of illegal access to the bulk water supply infrastructure.

Clause 14 sets out specific requirements for development in or adjoining a nature reserve (within the meaning of *the National Parks and Wildlife Act 1974*) or an identified environmental conservation area. The proposal does adjoin a nature reserve, being the Prospect Nature Reserve so consideration of Clause 14(2) of the WSP SEPP is required. The proposal does not encroach on a nature reserve or encroach on areas identified as Core Habitat or Habitat Corridor.

Clause 15 regulates development affecting heritage items. The proposal would affect a heritage item identified by Schedule 1 of the Parklands SEPP so consideration of Clause 15 of the WSP SEPP is required, however the impact is considered negligible or minor in nature.



Figure 4-1 Location of Western Sydney Parklands SEPP boundary

4.1.2 Local Environmental Plans

Blacktown Local Environmental Plan 2015

As outlined in section 4.1.1, the ISEPP supersedes the requirements for development consent.

Development within the Blacktown Local Government Area (LGA) is generally subject to the provisions of the Blacktown LEP 2015. The provisions of the LEP zonings within the proposal area are identified in Table 4-1.

Table 4-1 Zoning relevant to the proposed activities assessed in this REF

Zoning	Objectives	Areas where relevant to project
SP2 - Infrastructure (Classified Roads)	To provide for infrastructure and related uses	Prospect Highway road corridor
R2 – Low Density Residential	To provide for the housing needs of the community and to enable land uses that provide facilities or services to meet the day to day needs of the residents.	Extensions to project boundary to reflect updated cadastre survey
RE1 – Public Recreation	To enable land to be used for public open space or recreational purposes	Extensions to project boundary to reflect updated cadastre survey, including near Harold Street
B1 – Neighbourhood Centre	To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood	Extension of project boundary near St Martins Crescent to reflect updated cadastre survey
B5 – Business Development	To enable a mix of business and warehouse uses, and specialised retail premises that require a large floor area, in locations that are close to, and that support the viability of, centres.	Extension of project boundary near St Martins Crescent to reflect updated cadastre survey
RU4 – Primary Production Small Lots	To enable sustainable primary industry and other compatible land uses	Minor extensions of project boundary to reflect updated cadastre survey
R2 – Low Density Residential	To provide for the housing needs of the community and to enable land uses that provide facilities or services to meet the day to day needs of the residents.	Minor extensions of project boundary to reflect updated cadastre survey

The key features of the modifications described in this proposed addendum REF are consistent with the objectives of the land zones outlined in Table 4-1, with the exception of the objectives of E2 and RE1. However, as this addendum REF would be assessed per the requirements of the Infrastructure SEPP, the objectives of the relevant land zones under the Blacktown LEP 2015 would not be applicable.

Clause 5.9 of Blacktown LEP 2015 sets out the requirements for the preservation of trees or vegetation and requires that trees or vegetation must not be cut or removed without (3)(a) development consent or (3)(b) permit granted by Council.

However, clause (8)(d) provides “this clause does not apply to or in respect of ... action required or authorised to be done by or under the *Electricity Supply Act 1995*, the *Roads Act 1993* or the *Surveying and Spatial Information Act 2002*”.

Mature trees are proposed to be removed as part of the modification works described in this addendum REF.

4.2 Other relevant NSW legislation

4.2.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) and its supporting regulations commenced on 25 August 2017. The BC Act repeals the *Threatened Species Conservation Act 1995* (TSC Act) along with other natural resource management legislation including the *Native Vegetation Act 2003*. The BC Act sets out the assessment framework for threatened species and ecological communities for Division 5.1 activities (amongst other types of development).

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 FM Act, are assessed using a five-part test. Where a significant impact is likely to occur, a SIS or Biodiversity Assessment Report (BAR) must be prepared in accordance with the Secretary’s requirements.

The BC Act, together with the *Biodiversity Conservation Regulation 2017*, outlines the framework for addressing impacts on biodiversity from development and clearing. It establishes a framework to avoid, minimise and offset impacts on biodiversity from development through the Biodiversity Offsets Scheme (BOS). Transport for NSW would prepare a BAR in accordance to the requirements set out in the BC Act. For Division 5.1 (REF) projects, if the Biodiversity assessment concludes that there will be a significant effect on threatened species or threatened ecological communities or their habitats, Transport for NSW would either:

- Prepare a Biodiversity Development Assessment Report (BDAR) in accordance with the Biodiversity Assessment Method (BAM) using an accredited assessor
- Prepare a Species Impact Statement and obtain the concurrence of the Chief Executive of the NSW Office of Environment & Heritage (OEH).

The addendum 2 REF was assessed under the provisions of the BC Act. This addendum REF has been assessed under the provisions of the BC Act. See section 6.3 for the details of this assessment.

4.2.2 National Parks and Wildlife Act 1974

The harming or desecrating of Aboriginal objects or places is an offence under section 86 of the *National Parks and Wildlife Act 1979* (NPW Act). Under section 90, an Aboriginal heritage impact permit may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons.

The Office of Environment and Heritage (OEH) has published the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010). The due diligence process outlined in Section 8 of that publication has been followed for the project REF (Jacobs, 2014a) and it was determined that an application for an Aboriginal heritage impact permit would not be required.

A Stage 1 assessment for the addendum1 REF (SMEC, 2016) was prepared under the Transport for NSW Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (Roads and Maritime, 2011). The PACHCI assessment identified that the proposal is unlikely to harm known Aboriginal objects or places and that no permit would be required.

4.2.3 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is administered by the NSW Environment Protection Authority (EPA). It provides an integrated system of licenses to set out protection of

the environment policies and to adopt more innovative approaches to reduce pollution in the environment, having regard to the need to maintain ecologically sustainable development.

The approved project constitutes a scheduled activity (main road construction of more than three kilometres in length in a metropolitan area as per Schedule 1) under the POEO Act and therefore would require an EPL. The proposal would not alter this requirement. The EPL issued for the project REF would incorporate restrictions on working hours, noise levels, and air and water quality impacts.

4.2.4 Western Sydney Parklands Act 2006

The Parklands were established under Part 4 of the *Western Sydney Parklands Act 2006*. The Western Sydney Parklands were established as part of the NSW Government's vision for contemporary, urban living in Western Sydney. They contain sporting facilities, popular picnic areas, cycle/walking track and native bushland. It is intended that the Parklands demonstrate best practice in integrated urban parklands by:

- Providing a mix of recreation and conservation uses
- Protecting and promoting ongoing agriculture in suitable areas
- Developing park tourism and commercial uses on sites along the major transport corridors
- Maintaining secluded areas for interaction with nature
- Delivering significant regional community and recreation facilities.

The approved project and the proposed modification would improve safety and access for local and through traffic and improve cyclists and pedestrian access to the area. Potential impacts are considered as part of chapter 6 of this addendum REF.

4.3 Commonwealth legislation

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (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 at Appendix C and section 6.4 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 impact 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 impact to these biodiversity matters are also considered as part of chapter 6 of the addendum REF and Appendix B.

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 Government Department of Agriculture, Water and the Environment is not required.

4.4 Confirmation of statutory position

The proposed modification is categorised as development for the purpose of a road and road infrastructure facilities and is being carried out by or on behalf of a public authority. Under clause 94 of ISEPP 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

Consultation for the PHU is detailed in Chapter 5 of the project REF and accompanying Submissions Report (Jacobs, 2014b). A Communications and Community Involvement Plan (CCIP) prepared for the project REF, and community consultation for the proposed modifications described in this addendum REF would be carried out in accordance to the CCIP.

Meetings with the following stakeholders have occurred since determination of the project REF:

- Blacktown City Council
- Shelley Public School
- Children First Day Care
- Bus operators & Bus stop advertiser (Ooh Media)
- All business operating in and around St Martins Village, Stoddart Rd industrial area and Reservoir Rd Roundabout
- State Emergency Services
- Local Emergency Services such as police, ambulance, St John Ambulance and the fire service
- Property owners for properties that require adjustments.

The consultation strategy for the project remains as outlined in section 5.1 of the project REF. No changes to the consultation strategy were required for this addendum.

5.2 ISEPP Consultation

Part 2, Division 1, clauses 13-15 of the ISEPP specify consultation requirements for infrastructure development to be carried out under the ISEPP. These largely relate to the requirement for public authorities other than local councils to consult with the relevant local council as part of the assessment process. Consultation is required if the proposal would affect council infrastructure or services, impact on a local heritage item or if development would impact on flood-labile lands.

Table 5-1 provides a summary of the consultation requirements for the proposal with reference to the ISEPP.

Table 5-1 Summary of ISEPP consultation requirements

Clause	Details	Response
13(1)(a)	Likely to have a substantial impact on stormwater management services provided by council.	No
13(1)(b)	Likely to generate traffic to an extent that will strain the capacity of the road system in the local government area.	No
13(1)(c)	Involves connection to, and substantial impact on the capacity of any part of a sewerage system owned by council.	No
13(1)(d)	Involves connection to, and use of a substantial volume of water from, any part of a water supply system owned by council.	No
13(1)(e)	Involves the installation of a temporary structure on, or the enclosing of, a public place that is under council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential.	No

Clause	Details	Response
13(1)(f)	Involves excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which council is the roads authority under the Roads Act.	No
14(1)(a)	Is likely to have an impact that is not minor or inconsequential on a local heritage item (other than a local heritage item that is also a State heritage item) or a heritage conservation area.	No
15(2)	Development that is to be carried out on flood liable land that may be carried out without consent and that would change flood patterns other than to a minor extent.	No
16(2)(a)	Development adjacent to land reserved under the <i>National Parks and Wildlife Act 1974</i> . In accordance with ISEPP, Transport for NSW consulted with the National Parks and Wildlife Service (NPWS). NPWS responded by email on 31 May 2021 and advised they approved of the proposed changes to the existing designs for Prospect Highway upgrade.	Yes
16(1)(b)	Development adjacent to a marine park declared under the <i>Marine Parks Act 1997</i> .	No
16(2)(c)	Development adjacent to an aquatic reserve declared under the <i>Fisheries Management Act 1994</i> .	No
16(2)(d)	Development in the foreshore area within the meaning of the <i>Sydney Harbour Foreshore Authority Act 1998</i> .	No
16(2)(e)	Development comprising a fixed or floating structure in or over navigable waters – the Maritime Authority of NSW.	No
16(2)(f)	Development for the purposes of an educational establishment, health services facility, correctional centre or group home, or for residential purposes, in an area that is bushfire prone land (as defined by the Act).	No

5.3 Government agency and stakeholder involvement

Transport for NSW has also maintained regular consultation with Blacktown City Council, government agencies and stakeholders about the project.

As noted in Table 5-1, Transport for NSW consulted with the National Parks and Wildlife Service (NPWS). NPWS responded by email on 31 May 2021 and advised they approved of the proposed changes to the existing designs for Prospect Highway upgrade.

Other recent consultation includes:

- Cumberland Council
- Sydney Parklands Trust
- Environmental Protection Authority
- Heritage NSW

5.4 Ongoing or future consultation

Ongoing consultation for the proposal would be carried out in accordance with the CCIP developed for the approved project, refer to section 5.1 of the project REF. Consultation would include:

Providing current proposal information through the project website and a Community Update newsletter

- Ongoing consultation with relevant stakeholders, including Blacktown City Council
- Consultation with property owners on Prospect Highway on minor works on or adjacent to their properties
- Consultation Blacktown City Council, nearby residents and businesses on the additional works associated with the utility trenching, excavation and cables on Hampton Crescent, Stoddart Road and Ozark Street including when construction is proposed to commence, of any proposed night-work and any changes to access or parking
- Informing and updating Blacktown City Council and the relevant property owners of the revised noise walls design, changes to operational noise impacts and at-property treatment on and for sensitive receivers
- Providing the relevant stakeholders with contact details, a helpline for further information and to raise concerns, and a project information telephone number for the construction phase.

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 PHU project. All aspects of the environment potentially impacted upon by the proposed modification are considered. This includes consideration of the factors specified in the guidelines *Roads and Related Facilities EIS Guideline* (DUAP, 1996) and *Is an EIS required?* (DUAP, 1999) as required under clause 228(1) of the Environmental Planning and Assessment Regulation 2000. The factors specified in clause 228(2) of the Environmental Planning and Assessment Regulation 2000 are also considered in Appendix C.

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

6.1 Issue identification

The proposed modifications described in this addendum REF has been reviewed in the context of the receiving environment to identify any additional issues for assessment. Where there are additional issues this addendum REF assesses them, where there are no additional issues or issues greater than negligible beyond those considered by the project REF, addendum 1 REF and addendum 2 REF these are not assessed. This review process is documented below in Table 6-1.

Table 6-1 Issues summary review for this addendum REF

Environmental factors (section in project REF)	Assessed in this addendum REF	Proposed modification/reason
Traffic, transport and access (section 6.1)	Yes	Construction associated with additional Endeavour Energy maintenance tracks and the installation of communications cabling and ducting trenching would result in a small increase in construction vehicles and plant and may temporarily restrict access to residences and businesses. This is not expected to result in more than a minor impact on traffic, transport and access and would be restricted to construction works.
Noise and vibration (section 6.2)	Yes	To accommodate road design refinements, noise barrier SB01 has been relocated further away from sensitive receivers and shortened at both ends. Assessment of the change in operational road traffic noise levels from the revised design of noise barrier SB01 determined three additional properties being for eligible for consideration of at-property treatment. Construction noise from additional trenching and cabling associated with installation of utility works has been assessed. Assessment of the change determined that reasonable and feasible and additional mitigation measures be applied to reduce impacts.
Biodiversity (section 6.3)	Yes	The proposed electrical utility access tracks described in this addendum REF triggered the need for assessment of potential biodiversity impacts. No likely additional impacts to threatened biodiversity from the modified design were identified (refer Appendix D).
Landscape character, visual amenity and	Yes	The proposed modifications described in this addendum REF relate to the design refinement of noise wall SB01, construction

Environmental factors (section in project REF)	Assessed in this addendum REF	Proposed modification/reason
urban design (section 6.4)		associated with utility works which would result in minor impacts to the visual amenity of the existing environment.
Water quality and hydrology (section 6.5)	No	The proposed modifications described in this addendum REF would have negligible impacts on water quality and hydrology. Water quality and hydrology aspects and impacts from the proposed modifications would be consistent with that assessed in the project REF and addendum 1 REF. The addendum 2 REF did not assess water quality and hydrology aspects and impacts.
Non-Aboriginal heritage (section 6.6)	No	<p>The proposed modifications considered by this addendum REF would result in a negligible to minor impact along Reservoir Road. Impacts relate to upgrading existing property access at 544 Reservoir Road, and two intersections on Reservoir Road where it intersects with William Lawson Drive and Picrite Close.</p> <p>As a measure of due diligence, a desktop search of heritage registers was carried out on 15 April 2021 for the revised proposal area assessed in this addendum REF. No additional non-Aboriginal heritage items were identified within the proposal area.</p>
Aboriginal heritage (section 6.7)	No	<p>The proposed modifications considered by this addendum REF is not expected to result in any impacts to Aboriginal heritage. As a measure of due diligence, an AHIMS search (refer Appendix E) was carried out on 15 April 2021 for the revised proposal area assessed in this addendum REF. No additional Aboriginal heritage items were identified within the proposal area.</p> <p>The project REF considered Aboriginal heritage aspects and determined the project is unlikely to harm known Aboriginal sites. The addendum 1 REF and addendum 2 REF did not assess Aboriginal heritage aspects and impacts.</p>
Socio-economic (section 6.8)	Yes	The proposed modifications described in this addendum REF would result in negligible to minor additional socio-economic impacts. The project REF and addendum 1 REF assessed socio-economic and land use aspects and impacts. The addendum 2 REF did not assess socio-economic aspects and impacts.
Landform, geology and soil (section 6.9)	No	The proposed modifications described in this addendum REF would result in negligible impacts to landform, geology and soils. Landform, geology and soil aspects and/or impacts from the proposed modifications would be consistent with that assessed in the project REF and addendum 2 REF. The addendum 1 REF did not assess landform, geology and soil aspects and impacts.
Air quality (section 6.10)	No	The proposed modifications described in this addendum REF would result in negligible impacts to air quality. Air quality aspects and impacts from the proposed modifications would be

Environmental factors (section in project REF)	Assessed in this addendum REF	Proposed modification/reason
		consistent with that assessed in the project REF, addendum 1 REF and addendum 2 REF.
Greenhouse gas emissions and climate change (section 6.11)	No	The proposed modifications described in this addendum REF would result in negligible impacts to greenhouse gas emissions and climate change. The construction and operational impacts would be consistent with those identified in the project REF. The addendum 1 REF and addendum 2 REF did not assess greenhouse gas emissions and climate change aspects and impacts.
Resource use and waste management (section 6.12)	No	<p>The proposed modifications described in this addendum REF would result in negligible impacts to resource use and waste management. Resource use and waste management aspects and impacts from the proposed modifications would be consistent with that assessed in the project REF, addendum 1 REF and addendum 2 REF.</p> <p>As a measure of due diligence, EPA databases were searched including NSW EPA public register of licences, contaminated land public register of notices and NSW contaminated sites notified to the EPA. The searches were carried out on 15 April 2021 and did not identify the revised proposal area assessed in this addendum REF.</p>
Cumulative environmental impacts (section 6.13)	No	The proposed modifications as described in this addendum REF would result in negligible increase to cumulative environmental impacts. Cumulative environmental impacts are consistent with those outlined in the project REF and addendum 2 REF. The addendum 1 REF did not assess cumulative environmental aspects and impacts.

6.2 Traffic, transport and access

The existing environment for traffic, transport and access are described in detail in section 6.1 of the project REF and the Traffic and Transport Assessment (TTA) (SMEC, 2014) in Appendix D of the project REF. As several key features of the proposed modifications are outside the project REF boundary, a desktop assessment of traffic, transport and access was carried out to inform the potential impacts of the works described in this addendum REF.

6.2.1 Existing environment

A Traffic and Transport Assessment (TTA) (SMEC, 2014) was prepared for the project REF. The TTA identified the current transport patterns and conditions of the highway and to assess the construction and operational impacts of the proposal. These conditions are generally considered relevant and valid to the existing conditions for this addendum REF. The conditions traffic, transport and access conditions relating to the proposed modifications outlined in this addendum REF are described below.

Road corridor

The existing traffic environment of the Prospect Highway was described in section 6.1 of the project REF. The current speed limit is 60 kilometres per hour. Construction of electrical utility access tracks are proposed within the Prospect Highway road corridor.

Proposed utility works would occur at Reservoir Road, Harrod Street, Hampton Crescent, Stoddart Road and Ozark Street. Traffic and residence access at these locations would likely be temporarily restricted as a result of the works during the construction phase of the project.

Hampton Crescent has a speed limit of 50 km/h and it provides thoroughfare between a small residential area and Prospect Highway via Harrod Street. The proposed works would be located along the electrical easement between Prospect Highway and Hampton Crescent.

Stoddart Road adjoins Prospect Highway at a T-intersection between the Great Western Highway and Harrod Street. The proposed works would be located along the Stoddart Road.

Ozark Street is a cul-de-sac abutting Prospect Highway, with pedestrian access to a signalised crossing at the Highway. The proposed works would follow the cul-de-sac from Prospect Highway.

Reservoir Road is a two-lane road connecting to Prospect Highway in the southern portion of the proposal area. It provides access to the Prospect Reservoir, Skyline Drive in Cinema and Raging Waters Sydney. The proposed works would be located at the edge of the road reserve.

Harrod Street intersects Prospect Reservoir at a T-intersection and provides local thoroughfare. The proposed works would be located within the road reserve.

Public transport

Section 6.2 of the addendum 1 REF identifies a total of eleven bus stops and shelters located within project REF boundary on the east and west sides of Prospect Highway. No additional bus stops have been added to the alignment between and the time of preparation of this addendum REF. There are no train stations or rail-crossings within the revised proposal area or project REF boundary.

Active transport

Shared path facilities for active transport are provided along the western side of the Prospect Highway alignment. These facilities begin at the intersection of Reservoir Road in the south and continue to the intersection of Bungarribee Road in the north, spanning 3.6 kilometres.

Pedestrian footpaths are present along both sides of the Council owned and maintained at Hampton Crescent, Stoddart Road and Ozark Street.

Several pedestrian crossings exist along the corridor, including a pedestrian underbridge providing passage between Sher Place and Old Church Lane, near the proposed electrical utility access tracks.

6.2.2 Potential impacts

It is anticipated that the proposed modifications outlined in this addendum REF would be minor adverse and temporary in nature. The potential impacts of the proposed modifications on traffic, transport and access are described in the section below.

Construction

The project REF notes construction is likely to require about 100 construction vehicle movements per day for the overall project (see section 6.1.4 of the project REF). Traffic impacts during construction works outlined in this addendum REF would be within Prospect Highway road reserve and local roads including Hampton Crescent, Stoddart Road, Ozark Street, Keyworth Drive, Harrod Street and Reservoir Road.

Construction works outlined associated with the modifications are expected to generate an additional twenty construction vehicles and plant movements per day. The additional heavy vehicle movements associated with the proposed modification is within the daily variation of construction vehicle volumes considered by the project REF and is not expected to have more than a **negligible** to **minor** impact on traffic and transport using the Prospect Highway and associated local roads (noted in the paragraph above).

Aspect	Potential impacts & duration	Description
Communication utility ducting works	Minor adverse Temporary	<p>As outlined in section 3 of this addendum REF, the works would involve trenching along at Harrod Street, Hampton Crescent, Stoddart Road and Ozark Street.</p> <p>Road corridor Temporary disruptions to local traffic may occur during trenching works and/or work on services connections. Traffic access would return to normal operation at the completion of the construction stage of the work. Direct access would be preserved under the proposed modification with the impacted ground surface to be reinstated and no significant impact anticipated.</p> <p>Access Temporary disruptions to local access (i.e. driveways) may occur during trenching works and/or work on services connections. Direct access would be preserved under the proposed modification with the impacted ground surface to be reinstated prior to operation and no significant impact anticipated.</p> <p>Active transport Temporary disruptions to local pedestrian access (i.e. footpaths) may occur during trenching works and/or work on services connections. Access would be reinstated at the operational stage of the work. Usability of footpaths would be preserved under the proposed modification with the impacted ground surface to be reinstated and no significant impact anticipated.</p>
Construction electrical utility maintenance access tracks	Minor adverse Temporary	<p>As outlined in section 3 of this addendum REF, the works would involve levelling of the ground surface and establishment of safe access to electrical utilities for maintenance activities.</p> <p>Road Corridor Temporary disruptions to local traffic may occur during construction activities given proximity of the works to Pacific Highway. Traffic access would return to normal operation at the completion of the construction stage of the work.</p> <p>Active Transport Temporary disruptions to local pedestrian access (i.e. footpaths/ Prospect Highway pedestrian underbridge) may occur during construction works. Access would be reinstated at the operational stage of the work. Usability of footpaths would be preserved under the proposed modification with no significant impact anticipated.</p>
Ponds Road and Keyworth Avenue line marking, milling and resheeting	Minor adverse Temporary	<p>Road Corridor Temporary disruptions to local traffic may occur during line marking, milling and potentially resheeting works along Ponds Road. Traffic access would return to normal operation at the completion of the construction stage of the work. Direct access would be preserved under the proposed modification and no significant impact anticipated..</p>
Prospect Highway (Ch 1930-2170) vegetation removal	Minor adverse Temporary	<p>Road Corridor Temporary disruptions to local traffic may occur during vegetation removal along Ch1930-2170 Prospect Highway. Traffic would return to normal operation at the completion of the construction stage of the work. No significant impact is anticipated.</p>

Access

Access to businesses on Stoddart Road including Homemaker Prospect and other commercial and industrial properties would be impacted as a result of the proposed electricity utility ducting works. Impacts to access have potential to delay customers entering and exiting these businesses. Impact to these businesses would be expected to be short term and minor in nature.

Access to residences on Harrod Street, Keyworth Drive, Hampton Crescent, Ozark Street and Prospect Highway would be impacted as a result of the proposed electricity and communication utility works. Any impact to residence access would be expected to be short term and **minor** in nature.

The potential impacts of the construction of the proposed modifications described in this addendum REF are outlined in Table 6-2.

Table 6-2 Potential impacts to traffic, transport and access during construction

Operation

The proposed modifications of this addendum REF are not anticipated to have any additional impact on traffic, transport and access than those described in section 6.1 of the project REF, section 6.2 of the addendum 1 REF and section 6.2 of the addendum 2 REF.

Access to electrical utilities for maintenance purposes would be improved as a result of the proposed modifications of the addendum REF.

6.2.3 Safeguards and management measures

No additional safeguards and management measures are recommended for the potential traffic and transport and access impact assessed in this addendum REF.

6.3 Noise and vibration

An Operational Traffic and Construction Noise and Vibration Assessment (OTCNVA) report was prepared by Jacobs (2014a) for the project REF. During detailed design, SLR Consulting (SLR) prepared an Acoustic Assessment (2015) to assess the potential impacts of design changes made since the project REF was prepared. Since then, it has been proposed that the location and length of sound barrier SB01 be amended (refer Appendix A for design drawings). Following a constructability and safety assessment review, the design of noise wall SB01 was refined to address the limitations and constraints of the previous design. The limitations and constraints of the previous design were:

- The noise wall was situated directly under overhead high voltage power lines and this was identified as a constructability risk for erection of the wall
- Construction of the wall would have required a complex electrical shutdown which would have resulted in potential power outages to electricity customers which was deemed unacceptable
- The complex offset footing was identified as difficult and time consuming to construct. An alternative wall alignment design was developed to eliminate both these issues without compromising other project elements and also addressing noise mitigation requirements.

Due to the design refinement of SB01 further assessment of operational noise impacts was required. A technical memorandum acoustic assessment (SLR 2021) (refer Appendix F) was prepared to address these issues and the findings are summarised below.

The construction activities associated with additional utility works required assessment for potential noise and vibration impacts to nearby sensitive receivers. A technical memorandum construction noise and vibration assessment (SLR 2021) (refer Appendix F) was prepared to address these issues and the findings are summarised below.

6.3.1 Existing environment

The existing environment of the proposal corridor and its surroundings are described in detail in Section 6.2 of the project REF.

The sound barrier design to be refined is located adjacent to residential properties. The refined alignments to SB01 are presented in Figure 6-1.



Figure 6-1 Revised noise barrier SB01

The proposed communication utility ducting works are to occur within low density residential areas, and one commercial/ industrial area. The location of proposed ducting works and sensitive receivers are presented in Figure 6-2 and details are outlined in Table 6-3 below.

Table 6-3 Sensitive receivers for additional construction activities (source: SLR, 2021).

Location	Nearest Receivers	ID	Direction	Type/Use	Distance from Works (m)	Line of Sight to Works?
Hampton Crescent	12 Hampton Cr	R1	West	Residential	10	Yes
	13A Hampton Cr	R2	North	Residential	10	Yes
	14 Hampton Cr	R3	West	Residential	10	Yes
	16 Hampton Cr	R3-1	West	Residential	10	Yes
	18 Hampton Cr	R3-2	West	Residential	10	Yes
	20 Hampton Cr	R3-3	West	Residential	10	Yes
	15 Hampton Cr	R4	South/East	Residential	9	Yes
	17 Hampton Cr	R5	South/East	Residential	12	Yes
	19 Hampton Cr	R6	South/East	Residential	12	Yes

Location	Nearest Receivers	ID	Direction	Type/Use	Distance from Works (m)	Line of Sight to Works?
	21 Hampton Cr	R6-1	South/East	Residential	12	Yes
	23 Hampton Cr	R6-2	South/East	Residential	12	Yes
Stoddart Road	69 Aldgate St	R7	North	Residential	130	Yes
	7 Hampton Cr	R8	West	Residential	145	Yes
	19 Stoddard St	C1	West/South	Commercial	<5	Yes
	28 Stoddart St	C2	North	Commercial	15	Yes
	32 Stoddart St	C3	North	Commercial	15	Yes
Ozark Street	239 Blacktown Rd	R9	North	Residential	<5	Yes
	32 Everest St	R10	North	Residential	<5	Yes
	241 Blacktown Rd	R11	South	Residential	10	Yes
	4 Ozark St	R12	South	Residential	12	Yes
	6 Ozark St	R13	South	Residential	15	Yes



Figure 6-2 Sensitive receivers identified associated with proposed construction activities at three sites

6.3.2 Potential impacts

Construction noise

The construction noise and vibration assessment was undertaken for proposed communication utility ducting at three locations (Hampton Crescent, Stoddart Road and Ozark Street) and referenced the NSW Interim Construction Noise Guideline (ICNG). The ICNG outlines methodology to assess and manage the impacts of construction noise on residences and requires project specific Noise Management Levels (NML) to be established for potentially noise affect receivers. The NMLs relevant to this assessment were taken from the representative background levels in the Transport for NSW Construction Noise Estimator (for area type R3). NMLs assumed for this assessment are presented in Table 6-4 below (refer to Appendix F, Table 5, for sleep disturbance assessment NMLs and Level above NMLs.)

Table 6-4 Noise management levels

Location	Area Type	Noise Management Level dBA				Sleep Disturbance Criteria (RBL +15dB)
		Standard Daytime	Out of Hours Works			
			Daytime	Evening	Night-time	
Hampton Crescent	R3	60	55	50	45	55
Stoddart Road						
Ozark Street						

The Transport for NSW Construction Noise Estimator was used to predict potential noise impacts and mitigation measures, and contains a number of representative construction scenarios that reflect typical construction activities. Three representative scenarios were used to determine the likely impact of the proposed works, and are presented in Table 6-5.

Table 6-5 Construction scenarios and predicted noise levels

Activity	Description of Activity	Plant/ Equipment	LAeq SWL	LAeq at 7m	Assumptions for Quantitative Assessment		
					No. Units	Activity total Leq SWL	Activity total LA1 SWL
Drainage infrastructure	Excavation of trenches and pits; Delivery and placement of precast pipes and pits; filling and compacting.	Backhoe	110	85	-	115	116
		Franna crane 20t	98	73	1		
		Excavator (tracked) 35t	110	85	1		
		Concrete truck	109	84	4 per hour		
		Truck compressor	75	50	1		
		Vibratory roller	109	84	1		
		Road truck	108	83	4 per hour		
Paving/ asphaltting		Pavement laying machine	114	89	1	118	130

Activity	Description of Activity	Plant/ Equipment	LAeq SWL	LAeq at 7m	Assumptions for Quantitative Assessment		
					No. Units	Activity total Leq SWL	Activity total LA1 SWL
(including concrete sawing)	Delivery of raw materials.	Dump truck	110	85	4 per hour		
		Asphalt truck & sprayer	103	78	1		
	Placement of surface material. Saw cutting.	Concrete truck	109	84	1		
		Smooth drum roller	107	82	1		
		Concrete saw	118	93	1		
Road furniture installation	Signposting and line marking	Road truck	108	83	4 per hour	110	116
		Scissor lift	98	73	1		
		Franna crane 20t	98	73	1		
		Line marking truck	108	83	1		

The assessment found:

- Construction noise levels are generally expected to exceed the NMLs when noisy work is being completed due to the close proximity of receivers at all three sites.
- The highest impacts are expected to occur during the Drainage Infrastructure scenario, which includes excavation works and may at times require noisy items of equipment such as backhoes, rollers or trucks.
- The relatively high noise levels during the noisy phases of works are likely to result in impacts during all periods in which the works occur. The greatest impact would be during the night-time, if works are required to occur during this period.
- It is noted that for most of the works, the noisiest works would only be required for a relatively short period of time. Noise levels and impacts at other times works would be much lower than the worst-case levels predicted.

Additionally, the impacts presented above are worst-case and are based on all equipment working simultaneously in each assessed scenario. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted and there would also be times when no equipment is in use and no impacts occur.

Construction vibration

The potential construction vibration impacts have been determined using the minimum working distances specified in the CNVG. Vibration intensive equipment would be required at times during the works and would include vibratory rollers and ground compaction equipment.

The assessment has assumed a vibratory roller could be used anywhere in the works area at each site. The CNVG notes that the cosmetic damage minimum working distance for a 4-6 tonne vibration roller is 12 m. Works outside of this distance are not expected to result in any potential cosmetic damage impacts.

It is likely that certain receivers are expected to be within the minimum working distance when a vibratory roller is being used.

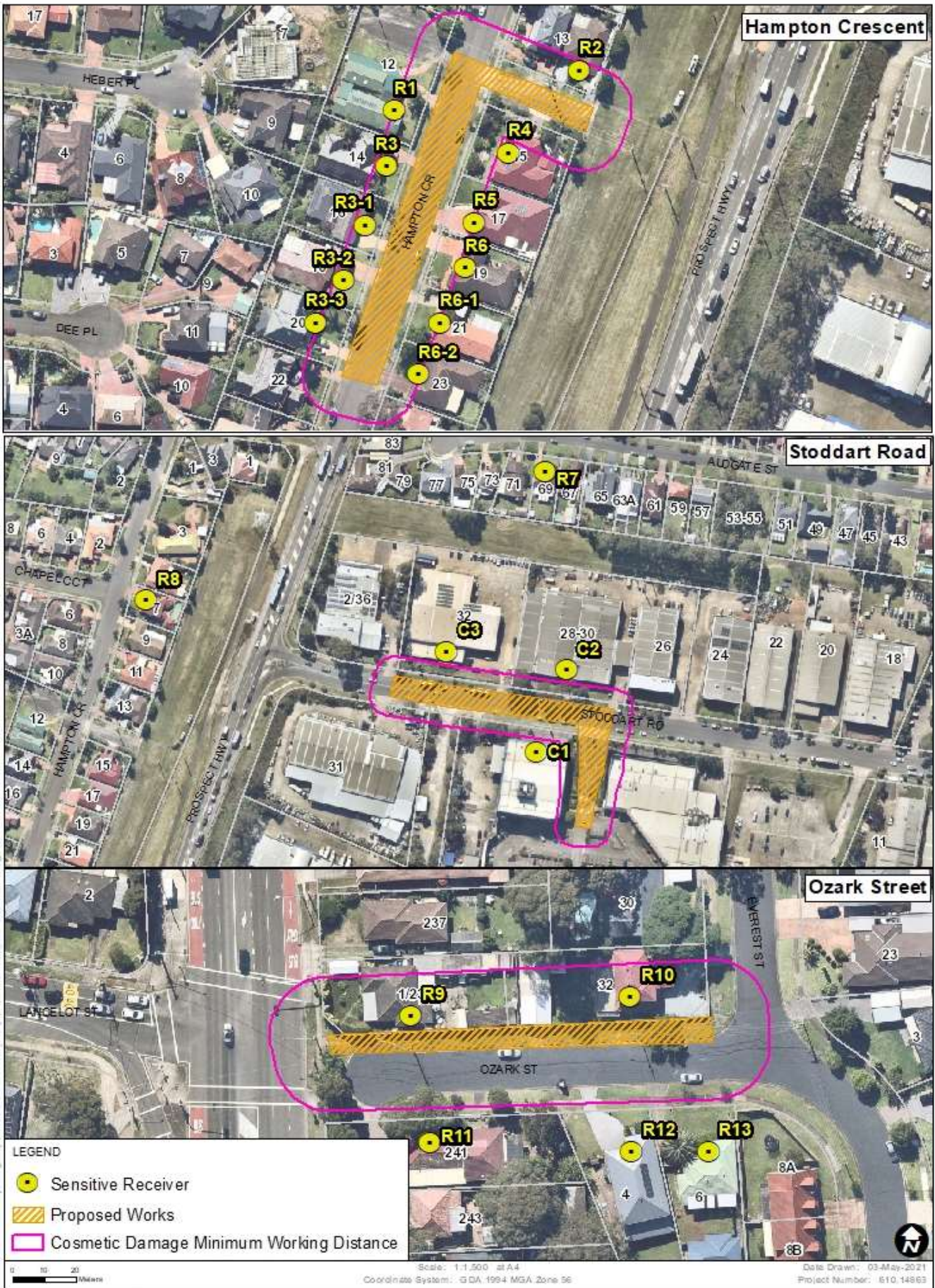


Figure 6-3 Sensitive receivers potentially impacted by vibratory works.

Operational noise

Potential operational noise impacts were assessed by SLR (2021) whereby the predicted noise levels with consideration of the original design for SB01 was compared to the predicted noise levels with the revised design.

The revised design of noise barrier SB01 will likely result in increased impacts to sensitive receivers compared with the previous design. Changes in noise levels are predicted to vary from 0-+11 dBA. Results of the operational assessment are presented in Table 6-6, Figure 6-4 and Figure 6-5.

Table 6-6 Comparison of Predicted Noise Levels and At-Property Treatments

Property ID	Property Address	Predicted Noise Level LAeq (9hour) (dBA)					Difference due to Revised Barrier Location (dBA)
		Original Detailed Design Assessment			Current SB01 Assessment		
		No Barrier	With Previous Barrier	Eligible for Consideration of Treatment?	With Revised Barrier	Eligible for Consideration of Treatment?	
1	91 Aldgate Street	69	56	Y	67	Y	+11
2	89 Aldgate Street	66	55	N	58	Y	+3
3	87 Aldgate Street	63	54	N	54	N	0
4	85 Aldgate Street	65	55	N	57	Y	+2
5	83 Aldgate Street	66	55	N	58	Y	+3
6	81 Aldgate Street	69	63	Y	68	Y	+5

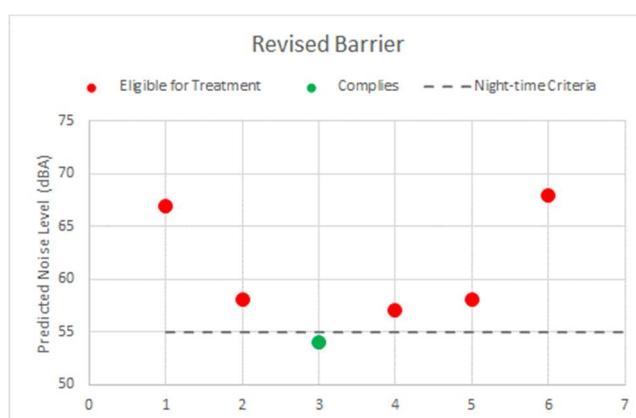
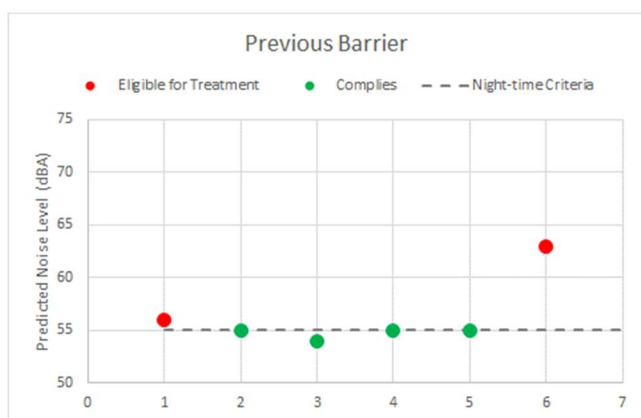


Figure 6-4 Comparison of Predicted Noise Levels and At-Property Treatments – Scatter Graphs

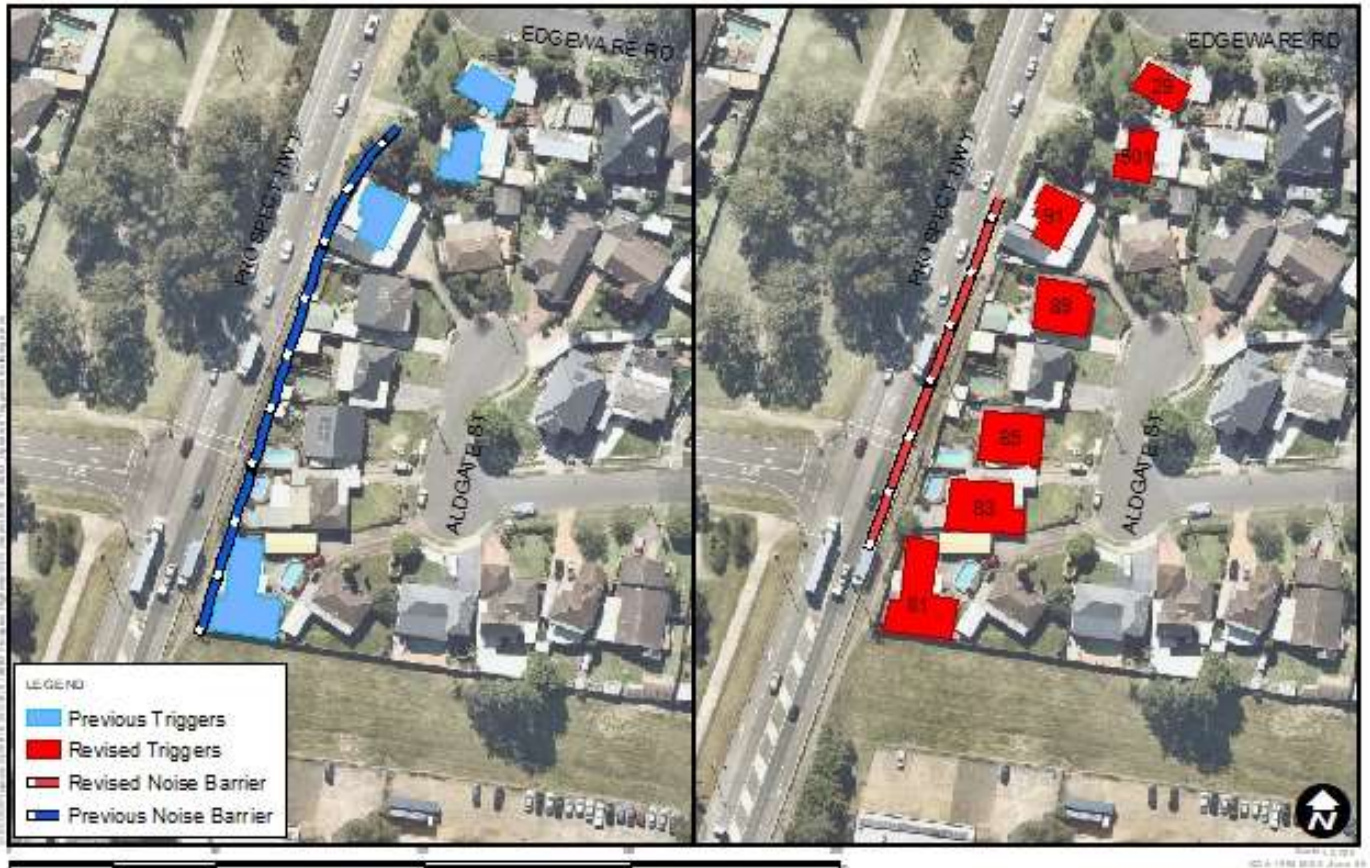


Figure 6-5 Predicted noise levels with previous (left) and revised (right) design for noise wall SB01

The assessment determined:

- The revised alignment of noise barrier SB01 increases road traffic noise levels at the adjacent residential receivers by between 1 and 5 dB for most receivers, which is generally due to the barrier being further away from the receivers, and shorter in length, which allows for greater line-of-sight to Prospect Highway. The northern most receiver (91 Prospect Highway) is predicted to have a larger increase which is due the revised design of the barrier stopping shorter than the previous design.
- Two residential properties immediately behind the barrier (91 and 81 Prospect Highway) were identified as being eligible for consideration of at-property treatment in the previous design.
- Five properties behind the barrier are now identified as being eligible, which is due to the reduced performance of the barrier resulting in noise levels exceeding the 55 dBA LAeq(15hour) night-time criteria.

6.3.3 Safeguards and management measures

Construction noise

Refer to the project REF (2014) for standard safeguard and management measures. The addendum 3 REF additional mitigation measures for construction activities are noted in Table 6-7, Table 6-8 and Table 6-9 below.

Hampton Crescent

Table 6-7 Hampton Crescent Additional mitigation measures

Period	Time Period	Drainage Infrastructure			Paving/Asphalting			Road Furniture Installation		
		R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR

Stoddard Road

Table 6-8 Stoddard Road additional mitigation measures

Period	Time Period	Drainage Infrastructure				Paving/Asphalting				Road Furniture Installation			
		C1	C2, C3	R7	R8	C1	C2, C3	R7	R8	C1	C2, C3	R7	R8
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	-	-	-
	Day (OOHW)	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	-	-	N, R1, DR	-	-	-

Prospect Highway Upgrade

Period	Time Period	Drainage Infrastructure				Paving/Asphalting				Road Furniture Installation			
		C1	C2, C3	R7	R8	C1	C2, C3	R7	R8	C1	C2, C3	R7	R8
	OOHW Period 1	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR
	OOHW Period 2	V, N, R2, DR	N	V, IB, N, PC, SN, R2, DR	V, IB, N, PC, SN, R2, DR	V, N, R2, DR	N	V, N, R2, DR	V, N, R2, DR	V, N, R2, DR	-	V, N, R2, DR	V, N, R2, DR

Ozark Street

Table 6-9 Ozark Street Additional mitigation measures

Period	Time Period	Drainage Infrastructure Works				Paving/Asphalting Works				Road Furniture Installation			
		R9, R10	R11	R12	R13	R9, R10	R11	R12	R13	R9, R10	R11	R12	R13
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V, PC, RO	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR

Table 6-10 Abbreviation definitions for additional mitigation measures

Abbreviation	Measure	Description
N	Notification (letterbox drop or equivalent)	Advance warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of using variable message sign, letterbox drop (or equivalent), web site / social media or a combination to distribute information detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of 5 working days prior to the start of works. The approval conditions for projects may also specify requirements for notification to the community about works that may impact on them.
SN	Specific notifications	"Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than 5 working days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops.
PC	Phone calls	Phone calls detailing relevant information made to identified/affected stakeholders, who have provided their contact details, within seven calendar days of proposed work.
IB	Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities.
RO	Respite offer	Respite Offers should be considered where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed 3 hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers.
R1	Respite Period 1	Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month
R2	Respite Period 2	Night time construction noise in out of hours period 2 shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before 11pm.
DR	Duration respite	Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly.
AA	Alternative accommodation	Alternative accommodation options may be offered (as a last resort) to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. The specifics of the offer

Abbreviation	Measure	Description
		will be identified on a project-by-project basis, however an AA offer is unlikely to be made for maintenance works.
V	Verification	Verification may be required for building or asset condition where works are likely to cause vibration impact or for noise levels following reasonable complaints. See Appendix F of the Construction Noise and Vibration Guideline for more details.

Operational noise

The operational noise assessment identified five properties behind the barrier SB01 as being eligible for consideration of at-property treatment, which is due to the predicted noise levels exceeding the 55 dBA $LA_{eq(15hour)}$ night-time criteria. The revised alignment results in three additional properties being for eligible for consideration of at-property treatment behind the barrier.

6.4 Biodiversity

The subject area considered and assessed by the Biodiversity Assessment Technical Memorandum (Technical Memorandum) comprises areas of potential biodiversity value listed under the *Biodiversity Conservation Act 2016* (BC Act) such as threatened species, threatened populations, threatened ecological communities (TEC) and supporting habitat. Any impact to flora and fauna or their habitat that is additional to the project REF, addendum 1 REF and addendum 2 REF would need to be considered with the combined impact for this proposal.

The biodiversity study area was determined as those areas of biodiversity value that have the potential to be directly or indirectly impacted by any modifications or additional impacts of the Endeavour Energy maintenance tracks. The direct and indirect impacts relating to the proposed maintenance tracks associated with the proposed Prospect Highway Upgrade on the eastern side of Prospect Highway, immediately north and south of the existing pedestrian underpass that links Sher Place with Old Church Lane, Blacktown (refer to Figure 6-6).

The biodiversity study area for considers those values within the study area along with known or likely biodiversity values including those considered by the project REF and addenda 1 REF.

6.4.1 Methodology

Desktop assessment

A desktop review assessment was carried out including:

- The Biodiversity Impact Assessment prepared for the project REF (Sinclair Knight Merz, 2014)
- The project REF (2014)
- The Prospect Highway Upgrade Addendum 1 Review of Environmental Factors (2016)
- The Prospect Highway Upgrade Addendum 2 Review of Environmental Factors (2019)
- A search of the Atlas of NSW Wildlife maintained by the NSW Department of Planning, Industry and Environment (DPIE 28th April 2021) (10km x 10km search area around project site boundary)
- A Protected Matters Search Tool search provided under the EPBC Act (30th April 2021) (5km buffer from the project site boundary)
- Updating vegetation mapping The Native Vegetation of the Sydney Metropolitan Area - Version 3.1 VIS_ID 4489 (OEH, 2016).

Note, the previously mapped Cumberland Plain Woodland (CPW) adjacent to the maintenance track study area was assessed by the project REF and addendum 1 REF as not meeting the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) condition thresholds. This was confirmed by the survey undertaken 20 April 2021 (refer to Appendix D).

Field survey

A field survey of the study area was carried out on 20th April 2021. Surveys carried out for the proposal equated to about 4-person hours including visitation of nearby CPW reference sites. The survey included those sections of the alignment of Prospect Highway as described above with immediately adjacent extents of vegetation. Areas of suitable habitat for threatened species were considered using broadly the methods identified in the project REF. Where native vegetation was identified, the vegetation type relative to listed threatened ecological communities was determined. Suitable potential non-vegetated habitat was considered as part of the survey.

The survey was carried out based on the nature of direct or likely indirect impacts, likely biodiversity habitat and mapped vegetation. All areas impacted by the proposed addendum 3 REF design were ground-truthed.

As the project REF was determined in 2014 the database searches were seven years old so there were rerun and updated. The likelihood of occurrence table was revised for the project boundary and the biodiversity study area. Refer to Appendix B for details those species which have been recorded previously or are predicted to occur in the locality of the proposal



Figure 6-6 Maintenance track location and environmental constraints mapping

6.4.2 Existing environment

The study area and existing environment subject of the assessment is broadly consistent with the description provided in section 6.3 of the project REF and further design refinements as described in the addendum 1 REF. The maintenance tracks were designed to avoid direct impacts to the CPW as mapped in the project REF. The extent of the proposed access tracks as shown in Figure 6-6 include a one metre buffer on all sides to account for any cut/fill batters to support these tracks. The vegetation along the proposed access tracks was ground-truthed and found to be dense exotic grass species *Chloris gayana* and *Cenchrus clandestinus*, along with occasional exotic *Bidens Pilosa*, with no native species noted.

6.4.3 Threatened species

A threatened species assessment was carried out for the project REF, with updates in the addendum 2 REF of additional listed species, changes to threat listing and species not previously recorded in the locality. The biodiversity in the maintenance track area does not support any native vegetation and no particular habitat for threatened fauna species. Habitat for threatened flora species was similarly poor with the study area ground layer being dense and simple extents of two main exotic grass species. A record of the threatened species *Grevillea juniperina subsp. juniperina* previously identified adjacent to the study area was ground-truthed by the current study and the species was not found, neither was any currently suitable habitat found in its previously recorded location.

The project REF found that remnant and planted vegetation to be impacted provides limited but potential habitat for some threatened fauna species, with 13 'mobile' species identified in the background review as having a moderate potential to occur. The Addendum 1 REF found no additional impact to remnant or planted vegetation, and as such did not identify any additional impact to potential vegetated or non-vegetated habitats identified in the project REF.

The current biodiversity study area did not identify any habitat of note for any threatened species, with no candidate threatened species previously recorded in the locality given a moderate or higher likelihood of occurring, and so no assessments of significance were carried out.

6.4.4 Potential Impacts

Construction

Aspects and impacts in the area of the proposed maintenance tracks was considered by the project REF with subsequent modifications being considered by the addendum 1 REF. The proposed maintenance tracks are within the construction footprint of noise wall NW SB 02b as considered in the addendum 1 REF.

No potential direct impacts were identified as additional to those areas or biodiversity values assessed by the project REF and addendum 1 REF. The habitat values assessed at the location of the proposed maintenance tracks were poor with no locally native flora species and no particular habitat for locally native fauna species present.

Operation

Operational impacts of the proposal are not expected to be additional in nature or extent from the assessment carried out in the project REF, and addendum 1 REF.

Test of significance

As there are no likely additional impacts to threatened biodiversity from design modification considered by the Technical Memorandum (refer Appendix D), no assessments of significance were required.

6.4.5 **Safeguards and management measures**

No additional safeguards and management measures have been recommended as there are no likely additional biodiversity impacts assessed in this addendum REF. Refer to the project REF S.6.3 Biodiversity for safeguards and management measures.

Biodiversity offsets

The proposed modification would not remove any additional CPW, threatened species or threatened species habitat.

6.5 Landscape, visual amenity and urban design

A Landscape Character and Visual Impact Assessment (LCVIA) report was prepared for the project REF. To inform the addendum 1 REF (SMEC, 2016), an additional Landscape Character and Visual Amenity assessment of the proposed noise walls was carried out, and an arborist report referenced for the removal of vegetation.

This review of LCVIA carried out for this addendum REF has undertaken in accordance with the Transport for NSW's *Guideline for Landscape Character and Visual Impact Assessment* (Transport for NSW, 2020). The key reasons for this are:

- Revised design of noise barrier SB01, opposite the intersection of Prospect Highway and Harrod Street: the proposed location and length of the noise barrier differs from that presented in the project REF
- Electrical utility ducting works, including trenching at Harrod Street, Hampton Crescent and Stoddart Road
- Communication utility aerial cabling, trenching works and installation of pit on Ozark Street
- Design refinements for property fence and communication trench and pit adjustments on Reservoir Road
- Design refinements for utility works at Harrod Street
- Electrical utility maintenance tracks located adjacent to Prospect Highway.

6.5.1 Existing environment

The existing environment of the proposal corridor and its surroundings are described in detail in section 6.4 of the project REF and section 6.5 of the addendum 1 REF. A total of nine landscape character zones (LCZ) were identified in the project REF. No additional LCZs have been added in the preparation of this addendum REF.

The interaction between LCZs and views with the proposed modifications described in this addendum REF are presented in Table 6-11 below.

Table 6-11 Interactions of proposed modification with LCZs and views

Aspect		Relevant LCZ	View
1	Revised design of noise barrier SB01	LCZ 7	Residences along and motorists using Prospect Highway would have direct views of the proposed noise wall and associated construction works.
2	The electrical utility ducting works, including trenching at Stoddart Road	LCZ 7	Commercial business staff/ clients and motorists using Stoddart Road would have direct views of the ducting works.
3	The electrical utility ducting works, including trenching at Hampton Crescent	LCZ 6	Residents on Hampton Crescent, local road users and motorists on Prospect Highway would have direct views of the ducting works.
4	The communication utility aerial cabling, trenching works and installation of pit on Ozark Street	LCZ 7 & 8	Residents on Ozark Street, local road users and motorists on Prospect Highway would have direct views of the construction activities and benched areas.
5	Design refinements for property fence and communication trench	LCZ 4	Nearby residents and motorists would have direct views of works and fence.

Aspect	Relevant LCZ	View
and pit adjustments on Reservoir Road		
6 Design refinements for utility works at Harrod Street	LCZ 7	Residents on Harrod Street, local road users and motorists on Prospect Highway would have direct views of the works.
7 Electrical utility maintenance tracks Prospect Highway (chainage 1930-2170)	LCZ 7	Motorists using the Prospect Highway would have direct views of the access track, vegetation removal (EEC as per BC Act) and associated construction works.
8 Proposal boundary modification: Prospect Highway (chainage 3380)	LCZ 8	Nearby residents and motorists using the Prospect Highway would have direct views of the cleared vegetation and associated construction works.
9 Proposal boundary modification: Prospect Highway (chainage 2640)	LCZ 8	Nearby residents and motorists using the Prospect Highway would have direct views of the cleared vegetation and associated construction works.
10 Proposal boundary modification: Prospect Highway (chainage 1540-1640)	LCZ 7	Nearby residents and motorists using the Prospect Highway would have direct views of any cleared vegetation and associated construction works.
11 Line Marking on Ponds Road and Keyworth Drive	LCZ 4 & 8	Motorists would have a direct view of works and new road markings.

6.5.2 Potential impacts

The potential impacts of the modifications described in this addendum REF on LCZs and visual aspects are described below.

Landscape character

The potential impacts during construction are outlined in Table 6-12 below.

Table 6-12 Landscape character impacts

Landscape Character Zone	Potential impacts
LCZ 4	<p>The landscape character impact of the modifications described in this addendum REF on this LCZ would be negligible to low.</p> <p>Property fence adjustments would have temporary minor impacts on the landscape character of LCZ 4 during construction. The fence design will purposefully match the existing property fence line and as such no long term impacts are anticipated.</p> <p>Utility works at Reservoir Road would have temporary minor impacts on LCZ 4 during construction only. The ground surface would be reinstated following completion of works.</p>

Landscape Character Zone	Potential impacts
<p>LCZ 6</p>	<p>The landscape character impact of the modifications described in this addendum REF on this LCZ would be negligible to low.</p> <p>The construction activities associated with the communication utility ducting works on Stoddart Crescent would not permanently alter the landscape features, and the ground surface is to be reinstated following any intrusive works. As such there would be no impact to the sensitivity rating assessed in the project REF or addendum 1 REF.</p>
<p>LCZ 7</p>	<p>The landscape character impact of the modifications described in this addendum REF on this LCZ would be negligible to low.</p> <p>The existing LCZ is described in the project REF as “highly modified arterial road landscape consisting of residential, urban parkland and electricity transmission uses”.</p> <p>The noise barrier (SB01) was previously assessed in the project REF. A refinement in design resulted in SB01 being located closer to the road verge, and reduced in length from 128 m to 90 m. The proposed amended noise wall design is not considered to have an impact on the existing sensitivity of LCZ 7.</p> <p>Construction activities associated with electrical utility ducting works on Hampton Crescent and communications ducting at Ozark Street would have a minor impact on the landscape sensitivity and would be temporary in nature. The ground surface would be reinstated at the finalisation of the ducting works. These works would have no long-term impacts on the existing sensitivity of LCZ 7.</p> <p>Construction activities associated with the electrical utility maintenance tracks would have negligible impacts on the landscape character. Some benching may be required to establish level tracks, however the location of the tracks are downgradient on a sloped embankment, are confined to the ground surface and therefore are not considered to have an impact on the existing sensitivity of LCZ 7.</p>
<p>LCZ 8</p>	<p>The landscape character impact of the modifications described in this addendum REF on this LCZ would be negligible to low.</p> <p>This LZC is described in the project REF as sharing similar characteristics to LCZ 7, with highly modified road landscape surrounded primarily by residential properties.</p> <p>Construction activities associated with communication utility ducting works on Ozark Street would have a minor impact on the landscape sensitivity and would be temporary in nature. The ground surface would be reinstated at the finalisation of the ducting works. These works would have no long-term impacts on the existing sensitivity of LCZ 8.</p> <p>Utility works at Harrod Street would have temporary minor impacts on LCZ 8 during construction only. The ground surface would be reinstated following completion of works.</p>

Visual impacts

The predicted visual impacts of the proposed modifications are described in the following section.

Design refinement of approved noise barrier SB01

The visual impact of the installation of SB01 was assessed in section 6.5 of the addendum 1 REF. The design refinement of SB01 is minor in nature, including relocation from the proposal boundary to the road

kerbside, and shortened length. The shortened length would reduce the visual impact from the original design length. There would be no change to visual impacts described in the addendum 1 REF.

Communication or electrical utility ducting works

The utility ducting works visual impacts at Ozark Street, Stoddart Road and Hampton Crescent would primarily be confined to the construction phase of the project. Construction fencing would be erected around the work area and potential laydown and stockpile areas. The works would be short-term in nature, and the ground surface at all three locations reinstated and therefore are not considered to increase the visual impact of the project in these areas.

A pit is to be installed at Ozark Street. The pit would be at ground level and would therefore have **negligible** visual impacts.

Electrical utility maintenance track

Electrical utility maintenance tracks proposed on the westbound side of the Princes Highway would involve minor earthworks to level the ground and construction of hardstand tracks. The tracks would be confined to the ground surface and therefore would have **negligible** to **minor** visual impacts.

Vegetation clearing

Removal of a number of trees is proposed on Prospect Highway at various locations (chainage 3380, chainage 2640 and chainage 1540-1640). The visual impacts would be **negligible** to **minor** in nature. The removal of these trees was considered by the addendum 1 REF and outlined in an arborist report contained in the addendum 1 REF.

6.5.3 Safeguards and management measures

No additional safeguards and management measures are recommended based on the potential landscape character and visual impact assessed in this addendum REF.

6.6 Socio-economic

6.6.1 Existing environment

As described in Section 6.8 of the project REF, Prospect Highway provides a key link for the local community, providing access between residential neighbourhoods and schools, and servicing commercial and industrial areas. Existing land uses in the updated boundary as assessed in this addendum REF 3 include:

- Low-density residential, generally to the east and west of the proposal
- Public recreation, generally along the road corridor
- Commercial/ industrial adjoining the southern portion of the proposal, just north of the Great Western Highway
- Road corridor (including Prospect Highway, Stoddard Avenue, Hampton Crescent, Ozark road and Ponds road).

6.6.2 Potential impacts

Access to businesses on Stoddart Road including Homemaker Prospect and other commercial and industrial properties would be impacted as a result of the proposed electricity utility ducting works. Impacts to access have potential to delay customers entering and exiting these businesses. Any impact to trade of these businesses would be expected to be short term and **minor** in nature.

Access to residences on Harrod Street, Keyworth Drive, Hampton Crescent, Ozark Street and Prospect Highway would be impacted as a result of the proposed electricity and communication utility works. Any impact to residence access would be expected to be short term and **minor** in nature.

These impacts would be during the construction phase only, with no impacts resulting from the operational phase of the proposal. There would be no material difference between this addendum 3 REF and the assessment of the project REF which considered impacts to the Homebase Centre on Stoddart Road and found the project may result in reduced trade during construction.

6.6.3 Safeguards and management measures

No additional safeguards and management measures to those outlined in the project REF are recommended based on the socio-economic impact assessed in this addendum REF.

7 Environmental management

7.1 Environmental management plans

Several 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, the management measures proposed in the Project REF, addendum 1 REF and addendum 2 REF and detailed below 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 safeguards and management measures

Environmental safeguards and management measures for the Prospect Highway Upgrade are summarised in Table 7-1. The safeguards and management measures will be incorporated into the detailed design phase of the proposed modification, the CEMP and the PEMP 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.

Additional mitigation measures (AMM) for Noise and Vibration are summarised in Table 7-2, Table 7-3 and Table 7-4. Abbreviation definitions of AMMs is provided in Table 7-5.

Table 7-1 Summary of site specific environmental mitigation measures and safeguards

No.	Impact	Environmental safeguards	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 Contractor specifications for the proposal Contractor’s Environmental Management Plan. 	Project manager	Pre-construction
2	General	A risk assessment would be carried out on the proposal in accordance with the TfNSW for NSW Audit Pack and PMS risk assessment procedures to determine an audit and inspection program for the works. The recommendations of the risk assessment are to be implemented. A review of the risk assessment must be undertaken after the initial audit or inspection to evaluate if the level of risk chosen for the project is appropriate. Any works 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 Regional environmental staff	Pre-construction and After first audit
3	General	The environmental contract specification G36, G38 and G40 must be forwarded to the TfNSW 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 TfNSW Senior Environmental Officer.	Project manager	Pre-construction
4	General	The TfNSW Project Manager must notify the TfNSW Environmental Officer Central Region at least 5 days prior to work commencing.	Project manager	Pre-construction
5	General	All businesses and residences likely to be affected by the proposed works must be notified at least 5 working days prior to the commencement of the proposed activities.	Project manager	Pre-construction
6	General	Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Contractor	Pre-construction and Construction as required

No.	Impact	Environmental safeguards	Responsibility	Timing
7	Consultation	TfNSW would continue to provide updates regarding the progression of the proposal to stakeholders and the community via the TfNSW website, emails and regular mail.	TfNSW	Detailed design, Pre-construction and Construction
8	Traffic management	A construction traffic management plan would be prepared and implemented in accordance with the Traffic Control and Worksites, version 4.0 (Roads and Maritime, June 2010). The construction traffic management plan would enable the safe management of traffic, provide for the safety of construction personnel and minimise impacts on the local community.	Construction contractor	Pre-construction
9	Emergency services	Consultation with emergency service authorities would be undertaken during development of the detailed design.	TfNSW	Detailed design
10	Property access	Vehicular property access would be maintained where possible including pre-schools, places of worship and all commercial premises Consultation with property owners would be undertaken prior to any changes to property accesses.	TfNSW	Construction
11	Property access	Potential private property adjustment works for fronting properties would be considered during detailed design, where required, to improve vehicle storage and turning capacity This would be subject to a reasonable and feasible assessment with property owners. Affected residents would be kept informed during detailed design.	TfNSW	Detailed design
12	Shelly Public School	Temporarily relocate maintenance access and garbage collection at Shelly Public School in consultation with the school.	TfNSW Construction contractor	Construction and Operation
13	Shelly Public School	TfNSW will investigate measures to improve traffic flow and access to Shelly Public School as part of the proposal in consultation with the school and Blacktown City Council Pedestrian fencing and controlled access to Shelly Public School via Hadrian Avenue and Pelleas Streets would be introduced to remove access to Shelly Public School from Prospect Highway.	TfNSW	Detailed design and Construction
14	Pedestrians and cyclists	Pedestrian and cyclist access is to be maintained throughout construction. Provision of signposting outlining the pedestrian and cyclist diversion routes would be displayed during construction.	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		There will be advance notification of any construction works that affect pedestrians and cyclists.		
15	Bus services	Access to appropriate bus stop locations would be maintained during construction in consultation with bus operators.	Construction contractor	Construction
16	Bus services	Ongoing updates on locations and access to bus stops would be provided to the community during construction period to ensure that disruption is minimised	Construction contractor	Construction
17	Operational noise	<p>During the detailed design stage of the proposal, further investigations of all feasible and reasonable mitigation options for affected receivers would be subject to assessment in line with the TfNSW Environmental Noise Management Manual (RTA, 2001) and NSW Road Noise Policy (OEM, 2011).</p> <p>A noise barrier assessment would be undertaken to determine the extent and design of any potential noise barriers. Affected residents would be kept informed during the detailed design process.</p>	TfNSW	Detailed design
18	Operational noise	Any mitigation measures provided to control operational noise impacts shall be implemented as early as practicable to also provide a benefit during some of the construction phase. Where possible, noise mitigation treatment would be planned to occur as preliminary works of the construction phase.	TfNSW	Construction
19	Operational noise	A post-construction noise monitoring program (including simultaneous traffic counts) would be undertaken in accordance with TfNSW Environmental Noise Management Manual (RTA 2001) within six to twelve months of opening once traffic flows have stabilised in order to verify the noise assessment. The assessment would be used to identify treatment required for receivers who were not identified during concept design and REF. It would lead to additional treatment for already treated dwellings; Results of this assessment would be available to the community.	TfNSW	Post construction
20	Construction noise	<p>A Construction Noise and Vibration Management Plan (CNVMP) would be prepared. This plan would include but not be limited to:</p> <ul style="list-style-type: none"> • A map indicating the locations of sensitive receivers including residential properties • A quantitative noise assessment in accordance with the EPA interim Construction Noise Guidelines (DECCW, 2009) 	Construction contractor	Pre-construction and Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> • Management measures to minimise the potential noise impacts from the quantitative noise assessment and for potential works outside of standard working hours (including implementation of EPA interim Construction Noise Guidelines (DECCW, 2009) • A risk assessment to determine potential risk for activities likely to affect receivers (for activities undertaken during and outside of standard working hours) • Mitigation measures to avoid noise and vibration impacts during construction activities including those associated with truck movements • A process for assessing the performance of the implemented mitigation measures • A process for documenting and resolving issues and complaints • A construction staging program incorporating a program of noise and vibration monitoring for sensitive receivers • A process for updating the plan when activities affecting construction noise and vibration change • Identify in toolbox talks where noise and vibration management is required • Consider construction compound layout so that primary noise sources are at a maximum distance from sensitive receivers (primarily residential receivers) • Locate compressors, generators, pumps and any other fixed plant as far from residences as possible and behind site structures • Vehicle delivery times will be scheduled where feasible to the recommended construction hours to minimise noise impacts from heavy vehicle movements and deliveries <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 • 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 		

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> Any out of hours works would comply with the TfNSW Noise Management Manual – Practice Note VII All noise complaints will be investigated and appropriate mitigation measures implemented where practicable to minimise further impacts <p>If deemed necessary, attended compliance noise and vibration monitoring would be undertaken upon receipt of a complaint. Monitoring would be reported as soon as possible. In the case that exceedances are detected, the situation would be reviewed in order to identify means to minimise the impacts to residences.</p>		
21	Vibration management	<p>A vibration assessment is to be prepared and included in the NVMP. The vibration assessment is to include (as a minimum):</p> <ul style="list-style-type: none"> Identification of potentially affected properties/receivers A risk assessment to determine the potential for discrete work activities to affect receivers a map indicating the locations considered likely to be impacted and those requiring building condition surveys outline a monitoring program A process for assessing the performance of the implemented mitigation measures A process for resolving issues and conflicts Where construction activities may cause damage through vibration a Building Condition inspection of these items must be undertaken Select alternative, lower-impact equipment or methods where possible, particularly in the vicinity of dwellings and heritage structures. 	Contractor	Pre-Construction and Construction
22	Vibration management	<p>Sensitivity testing for vibration generated by construction equipment will be undertaken in the vicinity of, but not immediately adjacent to the St Bartholomew's Church</p> <p>The sensitivity testing will identify targets and safe buffer distances for the use of vibration producing equipment around St Bartholomew's church. The results of the sensitivity testing and any targets or buffer distances identified will be documented in a Management Plan for works adjacent to St Bartholomew's Church</p> <p>A program of monitoring vibration will be included in the Management Plan, which will form part of the CEMP.</p>	Construction contractor	Pre-construction
23	Vibration management	Building condition surveys will be undertaken for any building or structure identified as having the potential to be affected by vibration impacts during construction works	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<p>A condition survey of the properties along Hampton Crescent that are adjacent to the two way link road construction area will be undertaken along with any other areas likely to be adjacent to construction</p> <p>The condition survey would be provided to each property owner at least two weeks prior to the commencement of construction.</p>		
24	Removal or modification of native vegetation	<p>Biodiversity Management Plan (BMP) is to be prepared and included within the CEMP. 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 TfNSW representatives to confirm clearing boundaries and sensitive location prior to commencement of works • 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. 	Construction contractor	Pre-construction
25	Pre-clearing surveys	<p>Where possible, pre-clearing surveys would be conducted during the optimal season and climatic condition. These surveys would be undertaken by an ecologist prior to vegetation removal.</p>	Construction contractor	Pre-construction
26	Spread of weeds	<p>A weed management plan would be prepared in accordance with TfNSW Biodiversity Guidelines (Guide 6) and incorporated into the BMP and would address:</p> <ul style="list-style-type: none"> • Identification of the weeds on site (confirm during ecologist pre-clearing inspection) <p>Weed management priorities and objectives:</p> <ul style="list-style-type: none"> • Sensitive environmental areas within or adjacent to the site • Location of weed infested areas. • Weed control methods • Measures to prevent the spread of weeds, including machinery hygiene procedures and disposal requirements • A monitoring program to measure the success of weed management • Communication with local Council noxious weed representative. 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
27	Introduction or spread of pests and diseases	<p>If the detailed design risk assessment determines that hygiene procedures are required on site, the BMP is to include hygiene protocols to prevent the introduction and spread of all pathogens as specified in Biodiversity Guidelines: Protecting and managing biodiversity on Roads and Maritime projects (Roads and Maritime, 2011)</p> <p>All pathogens (e.g. Chytrid, Myrtle Rust and Phytophthora) are to be managed in accordance with the TfNSW Biodiversity Guidelines - Guide 7 (Pathogen Management) and DECC Statement of intent 1: infection of native plants by <i>Phytophthora cinnamomi</i> (for Phytophthora).</p>	Construction contractor	Pre-construction
28	General impacts on threatened species and ecological communities	If unexpected threatened flora or fauna are discovered, works would stop immediately and the TfNSW Biodiversity Guideline - Unexpected Threatened Species Finds Procedure (Roads and Maritime 2011) implemented.	Construction contractor	Pre-construction
29	Re-establishment of native vegetation	As stated in the Approved Project REF, the loss of 0.69 hectares of Cumberland Plain Woodland does not trigger the biodiversity offsetting requirements in accordance with TfNSW's Offset Policy (2011). The additional 0.64 hectares of Cumberland Plain Woodland to be removed as part of the proposal does not result in a significant impact, and similarly, does not require biodiversity offsets to be secured in accordance with TfNSW's Offset Policy (2011).	Construction contractor	Construction
30	Removal or modification of native vegetation	An exclusion zone would be established around the Freshwater Wetland adjacent to the proposed compound site on Thornley Road.	Construction contractor	Pre-construction
31	Removal or modification of native vegetation	Identify known Cumberland Plain Woodland areas and exclusion zones during induction of all site personnel.	Construction contractor	Pre-construction
32	Removal or modification of native	The construction footprint would be identified and marked before construction and exclusion zones established in retained areas of habitat particularly in remnant vegetation areas.	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
	vegetation outside the construction footprint			
33	Accidental removal or modification of native vegetation not within the proposal area	Permanent fencing would be established along the edges of the high condition Cumberland Plain Woodland remnant next to Timbertop Reserve before construction. This would help to avoid impacts to this area during construction and operation.	Construction contractor	Pre-construction
34	Minimising fauna injury and mortality	In circumstances where the handling of fauna is completely unavoidable, best practice methods would be followed as outlined in the TfNSW Biodiversity Guidelines - Guide 9: Fauna Handling (RTA2011).	Construction contractor	Pre-construction
35	Landscape character and visual impacts	<p>During detailed design, the landscape design principles and streetscape (planting) would be reviewed to ensure that they are consistent with the following factors:</p> <ul style="list-style-type: none"> • The outcomes of the biodiversity assessment. • The requirement to maintain the function of the drainage easement corridor • Maintenance requirements in the vicinity of the Blacktown Road intersection • Maintenance requirements for the potential noise barriers • Road safety requirements • Blacktown City Council's visual character and maintenance requirements <p>This would be done in consultation with TfNSW environment staff and Blacktown City Council.</p>	TfNSW Design contractor	Detailed design
36	Landscape character and visual impacts	<p>During detailed design, the design including landscape plans are to incorporate the design principles outlined in the Landscape Character, Visual impact Assessment and Urban Design Report. These include:</p> <ul style="list-style-type: none"> • To ensure that the design reinforces the identity and functionality of an arterial road type 	TfNSW Design contractor	Detailed design

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> To ensure that existing land uses is considered and integrated in to the design of the road alignment To contribute to the future urban planning of the adjoining development precincts including its transport and access needs To respond to natural patterns including creek lines and drainage corridors and vegetation communities. This includes the use of local plants consistent with the existing communities either side of the alignment in order to unify the crossing with the existing corridor, and, use of advance stock to escalate the revegetation where appropriate To provide a unified and consistent approach to the design of bridges along the corridor 		
37	Landscape character and visual impacts	An urban design contractor from the TfNSW panel would 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.	TfNSW Design contractor	Detailed design
38	Landscape character and visual impacts	The design of vegetative screening would occur in consultation with adjoining land owners.	TfNSW Design contractor	Detailed design
39	Landscape character and visual impacts	The footprint for construction work would be kept to a minimum to ensure existing stands of vegetation remain intact wherever possible and to screen adjoining sensitive receivers.	TfNSW Design contractor	Detailed design
40	Landscape character and visual impacts	<p>The design of potential noise barriers will be undertaken during detailed design and will take into consideration the TfNSW Noise Wall Design Guidelines (RTA 2007). The following principles will be considered during the design of the noise barriers:</p> <ul style="list-style-type: none"> Materials, colours and textures will be selected to break up the dominant nature of the noise barrier <p>Transparent panels will be incorporated into sections of the noise barrier where it has potential to block solar access to adjacent residential properties.</p>	TfNSW Design contractor	Detailed design
41	Landscape character and visual impacts	The visual impact of the retaining wall along the two way link road would be reduced by the establishment of native vegetation screening and the inclusion of urban design principles into the design of the wall façade.	TfNSW Design contractor	Detailed design

No.	Impact	Environmental safeguards	Responsibility	Timing
42	Construction related visual impacts	Fencing with material attached (for example, shade cloth) would be provided around the construction compounds and other areas to screen views of the construction compounds from adjoining properties.	Construction contractor	Construction
43	Flood and drainage design	Final layout and detail of the drainage system including swale design and scour protection will be refined during detailed design in consultation with the TfNSW Senior Environmental Officer.	TfNSW Design contractor	Detailed design
44	Flood and drainage design	Further flood modelling including a detailed afflux assessment would be undertaken during detailed design to confirm impacts to surrounding land uses.	TfNSW Design contractor	Detailed design
45	Water quality management	<p>A Soli and Water Management Plan (SWMP) will be prepared as part of the CEMP in accordance with the requirements of TfNSW contract specification G38 prior to the commencement of construction. The SWMP will also address the following:</p> <ul style="list-style-type: none"> • RMS Technical Guideline: Temporary Stormwater Drainage for Road Construction, 2011 • RMS Technical Guideline: Environmental Management of Construction Site Dewatering, 011 <p>The SWMP would detail the following as a minimum:</p> <ul style="list-style-type: none"> • Identification of catchment and sub-catchment areas, high risk areas and sensitive areas • Sizing of each of the above areas and catchment • The likely volume of run-off from each road sub- catchment • Direction of flow of on-site and off-site water • Separation of on-site and off-site water • The direction of run-off and drainage points during each stage of construction • The locations and sizing of sediment traps such as sump or basin as well as associated drainage • Dewatering plan which includes process for monitoring, flocculating and dewatering water from site (i.e. sediment basin and sumps) • The staging plans, location, sizing and details of creek alignment and realignment controls for scour protection and bank and bed stabilisation including those used during construction and long term 	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> • A mapped plan identifying the above • A process to routinely monitor the BOM weather forecast • Preparation of a wet weather (rain event) plan which includes a process for monitoring potential wet weather and identification of controls to be implemented in the event of wet weather. These controls are to be shown on the ESCPs • Provision of an inspection and maintenance schedule for ongoing maintenance of temporary and permanent erosion and sedimentation controls. 		
46	Spills	Emergency wet and dry spill kits would be kept on site at all times and all staff would be made aware of the location of the spill kit and trained in its use.	Construction contractor	Construction
47	Spills	The vehicles refuelling process will include a person attending the refuelling facility / vehicle and a spill kit on the vehicle.	Construction contractor	Construction
48	Water quality management	Vehicle wash down and/or cement truck washout is to occur in a designated bunded area and least 50 metres away from water bodies and surface water drains.	Construction contractor	Construction
49	Spills	Any fuel, oils or other liquids stored on site would be stored in an appropriately sized impervious bunded at least 120% larger than the greatest container and in an area least 50 metres away from water bodies.	Construction contractor	Construction
50	Spills	If a spill or incident occurs, the TfNSW Environmental incident Classification and Management Procedure is to be followed and the TfNSW Contract Manager notified immediately.	Construction contractor	Construction
51	Potential physical impact on non-Aboriginal heritage items during construction	<p>A Non-Aboriginal Heritage Management plan would be prepared and included in the CEMP. This plan would include but not be limited to the following:</p> <ul style="list-style-type: none"> • A map identifying locations of items or sites (including curtilages) which are to be protected and those which are to be destroyed/impacted and no-go zones • Identification of potential environmental risks/impacts due to the works/activities • Management measures to minimise the potential risk • Mitigation measures to avoid risk of harm and the interface with work activities on site • Implementation of mitigation measures to protect identified heritage items or areas 	TfNSW Construction contractor	Pre-Construction and Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> Identify in toolbox talks where management of non- aboriginal heritage is required such as identification of no-go zones and responsibilities under the Heritage Act 1977 and any obtained permits or exemptions A stop works procedure in the event of actual or suspected potential harm to a heritage feature/place Requirement to comply with TfNSW Standard Management Procedure Unexpected Archaeological Finds, 2012. 		
52	Non-Aboriginal heritage	<p>A s57 exemption for the project works within the SHR curtilage should be obtained prior to works commencing. Note the following:</p> <ul style="list-style-type: none"> The exemption is unlikely to allow impact to, or removal of, archaeological remains which have not been previously identified in the archaeological assessment for the project The exemption is unlikely to allow impact to, or removal of, state significant relics <p>Where substantial intact archaeological relics of state or local significance, not identified in the original assessment or during the test excavation program, are unexpectedly discovered during excavation, work must cease within the affected area and the Heritage Council must be notified in writing in accordance with section 146 of the NSW Heritage Act. Depending on the nature of the discovery, additional assessment and possibly an excavation permit may be required prior to the recommencement of excavation in the affected area</p>	TfNSW	Pre-Construction
53	Potential physical impact on non-Aboriginal heritage items during construction	A condition survey would be undertaken before the start of work by a qualified contractor and a building condition report prepared for heritage structures.	TfNSW Construction contractor	Pre-Construction and Construction
54	Potential vibration impacts to St Bartholomew's Church and Cemetery and	Vibration management procedures would be developed and implemented where works resulting in vibration are undertaken within the vicinity of identified heritage items.	Construction contractor	Pre-Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
	the house at 29 Old Church Lane, Prospect			
55	Unexpected heritage find during construction	If unexpected heritage item/s, archaeological remains or potential relics are uncovered during the works, all works would cease in the vicinity of the material/find and the TfNSW Standard Management Procedure Unexpected Archaeological Finds 2012 would be followed.	TfNSW Construction contractor	Pre-Construction and Construction
56	Physical impacts to the Former Great Western Road, Prospect	Direct physical impacts to the Former Great Western Road would be avoided, if possible, and dependent on the status of the heritage listing, an exemption from approval under Section 57(2) of the Heritage Act 1977 would be requested and/or the Heritage Division would be consulted before work start.	TfNSW	Pre-Construction
57	Unexpected heritage find during construction	If unexpected Aboriginal heritage item/s, archaeological remains or potential relics are uncovered during the works, all works would cease in the vicinity of the material/find and the RMS Standard Management Procedure Unexpected Archaeological Finds 2012 would be followed.	TfNSW Construction contractor	Pre-Construction and Construction
58	Property acquisition	All land acquisitions would be conducted in line with the TfNSW Land Acquisition Policy and the requirements of the Land Acquisition (Just Terms) Compensation Act 1991.	TfNSW	Pre-Construction
59	Community	<p>Communication Plan would be prepared and included in the Construction Environmental Management Plan (CEMP). The Communication Plan would include:</p> <ul style="list-style-type: none"> Requirements to provide details and timing of proposed activities to affected residents and businesses including St Martins Shopping Village/Blacktown Mega Centre, Medlife Medical Centre, Army cadet base (Safe Base Bravo Shelley Public School, Blacktown Road Children's Centre, Mitchell High School, St Mark's Coptic Catholic Church, Homebase Prospect, Blacktown City Council and Holroyd City Council Contact name and number for complaints Procedure to notify adjacent land users for changed conditions during the construction period such as traffic, pedestrian or driveway access 	Construction contractor	Pre-Construction and Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> The communications plan would be prepared in line with G36 requirements and TfNSW Community Engagement and Communications Manual (2012) The communications plan would include a complaint handling procedure and register and maintained for the duration of the proposal. 		
60	Community	Residents would be informed prior to any interruptions to utility services that may be experienced as a result of utilities relocation.	Construction contractor	Pre-Construction and Construction
61	Erosion and sedimentation	<p>During detailed design an Erosion and Sedimentation Management Report is to be prepared. The report is to include (as a minimum):</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 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 Diversion of off-site water around or through the site or details of separation of on-site and off- site water The direction of runoff and drainage points during each stage of construction The locations and sizing of sediment basins / sumps as well as associated drainage to direct site water to the basin or sumps A mapped plan identifying the above at all major construction stages A review process by a soil conservationist and a process for updating the report to address any recommendations. 	TfNSW Design contractor	Detailed design
62	Erosion and sedimentation	The Erosion and Sedimentation Management Report would be provided to TfNSW Environment Manager for review and verification prior to the construction tender.	TfNSW	Detailed design and Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
63	Erosion and sedimentation	A soli conservationist from the TfNSW Erosion, Sedimentation and Soli Conservation Consultancy Services Register is to be engaged to review the Erosion and Sedimentation Management Report and conduct routine inspections of the construction works.	TfNSW	Pre-construction
64	Erosion and sedimentation	<p>An Erosion and Sedimentation Control Plan (ESCP) would be prepared prior to construction and is to include as a minimum:</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 • The likely run-off from each sub-catchment • Separation of on-site and off-site water • The direction of run-off and drainage points during each stage of construction • Direction of flow of on-site and off-site water • The locations and sizing of sediment basins or sumps and associated catch drains and/or bunds • The locations of other erosion and sediment control measures (e.g. rock check dams, swales and sediment fences) • Controls/measures to be implemented on wet weather events • A mapped plan identifying the above • A dewatering procedure for onsite water and basins • A process for reviewing and updating the plan on a fortnightly basis and/or when works alter. 	Construction contractor	Pre-construction
65	Erosion and sedimentation	<p>Erosion and sediment control measures are to be implemented and maintained to:</p> <ul style="list-style-type: none"> • Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets • Reduce water velocity and capture sediment on site • Minimise the amount of material transported from site to surrounding pavement surfaces <p>Divert clean water around the site. (In accordance with the Landcom / Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book)).</p>	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
66	Erosion and sedimentation	All stockpiles will be designed, established, operated and decommissioned in accordance with the TfNSW Stockpile Site Management Guideline, 2011.	Construction contractor	Construction
67	Erosion and sedimentation	<p>A Stabilisation Plan is to be prepared and included in the SWMP. The stabilisation plan is to include but not be limited to the following:</p> <ul style="list-style-type: none"> • Identification and methodology of techniques for stabilisation of site • Identification of area on site for progressive stabilisation • Stabilisation is to be undertaken of areas, including • Stockpiles and batters exposed for a duration of 2 weeks or greater. For example, covering with geotextile fabric, stabilised mulch, soli binder or spray grass • Identification of areas on site for progressive • Permanent stabilisation such as implementation of landscaping. 	Construction contractor	Construction
68	Erosion and sedimentation	Erosion and sedimentation controls are to be checked and maintained on a regular basis and after a rain event of 10mm or greater (including clearing of sediment from behind barriers) and records kept and provided on request.	Construction contractor	Construction
69	Erosion and sedimentation	Disturbed surfaces would be compacted and stabilised in anticipation of a rain event to reduce the potential for erosion.	Construction contractor	Construction
70	Erosion and sedimentation	<p>Controls would be implemented at exit points to minimise the tracking of soli and particulates onto pavement surfaces</p> <p>Any material transported onto pavement surfaces would be swept and removed at the end of each working day and prior to rainfall.</p>	Construction contractor	Construction
71	Erosion and sedimentation	The Soil and Water Management Plan would include a contingency plan for any acid sulfate soils or salinity identified during the construction phase.	Construction contractor	Construction
72	Soil and water	A Soil and Water Management Plan (SWMP) will be prepared and implemented as part of the CEMP. The SWMP will identify all reasonably foreseeable risks relating to soil erosion and water pollution and describe how these risks will be addressed during construction.	Construction Contractor	Pre-Construction Construction
73	Soil and water	A soil conservation consultant is required to work in collaboration with the design team.	TfNSW	Pre-Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
74	Water discharge	Outlet discharge requirements for the proposal will be in accordance with TfNSW Technical Guideline: Temporary stormwater drainage for road construction 2011	Construction Contractor	Operation
75	Contamination management	<p>A Contamination Management Plan (CMP) will be prepared in accordance with the Contaminated Land Act 1997 and relevant EPA Guidelines. This plan will be form part of the CEMP and will include at a minimum:</p> <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 • Monitoring and sampling procedure for landfill seepage (leachate) • A procedure for dewatering and disposal of potentially contaminated liquid waste • In the event that indications of contamination are encountered (known and unexpected, including odorous or visual indicators), work in the area will immediately cease until a contamination assessment can be prepared to advise on the need for remediation or other action, as deemed appropriate • A process for reviewing and updating the plan. <p>The CMP would be reviewed by TfNSW Senior Environment Officer and TfNSW Land Management Specialist prior to the commencement of works.</p>	Construction contractor	Pre-construction
76	Hazardous materials	<p>A hazardous materials assessment will be carried out before demolishing structures within the proposal area. The assessment will include, but not limited to:</p> <ul style="list-style-type: none"> • Details of hazards and risks associated with the activity • Measures to be implemented during construction and disposal to minimise these risks • Selecting adequately licensed contractors to undertake demolition work of hazardous material such as asbestos 	Construction contractor	Pre-demolition

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> Record keeping arrangements, including information on the materials present on the site, material safety data sheets, and personnel trained and authorised to use such materials A monitoring program to assess performance in managing the identified risks Contingency measures to be implemented in the event of unexpected hazards or risks arising, including emergency situations. <p>The assessment will be prepared in accordance with relevant guidelines and standards, including relevant Commonwealth, state, and/or local council guidelines and legislation, Safe Work Australia Codes of Practice, and EPA or Office of Environment and Heritage publications.</p>		
77	Hazardous materials	<p>A Removal Control Plan (Asbestos Management Plan) will be prepared in accordance with Safe Work NSW (2016) for the removal of any asbestos material</p> <p>The plan will be made available for inspection under the WHS Act to all workers and other personal on-site during the duration of the licensed asbestos removal work</p> <p>Asbestos control air monitoring should be performed during the removal of ACM from structures and during demolition.</p>	Contractor	Pre- demolition
78	Hazardous materials	<p>Fluorescent light fittings should be inspected by an appropriately qualified professional for PCB containing capacitors prior to demolition or refurbishment and, if found, be disposed in accordance with NSW EPA guidelines to an approved hazardous waste facility</p>	Contractor	Pre-demolition
79	Hazardous materials	<p>Following demolition of the structures at the site, the soils should be assessed for the presence of lead, asbestos, heavy metals and pesticides</p>	Contractor	Post-demolition
80	General air quality management	<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 on site and weather conditions 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		A process for altering management measures as required.		
81	Air quality during construction	<p>The management measures within the AQMP would include but not 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, soli binders or other appropriate 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 receivers • Works (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 particulates are likely • Plant, vehicles and equipment will be maintained in good condition and in accordance with manufacturer's specifications • Plant and machinery will be turned off when not in use • No burning of any timbers or other combustible materials will occur on site • Visual monitoring of air quality will be undertaken to verify the effectiveness of controls and enable early intervention <p>Work activities will be reprogrammed if the management measures are not adequately restricting dust generation.</p>	Construction contractor	Pre-construction
82	Air quality	Asbestos control air monitoring should be performed during removal of ACM from the building structures and during demolition	Construction contractor	Pre-demolition
83	Dust from construction activities	<p>An air quality management plan would be prepared before any construction or clearing activities, and would provide guidance on the use of appropriate dust suppression methods which would include, but not be limited to:</p> <ul style="list-style-type: none"> • Stabilising of areas with the capacity to cause dust, with water spraying, compaction or progressive revegetation 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> • Covering of stockpile and storage areas • Cessation of dust generating activities in high wind situations where dust cannot be controlled. <p>In addition, local residents and other sensitive receivers (such as schools, churches and local businesses) would be advised of hours of operation and provided with contact details for queries regarding air quality.</p>		
84	Impacts on climate change from construction activities	Detailed design would take into consideration the potential effect of climate change on the proposal including drainage requirements.	TfNSW Design contractor	Detailed design
85	Impacts on climate change from construction activities	<p>Establishing operating procedures for site vehicles to increase efficiency of vehicle fuel use. Reducing clearing of vegetation as much as practicable and re-establish vegetation in suitable areas when construction is completed</p> <p>Reducing site wastage by reusing and recycling wasted material as a preference before disposing to landfill.</p>	Construction contractor	Pre-construction
86	Generation of construction waste	<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 on site including identification of recyclable and non-recyclable waste in accordance with EPA Waste Classification Guidelines • Quantity and classification of excavated material generated as a result of the proposal (Refer RMS Waste Management Fact sheets 1-6, 2012) • Interface strategies for cut and fill on site to ensure re-use 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 on-site reuse or recycling, offsite reuse or recycling, or disposal at a licensed waste facility • Details of how material would be stored and treated on-site 	Construction contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> • Identification of available recycling facilities on and off site • 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. 		
87	Generation of construction waste.	Procurement will endeavour to use materials and products with a recycled content where that material or product is cost and performance effective.	Construction contractor	Pre-construction
88	Generation of construction waste	Cleared weed free vegetation will be chipped and reused onsite as part of the proposed landscaping and to stabilise disturbed soils where possible.	Construction contractor	Construction
89	Generation of construction waste	A dedicated concrete washout facility that is impervious would be provided during construction so that runoff from the washing of concrete machinery, equipment and concrete trucks can be collected and disposed of at an appropriate waste facility.	Construction contractor	Pre-construction
90	Generation of construction waste	All wastes will be managed in accordance with the Protection of the Environment Operations Act 1997.	Construction contractor	Pre-construction and Construction
91	Generation of construction waste	Types of waste collected, amounts, date/time and details of disposal are to be recorded in a waste register.	Construction	Construction
92	Generation of construction waste	Works sites would be maintained, kept free of rubbish and cleaned up at the end of each working day.	Construction	Construction
93	Generation of construction waste	Suitable waste disposal locations would be identified and used to dispose of litter and other wastes onsite. Suitable containers would be provided for waste collection.	Construction	Pre-construction and Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
94	Generation of construction waste	Resource management hierarchy principles would be followed and are: <ul style="list-style-type: none"> Avoid unnecessary resource consumption as a priority Avoidance is followed by resource recovery (including reuse of materials, reprocessing, and recycling and energy recovery) Disposal is undertaken as a last resort (in line with the Waste Avoidance and Resource Recovery Act 2001). 	Detailed design contractor Construction contractor	Detailed design, Pre-construction and Construction
95	Generation of construction waste	A Waste Management Plan would be completed in line with the requirements of the TfNSW's QA Specification G36 - Environmental Protection (Management System).	Construction contractor	Construction
96	Generation of construction waste	Housekeeping at construction sites would be addressed regularly. This would include collection and sorting of recycling, general waste and green waste. Waste would be disposed regularly at a licensed waste facility or recycling where available.	Construction contractor	Construction
97	Cumulative impacts due to concurrent construction of multiple road projects	The contractor's environmental management plan would be revised to consider potential cumulative impacts from surrounding developments as they become known.	TfNSW Construction contractor	Detailed design, Pre-construction and Construction
98	Traffic management - General	The construction traffic management plan (CTMP) would include the proposed refinements, including arrangements for all early works. The CTMP would enable the safe management of traffic and pedestrians, provide for the safety of construction personnel and minimise impacts on the local community.	Construction contractor	Pre-construction
99	Traffic management - construction at Shelley Public School	The CTMP for construction at Shelley Public School would include notification and safety requirements for the school community and be prepared in consultation with school authorities and/or Department of Education. No construction truck movements are to occur during school peak drop off times. These times are as follows: <ul style="list-style-type: none"> Morning Peak - 8am to 9:15am, Monday to Friday Afternoon Peak - 2:30pm to 3:15pm, Monday to Friday 	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
100	Traffic management - test excavations	Temporary lane closures at Reservoir Road would be undertaken outside peak hours.	Construction contractor	Construction
101	Construction noise – kiss and ride facility	Where possible, preparation and construction activities would be undertaken during school holidays or out of school hours. Where this is not possible, the timing and operation of construction activities would be coordinated to limit the noise impacts to the school and local residents. Construction and preparation activities would not be undertaken during exam periods.	Construction contractor	Pre-construction and Construction
102	Construction noise - test excavation works	Construction work would not take place on Sundays to limit the disturbance to people attending Saint Marks Coptic Church.	Construction contractor	Construction
103	Architectural acoustic treatments	Consultation with eligible properties would be undertaken during the construction period to determine the suitability of properties for treatment and the agreement of the proposed measures.	TfNSW Construction contractor	Construction
104	Tree removal at Shelley Public School	Tree Protection Plan would be prepared by a qualified arborist as part of the CEMP in accordance with AS4970-2009 to protect all trees within the construction zone which are to be retained Tree numbers 111 (English Oak) and 116 (Aleppo Pine) would be retained and protected. At a minimum, tree protection fencing would be applied to mark and exclusion zone around these trees. All personnel working on the site would be made aware of the location of the Aleppo Pine tree.	Construction contractor	Pre-construction
105	Removal of native vegetation	The construction footprint for all activities would be identified and marked before construction. Trees to be removed/ retained would be clearly identified prior to clearing Tree clearing would be undertaken in accordance with AS 4373-2007.	Construction contractor	Pre-construction
106	Impacts on trees at the proposed	An arborist would inspect and assess Trees 131-132 at the intersection of Hadrian Avenue and Keyworth Drive to determine which trees can be retained and which would require	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
	roundabout location	removal. This would be undertaken once the existing guttering has been removed, so that the roots are visible.		
107	Removal of vegetation powerline relocation	<p>A landscape plan would be prepared as part of the CEMP in consultation with landowners and Endeavour Energy to inform the appropriate planting of new vegetation in disturbed areas. The landscape plan would:</p> <ul style="list-style-type: none"> • Establish suitable low height trees and shrubs under electrical powerlines • Provide taller trees where there are no powerlines, taking into consideration clearance zone requirements • A qualified arborist would be consulted regarding the trimming of the Golden Cypress (<i>Cupressus macrocarpa</i>) at 239 Blacktown Road to ensure an appropriate treatment is implemented. 	Construction contractor	Construction
108	Potential for graffiti on noise walls	The noise wall panels would have a sand blasted or bead blasted finish to discourage graffiti on both sides of the panels.	TfNSW Construction contractor	Construction
109	Visual impact of introduced noise walls	<p>The landscape plan would include a planting strategy to soften the visual impact of the noise walls. The planting strategy would:</p> <ul style="list-style-type: none"> • Provide frangible shrub and ground cover planting between the road and the wall where possible. If space is limited, climbers are to be considered as an alternative • Plant mature tree stock in groupings at targeted locations. 	Construction contractor	Construction
110	Test archaeological excavations in SHR listed former Great Western Road	Test archaeological investigations would be carried out in accordance with the approved Archaeological Management Plan.	TfNSW	Pre-construction
111	Unexpected finds	In the event of an unexpected find, work would cease in the affected area and TfNSW Standard Management Procedure - Unexpected Archaeological Items (2015) would be implemented. TfNSW's Environment Manager would be notified immediately.	Construction contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
112	Construction works within Shelley Public School	Construction activities and timing of the kiss and ride facility would be co-ordinated with the relevant school authorities A site specific safety management plan would be prepared for works at the school.	TfNSW Construction contractor	Pre-construction and Construction
113	Installation of noise wall at the back of residential properties			
114	Access to private property to undertake vegetation clearance for powerline relocation	The communications plan for the powerline relocation works would include the requirement to secure access agreements for vegetation clearance works.	TfNSW Endeavour Energy	Pre-construction
115	Access to private property during property access adjustments	Affected properties would be notified and property access consent arrangements would be discussed prior to the commencement of property access adjustments.	TfNSW Construction contractor	Pre-construction

Additional mitigation measures

Hampton Crescent

Table 7-2 Hampton Crescent Additional mitigation measures

Period	Time Period	Drainage Infrastructure			Paving/Asphalting			Road Furniture Installation		
		R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR

Stoddard Road

Table 7-3 Stoddard Road additional mitigation measures

Period	Time Period	Drainage Infrastructure				Paving/Asphalting				Road Furniture Installation			
		C1	C2, C3	R7	R8	C1	C2, C3	R7	R8	C1	C2, C3	R7	R8
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	-	-	-
	Day (OOHW)	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	-	-	N, R1, DR	-	-	-

Period	Time Period	Drainage Infrastructure				Paving/Asphalting				Road Furniture Installation			
		C1	C2, C3	R7	R8	C1	C2, C3	R7	R8	C1	C2, C3	R7	R8
	OOHW Period 1	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR
	OOHW Period 2	V, N, R2, DR	N	V, IB, N, PC, SN, R2, DR	V, IB, N, PC, SN, R2, DR	V, N, R2, DR	N	V, N, R2, DR	V, N, R2, DR	V, N, R2, DR	-	V, N, R2, DR	V, N, R2, DR

Ozark Street

Table 7-4 Ozark Street Additional mitigation measures

Period	Time Period	Drainage Infrastructure Works				Paving/Asphalting Works				Road Furniture Installation			
		R9, R10	R11	R12	R13	R9, R10	R11	R12	R13	R9, R10	R11	R12	R13
Additional mitigation measures (See Table 6-10)	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V, PC, RO	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR

Table 7-5 Abbreviation definitions for additional mitigation measures

Abbreviation	Measure	Description
N	Notification (letterbox drop or equivalent)	Advance warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of using variable message sign, letterbox drop (or equivalent), web site / social media or a combination to distribute information detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of 5 working days prior to the start of works. The approval conditions for projects may also specify requirements for notification to the community about works that may impact on them.
SN	Specific notifications	"Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than 5 working days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops.
PC	Phone calls	Phone calls detailing relevant information made to identified/affected stakeholders, who have provided their contact details, within seven calendar days of proposed work.
IB	Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities.
RO	Respite offer	Respite Offers should be considered where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed 3 hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers.
R1	Respite Period 1	Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month
R2	Respite Period 2	Night time construction noise in out of hours period 2 shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before 11pm.
DR	Duration respite	Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly.
AA	Alternative accommodation	Alternative accommodation options may be offered (as a last resort) to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. The specifics of the offer

Abbreviation	Measure	Description
		will be identified on a project-by-project basis, however an AA offer is unlikely to be made for maintenance works.
V	Verification	Verification may be required for building or asset condition where works are likely to cause vibration impact or for noise levels following reasonable complaints. See Appendix F of the Construction Noise and Vibration Guideline for more details.

8 Conclusion

This chapter provides the justification for the proposal taking into account its biophysical, social and economic impacts, the suitability of the site and whether or not the proposal is in the public interest. The proposal is also considered in the context of the objectives of the EP&A Act, including the principles of ecologically sustainable development as defined in Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

8.1 Justification

The modified proposal is considered justified as the proposed changes to the design have been implemented to provide better results for the overall Prospect Highway Upgrade.

While there would be some environmental impacts from the proposal, they have been avoided or minimised where possible through design and site specific safeguards summarised in Section 7.2.

The benefits of the proposal are considered to outweigh the adverse impacts that may be generated by the proposal, which are mostly temporary and local in nature.

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 meets this object. An adverse impact on the environment or the social or the economic welfare of the community is not likely
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 meets this object, as discussed in section 8.3 below.
1.3(c) To promote the orderly and economic use and development of land.	Not relevant to the proposed modification.
1.3(d) To promote the delivery and maintenance of affordable housing.	Not relevant to the proposed modification.
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 meets this object. As discussed in section 6, there would be negligible impacts on threatened and other species of native animals and plants, ecological communities and their habitats.
1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	Not relevant to the proposed modification.
1.3(g) To promote good design and amenity of the built environment.	Not relevant to the proposed modification.
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 proposed modification.
1.3(i) To promote the sharing of the responsibility for environmental planning and	Not relevant to the proposed modification.

Object	Comment
assessment between the different levels of government in the State.	
1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.	Consultation with the community has occurred to date and would continue for the duration of the work. Given the minor nature of the proposed modification, consultation with the public has not been carried out.

8.3 Ecologically sustainable development

8.3.1 The precautionary principle

This principle states that ‘if there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation’.

The assessment of potential environmental impacts in the development of the proposed design changes that comprise this proposal has sought to minimise impacts on the urban and natural amenity of the proposal area while maintaining engineering feasibility and safety for all road users. A number of safeguards have been proposed to minimise potential impacts. These safeguards would be implemented during construction and operation of the proposal.

A CEMP would be prepared prior to commencing construction and would incorporate safeguards to be implemented. This requirement would ensure that the proposed activities achieve a high-level of environmental performance. No mitigation measures or management mechanisms would be postponed as a result of a lack of information.

8.3.2 Intergenerational equity

The principle states that ‘the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.’

The proposal would improve safety and access for maintenance of electrical utilities and improve local utility infrastructure. The proposal would benefit future generations by ensuring that the proposal does not give rise to long term adverse impacts on the environment and potential impacts would be minimised by implementation of appropriate safeguards.

8.3.3 Conservation of biological diversity and ecological integrity

This principle states that the ‘diversity of genes, species, populations and communities, as well as the ecosystems and habitats to which they belong, must be maintained and improved to ensure their survival’.

The proposal is not considered to have a significant impact on biological diversity and ecological integrity.

8.3.4 Improved valuation, pricing and incentive mechanisms

This principle requires that ‘costs to the environment should be factored into the economic costs of a project’.

This addendum REF has examined the environmental consequences of the proposal and identified management measures and safeguards for areas which have the potential to experience adverse impacts.

Requirements imposed in terms of implementation of these mitigation measures would result in an economic cost to the Transport for NSW. The implementation of management measures and safeguards would increase both the capital and operating costs of the proposal. This signifies that environmental resources have been given appropriate valuation.

The design for the proposal has been developed with an objective of minimising potential impacts on the surrounding environment. This indicates that the concept design for the proposal has been developed with an environmental objective in mind

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 Federal 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 this addendum REF best meets the project objectives, but would still result in some impacts on traffic and transport, contaminated lands and visual amenity. Safeguards and management measures as detailed in this addendum REF would ameliorate or minimise these expected impacts. The proposed modification would also improve safety, improved driving conditions, reduce travel times and allow for the storage of some surplus spoil on site. 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 (Jacobs, 2014a), Submissions Report (Jacobs, 2014b), the addendum 1 REF (SMEC, 2016) or the addendum 2 REF (SMEC 2019) 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 Agriculture, Water and the Environment 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.



David Wells

Senior Environmental Scientist - Environment & Waste

SMEC Australia

Date" 9 June 2021

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

Thev Theivendran

Project/Contract Manager

Western Sydney Project Office / Project Delivery

Date:

10 References

Endeavour Energy (2019), 33kV Feeder 467 Asset Relocation, Draft Summary Environmental Report (SER), Sydney

Office of Environment & Heritage (2011), Protocols for recycling redundant utility poles and bridge timbers in New South Wales

Jacobs (2014a), The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown. Review of Environmental Factors, Sydney.

Jacobs (2014b), The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown. Submissions Report, Sydney.

SMEC (2016) The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown, Addendum 1 REF, prepared for Roads and Maritime, Sydney

SMEC (2016a), The Prospect Highway Upgrade – Reservoir Road to St Martins Crescent, Roads Detailed Design Report, prepared for Roads and Maritime

SMEC (2014), The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown, Traffic and Transport Assessment, prepared for Roads and Maritime

SMEC (2019a) The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown, Addendum 2 REF, prepared for Roads and Maritime, Sydney

SMEC (2019b), Prospect Highway Cut Investigation – Soil Waste Analysis and Resource Recovery Classification Report: Site 1, prepared for Roads and Maritime

SMEC (2019c), Prospect Highway Cut Investigation – Soil Waste Analysis and Resource Recovery Classification Report: Site 2, prepared for Roads and Maritime

SMEC (2021), Prospect Highway Upgrade – addendum 3 REF. Biodiversity assessment – technical memorandum, Sydney

SLR (2021), Prospect Highway: Noise barrier SB01 revisions and construction works. Technical memorandum, Sydney

Terms and acronyms used in this addendum REF

Term / Acronym	Description
BAR	Biodiversity Assessment Report
BC Act	<i>Biodiversity Conservation Act 2016</i> (NSW).
BOS	Biodiversity Offset Scheme
CBD	Central Business District
CCIP	Communications and Community Involvement Plan
CEMP	Construction / Contractor's environmental management plan
Council	Blacktown City Council
EIA	Environmental impact assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
EPL	Environment Protection Licence
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</i> (NSW)
Heritage Act	<i>Heritage Act 1977</i> (NSW)
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
LGA	Local government area
MNES	Matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
M4 Motorway	M4 Western Motorway
NML	Noise Management Levels
NPW Act	<i>National Parks and Wildlife Act 1974</i> (NSW)
OTVNVA	Operational Traffic and Construction Noise and Vibration Assessment
PHU	Prospect Highway Upgrades
Roads and Maritime	NSW Roads and Maritime Services
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SER	Summary of Environmental Report

Term / Acronym	Description
TMP	Traffic Management Plan
TfNSW	Transport for New South Wales
TSC Act	<i>Threatened Species Conservation Act 1995</i>
TTA	Traffic and Transport Assessment
Western Sydney SEPP	State Environmental Planning Policy (Western Sydney Parklands) 2009

Appendix A

Detailed design drawings

Appendix B

Boundary modification locations

Appendix C

Consideration of clause 228(2) factors and Matters of National Environmental Significance and Commonwealth land

Clause 228(2) Checklist

In addition to the requirements of the *Is an EIS required?* (1995/1996) guideline and the *Roads and Related Facilities EIS Guideline* (DUAP, 1996) as detailed in the addendum REF, the following factors, listed in clause 228(2) of the Environmental Planning and Assessment Regulation 2000, 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>During construction, the proposal would cause minor impacts on the community because of construction noise, potential air quality impacts, and traffic and transport impacts. Affected residence would be contacted prior to the commencement of work</p> <p>The design modifications assessed in this Addendum REF contribute to the overall Approved Project, which would provide the community with a safer and less congested road, one that can accommodate predicted traffic growth. The local and broader community would experience these benefits. Property access arrangements would benefit individual property owners.</p>	<p>Short-term negative</p> <p>Long-term positive</p>
<p>Any transformation of a locality?</p> <p>The proposed modification would not transform a locality.</p>	<p>Nil</p>
<p>Any environmental impact on the ecosystems of the locality?</p> <p>The proposed modification would have negligible impact during construction on the ecosystems of the locality as discussed above in section 6.4. Operational impacts of the proposal are not expected to be additional in nature or extent from the assessment carried out in the project REF, addendum 1 REF or addendum 2 REF.</p> <p>No new safeguards have been proposed to address the potential impacts associated with the proposed modification.</p>	<p>Short-term minor negative</p>
<p>Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</p> <p>The proposed modification is not expected to reduce the aesthetic, recreational, scientific or other environmental quality or value of the locality.</p>	<p>Nil</p>
<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>Nil</p>
<p>Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)?</p> <p>No impact on the habitat of protected fauna is expected.</p>	<p>Nil</p>
<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>The proposed modification would not endanger any species of animal, plant or other form of life.</p>	<p>Nil</p>
<p>Any long-term effects on the environment?</p> <p>In the long term, there would be negligible changes to the locality from the current status. The land use of the area would be consistent, and the area of</p>	<p>Nil</p>

Factor	Impact
<p>additional vegetation clearance required for construction negligible in the context of the surrounding area.</p>	
<p>Any degradation of the quality of the environment? In the short term the proposal has the potential to degrade the environment in the area immediately surrounding the proposed modification site due to construction work activities. Table 7-1 details safeguards and management measures to manage these impacts. With effective implementation of the measures, most impacts would be minor or negligible.</p>	<p>Short-term minor negative Long-term negligible</p>
<p>Any risk to the safety of the environment? The proposed modification does not pose a risk to the safety of the environment.</p>	<p>Nil</p>
<p>Any reduction in the range of beneficial uses of the environment? The proposed modification would not reduce the range of beneficial uses of the environment.</p>	<p>Nil</p>
<p>Any pollution of the environment? In the short term the proposal has the potential to pollute the environment in the area immediately surrounding the proposed modification site, through erosion and runoff, accidental spills and construction noise. Table 7-1 details safeguards and management measures to manage these impacts. With effective implementation of the measures, most impacts would be minor or negligible.</p>	<p>Short-term minor negative Long-term negligible</p>
<p>Any environmental problems associated with the disposal of waste? The proposed modification has no identified problems associated with the disposal of waste.</p>	<p>Nil</p>
<p>Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The proposed modification would not place any increased demand on resources, (natural or otherwise) that are, or are likely to become, in short supply.</p>	<p>Nil</p>
<p>Any cumulative environmental effect with other existing or likely future activities? Given the location and scale of the proposed modification, cumulative impacts are not expected.</p>	<p>Nil</p>
<p>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? There would be no impact to coastal processes or hazards.</p>	<p>Nil</p>

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 the Environment.

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
a. Any impact on a World Heritage property? The proposed modification would not impact World Heritage property.	Nil
b. Any impact on a National Heritage place? The proposed modification would not impact a National Heritage Place.	Nil
c. Any impact on a wetland of international importance? The proposed modification would not impact a wetland of international importance.	Nil
d. Any impact on a listed threatened species or communities? The proposed modification would not impact a listed threatened species or communities.	Nil
e. Any impacts on listed migratory species? The proposed modification would not impact on listed migratory species.	Nil
f. Any impact on a Commonwealth marine area? The proposed modification would not impact a Commonwealth marine area.	Nil
g. Does the proposed modification involve a nuclear action (including uranium mining)? The proposed modification would not involve a nuclear action (including uranium mining),	Nil
Additionally, any impact (direct or indirect) on Commonwealth land? The proposed modification would not have any impact (direct or indirect) on Commonwealth land.	Nil

Appendix D

Biodiversity assessment technical note

Appendix E

AHIMS search results

Appendix F

Noisie and vibration assessment technical note

Appendix G

Statutory consultation checklists

Infrastructure SEPP

Certain development types

Development type	Description	Yes / No	If 'yes' consult with	ISEPP clause
Car Park	Does the project include a car park intended for the use by commuters using regular bus services?	No		ISEPP cl. 95A
Bus Depots	Does the project propose a bus depot?	No		ISEPP cl. 95A
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		ISEPP cl. 95A

Development within the Coastal Zone

Issue	Description	Yes / No / NA	If 'yes' consult with	ISEPP clause
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?	NA		ISEPP cl. 15A

Council related infrastructure or services

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
Stormwater	Are the works likely to have a <i>substantial</i> impact on the stormwater management services which are provided by council?	No		ISEPP cl.13(1)(a)
Traffic	Are the works likely to generate traffic to an extent that will <i>strain</i> the capacity of the existing road system in a local government area?	No		ISEPP cl.13(1)(b)

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
Sewerage system	Will the works involve connection to a council owned sewerage system? If so, will this connection have a <i>substantial</i> impact on the capacity of any part of the system?	No		ISEPP cl.13(1)(c)
Water usage	Will the works involve connection to a council owned water supply system? If so, will this require the use of a <i>substantial</i> volume of water?	No		ISEPP cl.13(1)(d)
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 <i>minor</i> or <i>inconsequential</i> disruption to pedestrian or vehicular flow?	No		ISEPP cl.13(1)(e)
Road & footpath excavation	Will the works involve more than <i>minor</i> or <i>inconsequential</i> excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No		ISEPP cl.13(1)(f)

Local heritage items

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
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	No		ISEPP cl.14

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
	impacts to the heritage significance of the item/area are more than <i>minor</i> or <i>inconsequential</i> ?			

Flood liable land

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
Flood liable land	Are the works located on flood liable land? If so, will the works change flood patterns to more than a <i>minor</i> extent?	No	Local Council	ISEPP cl.15
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 Service	ISEPP cl.15AA

Public authorities other than councils

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
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?	Yes	Department of Planning, Industry and Environment – National Parks and Wildlife Service	ISEPP cl.16(2)(a)
National parks and reserves	Are the works on land in Zone E1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	Office of Environment and Heritage	ISEPP cl. 16(2)(b)
Aquatic reserves and marine parks	Are the works adjacent to an aquatic reserve or a marine park declared under the <i>Marine Estate</i>	No	Department of Planning, Industry and Environment	ISEPP cl.16(2)(c)

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
	<i>Management Act 2014?</i>			
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	ISEPP cl.16(2)(d)
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	ISEPP cl.16(2)(f)
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	ISEPP cl. 16(2)(g)
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 clause 5.15 of Lockhardt LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence	ISEPP cl. 16(2)(h)
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	ISEPP cl. 16(2)(i)

Growth Centres SEPP

Issue	Potential impact	Yes / No	If 'yes' consult with	SEPP clause
Clearing native vegetation	Do the works involve clearing native vegetation (as defined in the <i>Local Land Services Act 2013</i>) 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, Industry and Environment	SEPP 18A



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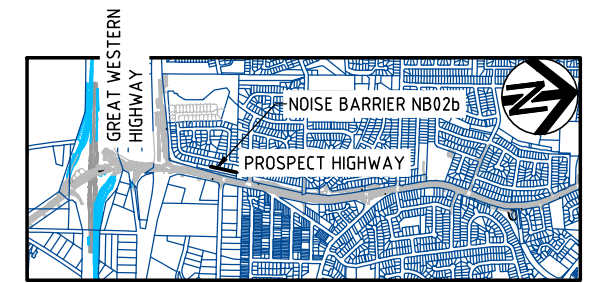
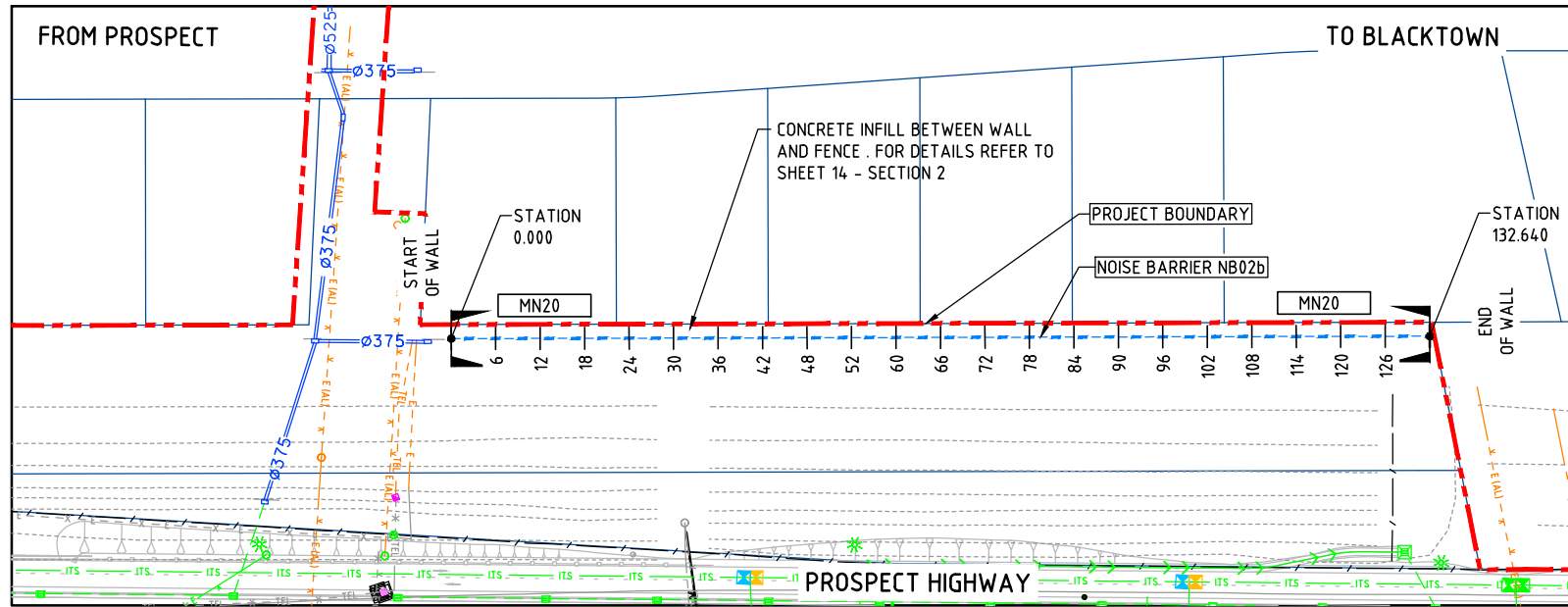


Customer feedback
Transport for New south Wales
Locked Bag 928,
North Sydney NSW 2059

Month Year
RMS XX.XXX
ISBN: XXX-X-XXXXXX-XX-X

Appendix A

Detailed design drawings



KEY PLAN
NOT TO SCALE

NOISE WALL NB02b - CONTROL LINE MN20

ACRYLIC PANEL, PRECAST CONCRETE PANELS, DESIGN GROUND LEVEL, BORED PILE FOUNDATION

CHAINAGE	0.000	3.000	6.000	12.000	18.000	24.000	30.000	36.000	42.000	48.000	54.000	60.000	66.000	72.000	78.000	84.000	90.000	96.000	102.000	108.000	114.000	120.000	126.000	132.640			
POST HEIGHT	3.600	3.600	3.800	3.800	3.700	3.800	3.900	3.600	4.000	3.700	3.600	4.000	3.700	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.700	3.600	3.600	3.700	3.600		
EXPOSED NOISE WALL HEIGHT	3.040	3.040	3.000	3.000	3.000	3.008	3.000	3.040	3.030	3.037	3.040	3.002	3.016	3.049	3.040	3.040	3.040	3.040	3.013	3.000	3.004	3.000	3.049	3.052	3.035	3.058	
TOP OF NOISE WALL LEVELS	77.040	77.040	77.040	77.240	77.440	77.540	77.740	78.040	78.040	78.440	78.540	78.540	78.940	79.040	79.040	79.040	79.040	79.040	79.040	79.040	79.040	79.140	79.140	79.140	79.140	79.040	79.040
BOTTOM OF NOISE WALL LEVELS	73.440	73.440	73.640	73.840	73.940	74.140	74.440	74.440	74.840	74.840	74.940	74.940	75.340	75.440	75.440	75.440	75.440	75.440	75.440	75.440	75.440	75.540	75.540	75.540	75.540	75.440	75.440
DESIGN GROUND LEVELS	74.000	74.020	74.040	74.240	74.440	74.532	74.740	75.000	75.010	75.403	75.500	75.538	75.924	75.991	76.000	76.000	76.000	76.000	76.027	76.040	76.036	76.040	76.040	76.082	76.082	75.982	75.982

NOISE WALL NB02b - CONTROL LINE MN20

NOISE WALL NB02b SETOUT TABLE CONTROL LINE MN20

STATION	EASTING	NORTHING	BEARING
0.000	307113.165	6258092.556	19°22'3.72"
132.640	307157.151	6258217.687	19°22'3.72"

NB: SETOUT TABLE IS ALONG NOISE WALL CONTROL LINE

LEGEND

- ROAD CONTROL LINE
- PROJECT BOUNDARY
- NOISE BARRIER (MN00) AND TAG
- PROPOSED ELECTRICAL ABOVE GROUND
- PROPOSED ELECTRICAL LIGHT POLE
- PROPOSED ITS CONDUITS (ELECTRICAL)
- PROPOSED ITS CONDUITS (COMMUNICATION)
- RETAINED ELECTRICAL ABOVE GROUND
- EXISTING DRAINAGE PIPE TO REMOVED
- EXISTING DRAINAGE PIPE TO REMAIN
- PROPOSED DRAINAGE PIPE

GENERAL NOTES

SCALE 0 5000 10000 20000mm OR AS SHOWN.

FOR GENERAL NOTES REFER TO SHEET 3.
FOR TYPICAL LAYOUT, SECTION AND ELEVATION REFER TO SHEET 14
FOR TYPICAL DETAILS AND CONNECTIONS REFER TO SHEET 24
CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO COMMENCING WORK.
POST HEIGHT IS MEASURED FROM BOTTOM OF WALL.

ISSUE	DATE	REVISION	PREP	CHECK	AUTH	WVR
B	29.10.2020	RE-ISSUED FOR TENDER			CS	040
A	03.05.2019	ISSUED FOR TENDER			CS	541_005

MAIN ROAD No 644 CITY OF BLACKTOWN
NOISE BARRIER WALL
AT MAIN ROAD No 644 (PROSPECT HIGHWAY)

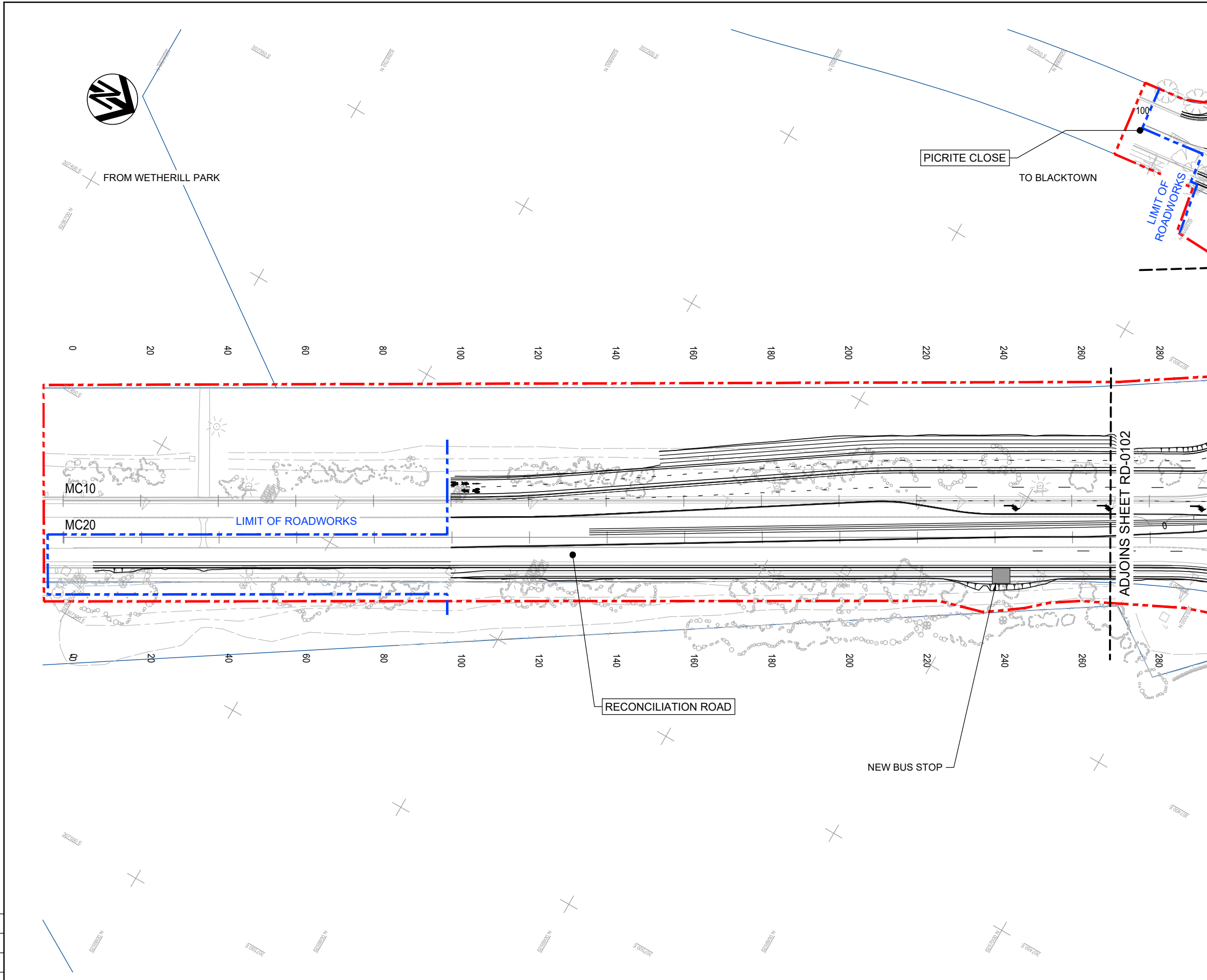
NB02b - GENERAL ARRANGEMENT

<p>LEVEL 5 20 BERRY STREET NORTH SYDNEY NSW 2060 PH 02 9925-6555 www.smc.com</p> <p>Member of the Surbana Jurong Group © ABN 47 065 475 149</p>	<p>CLIENT: ROADS AND MARITIME SERVICES 27-31 ARGYLE STREET PARRAMATTA NSW 2150 PHONE (02) 8837-0802 FACSIMILE (02) 8847-2760</p>	
	<p>SMC PROJECT No 30012378</p>	<p>REGISTRATION No OF PLANS DS2016/002051</p>
<p>PREPARED DESIGN KW DRAWING NM</p>	<p>CHECKED ST MH</p>	<p>BRIDGE NUMBER</p>
<p>APPROVED DIRECTOR</p>	<p>DESIGN QA RECORDS</p>	<p>ISSUE STATUS: TENDER</p>
<p>SHEET No 5</p>		<p>ISSUE B</p>

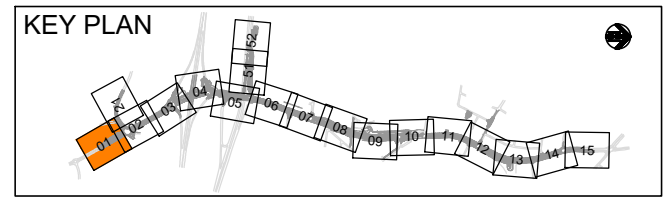
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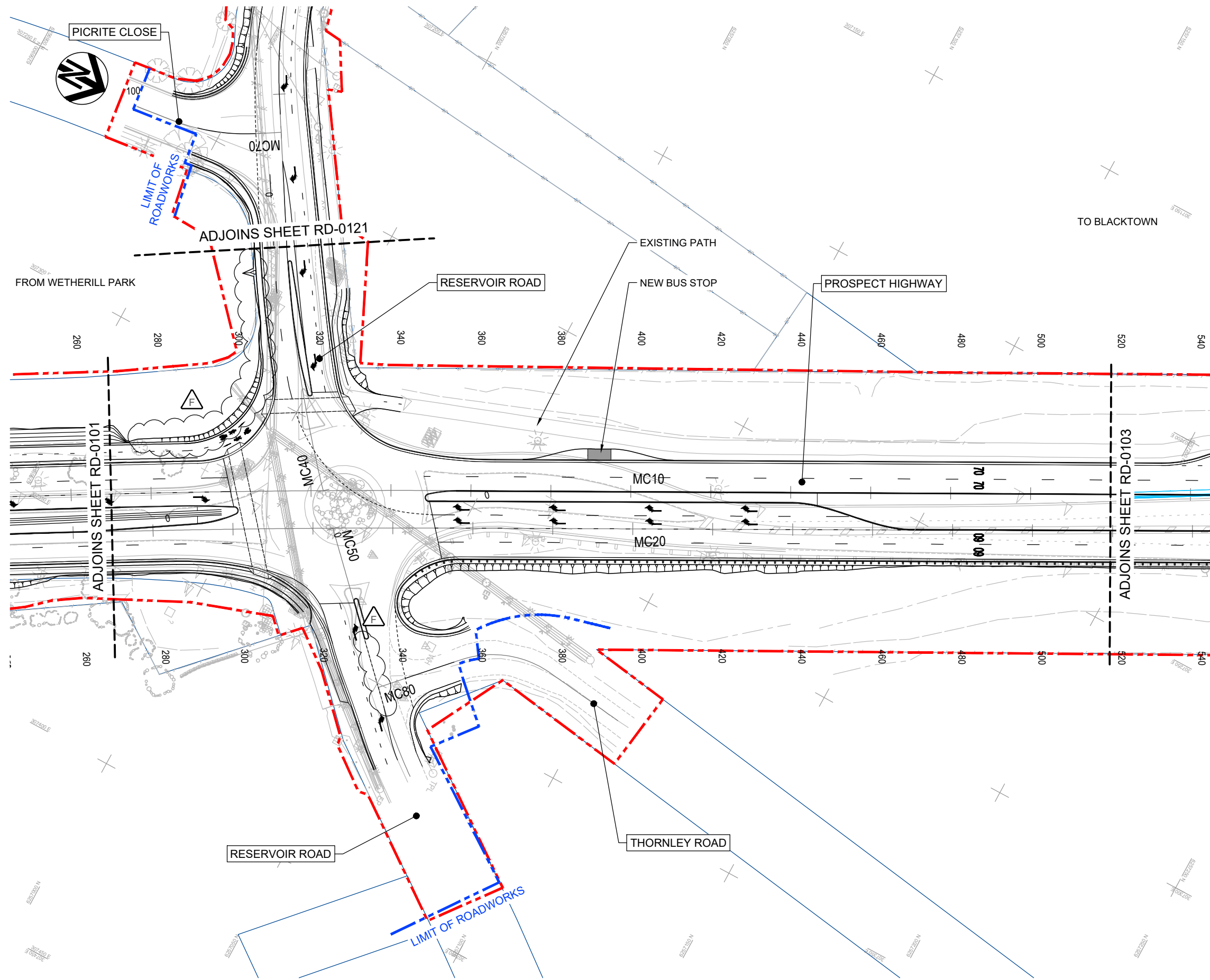
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	EXISTING ROADS AND TRACKS
	RETAINING WALL
	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
	SF KERB
	SFM KERB
	'ACO QK200SF' KERB DRAIN
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	M4SM DESIGN BY OTHERS
	PROPERTY WORKS DRAWING REFERENCE
	PW-0124



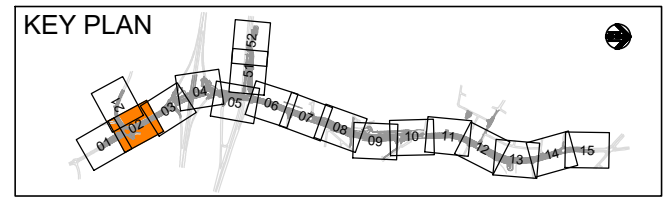
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EXTERNAL REFERENCE FILES X:\RMS\NSW\4.2_C43 X:\BERRY_CTRL_1000 X:\DESIGN_MAIN X:\DESIGN_MAIN X:\FRAME_1000 X:\KEY_1000 X:\CADAST X:\STREET_NAMES_1000 X:\GRID X:\DES_CTRL_500 X:\PW_TAG X:\BERRY_LIM_OF_RD_WORKS		REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING SCALE 1:1000	DRAWINGS / DESIGN PREPARED BY SMEC AUSTRALIA PTY LTD © ABN 47 065 475 149 LEVEL 5 20 BERRY STREET NORTH SYDNEY NSW 2060 PH 02 9925-5555 FAX 02 9925-5566	
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							PROJECT MNGR		C. SUTTON 10.02.17
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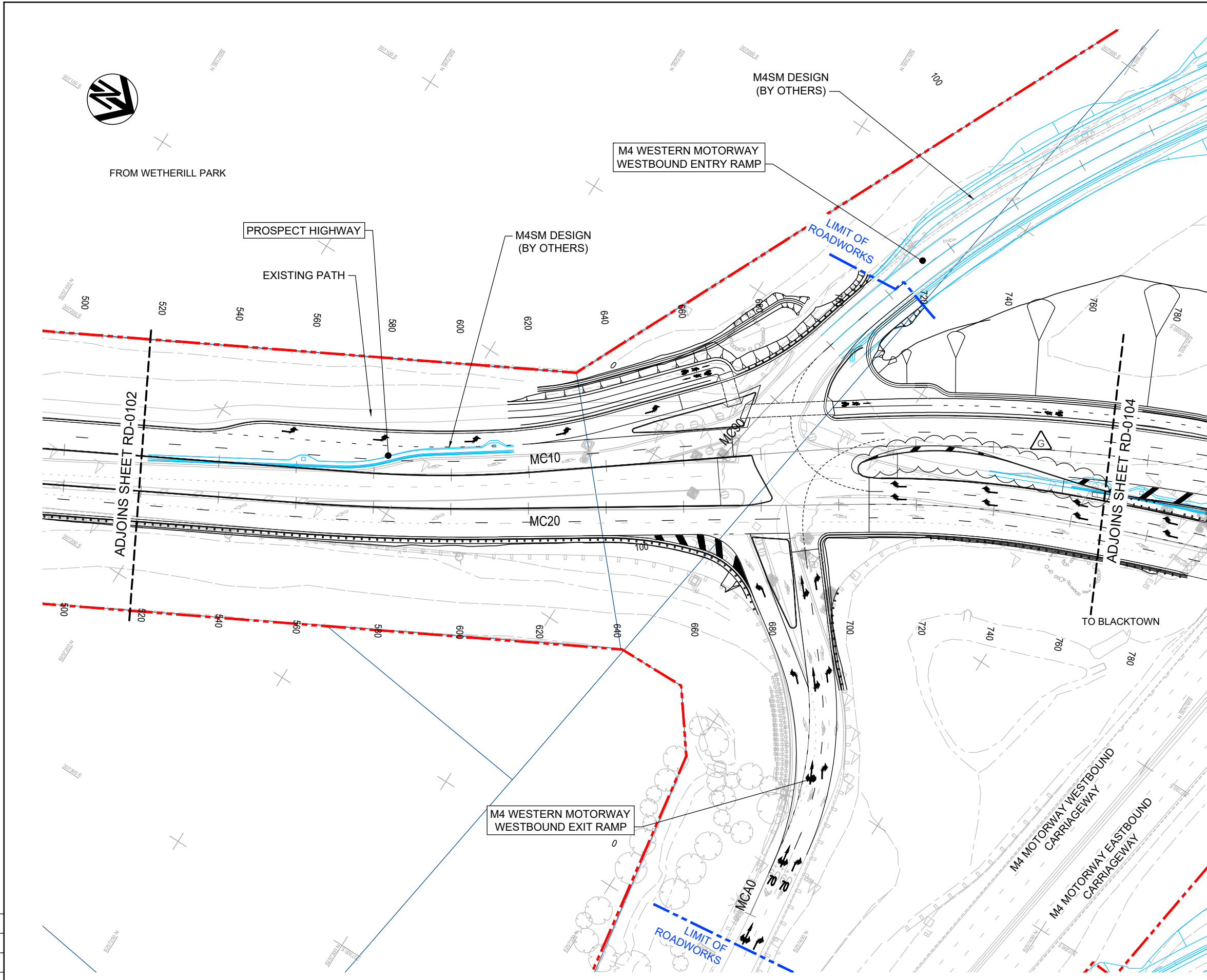
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	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
	SF KERB
	SFM KERB
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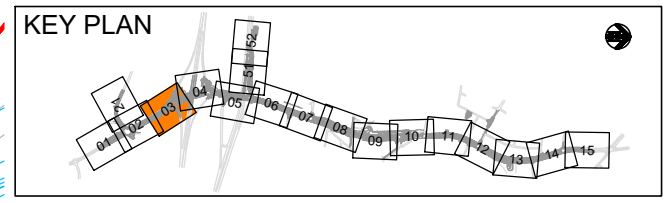
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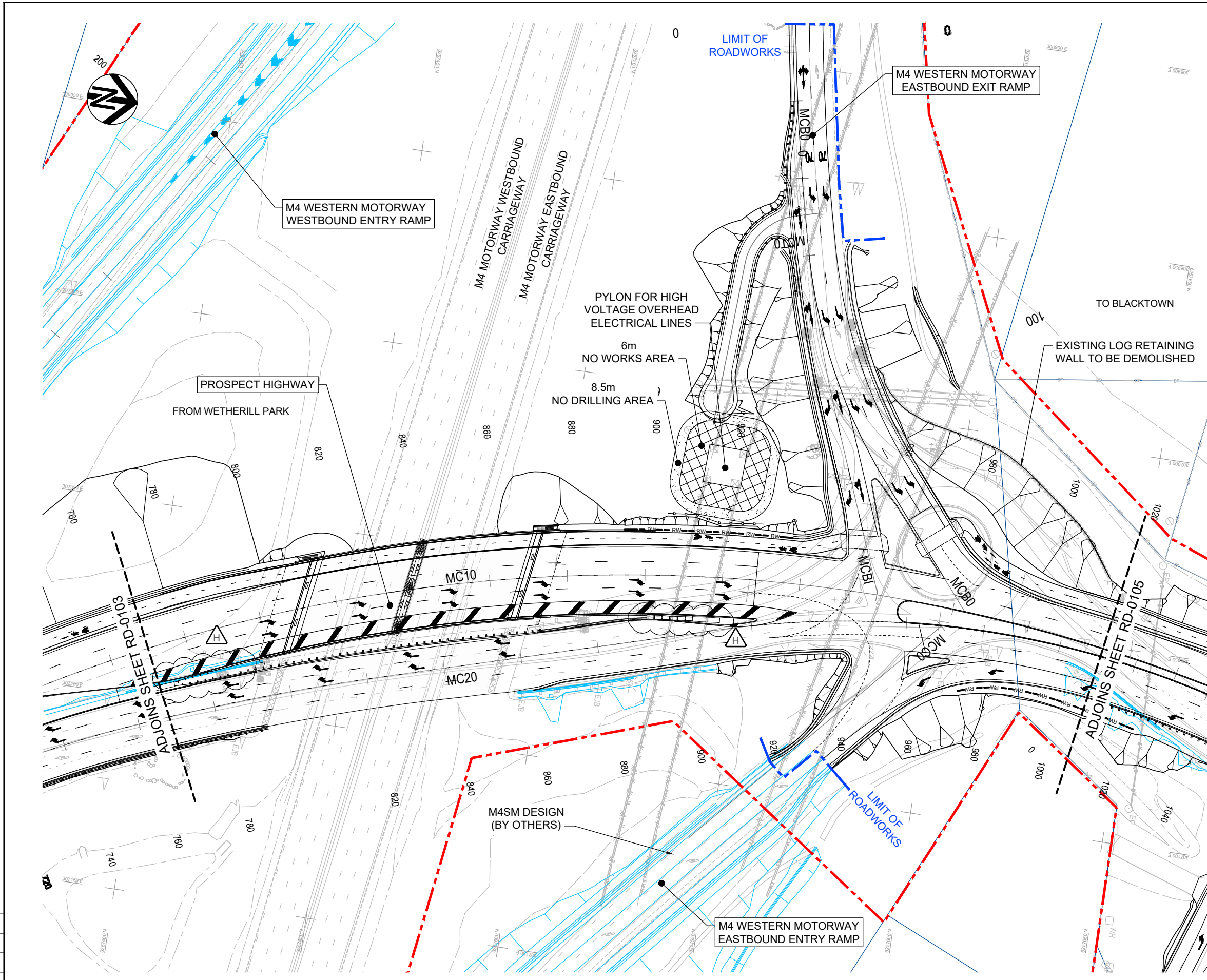
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	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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	'ACO QK200SF' KERB DRAIN
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	PROPERTY WORKS DRAWING REFERENCE



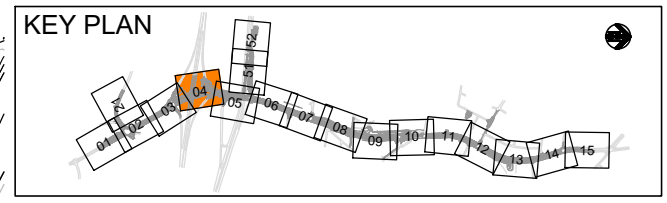
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LEGEND	
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	REF APPROVED PROJECT BOUNDARY
	LIMIT OF ROAD WORKS
	EXISTING PROPERTY BOUNDARY
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	NEW FENCING
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	NOISE WALL
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	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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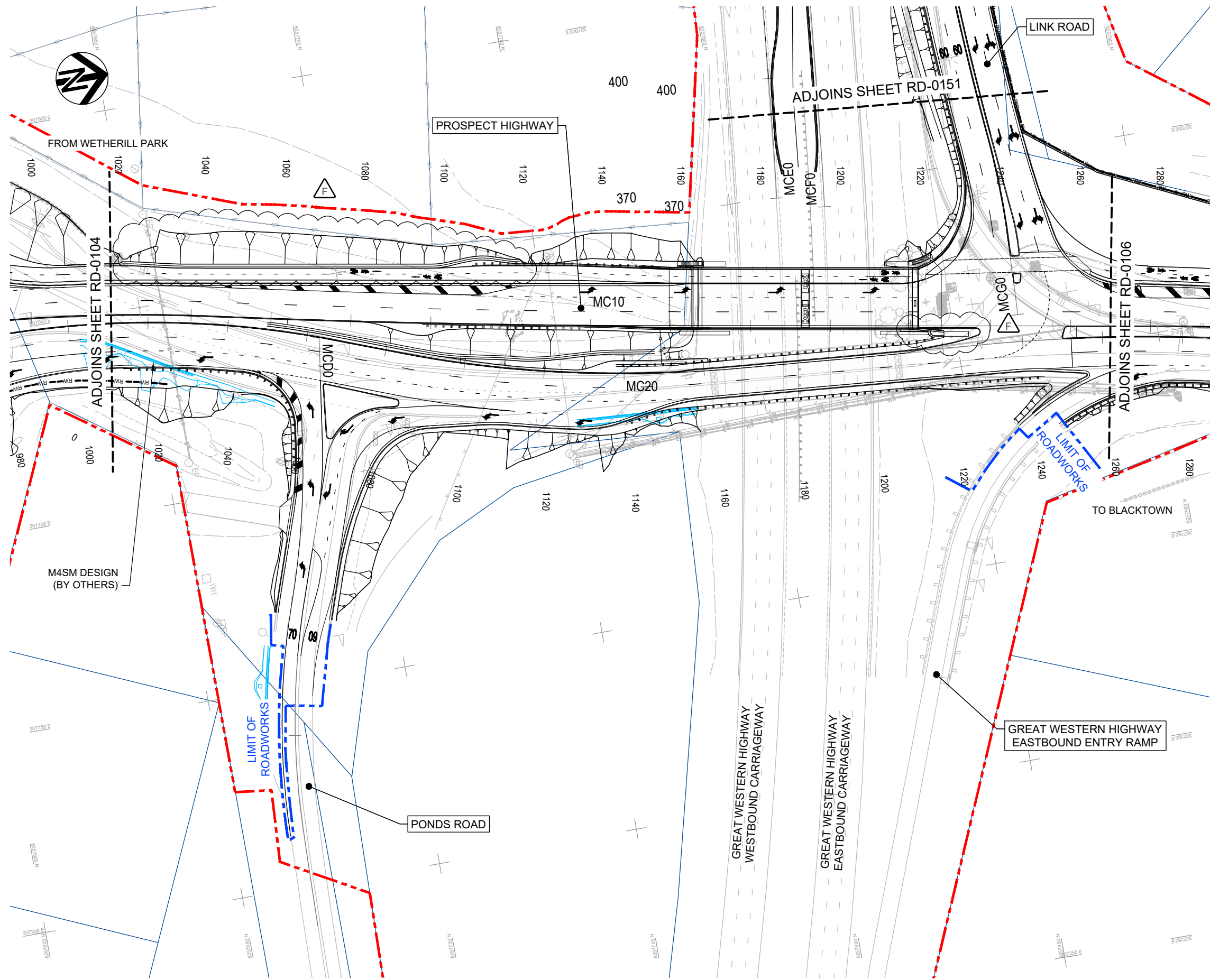


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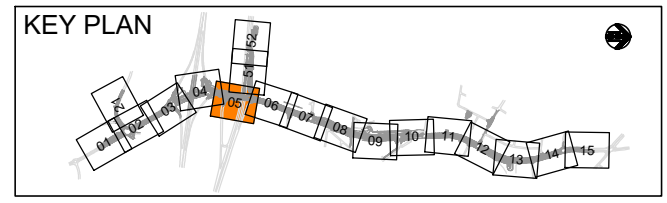
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RMS REGISTRATION No. **DS2015/000269**
ISSUE STATUS: TENDER
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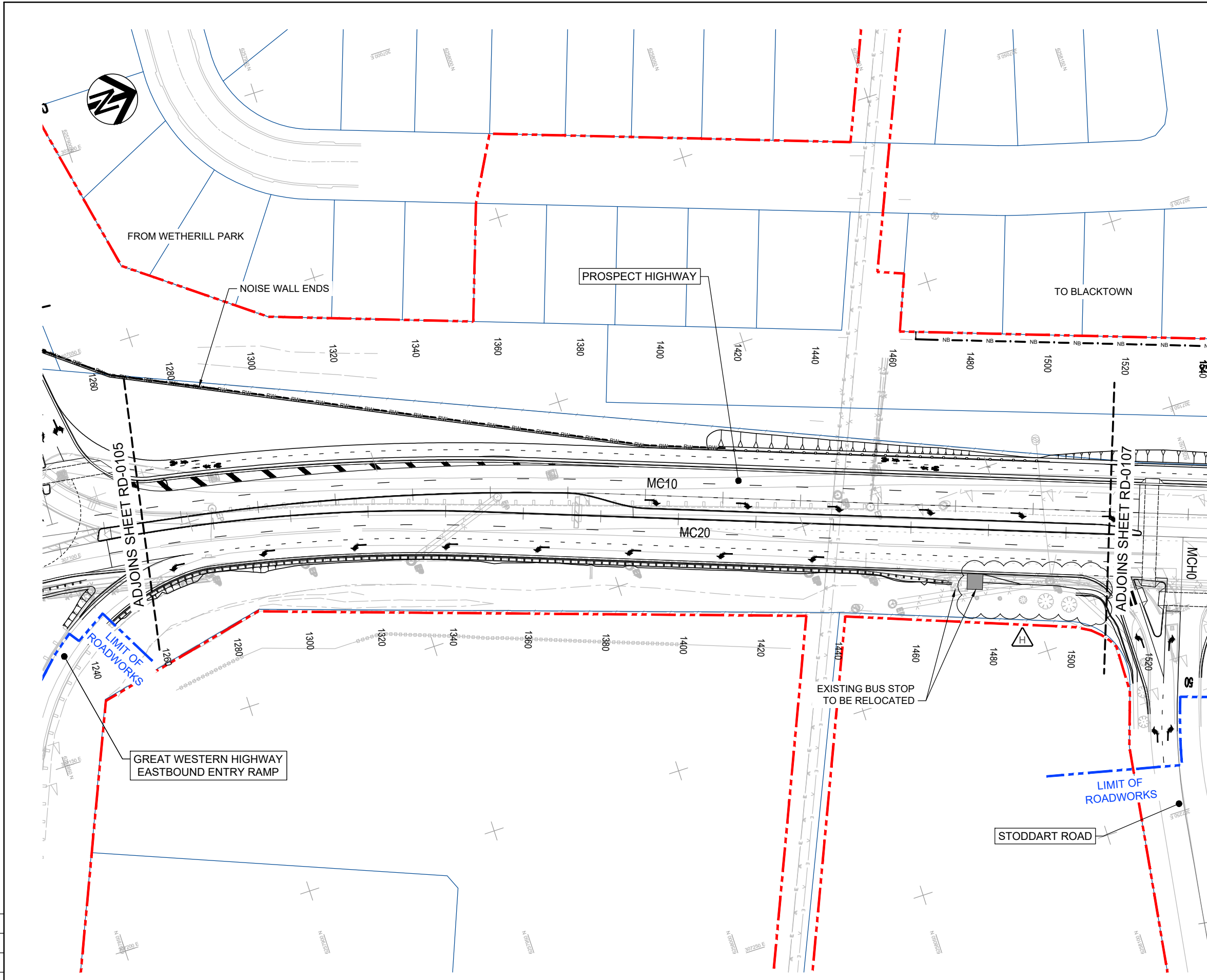
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	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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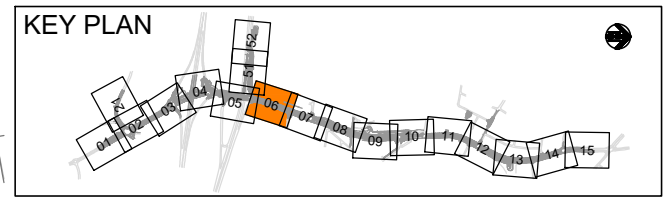
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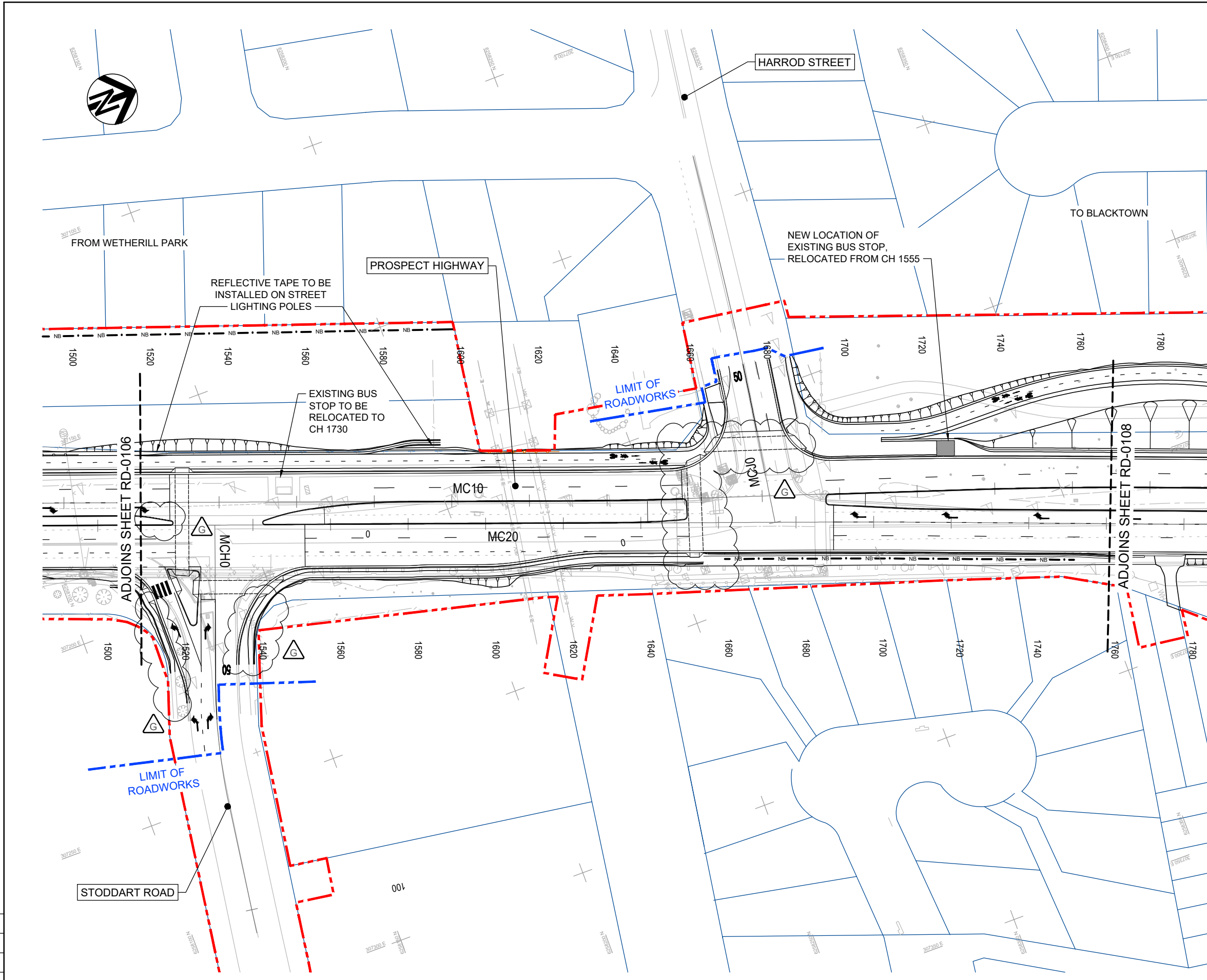
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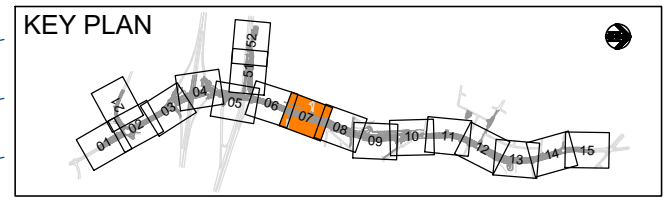
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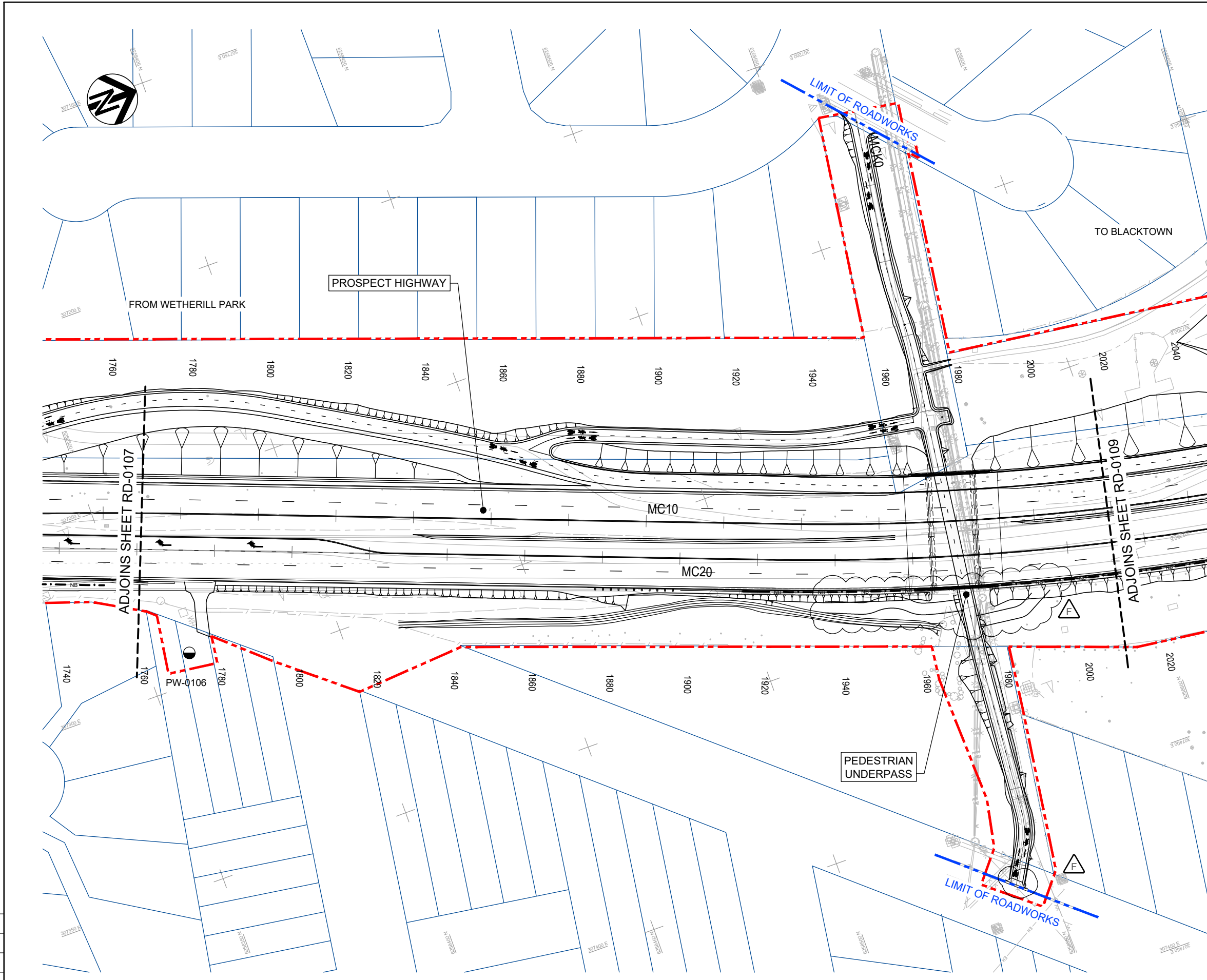
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	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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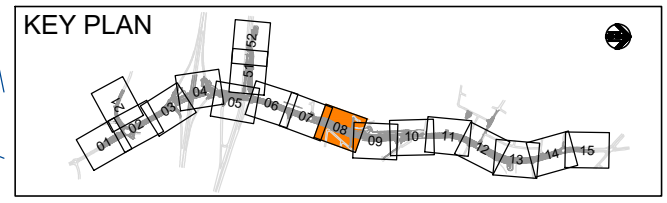
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	F	15.02.2021	RE-ISSUED FOR TENDER	045	CS		PROJECT MNGR	C. SUTTON	10.02.17				
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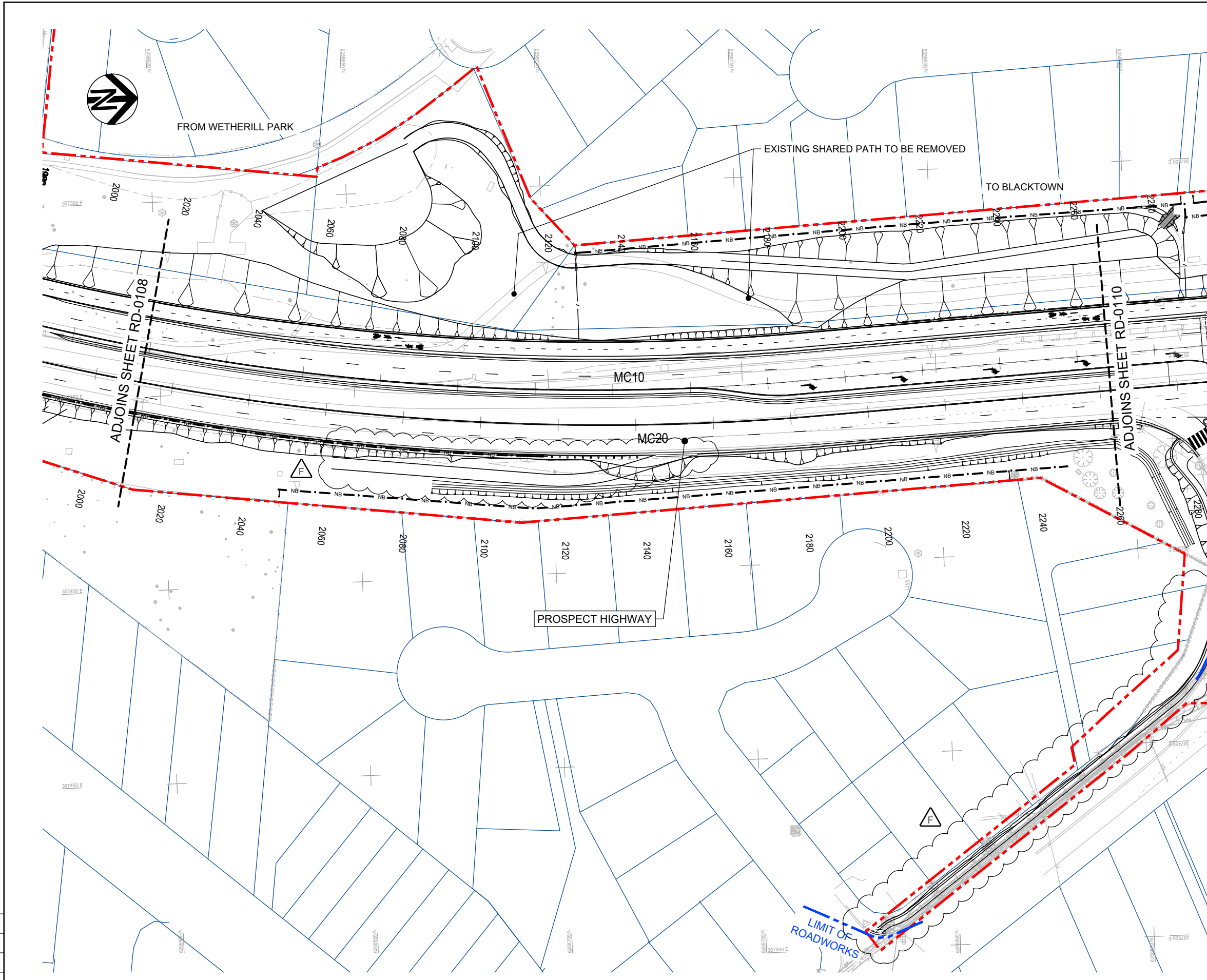
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	NEW FENCING
	EXISTING ROADS AND TRACKS
	RETAINING WALL
	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
	SF KERB
	SFM KERB
	'ACO QK200SF' KERB DRAIN
	SM KERB
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	M4SM DESIGN BY OTHERS
	PROPERTY WORKS DRAWING REFERENCE
	PW-0124



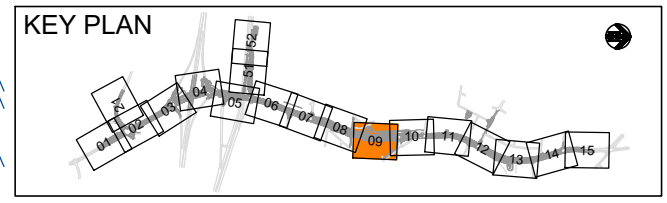
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EXTERNAL REFERENCE FILES X:\RMS\NSW\4.2_C43 X:\BERRY_CTRL_1000 X:\DES_MAIN X:\FRAME_1000 X:\CADAST X:\KEY_1000 X:\LEG_RD X:\GRID X:\DES_CTRL_500 X:\BRG_BARRIERS_Underpass X:\BRG_ADJUSTMENTS_Underpass X:\BERRY_ULM_OF_RD_Works		REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING SCALE 1:1000	DRAWINGS / DESIGN PREPARED BY SMC AUSTRALIA PTY LTD © ABN 47 065 475 149 LEVEL 5 20 BERRY STREET NORTH SYDNEY NSW 2060 PH 02 9925-5555 FAX 02 9925-5566	TITLE	NAME	DATE	PREPARED FOR	RMS REGISTRATION No. DS2015/000269	PART 1		
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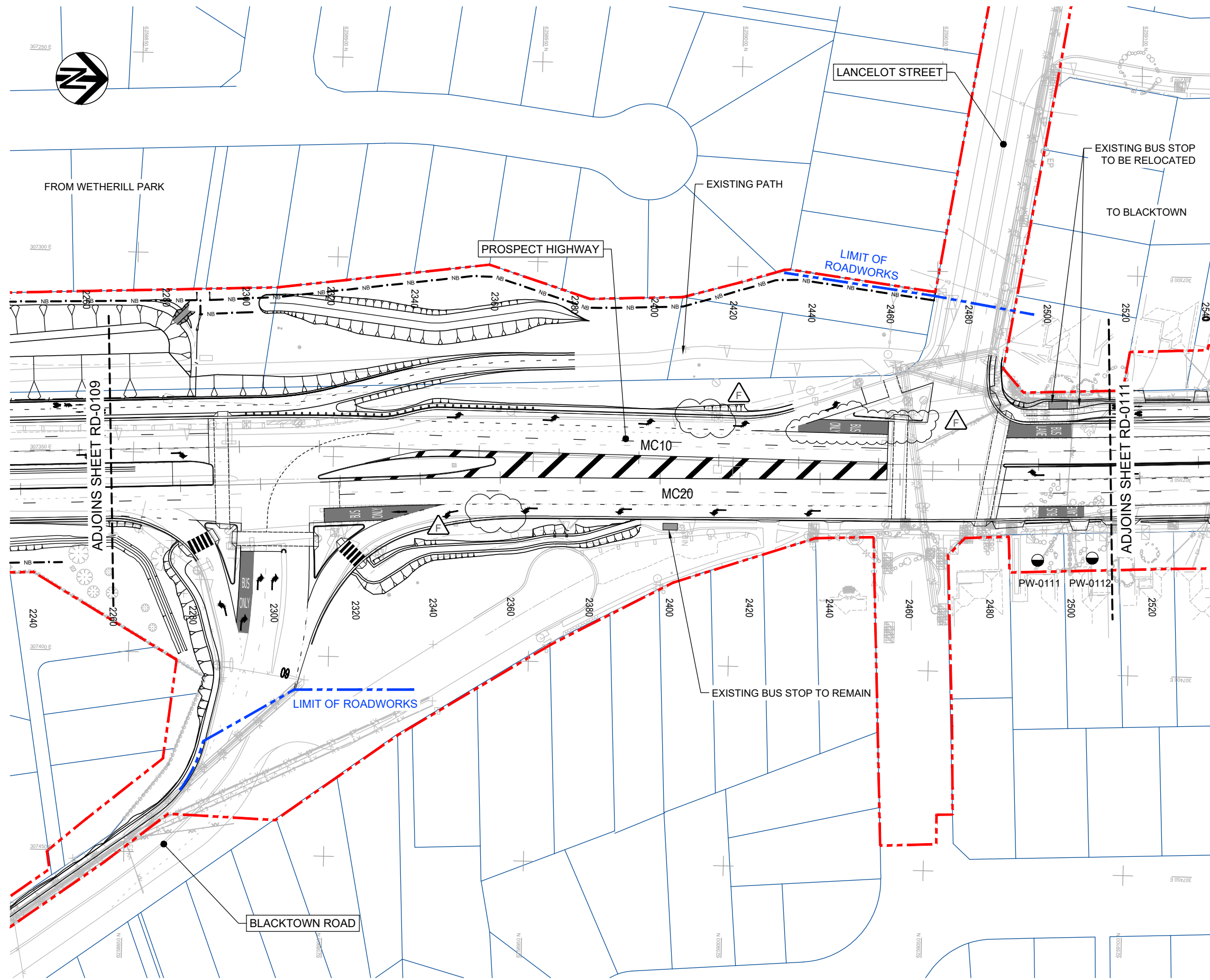
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	EXISTING ROADS AND TRACKS
	RETAINING WALL
	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
	SF KERB
	SFM KERB
	'ACO QK200SF' KERB DRAIN
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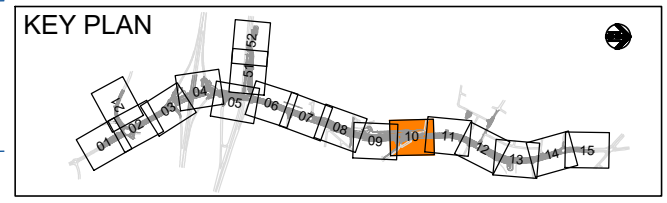
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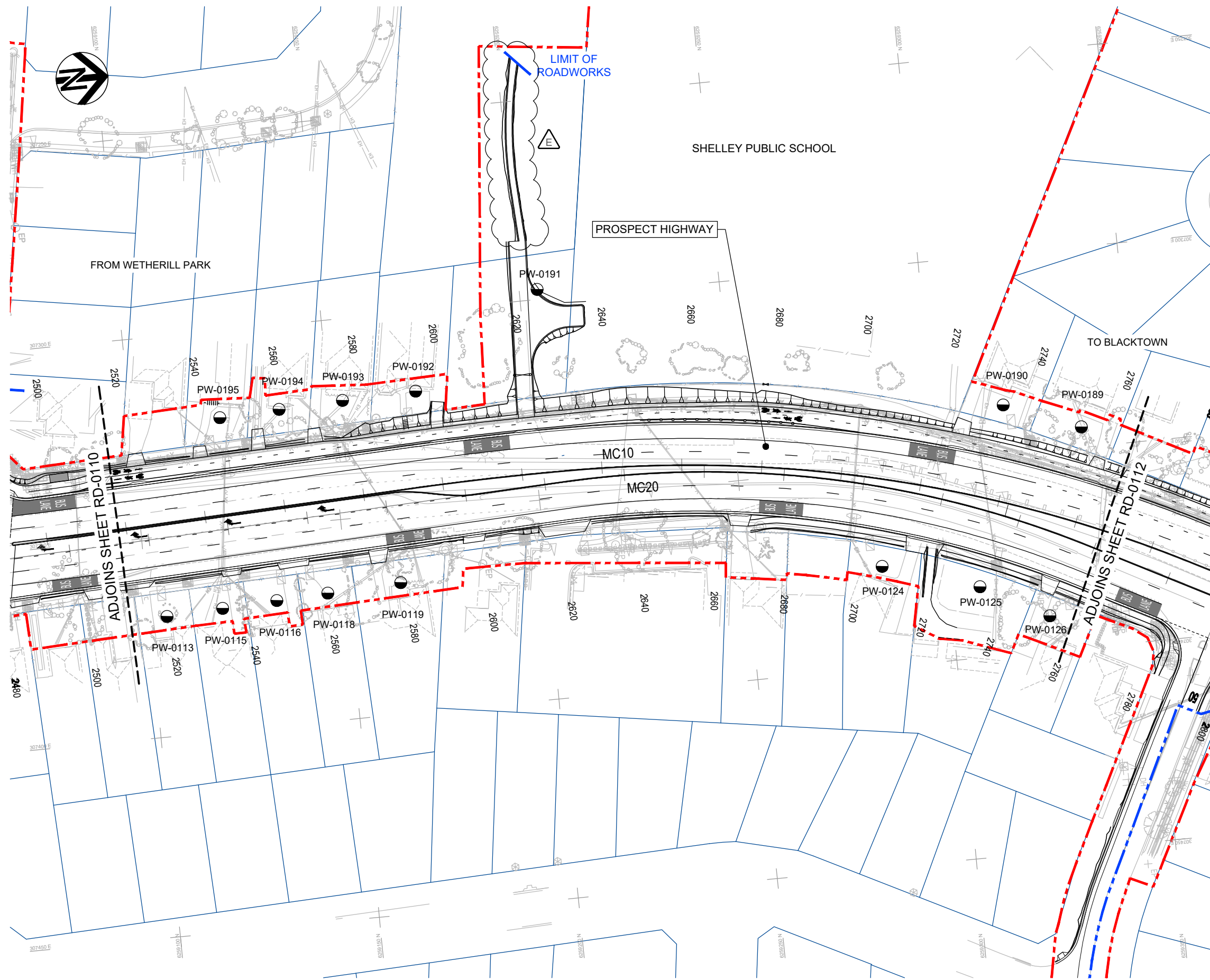
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	EXISTING ROADS AND TRACKS
	RETAINING WALL
	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
	SF KERB
	SFM KERB
	'ACO QK200SF' KERB DRAIN
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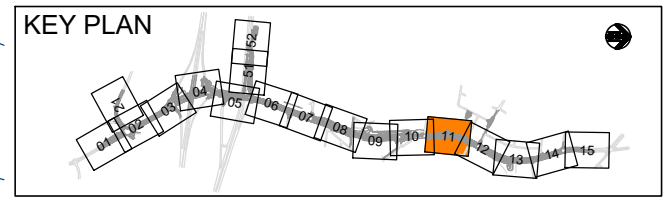
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	PREPARED FOR	RMS REGISTRATION No. DS2015/000269	PART 1
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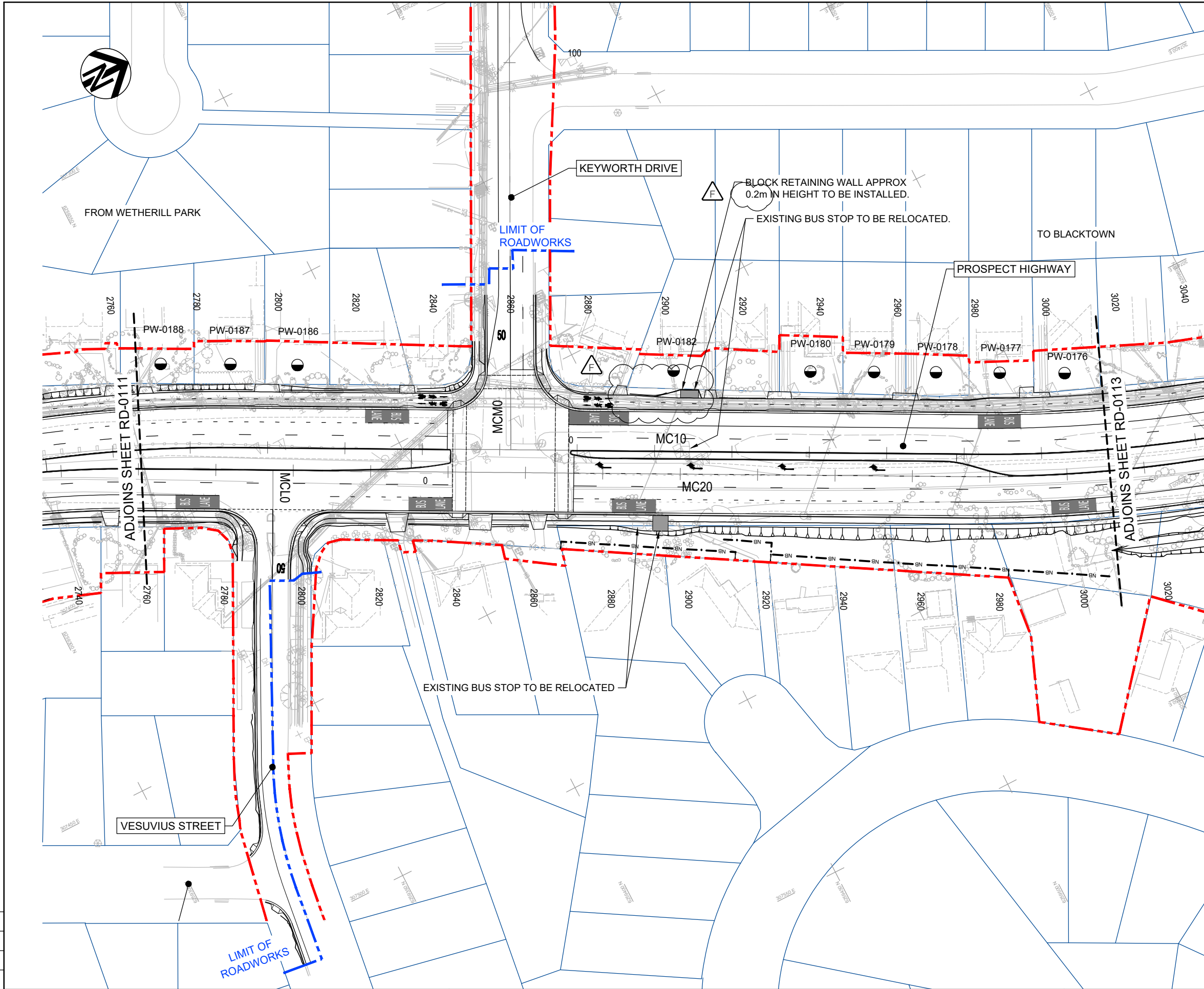
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	NOISE WALL
	PEDESTRIAN HANDRAIL
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	TYPE F SAFETY BARRIER
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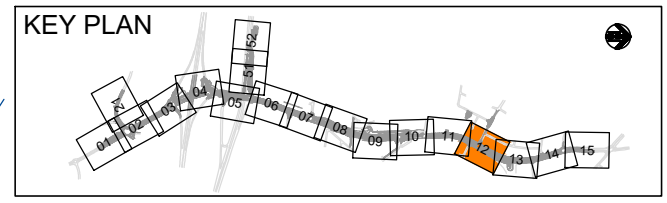
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	PREPARED FOR	RMS REGISTRATION No. DS2015/000269	PART 1			
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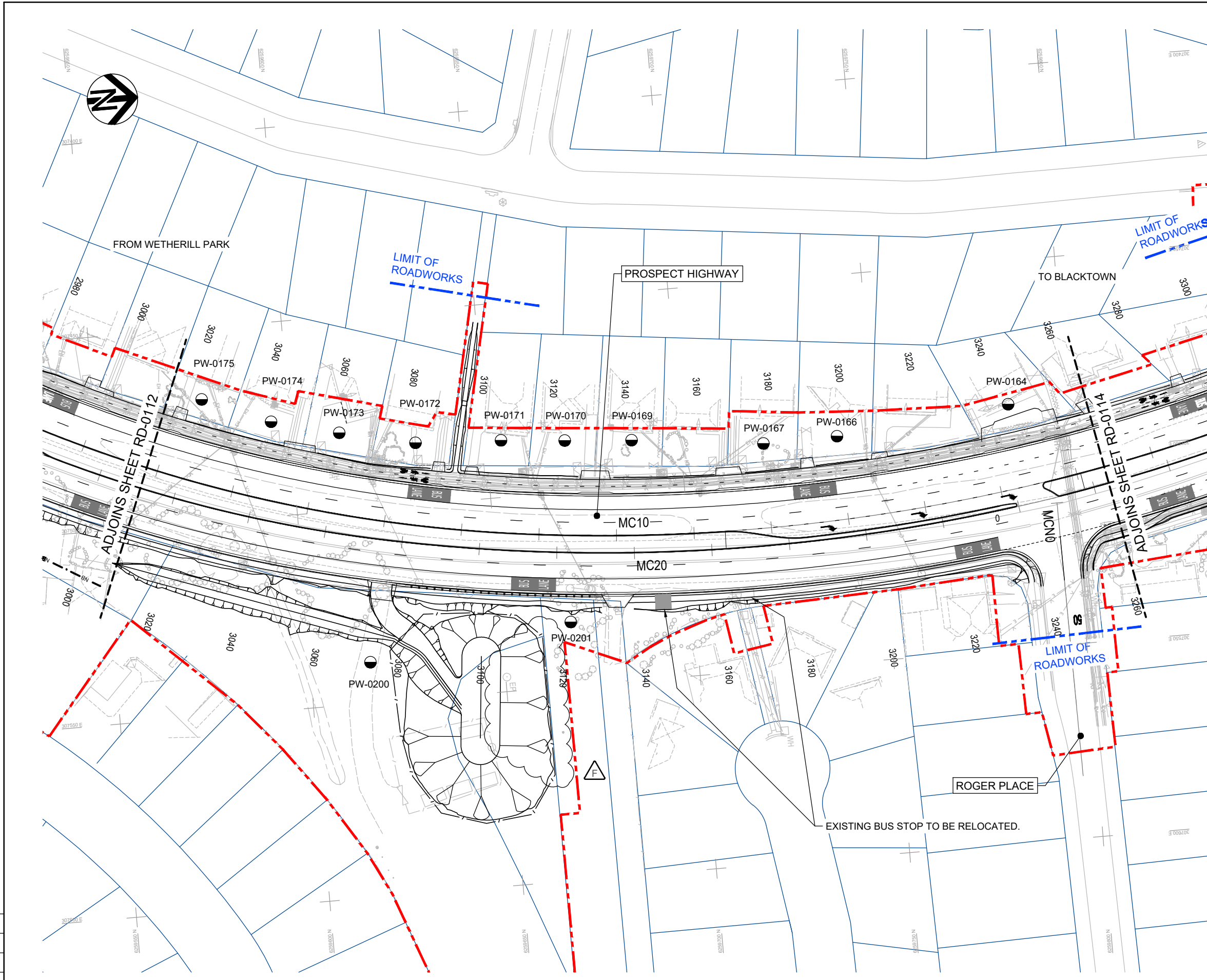
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	TYPE F SAFETY BARRIER
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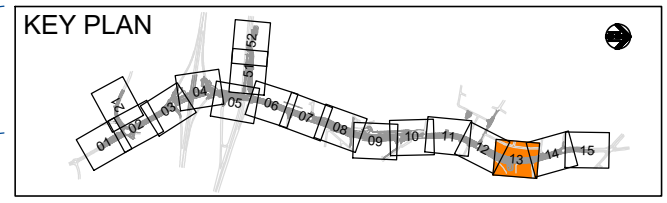
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CO-ORDINATE SYSTEM MGA ZONE 56		HEIGHT DATUM AHD		TITLE		NAME	DATE	PREPARED FOR	
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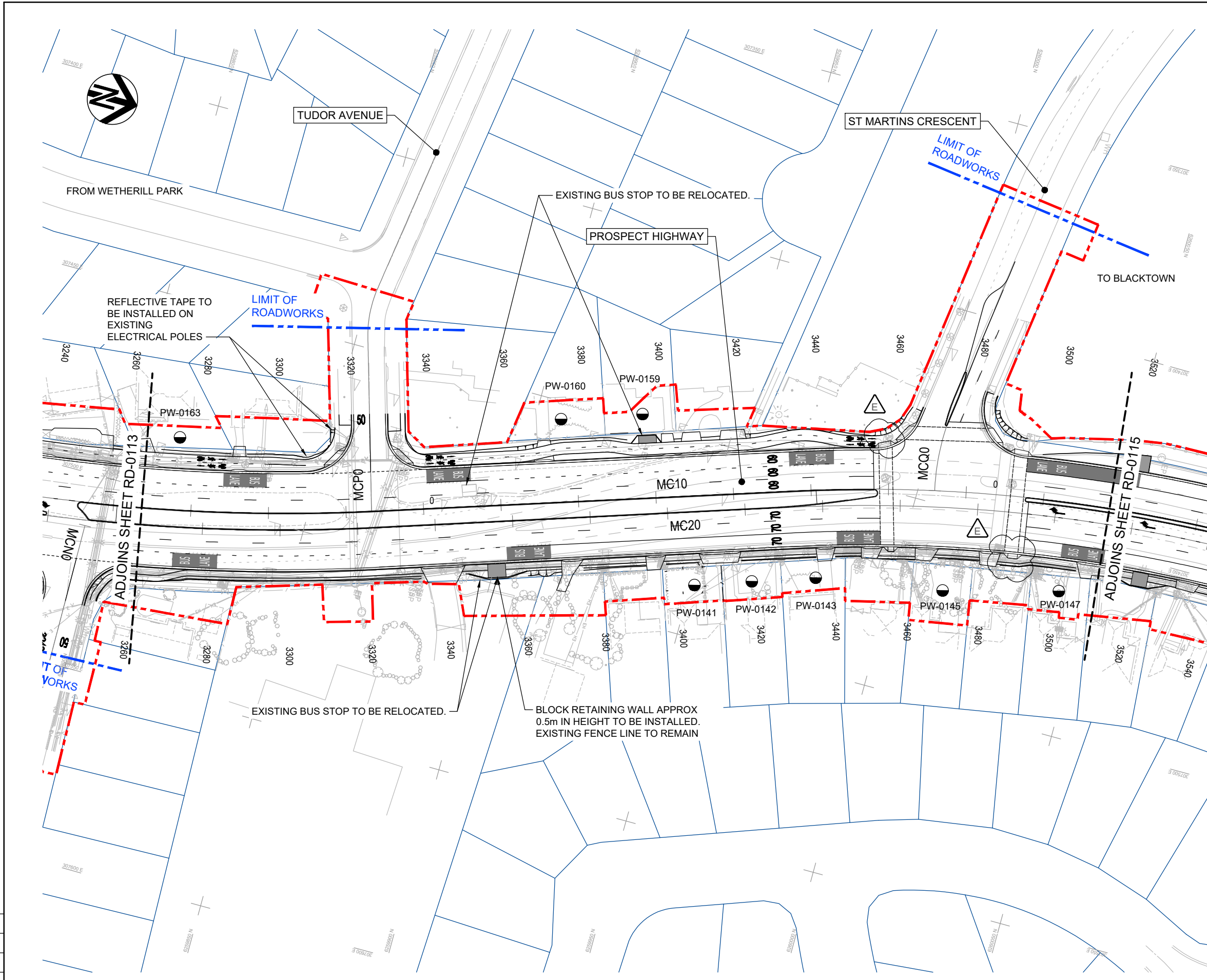
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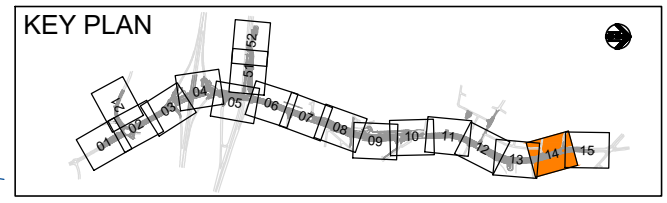
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RMS REGISTRATION No. DS2015/000269		ISSUE STATUS TENDER	EDMS No. DS2015-000269	SHEET No. RD-0113	ISSUE F	PREPARED FOR Transport Roads & Maritime Services		

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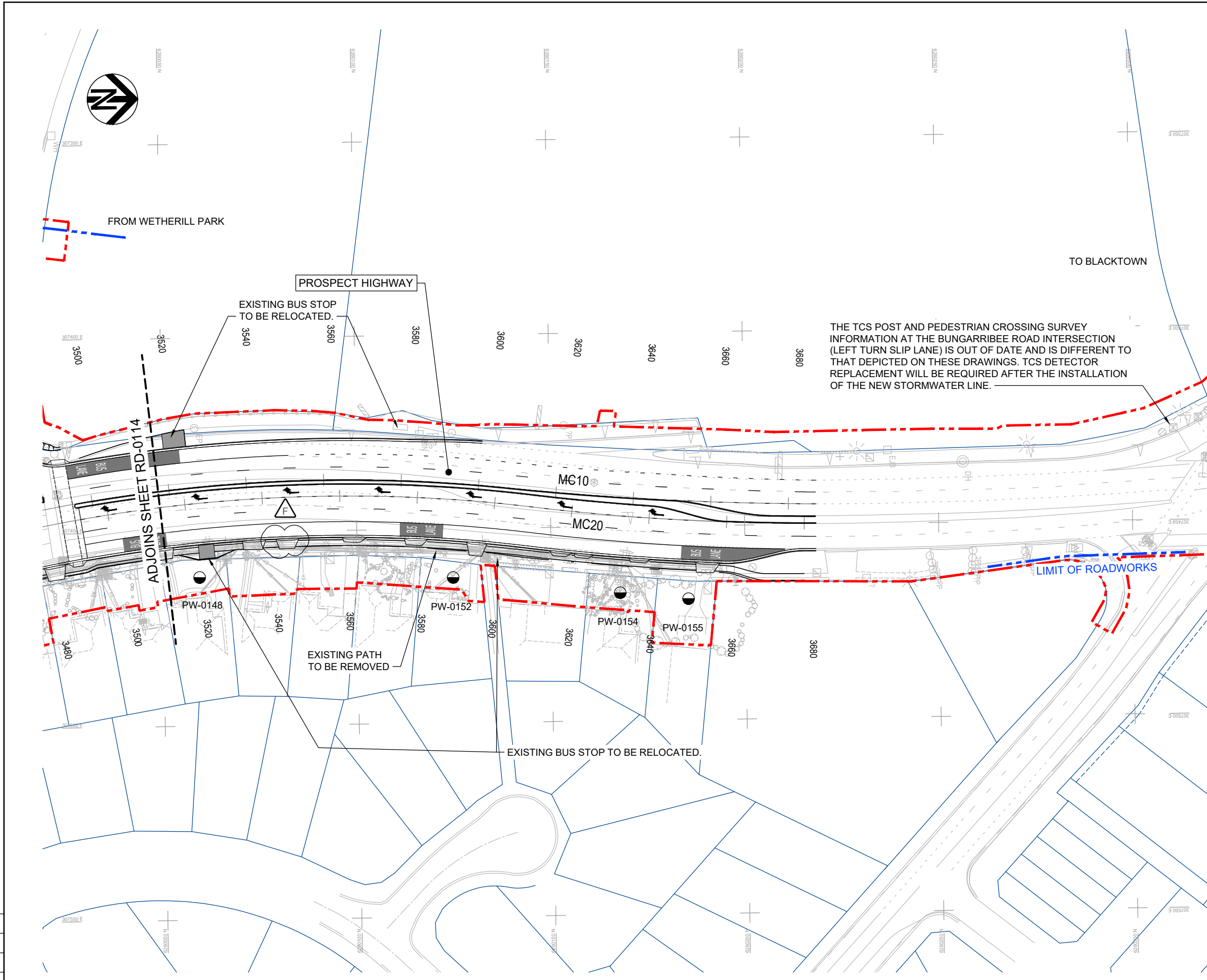
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	EXISTING ROADS AND TRACKS
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	NOISE WALL
	PEDESTRIAN HANDRAIL
	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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	SFM KERB
	'ACO QK200SF' KERB DRAIN
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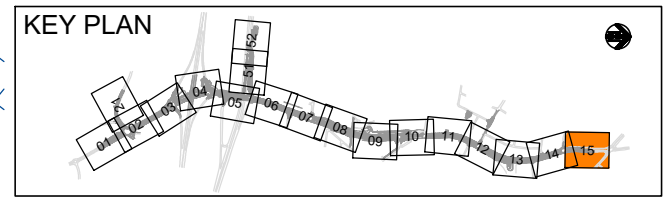
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X:\GRID						HEIGHT DATUM AHD				
X:\DES_CTRL_500										
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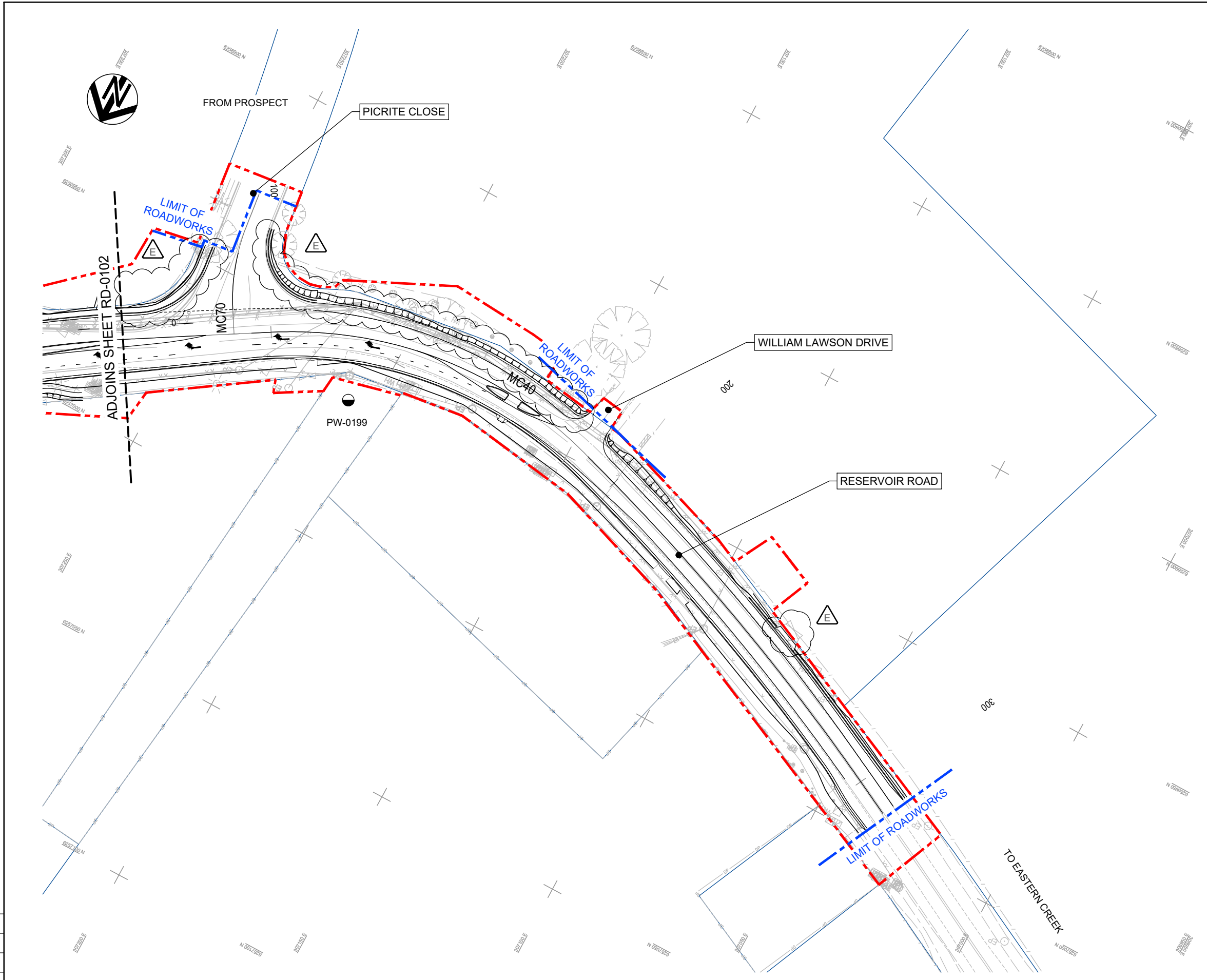
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	SAFETY BARRIER
	TYPE F SAFETY BARRIER
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	SFM KERB
	'ACO QK200SF' KERB DRAIN
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	M4SM DESIGN BY OTHERS
	PROPERTY WORKS DRAWING REFERENCE



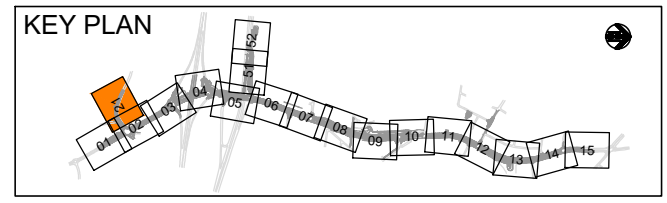
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								R. STEENKAMP 10.02.17	
								C. DALGLEISH 10.02.17	
								R. STEENKAMP 10.02.17	
								S. TAYLOR 10.02.17	
								C. SUTTON 10.02.17	
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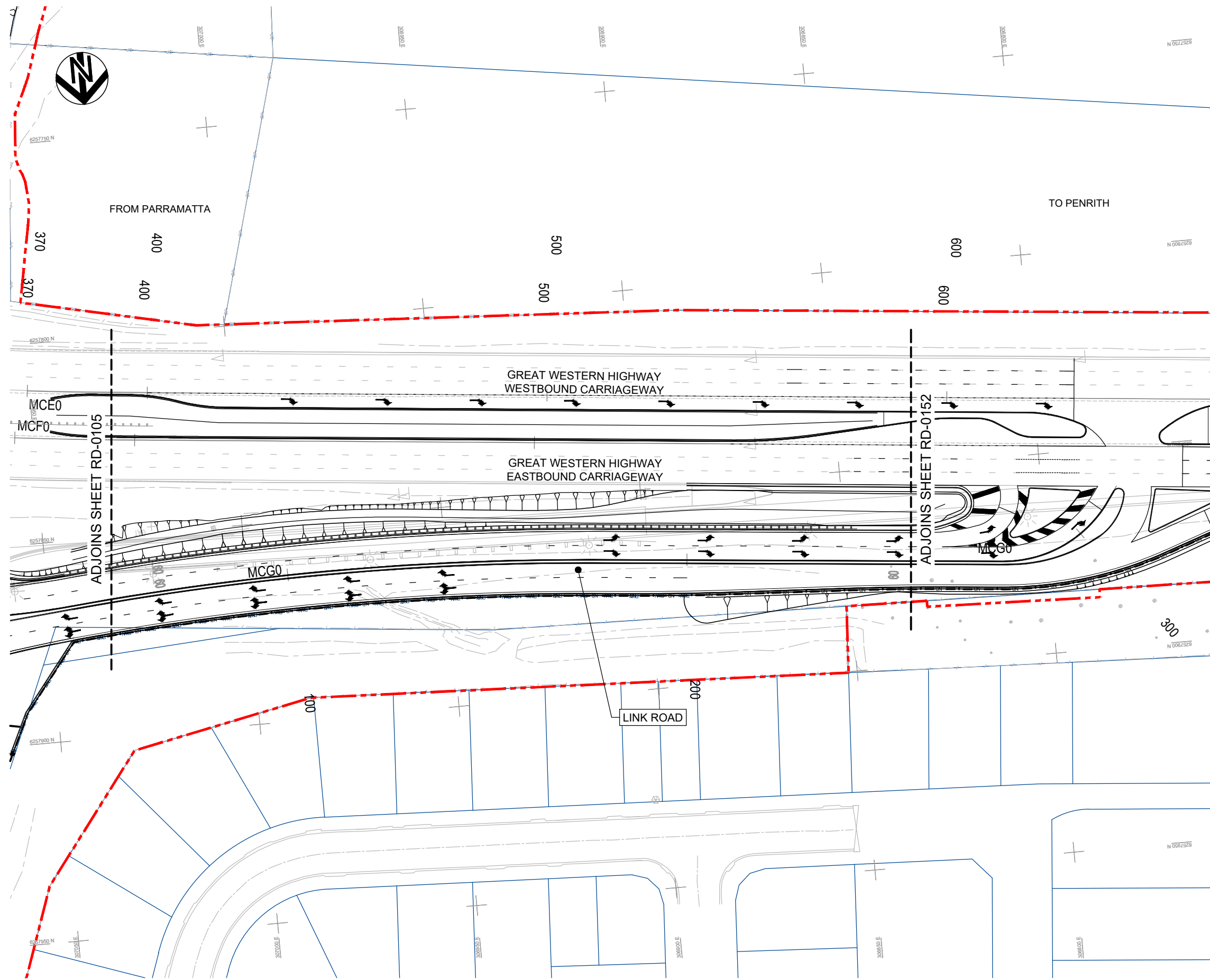
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	M4SM DESIGN BY OTHERS
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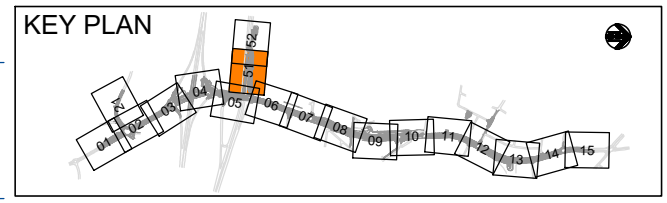
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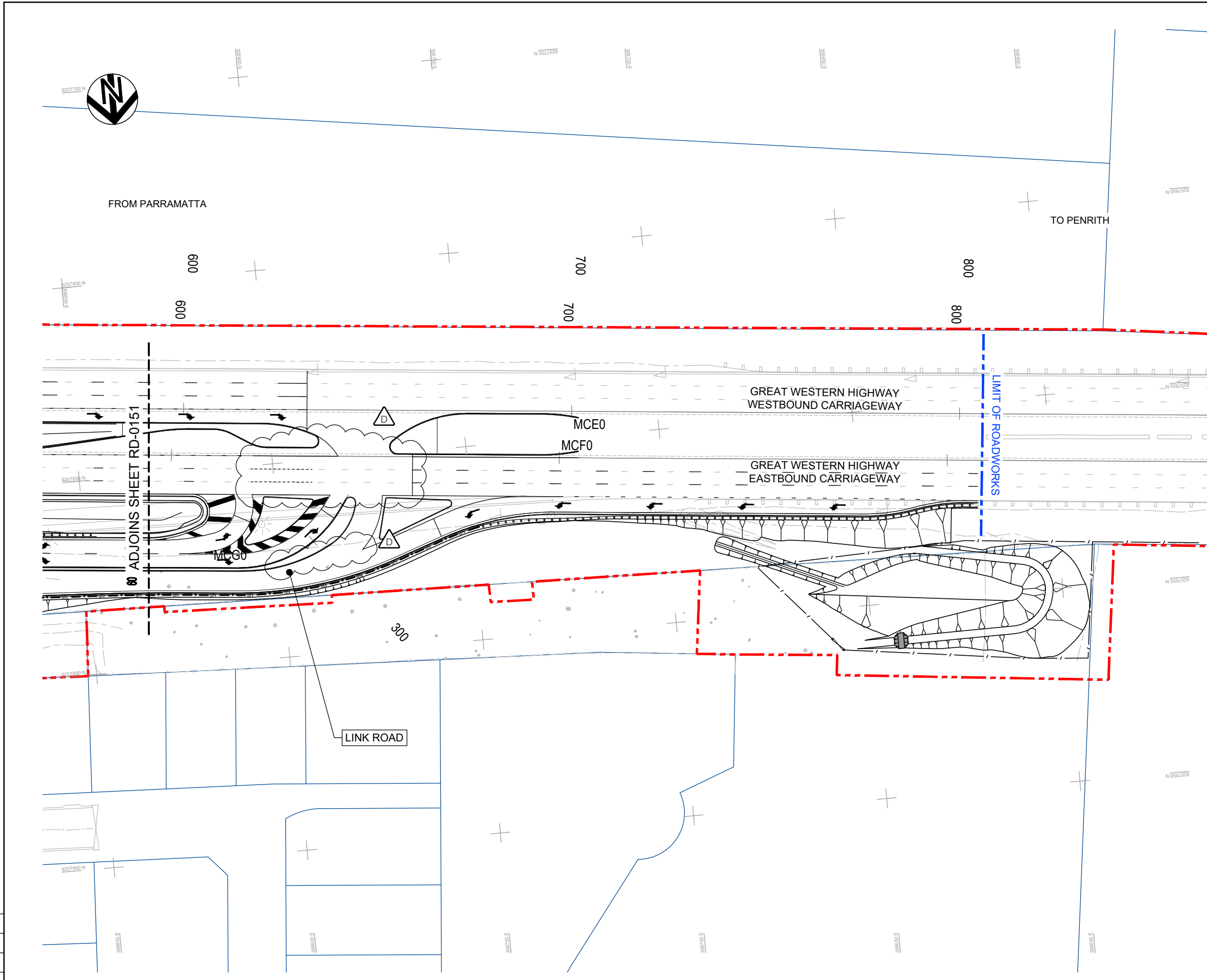
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	'ACO QK200SF' KERB DRAIN
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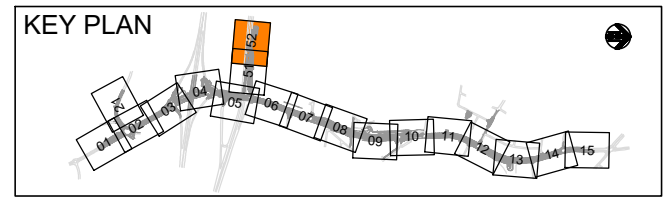
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LEGEND	
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	SAFETY BARRIER
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	SM KERB
	SA KERB
	SB KERB
	ELSHOLZ KERB
	M4SM DESIGN BY OTHERS
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								PROJECT MNGR	C. SUTTON	10.02.17			

Appendix B

Boundary modification locations



Item Number	Street	Approx CH	Location	Update	Description
0001	Picrite Close	20	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0002	Picrite Close	20	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0003	Reservoir Rd	220	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0004	Reservoir Rd	280	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0005	Reservoir Rd	320	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0006	Reservoir Rd	160	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0007	Reservoir Rd	120	RHS	Property Works	REF boundary updated for proposed property works at 531 Reservoir Rd
0008	Reservoir Rd	80	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0009	Prospect Hwy	120	RHS	Cadastral - Offset	REF boundary moved out to match new 5m offset from cadastral property boundary
0010	Prospect Hwy	120	RHS	Cadastral - Offset	REF boundary moved out to match new 5m offset from cadastral property boundary
0011	Thornley Rd	60	Both	Cadastral	REF boundary moved out to match new cadastral property boundary
0012	Prospect Hwy	500	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0013	M4 WB Exit Ramp	40	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0014	M4 WB Exit Ramp	-180	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0015	M4 WB Entry Ramp	0	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0016	M4 EB Exit Ramp	0	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0017	GWH	440	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0018	GWH	860	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0019	GWH	720	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0020	GWH Link Rd	280	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0021	Ponds Rd	120	Both	Design	REF boundary updated to cover linemarking and eradication extents on Ponds Rd
0022	Ponds Rd	350	Both	Cadastral	REF boundary moved out to match new cadastral property boundary
0023	GWH	N/A	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0024	Tarlington Pl	N/A	N/A	Cadastral	REF boundary moved out to match new cadastral property boundary
0025	GWH	N/A	Both	Cadastral	REF boundary moved out to match new cadastral property boundary
0026	GWH	N/A	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0027	GWH	N/A	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0028	GWH	N/A	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0029	GWH	N/A	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0030	GWH	N/A	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0031	GWH	140	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0032	Stoddart Rd	60	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0033	Stoddart Rd	80	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0034	Prospect Hwy	1740	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0035	Prospect Hwy	1820	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0036	Prospect Hwy	1920	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0037	Prospect Hwy	2120	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0038	Ozark St	N/A	N/A	Cadastral	REF boundary moved out to match new cadastral property boundary
0039	Prospect Hwy	2480	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0040	Prospect Hwy	2560	RHS	Property Works	REF boundary updated for proposed property works at 299 Blacktown Rd
0041	Prospect Hwy	2620	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0042	Prospect Hwy	2680	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0043	Prospect Hwy	2780	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0044	Vesuvius St	60	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0045	Vesuvius St	100	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0046	Prospect Hwy	2820	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0047	Prospect Hwy	2840	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0048	Prospect Hwy	3040	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0049	Prospect Hwy	3180	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0050	Prospect Hwy	3220	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0051	Roger Pl	40	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0052	Prospect Hwy	3300	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0053	Prospect Hwy	3300	RHS	Design	REF boundary updated to cover driveway upgrade extents at 143 Blacktown Rd
0054	Prospect Hwy	3380	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0055	Prospect Hwy	3420	RHS	Property Works	REF boundary updated for proposed property works at 135 Blacktown Rd
0056	Prospect Hwy	3600	RHS	Property Works	REF boundary updated for proposed property works at 115 Blacktown Rd
0057	Prospect Hwy	3640	RHS	Property Works	REF boundary updated for proposed property works at 111 Blacktown Rd
0058	Prospect Hwy	3680	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0059	Prospect Hwy	3740	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0060	Prospect Hwy	1460	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0061	Shared Path Underpass (MCK0)	40	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0062	Prospect Hwy	2080	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0063	Prospect Hwy	2300	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary



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Item Number	Street	Approx CH	Location	Update	Description
0064	Prospect Hwy	2300	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0065	Prospect Hwy	2540	LHS	Property Works	REF boundary updated for proposed property works at 230 Blacktown Rd
0066	Prospect Hwy	2600	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0067	Shelly PS	N/A	N/A	Cadastral	REF boundary moved out to match new cadastral property boundary
0068	Hadrian Ave	300	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0069	Keyworth Dr	240	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0070	Keyworth Dr	280	LHS	Design	REF boundary moved out to match new linemarking extents
0071	Prospect Hwy	2740	LHS	Property Works	REF boundary updated for proposed property works at 206 Blacktown Rd
0072	Prospect Hwy	2920	LHS	Property Works	REF boundary updated for proposed property works at 190 Blacktown Rd
0073	Prospect Hwy	2960	LHS	Property Works	REF boundary updated for proposed property works at 184 Blacktown Rd
0074	Prospect Hwy	2980	LHS	Property Works	REF boundary updated for proposed property works at 182 Blacktown Rd
0075	Prospect Hwy	3060	LHS	Property Works	REF boundary updated for proposed property works at 174 Blacktown Rd
0076	Prospect Hwy	3100	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0077	Prospect Hwy	3160	LHS	Property Works	REF boundary updated for proposed property works at 160 Blacktown Rd
0078	Tudor Ave	40	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0079	Tudor Ave	40	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0080	Prospect Hwy	3400	LHS	Property Works	REF boundary updated for proposed property works at 142 Blacktown Rd
0081	Prospect Hwy	3540	LHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0082	Reservoir Rd	60	RHS	Utilities	REF boundary updated for proposed Vocus SOW with UG connection to pit.
0083	Prospect Hwy	320	RHS	Cadastral	REF boundary moved out to match new cadastral property boundary
0084	Prospect Hwy	2760	LHS	Property Works	REF boundary updated for proposed property works at 204 Blacktown Rd
0085	Prospect Hwy	1380	LHS	Utilities	REF boundary updated for proposed ARP4110 Stage 4 connection to Sub 9573
0086	Stoddart Rd	180	RHS	Utilities	REF boundary updated for proposed ARP4110 Stage 4 connection to Sub 17840
0087	Stoddart Rd	120	LHS	Utilities	REF boundary updated for proposed ARP4110 Stage 4 connection to Sub 17808
0088	Harrod St	40	Both	Utilities	REF boundary updated for proposed ARP4109 Stage 3 connection to existing pits
0089	Ozark St	N/A	N/A	Utilities	REF boundary updated for proposed Optus SOW
0090	Prospect Hwy	Multiple	Multiple	Property Works	Multiple updates to snap REF boundary to property boundaries perpendicular to road reserve. Only at properties where the REF wobbles for front yard coverage.
0091	Prospect Hwy	3380	RHS	Landscaping	Tree Removal/Pruning outside of REF boundary
0092	Prospect Hwy	1540	RHS	Landscaping	Tree Removal outside of REF boundary
0093	Prospect Hwy	2640	RHS	Landscaping	Tree Removal outside of REF boundary
0094	Prospect Hwy	1640	LHS	Landscaping	Tree Pruning outside of REF boundary
0095	GWH Link Rd	640	RHS	Landscaping	Maintenance track outside of REF boundary

Appendix C

Consideration of clause 228(2) factors and Matters of National Environmental Significance and Commonwealth land

Clause 228(2) Checklist

In addition to the requirements of the *Is an EIS required?* (1995/1996) guideline and the *Roads and Related Facilities EIS Guideline* (DUAP, 1996) as detailed in the addendum REF, the following factors, listed in clause 228(2) of the Environmental Planning and Assessment Regulation 2000, 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>During construction, the proposal would cause minor impacts on the community because of construction noise, potential air quality impacts, and traffic and transport impacts. Affected residence would be contacted prior to the commencement of work</p> <p>The design modifications assessed in this Addendum REF contribute to the overall Approved Project, which would provide the community with a safer and less congested road, one that can accommodate predicted traffic growth. The local and broader community would experience these benefits. Property access arrangements would benefit individual property owners.</p>	<p>Short-term negative</p> <p>Long-term positive</p>
<p>Any transformation of a locality?</p> <p>The proposed modification would not transform a locality.</p>	<p>Nil</p>
<p>Any environmental impact on the ecosystems of the locality?</p> <p>The proposed modification would have negligible impact during construction on the ecosystems of the locality as discussed above in section 6.4. Operational impacts of the proposal are not expected to be additional in nature or extent from the assessment carried out in the project REF, addendum 1 REF or addendum 2 REF.</p> <p>No new safeguards have been proposed to address the potential impacts associated with the proposed modification.</p>	<p>Short-term minor negative</p>
<p>Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</p> <p>The proposed modification is not expected to reduce the aesthetic, recreational, scientific or other environmental quality or value of the locality.</p>	<p>Nil</p>
<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>Nil</p>
<p>Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)?</p> <p>No impact on the habitat of protected fauna is expected.</p>	<p>Nil</p>
<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>The proposed modification would not endanger any species of animal, plant or other form of life.</p>	<p>Nil</p>
<p>Any long-term effects on the environment?</p> <p>In the long term, there would be negligible changes to the locality from the current status. The land use of the area would be consistent, and the area of</p>	<p>Nil</p>

Factor	Impact
<p>additional vegetation clearance required for construction negligible in the context of the surrounding area.</p>	
<p>Any degradation of the quality of the environment? In the short term the proposal has the potential to degrade the environment in the area immediately surrounding the proposed modification site due to construction work activities. Table 7-1 details safeguards and management measures to manage these impacts. With effective implementation of the measures, most impacts would be minor or negligible.</p>	<p>Short-term minor negative Long-term negligible</p>
<p>Any risk to the safety of the environment? The proposed modification does not pose a risk to the safety of the environment.</p>	<p>Nil</p>
<p>Any reduction in the range of beneficial uses of the environment? The proposed modification would not reduce the range of beneficial uses of the environment.</p>	<p>Nil</p>
<p>Any pollution of the environment? In the short term the proposal has the potential to pollute the environment in the area immediately surrounding the proposed modification site, through erosion and runoff, accidental spills and construction noise. Table 7-1 details safeguards and management measures to manage these impacts. With effective implementation of the measures, most impacts would be minor or negligible.</p>	<p>Short-term minor negative Long-term negligible</p>
<p>Any environmental problems associated with the disposal of waste? The proposed modification has no identified problems associated with the disposal of waste.</p>	<p>Nil</p>
<p>Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The proposed modification would not place any increased demand on resources, (natural or otherwise) that are, or are likely to become, in short supply.</p>	<p>Nil</p>
<p>Any cumulative environmental effect with other existing or likely future activities? Given the location and scale of the proposed modification, cumulative impacts are not expected.</p>	<p>Nil</p>
<p>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? There would be no impact to coastal processes or hazards.</p>	<p>Nil</p>

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 the Environment.

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
a. Any impact on a World Heritage property? The proposed modification would not impact World Heritage property.	Nil
b. Any impact on a National Heritage place? The proposed modification would not impact a National Heritage Place.	Nil
c. Any impact on a wetland of international importance? The proposed modification would not impact a wetland of international importance.	Nil
d. Any impact on a listed threatened species or communities? The proposed modification would not impact a listed threatened species or communities.	Nil
e. Any impacts on listed migratory species? The proposed modification would not impact on listed migratory species.	Nil
f. Any impact on a Commonwealth marine area? The proposed modification would not impact a Commonwealth marine area.	Nil
g. Does the proposed modification involve a nuclear action (including uranium mining)? The proposed modification would not involve a nuclear action (including uranium mining),	Nil
Additionally, any impact (direct or indirect) on Commonwealth land? The proposed modification would not have any impact (direct or indirect) on Commonwealth land.	Nil

Appendix D

Biodiversity assessment technical note

Technical Memorandum

To	David Wells, SMEC Senior Environmental Scientist	Date	07/05/2021
From	Lachlan Laurie, SMEC Senior Scientist - Ecology	No of Pages	16
Reference	Prospect Highway Upgrade – addendum 3 REF		
Subject	Biodiversity Assessment – Technical Memorandum		

1.1 Background

The subject area considered and assessed by this Biodiversity Assessment Technical Memorandum (Technical Memorandum) comprises areas of potential biodiversity value listed under the Biodiversity Conservation Act 2016 (BC Act) such as threatened species, threatened populations, threatened ecological communities (TEC) and supporting habitat. Any impact to flora and fauna or their habitat that is additional to the project REF, addendum 1 REF and addendum 2 REF would need to be considered with the combined impact for this proposal.

The biodiversity study area for this Technical Memorandum was determined as those areas of biodiversity value that have the potential to be directly or indirectly impacted by any modifications or additional impacts of the Endeavour Energy maintenance tracks. The direct and indirect impacts relating to the proposed maintenance tracks associated with the proposed Prospect Highway Upgrade on the eastern side of Prospect Highway, immediately north and south of the existing pedestrian underpass that links Sher Place with Old Church Lane, Blacktown (refer Figure 1).

The biodiversity study area for this Technical Memorandum considers those values within the study area along with known or likely biodiversity values including those considered by the project REF and addenda 1 REF. .

1.2 Methodology

1.2.1 Desktop assessment

A desktop review assessment was carried out including:

- The Biodiversity Impact Assessment prepared for the project REF (Sinclair Knight Merz, 2014)
- The project REF (2014)
- The Prospect Highway Upgrade Addendum 1 Review of Environmental Factors (2016)
- The Prospect Highway Upgrade Addendum 2 Review of Environmental Factors (2019)
- A search of the Atlas of NSW Wildlife maintained by the NSW Department of Planning, Industry and Environment (DPIE 28th April 2021) (10km x 10km search area around project site boundary)

- A Protected Matters Search Tool search provided under the EPBC Act (30th April 2021) (5km buffer from the project site boundary)
- Updating vegetation mapping The Native Vegetation of the Sydney Metropolitan Area - Version 3.1 VIS_ID 4489 (OEH, 2016).

Note, the previously mapped Cumberland Plain Woodland (CPW) adjacent to the maintenance access study area was assessed by the project RE and addendum 1 REF as not meeting the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) condition thresholds. This was confirmed by the survey undertaken 20 April 2021 (refer below).

1.2.2 Field survey

A field survey of the study area was carried out on 20th April 2021. Surveys carried out for the proposal equated to about 4-person hours including visitation of nearby CPW reference sites. The survey included those sections of the alignment of Prospect Highway as described above with immediately adjacent extents of vegetation. Areas of suitable habitat for threatened species were considered using broadly the methods identified in the project REF. Where native vegetation was identified, the vegetation type relative to listed threatened ecological communities was determined. Suitable potential non-vegetated habitat was considered as part of the survey.

The survey was carried out based on the nature of direct or likely indirect impacts, likely biodiversity habitat and mapped vegetation. All areas impacted by the proposed addendum 3 REF design (as described in section 1.1 above) were ground-truthed.

As the project REF was determined in 2014 the database searches were seven years old so there were rerun and updated. The likelihood of occurrence table was revised for the project boundary and the biodiversity study area for this Technical Memorandum . Table 1 details those species which have been recorded previously or are predicted to occur in the locality of the proposal



Figure 1 Maintenance track location and environmental constraints mapping

Table 1 Likelihood of Occurrence for Threatened Species

Likelihood	Criteria
Recorded	The species was observed in the study area during the current survey
High	It is highly likely that a species inhabits the study area and is dependent on identified suitable habitat (ie. for breeding or important life cycle periods such as winter flowering resources), has been recorded recently in the locality (10km) and is known or likely to maintain resident populations in the study area. Also includes species known or likely to visit the study area during regular seasonal movements or migration.
Moderate	Potential habitat is present in the study area. Species unlikely to maintain sedentary populations, however may seasonally use resources within the study area opportunistically or during migration. The species is unlikely to be dependent (ie. for breeding or important life cycle periods such as winter flowering resources) on habitat within the study area, or habitat is in a modified or degraded state. Includes cryptic flowering flora species that were not seasonally targeted by surveys and that have not been recorded.
Low	It is unlikely that the species inhabits the study area and has not been recorded recently in the locality (10km). It may be an occasional visitor, but habitat similar to the study area is widely distributed in the local area, meaning that the species is not dependent (ie. for breeding or important life cycle periods such as winter flowering resources) on available habitat. Specific habitat is not present in the study area or the species are a non-cryptic perennial flora species that were specifically targeted by surveys and not recorded.
None	Suitable habitat is absent from the study area.

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
FAUNA							
Amphibians							
Green and Golden Bell Frog <i>(Litoria aurea)</i>	V	E	Large populations in NSW are located around coastal and near coastal areas of the metropolitan areas of Sydney, Shoalhaven and mid north coast. It inhabits marshes, dams and stream-sides, particularly those containing bullrushes (<i>Typha</i> spp.) or spikerushes (<i>Eleocharis</i> spp.). Optimum habitat includes unshaded water-bodies which are free of predatory fish (such as the Plague Minnow, <i>Gambusia holbrooki</i>) and have a grassy area nearby.	10	Low – Blacktown Creek waterbody near study area with adjacent grassy area but no suitable aquatic habitat in study area	Low	Low
Birds							
White-throated Needletail <i>(Hirundapus caudacutus)</i>	V	-	Almost exclusively aerial, migrating to Australia in October and leaving between May and August each year. Seen in a wide variety of habitats in Eastern Australia, roosting in trees and feeding on flying insects. More common in coastal areas.	1	Marginal – study area is not coastal but may support roosting and feeding habitat.	Moderate	Low
Little Eagle <i>(Hieraetus morphnoides)</i>	-	V	Distributed across Mainland Australia, although has also been recorded in Tasmania. Occupies habitats that are rich in prey (birds, reptiles and mammals) within open eucalypt forest, woodland or open woodland. Requires tall living trees for building a	12	Potential habitat present.	Moderate	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
			large stick nest and preys on birds, reptiles, mammals and occasionally carrion.				
Black Falcon (<i>Falco subniger</i>)	-	V	Widely and sparsely distributed in NSW, more commonly occurring in inland regions. Utilises a range of habitats including wet and dry sclerophyll forest, woodland and rainforest.	1	Potential habitat present.	Low – potentially a rare visitor only	Low
Little Lorikeet (<i>Glossopsitta pusilla</i>)	-	V	Widely distributed across the coastal and Great Divide regions of eastern Australia, extending as far west as Dubbo and Albury. Habitat includes canopy of open <i>Eucalyptus</i> forest and woodland, <i>Angophora</i> , <i>Melaleuca</i> and other tree species for foraging. Utilises hollows in limb or trunk of smooth-barked Eucalypts for nesting. Often uses riparian habitats due to higher productivity.	2	Marginal – open Eucalypt woodland is present for foraging but may not have hollows to support nesting.	Low – potentially a rare visitor only	Low
Swift Parrot (<i>Lathamus discolor</i>)	CE	E	In NSW the Swift Parrot has been recorded on the coast and south west slopes, occurring in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Inhabit dry woodland forest, particularly ironbark forests. Favoured feed trees include winter flowering species such as Swamp Mahogany (<i>Eucalyptus robusta</i>), Spotted Gum (<i>Corymbia maculata</i>), Red Bloodwood (<i>C. gummifera</i>), Mugga Ironbark (<i>E. sideroxylon</i>), and White Box (<i>E. albens</i>).	28	Potential habitat present.	Moderate	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
Turquoise Parrot (<i>Neophema pulchella</i>)	-	V	Distribution ranges from southern Queensland to northern Victoria, and from the coastal plains to the western slopes of the Great Dividing Range. Inhabits edges of eucalypt woodland adjacent to clearings, ridges, and creeks. Uses tree hollows and logs for nesting.	1	Marginal – open Eucalypt woodland is present for foraging but may not have hollows to support nesting.	Low	Low
Barking Owl (<i>Ninox connivens</i>)	-	V	Occurs throughout NSW, where it inhabits dry open sclerophyll forests and woodlands. This species favours dense riparian stands of eucalypts or casuarinas where there are many large trees suitable for roosting or breeding.	2	Potential habitat present.	Low	Low
Powerful Owl (<i>Ninox strenua</i>)	-	V	Mainly distributed across south-eastern mainland Australia. Inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. Require large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. Nest in large tree hollows (at least 0.5m deep), in large eucalypts (diameter at breast height of 80-240 cm) that are at least 150 years old.	4	Marginal – vegetation type may be suitable but may not have hollows to support nesting.	Moderate	Low
Masked Owl	-	V	Distributed widely across NSW excluding the most arid north-western corner. Lives in dry eucalypt forests and woodlands up to 1110m above sea level. Predominantly hunts in forests but has been	3	Marginal – suitable habitat is present for foraging but may	Moderate	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
(<i>Tyto novaehollandiae</i>)			observed foraging along roadsides and along forest margins. Roosts in eucalypt forested gullies, utilising large tree hollows and or even caves.		not have hollows to support nesting.		
Regent Honeyeater (<i>Anthochaera Phrygia</i>)	CE	E	Inhabits dry open forest and woodland in south-east Australia, particularly Box-Ironbark woodland and River Sheoak forests. These woodlands and forests have many mature trees, high canopy cover and an abundance of mistletoes. Non-breeding flocks have been observed on occasion foraging in flowering coastal Swamp Mahogany and Spotted Gum forest along the Central Coast and Upper North Coast.	13	Potential habitat present.	Moderate	Low
Varied Sittella (<i>Daphoenositta chrysoptera</i>)	-	V	Mostly continuous distribution across NSW. Habitat includes eucalypt forests and woodlands, particularly those with rough-barked species and mature smooth-barked gums, mallee and <i>Acacia</i> woodland.	6	Potential habitat present.	Moderate	Low
Dusky Woodswallow (<i>Artamus cyanopterus cyanopterus</i>)	-	V	Primarily inhabits dry, open eucalypt forests and woodlands, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. Also found in farmland, usually at the edges of forest or woodland.	9	Potential habitat present.	Moderate	Low
Flame Robin (<i>Petroica phoenicea</i>)	-	V	Ranges from near the Queensland border to south-east South Australia and is also found in Tasmania. Utilises upland tall moist eucalypt forests and	1	Marginal – suitable habitat is present for	Moderate	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
			woodlands for breeding with a ground layer dominated by native grasses and shrubs. Can also occur in temperate rainforest, heathlands, shrublands, sedgelands, and at high altitudes. Often build nests near the ground in sheltered sites such as shallow cavities in trees, stumps or banks.		foraging but may not have hollows to support nesting.		
Mammals							
Spotted-tailed Quoll <i>(Dasyurus maculatus)</i>	E	V	Utilises a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest. This habitat ranges from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock crevices, boulder fields and rocky-cliff faces as den sites.	7	Marginal – suitable habitat type is present but may not have habitat for suitable den sites. Heavily fragmented habitat	Low	Low
Grey-headed Flying-fox <i>(Petroica phoenicea)</i>	V	V	Occurs in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are commonly found in gullies, close to water, in vegetation with a dense canopy. They travel up to 50 km to forage, on the nectar and pollen of native trees, in particular <i>Eucalyptus</i> , <i>Melaleuca</i> and <i>Banksia</i> , and fruits of rainforest trees and vines.	318	Potential habitat present.	Moderate	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
Yellow-bellied Sheath-tail-bat <i>(Saccolaimus flaviventris)</i>		V	Found across northern and eastern Australia. Utilises tree hollows, buildings and mammal burrows for roosting and forages in most habitats in its range.	1	Potential habitat present.	Moderate	Low
Eastern Coastal Free-tailed Bat <i>(Micronomus norfolkensis)</i>		V	Distributed along the east coast of Australia from south Queensland to southern NSW. Inhabits dry sclerophyll forest, woodland, swamp forests and mangrove forests. Mainly utilises tree hollows for roosting but will also roost under bark or in man-made structures.	23	Potential habitat present.	Moderate	Low
Large-eared Pied Bat <i>(Chalinolobus dwyeri)</i>	V	V	Roosts in disused mine shafts, caves, overhangs and disused Fairy Martin nests for shelter and to raise young. Also potentially roost in tree hollows. Occurs in low to mid-elevation dry open forest and woodlands, preferably with extensive cliffs, caves or gullies. Largely restricted to the interface of sandstone escarpment (for roost habitat) and relatively fertile valleys (for foraging habitat).	1	Marginal – while the study area supports small areas of dry woodland, preferred roosting and foraging habitat is absent.	Low	Low
Eastern False Pipistrelle <i>(Falsistrellus tasmaniensis)</i>	-	V	Distributed along the south-east coast of Australia, from southern Queensland to Victoria and Tasmania. Prefers wet sclerophyll forest and coastal mallee with trees >20 m tall. Primarily utilises eucalypt hollows for	9	Absent – no wet sclerophyll forest or coastal mallee, may not	Low	Low

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
			roosting but will also roost under loose bark on trees and in buildings.		have hollows to support nesting.		
Southern Myotis (<i>Myotis macropus</i>)	-	V	This species generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. They forage over streams and pools catching insects and small fish.	10	Absent – no roosting or foraging habitat.	Low	Low
Greater Broad-nosed Bat (<i>Scoteanax rueppellii</i>)	-	V	Commonly found in tall wet forest, but also utilises open woodland and dry open forest habitats. Generally uses tree hollows for roosts, and has been found in buildings.	11	Marginal – some open woodland but may not have hollows to support nesting.	Moderate	Low
Little Bent-winged Bat (<i>Miniopterus australis</i>)	-	V	Moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas.	4	Potential habitat present.	Moderate	Low
Large Bent-winged Bat (<i>Miniopterus orianae oceanensis</i>)	-	V	Primarily utilises caves for roosting habitat, but also can be found in derelict mines, storm-water tunnels, buildings, and other man-made structures. Use forest areas for hunting moths and other flying insects above tree tops.	41	Potential habitat present.	Moderate	Low
Invertebrates							

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
Cumberland Plain Land Snail <i>(Meridolum corneovirens)</i>	-	E	Occupies small areas on the Cumberland Plain west of Sydney, ranging from Richmond and Windsor south to Picton, and from Liverpool west to the Hawkesbury and Nepean Rivers at the base of the Blue Mountains. Primarily inhabits Cumberland Plain Woodland but can also be found in Shale Gravel Transition Forests, Castlereagh Swamp Woodlands and the margins of River-flat Eucalypt Forest. Utilises bark litter, leaves, logs and loose soil around grass clumps for shelter.	74	Potential habitat widespread.	High	Low
FLORA							
<i>Marsdenia viridiflora</i> subsp. <i>viridiflora</i> endangered population	-	E	Known from the Canterbury-Bankstown LGA along with Prospect, Smithfield, Cabramatta Creek and St Marys. It has been recorded growing in vine thickets and open shale woodlands.	36	Potential habitat present.	Moderate	Low – not recorded during surveys
<i>Pultenaea parviflora</i>	V	E	Endemic to the Cumberland Plain. Can be found within scrubby/dry heath areas on tertiary alluvium or laterite clays.	26	Study area not scrubby/dry heath areas on tertiary alluvium or laterite clays	Low	Low
Downy Wattle <i>(Acacia pubescens)</i>	V	V	Grows on alluviums, shales and the intergrade between shales and sandstones that support open woodlands and forests. The communities this wattle has been recorded in include Cooks	21	Potential habitat present.	Moderate	Low – not recorded during surveys

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
			River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland.				
Austral Pillwort <i>(Pilularia novae-hollandiae)</i>	-	E	Widespread but not common in seasonally dry depressions and margins of margins. Grows in shallow swamps and waterways, usually among grasses and sedges.	1	Absent – no swamps or seasonally wet waterways.	Low	Low
Sydney Plains Greenhood <i>(Pterostylis saxicola)</i>	E	E	This orchid is restricted to western Sydney between Freemans Reach and Picton. While there are very few known populations, the ones that have been recorded were in small pockets of shallow soil in depressions above sandstone cliff lines.	1	Low – study area within species distribution, however no sandstone cliff lines are present.	Low	Low
Juniper-leaved Grevillea <i>(Grevillea juniperina subsp. juniperina)</i>	-	V	Endemic to Western Sydney and grows on reddish clay to sandy soils derived from Wianamatta Shale and Tertiary alluvium. It is an associated canopy species within Cumberland Plain Woodland and Shale/Gravel Transition Forest.	8	Potential habitat present in known range of species	Moderate	Low – not recorded during surveys. Previous record identified by SKM (2013) was groundtruthed and neither it nor suitable habitat was observed.

Species	Status EPBC Act ^	Status BC Act ^	Distribution and habitat requirements*	Source+	Potential preferred habitat in the biodiversity study area	Likelihood of occurrence in the Addendum 3 REF project boundary	Likelihood of occurrence in the Addendum 3 REF study area
<i>Pimelea curviflora</i> <i>var. curviflora</i>	V	V	Grows in shale/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes. Has also been recorded growing in Illawarra Lowland Grassy Woodland habitat at Albion Park.	2	Low – shale soils can be found in the study area, however there are no ridgetops or slopes present.	Low	Low
(Spiked Rice-flower) <i>Pimelea spicata</i>	E	E	Occurs on an undulating topography with well-structured clay soils. In the Illawarra area it often grows in association with Coastal Banksia in woodlands and headland complexes.	132	Potential habitat present.	Moderate	Low – not recorded during surveys

^ CE – critically endangered, E – endangered, EP – endangered population, V – vulnerable, M – Migratory/Marine

* Distribution and habitat requirement information adapted from:

- Australian Government Department of Sustainability, Environment, Water, Populations and Community <http://www.environment.gov.au/biodiversity/threatened/index.html>
- NSW Office of Environment and Heritage <http://www.environment.nsw.gov.au/threatenedspecies/>
- Department of Primary Industries – Threatened Fish and Marine Vegetation http://pas.dpi.nsw.gov.au/Species/All_Species.aspx

+ Number of records from the NSW Office of Environment and Heritage Wildlife Atlas record data (Accessed April 2021); and

1.3 Existing Environment

1.3.1 Cumberland Plain Woodland

The study area and existing environment subject of assessment by this Technical Memorandum is broadly consistent with the description provided in section 6.3 of the project REF and further design refinements as described in the addendum 1 REF. The maintenance tracks were designed to avoid direct impacts to the CPW as mapped in the project REF. The extent of the proposed access tracks as shown in Figure 1 include a one metre buffer on all sides to account for any cut/fill batters to support these tracks. The vegetation along the proposed access tracks was ground-truthed and found to be dense exotic grass species *Chloris gayana* and *Cenchrus clandestinus*, along with occasional exotic *Bidens Pilosa*, with no native species noted.

1.3.2 Threatened species

A threatened species assessment was carried out for the project REF, with updates in the addendum 2 REF of additional listed species, changes to threat listing and species not previously recorded in the locality. The biodiversity in the maintenance track area does not support any native vegetation and no particular habitat for threatened fauna species. Habitat for threatened flora species was similarly poor with the study area groundlayer being dense and simple extents of two main exotic grass species. A record of the threatened species *Grevillea juniperina subsp. juniperina* previously identified adjacent to the study area was ground-truthed by the current study and the species was not found, neither was any currently suitable habitat found in its previously recorded location.

The project REF found that remnant and planted vegetation to be impacted provides limited but potential habitat for some threatened fauna species, with 13 'mobile' species identified in the background review as having a moderate potential to occur. The Addendum 1 REF found no additional impact to remnant or planted vegetation, and as such did not identify any additional impact to potential vegetated or non-vegetated habitats identified in the project REF.

The current biodiversity study area did not identify any habitat of note for any threatened species, with no candidate threatened species previously recorded in the locality given a moderate or higher likelihood of occurring, and so no assessments of significance were carried out.

1.4 Potential impacts

1.4.1 Construction

Aspects and impacts in the area of the proposed maintenance tracks was considered by the project REF with subsequent modifications being considered by the addendum 1 REF. The proposed maintenance tracks are within the construction footprint of noise wall NW SB 02b as considered in the addendum 1 REF.

No potential direct impacts were identified as additional to those areas or biodiversity values assessed by the project REF and addendum 1 REF. The habitat values assessed at the location of the proposed maintenance tracks were poor with no locally native flora species and no particular habitat for locally native fauna species present.

1.4.2 Operation

Operational impacts of the proposal are not expected to be additional in nature or extent from the assessment carried out in the project REF, addendum 1 REF and addendum 2 REF.

1.4.3 Test of significance

As there are no likely additional impacts to threatened biodiversity from design modification considered by this Technical Memorandum, no assessments of significance were required.

1.5 Safeguards and management measures

No additional safeguards and management measures have been recommended as there are no likely additional biodiversity impacts assessed in this addendum REF. Refer to the project REF S.6.3 Biodiversity for safeguards and management measures.

1.6 Biodiversity offsets

The proposed modification as considered by this assessment would not remove any additional CPW, threatened species or threatened species habitat.

Appendix E

AHIMS search results

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307053 - 307277, Northings : 6257881 - 6258272 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 591, DP:DP587130 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

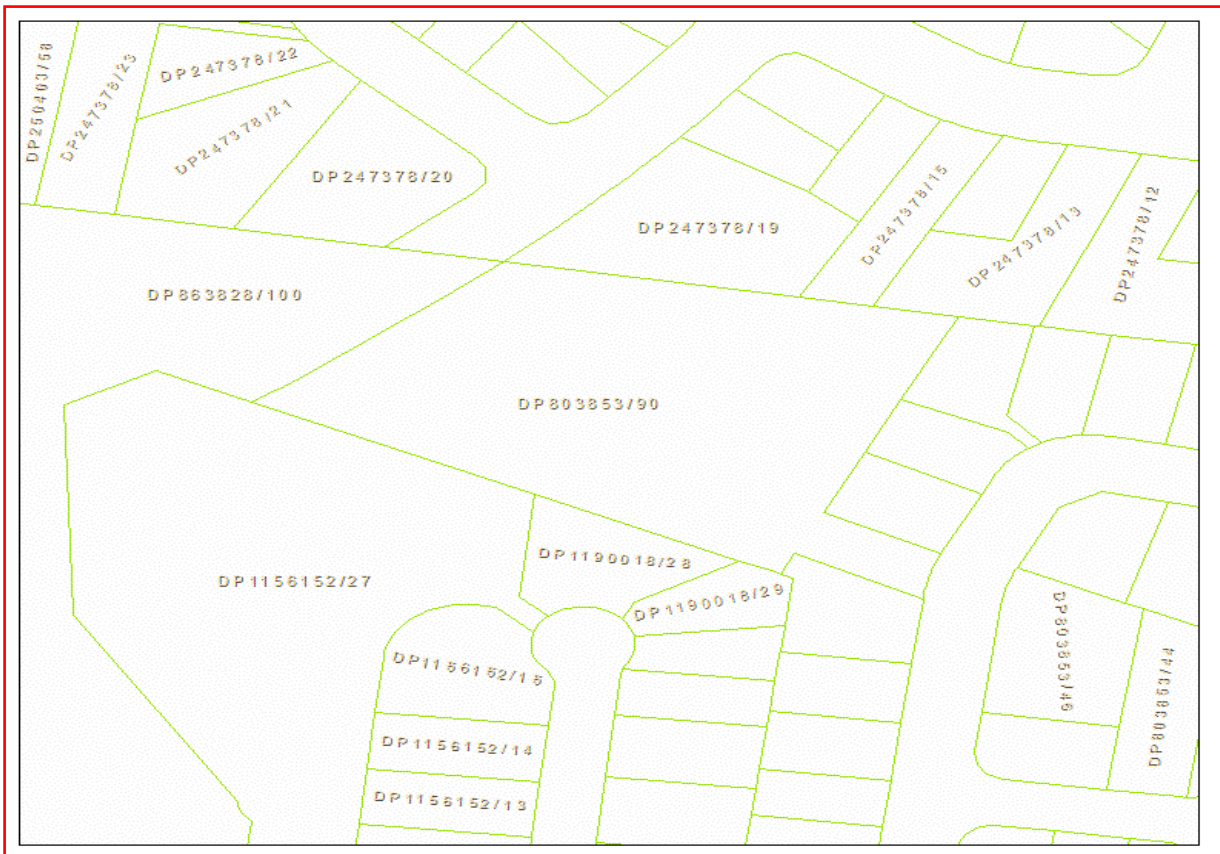
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 90, DP:DP803853 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

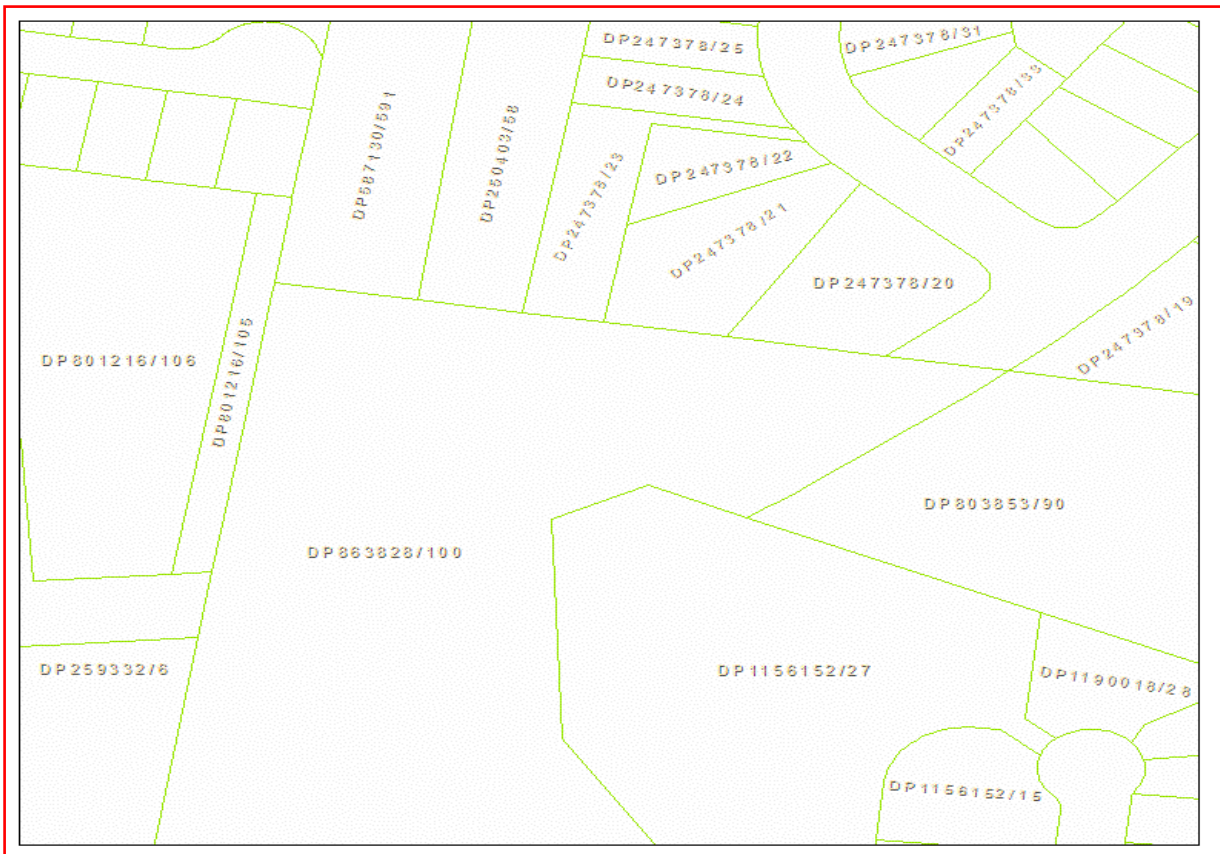
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 306639 - 306798, Northings : 6258232 - 6258265 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

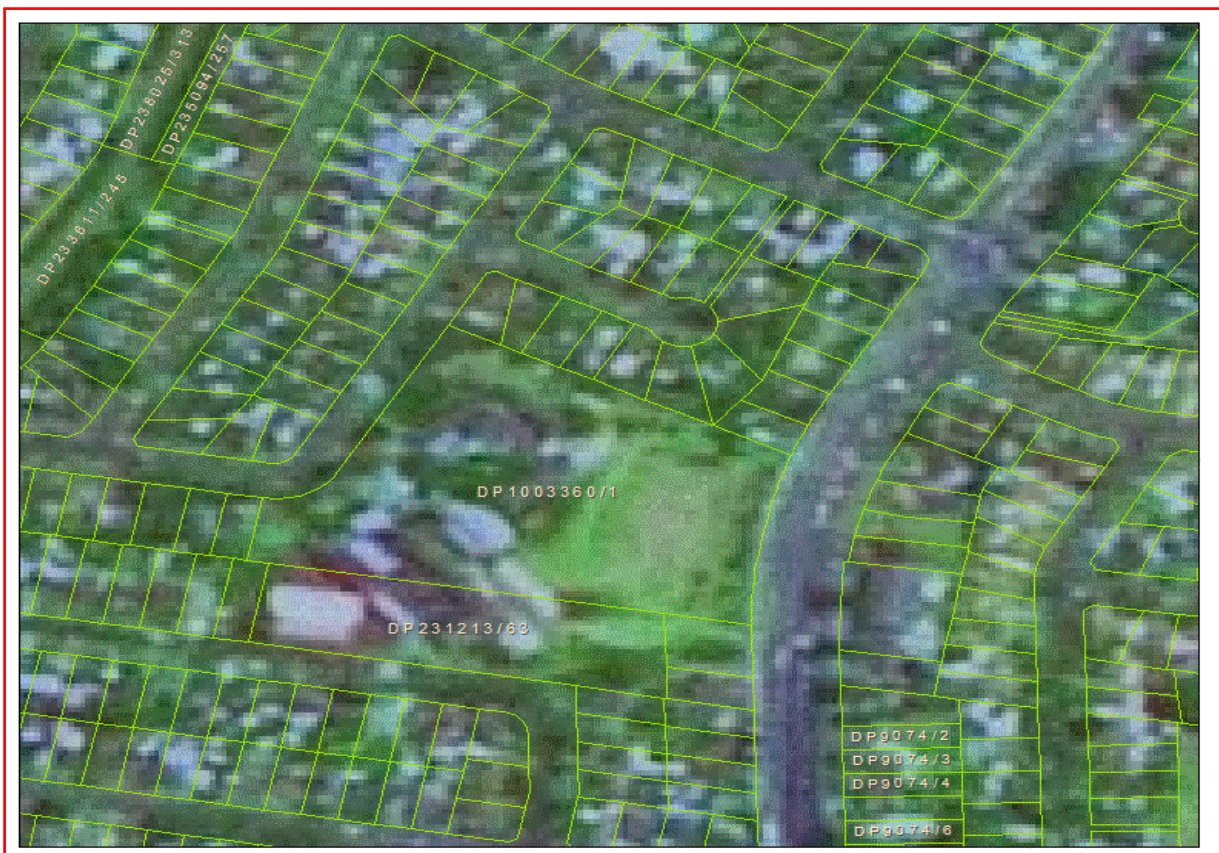
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307086 - 307441, Northings : 6259135 - 6259499 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307482 - 307756, Northings : 6259526 - 6259712 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307279 - 307511, Northings : 6256637 - 6257086 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

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- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307003 - 307333, Northings : 6257023 - 6257480 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
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Important information about your AHIMS search

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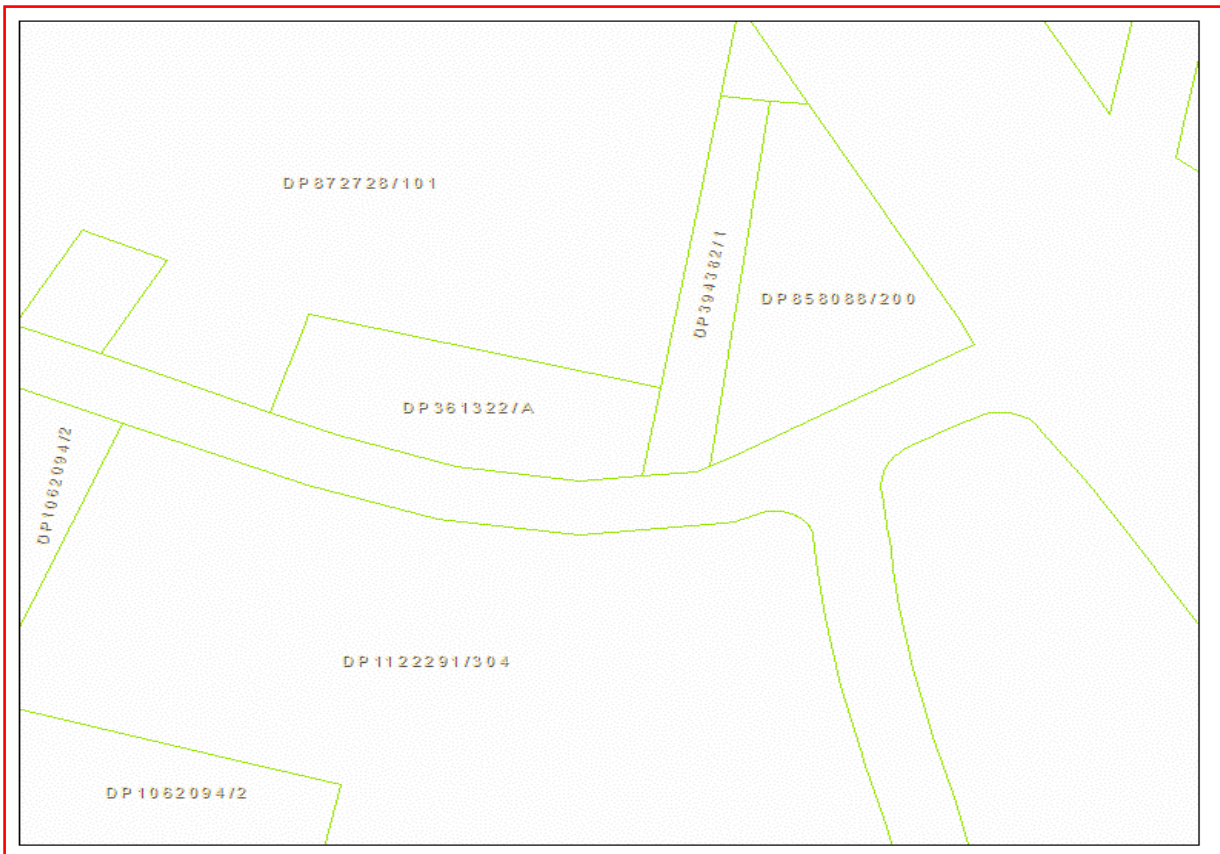
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307081 - 307291, Northings : 6256926 - 6257017 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
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Important information about your AHIMS search

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- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 7, DP:DP808524 with a Buffer of 0 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

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- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

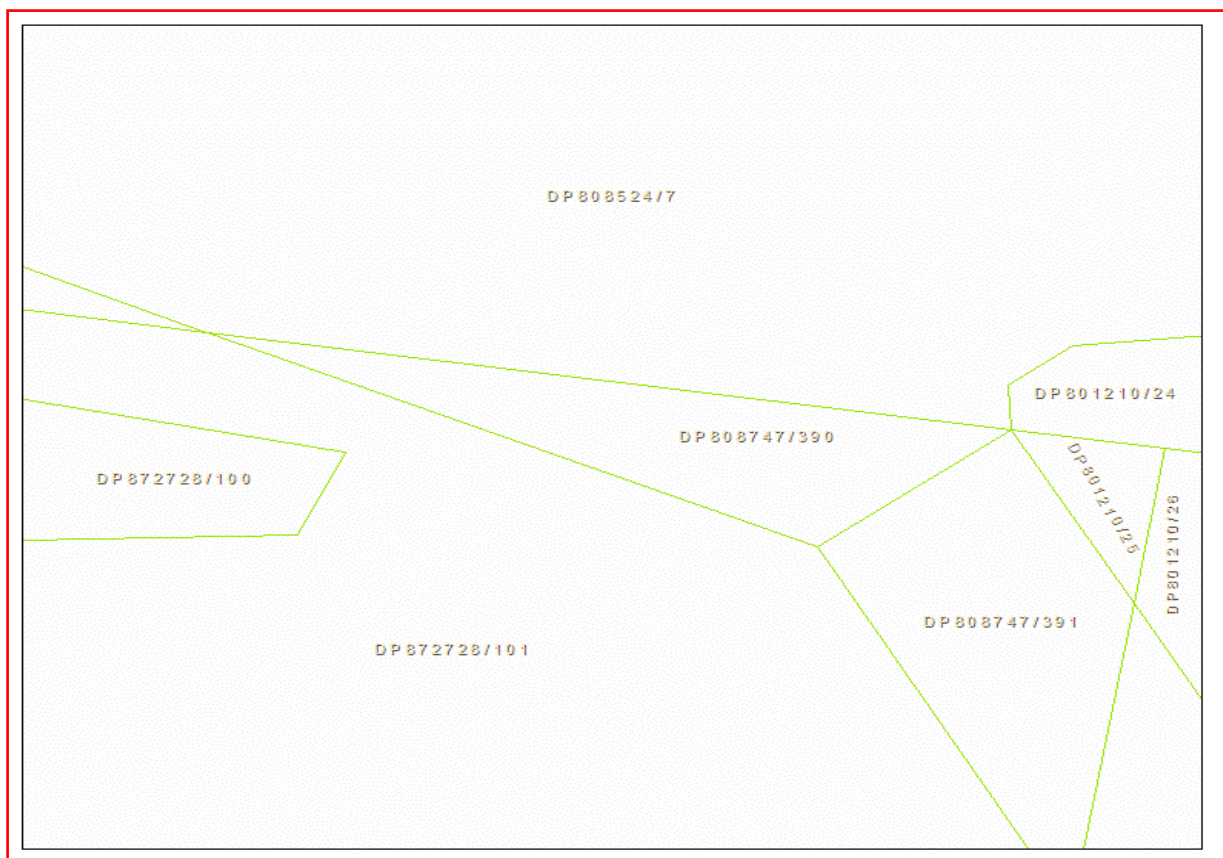
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 390, DP:DP808747 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
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- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

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- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
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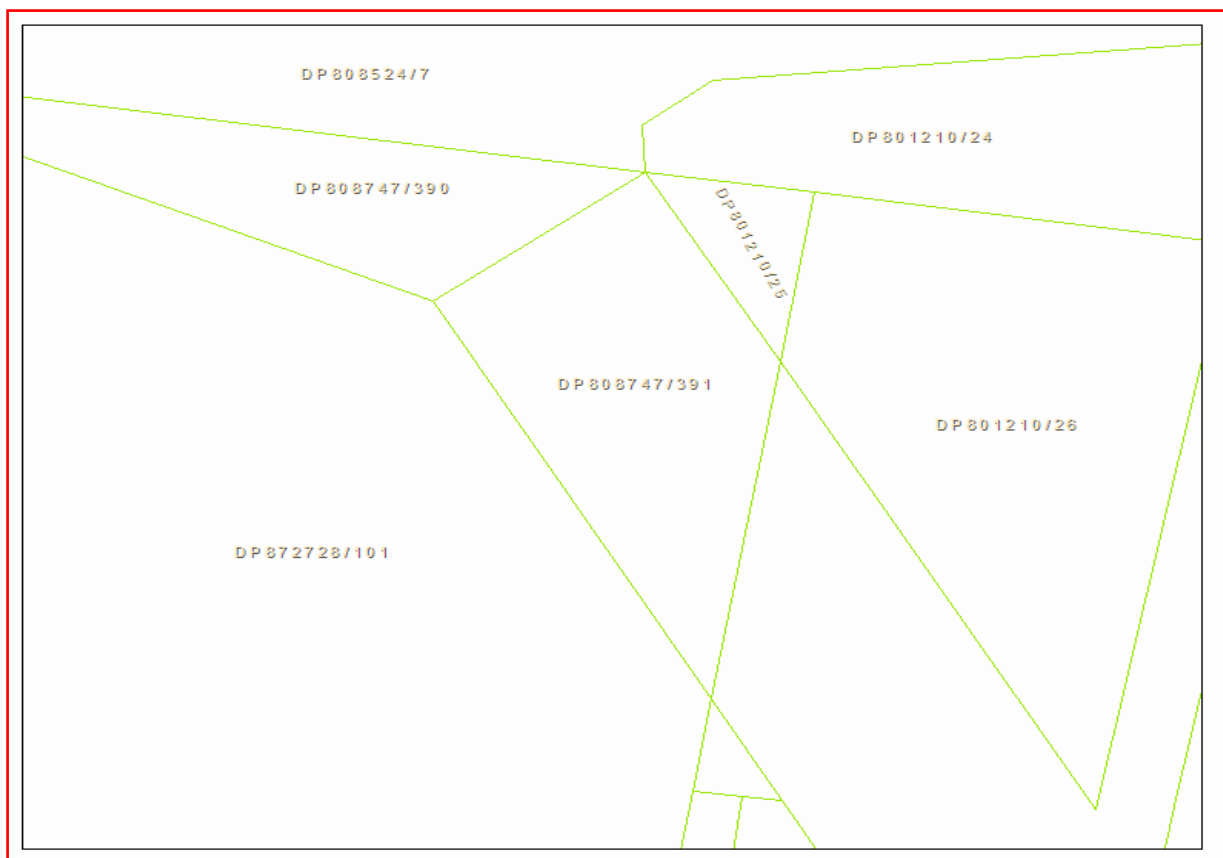
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 391, DP:DP808747 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
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If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
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Important information about your AHIMS search

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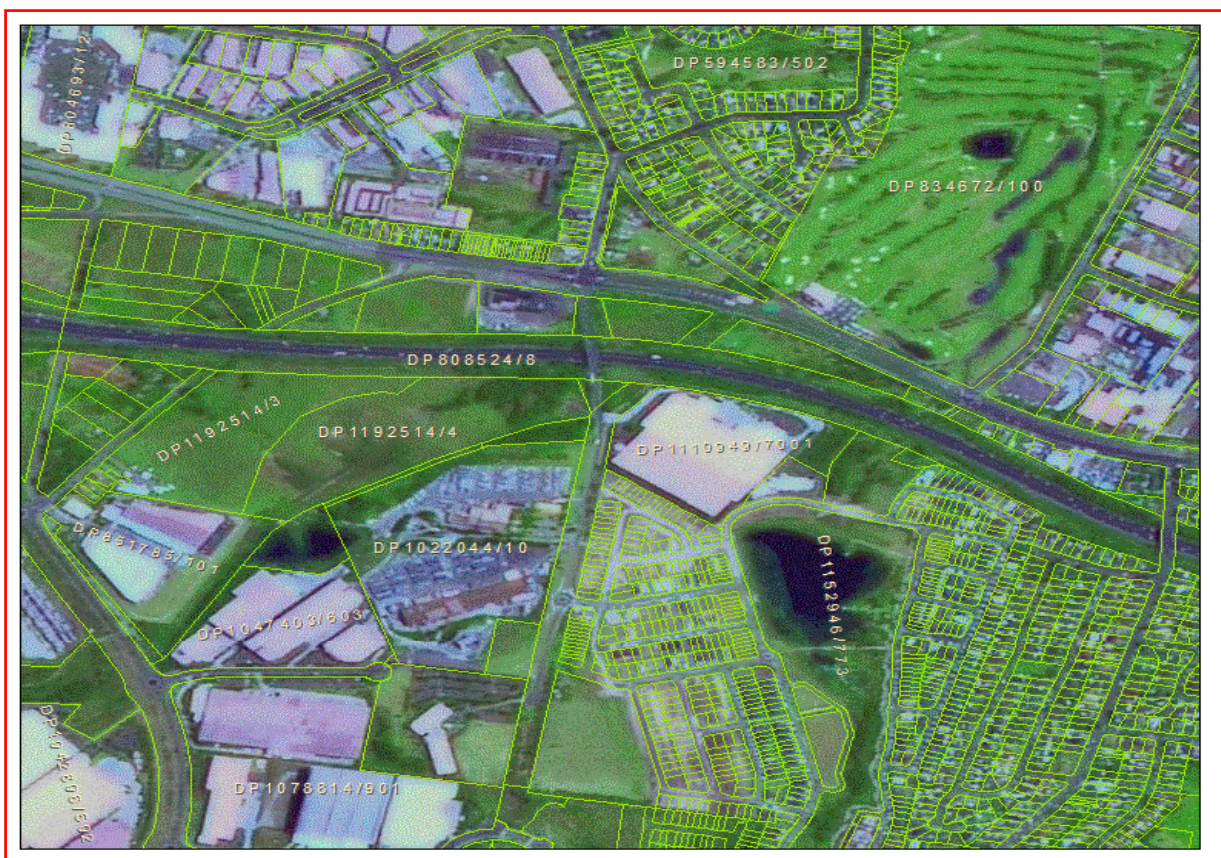
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 8, DP:DP808524 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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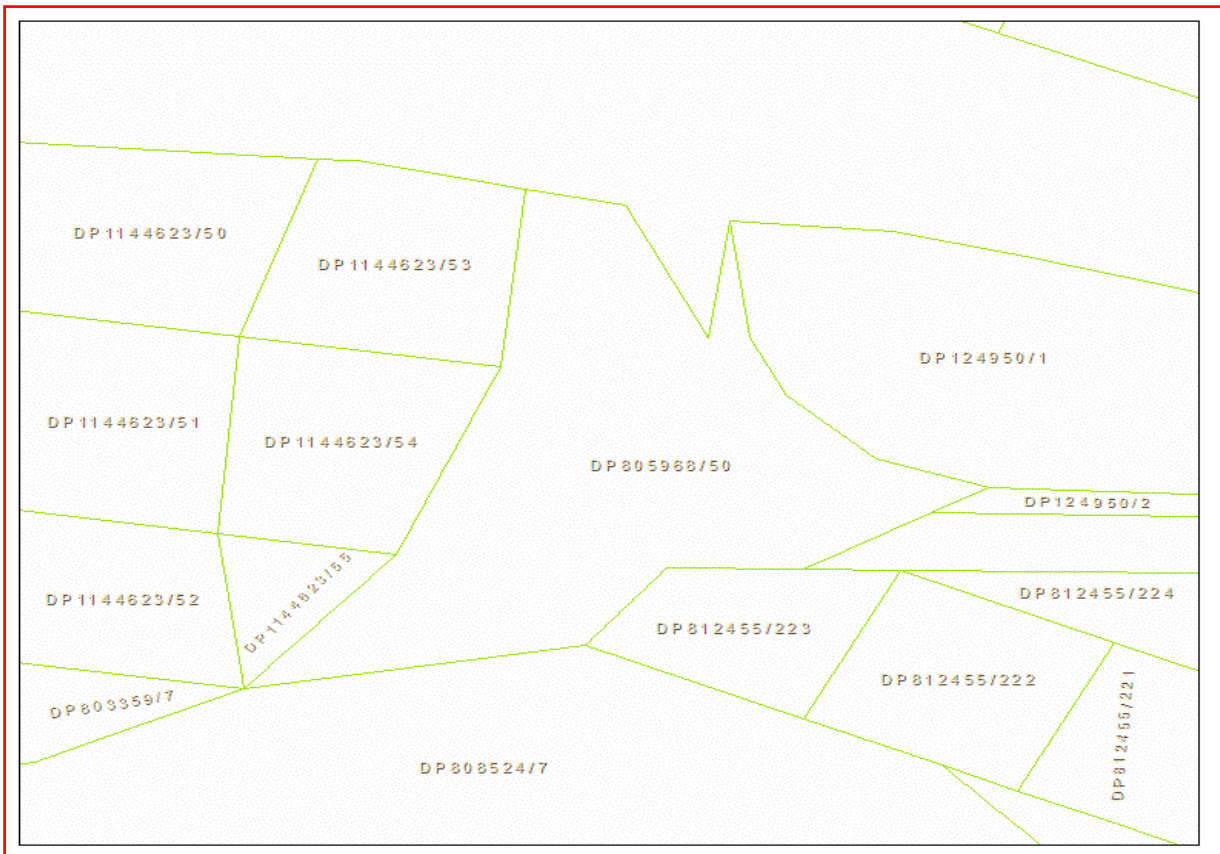
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 50, DP:DP805968 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 1, DP:DP124950 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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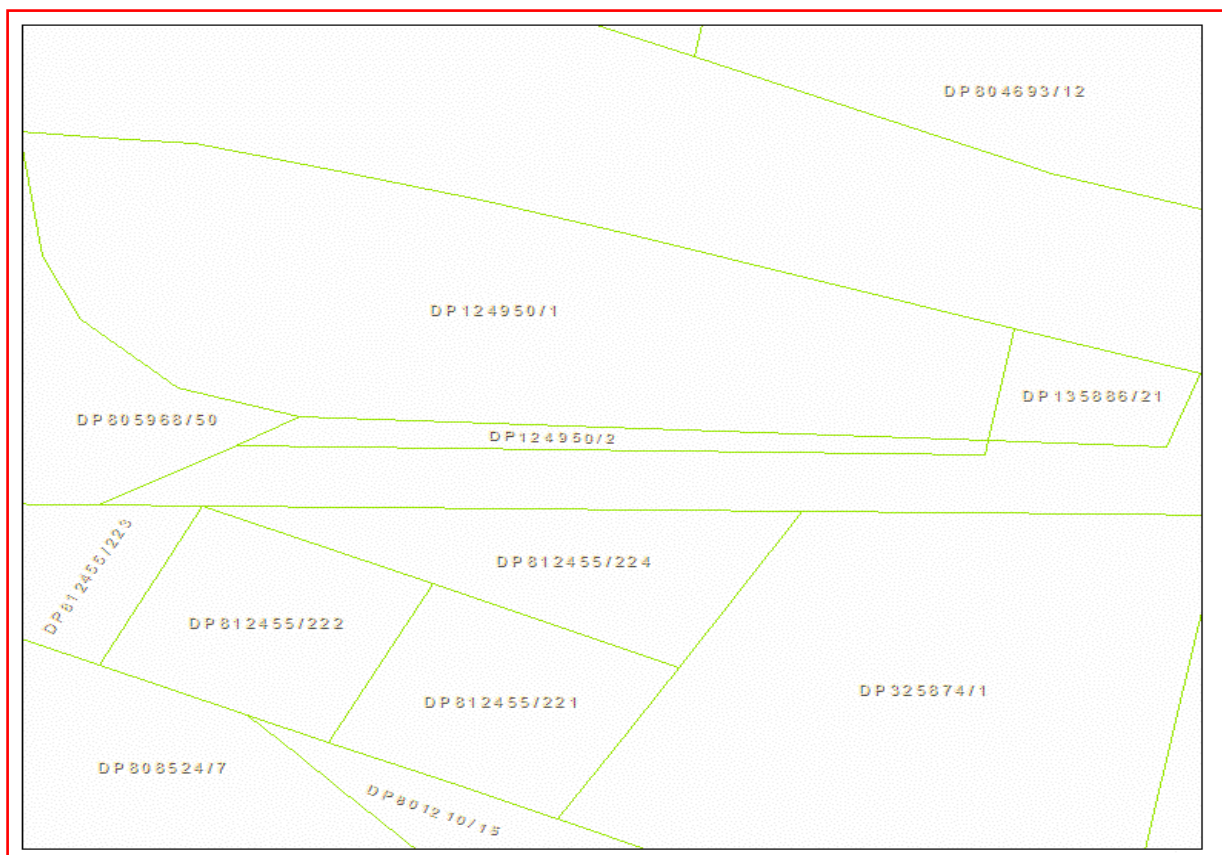
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 2, DP:DP124950 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

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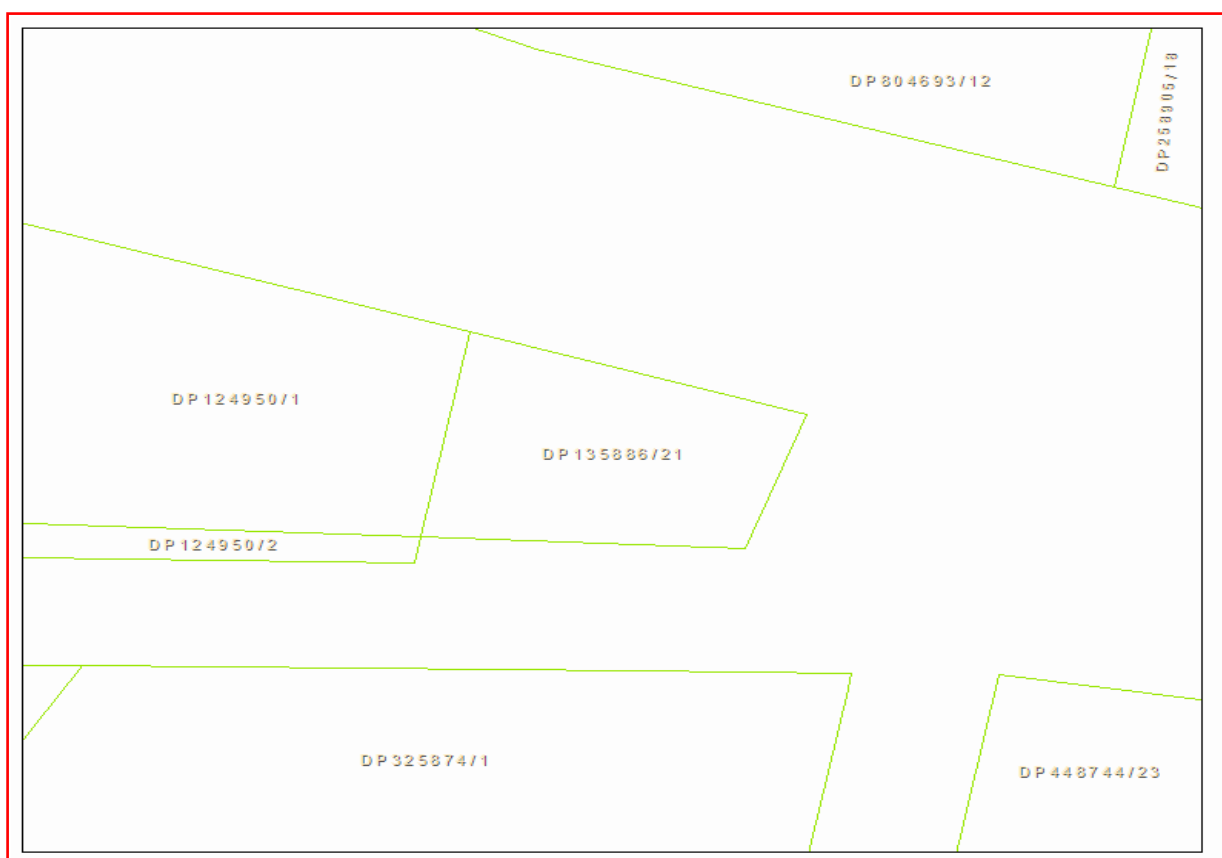
SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 15 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 21, DP:DP135886 with a Buffer of 50 meters, conducted by Rachel Gray on 15 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307204 - 307394, Northings : 6258275 - 6258720 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

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Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

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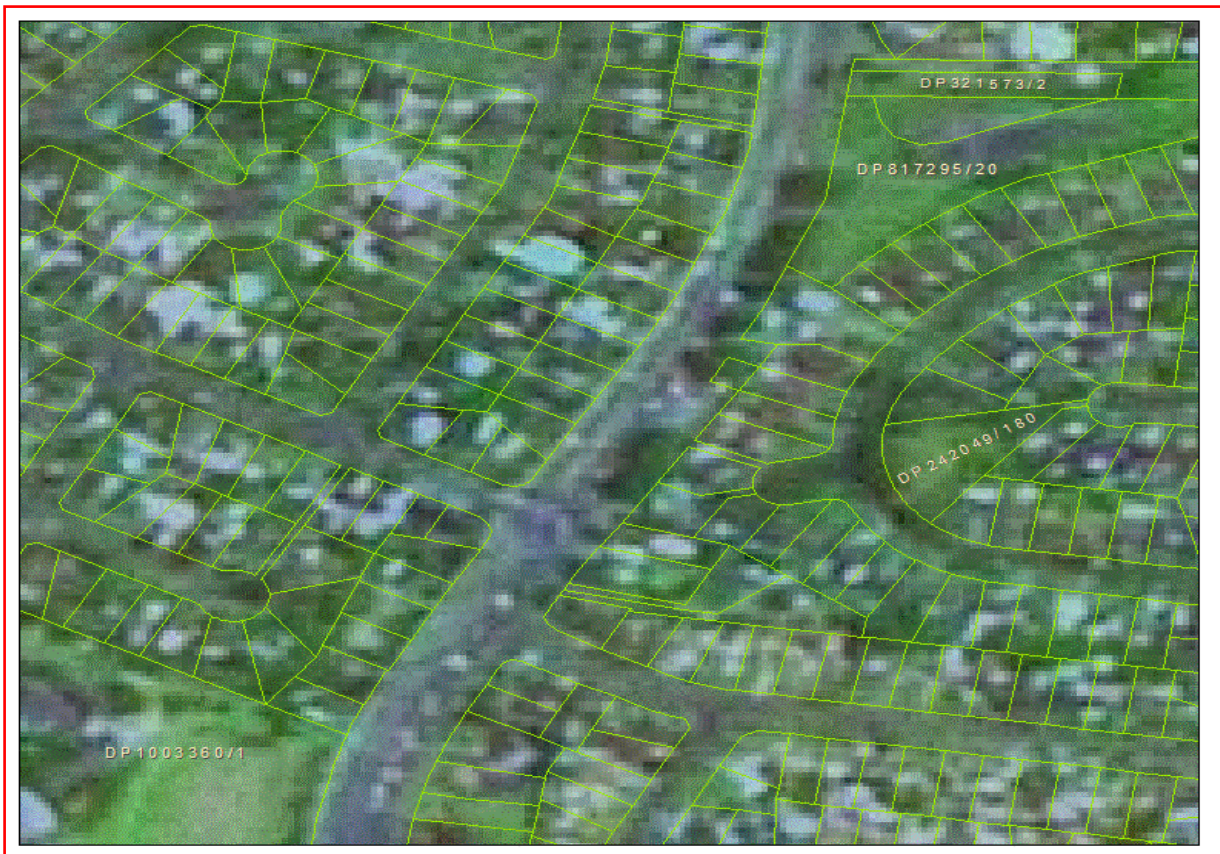
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Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
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Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307326 - 307549, Northings : 6259302 - 6259647 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

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SMEC - North Sydney
Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

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Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307383 - 307493, Northings : 6260021 - 6260343 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

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Level 5, 20 Berry Street
North Sydney New South Wales 2060
Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 307139 - 307760, Northings : 6257896 - 6258097 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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Level 5, 20 Berry Street
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Attention: Rachel Gray
Email: rachel.gray@smec.com

Date: 14 April 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 306777 - 307181, Northings : 6258089 - 6258165 with a Buffer of 50 meters, conducted by Rachel Gray on 14 April 2021.

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Appendix F

Noisie and vibration assessment technical note

To: David Wells
From: James Daramola
Date: 4 June 2021
Subject: Prospect Highway
Noise Barrier SB01 Revisions and
Construction Works

At: SMEC
At: SLR Consulting Australia Pty Ltd
Ref: 610.14863-M01-SB01-v0.4-20210604

1 Introduction

SLR Consulting Pty Ltd (SLR) has been engaged by SMEC to assess the potential change in operational road traffic noise levels from a revised design of noise barrier SB01 on the Prospect Highway Upgrade project, along with the potential noise impacts from additional construction works associated with communication ducting and cabling works.

This letter serves as an addendum to the Detail Design assessment for the project contained in SLR report *Prospect Highway Upgrade, Detailed Design Acoustic Assessment 610.14863-R1*, dated April 2016.

2 Operational Road Traffic Noise – SB01 Revisions

2.1 Amendment to Design

It is proposed to realign noise barrier SB01 due to constraints at the location identified in the Detailed Design assessment report. The location of the revised noise barrier is shown in Figure 1. The previous noise barrier is shown in blue with the revised barrier being in red.

The revised barrier is noted as being further away from the residential receivers to the east and also shorter on both ends. The revised barrier is at the same height as the previous design (ie 4 m).

2.2 Assessment Criteria

The revised noise barrier has been assessed using the same methodology and criteria (*RMS Noise Criteria Guideline* and *Noise Mitigation Guideline*) as contained in the Detailed Design assessment report.

Figure 1 Alignment of New SB01 Barrier



2.3 Operational Noise Impacts

The revised operational road traffic noise impacts are summarised in Table 1, and Figure 2 and Figure 3. The predictions for the revised barrier have been compared to the predictions in the Detailed Design report for reference. The assessment is based on the controlling scenario (ie timeframe 2 during the night-time).

Table 1 Comparison of Predicted Noise Levels and At-Property Treatments

ID	Address	Predicted Noise Level LAeq(9hour) (dBA)					Difference due to Revised Barrier Location (dBA)
		Detailed Design Assessment			Current SB01 Assessment		
		No Barrier	With Previous Barrier	Eligible for Consideration of Treatment?	With Revised Barrier	Eligible for Consideration of Treatment?	
1	91 Aldgate Street	69	56	Y	67	Y	+11
2	89 Aldgate Street	66	55	N	58	Y	+3
3	87 Aldgate Street	63	54	N	54	N	0
4	85 Aldgate Street	65	55	N	57	Y	+2
5	83 Aldgate Street	66	55	N	58	Y	+3
6	81 Aldgate Street	69	63	Y	68	Y	+5

Figure 2 Comparison of Predicted Noise Levels and At-Property Treatments – Scatter Graphs

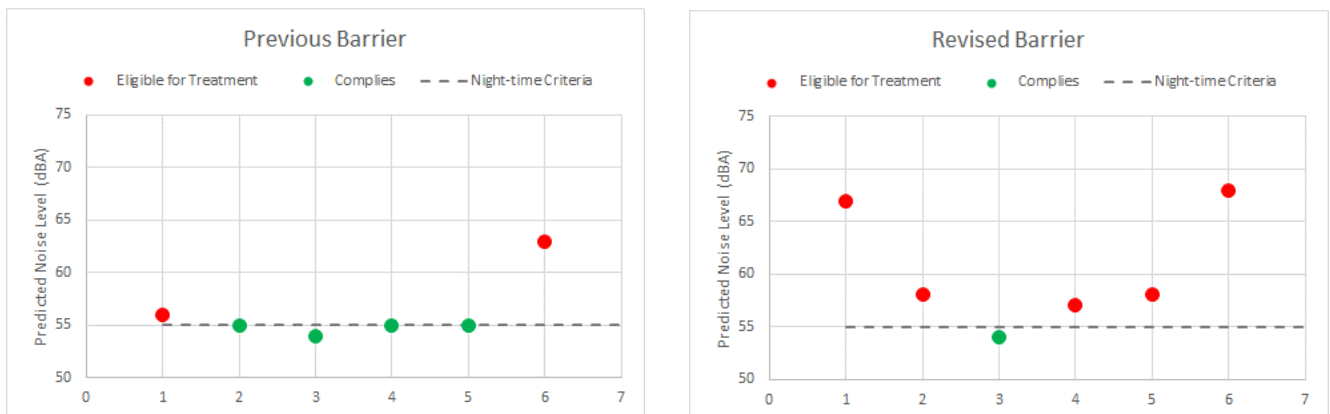
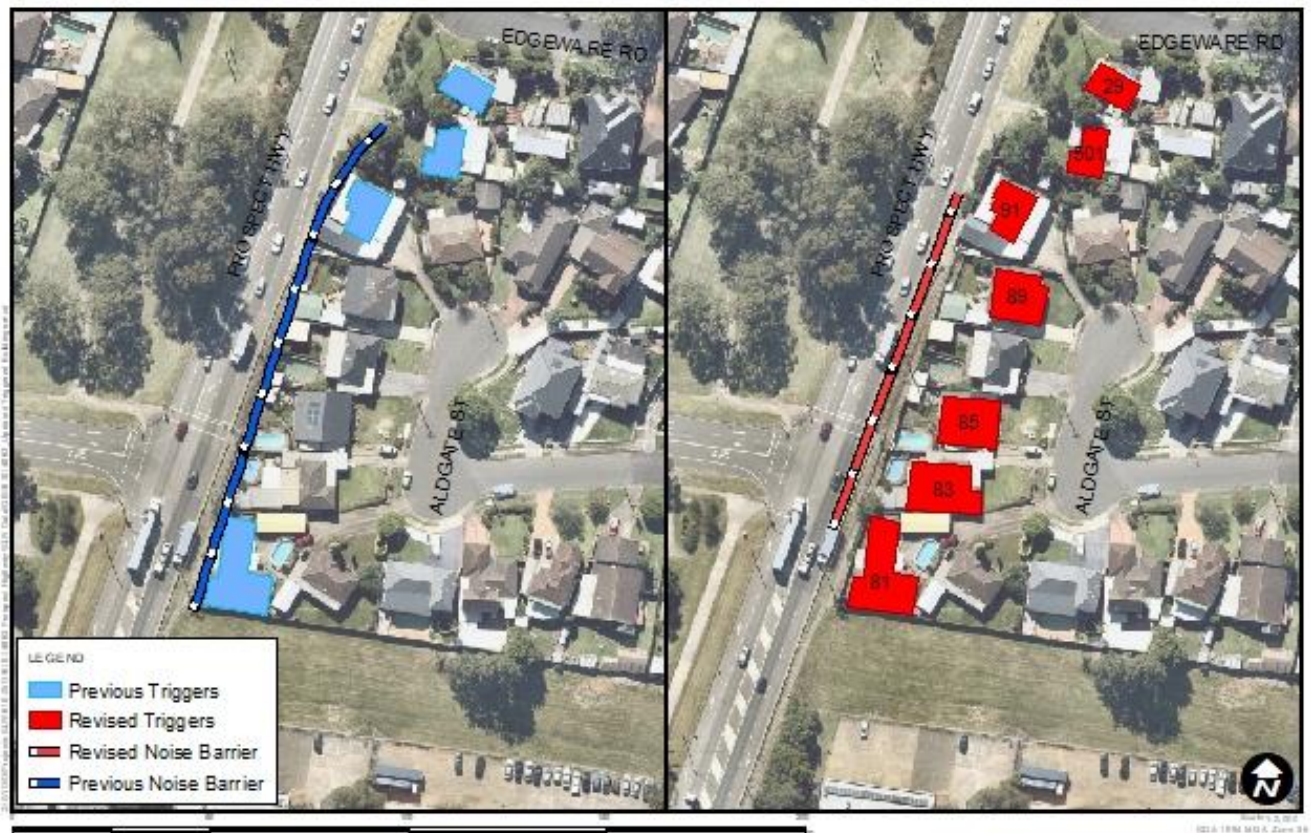


Figure 3 Comparison of At-Property Treatment Locations



The above shows:

- The revised alignment of noise barrier SB01 increases road traffic noise levels at the adjacent residential receivers by between 1 and 5 dB for most receivers, which is generally due to the barrier being further away from the receivers, and shorter in length, which allows for greater line-of-sight to Prospect Highway. The northern most receiver (91 Prospect Highway) is predicted to have a larger increase which is due the revised design of the barrier stopping shorter than the previous design.
- Two residential properties immediately behind the barrier (91 and 81 Prospect Highway) were identified as being eligible for consideration of at-property treatment in the previous design.
- Five properties behind the barrier are now identified as being eligible, which is due to the reduced performance of the barrier resulting in noise levels exceeding the 55 dBA LAeq(15hour) night-time criteria.

3 Construction Assessment – Communication and Ducting Cabling Works

3.1 Proposed Works

The proposed cabling works consist of the following works:

- Hampton Crescent: excavation for provisional electrical ducts
- Stoddart Road: entrance into Homemaker Prospect for excavation for provisional electrical ducts
- Ozark Street: additional aerial cabling, trenching excavation and pit.

The proposed works locations are shown in Figure 4 and the nearest sensitive receivers to each site are detailed in Table 2.

Table 2 Nearest Sensitive Receivers

Location	Nearest Receivers	ID	Direction	Type/Use	Distance from Works (m)	Line of Sight to Works?
Hampton Crescent	12 Hampton Cr	R1	West	Residential	10	Yes
	13A Hampton Cr	R2	North	Residential	10	Yes
	14 Hampton Cr	R3	West	Residential	10	Yes
	16 Hampton Cr	R3-1	West	Residential	10	Yes
	18 Hampton Cr	R3-2	West	Residential	10	Yes
	20 Hampton Cr	R3-3	West	Residential	10	Yes
	15 Hampton Cr	R4	South/East	Residential	9	Yes
	17 Hampton Cr	R5	South/East	Residential	12	Yes
	19 Hampton Cr	R6	South/East	Residential	12	Yes
	21 Hampton Cr	R6-1	South/East	Residential	12	Yes
	23 Hampton Cr	R6-2	South/East	Residential	12	Yes
Stoddart Road	69 Aldgate St	R7	North	Residential	130	Yes
	7 Hampton Cr	R8	West	Residential	145	Yes
	19 Stoddart St	C1	West/South	Commercial	<5	Yes
	28 Stoddart St	C2	North	Commercial	15	Yes
	32 Stoddart St	C3	North	Commercial	15	Yes
Ozark Street	239 Blacktown Rd	R9	North	Residential	<5	Yes
	32 Everest St	R10	North	Residential	<5	Yes
	241 Blacktown Rd	R11	South	Residential	10	Yes
	4 Ozark St	R12	South	Residential	12	Yes
	6 Ozark St	R13	South	Residential	15	Yes

Figure 4 Proposed Works and Sensitive Receivers



3.2 Project Criteria and Trigger Levels

The NSW *Interim Construction Noise Guideline* (ICNG) has been referenced in this assessment. The ICNG sets out ways to assess and manage the impacts of construction noise on residences and 'other sensitive' land uses. The ICNG requires project specific Noise Management Levels (NMLS) to be established for potentially noise affect receivers.

The NMLS are not mandatory limits, however, in the event construction noise levels are predicted to be above the NMLS, feasible and reasonable work practices are to be investigated to minimise noise emissions.

The NMLS relevant to this assessment have been taken from the representative background levels in the TfNSW Construction Noise Estimator (for area type R3), as shown in Table 3.

Table 3 Noise Management Levels

Location	Area Type	Noise Management Level dBA				Sleep Disturbance (RBL +15 dB)
		Standard Daytime	Out of Hours Works			
			Daytime	Evening	Night-time	
Hampton Crescent	R3	60	55	50	45	55
Stoddart Road						
Ozark Street						

3.3 Construction Noise Assessment

The TfNSW Construction Noise Estimator has been used to predict the potential noise impacts from the works and to determine appropriate mitigation measures, where required.

The Construction Noise Estimator contains a number of representative construction scenarios that reflect typical construction activities. The following three representative scenarios, as shown in in Table 4, have been used to demine the likely impact of the proposed works.

Table 4 Construction Scenarios

Activity	Description of Activity	Plant/ Equipment	LAeq SWL	LAeq at 7m	Assumptions for Quantitative Assessment		
					No. Units	Activity total Leq SWL	Activity total LA1 SWL
Drainage infrastructure	Excavation of trenches and pits; Delivery and placement of precast pipes and pits; filling and compacting.	Backhoe	110	85	-	115	116
		Franna crane 20t	98	73	1		
		Excavator (tracked) 35t	110	85	1		
		Concrete truck	109	84	4 per hour		
		Truck compressor	75	50	1		
		Vibratory roller	109	84	1		
		Road truck	108	83	4 per hour		

Activity	Description of Activity	Plant/ Equipment	L _{Aeq} SWL	L _{Aeq} at 7m	Assumptions for Quantitative Assessment		
					No. Units	Activity total Leq SWL	Activity total LA1 SWL
Paving/ asphaltting (inc concrete sawing)	Delivery of raw materials. Placement of surface material. Saw cutting.	Pavement laying machine	114	89	1	118	130
		Dump truck	110	85	4 per hour		
		Asphalt truck & sprayer	103	78	1		
		Concrete truck	109	84	1		
		Smooth drum roller	107	82	1		
		Concrete saw	118	93	1		
Road furniture installation	Signposting and line marking	Road truck	108	83	4 per hour	110	116
		Scissor lift	98	73	1		
		Franna crane 20t	98	73	1		
		Line marking truck	108	83	1		

3.3.1 Assessment Results

The results from the assessment are shown in Table 5, Table 6, and Table 7 for Hampton Crescent, Stoddart Road and Ozark Street, respectively.

Table 5 Construction Noise Assessment – Hampton Crescent

Period	Time Period	Drainage Infrastructure			Paving/Asphalting			Road Furniture Installation		
		R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2	R1, R2, R3, R3-1, R3-2, R3-3	R4	R5, R6, R6-1, R6-2
Noise Management Level (dB(A))	Standard hours	60	60	60	60	60	60	60	60	60
	Day (OOHW)	55	55	55	55	55	55	55	55	55
	OOHW Period 1	50	50	50	50	50	50	50	50	50
	OOHW Period 2	45	45	45	45	45	45	45	45	45
Level above background (dB(A))	Standard hours	31	32	30	29	30	28	26	27	25
	Day (OOHW)	31	32	30	29	30	28	26	27	25
	OOHW Period 1	36	37	35	34	35	33	31	32	30
	OOHW Period 2	41	42	40	39	40	38	36	37	35
Level above NML (dB(A))	Standard hours	21	22	20	19	20	18	16	17	15
	Day (OOHW)	26	27	25	24	25	23	21	22	20
	OOHW Period 1	31	32	30	29	30	28	26	27	25
	OOHW Period 2	36	37	35	34	35	33	31	32	30
Additional mitigation measures ¹	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR
Sleep disturbance (dB(A)) ²	NML	55	55	55	55	55	55	55	55	55
	Level above NML	34	35	33	32	33	31	29	30	28

Note 1: Refer to Section 3.5 for a description of the various “Additional mitigation measures”.

Note 2: Potential sleep disturbance impacts have been calculated on the basis of typical maximum levels being 8 dB higher than the LAeq.

Table 6 Construction Noise Assessment – Stoddart Road

Period	Time Period	Drainage Infrastructure				Paving/Asphalting				Road Furniture Installation			
		C1	C2, C3	R7	R8	C1	C2, C3	R7	R8	C1	C2, C3	R7	R8
Noise Management Level (dB(A))	Standard hours	75	75	60	60	75	75	60	60	75	75	60	60
	Day (OOHW)	75	75	55	55	75	75	55	55	75	75	55	55
	OOHW Period 1	75	75	50	50	75	75	50	50	75	75	50	50
	OOHW Period 2	75	75	45	45	75	75	45	45	75	75	45	45
Level above background (dB(A))	Standard hours	n/a	n/a	11	10	n/a	n/a	9	8	n/a	n/a	6	5
	Day (OOHW)	n/a	n/a	11	10	n/a	n/a	9	8	n/a	n/a	6	5
	OOHW Period 1	n/a	n/a	16	15	n/a	n/a	14	13	n/a	n/a	11	10
	OOHW Period 2	n/a	n/a	21	20	n/a	n/a	19	18	n/a	n/a	16	15
Level above NML (dB(A))	Standard hours	10	4	1	-	8	2	-	-	5	-	-	-
	Day (OOHW)	10	4	6	5	8	2	4	3	5	-	1	-
	OOHW Period 1	10	4	11	10	8	2	9	8	5	-	6	5
	OOHW Period 2	10	4	16	15	8	2	14	13	5	-	11	10
Additional mitigation measures ¹	Standard Hours	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	N, V, PC, RO	-	-	N, V, PC, RO	-	-	-
	Day (OOHW)	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	-	-	N, R1, DR	-	-	-
	OOHW Period 1	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR	N, R1, DR	-	N, R1, DR	N, R1, DR
	OOHW Period 2	V, N, R2, DR	N	V, IB, N, PC, SN, R2, DR	V, IB, N, PC, SN, R2, DR	V, N, R2, DR	N	V, N, R2, DR	V, N, R2, DR	V, N, R2, DR	-	V, N, R2, DR	V, N, R2, DR
Sleep disturbance (dB(A)) ²	NML	n/a	n/a	55	55	n/a	n/a	55	55	n/a	n/a	55	55
	Level above NML	n/a	n/a	14	13	n/a	n/a	12	11	n/a	n/a	9	8

Note 1: Refer to Section 3.5 for a description of the various “Additional mitigation measures”.

Note 2: Potential sleep disturbance impacts have been calculated on the basis of typical maximum levels being 8 dB higher than the LAeq.

Table 7 Construction Noise Assessment – Ozark Street

Period	Time Period	Drainage Infrastructure Works				Paving/Asphalting Works				Road Furniture Installation			
		R9, R10	R11	R12	R13	R9, R10	R11	R12	R13	R9, R10	R11	R12	R13
Noise Management Level (dB(A))	Standard hours	60	60	60	60	60	60	60	60	60	60	60	60
	Day (OOHW)	55	55	55	55	55	55	55	55	55	55	55	55
	OOHW Period 1	50	50	50	50	50	50	50	50	50	50	50	50
	OOHW Period 2	45	45	45	45	45	45	45	45	45	45	45	45
Level above background (dB(A))	Standard hours	35	31	30	29	33	29	28	27	30	26	25	24
	Day (OOHW)	35	31	30	29	33	29	28	27	30	26	25	24
	OOHW Period 1	40	36	35	34	38	34	33	32	35	31	30	29
	OOHW Period 2	45	41	40	39	43	39	38	37	40	36	35	34
Level above NML (dB(A))	Standard hours	25	21	20	19	23	19	18	17	20	16	15	14
	Day (OOHW)	30	26	25	24	28	24	23	22	25	21	20	19
	OOHW Period 1	35	31	30	29	33	29	28	27	30	26	25	24
	OOHW Period 2	40	36	35	34	38	34	33	32	35	31	30	29
Additional mitigation measures ¹	Standard Hours	N, V, PC, RO	N, V, PC, RO	N, V, PC, RO	N, V	N, V, PC, RO	N, V	N, V	N, V	N, V, PC, RO	N, V	N, V	N, V
	Day (OOHW)	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR	V, IB, N, R1, DR, PC, SN	V, N, R1, DR	V, N, R1, DR	V, N, R1, DR
	OOHW Period 1	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, IB, N, R1, DR, PC, SN	V, N, R1, DR

Period	Time Period	Drainage Infrastructure Works				Paving/Asphalting Works				Road Furniture Installation			
		R9, R10	R11	R12	R13	R9, R10	R11	R12	R13	R9, R10	R11	R12	R13
	OOHW Period 2	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR	AA, V, IB, N, PC, SN, R2, DR
Sleep disturbance (dB(A)) ²	NML	55	55	55	55	55	55	55	55	55	55	55	55
	Level above NML	38	34	33	32	36	32	31	30	33	29	28	27

Note 1: Refer to Section 3.5 for a description of the various “Additional mitigation measures”.

Note 2: Potential sleep disturbance impacts have been calculated on the basis of typical maximum levels being 8 dB higher than the LAeq.

The above assessment shows:

- Construction noise levels are generally expected to exceed the NMLs when noisy work is being completed due to the close proximity of receivers at all three sites.
- The highest impacts are expected to occur during the Drainage Infrastructure scenario, which includes excavation works and may at times require noisy items of equipment such as backhoes, rollers or trucks.
- The relatively high noise levels during the noisy phases of works are likely to result in impacts during all periods in which the works occur. The greatest impact would be during the night-time, if works are required to occur during this period. The assessment indicates sleep disturbance impacts are likely to occur at the nearest residential receivers to all three sites where noise intensive equipment is required to be used during the night-time period.
- It is noted that for most of the works, the noisiest works would only be required for a relatively short period of time. Noise levels and impacts at other times works would be much lower than the worst-case levels predicted.
- Additionally, the impacts presented above are worst-case and are based on all equipment working simultaneously in each assessed scenario. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted and there would also be times when no equipment is in use and no impacts occur.

Mitigation and management measures are discussed in Section 3.5.

3.4 Construction Vibration Assessment

The potential construction vibration impacts have been determined using the minimum working distances specified in the CNVG. Vibration intensive equipment would be required at times during the works and would include vibratory rollers and ground compaction equipment.

The assessment has assumed a vibratory roller could be used anywhere in the works area at each site. The CNVG notes that the cosmetic damage minimum working distance for a 4-6 tonne vibration roller is 12 m. Works outside of this distance are not expected to result in any potential cosmetic damage impacts. The minimum working distances are shown in Figure 5 for all three sites.

Figure 5 Vibration Assessment – Minimum Working Distances (Vibratory Roller)



The above shows that certain receivers are expected to be within the minimum working distance when a vibratory roller is being used. Mitigation and management measures are discussed in Section 3.5.

3.5 Mitigation and Recommendations

The following measures are recommended to be applied to the works to minimise the potential impacts:

- Where noise intensive equipment is to be used near sensitive receivers, the works should be scheduled for Standard Construction Hours, where possible. If it is not possible to restrict the works to the daytime then they should be completed as early as possible in each work shift.
- Monitoring should be carried out at the start of new activities to confirm that actual levels are consistent with the predictions and that appropriate mitigation measures from the CNVG have been implemented.
- Appropriate respite should also be provided to affected receivers in accordance with the CNVG.
- Certain receivers are within the cosmetic damage minimum working distance for vibration intensive works. Attended vibration monitoring should be completed at the start of vibratory intensive works that are within the minimum working distances to confirm the impacts.

The 'additional mitigation measures' required to be considered by the works are specified in the assessment tables for each works site (see Table 5 to Table 7). The descriptions of the various measures are detailed Table 8.

Table 8 Additional Mitigation Measure Descriptions

Abbreviation	Measure	Description
N	Notification (letterbox drop or equivalent)	Advance warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of using variable message sign, letterbox drop (or equivalent), web site / social media or a combination to distribute information detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of 5 working days prior to the start of works. The approval conditions for projects may also specify requirements for notification to the community about works that may impact on them.
SN	Specific notifications	"Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than 5 working days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops.
PC	Phone calls	Phone calls detailing relevant information made to identified/affected stakeholders, who have provided their contact details, within seven calendar days of proposed work. Phone calls provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs. Where the resident cannot be telephoned then an alternative form of engagement should be used.

Abbreviation	Measure	Description
IB	Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project. Where the resident cannot be met with individually then an alternative form of engagement should be used.
RO	Respite offer	Respite Offers should be considered where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed 3 hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers. The purpose of such an offer is to provide residents with respite from an ongoing impact. This measure is evaluated on a project-by-project basis, and may not be applicable to all projects, or when duration respite has been agreed (see below)
R1	Respite Period 1	Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month
R2	Respite Period 2	Night time construction noise in out of hours period 2 shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before 11pm.
DR	Duration respite	"Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly.
AA	Alternative accommodation	Alternative accommodation options may be offered (as a last resort) to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. The specifics of the offer will be identified on a project-by-project basis, however an AA offer is unlikely to be made for maintenance works. Additional aspects for consideration shall include whether the highly intrusive activities occur throughout the night or before midnight.
V	Verification	Verification may be required for building or asset condition where works are likely to cause vibration impact or for noise levels following reasonable complaints. See Appendix F of the Construction Noise and Vibration Guideline for more details.

4 Conclusion

An assessment of the change in operational road traffic noise levels from the revised design of noise barrier SB01 has been completed. The revised location of the barrier results in increased noise levels at the adjacent residential receivers due to the barrier being further away and shorter at both ends. The revised alignment results in three additional properties being eligible for consideration of at-property treatment behind the barrier.

Construction noise and vibration emissions associated with cabling works at three locations near the project have been assessed. The nearest receivers are predicted to be subject to relatively high worst-case noise impacts, particularly when noisy equipment is being used near to receivers. The highest impacts are expected to occur during the Drainage Infrastructure scenario, which includes excavation works and may at times require noisy items of equipment such as backhoes, rollers or trucks.

The works should apply all feasible and reasonable practices to reduce the potential impacts. A number of measures have been recommended to be applied to reduce the impacts as far as practicable.

Checked/ Authorised by: AW

Appendix G

Statutory consultation checklists

Infrastructure SEPP

Certain development types

Development type	Description	Yes / No	If 'yes' consult with	ISEPP clause
Car Park	Does the project include a car park intended for the use by commuters using regular bus services?	No		ISEPP cl. 95A
Bus Depots	Does the project propose a bus depot?	No		ISEPP cl. 95A
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		ISEPP cl. 95A

Development within the Coastal Zone

Issue	Description	Yes / No / NA	If 'yes' consult with	ISEPP clause
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?	NA		ISEPP cl. 15A

Council related infrastructure or services

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
Stormwater	Are the works likely to have a <i>substantial</i> impact on the stormwater management services which are provided by council?	No		ISEPP cl.13(1)(a)
Traffic	Are the works likely to generate traffic to an extent that will <i>strain</i> the capacity of the existing road system in a local government area?	No		ISEPP cl.13(1)(b)

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
Sewerage system	Will the works involve connection to a council owned sewerage system? If so, will this connection have a <i>substantial</i> impact on the capacity of any part of the system?	No		ISEPP cl.13(1)(c)
Water usage	Will the works involve connection to a council owned water supply system? If so, will this require the use of a <i>substantial</i> volume of water?	No		ISEPP cl.13(1)(d)
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 <i>minor</i> or <i>inconsequential</i> disruption to pedestrian or vehicular flow?	No		ISEPP cl.13(1)(e)
Road & footpath excavation	Will the works involve more than <i>minor</i> or <i>inconsequential</i> excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No		ISEPP cl.13(1)(f)

Local heritage items

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
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	No		ISEPP cl.14

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
	impacts to the heritage significance of the item/area are more than <i>minor</i> or <i>inconsequential</i> ?			

Flood liable land

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
Flood liable land	Are the works located on flood liable land? If so, will the works change flood patterns to more than a <i>minor</i> extent?	No	Local Council	ISEPP cl.15
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 Service	ISEPP cl.15AA

Public authorities other than councils

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
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?	Yes	Department of Planning, Industry and Environment – National Parks and Wildlife Service	ISEPP cl.16(2)(a)
National parks and reserves	Are the works on land in Zone E1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	Office of Environment and Heritage	ISEPP cl. 16(2)(b)
Aquatic reserves and marine parks	Are the works adjacent to an aquatic reserve or a marine park declared under the <i>Marine Estate</i>	No	Department of Planning, Industry and Environment	ISEPP cl.16(2)(c)

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
	<i>Management Act 2014?</i>			
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	ISEPP cl.16(2)(d)
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	ISEPP cl.16(2)(f)
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	ISEPP cl. 16(2)(g)
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 clause 5.15 of Lockhardt LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence	ISEPP cl. 16(2)(h)
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	ISEPP cl. 16(2)(i)

Growth Centres SEPP

Issue	Potential impact	Yes / No	If 'yes' consult with	SEPP clause
Clearing native vegetation	Do the works involve clearing native vegetation (as defined in the <i>Local Land Services Act 2013</i>) 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, Industry and Environment	SEPP 18A



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