Transport for NSW

Prospect Highway Upgrade - Ponds Road Land Improvement

Addendum Review of Environmental Factors

October 2023

NSW GOVERNMENT

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Acknowledgement of Country

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

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

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

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

Prepared by Fulton Hogan Pty Ltd and Transport for NSW.

Executive summary

The proposed modification

Transport for NSW (Transport) 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:

- The use of surplus material to reshape Lot 1 DP 124950 and Lot 21 DP 135886.
- Removal of priority weeds and other low value ground cover by clearing and grubbing.
- Enhancement of the stockpile area restoration and improved amenity of Lot 1 DP 124950 by altering the area surface and landscape.
- Improving the landscaping and public amenity of Lot 21 DP 135886 by modifying the planting and ground cover proposed for site restoration.
- Improve the project's sustainability by reducing emissions and providing future carbon storage in the increased vegetation planting.
- Support future local developments including the St Bartholomew's Cemetery expansion.

The impacted Lots, while zoned for public recreation, are currently not used for their intended purpose. The current conditions of the Lots are overgrown, weed infested, have inconsistent ground level and used as locations for illegal dumping. This makes it difficult for the community to use the space to its full potential. The proposal attempts to remove these obstacles and allow for further future development and use as a public space.

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 Transport (then Roads and Maritime Services) project website. A 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 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. The following works were included:

- A kiss and ride facility for Shelley Public School.
- Inclusion of four additional noise walls.
- Powerline relocation
- Additional drainage, basins and road works.
- Additional site compound areas
- Test excavations for non-Aboriginal heritage items at Reservoir Road.
- Property works including at-property acoustic architectural treatments and turning bays.
- Relocation of two Sydney Trains power poles.

In 2019, an addendum to the project REF, referred to in this addendum REF as addendum 2 REF, was prepared to address changes to the approved scope of work for the Prospect Highway Upgrade. Addendum 2 was determined 11 October 2019. The following works were included:

- Realignment of retaining wall RW03.
- Property adjustments
- Additional alignment work at the M4 Western Motorway (M4 Motorway)
- Changes to the road surface and work methodology
- Demolition of residential property and ancillary structures located at 30 Topaz Crescent, Seven Hills

In 2021, an addendum to the project REF, referred to in this addendum REF as addendum 3 REF, was prepared to address changes to the approved scope of work for the Prospect Highway upgrade. Addendum 3 REF was determined 9 June 2021. The following works were included:

- Design refinement of noise wall SB01
- Establishment of three electrical utility maintenance tracks
- Minor property adjustment works.
- Communication trench and pit adjustments.
- Line marking, milling and potentially resheeting on Ponds Road and Keyworth Drive.
- Establishment of a vegetation clearing boundary.
- Proposal boundary updated.

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, addendum 2 REF and addendum 3 REF.

The proposed modification is required to refine the scope of work and minimise the environmental impact associated with the PHU project. The proposed modification would result in the following benefits:

- Reduction in waste disposal (and associated vehicle movements) through re-use on site
- Increased native plantings and removal of priority weeds
- Improved public amenity and landscape elements.

Proposal objectives

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

Options considered

Two options for the proposed modification were investigated:

- 'Do nothing' option – This option involves carrying out the project as described in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF, without any additional scope of work. This

would result in the excess material being transported off site to a waste facility for storage as landfill and Lot 1 DP 124950 being restored to its preexisting grassed landscaping and topography. Lot 21 DP 135886 would remain in its current condition.

- Option 1 – This option involves the rehabilitation and enhancement the public recreation land on Lot 1 DP 124950 and improvement of Lot 21 DP 135886 located between the Great Western Highway and Ponds Road. This would be achieved through the use of surplus material generated on the project to smooth out the slope, remove the weeds, adding a maintenance track and hardstand area, and landscaping the area with mulch and trees. This would also reduce environmental impacts by reducing truck movements, fuel use and improving future carbon sequestration.

The 'do nothing' option would involve no additional work outside the scope of the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF. The do nothing option does not address the identified need for the modification as the area would remain in its current underused state by the community, not support the future growth of the local area and the excess material would be transported as waste offsite without reuse, resulting in poorer environmental outcomes and would therefore only be preferred in circumstances where the costs and environmental impact of proceeding were assessed as outweighing identified benefits. This was not identified as being the case; therefore, the 'do nothing' option was not pursued further.

Option 1 would meet the needs of the proposed modification and the objectives of the project. This option would allow for the safe permanent placement of some surplus spoil within the existing project boundary and enhance the landscaping used to rehabilitate the temporary stockpile location at Lot 1 DP 124950 and improve Lot 21 DP 135886. This would increase the project's sustainably outcomes by reducing waste and resources used, increasing native plantings and removing priority weeds, while adding additional value to the community through improved amenity and landscape outcomes and support future local developments.

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 also considers clause 171 of the *Environmental Planning and Assessment Regulation 2021* and matters of national environmental significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) applies to this proposal. Division 17 Clause 2.109 of the T&I SEPP 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 the Environment and Energy 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 Communications and Community Involvement Plan (CCIP) developed for the approved project (refer to section 5.1 of the project REF) by:

- Providing current proposal information through the project website and a Community Update newsletter.
- Ongoing consultation with relevant stakeholders, including Blacktown City Council.
- Informing and updating Blacktown City Council about the proposal.
- 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.

Extensive consultation has been undertaken to date with the landowner Blacktown City Council (the Council). The Council is supportive of the proposed modification (refer Appendix D).

Environmental impacts

The main environmental impacts for the proposed modification are:

Noise and vibration

- The potential impact to noise and vibration as a result of the proposed modifications described in this addendum REF would be minor and temporary in nature and consistent with the impacts described in the REF and previous addendum REFs.

Contaminated lands and hazardous materials

- A small amount of Asbestos Containing Material (ACM) was located and removed from Lot 1 DP 124950 as part of the project.
- Contaminated material would be excluded from use as part of this proposal.

Non-Aboriginal Heritage

- The proposed modification is not expected to have any impacts on Non-Aboriginal Heritage.

Landscape, visual amenity and urban design

- The visual amenity of the Lots impacted on Ponds Road is minor in nature.
- The improved landscaping will add value as the land is zoned Public Recreation but currently overgrown and underused.
- The proposal positively supports the current and future urban design of the local area including the recently competed Stage 1 (northbound carriageway and verge works) and soon to start Stage 2 (southbound carriageway and verge works) extension of the existing St Bartholomew's Cemetery by creating a more aesthetic environmental for the new sections of the cemetery and providing a well maintained area for future use.

Resource use and waste management

- The proposal would use spoil generated onsite, reducing the waste removed.
- The proposal would reduce required truck movements by retaining the material onsite.
- The proposal would improve sustainability outcomes for the project through material re-use.

Biodiversity

- The Lots impacted currently have low biodiversity value and are dominated by exotic grasses and priority weeds. The replacement of these grasses and weeds with native gumtrees would provide future feeding and habitat opportunities, as well as support the existing native vegetation in the local area. The mulch would assist with future weed management and reduce the risk of future infestation.
- The existing gumtrees on Lot 1 DP 124950 would be retained. These consist of Forest Red Gum (*Eucalyptus tereticornis*) and Grey Box (*Eucalyptus moluccana*)
- Some clearing is required to Lot 21 DP 135886 as part of the proposal. This would consist of removing exotic grasses, priority weeds and some shrubs.

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

Adverse environmental effects would be minimised and managed through the implementation of safeguards (new and existing) outlined in this addendum REF. The consolidated list of safeguards and management measures detailed in this addendum REF would apply to the proposed modification.

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.

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Appendices

1. Introduction

1.1 Proposed modification overview

Transport for NSW (Transport) proposes to modify the Prospect Highway Upgrade (PHU) by providing landscape and amenity enhancements to two Lots located between Ponds Roads and the Great Western Highway (Lot 1 DP 124950 and Lot 21 DP 135886, See Fig 1-1) (the proposed modification). Key features of the proposed modification would include:

- Increase the detailed landscaping for the project.
- Removal of weeds and other non-desirable vegetation.
- Alterations to topography and grading by placement of fill to result in broader flat ridge with a smooth flowing profile.
- Revegetation with native Eucalyptus species and improved landscaping, enhancing the aesthetics and community appeal.
- Provide space for a potential future public car park and easier access.
- Increased sustainable outcomes for the project through minimising waste disposal and maximising material re-use.

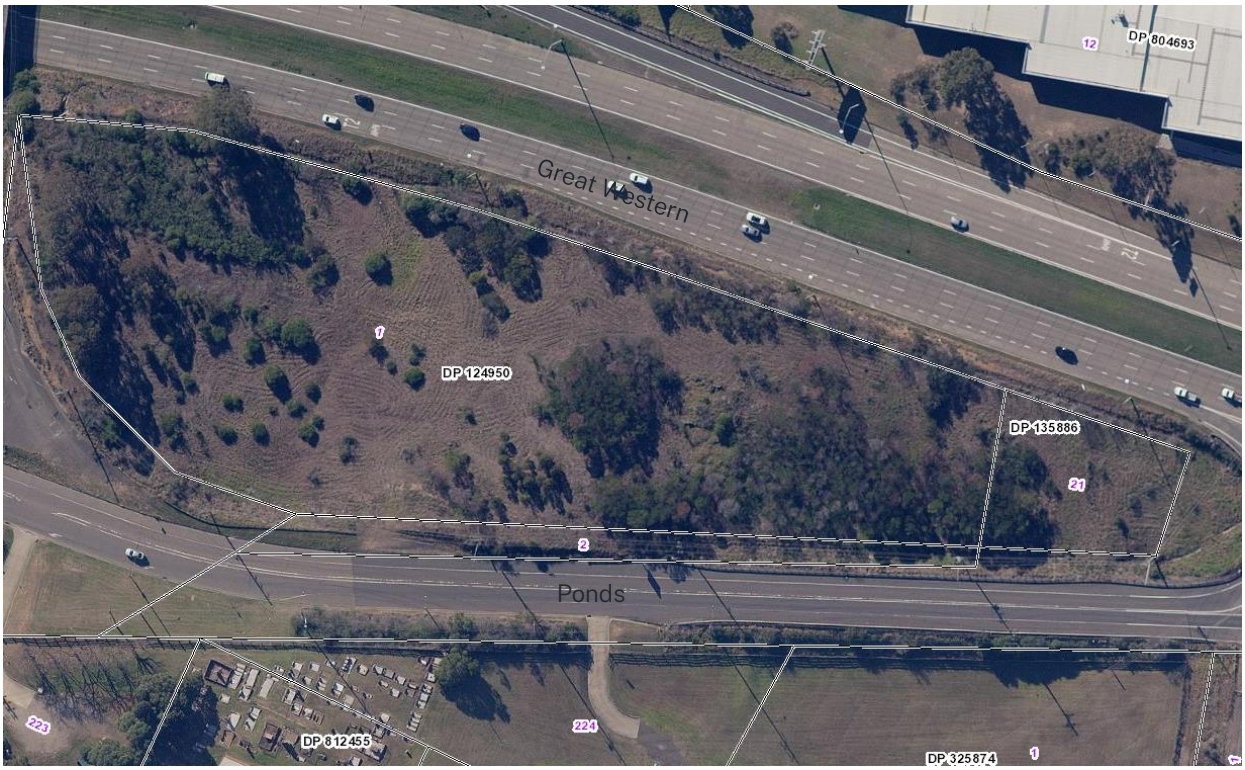

Figure 1-1-1 Lot location map.

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

A review of environmental factors (REF) was determined for the Prospect Highway Upgrade in September 2014 (referred to in this addendum REF as the project REF). The project REF was placed on public display between 2 June 2014 and 30 June 2014 for community and stakeholder comment. A submissions report dated October 2014 was prepared to respond to issues raised.

In addition, the following addendum REFs for the Prospect Highway have been prepared:

- Prospect Highway Upgrade Addendum Review of Environmental Factors, 12 July 2016 (Addendum 1 REF).

- Prospect Highway Upgrade Addendum Review of Environmental Factors, 11 October 2019 (Addendum 2 REF).
- Prospect Highway Upgrade Addendum Review of Environmental Factors, 9 June 2021 (Addendum 3 REF).

Figure 1-2: Location of the proposed modification

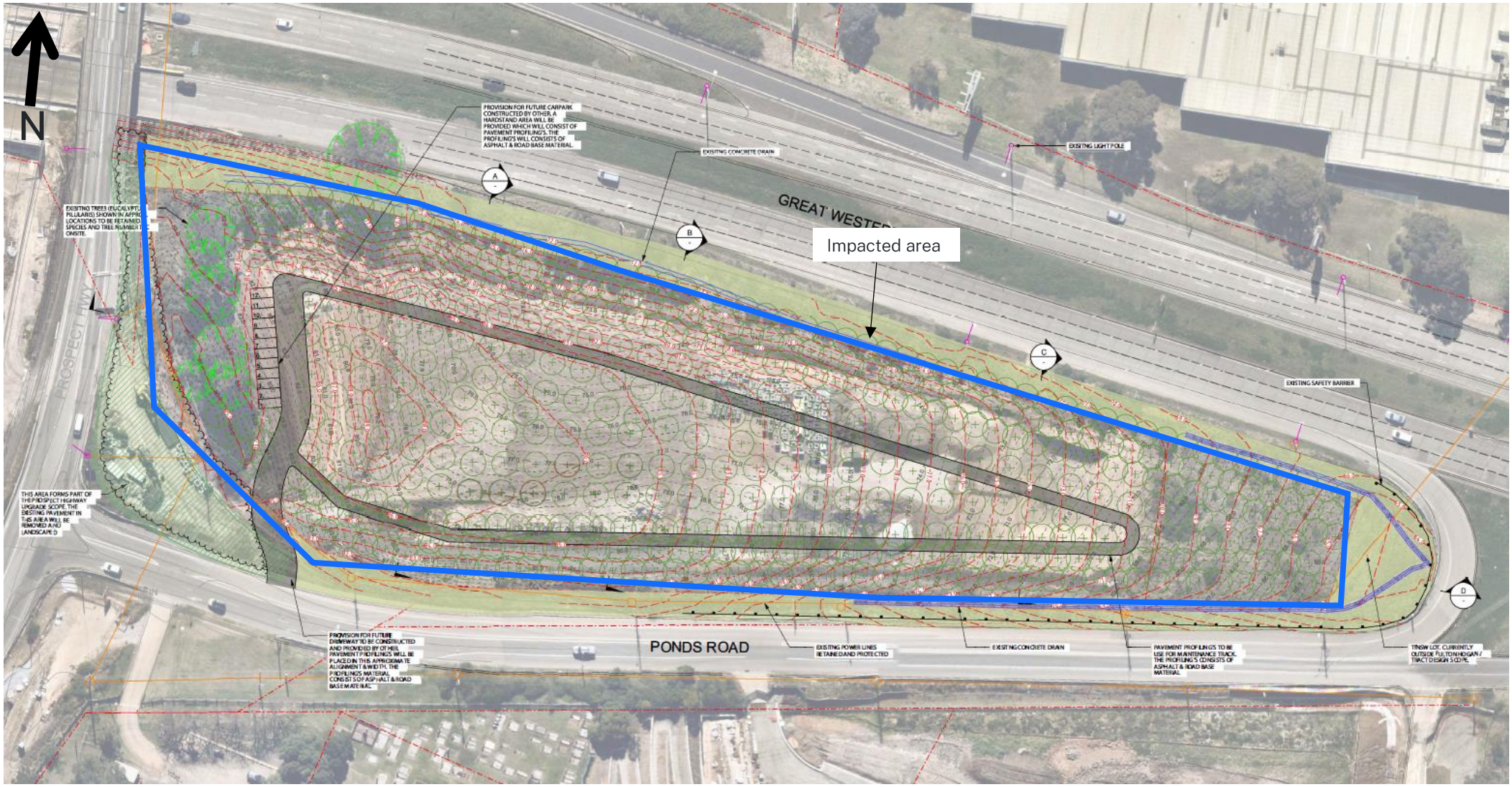

Figure 1-3: The proposed modification

1.2 Purpose of the report

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

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

The description of the proposed work and assessment of associated environmental impacts has been undertaken in context of section 171 of the Environmental Planning and Assessment Regulation 2021, *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).

The addendum REF helps to fulfil the requirements of:

- Section 5.5 of the EP&A Act including that Transport for NSW examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

The findings of the addendum REF would be considered when assessing:

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

2. Need and options considered

2.1 Strategic need for the proposed modification

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

The proposed modification is needed to support the main work of the Prospect Highway Upgrade. The modification is needed to further refine the scope of work, provide additional management of material generated by the project and expand the use of the Project's mitigation measures as detailed in the REF by providing additional improved landscaping.

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 are:

- Reduce traffic congestion and improve traffic flow
- Support public transport.
- Support freight movement.
- Support growth areas.
- Improve safety.

These objects are not modified by the addendum REF.

There are no development criteria for this proposed modification.

2.3 Alternatives and options considered

2.3.1 Methodology for selection of preferred option

The proposed modification (as described below in Section 3.1) involves changes that have resulted from the detailed design and construction of the project 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 could be justified or the project remain in its current approved scope. This is an evaluation of the 'do nothing' option.
- An evaluation of the other options by comparing their respective impacts and benefits.

2.3.2 Identified options

- 'Do nothing' option This option involves carrying the project as described in the project REF and addendum 1 REF, addendum 2 REF and addendum 3 REF, without any additional scope of work. This would result in the excess material being transported off site to a waste facility for storage in landfill and Lot 1 DP 124950 being restored to its preexisting grassed landscaping and topography. Lot 21 DP 135886 would remain it its current condition.
- Option 1 – This option involves the enhancement of the Lots located between Ponds Roads and the Great Western Highway (Lot 1 DP 124950 and Lot 21 DP 135886) which would involve the use of site won material to reshape the Lots to improve topography and enhanced landscaping to increase the aesthetics and community value of the space while controlling weeds.

2.3.3 Analysis of options

- 'Do nothing' option

  The "Do nothing" option would be to continue with the current approved scope to remove the excess material offsite, which involves leaving Lot 21 DP 135886 unaltered and returning Lot 1 DP 124950 to its previous condition once it was no longer required as a temporary stockpile area.

  The excess material would have to be removed offsite to a waste facility for permanent storage. Landfill space is limited, constrained, and seen as a growing issue for many cities. The Department of Climate Change, Energy, the Environment and Water's Australian landfill capacities into the future Report (2009) stated "long-term problems with landfill capacity are likely in two of Australia's major urban centres Melbourne's south-east and metropolitan Sydney". The current approval has the 70,000m^3 of material generated in this proposal removed as waste.

  The removal of the waste would require the use of trucks, machinery and fuel. Approximately 14,000 truck movements are needed to remove the 70,000m^3 of excess material offsite. If this material were to be transported to the closest waste facility, approximately 120 tonnes of Carbon dioxide (CO_2) would be released. If loading out at optimum operating efficiency, approximately 3500 hours of machinery operation would be required to remove the material. The resource use required for the current scope is a poor outcome for the project.

  Lot 1 DP 124950 would continue to be used as a temporary stockpiling area and as such still impacted by the project. The current scope includes stripping the vegetation, ground disturbance and changes to the gradient of the area. After its use it would be restored to its previous condition. Its previous condition was poor with its vegetation being dominated by weeds and overgrown grass, the area being used for illegal dumping including Asbestos Containing Material (ACM), and the ground was uneven with the gradient resulted in a dip of about 1.75metres before rising again. The area was not in use by the public. The restoration would involve restabilising grass and restoring the overall topography. This is a neutral outcome for the project.

  The current condition of Lot 21 DP 135886 is very poor, the vegetation is mostly grasses which are dominated by weeds. The vegetation is overgrown and there is no evidence of maintenance. The ground level is uneven. The Lot is not in use by the community.

  As a result of these factors, the 'Do nothing' option was not considered any further.

- Option 1

  Option 1, the proposed modification, supports and improves the outcome for the following project objective:

  - Support growth areas

  This option would allow for the safe permanent placement of some surplus spoil, effectively reducing the amount of landfill generated by the PHU project. The lots impacted are zoned Public Recreation but are currently not used and are overgrown. The proposal would improve the quality of landscaping. There are current and future local developments associated with St Bartholomew's Cemetery in the local area which would be better supported by the project with the inclusion of this option.

  The proposed modification would improve the outcomes of the following REF mitigation measures (detailed in section 7.2 of the REF, section 7.2 of addendum 1 REF, section 7.2 of addendum 2 REF and section 7.2 of addendum 3 REF):

  - REF Mitigation Measure No. 26: Spread of weeds – Management of weeds during the project with use of a weed management plan.
  - REF Mitigation Measure No. 35: Landscape character and visual impacts - the landscape design principles and streetscape consistent with the important factors including Blacktown City Council's visual character and maintenance requirements.
  - REF Mitigation Measure No. 36: Landscape character and visual impacts – landscape plans are to incorporate the design principles outlined in the Landscape Character, Visual impact Assessment and Urban Design Report.
  - REF Mitigation Measure No. 86: Impacts on climate change from construction activities - Detailed design would take into consideration the potential effect of climate change on the proposal.

- REF Mitigation Measure No. 88: Generation of construction waste – Management of waste in accordance with a Resource and Waste Management Plan (RWMP).
- REF Mitigation Measure No. 94: Generation of construction waste - Resource management hierarchy principles would be followed.

2.4 Preferred option

Option 1, the modification, was selected as the preferred option as this enhances the ability to meet the project objectives while minimising the environmental impacts associated with the project.

3. Description of the proposed modification

3.1 The proposed modification

Transport for NSW proposes to modify the Prospect Highway Upgrade by including landscaping enhancements to the Lots located between Ponds Roads and the Great Western Highway (Lot 1 DP 124950 and Lot 21 DP 135886) (the proposed modification). The proposed modification is shown in Figure 1-3 and Figure 3-1 to Figure 3-4.

Key features of the proposed modification would include:

- The permanent placement of surplus spoil within the project REF boundary (Lot 1 DP 124950 and Lot 21 DP 135886).
- Development of Lot 1 DP 124950 and Lot 21 DP 135886 to improve the land amenity by decreasing the gradient of the slope, removing weeds, and landscaping with native species and mulch.
- Installation of a stabilised parking area and maintenance track.
- Decreasing future landscape maintenance needs.
- Increase mitigation for St Bartholomew's Church and Cemetery by increased planting shielding the Great Western Highway.
- Increased project sustainability by reduction of transportation of material offsite reducing fuel requirements.

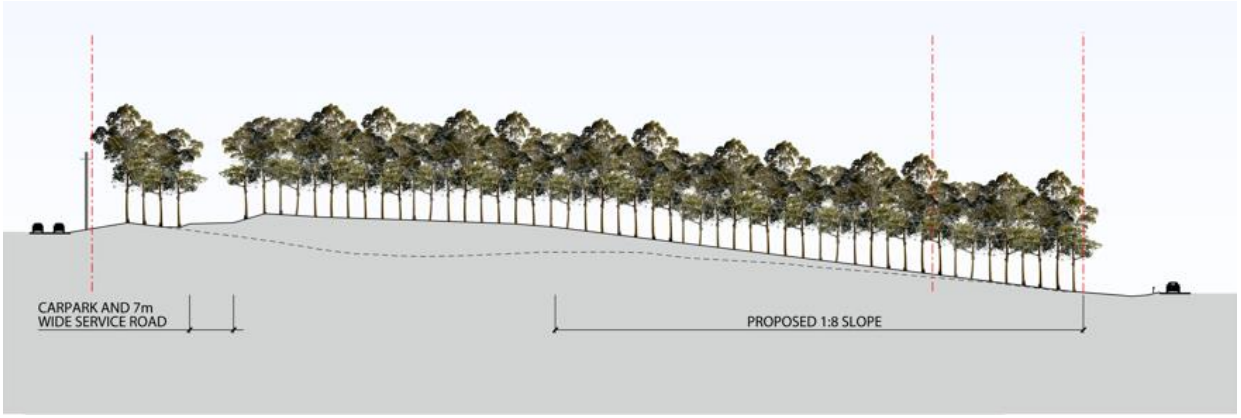

Figure 3-1: Longitudinal artist impression of proposed design once plants are mature between 10-15 years.

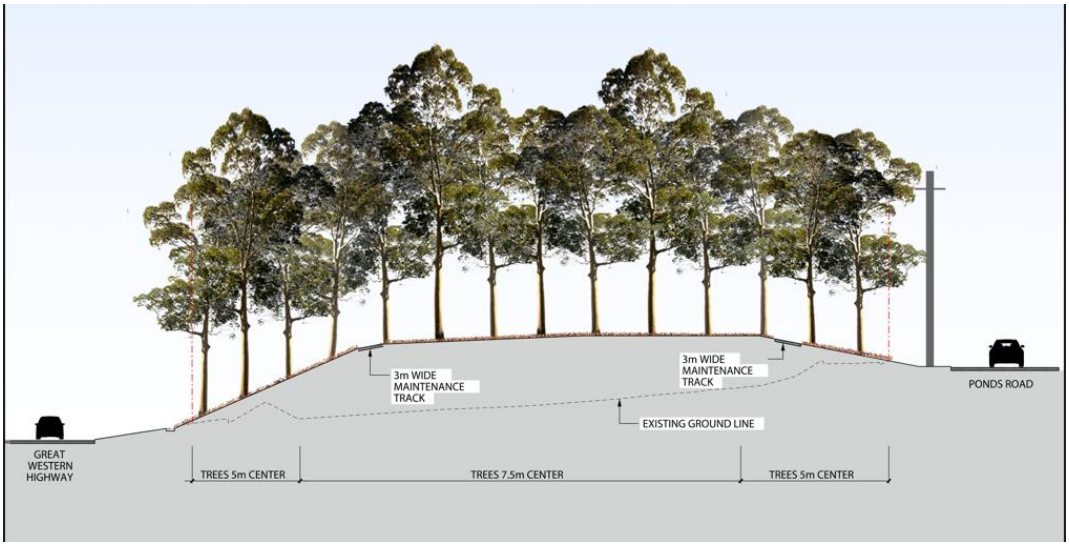

Figure 3-2: Cross section artist impression of western end of proposal once plants are mature between 10-15 years.

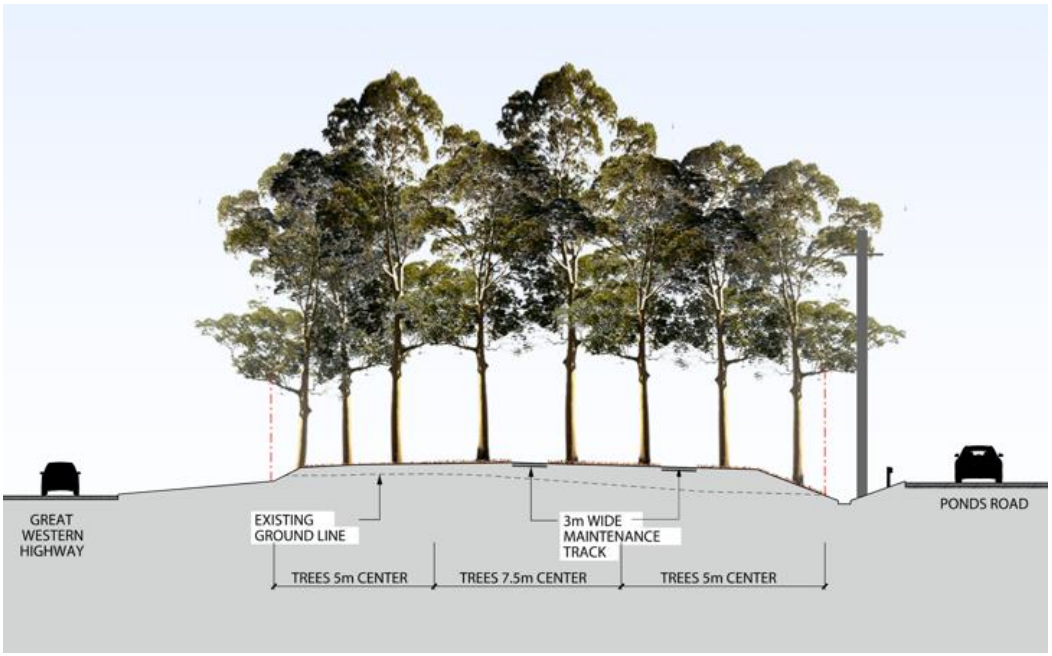

Figure 3-3: Cross section artist impression of eastern end of proposal once plants are mature between 10-15 years.

Figure 3-4: Artist impression of the completed Lots should the proposed modification proceed and photo of current conditions from Ponds Road facing east once plants are mature between 10-15 years.

3.2 Design

3.2.1 Design criteria

The relevant design standards and design criteria are outlined in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF. Details relating to design standards are outlined in *Prospect Highway Upgrades: Roads Detailed Design Report* (SMEC, 2016a).

The proposal's design was created with extensive consultation with the landowner Blacktown City Council and their design requirements (see appendix D). The proposed design has been approved as acceptable by the landowner Blacktown City Council and meets their design requirements.

The design criteria for the proposal was developed to meet the TfNSW Specification R44 Earthworks for placement and compaction of material to ensure that the risk of future ground movement was prevented. The proposed slope design criteria included the need to maintain slopes at ratios that would not increase the risk of future long term erosion.

The verge areas which are not impacted by the proposal contain concrete lined swale drains on sections of the north and south verge and the eastern side of the verge. There are two existing drainage head wall outlets, one in the northern verge and the other in the eastern. Due to the lots being enclosed by guttered roads on all sides, run off into this drainage is limited to what falls on the Lots and verge. A key criteria of the new design was to ensure that the existing overall topography (a steeper batter on the north side and the dominate slope profile to the east) was maintained to limit changes to run off.

The landscaping design criteria was focused on integrating with the existing landscape plan for the project, TfNSW Specification R179 Vegetation and Blacktown City Council requirements for maintenance and tree maturity.

3.2.2 Engineering constraints

The relevant design standards and design criteria are outlined in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF. Details relating to engineering constraints are outlined *in Prospect Highway Upgrades: Roads Detailed Design Report* (SMEC, 2016a).

The engineering constraints considered as part of the proposal included:

- The construction and maintenance of the proposal considering the proximity of the proposal to the Endeavour Energy transmission lines. There are low power lines on the south, east and west verges. This has been considered for design and construction.
- Integration with existing road and roadside infrastructure. There is an existing guard rail on the west and south which wedge the hard stand in the south west corner and current entry point. The are also Blacktown City Council requirements relating to rail integration.
- Potential impacts to St Bartholomew's Church and Cemetery had to be prevented as part of the proposal due to its significance. The church is located 63m from the impacted Lots and is elevated above the works.

3.2.3 Main features of the modification

The main features of the modification are limited to enhancement of the Ponds Road site compound. There are no substantial changes to the design since the addendum 1 REF, addendum 2 REF and addendum 3 REF. Refer to Appendix G for design plans. Details of the main features of the proposed modification are provided below.

Sustainable use of surplus material onsite

Through enhancement of the Ponds Roads site compound, surplus material generated from the PHU works would be placed on this site, rather than disposed to landfill. The design proposal provides for an upper threshold of 70,000m3 in volume, placed in accordance with methods in the TfNSW R44 Earthworks specification. The proposed location is zoned Public Recreation and there would be no change to the approved land use of the site from the placement of the material. The material has been tested and is compliant with the National Environment Protection (Assessment of Site Contamination) Measure April 2011 requirements for recreation land use.

Improved amenity and landscaping

The improved landscaping would allow for the enhancement of vegetation quality, removal and control of several priority weeds, and an improvement in the topography. The placement of material would be to maximum grades of 1:3 on the north and south sides, which is either similar or flatter than existing embankments, with a broad flat ridge sloping down to the east at maximum grade of 1:8. The general interface of batter slopes has been rounded to avoid sharp changes in slope and to present a smooth flowing profile.

The landscaping would involve the placement of 100mm of Hardwood mulch over 150mm of topsoil over 300mm of cultivated subgrade. The planting would consist of *Corymbia maculata* or *Eucalyptus tereticornis* 25 litre plants in a variable planting grid, with greater density (5x5m grid) at the margin and decreasing density (7x7m grid) at the centre.

Maintenance track and hardstand infrastructure

A maintenance track would be installed, allowing for maintenance access to the whole site. The access track would be constructed using recycled pavement profiling and road base material excess to the project. It would be 3m wide and connected to the edge of Ponds Road for the potential future installation of a permanent driveway. A hard stand stabilised parking area would be provided on the western side made from the same material.

Decreasing future landscape maintenance needs.

The proposed changes of landscaping involve the replacement of the primary ground cover from grass to mulch. Mulch requires limited maintenance compared to grass. In addition, mulch acts as a deterrent for weeds by preventing them from establishing. These features would reduce the future maintenance requirements of the Lots and increase the likelihood they remain in good condition.

Increase mitigation for St Bartholomew's Church and Cemetery

Currently the Great Western Highway is partly visible from St Bartholomew's Church and Cemetery. Being a main road, noise from the Great Western Highway impacts the church and cemetery given the existing topography. The proposal area is located at a lower level than the church and is clearly visible from the cemetery. The alteration to the proposal area's topography and height, as well as planted trees once mature would improve noise shielding while improving the aesthetics of the St Bartholomew's Church and Cemetery locality.

Increased project sustainability

The proposal allows for up 70,000m3 of material to be retained onsite which would otherwise be directed to landfill. By retaining material generated on the project within the project, there would be reduced truck movements and fuel use. This represents over 12,000 reduced truck movements offsite as a result of the proposal. There are also reductions in fuel and plant use from avoiding double handling of material. This is a significant benefit to the sustainability of the project.

3.3 Construction activities

3.3.1 Work methodology

The project's work methodology is described in section 3.4 of the project REF, section 3.3 of addendum 1 REF, section 3.3 of addendum 2 REF and section 3.3 of addendum 3 REF. Section 3.4 of the project REF details the staging, construction hours and duration and plant and equipment to complete the proposed work. The works proposed in this addendum do not result in any changes to staging, construction hours or duration detailed in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF.

The proposal would involve the following work methodology:

- Placement of boundary control in Lot 21 DP 135886.
- Modification of the existing environmental controls including erosion and sediment controls in Lot 1 DP 124950 and establishment of environmental controls in Lot 21 DP 135886.
- Vegetation clearing, grubbing and stripping of Lot 21 DP 135886.

- The transition of the temporary stockpiles to the permanent placement location. This will involve move the material conpcting it in layers and shaping it to final designPlacement of the access track and hard stand.
- Topsoiling, revegetation and landscaping.
- Finishing work including clean up and removal of any excess material and equipment..
- Site clean-up.

3.3.2 Construction hours and duration

The proposal's construction hours are as per the project REF, which are standard hours as follows:

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

The project is able to undertake Out-of-hours work (OOHW) provided that it meets the requirements for one of the OOHW exemptions detailed in the project's EPL (EPL-21295). These exemptions are:

- L4.3 Exemptions to standard construction hours – Emergency works and oversized plant
- L4.4 Exemptions to standard construction hours - Low noise-impact works
- L4.5 Exemptions to standard construction hours – Road and utility network integrity
- L4.10 Community Agreements
- L.4.12 Works outside of standard construction hours (out-of-hours works trial)

In addition to this, OOHW is carried out in accordance with the *Interim Construction Noise Guideline (DECC, 2009)* and with Transport for NSW's *Environmental Noise Management Manual Practice Note VIII*. The majority of OOHW are undertaken between Sunday to Thursday with some works on Friday night and Saturday days and nights when required.

There has been OOHW undertaken in the area impacted by the proposed modification since the start of the project. These OOHW have been undertaken ELP 21295 L4.4 (low Impact Works) and involved stockpiling and movement of material collected as part of other OOHW.

Works required for the proposed modification would be undertaken generally in standard construction hours. Works would be carried out in accordance with the project's construction noise and vibration management plan (NVMP) in accordance with the project REF.

The proposed modification would be completed prior to the programmed completion of the project.

3.3.3 Plant and equipment

No additional plant or equipment would be required to complete the works described in this addendum REF. Details of plant and equipment are provided in section 3.3 of the REF and include:

- Excavators (sized between 5 and 25 tonnes)
- Rollers both padfoot and vibration
- Trucks
- Dozers.

3.3.4 Earthworks

Earthworks would be required as part of the proposed modification. The earthworks would involve the movement of material and shaping of the batters.

The earthworks required to undertake the modifications as described in this addendum REF would be minor in the context of earthworks 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 which are consistent with those described in in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF.

The proposed modification would require additional material to the site sourced general fill material. Imported material would consist of mulch and topsoil in small volumes relative to the overall requirements. Materials required for the proposed modification include the following:

- General fill (site won only) upper limit of 70,000m^3.
- Mulch approximately 8000m^3.
- Profiling and road base material (site won only) approximately 750m^3.
- Topsoil approximately 8000m^3.
- Trees

A more comprehensive list of construction materials needed for the overall PHU is provided in section 5.4. of the project REF. Where possible, construction materials are sourced from local commercial suppliers.

3.3.6 Traffic management and access

There is a current Traffic Management Plan (TMP) and Traffic Guidance Scheme (TGS) covering the proposed modification's work area. Standard traffic management measures are employed to minimise short-term traffic impacts that could be expected during construction. The proposed modification would not change the traffic management requirement and existing entry and exit gates would be used while undertaking the works.

Generally, access would be as detailed in the project REF. No additional impacts to access are expected as a result of the proposed modification.

3.4 Ancillary facilities

No additional ancillary facilities would be required to complete the works described in this addendum REF. Details of ancillary facilities are provided in section 3.4 of the REF, section 3.4 of addendum 1 REF, section 3.4 of addendum 2 REF and section 3.4 of addendum 3 REF.

3.5 Public utility adjustment

No additional public utility adjustments would be required to complete the works described in this addendum REF. Details of public utility adjustments are provided in section 3.5 of the REF, section 3.2 of the addendum 3 REF and the relevant for construction drawings.

3.6 Property acquisition

No additional acquisitions would be required to complete the works described in this addendum REF. One of the Lots involved are being accessed by lease arrangements and the approval of the landowner (Blacktown City Council). Details of property acquisition are provided in section 3.6 of the project REF, section 3.6 of the addendum 1 REF, section 3.6 of the addendum 2 REF and section 3.6 of the addendum 3 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 (Transport and Infrastructure) 2021

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

Section 2.108 of SEPP (Transport and Infrastructure) permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

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

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

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

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

Consultation, including consultation as required by ISEPP (where applicable), is discussed in section 5 of this addendum REF.

4.1.2 Local Environmental Plans

Blacktown Local Environmental Plan 2015

As outlined in section 4.1.1, the SEPP (T&I) supersedes the requirements for development consent.

Development within the Blacktown Local Government Area (LGA) is generally subject to the provisions of the Blacktown LEP 2021. 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 Addendum REF

Zoning	Objectives	Areas where relevant to project
RE1 – Public Recreation	To enable land to be used for public open space or recreational purposes	Lots impacted by the proposed changes.

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.

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 native trees are not 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 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 a five part test is used to assess if there is a significance impact on threatened species, populations and endangered ecological communities listed under the BC Act or FM Act. If it is determined that there is a significance impact likely to occur, a SIS or Biodiversity Assessment Report (BAR) must be prepared.

The BC Act and the *Biodiversity Conservation Regulation 2017*, outlines the framework for addressing impacts on biodiversity from development and clearing. This framework establishes the Biodiversity Offsets Scheme (BOS) to avoid, minimise and offset impacts on biodiversity from development. Transport for NSW would prepare a BAR in accordance with the requirements set out in the BC Act. For Division 5.1 (REF) projects, if the Biodiversity assessment concludes that there would 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 3 REF was assessed under the provisions of the BC Act and found to be applicable. 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 *National Parks and Wildlife Act 1979 (NPW Act)* manages the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects. Section 90, regulates the impact to specified Aboriginal objects, Aboriginal places, land, activity or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons by issuing Aboriginal heritage impact permit.

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 that publication has been followed for the project REF (Jacobs, 2014a) which 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) which included all areas within the project boundary (Roads and Maritime, 2011). The PACHCI assessment identified that the proposal is unlikely to harm known Aboriginal objects or places. Therefore, no permit is required.

4.2.3 Protection of the Environmental Operations Act 1997

The Protection of the *Environment Operations Act 1997 (POEO Act)* commenced on 1 July 1999 and 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 which includes works in the areas impacted by the proposal 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 as a result an EPL (ELP-21296) has been issued. This EPL provides restrictions on working hours, noise levels, waste use onsite, discharging water, air and water quality impacts.

4.3 Commonwealth legislation

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

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

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

Potential impacts to these biodiversity matters are also considered as part of section 6 of this 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 Department of Climate Change, Energy, the Environment and Water is not required.

4.4 Confirmation of statutory position

The proposed modification is categorised as development for the purpose of road infrastructure facilities and is being carried out by or on behalf of a public authority. Under section 2.108 of SEPP (Transport and Infrastructure) the proposed modification is permissible without consent. The proposed modification is not State significant infrastructure or State significant development. The proposed modification can be assessed under Division 5.1 of the EP&A Act. Consent from Council is not required for the purpose of compliance with the Act.

5. Consultation

5.1 Consultation strategy

Consultation was undertaken as part of the REF and detailed in REF Chapter 5 and the supporting Submission Report (Jacobs, 2014). As per the REF mitigation measures, a Community and Stakeholder Engagement Plan (CSEP) has been developed and approved since starting construction to manage ongoing interaction and communication with the community. Any additional consultation required for the proposed modification would be undertaken in accordance with the CSEP and the consultation strategy for the outlined in section 5.1 of the project REF.

Specific consultation regarding the modification has been undertaken with the landowner Blacktown City Council and their written support is included in the correspondence in Appendix D and E.

In addition to this, meetings have been undertaken with the following stakeholders since the determination of the REF:

- Blacktown City Council
- Shelley Public School
- Children First Day Care
- Bus operators and bus stop advertiser (Ooh Media)
- All business operating in and around St Martins Village, Stoddart Road industrial area and Reservoir Road 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.
- Residents potentially impacted by construction works as a result of noise, night works or traffic changes.

No changes to the consultation strategy were required for this addendum.

5.2 Consultation outcomes

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

Extensive consultation has been undertaken with Blacktown City Council between May 2022 and March 2023, concurrent with the development of this proposal. A summary timeline is provided in Table 5-1. The finalised proposal (see Appendix D) was accepted by Blacktown City Council on 01 March 2023. Key elements of the accepted proposal include:

- Removal of existing vegetation (including priority weeds).
- Exclusive source of non-contaminated material generated from the MR644 Prospect Highway Upgrade Project i.e. under the Waste Classification Guidelines, the material would not meet the waste classification of Special, Hazardous or Restricted Waste, and be documented with representative test results.
- Interim inspections of the area will be conducted by Blacktown City Council prior to landscaping and during landscaping works.
- Landscaping and tree planting, mulch, and recovered millings for the maintenance track and hardstand areas, in accordance with the accepted landscape design.
- Landscape maintenance regime and handover process with Blacktown City Council.

Table 5-1: Summary timeline with Blacktown City Council

Date	Consultation details
Mid-May 2022	FH commenced discussions with BCC representatives regarding the Ponds Road proposal.
7 Jul 2022	FH submitted concept proposal to BCC.
19 Jul 2022	BCC provided feedback following submission of concept proposal, including confirmation of no objection and increased tree planting.
15 Aug 2022	Meeting held between FH and BCC representatives, BCC provided guidance on appropriate liaison process and nominated BCC officers for further discussion.
20 Sep 2022	FH attended BCC Design Review Panel meeting, presented the Ponds Road proposal including landscape detailed design, for further guidance and discussion.
6 Oct 2022	Meeting held between FH and BCC representatives at BCC office, and discussed nominated topics including: • Revegetation • Intersection of trees with powerlines • Approval process • Commercial arrangements • Timeline
12 Oct 2022	BCC followed up the meeting held 06/10/2022, with an email which provided comments on the landscape design.
05 Dec 2022	Fulton Hogan submitted the formal proposal to BCC by email.
9 January 2023	BCC review of proposal with questions for Fulton Hogan to address.
19 January 2023	Fulton Hogan provided an interim response to the questions and requested meeting with BCC.
3 February 2023	Meeting held to discuss the proposal and questions it raised between BCC and Fulton Hogan.
13 February 2023	Fulton Hogan provided details on the action items from the meeting held on 3 February 2023.
23 February 2023	BCC requested some modifications to comply with their commercial layback specifications relating to Armco rail and potential use of a concrete skirt.
1 March 2023	Fulton Hogan accepted and incorporated the layback specifications into the design.
14 March 2023	BCC advised that the proposal had been accepted by email.
12 April 2023	Fulton Hogan requested confirmation of the status of Lot 21 DP 135886 use in the proposal.
12 April 2023	BCC confirmed Lot 21 DP 135886 was included in BCC acceptance of the proposal by email.

5.3 Ongoing or future consultation

Future consultation required would be undertaken in accordance with the CSEP and the consultation strategy outlined in section 5.1 of the project REF. This would include:

- Ongoing updates to the project website.
- Three monthly and targeted notifications

- Consultation with Blacktown City Council, and any residents and businesses impacted by the additional works.
- Ongoing access and provision of the Project 24 hour hotline, email and other contract methods for concerns and information request.

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 Prospect Highway Upgrade. All aspects of the environment potentially impacted upon by the proposed modification are considered. This includes consideration of the guidelines Roads and Related Facilities EIS Guideline (DUAP, 1996) and Is an EIS required? (DUAP, 1999) the factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021. The factors specified in section 171(2) of the Environmental Planning and Assessment Regulation 2021 are also considered in Appendix C.

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

6.1 Noise and vibration

6.1.1 Methodology

An Operational Traffic and Construction Noise and Vibration Assessment (OTCNVA) report was prepared by Jacobs (2014a) for the project REF. Noise Catchment Areas (NCA) are described in section 6.2 of the project REF. Construction noise impact have not been revisited in this addendum REF as there has been no change to the proposed construction methodology.

The sound barrier designs for the project have been included in the project REF and addendum 2 REF.

6.1.2 Existing environment

The existing environment of the proposal corridor and its surroundings are described in detail in Section 6.2 of the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF. The impacted area is in NCA 1 and is vacant land between a major roadway and one of its on and off ramps.

6.1.3 History

Due to the area impacted being located next to one of the main east/west corridors in Western Sydney (the Great Western Highway), there is an elevated level of environmental noise despite the lack of development in the surrounding area. The majority of noise is from traffic, which travels past the impacted Lots and continues closer towards the nearest impacted residents than the location of proposed modifications.

There has been an increase in noise generation from the project, due to the use of one of the Lots for temporary stockpiling for the project. Due to the distance between the works and the nearest residence, the noise generated cannot be heard at or above the existing background noise level at the nearest impacted resident.

6.1.4 Criteria

Potential impacts

The proposed modification is located 195m from the nearest sensitive residential receiver, located in Hampton Crescent, Prospect. There is the Prospect Highway bridge over the Great Western Highway, the Great Western Highway and topographic features between the nearest resident and area impacted by the proposed modification.

In addition to the existing barriers, the current design includes a noise wall (NB01) between the nearest resident and area impacted by the proposed modification. This barrier design was updated in addendum 2 REF.

Construction

The proposed modification would not involve any new work methods or equipment being used. Due to the increase in the volume of work, the period of noise and vibration would be extended slightly. Routine monthly monitoring has been undertaken in Hampton Crescent during construction works at the impacted area. No construction work undertaken at this location has been monitored in exceedance of the NML at the nearest

impacted receiver. Therefore, as the proposal uses the same equipment and construction methods it is unlikely that the residents would be impacted from these works.

There is an existing OOWH noise and vibration impact assessment which modelled noise in the impacted work area as below background at the nearest sensitive receiver during nightworks.

For vibration there are no structures within the safe working distances of the plant currently used. The proposal would not add any additional plant as result of the proposed modification. No vibration impacts are expected.

Operation

The proposed modification would not result in any additional noise or vibration being generated. As the proposal includes landscaping with mulch as a ground cover rather than turf or other vegetation which requires less maintenance there is likely to be a decrease in operational noise as a result.

It is not anticipated that there would be any residual risk at the operational stage of the works described in this addendum REF.

6.1.5 Safeguards and management measures

No additional safeguards and management measures are recommended based on the potential noise and vibration impact assessed in this addendum REF.

6.2 Contaminated lands and hazardous materials

6.2.1 Methodology

A contaminated lands assessment was not included in the project REF or the addendum 1 REF, addendum 2 REF and addendum 3 REF. A desktop assessment was carried out to identify any potential sources of contamination relevant to the proposal area. To identify possible sources of contamination and hazardous materials, the following databases were reviewed on 24 April 2023:

- The NSW Environmental Protection Authority (EPA) list of notified sites
- National Pollutant Inventory (NPI)

No new EPA notified sites or NPI locations were located within the existing project REF boundary or the revised proposal area.

6.2.2 Existing environment

A Hazardous Building Material Survey Report (HBMSR) was prepared by SMEC in 2019 for the demolition of 30 Topaz Crescent as part of addendum 2 REF. This demolition was completed as part of the early works.

There has been Asbestos Containing Material (ACM) and small hot spots of restricted waste (localised to the Timbertop Reserve work area) located during the project works undertaken so far. The majority of these finds have been fragments of bonded ACM situated within topsoil. The ACM has been found across most of the work zones. ACM has been managed independently and when excavated removed offsite to a licensed waste facility.

ACM testing has been undertaken on soil within the site as part of standard classification testing.

6.2.3 History

During the occupation of Lot 1 DP 124950 a small amount of dumped Asbestos Containing Material (ACM) was located on 12 June 2022. It was managed by using the project's Unexpected Find Procedure. The ACM was removed from site to a licensed waste facility on 22 November 2022 and a clearance certificate (Appendix E) was provided on the same day.

No additional contamination has been encountered during works in this area.

No ACM has been transported to the stockpiling Lot from other areas on the worksite.

The contaminants encountered in the wider project area and their potential impacts are shown in Table 6-1 below.

Table 6-1: Contaminates found within the project boundary

Contaminant	Potential impacts
Asbestos	The negative health impacts associated with asbestos exposure are linked to the inhalation of airborne respirable asbestos fibres. Disturbance of ACM causes the release of asbestos fibres in significant quantities.
Lead	Lead can bioaccumulate in organisms when ingested or inhaled. Repeat exposure leads to health complications. The movement of lead contaminated soil without proper dust suppression can cause exposure risk to workers

When encountered within the areas requiring work, contaminated material has been removed offsite and disposed of in licensed waste facilities.

6.2.4 Criteria

Potential impacts

Construction

Excess spoil from the Stage 1 (northbound carriageway and verge works) work areas was tested for contamination prior to excavation or during stripping. Some of the material has been transported to Lot 1 DP 124950 already and is being currently stored there temporarily in accordance with the current lease agreements (Ref SF2016/002359).

The remainder of the material proposed for the scope of works would be excavated from Stage 2 (southbound carriageway and verge works) and Stage 3 (median works)areas. The material would be tested for contamination prior to excavation or during stripping.

The material tested, with samples taken in situ, were found to meet the National Environment Protection (Assessment of Site Contamination) Measure April 2011 requirements for recreation areas use. This classification is consistent with the Public Recreation land use zoning of the impacted Lots. Sampling will be carried out as the works progress and results provided to the landowner and approving authority prior to completion of the works. No Special, Hazardous or Restricted waste would be used as part of the proposed works (defined by Waste Classification Guidelines).

Operation

Any contaminated material identified will be disposed offsite at licensed facilities. No contaminated material will be used in the work area. As a result, no residual risk is anticipated at the operational stage of the works described in this addendum REF.

6.2.5 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing	Reference
Contaminate Land	Ensure that all material used in the Ponds Road enhancement will be tested to ensure it is not classed as Special, Hazardous or Restricted waste as defined by Waste	Construction contractor	Construction	N/A

Impact	Environmental safeguards	Responsibility	Timing	Reference
	Classification Guidelines			
Contaminate Land	Material used within the Ponds Road enhancement would meet the National Environment Protection (Assessment of Site Contamination) Measure April 2011 requirements for recreation areas use	Construction contractor	Construction	N/A

6.3 Non-Aboriginal Heritage

6.3.1 Existing environment

The existing environment and historical context of the proposal area locality is described in section 6.6 of the project REF. A Historical Archaeological Test Excavation Report and Historical Archaeological Management Plan (AMP) (Artefact, 2019) was prepared for the works at the intersection of Prospect Highway and Reservoir Road. The full report is in addendum 2 REF.

In addition, a desktop review of the following heritage databases was carried out 4 May 2023 to identify any additional heritage items not previously addressed in the project REF or addendum 1 REF, addendum 2 REF and addendum 3 REF:

- Blacktown LEP 2015 Heritage conservation register
- NSW State Heritage Register
- National heritage list
- Commonwealth heritage list

6.3.2 History

Within the workspace impacted by the proposal, no artefacts or historical site items have been identified. The Lots are not listed as having heritage value on any of the above databases.

Adjacent to the work area is St Bartholomew's Anglican Church and Cemetery listed on the State Heritage Inventory. St Bartholomew's Church was the first church to open in Prospect in 1841. The building of the church is contributed to William Lawson. William and other pioneers including those from prominent families are buried in the cemetery on the eastern side of the church. It occupies a special position in the architectural evolution of churches in NSW due to it being an unusually detailed and planned church. The site is an important surviving fragment of nineteenth century cultural landscape. St. Bartholomew's is a dominant landmark in the surrounding landscape due to its prominent siting, striking design and mature tree plantings.

A masterplan has been prepared for the extension of the existing St Bartholomew's Cemetery to provide additional burial plots for the region. The area to the south of the existing cemetery is currently under redevelopment adding new burial plots, columbarium and parking as part of stage 1 of this extension plan. This is being undertaken by Blacktown City Council, Stage 2 would involve further expansion of the cemetery over 7.3 hectares of land to the east of the existing cemetery.

6.3.3 Criteria

Potential impacts

Construction

There would be no physical works within St Bartholomew's Anglican Church and Cemetery by the project. The impacts of the activities required for the proposed modification have been previously assessed. Current mitigation measures are effectively managing these works.

Operation

The delivery of additional works outlined in this proposed modification are not anticipated to have any impacts on the non-Aboriginal heritage items identified above and in the REF. St Bartholomew's Anglican Church and Cemetery would remain the highest point in the local area. The increased ground height would not reach the height of the church, ensuring that it remains the dominant landmark.

The REF's urban design strategy includes measures to reduce the project's visual impact on the church by including screen planting while maintaining clear zone and shared path requirements. The proposed modification increases planted trees to further reduce the visual impact of the project's changes by the addition of more screening tree within the church's view.

6.3.4 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing	Reference
Potential standing impacts to St Bartholomew's Church and Cemetery	The final ground height is to remain lower than Bartholomew's Anglican Church and Cemetery	Contractor's designer	Pre-construction	N/A

Other safeguards and management measures that would address other environmental factors [e.g., noise] impacts are identified in Section/s [6.1-6.2 and 6.4-6.7].

6.4 Landscape, visual amenity and urban design

6.4.1 Methodology

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.

A review of the LCVIA was carried out for this addendum REF in accordance with Transport for NSW's *Guideline for Landscape Character and Visual Impact Assessment* (Transport for NSW, 2020).

6.4.2 Existing environment

Prior to clearing, Lot 1 DP 124950 condition was assessed during a precondition assessment undertaken on 5 May 2023 by Element Environment. The area was found to be in poor condition with illegally dumped waste, overgrown introduced grasses and Priority Weeds of Greater Western Sydney including African olive (*Olea europaea subsp. cuspidata*), African boxthorn (*Lycium ferocissimum*), Lantana (*Lantana camara*) and Blackberry (*Rubus fruticosus species aggregate*). A poor condition timber paling fence was located on the northern boundary and a poor condition star picket and wire fence on the north-western boundary. The western end of the Lot has several mature and juvenile gumtrees with a weedy understory.

The condition of Lot 21 DP 135886 was assessed in the precondition assessment undertaken on 5 May 2022 by Element Environment. It was recorded to be in the same condition as the above Lot.

6.4.3 History

The area impacted by the proposal is zoned as RE1 Public Recreation. The two plots impacted by the proposed modification are owned by Blacktown City Council and have not been developed.

In May 2022 as part of the project, the majority of Lot 1 DP 124950 was cleared for use as a stockpile site with the exception of the western vegetation containing the gumtrees. Lot 21 DP 135886 has remained unaltered. The Lot is currently not in use and remains overgrown with low visual amenity value.

Blacktown City Council has advised that there are currently no development applications or plans for the Lots.

6.4.4 Criteria

Potential impacts

Construction

No residents have line of sight to the impacted Lots. Therefore, no additional impacts to residents are expected as a result of the proposal during construction. There would be a temporary decrease of visual amenity to St Bartholomew's Church. The church is currently only in use when hired.

Use of Lot 1 DP 124950 as a temporary stockpile area for the project was assessed previously in Addendum REF 1. This included removal of the existing landscaping and restoring it to its previous condition after use of it ended. The modification includes improved landscaping, including planting more trees, installing an access track and a mulch cover layer to manage weeds. Lot 21 DP 135886 would require its existing landscaping to be removed to complete the works. While this will have a short-term negative impact during construction, the replacement of the low-quality landscaping with landscaping of higher quality as part of the proposed changes would offset the short-term impact.

Shaping and some slope alteration has been undertaken temporarily as part of Lot 1 DP 124950's use as a stockpiling area. This is currently a temporary measure, with the existing design for the area to be restored to previous condition. The proposed changes would not alter the landscape, visual amenity and urban design during construction. It would alter the restoration of the work area by replacing the current proposed spray grass with tree plantings, mulch and an access track. This will improve the landscaping and result in a positive impact from the proposed modification.

The impacted Lots are zoned as Public Recreation however due to access and current condition they are not being used by the public. Therefore, the modification possesses no additional impact to community use.

Operation

The project's urban design strategy incorporated providing an entry treatment to Blacktown and incorporating existing heritage and cultural landscapes. The proposed modification would result in a positive impact on the landscape and visual amenity during operation. The current landscaping is overgrown. The modification will result in a structured landscaping which is easier to maintain than the current landscaping.

The project's Visual Impact Assessment advised that visual impact can be further reduced by providing replacement tree planting. The proposed modification would increase the trees planted.

There has been recent development to the south, on the other side of Ponds Road where St Bartholomew's Cemetery has been expanded resulting in the land use change from vacant rural land to a cemetery. There is a community expectation that cemeteries are a quiet and tranquil space to maximise amenity of these facilities. The area impacted by the proposed changes is within the line of sight of this development and currently allows noise and limited viewing of the Great Western Highway. The increase to the ground level and proposed modifications to landscaping would provide a minor increase to visual amenity and provide noise shielding from the impacts from the Great Western Highway. This would support the local area's urban design.

6.4.5 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.

6.5 Resource use and waste management

6.5.1 Existing environment

The Project has a surplus of excavated material in excess of 70,000 m^3. This surplus material consists of a mix of in-situ material and fill previously placed during construction of the existing roadway and associated infrastructure within the project boundary. This surplus material has been classified insitu as either Excavated Natural Material (ENM) and General Solid Waste (non-putrescible) (GSW) if it was to be removed offsite. Test results also show that the surplus material meets National Environment Protection (Assessment of Site Contamination) Measure April 2011 requirements for use in recreation areas.

6.5.2 History

The Lots impacted by the proposed modification have been subjected to littering and larger illegal dumping incidents prior to the project starting. This is detailed in the Preconstruction Land Condition Assessment undertaken on 5 May 2022.

6.5.3 Policy setting

The NSW Government has released the NSW Waste Avoidance and Resource Recovery Strategy 2007 (WARR Strategy) to minimise waste generated across all government sectors and to improve the efficient use of resources. This reflects the community's view that waste should be treated as a resource.

The principles of the Waste Avoidance and Resource Recovery Act 2001 are integrated into Transport for NSW project management to ensure the most efficient use of resources and reduce cost and environmental harm in line with the principles of ecologically sustainable development.

6.5.4 Criteria

Potential impacts

Construction

The resources required for the proposal are consistent with that described in section 6.12 of the Project REF and section 6.10 of the addendum 1 REF and are typically generated by the associated road construction work. It is not anticipated that the proposal described in this addendum REF would substantially increase the demand on these resources.

During construction, the area impacted by the proposal is used as a temporary storage facility. The proposal would result in the material remaining onsite, reducing any further transportation and need for disposal at off-site waste facilities.

The surplus material generated has been confirmed as suitable for recreational areas in accordance with the National Environment Protection (Assessment of Site Contamination) Measure April 2011.

The proposal is compliant with the *Protection of the Environment Operation Act 1997* and the project's Environmental Protection Licence which allows for excavated material suitable for re-use within the premises, and that such material may be transported from one part of the premises to another.

Operation

Due to the proposal's landscaping having mulch as the dominate ground cover instead of grasses, it would reduce the maintenance required. This would decrease the resources, including fuel, required during operation of the Lots. There would also be a lower generation of green waste.

6.5.5 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing	Reference
Waste management material reuse	No general fill material from outside the project would be accepted for use in the Pond's Road enhancement.	Construction contractor	Construction	N/A

Other safeguards and management measures that would address other environmental factor [e.g., noise] impacts are identified in Section/s [6.1-6.4 and 6.6-6.7].

6.6 Biodiversity

The project site boundary comprises areas of potential biodiversity value listed under the Biodiversity *Conservation Act 2016 (BC Act)*, *Fisheries Management Act 1994 (FM Act)* and/or Environment Protection and *Biodiversity Conservation Act 1999 (EPBC 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, addendum 2 REF and addendum 3 REF would need to be considered with the combined impact for this proposal.

To assess if there was any potential impact, directly or indirectly to those areas of biodiversity value, by any modifications in the proposal a biodiversity study area was determined.

The biodiversity study area is shown in Figure 6-2 and includes the boundaries assessed under the project REF addendum 1 REF, addendum 2 REF and addendum 3 REF which includes the Lots impacted by the proposal,

6.6.1 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)
- The Prospect Highway Upgrade Addendum 2 Review of Environmental Factors (2021)
- Prospect Highway Upgrade – Pre-clearance Survey (Ecologicial, 2022)
- Prospect Highway Upgrade – Pond Road Compound, Prospect Land Condition Assessment Report (Element. 2022)
- 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) is not impacted by the proposed modifications.

Field survey

Inspections of the study area was carried out on 20 December 2021 and 19th April 2022 by Ecological.

6.6.2 Existing environment

The impacted area was classed as Declared/Exotic Vegetation with the following priority weed species observed:

- African Olive (*Olea europaea subsp. cuspidata*)
- Lantana (*Lantana camara*)
- Blackberry *(Rubus fruticosus agg.*)
- Fire weed (Senecio madagascariensis)
- Bridal Creeper (*Asparagus asparagoides*)

There are mixed gums ranging from juvenile to mature along the western edge. Given the age and placement of the older gums, it is likely they are from planting undertaken during prior development of the Prospect Highway. The remainder of the area is dominated by exotic grasses. There are also a number of semi mature Illawarra Flame Trees (*Brachychiton acerifolius*) located in the verge area along the northern side of the Great Western Highway outside of the impacted Lots.

No habitat features were recorded in this area during inspections. No endangered species or communities were identified.

6.6.3 Potential impacts

Construction

The current construction works under the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF includes clearing and grubbing of vegetation of Lot 1 DP 124950. Aspects and impacts for the use of this area as a stockpile location is managed by the existing mitigation measures.

The proposed modification would include clearing of Lot 21 DP 135886. This Lot is dominated by exotic grasses and weeds. There are several large shrubs that would need to be removed, however no trees would require removal.

No potential direct impacts were identified in addition to those assessed by the project REF and addendum 1 REF, addendum 2 REF or addendum 3 REF. The habitat values assessed at the location of the proposed landscaping upgrade is poor with no limited native flora species and no particular habitat for local native fauna species is present.

There are no anticipated impacts to threatened biodiversity due to the proposed modification.

Operation

The proposed modification incorporates the project's Cumberland Shale Plains Woodland Planting concept by using native Cumberland Shale Plains Woodland species. This would reinforce the existing remnant native trees within the project area. The long-term maintenance of the area would remain with the landowner, Blacktown City Council. Maintenance would likely be reduced due to the use of mulch as the dominant ground cover. As the proposed landscaping finish is consistent with those in the existing landscaping design, the operational impacts of the proposal are not expected to be additional in nature or extent from the assessment carried out for the project.

Conclusion on significance of impacts

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

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

6.6.4 Safeguards and management measures

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

6.7 Other impacts

6.7.1 Existing environment and potential impacts

Environmental factor	Existing environment	Potential impacts
Air quality	The air quality of the existing environment and EPA air quality guidelines for the proposed works are described in section 6.10 of the project REF.	The proposed modifications described in this addendum REF would result in minor short term negative impact and long term negligible impacts to air quality. The longer use of the area as a stockpile location and during construction of the proposed modification risks additional dust emissions from the increased use of plant and trucks. This would be managed by the existing controls in the CEMP. Air quality aspects and impacts from the proposed modifications would be consistent with that assessed in the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF.
Landform, geology and soil	The existing landforms, geology and soils for this addendum REF are consistent with those described in section 6.9 of the project REF. The proposed location of surplus spoil, at Pond Road is located on Blacktown soil landscapes.	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, addendum 2 REF and addendum 3 REF. The long term erosion risk to the ground surface would be managed by the application of mulch and gravel as the dominate ground covers. The slope proposed are similar to the existing slope. The increase in level across the site has been minimised to a level consistent with the scale and nature of the space. The general interface of batter slopes has been rounded to avoid sharp changes in slope and to present a smooth flowing profile. The addendum 1 REF did not assess landform, geology and soil aspects and impacts.
Socio-economic	The existing socio-economic for this addendum REF are consistent with those described in section 6.8 of the project REF. Access to businesses, schools, other commercial and industrial properties would not be impacted	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, addendum 3 REF assessed socio-economic and land use aspects and impacts. The addendum 2 REF did not assess socio-economic aspects and impacts.
Aboriginal heritage	The existing Aboriginal heritage for this addendum REF are consistent with those described in section 6.7 of the project REF. There are no identified Aboriginal heritage sites or relics within the work area impacted by the proposal.	The proposed modifications considered by this addendum REF is not expected to result in any impacts to Aboriginal heritage. The project REF and addendum 3 REF considered Aboriginal heritage aspects included in the area impacted by the proposal 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. Furthermore, the works will not require excavation below the existing ground level,

Environmental factor	Existing environment	Potential impacts
Traffic, transport and access	The existing traffic, transport and access for this addendum REF are consistent with those described in section 6.1 of the project REF. The entry gate proposed for use is already in use by the project.	The proposed modifications described in this addendum REF would have negligible impacts on traffic, transport and access. While there would be an increase in vehicle movements needed to work in the area for longer than the current project requires, it would be offset through the reduction of truck movements for transport of material, reducing total movements. Traffic, transport and access aspects and impacts from the proposed modifications would be consistent with that assessed in the project REF, addendum 1 REF and addendum 3 REF. The addendum 2 REF did not assess traffic, transport and access aspects and impacts.
Water quality and hydrology	The existing water quality and hydrology for this addendum REF are consistent with those described in section 6.8 of the project REF.	The proposed modifications described in this addendum REF would have negligible long term impacts on water quality and hydrology. The existing water overall flow pathways to the north and east would be maintained. The stormwater infrastructure on the verge around the impacted Lots would be maintained. Water would leave the area by the two existing headwalls in the verge. Water quality and hydrology aspects and impacts from the proposed modifications would be consistent with that assessed in the project REF, addendum 1 REF and addendum 3 REF. The addendum 2 REF did not assess water quality and hydrology aspects and impacts.

6.8 Cumulative impacts

6.8.1 Potential impacts

The proposed modification has the potential to have cumulative environmental effects with other existing or likely future proposals such as the St Bartholomew's Cemetery expansion.

Potential cumulative impact outcomes may include:

- Removal of vegetation
- Increased earthwork causing potential increases to construction noise and dust generation
- Increased exposure time before landscaping resulting in a longer risk for sediment and erosion.

The potential cumulative impacts may affect residents and road users travelling through the proposed modification area during construction. Other roadside development work along the Prospect Highway and/or Ponds Rad may potentially exacerbate cumulative impact to the area.

The expansion of the cemetery and its resulting reopening may result in more members of the community engaging with the impacted Lots visual and possibly by active use.

Given the scale of the proposed modification work compared to the approved design assessed under the project REF, addendum 1 REF, addendum 2 REF and addendum 3 REF, the additional cumulative impact would be minimal due to the limited scope of work for the activities covered in this addendum assessment and the potential impacts on the environment would be minimised with the implementation of the safeguards listed in section 7.2.

7. Environmental management

7.1 Environmental management plans

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

7.2 Summary of environmental safeguards and management measures

Environmental safeguards and management measures for the Prospect Highway Upgrade are summarised in Table 7-1. Additional safeguards and management measures identified in this addendum REF are included in bold and italicised font. The safeguards and management measures would be incorporated into the detailed design phase of the proposed modification, the CEMP and implemented during construction and operation of the proposed modification, should it proceed. These safeguards and management measures would minimise any potential adverse impacts arising from the proposed works on the surrounding environment.

Table 7-1: Summary of safeguards and management measures

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
1	General	• All environmental safeguards must be incorporated within the following: - Project Environmental Management Plan. - Detailed design. - Contractor specifications for the proposal. - Contractor's Environmental Management Plan.	Project manager	Pre-construction	N/A
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 is 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	G36 Sec 3.2.1
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	N/A
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	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
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	G36 Sec 3.7.2
6	General	• Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Contractor	Pre-construction and Construction as required	G36 Sec 3.5
7	Consultation	• TfNSW would continue to provide updated 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	G36 Sec 3.7.2.9
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	G10 Sec 2.2
9	Emergency services	• Consultation with emergency service authorities would be undertaken during development of the detailed design.	TfNSW	Detailed design	N/A
10	Property access	• Vehicular property access would be maintained where possible including pre-schools, places of worship and ail commercial premises. • Consultation with property owners would be undertaken prior to any changes to property accesses.	TfNSW	Construction	G10 Sec 2.2.3
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	N/A
12	Shelly Public School	• Temporarily relocate maintenance access and garbage collection at Shelley Public School in consultation with the school.	TfNSW Construction contractor	Construction and Operation	G10 Sec A2
13	Shelly Public School	• TfNSW will investigate measures to improve traffic flow and access to Shelley Public School as part of the proposal in consultation with the school and Blacktown City Council. • Pedestrian fencing and controlled access to Shelley Public School via Hadrian Avenue and Pelleas Streets would be	TfNSW	Detailed design and Construction	G10 Sec A2.7

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		introduced to remove access to Shelley Public School from Prospect Highway.			
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. • There will be advance notification of any construction works that affect pedestrians and cyclists.	Construction contractor	Construction	G10 Sec A2.8
15	Bus services	• Access to appropriate bus stop locations would be maintained during construction in consultation with bus operators.	Construction contractor	Construction	G10 Sec A2.6
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	G10 Sec A2.6
17	Operational noise	• During the detailed design stage of the proposal, further investigations of ail 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).* • 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.	TfNSW	Detailed design	N/A
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	N/A
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	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
20	Construction noise	• A Construction Noise and Vibration Management Plan (CNVMP) would be prepared. This plan would include but not be limited to: - 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).* - 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. • The environmental induction program will include specific noise and vibration issues awareness training including, but not limited to, the following: - Avoiding use of radios during work outside normal hours - Avoiding shouting and slamming doors.	Construction contractor	Pre-construction and Construction	G36 Sec 4.6

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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. - 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. • 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.			
21	Vibration management	• A vibration assessment is to be prepared and included in the NVMP. The vibration assessment is to include (as a minimum): - 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	G36 Sec 4.7
22	Vibration management	• 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. • 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	Construction contractor	Pre-construction	G36 Sec 4.7

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		documented in a Management Plan for works adjacent to St Bartholomew's Church. • A program of monitoring vibration will be included in the Management Plan, which will form part of the CEMP.			
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. • 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. • The condition survey would be provided to each property owner at least two weeks prior to the commencement of construction.	Construction contractor	Pre-construction	G36 Sec 4.7
24	Removal or modification of native vegetation	• 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: - 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	G36 Sec 4.8
25	Pre-clearing surveys	• 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.	Construction contractor	Pre-construction	G36 Sec 4.8
26	Spread of weeds	• A weed management plan would be prepared in accordance and incorporated into the BMP and would address: - Identification of the weeds on site (confirm during ecologist pre-clearing inspection). - Weed management priorities and objectives. - Sensitive environmental areas within or adjacent to the site - Location of weed infested areas. - Weed control methods.	Construction contractor	Pre-construction	G36 Sec 4.8

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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.			
27	Introduction or spread of pests and diseases	• 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). • 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 Phytophthora cinnamomi (for Phytophthora).*	Construction contractor	Pre-construction	G36 Sec 4.8
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	G36 Sec 4.8
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	N/A
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	G36 Sec 4.13
31	Removal or modification of native vegetation	• Identify known Cumberland Plain Woodland areas and exclusion zones during induction of ail site personnel.	Construction contractor	Pre-construction	G36 Sec 4.13
32	Removal or modification of native vegetation	• 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	G36 Sec 4.8

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
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	G36 Sec 4.8
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	G36 Sec 4.8
35	Landscape character and visual impacts	• During detailed design, the landscape design principles and streetscape (planting) would be reviewed to ensure that they are consistent with the following factors: - 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. • This would be done in consultation with TfNSW environment staff and Blacktown City Council.	TfNSW Design contractor	Detailed design	N/A
36	Landscape character and visual impacts	• 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: - To ensure that the design reinforces the identity and functionality of an arterial road type. - 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.	TfNSW Design contractor	Detailed design	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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	N/A
38	Landscape character and visual impacts	• The design of vegetative screening would occur in consultation with adjoining land owners.	TfNSW Design contractor	Detailed design	N/A
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	N/A
40	Landscape character and visual impacts	• 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: - Materials, colours and textures will be selected to break up the dominant nature of the noise barrier. • Transparent panels will be incorporated into sections of the noise barrier where it has potential to block solar access to adjacent residential properties.	TfNSW Design contractor	Detailed design	N/A
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	N/A
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	N/A
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	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
45	Water quality management	• A Soil 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: - *RMS Technical Guideline: Temporary Stormwater Drainage for Road Construction, 2011*. - *RMS Technical Guideline: Environmental Management of Construction Site Dewatering, 01*1 The SWMP would detail the following as a minimum: - 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. - 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.	Construction contractor	Construction	G36 Sec 4.1
46	Spills	• Emergency wet and dry spill kits would be kept on site at all times and ail staff would be made aware of the location of the spill kit and trained in its use.	Construction contractor	Construction	G36 Sec 4.3

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
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	G36 Sec 4.3
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	G36 Sec 4.1
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	G36 Sec 4.3
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	G36 Sec 4.3
51	Potential physical impact on non-Aboriginal heritage items during construction	• 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: - 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. - 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*.	TfNSW Construction contractor	Pre-Construction and Construction	G36 Sec 4.10
52	Non-Aboriginal heritage	• A s57 exemption for the project works within the SHR curtilage should be obtained prior to works commencing. Note the following:	TfNSW	Pre-Construction	G36 Sec 4.10

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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. • 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 1977*. 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.			
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	G36 Sec 4.10
54	Potential vibration impacts to St Bartholomew's Church and Cemetery and the house at 29 Old Church Lane, Prospect	• 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	G36 Sec 4.10
~~55~~	***Potential standing impacts to St Bartholomew's Church and Cemetery***	• ***The final ground height would remain lower than Bartholomew's Anglican Church and Cemetery***	***Contractor's designer***	***Pre-construction***	***N/A***
~~55~~ 56	Unexpected heritage find during construction	• If unexpected heritage item/s, archaeological remains or potential relics are uncovered during the works, ail 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	G36 Sec 4.10
~~56~~ 57	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	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~57~~ 58	Unexpected heritage find during construction	• If unexpected Aboriginal heritage item/s, archaeological remains or potential relics are uncovered during the works, ail 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~~ 59	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	N/A
~~59~~ 60	Community	• Communication Plan would be prepared and included in the Construction Environmental Management Plan (CEMP). The Communication Plan would include: - 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 Pubic 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. - The communications plan would be prepared in line with G36 requirements and - The communications plan would include a complaint handling procedure and register and maintained for the duration of the proposal.	TfNSW Construction contractor	Pre-Construction and Construction	G36 Sec 3.7.2
~~60~~ 61	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	G36 Sec 3.7.2
~~61~~ 62	Erosion and sedimentation	• During detailed design an Erosion and Sedimentation Management Report is to be prepared. The report is to include (as a minimum): - 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.	TfNSW Design contractor	Detailed design	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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.			
~~62~~ 63	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	G36 Sec 4.1
~~63~~ 64	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	N/A
~~64~~ 65	Erosion and sedimentation	• An Erosion and Sedimentation Control Plan (ESCP) would be prepared prior to construction and is to include as a minimum: - 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	Construction contractor	Pre-construction	G36 Sec 4.1

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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.			
~~65~~ 66	Erosion and sedimentation	• Erosion and sediment control measures are to be implemented and maintained to: - 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. • Divert clean water around the site. (In accordance with the Landcom / Department of Housing Managing Urban Stormwater, *Soils and Construction Guidelines (the Blue Book)*).	Construction contractor	Construction	G36 Sec 4.1
~~66~~ 67	Erosion and sedimentation	• Ail stockpiles will be designed, established, operated and decommissioned in accordance with the *TfNSW Stockpile Site Management Guideline, 2011*.	Construction contractor	Construction	G36 Sec 4.1
~~67~~ 68	Erosion and sedimentation	• 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: - 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	G36 Sec 4.1
~~68~~ 69	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	G36 Sec 4.1

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~69~~ 70	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	G36 Sec 4.1
~~70~~ 71	Erosion and sedimentation	• Controls would be implemented at exit points to minimise the tracking of soli and particulates onto pavement surfaces • Any material transported onto pavement surfaces would be swept and removed at the end of each working day and prior to rainfall.	Construction contractor	Construction	G36 Sec 4.1
~~71~~ 72	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	G36 Sec 4.1
~~72~~ 73	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	G36 Sec 4.1
~~73~~ 74	Soil and water	• A soil conservation consultant is required to work in collaboration with the design team.	TfNSW	Pre-Construction	N/A
~~74~~ 75	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	G36 Sec 4.1
~~75~~ 76	Contamination management	• 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: - 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)	Construction contractor	Pre-construction	G36 Sec 4.2

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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. • The CMP would be reviewed by TfNSW Senior Environment Officer and TfNSW Land Management Specialist prior to the commencement of works.			
77	*Contaminate Land*	• ***Ensure that all material used in the Pond's Road enhancement would be tested to ensure its not classed as Special, Hazardous or Restricted waste as defined by Waste Classification Guidelines***	***Construction contractor***	***Construction***	***N/A***
78	*Contaminate Land*	• ***Material used within the Ponds Road enhancement would meet the National Environment Protection (Assessment of Site Contamination) Measure April 2011 requirements for recreation areas use.***	***Construction contractor***	***Construction***	***N/A***
~~76~~ 79	Hazardous materials	• A hazardous materials assessment will be carried out before demolishing structures within the proposal area. The assessment will include, but not limited to: - 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. - 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. • 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.	Construction contractor	Pre-demolition	G36 Sec 3.8

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~77~~ 80	Hazardous materials	• A Removal Control Plan (Asbestos Management Plan) will be prepared in accordance *with Safe Work NSW (2016)* for the removal of any asbestos material. • 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. • Asbestos control air monitoring should be performed during the removal of ACM from structures and during demolition.	Contractor	Pre-demolition	G36 Sec 4.11.5
~~78~~ 81	Hazardous materials	• 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.	Contractor	Pre-demolition	G36 Sec 3.8
~~79~~ 82	Hazardous materials	• Following demolition of the structures at the site, the soils should be assessed for the presence of lead, asbestos, heavy metals and pesticides.	Contractor	Post-demolition	G36 Sec 3.8
~~80~~ 83	General air quality management	• An Air Quality Management plan (AQMP) would be prepared as part of the CEMP. The plan would include but not be limited to: - 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	G36 Sec 4.4
~~81~~ 84	Air quality during construction	• The management measures within the AQMP would include but not limited to the following: - 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.	Construction contractor	Pre-construction	G36 Sec 4.4

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		- 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. • Work activities will be reprogrammed if the management measures are not adequately restricting dust generation.			
~~82~~ 85	Air quality	• Asbestos control air monitoring should be performed during removal of ACM from the building structures and during demolition.	Construction contractor	Pre-demolition	G36 Sec 4.4
~~83~~ 86	Dust from construction activities	• 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: - Stabilising of areas with the capacity to cause dust, with water spraying, compaction or progressive revegetation. - Covering of stockpile and storage areas. - Cessation of dust generating activities in high wind situations where dust cannot be controlled. • 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.	Construction contractor	Pre-construction	G36 Sec 4.4
~~84~~ 87	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	N/A
~~85~~ 88	Impacts on climate change from construction activities	• 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. • Reducing site wastage by reusing and recycling wasted material as a preference before disposing to landfill.	Construction contractor	Pre-construction	N/A

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~86~~ 89	Generation of construction waste	• A Resource and Waste Management Plan (RWMP) would be prepared, which will include the following (as a minimum): - 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. - 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.	Construction contractor	Pre-construction	G36 Sec 4.11
~~87~~ 90	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	G36 Sec 4.11
~~88~~ 91	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	G36 Sec 4.11
~~89~~ 92	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	G36 Sec 4.11
~~90~~ 93	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	G36 Sec 4.11

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~91~~ 94	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	G36 Sec 4.11
~~92~~ 95	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	G36 Sec 4.11
~~93~~ 96	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	G36 Sec 4.11
~~94~~ 97	Generation of construction waste.	• Resource management hierarchy principles would be followed and are: - 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	G36 Sec 4.11
~~95~~ 98	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	G36 Sec 4.11
~~96~~ 99	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	G36 Sec 4.11
100	*Waste management material reuse*	• ***No general fill material from outside the project will be accepted for use in the Pond's Road enhancement.***	***Construction contractor***	***Construction***	***N/A***
~~97~~ 101	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	G36 Sec 3.1
~~98~~ 102	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	G10 Sec 2.2

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~99~~ 103	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: - Morning Peak - 8am to 9:15am, Monday to Friday. - Afternoon Peak - 2:30pm to 3:15pm, Monday to Friday.	Construction contractor	Construction	G10 Sec A2.7
~~100~~ 104	Traffic management - test excavations	• Temporary lane closures at Reservoir Road would be undertaken outside peak hours.	Construction contractor	Construction	G10 Sec A2.3
~~101~~ 105	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	G10 Sec A2.7
~~102~~ 106	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~~ 107	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	N/A
~~104~~ 108	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	G36 Sec 4.6
~~105~~ 109	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	G36 Sec 4.8

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
~~106~~ 110	Impacts on trees at the proposed roundabout location	• 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 removal. This would be undertaken once the existing guttering has been removed, so that the roots are visible.	Construction contractor	Construction	G36 Sec 4.8
~~107~~ 111	Removal of vegetation powerline relocation	• 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: - 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 (*Cupressus macrocarpa*) at 239 Blacktown Road to ensure an appropriate treatment is implemented.	Construction contractor	Construction	G36 Sec 4.8
~~108~~ 112	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	R271 Sec 7.6.2
~~109~~ 113	Visual impact of introduced noise walls	• The landscape plan would include a planting strategy to soften the visual impact of the noise walls. The planting strategy would: - 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	N/A
~~110~~ 114	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	N/A
~~111~~ 115	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	G36 Sec 4.10
~~112~~ 116	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.	TfNSW	Pre-construction and Construction	G10 Sec A2.7

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing	Reference
		• A site specific safety management plan would be prepared for works at the school.	Construction contractor		
~~113~~ 117	Installation of noise wall at the back of residential properties	• Affected properties would be notified prior to the commencement of construction. This would include notification of time and duration of the proposal, and provision of a contact name and number	TfNSW Construction contractor	Pre-construction	G36 Sec 3.7.2.7
~~114~~ 118	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	N/A
~~115~~ 119	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	G36 Sec 3.7.2.7

7.3 Licensing and approvals

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

Table 7-2: Summary of licensing and approval required

Instrument	Requirement	Timing
POEO Act	EPL-21295	Obtained

8. Conclusion

8.1 Justification

The proposed modification is considered justified as the proposed changes to the design would provide better outcomes 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.

8.1.1 Public interest

The proposed modification would improve the quality of land zoned for public recreation which currently is underused. The improved amenity from the proposed modification would increase the value of the land to the community.

This could be further developed in the future to give land a defined use. Fulton Hogan is aware that the landowner is already considering future options based on the improvement made by the modification

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. The proposal is expected to add social value for the comment and negatives impacts to 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 sections 8.2.1 to 8.2.4 below.
1.3(c) To promote the orderly and economic use and development of land.	Not relevant to the proposed modification as land use is unchanged.
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.	The proposed modification meets this object by improving the amenity of the Lot impacted by increasing landscaping and improving site value.
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.

Object	Comment
1.3(i) To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State.	Not relevant to the proposed modification.
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 developed of the proposed changes in this proposal has sought to minimise impacts on the urban and natural amenity of the proposal area while maintaining engineering feasibility and safety for the community. A number of safeguards have been proposed to minimise potential impacts. These safeguards would be implemented during construction and operation of the proposal.

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 project improves the landscaping of a public recreation area, as this landscaping matures it would increase in value and amenity. This would benefit future generations by ensuring that the proposal add ongoing value for the community. The reuse of materials onsite, limiting waste sent off site, fuel uses making the project more sustainable. 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 the addendum REF best meets the project objectives but would still result in some impacts on air quality, erosion and sediment, landscaping and amenity]. Safeguards and management measures as detailed in this addendum REF would ameliorate or minimise these expected impacts. The proposed modification would also enhance the amenity of a public recreation space, reduce the waste sent offsite, enhance the revegetation, reduce maintenance and support the extension St Bartholomew's Cemetery. 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 [also refer to the submissions report and any other previous addendum REFs if relevant] and would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

8.4.2 Significance of impact under Australian legislation

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

9. Certification

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

Sasha Clarke-Rowlands
Environmental Manager
Prospect Highway Upgrade
Fulton Hogan Ltd

Date: 26/10/2023

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

Insert name
Position title, e.g., Environment Officer
Company name

Date:

10. EP&A Regulation publication requirement

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

11. Terms and acronyms used in this addendum REF

Term /acronym	Description
AusLink	Mechanism to facilitate cooperative transport planning and funding by Commonwealth and state and territory jurisdictions
BC Act	*Biodiversity Conservation Act 2016 (NSW).*
CEMP	Construction / Contractor's environmental management plan
EIA	Environmental impact assessment
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
FM Act	*Fisheries Management Act 1994* (NSW)
Heritage Act	*Heritage Act 1977* (NSW)
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
LoS	Level of Service. A qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers.
NES	Matters of national environmental significance under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
NPW Act	National Parks and Wildlife Act 1974 (NSW)
Roads and Maritime	NSW Roads and Maritime was dissolved by the Transport Administration Amendment Bill in August 2019, all function are now managed by Transport for NSW
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SEPP (Biodiversity and Conservation)	State Environmental Planning Policy (Biodiversity and Conservation) 2021
SEPP (Planning Systems)	State Environmental Planning Policy (Planning Systems) 2021
SEPP (Precincts – Central River City)	State Environmental Planning Policy (Precincts – Central River City) 2021
SEPP (Precincts – Eastern Harbour City)	State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021
SEPP (Precincts – Regional)	State Environmental Planning Policy (Precincts – Regional) 2021

Term /acronym	Description
SEPP (Precincts – Western Parkland City)	State Environmental Planning Policy (Precincts – Western Parkland City) 2021
SEPP (Resilience and Hazards)	State Environmental Planning Policy (Resilience and Hazards) 2021
SEPP (Transport and Infrastructure)	State Environmental Planning Policy (Transport and Infrastructure) 2021
TSC Act	*Threatened Species Conservation Act 1995* (NSW)
QA Specifications	Specifications developed by Roads and Maritime Services for use with road work and bridge work contracts let by Transport for NSW.

12. References

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, (2016a) Prospect Highway Upgrades: Roads Detailed Design Report.

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

SMEC (2019) The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown, Addendum 2 REF, prepared for Transport for NSW, Sydney

SMEC (2021) The Prospect Highway Upgrade. Reservoir Road, Prospect to St Martins Crescent, Blacktown, Addendum 2 REF, prepared for Transport for NSW, Sydney.

Appendix A

Figures

Appendix B

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

Section 171(2) checklist

In addition to the requirements of the 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 section 171(2) of the Environmental Planning and Assessment Regulation 2021, have also been considered to assess the likely impacts of the proposed modification on the natural and built environment.

Factor	Impact
Any environmental impact on a community? During construction due to the location of the works there would be 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. Once completed the design modifications assessed in this Addendum REF contribute positively to the overall project. The proposal would give the community an improved safer travel experience and enhance the public space adjacent to the road way. Future potential improvement to the area as a result of changes by this Addendum REF would further benefit the community.	Short-term negative Long-term positive
Any transformation of a locality? **The work area will be change into a construction site short term and them a landscaped vegetive area long term.**	Short-term negative Long-term positive
Any environmental impact on the ecosystems of the locality?	Nil
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	Nil
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?	Nil
Any impact on the habitat of protected fauna (within the meaning of the *National Parks and Wildlife Act 1974*)?	Nil
Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?	Nil
Any long-term effects on the environment? Given the current degraded sate and the enhancement to landscaping proposed in the modification there is likely to be a long-term benefit in biodiversity and weed management though the planting of native species and establishment of a mulch ground cover.	Positive
Any degradation of the quality of the environment? While the area is in use as a stockpiling area and as its being modified, there would be some short term degradation. The potential impact to the surrounding area would be limited by the roads acting as clear boundaries to prevent encroachment. Safeguards and management measure to manage these risks are detailed in Table 7.2. Provided these are implemented the impact would be minor or negligible.	Short-term minor negative Long-term negligible
Any risk to the safety of the environment?	Nil

Factor	Impact
Any reduction in the range of beneficial uses of the environment?	Nil
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 by sediment and erosion run off, noise and dust generation and spills. All material used is site won and would be compliant with the requirement of being not restricted or hazardous. The area would be revegetated for long term stablisation and enhancement. Safeguards and management measure to manage these risks are detailed in Table 7.2. Provided these are implemented the impact would be minor or negligible.	Short-term minor negative Long-term minor positive
Any environmental problems associated with the disposal of waste? The proposed modification would be reduce the amount of waste which needs to be removed from the site.	Nil
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	Nil
Any cumulative environmental effect with other existing or likely future activities? Given the confined area impacted by the Addendum REF, cumulative impacts are not expected.	Nil
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	Nil
Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1.	Nil

Matters of National Environmental Significance and Commonwealth land

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

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

Factor	Impact
Any impact on a World Heritage property?	Nil
Any impact on a National Heritage place?	Nil
Any impact on a wetland of international importance?	Nil
Any impact on a listed threatened species or communities?	Nil
Any impacts on listed migratory species?	Nil
Any impact on a Commonwealth marine area?	Nil
Does the proposed modification involve a nuclear action (including uranium mining)?	Nil
Additionally, any impact (direct or indirect) on Commonwealth land?	Nil

Appendix C

Statutory consultation checklists

Matters of National Environmental Significance and Commonwealth land

Certain development types

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

Development within the Coastal Zone

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

Note: See interactive map Coastal management - (nsw.gov.au). Note the coastal vulnerability area has not yet been mapped.

Note: a certified coastal zone management plan is taken to be a certified coastal management program.

Council related infrastructure or services

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

Local heritage items

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

Flood liable land

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

Note: Flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled Floodplain Development Manual: the management of flood liable land published by the New South Wales Government.

Public authorities other than councils

Development type	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	SEPP (Transport and Infrastructure) section
National parks and reserves	Are the works adjacent to a national park or nature reserve, or other area reserved under the *National Parks and Wildlife Act 1974*, or on land acquired under that Act?	No	DPE	Section 2.15
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	DPE	Section 2.15
Aquatic reserves and marine parks	Are the works adjacent to an aquatic reserve or a marine park declared under the *Marine Estate Management Act 2014*?	No	Department of Industry	Section 2.15
Sydney Harbour foreshore	Are the works in the Sydney Harbour Foreshore Area as defined by the *Sydney Harbour Foreshore Authority Act 1998*?	No	Sydney Harbour Foreshore Authority	Section 2.15
Bush fire prone land	Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional centre or group home in bush fire prone land?	No	Rural Fire Service	Section 2.15
Artificial light	Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	No	Director of the Siding Spring Observatory	Section 2.15
Defence communications buffer land	Are the works on buffer land around the defence communications facility near Morundah? (Note: refer to Defence Communications Facility Buffer Map referred to in section 5.15 of Lockhart LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence	Section 2.15

Development type	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	SEPP (Transport and Infrastructure) section
Mine subsidence land	Are the works on land in a mine subsidence district within the meaning of the *Mine Subsidence Compensation Act 1961*?	No	Mine Subsidence Board	Section 2.15

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

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

Appendix D

Proposal to Blacktown City Council

Appendix E

ACM Clearance Certificate

Appendix F

Detailed Design

NSW GOVERNMENT