Western Sydney Orbital Modification 6

The widening of the M7 between the M5 and Richmond Road.
State Significant Infrastructure Modification Assessment
(SSI-663-MOD-6)

January 2023

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Title: Western Sydney Orbital Modification 6

Subtitle: The widening of the M7 between the M5 and Richmond Road

Cover image: Photomontage of the Westlink M7 (TfNSW)

Glossary

Abbreviation	Definition
AEP	Annual Exceedance Probability
Councils	Liverpool City Council, Fairfield City Council and Blacktown City Council
DECC	NSW Department of Environment and Climate Change
Department	Department of Planning and Environment
DPE	Department of Planning and Environment
DPE EHG	NSW Environment and Heritage Group – DPE
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPL	Environment Protection Licence
Heritage NSW	Heritage NSW – DPE
ICNG	Interim Construction Noise Guideline (DECC, 2009)
LALC	Local Aboriginal Land Council
LoS	Level of service
Minister	Minister for Planning
NCA	Noise Catchment Area
NML	Noise Management Level
OOHW	Out-of-hours work
RNP	Road Noise Policy (DECCW, 2011)
SEARs	Planning Secretary's Environmental Assessment Requirements
Secretary	Planning Secretary of the Department of Planning and Environment
SEPP	State Environmental Planning Policy
SSI	State Significant Infrastructure
TfNSW	Transport for NSW
Western Sydney Airport	Western Sydney International (Nancy-Bird Walton) Airport

Executive Summary

Transport for NSW (the Proponent) is seeking to modify the existing Western Sydney Orbital (now referred to as Westlink M7) approval to construct and operate an additional lane in both directions within the existing Westlink M7 median. The widening would extend from approximately 140 metres south of the Kurrajong Road overhead bridge at Prestons to the Westlink M7 bridge at Richmond Road in the suburbs of Oakhurst and Glendenning (the modification). The modification does not involve widening the Westlink M7/M4 Motorway (Light Horse) Interchange. The modification includes:

- widening of the Westlink M7 into the median for approximately 26 kilometres, approximately 140 metres south of the Kurrajong Road overhead bridge at Prestons (southern end) to the Westlink M7/Richmond Road interchange in Oakhurst/Glendenning (northern end)
- establishing a two-lane exit from the Westlink M7 northbound to the M4 Motorway westbound
- widening of 43 existing northbound and southbound bridges on the Westlink M7 at 23 locations within the centre median, and on the outside of the bridges on the approach to the M4 Motorway from Old Wallgrove Road
- modifications to existing and new noise wall infrastructure
- utility works and upgrades to drainage infrastructure
- Intelligent Transport Systems installations, adjustments and relocations.

The modification complies with the objects of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and is consistent with the NSW Government's key priorities and transport planning framework. The Minister for Planning is the approval authority.

The Department considers the environmental impacts of construction and operation are acceptable, subject to implementation of appropriate mitigation and management measures, and compliance with the Department's recommended modified conditions. The Department considers that the modification is in the public interest and should be approved, subject to conditions.

Community engagement

The Modification Report was publicly exhibited from 3 August to 23 August 2022 (21 days) on the Department's website. During the exhibition period, the Department received submissions from 33 submitters (excluding feedback from an organisation provided to the Proponent following the conclusion of the exhibition period). Submitters included one State-owned corporation, three local councils, 26 community members, and three special interest groups and organisations. Eight were in support, six objected, and 19 provided comments only. Blacktown City Council objected to the modification. Six government agencies provided advice.

The key issues raised by the community, councils and agencies included justification for the modification and transport strategy, traffic and transport, noise and vibration, land and property use, social impacts, and air quality.

Key assessment issues

Transport Strategy

The Westlink M7 was built with a median approximately 15 metres wide, with the intent of providing space for future expansion of the road corridor (either through public transport or additional traffic lanes). This intent was reflected in the 2002 Conditions of Approval that required the Proponent to review the demand for public transport.

Since the project was approved in 2002, there have been significant changes in NSW Government transport and land use strategies. The largest and most recent of these are the Aerotropolis and new Western Sydney Airport, that create new public transport and motorway projects, including the M12 and Metro Western Sydney Airport.

While the modification is not inconsistent with current transport and land use strategies, and would provide congestion relief and increased safety for vehicles using the corridor, the Department has not proposed removing conditions relating to public transport provision within the motorway corridor should further opportunities arise in the future.

Traffic and transport

The modification would provide two additional lanes within the existing Westlink M7 and would result in improved capacity along the alignment, significantly reducing congestion along the corridor and reducing the risk of collisions.

Traffic safety measures will be implemented during construction to reduce speed limits to 80 km/h, lane closures, and full motorway closures during the bridge widening stages that would result in detours passing through adjoining residential areas. These construction impacts are unavoidable and need to be managed through proactive traffic management measures, to ensure the community is not impacted by excessive durations of detours at night, while ensuring the road network still operates efficiently.

The existing separated shared user path adjacent to the motorway would be temporarily impacted by construction, through closures and detours ranging between 200 metres to approximately 1.3 kilometres. The project also seeks to prohibit cycling on the shoulder of the motorway due to changes to off-ramp configurations at the M4/M7 interchange, which creates safety issues for cyclists having to cross two lanes of traffic. The Department has recommended conditions to ensure that active transport infrastructure within the region is not adversely affected, by requiring upgrade of infrastructure and ensuring the project does not preclude delivery of council proposed active transport links crossing the motorway.

Noise and vibration

Construction of the project will exceed noise management levels (NMLs) set out in the *Interim Construction Noise Guideline* (ICNG) (DECC, 2009) during standard hours and out-of-hours work (OOHW). This will cause greatest impact where the Westlink M7 is near residences. Out-of-hours construction noise impacts are unavoidable, due to constraints associated with construction activities in a live road corridor, which require partial or full road closure and can only be undertaken at night to reduce traffic disruptions on an existing motorway. Detours as a result of these road closures may also transfer traffic noise impacts to the adjoining road network.

The Proponent will manage construction noise impacts through the implementation of path controls (e.g. shielding equipment or erecting structures to shield receivers), selection of quieter equipment,

scheduling high noise impact activities during the day, provision of respite periods and provision of alterative accommodation for long duration out-of-hours works. A Construction Noise and Vibration Management Plan will provide further detail on specific noise generating activities and locations, and how noise will be managed and mitigated. The Department has recommended conditions to manage impacts associated with OOHW, including coordination of utility management works, active community engagement, provision of respite periods, mitigation of noise due to detours, and early implementation of at-property architectural noise treatments.

As the M7 is an operational motorway, many receivers are already noise affected. However, additional receivers have been identified due to the increased operational traffic noise impacts associated with the project. To reduce these impacts, the Proponent has proposed low noise pavement, additional and upgraded noise walls, and at-property architectural treatment at eligible residences. To ensure these measures are effective, the Proponent is required to review predicted operational noise levels during detailed design, to determine the final noise mitigation measures. Comprehensive noise monitoring is required within twelve months and at five years (should low noise pavement be used) after opening, to confirm performance of mitigation measures, and whether additional measures may be required.

Soil and water

The water quality of nearby waterways could be impacted by controlled discharges during construction, and stormwater runoff during operation, if these are not appropriately managed. The Department notes that stormwater runoff during operation would be minor, with similar water quality impacts to those generated by runoff from the existing M7 Motorway. The performance of existing stormwater retention basins would be assessed during detailed design and, if required, upgraded to meet current standards.

The proposed works are located within the Cabramatta Creek, Ropes Creek, and Eastern Creek catchments. Land use within these catchments largely comprises medium-density residential, industrial, and commercial development. Consequently, waterways traversed by the project are subject to urban pollution and are generally in poor quality. The Proponent has committed to continuing to meet the water quality objectives at waterways where they are currently being achieved, or improve water quality at waterways where water quality objectives are not being met. The Department considers that potential construction and operational impacts to water quality are relatively minor and would be appropriately managed by the Proponent's proposed mitigation measures and recommended conditions.

Contents

1 Introduction

This report assesses an application to modify the State significant infrastructure (SSI) approval for the existing Western Sydney Orbital (now referred to as Westlink M7). The Westlink M7 comprises a 39 kilometre, four-lane motorway with a 15-metre-wide central median, from the M5 Motorway at Prestons in the south to the M2 Motorway at West Baulkham Hills in the north.

The modification application seeks approval to construct and operate an additional lane in both directions within the existing Westlink M7 median (the modification). The widening into the median would extend from approximately 140 metres south of the Kurrajong Road overhead bridge at Prestons to the Westlink M7 bridge at Richmond Road in the suburbs of Oakhurst and Glendenning. Widening through the Light Horse (M4) interchange does not form part of this application. The application was lodged by Transport for NSW (TfNSW - the Proponent) pursuant to section 5.25 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Figure 1 provides an overview of the location of the proposed widening works.

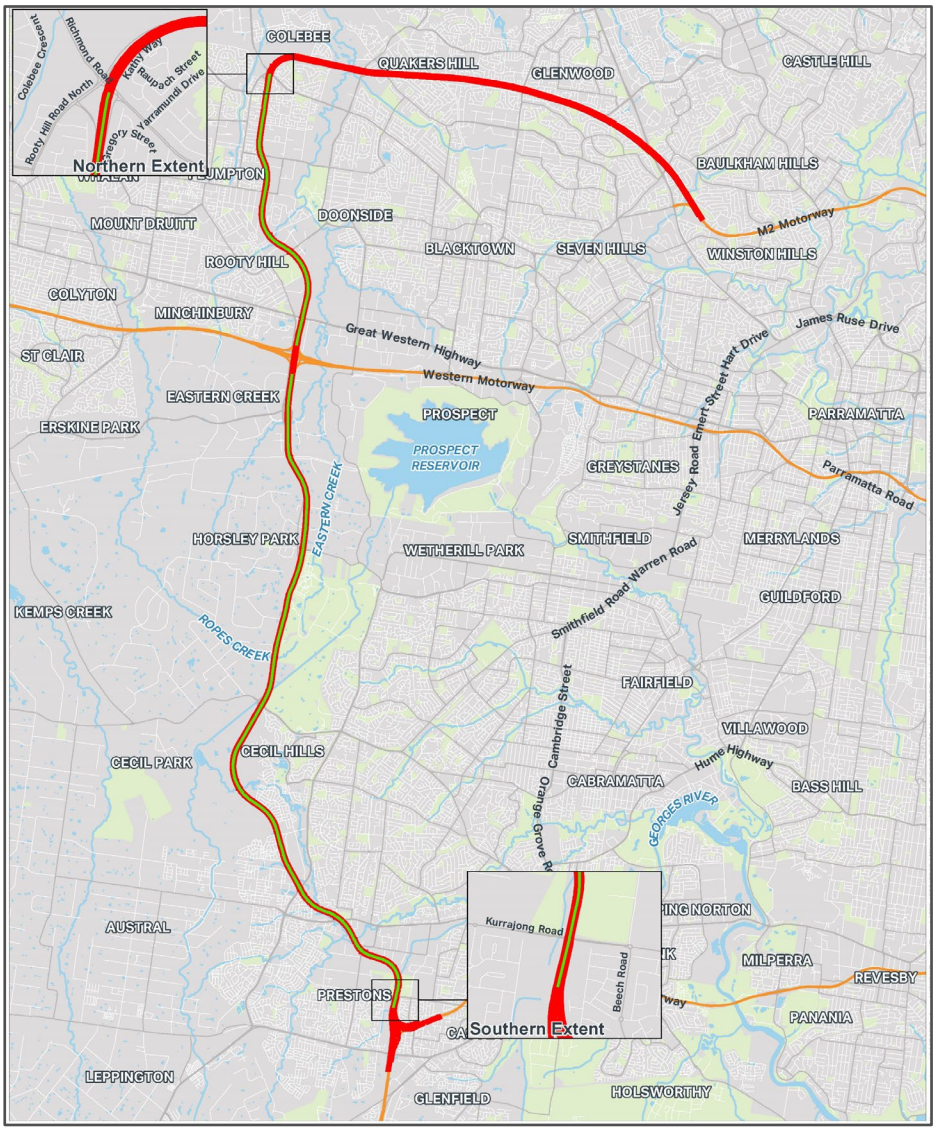


Figure 1 | Proposed modification footprint and regional context (Source: AECOM, 2022)

1.1 Background

The modification is located within the local government areas of Liverpool City Council, Fairfield City Council and Blacktown City Council. The Westlink M7 passes through low-density residential suburbs, industrial precincts and the Western Sydney Parklands. The existing land uses of the surrounding area include existing road corridors, rural, industrial, recreational and bushland, and residential (see **Figure 2**). A shared path runs alongside the Westlink M7 from Prestons to Baulkham Hills and is separated from road traffic.

Major roads that connect to the Westlink M7 include the Hume Highway/M5 Motorway, Kurrajong Road, Bernera Road, Hoxton Park Road, Cowpasture Road, Elizabeth Drive, Wallgrove Road Link, Elizabeth Drive, The Horsley Drive, Old Wallgrove Road, M4 Motorway, Great Western Highway, Power Street, Richmond Road, Quakers Hill Parkway, Sunnyholt Road, Norwest Boulevard, Old Windsor Road, and the M2 Motorway.

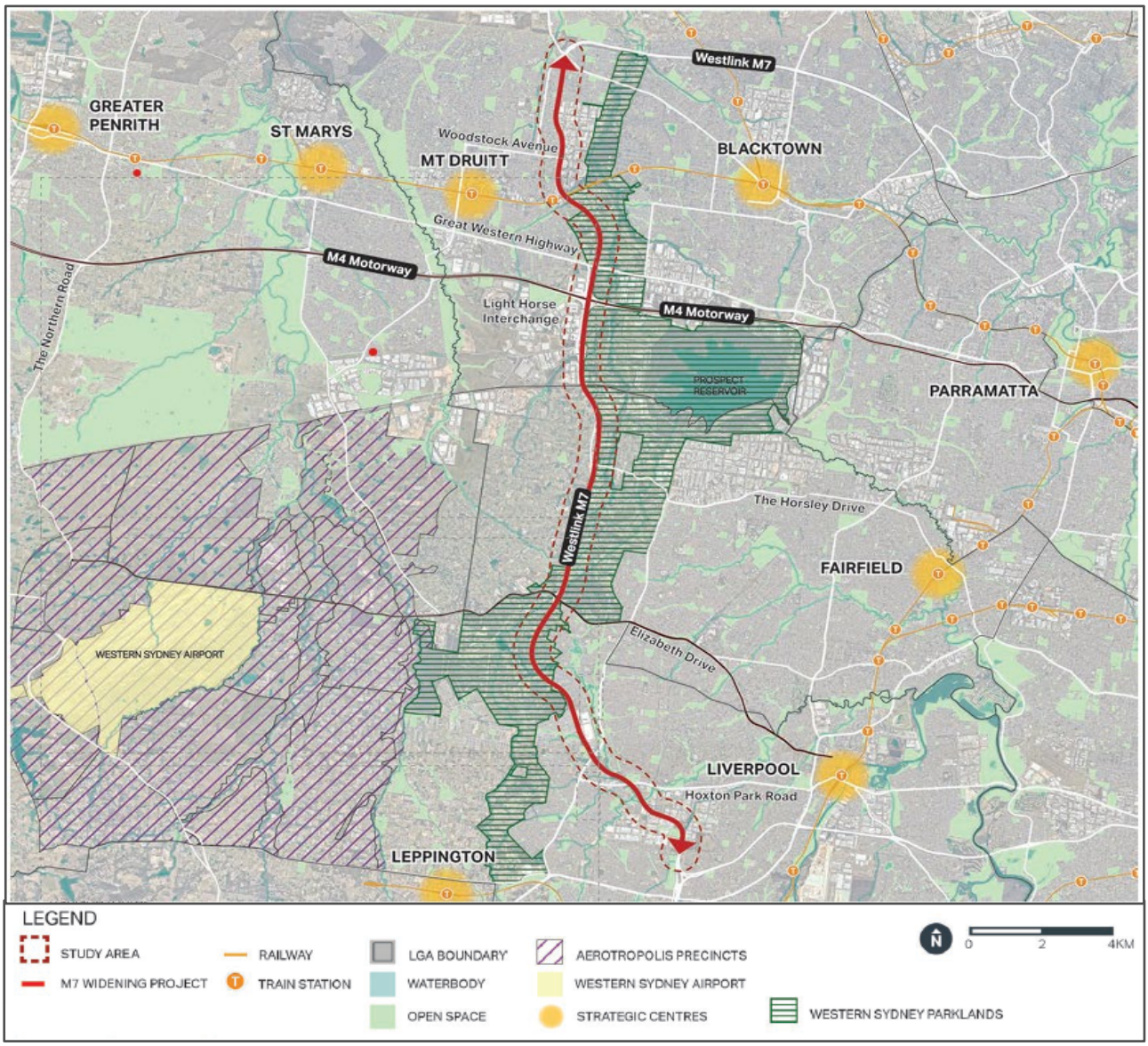


Figure 2 | Site setting (Source: AECOM, 2022)

1.2 Approval history

On 28 February 2002, project approval was granted by the then Minister for Planning under the then Division 4, Part 5 of the EP&A Act for the Western Sydney Orbital. The approval granted consent for the construction and operation of a 39-kilometre-long, four traffic lane motorway with a 15-metre-wide central median, from the M5 Motorway at Prestons in the south to the M2 Motorway at West Baulkham Hills in the north.

An Order was made by the Minister for Planning which came into effect on 26 April 2019 to make the original approval for the Western Sydney Orbital (now known as the Westlink M7) subject to the current State significant infrastructure provisions of the EP&A Act (Division 5.2, Part 5). As such, the approved project is considered State significant infrastructure under the EP&A Act (SSI-663).

The project approval has been modified on five occasions (see **Table 1**).

Table 1 | Summary of previous modifications

Mod No.	Summary of Modifications	Approval Authority	Type	Approval Date
MOD 1	Administrative changes	Minister	115 BAA	19/06/2003
MOD 2	Administrative changes	Minister	115 BAA	04/05/2004
MOD 3	Administrative changes	Minister	115 BAA	25/08/2004
MOD 4	Removal of requirement to maintain pedestrian and bicycle access across the M7 at Mavis Street, Rooty Hill	Minister	75W	24/01/2006
MOD 5	Administrative changes	Director	5.25	18/07/2019

2 Proposed modification

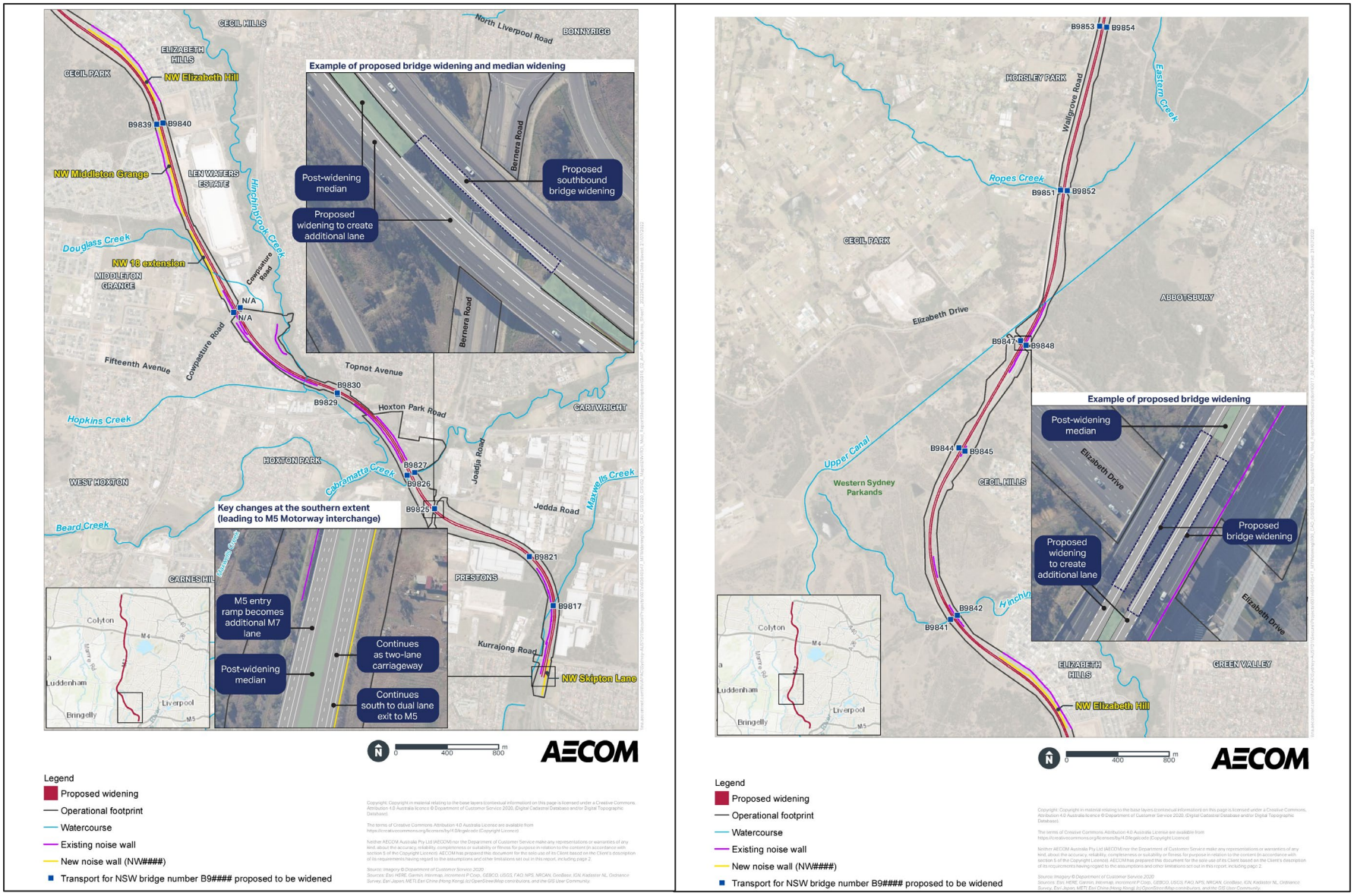
2.1 Project description

The Proponent is seeking to modify the approved Westlink M7 project by:

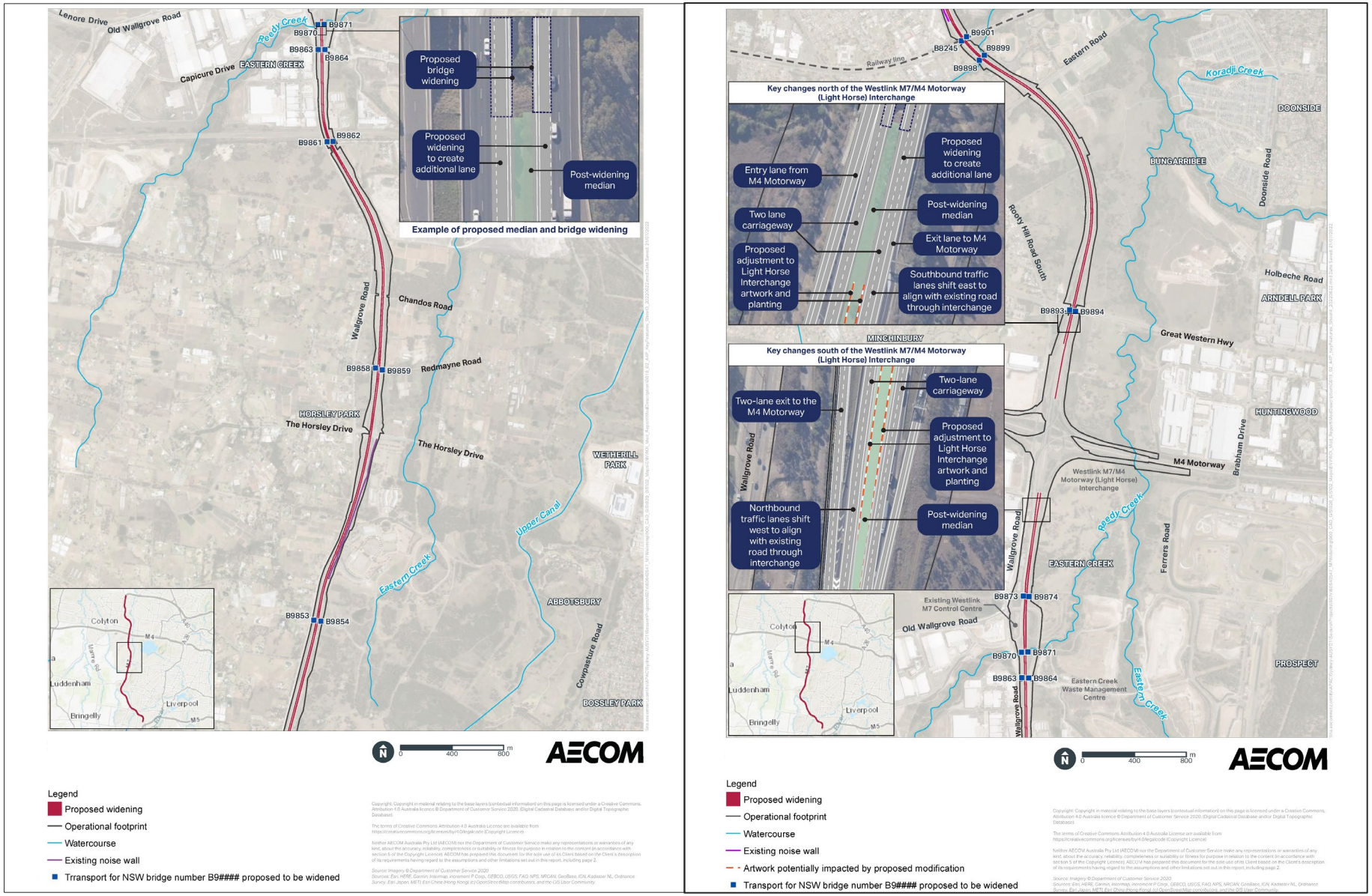
- widening the Westlink M7 into the median for approximately 26 kilometres, approximately 140 metres south of the Kurrajong Road overhead bridge at Prestons (southern end) to the Westlink M7/Richmond Road interchange in Oakhurst/Glendenning (northern end)
- establishing a two-lane exit from the Westlink M7 northbound to the M4 Motorway westbound
- widening 43 existing northbound and southbound bridges on the Westlink M7 at 23 locations in the centre median, and outside the bridges on the approach to the M4 Motorway from Old Wallgrove Road
- modifications to existing and new noise wall infrastructure
- utility works and upgrades to drainage infrastructure
- Intelligent Transport Systems installations, adjustments and relocations.

The design criteria for the modification are based on criteria used for the original Westlink M7 design. Lane widths would generally be 3.5 metres, as per the existing Westlink M7.

The key features of the proposed modification are shown in **Figures 3 – 7**.



Figures 3 and 4 | Key features of the modification between Prestons and Horsley Park (Source: Modification Report)



Figures 5 and 6 | Key features of the modification between Horsley Park and Rooty Hill (Source: Modification Report)

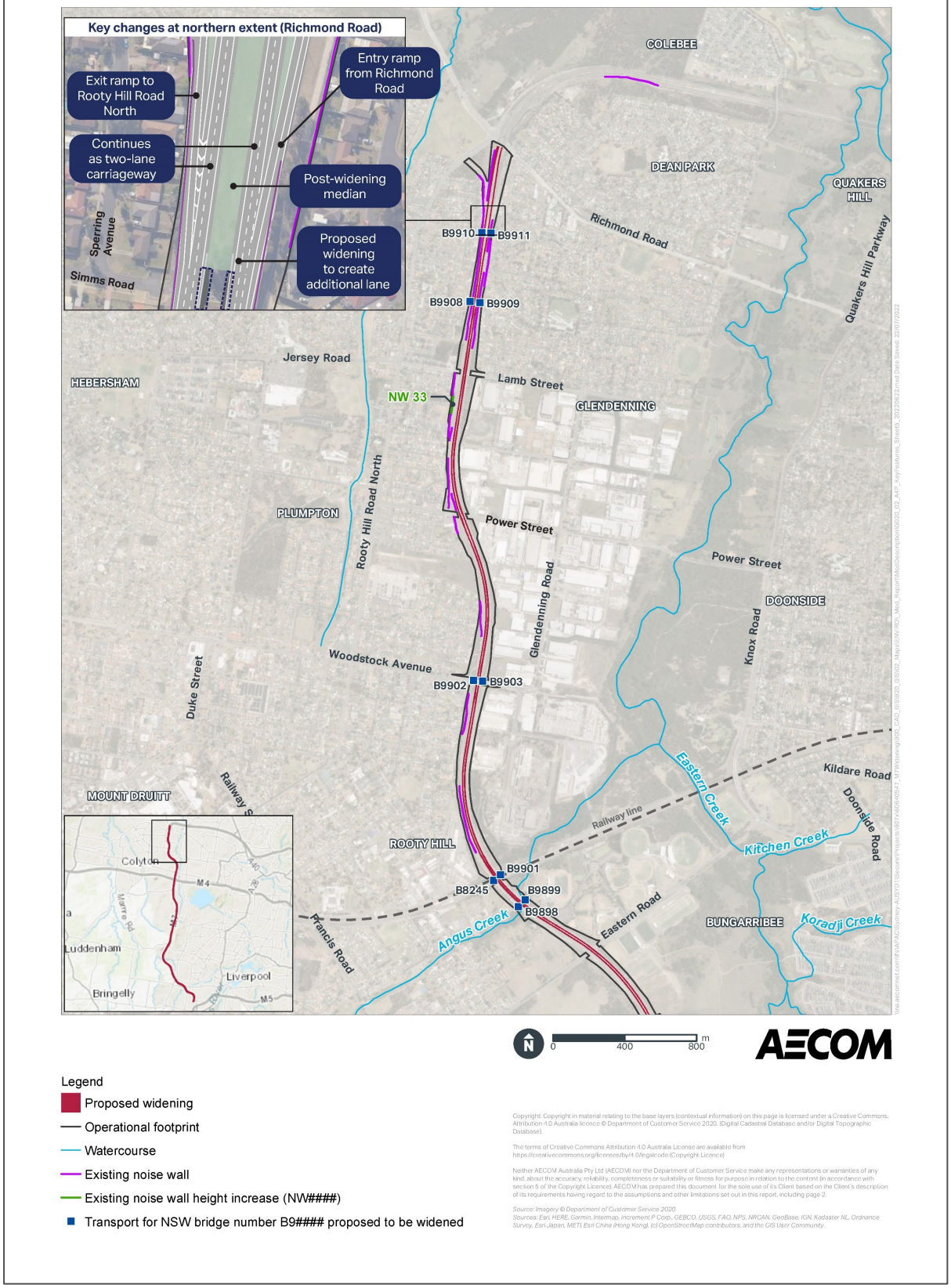


Figure 7 | Key features of the modification between Rooty Hill and Oakhurst/Glendenning (Source: Modification Report)

2.2 Proposed construction activities

Key elements of constructing the modification are described in **Table 2**.

Table 2 | Key construction activities

Component	Activities
Site establishment and enabling works	• site investigations • installation of site offices, crib rooms and amenities • vegetation clearing and removal • installation of traffic management measures • establishment of potential temporary diversions to property access • installation of safety and environmental controls • installation of site fencing and hoarding • establishment of temporary noise attenuation measures • temporary removal of some sections of the Australian Light Horse Sculpture Parade (to be stored and reinstated elsewhere within the memorial following construction) • establishment of construction ancillary facilities and access • utility supply for construction ancillary facilities • establishment of temporary pedestrian and cyclist diversions • temporary adjustments to fencing along the Westlink M7 • demolition of existing buildings and structures
Utility works	• site investigations to identify and mark up utilities requiring relocation and protection • utility relocation and protection
Earthworks	• topsoil stripping • excavation and fill placement • offsite movement of excavated spoil • construction of retaining structures • establishment and stabilisation of new ground levels
Bridge works	• establishment of temporary waterway crossings/diversions • piling and construction of piers and abutments • installation of girders/beams • construction of bridge decks, slabs and associated barriers
Drainage works	• construction of new pits and pipes along road carriageway • connection of new drainage to existing network • adjustments to existing drainage infrastructure to tie into new drainage infrastructure • demolition and removal of redundant drainage
Pavement works	• placement of selected material zone and pavement layers • installation of road pavement surfacing • construction of pavement drainage

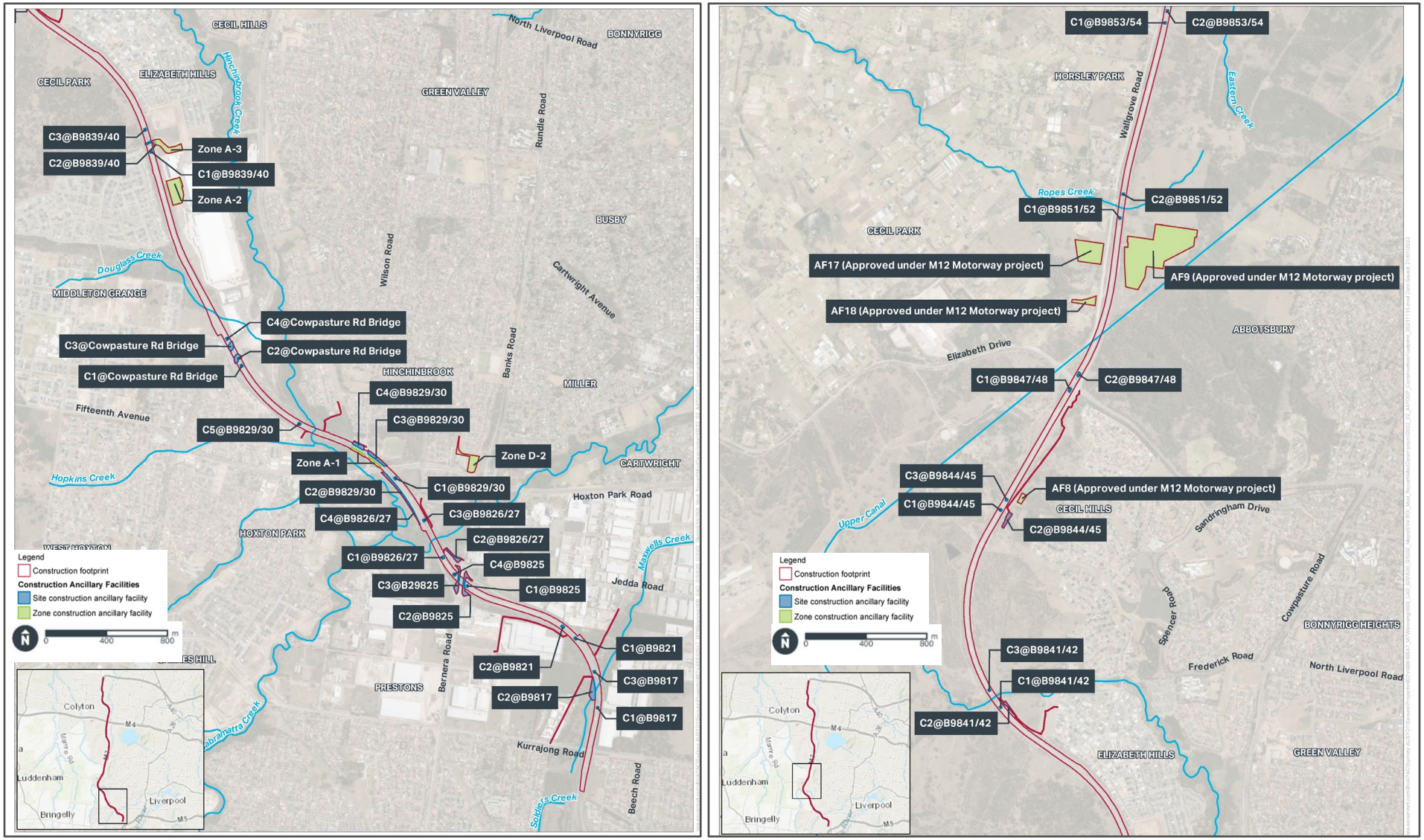
Component	Activities
Finishing works	• line markings on new road surfaces • installation of signage and other roadside furniture • earthworks to establish the finished landform • landscape reinstatement, including plantings • completion of work on the Australian Light Horse Sculpture Parade • construction of new noise walls and adjustments to existing noise walls • reinstatement of cyclist and pedestrian facilities, property access and fencing • site demobilisation and rehabilitation.

Ancillary sites

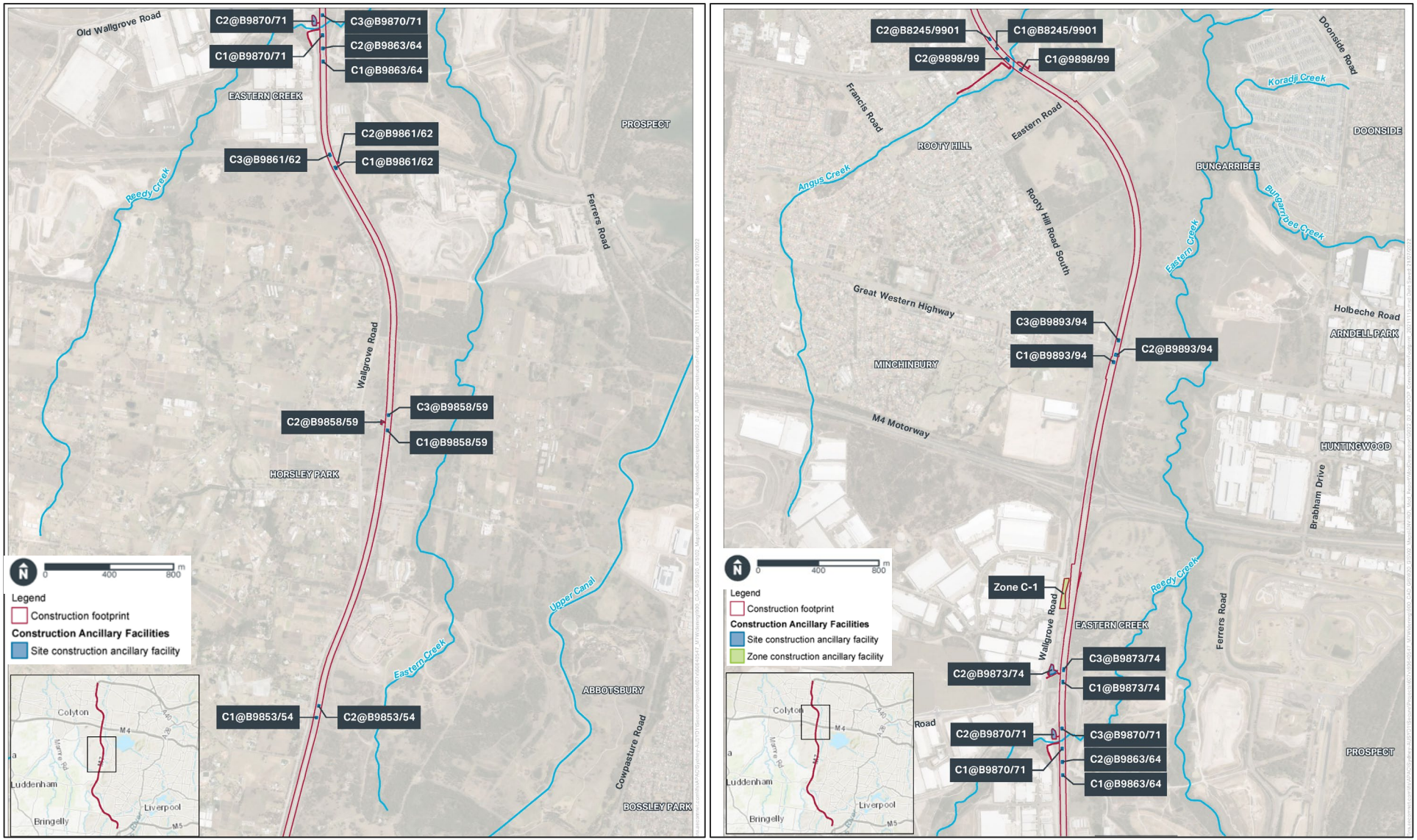
Ancillary sites would be located in and adjacent to the construction footprint of the proposed works.

Larger construction ancillary facilities would be located on leased vacant land, farmland, parkland, commercial office space, or industrial land near the Westlink M7. The Proponent also proposed to use some construction ancillary sites approved under the M12 Motorway project (SSI-9364) located near the Westlink M7 at Cecil Hills.

The total construction area for the proposed modification (including construction ancillary facilities) is about 145 hectares and shown in **Figures 8 - 12**.



Figures 8 and 9 | Proposed construction area between Prestons and Horsley Park (Source: Modification Report)



Figures 10 and 11 | Proposed construction area between Horsley Park and Rooty Hill (Source: Modification Report)

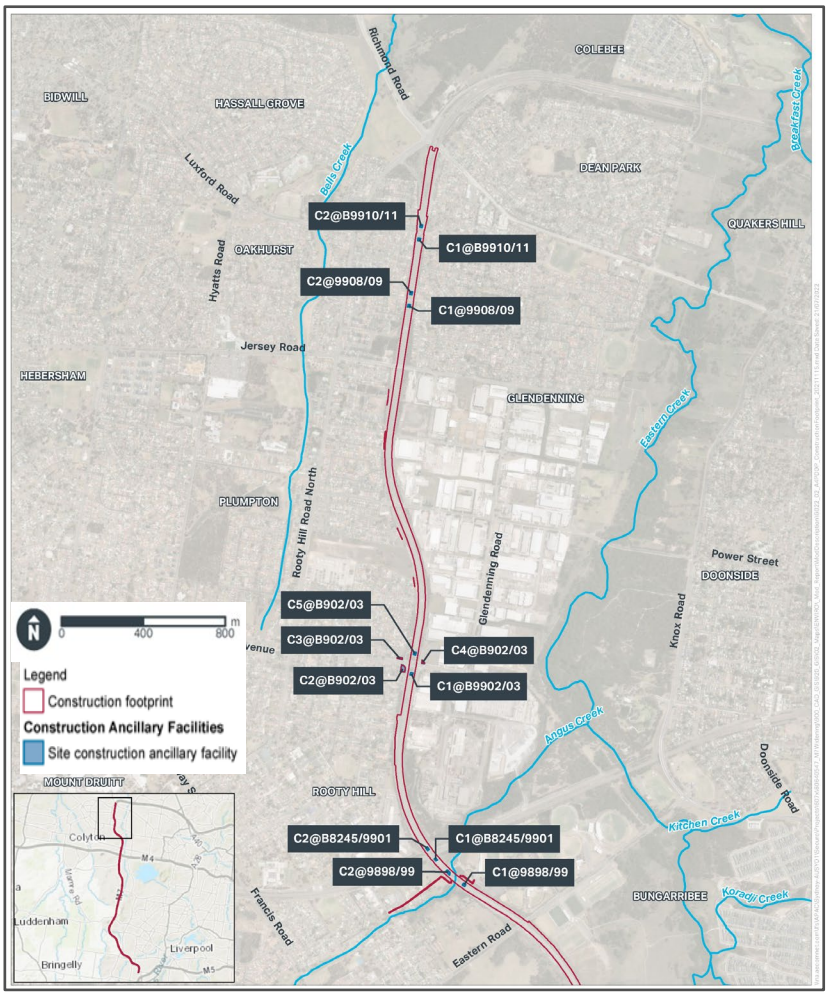


Figure 12 | Proposed construction area between Rooty Hill and Oakhurst/Glendenning (Source: Modification Report)

Timing and workforce

Construction of the modification is expected to take approximately three years. The indicative construction program is shown in **Table 3**.

Table 3 | Indicative construction program for the modification

Key Stages	2023				2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Site establishment	■	■										
Utility works			■	■	■	■	■	■	■	■		
Bridge works				■	■	■	■	■	■	■		
Pavement works				■	■	■	■	■	■	■	■	
Finishing works										■	■	■

Proposed construction hours

The *Interim Construction Noise Guideline* (DECC, 2011) (ICNG) sets the standard construction hours of 7:00 am to 6:00 pm on weekdays and 8:00 am to 1:00 pm on Saturdays. The Proponent has requested extended construction hours of an extra hour at the start and end of each day Monday to Friday (i.e. 6:00 am start and 7:00 pm finish), and an extra four hours on Saturday (i.e. 8:00 am start and 5:00 pm finish). No works are proposed on Sundays or public holidays. The main rationale for extended construction hours is to minimise the impacts to the wider road network and traffic flow along the Westlink M7 corridor.

In addition to proposed standard and extended construction hours, some out-of-hours work would be needed within the Westlink M7 corridor where a Road Occupancy Licence is required.

The Department's consideration of activities outside the ICNG standard hours and the Proponent's request for extended construction hours is discussed in **Section 6.3 – Noise and Vibration**.

2.3 Operation

The overall area required for operation and maintenance of the Westlink M7 is not anticipated to change as part of the proposed modification.

Alignment and interchanges

The existing Westlink M7 would be widened within the existing median, to provide an additional lane in each direction (excluding through the Westlink M7/M4 Motorway). Most existing bridges along the Westlink M7 would need to be widened to accommodate the additional lane in each direction. Details of the alignment are described below and were shown above in **Figures 3 – 7.**

The modification would also result in the following changes at the southern and northern extents:

- Southern (M5 Motorway) connection:
    - Travelling northbound, the entry ramp from the M5 Motorway becomes the rightmost lane on the Westlink M7, while the leftmost lane terminates. The modification would provide three lanes from where the M5 Motorway ramp enters the Westlink M7
    - Travelling southbound, the existing three lanes continue to the dual lane exit to the M5 Motorway, then the Westlink M7 would continue as a two-lane carriageway
- Northern (Richmond Road) connection:
    - Travelling northbound, the left lane would become the exit ramp, and remaining two lanes tie into the existing two-lane carriageway
    - Travelling southbound, existing southbound lanes move toward the median and the entry ramp from Richmond Road would become the left lane.

The modification does not involve widening the Westlink M7/M4 Motorway (Light Horse) Interchange (as shown in **Figure 13**), however the following works would be undertaken to reduce congestion in the AM and PM peak periods:

Northbound carriageway:

- the carriageway would be a three-lane approach from the south after widening in the median
- no changes to the entry ramp from Old Wallgrove Road
- at the approach to the Westlink M7/M4 Motorway (Light Horse) Interchange and M4 Motorway exit ramp, the left lane would become an exit lane toward the M4 Motorway, while a second exit lane would be available from the middle lane, creating a dual-lane exit toward the M4 Motorway
- from the exit to the M4 Motorway, the middle lane on the Westlink M7 would become the left lane, and the northbound carriageway would become a two-lane carriageway
- both the right lane and left lane would move to the west, to align to the existing road through the Westlink M7/M4 Motorway (Light Horse) Interchange, prior to reaching the first bridge that passes over an unnamed access road
- the carriageway would continue as two lanes north of the M4 Motorway exit through the entirety of the Westlink M7/M4 Motorway (Light Horse) Interchange. North of the bridges over the M4 Motorway, widening into the central median would resume. At this point, the left and right lane would move to the east, with the new lane in the median becoming the right lane, and the former right lane becoming the left lane/eventual middle lane
- the entry ramp from the M4 Motorway would join the northbound carriageway, and become the left lane of the now three-lane carriageway
- north of the entry ramp three lanes would be provided through to the Richmond Road bridge.

Southbound carriageway:

- the carriageway would be a three-lane approach from the north following widening in the median
- on the approach to the M4 Motorway exit, the exit lane that extends from the left lane would remain the same
- the middle lane would become the left lane, as the two-lane carriageway proceeds south through the Westlink M7/M4 Motorway (Light Horse) Interchange
- the right lane created through widening the road into the median and the left lane would move east to align to the existing carriageway through the Westlink M7/M4 Motorway (Light Horse) Interchange
- widening into the median would continue after the Westlink M7/M4 Motorway (Light Horse) Interchange, with the entry ramp from the M4 Motorway forming the left lane. At this point, the carriageway would continue as three lanes until the M5 Motorway.

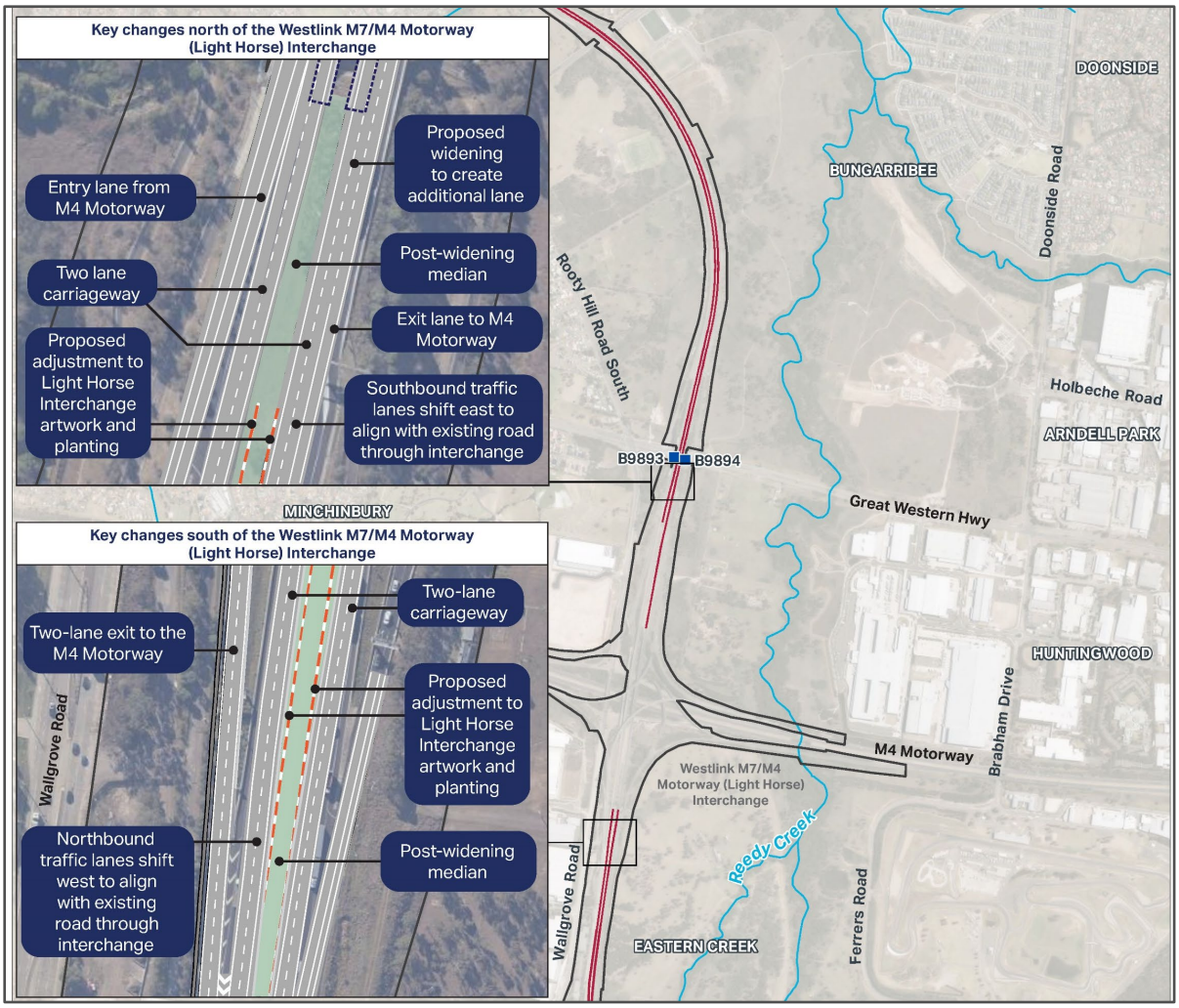


Figure 13 | Old Wallgrove Road to Westlink M7/M4 Motorway (Light Horse Interchange) (Source: Modification Report)

3 Strategic context

3.1 The project

The Westlink M7 is a major component of the Greater Sydney orbital motorway network. It connects the M5 South-West Motorway with the M4 Motorway and the Hills M2 Motorway. The motorway has a key role in connecting both existing and future transport infrastructure across Western and Greater Sydney. The Westlink M7 is identified as one of Greater Sydney's key freight corridors in the *NSW Freight and Ports Plan 2018-2023* (TfNSW, 2018).

The Westlink M7 will connect to the M12 Motorway (SSI-9364) to enable access for growth areas in Western Sydney and the future Western Sydney International (Nancy-Bird Walton) Airport. The operation of the airport and population growth in the region would increase demand and traffic volumes on the Westlink M7, especially at the northbound and southbound carriageways of the Westlink M7 and future M12 Motorway. This could impact journey times and freight productivity for the Westlink M7 if additional capacity is not provided.

In the absence of the proposed modification, there is limited capacity for the Westlink M7 to meet additional traffic demands to support vehicles that would access the Westlink M7 via the M12. Without this additional capacity, traffic performance would deteriorate to the south and north of the M12 Motorway – Westlink M7 interchange.

The planning and transport strategies that informed the original project and Environmental Impact Statement have been superseded by new metropolitan and infrastructure strategies developed by the Proponent including the *Future Transport Strategy 2056* and *NSW Freight and Ports Plan 2018 – 2023*. The following strategic plans also apply:

- *Staying Ahead: NSW State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022)
- *Greater Sydney Services and Infrastructure Plan* (TfNSW, 2018)
- *Greater Sydney Region Plan: A Metropolis of Three Cities* (Greater Sydney Commission, 2018)
- *Western City District Plan* (Greater Sydney Commission, 2018)
- *Central City District Plan* (Greater Sydney Commission, 2018).

3.2 Alternatives and option selection

An options assessment was undertaken by the Proponent to compare widening into the centre median of the Westlink M7 against widening onto the shoulder of the Westlink M7. The assessment considered the social, environmental, and cost implications of these options. Widening onto the shoulder of the Westlink M7 would generally have greater social, environmental and cost implications than widening into the centre median of the Westlink M7, and this option was not considered further. Subsequently, the following alternative design options were considered:

1. Do nothing
2. Widening the Westlink M7 from the M5 Motorway to the M4 Motorway, using the centre median

3. Widening the Westlink M7 from the M5 Motorway to Richmond Road, using the centre median
4. Widening full length of the Westlink M7, from the M5 Motorway to The Hills M2 Motorway Interchange, using the centre median.

Extending the widening to Richmond Road (Option 3) was selected as the preferred option, as it best achieved the project objectives of reducing current congestion along the Westlink M7 corridor. It would also provide additional capacity following the opening of the M12. Further, the project would:

- deliver significant additional capacity on the Westlink M7, without the need for additional widening works between the M4 Motorway and Richmond Road to relieve congestion in this section within a few years' time (which would be required if Option 2 was selected). The improvement in capacity would enable reliable travel times and enhance access between residential, employment, and growth areas
- minimise environmental and social impacts by reducing the length of widening to the extent necessary
- achieve concurrent construction timeframes with the M12 Motorway, to minimise disruption and provide an upgraded and safer connection
- deliver a design that integrates with, and respects the existing, urban design and landscape features of the Westlink M7
- minimise the construction duration and associated impacts in comparison to widening the full length of the Westlink M7 from the M5 Motorway to the Hills M2 Motorway Interchange.

Option 1 was discounted as it would not meet the objectives of increased capacity or integration with the M12. Option 2 would provide some relief to congestion, however modelling identified that widening the M4 – Richmond Road segment may be required in the future. Option 4 was considered the least cost-effective solution, as it would not solve the main source of congestion along the Richmond Road – M2 portion of the M7, which is the M2 Motorway.

4 Statutory context

4.1 Scope of modifications

In accordance with section 5.25 of the EP&A Act, a Proponent may request the Minister to modify an approval for State significant infrastructure. The Minister's approval for a modification is not required if the infrastructure as modified will be consistent with the existing approval. The addition of an additional lane to each carriageway along the Westlink M7 is not considered consistent with the existing approval. Consequently, modification of the Minister's approval under section 5.25 of the EP&A Act is required.

4.2 Delegated authority

The Minister is the approval authority under section 5.25 of the EP&A Act, unless the Minister has delegated his determination functions to the Department.

4.3 Ministers delegate as determining authority

Under the Instrument of Delegation dated 9 March 2022, the functions and powers of the Minister for Planning under section 5.25 of the EP&A Act to determine a modification of the Minister's approval have been delegated where:

- the relevant local council has not made an objection
- a political disclosure statement has not been made
- there are less than 50 unique public submissions in the nature of objections.

Blacktown City Council objected to the proposed modification. As the Minister's determination power has not been delegated in the case of a council objection, the Minister is the approval authority.

5 Engagement

5.1 Department's engagement

Under section 5.28(1)(g) of the EP&A Act, the Planning Secretary is required to make requests for modification of approvals determined by the Minister publicly available. The Modification Report (**Appendix B**) was publicly exhibited from 3 August to 23 August 2022 (21 days) on the Department's website. The Department advertised the exhibition in The Daily Telegraph and The Sydney Morning Herald on Wednesday 3 August 2022. The Department notified relevant State and local government authorities of the exhibition.

The Department undertook site inspections of the proposed modification in May and August 2022, to understand the surrounding environment, its sensitivities, and issues raised in submissions.

The Department met Blacktown City Council in January 2023 to discuss the Mavis Street active transport connection (see **Section 6.2**).

5.2 Summary of advice received from government agencies

During the exhibition period, the Department received advice from six government agencies. A summary of the advice from agencies is in **Table 4**. A link to the full copy of the advice is provided in **Appendix D**.

Table 4 | Summary of agency advice

Environment Protection Authority (EPA)
EPA indicated that the project would require an Environment Protection Licence, requested additional information, and provided recommendations relating to noise and vibration, water quality, and contamination impacts. Specifically, it requested that the Proponent: • provide further information on appropriate erosion and sediment controls suitable for contaminated areas • establish appropriate water quality management criteria • identify and manage water pollution risks • consider options to avoid contaminated stormwater discharges • consider the need for stormwater containment/basins or other mitigation measures to prevent contaminated stormwater entering waterways • include surface water monitoring for moderate to high contamination risk areas • provide further information on the Dewatering Management Plan • implement an unexpected finds protocol to manage any unexpected contamination encountered during construction.

Heritage NSW (Aboriginal Cultural Heritage Regulation Branch) - Environment and Heritage Group, DPE

Heritage NSW – Aboriginal Cultural Heritage Regulation Branch advised that no additional assessment for Aboriginal cultural heritage is required for the proposed modification. Therefore, no further agency consultation is required.

Heritage NSW – Heritage Council of NSW

Heritage NSW – Heritage Council of NSW identified the potential for indirect vibration impacts on the Upper Canal System, including Shaft 4, during construction works. It recommended vibration modelling and determining site-specific minimum working distances.

Water Group - DPE (DPE Water)

DPE Water recommended that work within waterfront land be undertaken in accordance with the *Guidelines for Controlled Activities on Waterfront Land.*

NSW Environment and Heritage Group – DPE (DPE EHG)

DPE EHG recommended additional Southern Myotis surveys be undertaken at the three bridges of moderate potential habitat, to inform the Microbat Management Plan. DPE EHG recommended that opportunities to avoid impacts on vegetation, and the consolidation or relocation of proposed temporary construction facilities to reduce the amount of vegetation clearing, should be considered.

NSW Health

NSW Health recommended increased active transport connections across the Westlink M7 corridor to link neighbourhoods and communities. NSW Health noted the consideration of urban heat island in the Modification Report, and recommended additional shade structures be provided at breakdown bays and along the shared user path.

Replacement of trees was also raised, including ongoing work with Blacktown City Council and the Western Sydney Regional Organisation of Councils, on climate resilient street trees.

5.3 Summary of submissions

During the exhibition period, the Department received 33 submissions. Submitters included one State-owned corporation, three local councils, 26 community members, and three special interest groups and organisations. Eight were in support, six objected, and 19 provided comments only. Most community submissions were received from individuals located within the Sydney Metropolitan area.

In addition, the Western Sydney Airport Co Limited provided feedback outside of the exhibition period. This was forwarded to the Proponent outside of the exhibition period. Although it is not formally counted as a duly made submission, the Proponent has addressed the issues raised in the Submissions Report.

A summary of submissions is provided in **Table 5**, **Table 6**, **Table 7, Section 5.4** and a link to submissions is at **Appendix D.**

Table 5 | Summary of State-owned Corporation submission

Water NSW
Water NSW raised concerns about potential impacts on the State heritage listed water supply asset - Upper Canal (Shaft 4). Water NSW recommended that access to Shaft 4 during construction and operation is maintained. Shaft 4 should be considered a sensitive structure, with an assessment of vibration impacts undertaken.

Table 6 | Summary of Council submissions

Fairfield City Council
Council provided comments on the project and raised concerns about the strategic justification for the project. Of particular concern was the previous commitment to reserve the existing M7 median for rapid bus transit. Other issues raised related to acoustic impacts on proposed residential development (Fairfield Urban Investigation Area), local traffic impacts during construction and operation, and a lack of public awareness of the project. Council also requested: • further project justification, including additional analysis of the road widening project that includes additional assessment of public transport demand along the corridor • further assessment of cumulative impacts of traffic and transport, noting a range of other road projects in or adjacent to the project • more information on impacts to the shared path, requiring more assessment of closures during construction • details of the properties that will be highly noise affected by the project.
Blacktown City Council
Council objected to the project. The main concerns raised were a lack of consultation with Council and the wider community, the opportunistic nature of the project, and a lack of comprehensive planning and integration with state and local strategic plans and outcomes. Council provided the following comments: • the proposed widening does not align with strategic transport priorities • Blacktown local government area (LGA) has expanded rapidly and local roads, particularly those that connect to the M7 require further assessment and consideration • there are no improvements to active transport including connections to the shared user path and east-west connections • the Proponent did not consider additional active transport connections that would link to current and future developments • current noise mitigation to address operational impacts is insufficient • the social impact assessment is inadequate and does not address high levels of disadvantage in the Blacktown LGA • Modification Report does not refer to toll charges and any increase would elevate the burden on the highest tolled population grouping in the country.

Liverpool City Council

Council provided comments on the modification, and made a number of recommendations and requests including:

- greater involvement and further consultation are required during detailed design for specific roadways within the Liverpool LGA including the access road between Elizabeth Hills and Middleton Grange
- cumulative impacts will be extensive, and a project construction traffic control group is recommended
- improving the shared user path by including flood proofing in certain areas and providing a pedestrian and cyclist management plan
- providing additional noise walls/at home treatments
- incorporating public art to mitigate adverse visual impacts.

Table 7 | Summary of submissions from community and Special Interest Groups

Submitter	Number of unique submissions	Position
Special Interest Groups	**3**	
CAMWEST	1	Comment
BikeNorth	1	Comment
Bicycle NSW	1	Comment
Unique submissions from Community Members	**26**	
< 5 km	4	Object
	2	Support
	9	Comment
5–100 km	1	Object
	3	Support
	3	Comment
No Location	0	Object
	2	Support
	3	Comment
TOTAL	**29**	

5.4 Key issues raised in submissions – community and Special Interest Groups

Key issues raised by community members and Special Interest Groups include:

Traffic and transport

- construction traffic impacts on local roads
- potential for increased risk of accidents along the alignment due to additional capacity
- request for upgrades to surrounding infrastructure and roads, including the entry and exit ramps to the M7, Richmond Road interchange, and M2/M5 connections
- potential traffic flow impacts from the proposed widening of the M4 westbound on-ramp
- stopping bay design should be refined to allow heavy vehicles to reach motorway speed
- the provision of a rest area

Active transport

- the existing shared path should remain open during construction
- new shared paths should be provided as part of the modified project
- connections to the shared path should be improved across the alignment
- request for improvements to the shared path, including flood proofing and provision of amenities along the path
- the suitability and usability of the proposed shared path detours were questioned

Project justification

- support for widening
- the need for four lanes to be built in each direction
- public transport option is preferred to road widening

Noise and vibration

- inadequate noise mitigation delivered from initial project delivery and the need to repair existing defective noise walls
- concern that the widening would exacerbate current noise impacts
- request for additional noise walls
- noise impacts associated with the use of compression brakes by heavy vehicles in residential areas
- construction vibration impacts to dwellings near the corridor

Other

- reduced air quality during operation
- limited notification of proposed modification
- ongoing and future increases to tolls.

5.5 Response to submissions and government agency advice

Following completion of the public exhibition, the Department directed the Proponent to prepare a response to the submissions received.

The Westlink M7 Widening Submissions Report (**Appendix E**) was made publicly available on the Department's website on 25 October 2022.

The Submissions Report was accompanied by an addendum to the Statement of Heritage Impact (SOHI) report for the heritage listed 'Shaft No. 4 of the Upper Canal System', to address concerns raised by Heritage NSW regarding potential construction vibration impacts to the shaft.

The report included information on when additional survey work for the Southern Myotis would be undertaken, to line up with the recommended survey period for the species, as recommended by DPE EH. It also included a commitment by the Proponent to refine the design of the shared user path near Ash Road in Prestons to improve the flood immunity of the path in response to recommendations made by Liverpool City Council.

6 Assessment

The Department in its assessment of the modification considered submissions received on the Modification Report and the Westlink M7 Widening Submissions Report, and identified the key issues as transport strategy, traffic and transport, noise and vibration, and soil and water (**Section 6.1** to 6.4). Other issues are discussed in **Section 6.5**.

6.1 Transport Strategy

The Westlink M7 was built with a median approximately 15 metres wide, with the intent of providing space for future expansion of the road corridor (either through public transport or additional traffic lanes). This intent was reflected in the 2002 Conditions of Approval that required the Proponent to review the demand for public transport.

Since the project was approved in 2002, there have been significant changes in NSW Government transport and land use strategies. The largest and most recent of these are the Aerotropolis and new Western Sydney Airport, that create new public transport and motorway projects, including the M12 and Metro Western Sydney Airport.

While the modification is not inconsistent with current transport and land use strategies, and would provide congestion relief and increased safety for vehicles using the corridor, the Department has not proposed removing conditions relating to public transport provision within the motorway corridor should further opportunities arise in the future.

Issue

The approved project included conditions requiring the future safeguarding and delivery of a future transport corridor in the median

The EIS for the approved project outlined the wide central median would provide sufficient space within the road corridor, that in future may allow for:

- public transport facilities such as dedicated bus operations
- light or heavy rail
- additional traffic lanes.

At the time of approval the Department recommended the median be dedicated to future public transport along the length of the project. This was reinforced by conditions of approval which safeguard the corridor for future public transport opportunities and as a primary freight corridor; it was envisaged that early implementation of public transport could benefit the community and mitigate potential impacts of a new road corridor being provided.

Existing conditions of approval include review triggers associated with traffic performance, that require provision of a public transport corridor between Richmond Road and the M2. Condition 42 states the Proponent is required to undertake a review of potential demand for dedicated public transport, five years after opening the project and every 10 years up to 25 years following opening. It is understood that these reviews have been undertaken and that the outcomes have informed the future transport planning documents including *Future Transport Strategy 2056*.

The modification removes the opportunity for provision of a dedicated public transport corridor within the median

The modification is seeking to add two additional lanes by widening into the median, with the outcome of three lanes of traffic in each direction, removing the ability for light or heavy rail to be delivered within the corridor. The Proponent has stated the proposed additional lanes do not preclude the use of the median or future potential for lanes of the motorway to be used as dedicated public transport routes. This has been reflected by the Proponent requesting modification of Condition 29 that currently states:

> "The Project shall be constructed and operated to accommodate a maximum of four (4) through traffic lanes (two through lanes in each direction)".

No other project conditions that relate to the delivery of public transport services/infrastructure have been requested to be removed or modified by the Proponent.

Removal of the public transport corridor reflects a shift in wider transport policy since the project was approved

Current government strategies do not recognise the Westlink M7 corridor as a future public transport corridor. The *Western City District Plan* (Greater Sydney Commission, 2018) displays new public transport corridors to accommodate the new Western Sydney Airport which were not considered when the project was approved.

Increasing the road capacity of the Westlink M7 as a key transport corridor supports the objectives of the strategic metropolitan and transport documents shaping Sydney's growth. The *State Infrastructure Strategy 2018-2038: Building Momentum* identifies assets across the State are under increased demand, and there is a need to provide relief for capacity issues throughout existing corridors. As western Sydney continues to grow, there is a need to relieve capacity along the Westlink M7, and the modification seeks to do this.

Submissions

Community and Special Interest Group submissions

Key issues raised in community submissions included:

- support for design including opportunities for reducing congestion, delays and accidents
- suggestion for additional lanes (up to four in each direction) and further extension through to the connection with the M2
- requests for public transport to be provided instead of lanes within the median.

Councils

Liverpool City Council supports widening into the median, subject to particular matters being addressed (outlined in **Table 6**).

Blacktown City Council raised concern over the lack of analysis in the Modification Report on the need for a future public transport provision, and cost of retrofitting a future public transport option.

Fairfield City Council noted that insufficient analysis and information was provided to support the assumption that widening would not preclude future public transport provision. Council requested the

modification include a cost-benefit analysis of whether the addition of lanes is suitable considering the loss of a public transport corridor.

Consideration

The need for the corridor to be used for public transport has been diminished and is not consistent with current transport strategy; however, the modification does not preclude future public transport being provided within the motorway corridor

Fairfield City Council queried whether the provision of a public transport corridor in the future, as identified by the Proponent, would be possible. The Proponent noted there are no major trip generators along the Westlink M7 corridor that would justify the provision of frequent public transport within the median. It was also identified there may be opportunities for future bus routes to use the corridor, including express bus routes connecting to Western Sydney Airport.

Fairfield and Blacktown Council raised concerns the modification had not fully considered an options analysis for a public transport corridor and future costs associated with retrofitting the roadway with public transport infrastructure in the future. The Council's requested that future analysis and detailed public transport demand reviews undertaken be provided to them, to justify the decision to provide traffic lanes in place of public transport.

The Department notes significant changes have occurred in relation to land use and transport strategy since the project was approved. Current transport strategies developed significant programs of public transport infrastructure and corridors in the region, including Sydney Metro Western Sydney International Airport and Sydney Metro West, and the Liverpool-Parramatta and North-West Transitway bus services. Alleviating capacity constraints on Greater Sydney's road network through the provision of public transport infrastructure along the Westlink M7 is no longer considered the most suitable option in both strategic planning and transport policy. Instead, increasing road capacity of this key north-south motorway, in conjunction with the development of the network of public transport infrastructure projects in Greater Sydney and western Sydney, is a better option for supporting the objectives of the strategic metropolitan and transport documents shaping Greater Sydney's growth. As such, the Department is satisfied the proposed modification is not inconsistent with existing transport and strategic land use policy, but does not propose to remove conditions relating to the public transport provision within the motorway corridor.

The provision of additional lanes above that proposed in the modification would increase environmental and social impacts, and is not supported

The Department notes the support in submissions to provide traffic relief along this significant road corridor that links current and future growth areas of Western Sydney, and the potential to provide congestion relief and increased safety for vehicles using the corridor.

Specific operational traffic and social impacts and benefits are addressed in **Section 6.2** and **Table 12**, respectively. Some community members requested the modification provide up to four lanes in each direction along the alignment. Providing four lanes along the corridor would exacerbate environmental and social impacts above current and proposed levels, by requiring further land clearing and property acquisition. It would also bring the motorway closer to receivers who live adjacent to the current corridor, resulting in increased noise impacts. The Department does not support the addition of a fourth lane in each direction due to it requiring increased environmental and social impacts closer to receivers.

6.2 Traffic and transport

The modification would provide two additional lanes within the existing Westlink M7 and would result in improved capacity along the alignment, significantly reducing congestion along the corridor and reducing the risk of collisions.

Traffic safety measures will be implemented during construction to reduce speed limits to 80 km/h, lane closures, and full motorway closures during the bridge widening stages that would result in detours passing through adjoining residential areas. These construction impacts are unavoidable and need to be managed through proactive traffic management measures, to ensure the community is not impacted by excessive durations of detours at night, while ensuring the road network still operates efficiently.

The existing separated shared user path adjacent to the motorway would be temporarily impacted by construction, through closures and detours ranging between 200 metres to approximately 1.3 kilometres. The project also seeks to prohibit cycling on the shoulder of the motorway due to changes to off-ramp configurations at the M4/M7 interchange, which creates safety issues for cyclists having to cross two lanes of traffic. The Department has recommended conditions to ensure that active transport infrastructure within the region is not adversely affected, by requiring upgrade of infrastructure and ensuring the project does not preclude delivery of council proposed active transport links crossing the motorway.

Issue

Travel time and traffic flow along the Westlink M7 corridor would improve as a result of the modification

Widening the Westlink M7 would provide significant travel time reductions for journeys along the motorway corridor, with predicted travel time savings of up to 13 minutes in the afternoon peak by 2026, and 12 minutes in the afternoon peak by 2036. Traffic modelling indicates that traffic volumes would increase from the current 80,000 vehicles per workday (Monday – Friday) using the motorway, to up to 100,000 vehicles per workday by 2036. It is also predicted there would be between 5-30% more vehicles on the motorway in 2036, due to additional lanes.

Despite the increased number of vehicles that would use the motorway, travel times on the motorway would reduce through increased average speed by 28% by 2036. The flow of traffic along the network would also be improved, due to the reduction in the number of stops made by vehicles from congestion. By increasing the number of lanes, the traffic modelling indicates the number of times vehicles would stop on the motorway would reduce by 54%, compared to current traffic conditions. The total predicted time reductions are presented in **Table 8**.

Table 8 | Travel time changes with and without the project (Source: Modification Report)

Peak Hour	Direction	Travel time (minutes) and percentage change								
		2021	2026				2036			
			Without modification	With modification	Difference		Without modification	With modification	Difference	
AM	Northbound	26	27	19	-8	-30%	27	19	-8	-28%
	Southbound	22	18	16	-2	-9%	23	21	-2	-9%
PM	Northbound	25	28	18	-9	-34%	28	20	-8	-28%
	Southbound	27	30	16	-13	-45%	34	23	-12	-34%

The wider network would reduce in performance over time during operation of the widened motorway, as the motorway could cater for more vehicles

The traffic assessment compared the Level of Service (LoS) performance at 23 intersections along the alignment. The LoS is a measure of the delay in seconds. The assessment showed most intersections would continue to operate with the same LoS in both 2026 and 2036, with and without the project. The assessment identified that, without the modification, nine intersections in the study area would perform at an unsatisfactory LoS (E or worse) in 2026 and/or 2036 due to future traffic growth.

In the “with modification” scenario, the assessment identified seven intersections that would perform poorly compared to the “without modification” scenario, as shown in **Table 9**. Due to forecast increases to population and employment, five of the seven intersections would perform at a LoS E (delay of 57 to 70 seconds) or F (delay greater than 70 seconds), during either the AM or PM peak in the opening year, or 10 years post opening in both the “with” and “without” the modification scenarios.

Table 9 | Intersection performance – 2026 and 2036 with and without project (Source: Modification Report)

Intersection	Peak time period	Level of service (seconds)			
		2026 without modification	2026 with modification	2036 without modification	2036 with modification
Bernera Road/Yarrawa Street/M7 exit ramp/M7entry ramp	AM	E (64)	F (160)	C (34)	F (112)
Old Wallgrove Road/Wallgrove Road/M7 entry ramp/M7 exit ramp	AM	D (46)	D (55)	D (44)	E (58)
Rooty Hill Road North/M7 exit ramp	AM	C (30)	C (33)	D (47)	E (70)
Rooty Hill Road North/M7 exit ramp	PM	B (27)	E (57)	E (63)	F (109)
Cowpasture Road/M7 exit ramp/M7 entry ramp	PM	B (25)	D (44)	D (54)	F (125)
The Horsley Drive/Wallgrove Road/M7 entry Ramp/M7 exit ramp	PM	D (47)	F (71)	D (47)	E (69)
Great Western Highway/Rooty Hill Road South/Wallgrove Road	PM	D (56)	E (57)	E (68)	F (71)
Rooty Hill Road North/Richmond Road/M7 entry ramp/M7 exit ramp	PM	D (56)	E (58)	F (104)	F (90)

Note: LoS B = 15 to 28 second delay, LoS C = 29-42 second delay, LoS D = 43-56 second *delay. LoS E = 57-70 second delay. LoS F = > 70 second delay*

Detours are required during construction and would reduce performance of the wider road network

Construction of additional lanes in the median would result in additional traffic impacts on the surrounding road network, as vehicles access construction compounds. In addition, during the widening works the motorway speed would be reduced from 100 km/h to 80 km/h.

Temporary lane closures and detours are required at night to allow for construction of the widened bridges and through the median. Undertaking construction during the night reduces impacts on motorists, however increases travel times for those travelling at night, and would increase strain on the surrounding roads where detours are required. Detours through residential areas are shown in **Figure 14** and **Figure 15**.

Public transport services would be impacted with six bus services being re-routed due to road closures.

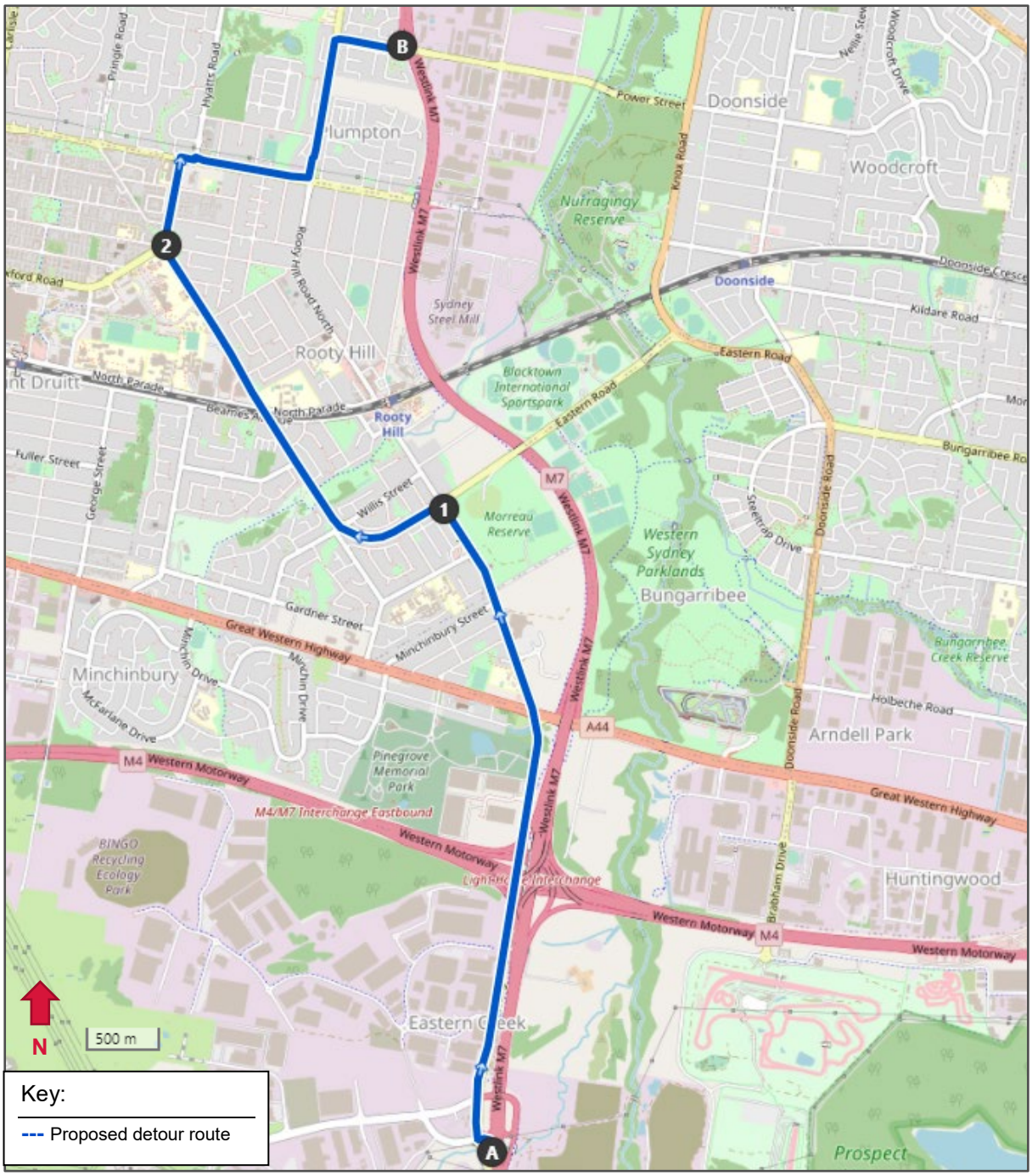


Figure 14 | Detour via Wallgrove Road/Rooty Hill Road/Francis Road during closures between Old Wallgrove Road and Power Street interchanges (Source: OpenStreetMap 2022)

The Proponent's traffic modelling predicts that during motorway closures, traffic volumes along Kurrajong Road, The Horsley Drive, Wallgrove Road, Woodstock Avenue, and Power Street would be greater at 9:00 pm than the daytime peak hour volumes at those locations. If closures were to commence at 10:00 pm, only the westbound lanes of The Horsley Drive would experience volumes greater than the peak hour volumes. However, heavy vehicle traffic volumes would stay consistent during the night while light vehicles (i.e. private car) volumes would decrease along these routes. After 10:00 pm, heavy vehicle volumes along these routes would be approximately between 27% - 51% of the total number of traffic volumes.

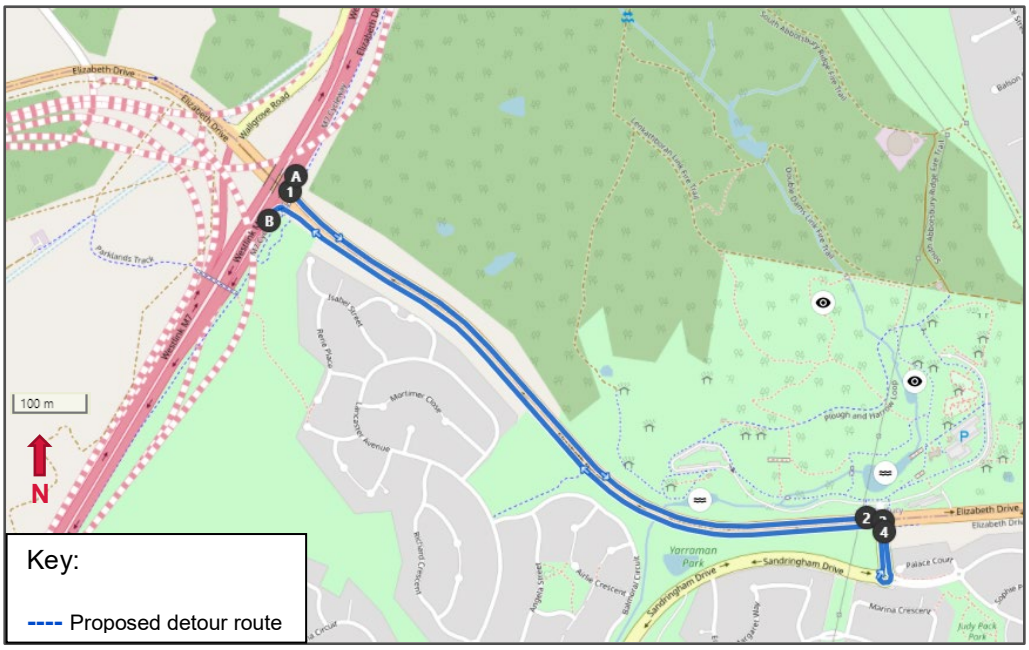


Figure 15 | Detour via Elizabeth Drive during closures of the Westlink M7 overpass crossing Elizabeth Drive (Source: OpenStreetMap 2022)

The shoulder of the motorway would be closed to cyclists due to reconfiguration of the M4 northbound exit, with potential safety implications for cyclists riding on the motorway shoulder

At the M4/M7 interchange, the motorway would not be widened. However, the off-ramp from the M7 to the M4 is proposed to be widened to two lanes (**Figure 16**). The construction of the proposed modification and the final widening of the off-ramp would result in unsafe environments for cyclists using the mainline. The widening of the off-ramp would require cyclists to cross two lanes of traffic to continue their journey north. Due to potential conflicts between cyclists and traffic and consequent increased risk of incidents, the Proponent has proposed to prohibit cycling along the mainline alignment between the M5 Motorway and Richmond Road during both construction and operation.

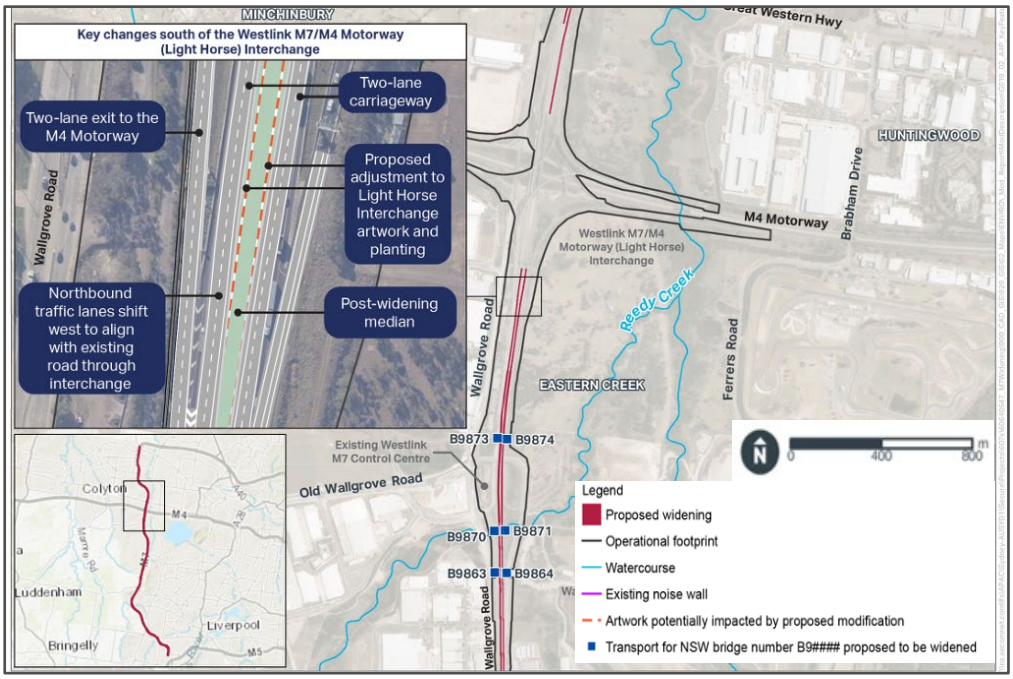


Figure 16 | Changes to the Westlink M7/M4 Motorway (Light Horse Interchange) (Source: Modification Report)

Bridge widening near the Blacktown International Sports Park / Mavis Street, Blacktown could impact on the delivery of Blacktown City Council's shared user path in this location

Blacktown City Council has constructed a shared path on both sides of the motorway near Mavis Street, Blacktown and the Blacktown International Sports Park (**Figure 17**). The path ends at the WestLink M7 corridor on both sides. Approval is required by the Proponent (and the motorway operator) to construct the missing link within the motorway corridor, which would include a concrete path and bridge creek crossing in the motorway underpass. Once completed, the path (referred to as the Mavis Street shared path link) enables access from Rooty Hill Station to the Sports Park. There is potential for the project to delay the delivery of the path until the widening works are complete.

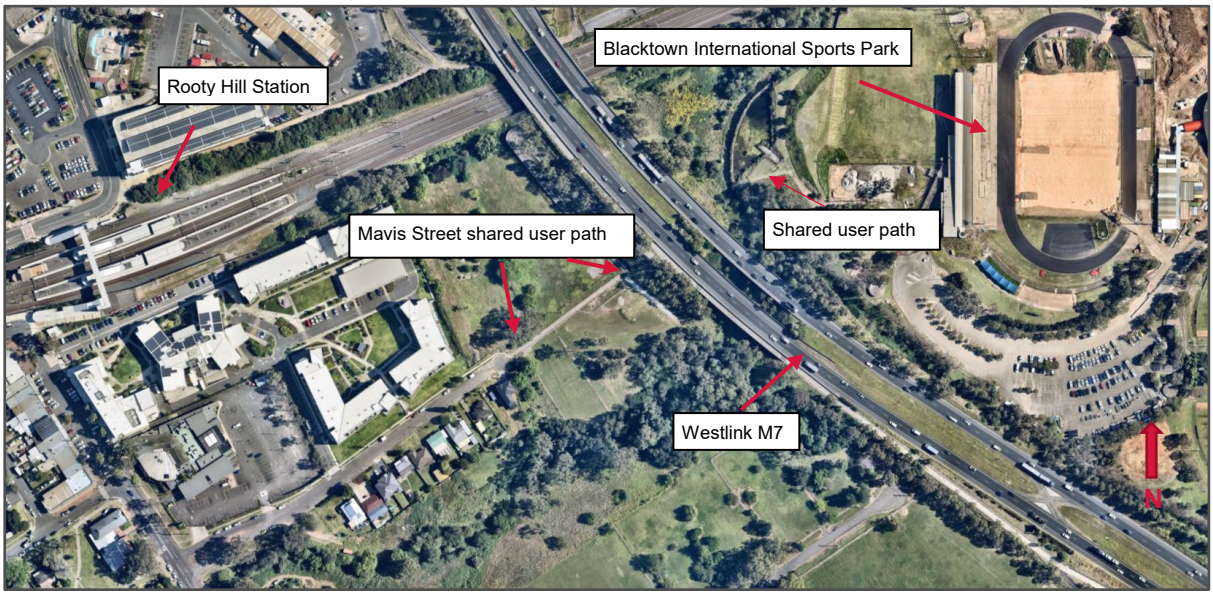


Figure 17 | Location of the proposed Mavis Street shared path link (Source: Nearmap 2023)

Submissions

Community and Special Interest Group submissions

Although support was expressed for additional lanes and their potential benefits of reducing congestion, delays and accidents, a number of issues were raised in community submissions including:

- concerns over the merging points at the Northbound M4 exit overlap with the traffic joining the motorway from Old Wallgrove Road
- wider motorway network issues beyond the Westlink M7
- the shared path should remain open and accessible during construction, with proposed construction detours questioned as to their suitability/rideability
- the shoulders of the motorway are used by cyclists training at high speeds and should remain accessible for cyclists
- increased risk of vehicle accidents from increased traffic and the additional lane would encourage speeding
- stopping bay design should be refined to allow heavy vehicles to reach motorway speed
- the provision of a rest area

- request for a connection from Middleton Ave to Aviation Road out of the Parkbridge Estate
- request for upgrades of on and off-ramps onto the motorway to address queuing
- Wallgrove Road may experience increased traffic volumes when the M7 is congested, resulting in poor network performance and accidents
- construction traffic impacts on local roads
- need for improvements to the existing shared path and facilities
- the need for new linkages across the motorway.

Councils

Liverpool City Council noted impacts of the modification on the wider road network that feeds into the Westlink M7, and recommended a connection of Middleton Drive with Aviation Drive at Elizabeth Hills be delivered as part of this project, and the shared user path be grade-separated at this location. Council recommended detailed construction traffic management and pedestrian and cyclist management plans be prepared in consultation with Council and the community to manage construction impacts.

Fairfield City Council requested the Proponent commit to undertaking wider network upgrades to reduce the impact to users before the opening of the new M7 lanes. Council also requested consideration of the operational impacts of the motorway and opportunity for accessibility of freight movements from adjacent industrial areas. Regarding construction traffic impacts, Council noted it did not support the proposed extent of impacts within its LGA. Council recommended it be consulted during preparation of the construction traffic management plan, and requested further information regarding closures of the M7 shared user path.

Blacktown City Council noted improvements to on and off-ramps to the motorway would improve access to the Western Sydney Airport. Specific actions requested by Council include widening the Westlink M7 through to the M2, and additional on-ramps to increase access for communities. Connections between the shared user path and Richmond Road were also requested.

Consideration

Impacts on surrounding road networks are unavoidable due to future traffic growth, but can be managed

Councils expressed concern with the impacts that the widened motorway would have on the surrounding road network, as more traffic seeks to access the motorway, resulting in decreased performance of surrounding intersections. The Proponent identified that the modification would accelerate the need to provide solutions to the road networks around the Westlink M7, particularly in response to regional growth in population and employment.

Increased road capacity is needed within the region, both on the motorway corridor and surrounding road network. The Proponent indicated benefits to travel time provided by the additional lanes within the motorway are unlikely to be reduced from the increased growth in the region and additional vehicles seeking to access the motorway.

There will not be a significant reduction in the performance of most intersections. However, where significant reductions will occur (see **Table 9**), the Proponent has committed to identifying solutions during detailed design which would improve network performance. Notwithstanding, the Department has recommended a condition requiring the Proponent prepare a Road Network Performance Plan.

The Plan would be prepared in consultation with councils, 12 months prior to the operation of the widened motorway. The Plan must include updated traffic modelling and an assessment of the road network performance at the intersections where a significant reduction in performance was identified in the Modification Report. It must also identify measures for enhancing performance and a timetable for implementation.

In addition, the Proponent must undertake Operational Road Network Performance Reviews within 12 months and at five years after the commencement of operation. The Review will consider the performance of the intersections, while confirming the adequacy of the mitigation measures implemented.

The Department is satisfied that this Plan and subsequent reviews will enable active and considered management of the impacts on the surrounding road network as a result of the modification and future population growth in Western Sydney.

Construction traffic would impact motorists using the motorway and detours would increase traffic using the wider road network

Traffic impacts associated with the construction of the modification are unavoidable and will need to be proactively managed, to ensure impacts to road users and communities are minimised. When bridges are being widened during construction, traffic using the motorway will be detoured via State and regional roads.

One detour proposed in the Modification Report (shown in **Figure 15**) proposes sending southbound motorway traffic via a local street, and requires all vehicles to use a roundabout in a residential area not adequately sized for all vehicles that use the motorway. The proposed detour is not suitable for heavy vehicles and would result in unacceptable impacts to both traffic and noise. As such, the Department has proposed a condition which prevents the use of that proposed detour.

Widening the Westlink M7 will not preclude delivery of the Middleton Drive extension project

Several community submissions, and Liverpool City Council, identified the unfinished connection between Middleton Drive and Aviation Road under the motorway corridor (see **Figure 18** and **Figure 19**). One community submission identified that the current arrangement for accessing the northern end of Middleton Grange via a single road was not suitable for emergencies such as bushfires.

Figure 18 | Middleton Grange access and future connection to Aviation Road (Source: Nearmap 2022)

Figure 19 | View from Middleton Drive looking east to Westlink M7 bridge and Aviation Drive (Source: DPE site visit 2022)

Liverpool City Council completed a strategic concept design for the Middleton Drive extension, and requested it be delivered as part of this modification, including upgrade of the shared user path to be grade separated at this location. Council noted the road is a local road, and has proposed an agreement with the Proponent and operator of the Westlink M7 which sets out the liability and responsibility for the delivery of the road. The Proponent did not directly respond to the next steps proposed by Council, only referring to connections provided from Middleton Drive to the shared path

since 2011. The Proponent committed to generally improving active transport through future strategic planning.

The Department recognises the potential positive outcomes that the delivery of the Middleton Drive – Aviation Road connection would provide to the community by increasing access points to the suburb. Although this connection could provide additional connectivity to the Middleton Grange estate, further investigations are required to the determine the suitability, design, and interface with the shared user path and the existing motorway. As the connection offers a number of benefits, the Department has recommended that the proposed Westlink M7 widening program not preclude delivery of a future connection to Middleton Grange.

Prohibition of cyclists along the motorway corridor will reduce the total active transport infrastructure available, however, cyclist access is available on the adjacent shared user path

A community submission raised concerns about the future closure of the motorway's shoulders to cyclists, as this would impact cyclists training at high speeds as the existing shared user path does not allow them to travel at the speed needed. Bicycle NSW highlighted that while some of its members may prefer to cycle on the motorway shoulder, best-practice would be to separate cyclists from high-speed traffic.

The Submissions Report acknowledged the impacts to cyclists, but concluded that safety implications of crossing two lanes of high-speed traffic at a significant interchange in Sydney's motorway network outweigh the possible benefits of retaining cycling in the motorway corridor.

The Department notes the significant safety risk that cyclists face if allowed to continue to cycle along the widened motorway, particularly where the Westlink M7 off-ramp to the M4 will be widened, and force cyclists to cross two lanes of traffic at the highly trafficked Light Horse Interchange. Closure of the motorway to cyclists during both construction and operation is supported by the Department, which notes the existing shared path alongside the motorway provides a safe route for cyclists.

Additional active transport infrastructure is required to enhance the current shared user path, mitigate the impact of closure of parts of the path during construction, and permanent removal of cyclist access to the motorway shoulder

Several submissions requested that additional active transport infrastructure be provided to enhance the shared user path that runs alongside the motorway. Some submissions, including Bicycle NSW, noted the shared user path was dated and lacked connections and enhancements (such as bubblers, bike pumps, toilets, and shared areas).

The modification does not propose any significant enhancements or additions to the existing shared user path adjacent to the Westlink M7, and noted that impacted sections of the shared user path would be returned to their current state. The Proponent stated that connections to the shared user path had been provided since the opening of the project in 2005, with no further connections proposed as part of the modification. Although no enhancements or upgrades are proposed, the Proponent has committed to investigating ways to improve the flood immunity of the shared user path at Ash Road, in response to recommendations made by Liverpool City Council.

The Department notes the desire of the community, organisations, and local councils to enhance the shared user path alongside the Westlink M7. The Secretary's Environmental Assessment Requirements required assessment of the existing network and proposed connections as part of the modification. This was not satisfactorily addressed in the Modification Report. The Submissions

Report included details on new connections to the shared user path provided since the opening of the project, however it did not assess current network usage or any new connections.

Based on this, the net-loss of active transport infrastructure through the prohibition of cyclists on the motorway shoulders, and to address community concerns regarding the lack of facilities along the existing shared path (such as water bubblers, shaded rest areas), the Department has recommended improved facilities be provided in consultation with bicycle user groups and relevant local council(s).

The Mavis Street shared path link must be delivered before construction commences, unless an alternative timeframe is agreed with Blacktown City Council

Blacktown City Council advised that the Mavis Street cycle link is ready to be constructed. However, it is unable to undertake works within the motorway corridor until such time that it has entered into an interface agreement with Transurban and TfNSW.

The delivery of this active transport link is supported, as it would provide a community benefit and improved connection to the Blacktown International Sports Park. In addition, the Department has provided funding to Council through a separate grants scheme to commence this work.

To ensure the Mavis Street cycle link can be delivered, the Department has recommended a condition that requires the Proponent provide Blacktown City Council unrestricted access to this area until 31 December 2023, as Council indicated it can deliver this link in a six-month window. Should Council be unable to provide this link before 31 December 2023, an alternative arrangement must be agreed to with the Proponent, as it intends to commence construction in this area in early 2024.

6.3 Noise and vibration

Construction of the project will exceed noise management levels (NMLs) set out in the *Interim Construction Noise Guideline* (ICNG) (DECC, 2009) during standard hours and out-of-hours work (OOHW). This will cause greatest impact where the Westlink M7 is near residences. Out-of-hours construction noise impacts are unavoidable, due to constraints associated with construction activities in a live road corridor, which require partial or full road closure and can only be undertaken at night to reduce traffic disruptions on an existing motorway. Detours as a result of these road closures may also transfer traffic noise impacts to the adjoining road network.

The Proponent will manage construction noise impacts through the implementation of path controls (e.g. shielding equipment or erecting structures to shield receivers), selection of quieter equipment, scheduling high noise impact activities during the day, provision of respite periods and provision of alterative accommodation for long duration out-of-hours works. A Construction Noise and Vibration Management Plan will provide further detail on specific noise generating activities and locations, and how noise will be managed and mitigated. The Department has recommended conditions to manage impacts associated with OOHW, including coordination of utility management works, active community engagement, provision of respite periods, mitigation of noise due to detours, and early implementation of at-property architectural noise treatments.

As the M7 is an operational motorway, many receivers are already noise affected. However, additional receivers have been identified due to the increased operational traffic noise impacts associated with the project. To reduce these impacts, the Proponent has proposed low noise pavement, additional and upgraded noise walls, and at-property architectural treatment at eligible residences. To ensure these measures are effective, the Proponent is required to review predicted

operational noise levels during detailed design, to determine the final noise mitigation measures. Comprehensive noise monitoring is required within twelve months and at five years (should low noise pavement be used) after opening, to confirm performance of mitigation measures, and whether additional measures may be required.

Issue

Significant OOHW are required to reduce disruption to current operation of the Westlink M7

Most construction activities would need to be carried out outside standard construction hours (as defined in the ICNG) during the evening (6:00 pm – 10:00 pm, Monday to Sunday) and night (10:00 pm – 7:00 am Monday to Saturday, and 10:00 pm – 8:00 am Sunday). OOHW are required for worker safety constraints associated with working within a live motorway corridor and to limit impacts on traffic during peak periods of the day.

Construction activities likely to be undertaken out-of-hours include, but are not limited to:

- bridge works
- utility relocations and connections
- traffic controls and traffic diversions
- asphalt works and line marking
- use of construction ancillary facilities.

A strong justification for each instance of OOHW is still required, as OOHW is often most disruptive to communities near these works.

As some construction activities require temporary closures of the Westlink M7, existing traffic would be detoured via the adjoining arterial road network. The traffic noise assessment predicts relative increases in traffic noise of 2-8 dB(A), particularly during at night, as a large volume of Westlink M7 traffic (both cars and heavy vehicles) would be required to use the arterial road network.

Construction noise impacts are unavoidable, but can be mitigated and managed

Noise impacts are expected during construction, particularly from earthworks and bridge widening. Exceedances of the day and night-time NMLs are typical for linear infrastructure projects of this scale. The highest noise impacts will occur at NCAs 9, 11, 14, 25, 30 and 31 (see **Figure 20** for the NCA locations) where noise levels would be up to 20 dBA above NML during standard hours and highly noise affected (experience construction noise levels above 75dBA) during out-of-hours works. NCA 32 would also experience noise levels of 10-20 dBA above the NML during standard hours, and highly noise affected during out-of-hours works.

Fifteen out of the 34 Noise Catchment Areas (NCA's) would be 'highly affected' (impacts of 75 dBA and above) by construction activities at different times during staging of activities. **Table 10** details the number of residential buildings at which noise levels may exceed NML across the study area.

As most construction activities will be undertaken as OOWH, these activities would have sleep disturbance impacts on residents that reside near the Westlink M7 corridor. The types of activities that would have the greatest impact include earthworks, site establishment and enabling works, pavement works, and finishing works.

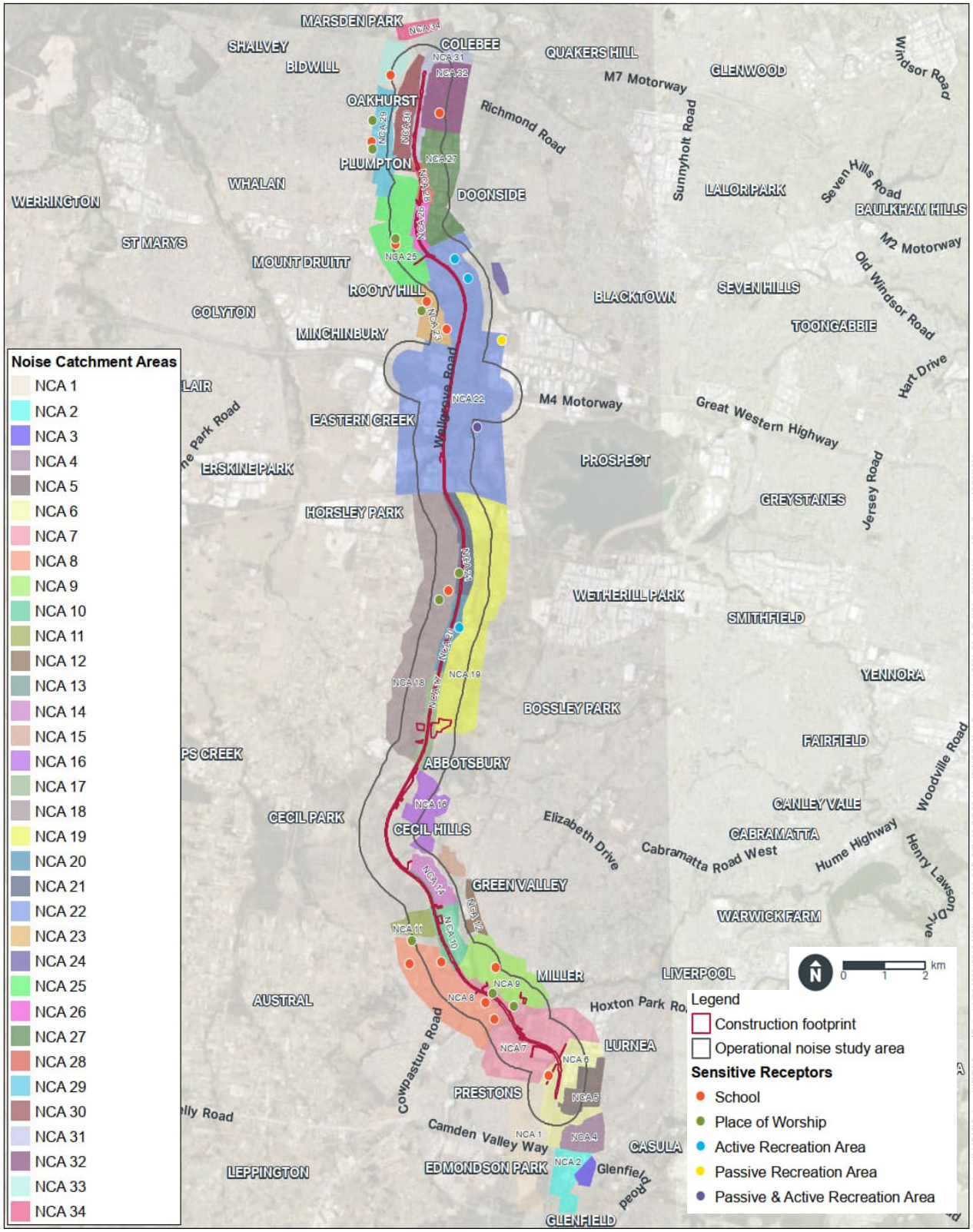


Figure 20 | Noise Catchment Areas and Sensitive Receivers (Source: Submissions Report)

Table 10 | Number of residential buildings at which NMLs are predicted to be exceeded during standard and outside standard construction hours (Source: Modification Report)

Scenario	Standard Construction Hours			Outside Standard Construction Hours			Highly Affected Residences (>75dB)
	Above NMLs (1-10dB)	Clearly audible-Moderately intrusive (11-20 dB)	Highly Intrusive (>20dB)	Above NMLS – may be noticeable (1-5dB)	Clearly Audible - Moderately Intrusive (6-25dB)	Highly intrusive (>25dB)	
Site establishment and enabling works	1,109	96	27	832	2,360	152	67
Earthworks	1,364	779	51	374	1,671	532	179
Bridge works	856	96	0	283	2,038	320	3
Drainage works	40	37	0	429	300	1	No highly affected residences
Pavement works	304	16	15	1,080	1,677	0	9
Noise wall works	318	82	8	389	916	389	66
Finishing works	464	49	13	1,063	1,772	62	36

Most construction activities would be staged, meaning not all receivers would be affected simultaneously, thus limiting the number of affected receivers at a point in time. Due to the nature of linear upgrades, construction noise exposure at each receiver reduces as works progresses along the alignment. Particularly noisy activities, such as the use of impact piling rigs, road and concrete saws, and rock hammers, would be scheduled (where feasible and reasonable) around times of high background noise, noting that in many scenarios this may not be possible. Blasting is not proposed as part of the modification.

Construction activities may have vibration impacts on sensitive water supply infrastructure

Vibration generating activities would, in most cases, be at a distance which would not cause damage to structures or disturbance to residents. However, there is potential for vibration generating activities (excavation works) to impact on the State heritage listed Upper Nepean Canal System, in particular vibration during construction may impact the stability of the air shaft, No. 4 Shaft.

Detoured road traffic will increase traffic noise levels at residences along the detour routes

There will be times when the Westlink M7 is closed to traffic at night to enable widening works. However, north and southbound detours will not occur simultaneously. Traffic will be re-routed via a series of detours through the adjoining road network. Construction vehicle traffic is not expected to increase traffic noise levels by more than 2 dB(A) on most detour routes. However, on some routes, there will be a relative increase in noise by 2-8 dB(A). While relative increases may be significant, in many cases receivers are already impacted by traffic noise from the Westlink M7.

Operation of the modification will increase traffic noise levels, which will require mitigation

Sensitive receivers (particularly residents) near the motorway already experience road traffic noise. The Proponent has assessed noise impacts directly associated with the modification, noting existing noise issues and provision of mitigation are addressed through the TfNSW noise abatement program.

Inclusion of additional traffic lanes is predicted to increase traffic volumes and result in exceedances of the operational noise criteria in the *Road Noise Policy* (DECCW, 2011) (RNP), with 329 residential receivers, seven schools, seven places of worship, and one childcare centre identified as eligible for consideration of feasible and reasonable noise mitigation measures. Following the implementation of new and extended noise walls, 250 sensitive receivers, seven schools, seven places of worship, and one childcare centre would still experience noise levels above the operational noise criteria and be considered eligible for at-property architectural noise treatment.

Submissions

Community submissions

Community members raised concerns about construction and operational noise including:

- request for additional noise walls
- concern that the widening would exacerbate current noise impacts
- the use of compression brakes in residential area by heavy vehicles

Councils

Liverpool City Council noted that if management measures are implemented correctly, it is unlikely the modification would result in vibration damage to heritage or other buildings. Traffic noise was a key concern, with Council noting the project could increase road traffic noise by more than 2 dB(A) along detour routes during construction.

Council indicated that, since construction of the motorway, there has been an increase in residential developments alongside the motorway, and suggested upgrades and extensions to noise walls near these developments. Council noted there is a gap between noise walls at Elizabeth Hills between Dobroyd Drive and Aviation Road, and has received many complaints from residents near this location. It also noted community concerns about operational noise at the intersection of the Westlink M7 and M12, with a request for additional noise walls.

Fairfield City Council requested property details of affected receivers (which was declined by the Proponent due to privacy reasons) and questioned whether operational noise levels would exceed critical limits.

Blacktown City Council noted the Proponent has focused mainly on construction impacts of noise, with limited assessment of operational noise impacts to residents around the M7 corridor. Council also noted there is a lack of detail regarding additional noise walls.

Agency advice

EPA advised that while construction-related road traffic is not expected to appreciably increase traffic volumes on the Westlink M7, changed traffic conditions including detouring M7 motorway traffic onto local roads may increase noise and community reaction. EPA noted significant and widespread construction noise impacts, particularly due to out-of-hours work and recommended all feasible and

reasonable noise mitigation and management measures are implemented, highlighting the necessity of continued community engagement.

Water NSW noted that the modification may impact the Upper Canal System; bulk water supply infrastructure, due to construction and operational vibration. Water NSW requested further assessment of potential impacts and the heritage significance of the Upper Canal System.

Heritage NSW shared concerns of potential impacts to the Upper Canal System, particularly a sensitive ancillary structure "Shaft no. 4". Heritage NSW requested an addendum Statement of Heritage Impact (SOHI) to further investigate potential indirect vibrational impacts on components of the structure.

Consideration

Standard construction hours have been adjusted to include Saturday afternoon, to provide flexibility to work scheduling

The Proponent sought to extend the standard construction hours on a Saturday of 8.00 am to 1.00 pm, up until 6.00 pm. The additional 5 hours would provide flexibility in moving forward some construction activities which otherwise would be undertaken of during the evening or night on weekdays. Extended hours benefit the community by reducing the need for OOHW's on a Saturday, as a full day of construction activities can occur during the day. The Department considers that construction on Saturday afternoons is acceptable in this instance, and the Proponent has provided sufficient justification for the extended hours. As such, the Department has recommended the extension in construction hours.

The Proponent also proposed construction hours to be extended and commence at 6:00 am on weekdays (rather than 7:00 am), and finish at 7.00 pm (rather than 6:00 pm). The Department does not consider it reasonable to further extend construction hours where construction activities would be close to residences, and where OOHW programs are already proposed. In addition, the ICNG allows for extended construction hours, subject to activities not generating noise more than 5 dB(A) above the rating background level. The EPA's Environment Protection Licence (EPL) process allows for construction activities to be undertaken outside of standard construction hours where justified. Taking this into consideration, and in the interest of aligning this project with the simultaneous delivery of the M12 (to provide consistency for the contractor/regulators and benefits to the community), the Department has recommended the following construction hours:

- 7:00 am – 6:00 pm Monday to Friday, inclusive
- 8:00 am – 6:00 pm Saturday.

Construction activities will take place during the recommended hours wherever practicable, and the Proponent must provide strong justification for all OOHWs, whether it is subject to an EPL or the Department's OOHW Protocol.

Noise from out-of-hours construction would be managed by active community engagement, respite periods, and noise mitigation measures including early installation of at-property treatment

OOHW's are required for much of the modification, due to the Westlink M7 being a functioning motorway. OOHW's will be prepared in consultation with community and councils, and subject to stringent assessment criteria with further justification and more detailed management. A key challenge of the modification is to maintain high community engagement during construction, which

would lead to the best outcomes. This would also provide opportunities for the community to influence aspects including mitigation and respite periods.

Where possible, noisiest works would be undertaken earlier in the evening, with temporary noise walls used when possible. The Department considers that with recommended conditions, OOHW is in the public interest. OOHW would shorten the overall construction period and minimises disruption to the community and road network during peak periods. OOHW reduces the duration that motorists endure changed traffic conditions during construction, particularly where the modification interacts with local roads in the existing network, reducing the extent and duration of delays. OOHW would also safeguard workers as most construction activities are in a live road corridor and there is reduced traffic during these times.

Specific construction noise criteria will be incorporated into the EPL to regulate OOHW. Where work is not regulated through an EPL, the Proponent must produce an Out-of-Hours Work Protocol, which sets out the process for the approval and management of OOHW. This would require community consultation at each affected location on a regular basis, and implementation of various mitigation measures such as respite offers and periods. Where OOHW results in an unacceptable level of noise (i.e. noise levels exceed NML by 25 dB(A) or are greater than 75 dBA), alternative accommodation is recommended as a mitigation measure, and must be made available to affected receivers.

OOHW would be subject to respite periods, including in response to detour traffic noise, as follows:

- no more than two consecutive evenings and/or nights
- no more than three evenings and/or night per week
- no more than 10 evenings and/or night per month.

The Department has recommended that residences identified for at-property architectural noise treatments due to exceedances of operational noise criteria, be provided treatment pre and early in construction. Early provision of these measures provides additional benefits to residents during the construction works, particularly due to OOHW. At-property mitigation measures are generally provided prior to the commencement of operation, to mitigate operational traffic noise impacts, and will be prioritised for those properties likely to be most affected by construction noise impacts.

Increases in traffic noise along detour routes are expected, and can be managed through implementation of at-property acoustic treatments and limits on the duration of OOHW

Traffic detours will occasionally be in place at night and traffic re-routed through adjacent roads, resulting in increases of between 2-8 dB(A). The increase in traffic, particularly heavy vehicle volumes, may cause sleep disturbance or sleep awakening due to breaking, gear changing, pass by events, and acceleration.

Detours from the closure of the Westlink M7 at night will be subject to the same respite requirements associated with OOHWs. However, other mitigation measures may be required, such as implementation of at-property treatments, to address the increase in traffic noise along the detour. The Department has recommended implementation of mitigation measures prior to construction, where a relative increase in road traffic noise of greater than 2 dB(A) is predicted from traffic detours.

Cumulative construction noise due to the simultaneous delivery of the Westlink M7 widening, M12 construction, and other projects in the area, is not significant

Construction of the widening of the Westlink M7 would occur concurrently with other projects, due to the length of the project, in particular the construction of the M12 motorway at the interface between

the projects (M7/M12 interchange at Cecil Hills). These projects will be delivered simultaneously to minimise disruption and construction fatigue. This would involve shared ancillary facilities and consolidating construction activities under one design and construct contractor.

It is likely that where a receiver is affected by two projects simultaneously, noise from one project would dominate the sound environment: any potential increases in noise, in most cases, would be imperceptible. The Proponent has committed to reviewing cumulative and consecutive noise impacts, and coordinating works with nearby projects, to ensure adequate respite periods are provided to affected receivers. The Department supports this commitment and has recommended the Proponent consider all other significant developments which may cause cumulative and/or consecutive noise impacts to residents when providing respite.

In addition, the Department has recommended implementation of a Construction Monitoring Program, to confirm construction noise levels and procedures, and identify and implement additional mitigation measures where monitoring results indicate unacceptable impacts.

Construction methods will be further investigated during detailed design to minimise potential vibration impacts to the Upper Canal System

The Submissions Report confirmed that there would be no direct impacts to Upper Canal System (in particular, Shaft No. 4), however the Proponent has committed to working with WaterNSW as asset owner, to develop appropriate vibration criteria, monitor vibration levels, and design/implement adaptive mitigation measures in the event of vibration criteria exceedances.

To reinforce the Proponent's commitments, the Department has recommended conditions requiring ongoing consultation with WaterNSW and heritage experts when undertaking any construction activities near the Upper Canal System, including vibration monitoring and management. The vibration limits set out in the industry and regulatory accepted German Standard *DIN 4150-3: Structural Vibration- effects of vibration on structures* is to be followed.

Operational noise impacts would be mitigated with a combination of noise walls, low noise pavement, and at-property architectural noise treatments

To address operational traffic noise impacts, the Proponent has committed to providing a combination of low noise pavement, new and upgraded noise walls, and at-property architectural noise treatments. A hierarchy of noise treatments have been considered with at-source mitigation (low noise pavement) the first measure.

The Proponent has proposed to use open-graded asphalt as the road surface along parts of the alignment, which is a 'quieter' road pavement. Open-graded asphalt may reduce tyre noise levels by up to 3 dB(A), compared to dense-graded asphalt. Although open-graded asphalt provides a noise reduction benefit for tyre noise, this benefit isn't permanent, as performance of low noise pavement degrades over time. As this mitigation measure degrades over time, it needs to be maintained regularly to provide optimal noise benefits. To address the degradation of low noise pavement, the Department has recommended that, should low noise pavement be used as a form of traffic noise mitigation measure, it must be maintained for the life of the project, to ensure optimal performance and that the noise traffic objectives of the RNP are met. In addition, supplementary traffic noise monitoring is required after the fifth year of operation to monitor the effectiveness of the low noise pavement.

Should the Proponent decide to not use low noise pavement, other mitigation measures will need to be provided, such as higher / longer noise walls, or at-property architectural noise treatments. To

ensure optimal mitigation of operational traffic noise, the Department has recommended the Proponent undertake an Operational Noise Review (ONR) that comprises of additional operational noise assessment and modelling during the detailed design stage (post approval process). This would include confirming the dimensions and location of noise walls and the number of properties that require at-property treatment. This would then be validated through traffic noise monitoring, once the project is operational. This two-stage approach is common practice for road projects. Validation monitoring would then confirm whether additional noise mitigation measures need to be implemented.

An operational review process must be undertaken to determine the final suite of operational noise mitigation measures, including the scale of noise walls

Community submissions and Liverpool City Council requested new and extensions to existing noise walls to address traffic noise impacts. **Table 11** details the proposed existing noise wall height extensions and new noise walls.

Table 11 | Proposed new and height extensions to noise walls (Source: Modification Report)

Noise Wall	Existing or new noise wall	Proposed height
NW 18 Extension	Existing noise wall to be adjusted	4 metres
NW 33	Existing noise wall to be adjusted	6 metres
NW Elizabeth Hills	Existing non-M7 noise wall to be adjusted	7 metres
NW Middleton Grange	Existing non-M7 noise wall to be adjusted	6 metres
NW Skipton Lane	New noise wall	5 metres

The Department considers that proposed augmentations and new noise wall would largely address community and council's concerns about operational traffic noise at adjacent receivers. The Proponent will be required to undertake an ONR to determine the final design and scale of the noise walls.

Further, inspection of the existing noise walls along the project alignment will determine whether they meet expected noise performance outcomes. Should inspections identify that the existing noise walls are not operating at optimal performance, they will need to be either replaced, repaired, or upgraded (increased height or length) by the Proponent, prior to the operation of the modification.

Compliance with operational traffic noise criteria will be subject to extensive monitoring and reporting, and further mitigation measures implemented where necessary

The Department has recommended monitoring operational traffic noise to compare actual noise performance of the project against the traffic noise performance predicted as part of the ONR. The operational traffic noise validation process will need to be undertaken within one year of opening of the additional lanes to traffic. If low noise pavement is used, validation will also be required at five years, to determine the level of performance of the low noise pavement.

Traffic noise monitoring data (combined with simultaneous classified traffic counts (light and heavy vehicle speed and volumes) and community complaints) will aid in validating the noise assessment.

The Department also recommended the preparation of an Operational Noise Compliance Report, which documents the results of the operational noise monitoring, reviews the effectiveness of the implemented noise mitigation measures, and identifies any additional measures required to achieve operational noise compliance.

6.4 Soil and water

The water quality of nearby waterways could be impacted by controlled discharges during construction, and stormwater runoff during operation, if these are not appropriately managed. The Department notes that stormwater runoff during operation would be minor, with similar water quality impacts to those generated by runoff from the existing M7 Motorway. The performance of existing stormwater retention basins would be assessed during detailed design and, if required, upgraded to meet current standards.

The proposed works are located within the Cabramatta Creek, Ropes Creek, and Eastern Creek catchments. Land use within these catchments largely comprises medium-density residential, industrial, and commercial development. Consequently, waterways traversed by the project are subject to urban pollution and are generally in poor quality. The Proponent has committed to continuing to meet the water quality objectives at waterways where they are currently being achieved, or improve water quality at waterways where water quality objectives are not being met. The Department considers that potential construction and operational impacts to water quality are relatively minor and would be appropriately managed by the Proponent's proposed mitigation measures and recommended conditions.

Issue

Construction activities could result in erosion and mobilisation of contaminated sediment, potentially impacting surface water quality of receiving watercourses

Impacts to surface water quality in nearby watercourses may occur from erosion and mobilisation of sediment (and associated nutrients, heavy metals and toxicants) during vegetation clearing, earthworks, and temporary stockpiling of spoil. The Modification Report identified sediment retention basins would not be required to manage erosion and sedimentation impacts during construction, as the average annual soil loss would not exceed threshold values, and does not trigger the need for a sediment retention basin. As a result, alternative local erosion and sediment control measures have been proposed to control sedimentation, such as geotextile filers, installation of local sediment controls upstream of stormwater inlet pits, and sandbags to create local check dams.

Existing on-site detention basins will manage runoff from the widened motorway

The operation of the modification could impact surface water quality associated with increased runoff from newly paved road surfaces. These impacts would be comparable to those already present from existing Westlink M7 operations. Runoff from the Westlink M7 within the Ropes Creek, Elizbeth Drive, and Cabramatta Creek catchments is currently controlled by a series of on-site detention basins that are typically provided in combination with water quality basins. These basins were originally sized to accommodate the additional paved area due to the potential future widening of the motorway. The

Proponent proposes to use existing on-site detention basins to manage stormwater runoff during the operation of the project. The size and performance of the existing stormwater controls would be assessed by the Proponent during detailed design.

The Modification Report identified that total nitrogen and total phosphorus concentrations exceeded guideline values set out in the water quality objectives at several locations across the Westlink M7 in the Ropes Creek, Elizabeth Drive and Cabramatta Creek catchments. Exceedances of total nitrogen and total phosphorus would likely still occur in receiving watercourses during operation.

Submissions

Council

Liverpool City Council commented on the management of soils, stormwater, and water quality impacts. Specifically, Council recommended that a Construction Management Plan is prepared to manage all environmental aspects of the development's construction.

Government agency advice

EPA recommended that appropriate assessment criteria are adopted for treated runoff discharged during construction, including the *Australian and New Zealand Guidelines for fresh and marine water quality* (ANZG, 2018) and *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPE, 2021).

EPA indicated that the *Surface Water and Flooding Impact Assessment* (SWFIA) did not consider the potential need for different erosion and sediment controls in areas of contamination. Specifically, the SWFIA did not propose sediment basins or other possible options to deal with potentially contaminated runoff.

EPA identified that stormwater containment basins should be considered to prevent contaminated stormwater from entering watercourses. In relation to operational stormwater quality controls, EPA recommended the use of current assessment criteria.

DPE Water indicated work within waterfront land must be undertaken in accordance with the *Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018)*. DPE Water highlighted that appropriate scour protection should be implemented to mitigate increased flow velocities from outlets.

Consideration

Sediment retention basins or sumps would be used to prevent potentially contaminated stormwater entering watercourses during construction

In response to EPA concerns, the Proponent committed to using sediment retention basins or sumps to control runoff during construction.

Additional mitigation measures committed to in the Submissions Report included:

- enhanced sediment and erosion controls in areas where it is identified that contamination poses a risk to surface water quality
- monitoring of surface water quality in areas identified as being of moderate to high contamination risk.

The Department recommended supplementary conditions to manage the risk of potentially contaminated runoff entering watercourses. These conditions require local erosion and sediment

control measures to manage stormwater discharges can only be used in lieu of sediment retention basins or sumps where it is demonstrated that:

- such measures would adequately manage the risk of erosion and sedimentation in accordance with Volume 1 and 2D of *Managing Urban Stormwater: Soils & Construction* (4th edition, Landcom 2004), commonly referred to as the "Blue Book"
- contaminated soils do not pose a risk to water quality in receiving waterways.

The Proponent must obtain approval from the Planning Secretary before implementing alternative local erosion and sediment control measures.

Runoff would be collected and treated to achieve discharge criteria

The Department acknowledges EPA's concern that relevant assessment criteria for proposed discharges have not been adopted, however proposed discharges during construction would be regulated by the EPA under an EPL, with discharge limits informed by a water pollution impact assessment prepared in consultation with the EPA.

During construction, the Proponent must meet the NSW Water Quality Objectives (ANZG, 2018) where they are being achieved in receiving watercourses, and or contribute towards achieving the NSW Water Quality Objectives over time where they are not being met, unless a current EPL has different requirements. The Proponent has committed to monitoring and treating collected runoff as required to meet discharge criteria, prior to its release into receiving watercourses.

The Department considers water quality impacts associated with controlled discharges during construction would be adequately managed by licensing requirements and recommended conditions.

Operational impacts on water quality are expected to be minor, and would be managed by existing controls and additional mitigation measures

In response to EPA concerns that operational stormwater discharges would not meet current surface water quality guidelines, the Proponent has committed to assessing the performance of the existing operational stormwater quality controls, to manage runoff from both existing and widened carriageways during detailed design to meet requirements for:

- water quality objectives to continue to be met at waterways where they are being achieved, or
- existing water quality to be improved at waterways where the water quality objectives are not being met.

If these requirements are not achieved, a review of measures would be undertaken to improve water quality outputs from the Westlink M7 over time, including assessing the potential benefits and feasibility or reasonableness of converting some existing water quality control ponds to bioretention basins, which are highly effective in the retention of total phosphorus and total nitrogen, in consultation with the EPA.

The Department has recommended conditions relating to operational stormwater. These require that the modification be operated to maintain *NSW Water Quality Objectives* (ANZG, 2018), and, where relevant, the *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPE, 2022) where they are achieved, and contribute towards achieving assessment criteria over time where they are not being met.

The Department considers that operational risks to surface water quality would be appropriately managed by existing stormwater controls, implementation of recommended conditions, and the mitigation measures committed to in the Modification Report and Submissions Report.

6.5 Other issues

Table 12 | Department assessment of other issues

Issue	Findings	Recommendations
Aboriginal heritage	Desktop research and archaeological surveys identified six Aboriginal sites near the construction footprint. The Proponent has committed to actively protecting these sites using temporary fencing. The Department recognises concerns raised by Gandangara Local Aboriginal Land Council regarding the impact of the removal of endangered Plant Community Types (PCT) at the Maxwell Creek Compound on Aboriginal cultural values.	The Department understands the project will not directly impact Aboriginal items, as all identified Aboriginal sites are located outside the construction boundary. To ensure Aboriginal sites outside the construction boundary are not impacted, the Proponent is required to prepare and implement an Aboriginal Cultural Heritage Management Plan. Impacts on PCT's 724, 1737 and 1800 at the Maxwell Creeks Compound must be limited, to the greatest extent possible. Impacted riparian corridors must be revegetated with suitable Indigenous species (and, where possible, using the impacted PCT) in consultation with the relevant Local Aboriginal Land Councils (LALCs). The Design and Landscape Plan (DLP) must detail how impacted PCT's with significant Aboriginal cultural values at Maxwell's Creek would be replanted with Indigenous plantings.
Air quality	During construction, there would be local dust impacts from activities, particularly during clearing and demolition, excavation, materials handling, stockpiling and compaction. Dust generation from these activities is common with large linear infrastructure projects, and can be managed by implementing industry standard measures such as using water carts and other dust suppressants. The operation of the modification would have variable impacts on air quality due to concentrations of vehicle emissions along the alignment. Variations of	All practicable measures must be implemented to minimise and manage the emission of dust and other pollutants (including odours) during construction.

	pollutants include carbon monoxide (CO), nitrogen dioxide (NO2), volatile organic compounds (VOCs), and particulate matter (PM10 and PM2.5). There is potential for small, isolated increases in pollutant concentration, although this would be minor in the context of relevant EPA criteria (including the *Air Quality Impact Assessment Criteria (NSW EPA, 2017)*, and does not present an unacceptable risk to human health. Regardless of short-term variations, a decrease in pollutants is expected during operation due to changes in vehicle standards.	
Biodiversity	Most project widening is within the existing median of the Westlink M7, as opposed to shoulders where most native vegetation occurs. The median consists of mainly exotic grass, eucalypts and shrubs, established during construction of the existing motorway. This vegetation is not suitable for use by threatened species. The project would remove 7.48 hectares (ha) of modified native vegetation containing seven PCTs, aligning to six Threatened Ecological Communities. Of this, 4.45 ha of native vegetation must be offset under the *Biodiversity Conservation Act 2016* (BC Act). Potential construction impacts to threatened fauna habitat would be limited to bridge works. The Biodiversity Development Assessment Report (BDAR) identified the removal of 2.31 ha of foraging habitat for the Southern Myotis, which must be offset under the BC Act. While the species was not observed during the microbat assessment, Southern Myotis was presumed to be present, given that the field survey occurred outside of the recommended period of detection. The Proponent has committed to undertake additional field surveys to confirm whether the Southern Myotis is using the subject land for its foraging purposes.	The Proponent must retire 67 Ecosystem Credits. 33 Species Credits would require offsetting under the BC Act. The Proponent must provide a net increase in the number of replacement trees at a ratio of 2:1, that are not subject to offsetting under the BC Act. A Vegetation Management Plan (VMP) must be prepared by a qualified ecologist, to inform revegetation of creek-side vegetation (including areas of River Flat Eucalyptus Forest). Prior to works, additional field surveys for Southern Myotis must be undertaken, to determine whether any breeding, roosting and/or foraging habitat is located within the construction footprint. Survey results must inform the preparation of the Construction Flora and Fauna Management Plan and the Microbat Management Plan. If additional surveys identify additional impacts to the Southern Myotis, a revised BDAR must be prepared that updates offset credits.
Climate change and greenhouse gas	The Proponent identified an increased likelihood of extreme weather events due to climate change during construction and operation (in both the short and long term), which would pose a low-medium risk for the modification. The Department has considered the Proponent's proposed mitigation and adaptation measures and accepts these address the risks of climate change.	The Proponent must prepare a Sustainability Strategy to achieve a 'Design' and 'As built' rating of Excellent, under the Infrastructure Sustainability Council infrastructure rating tool.

	The modification would generate greenhouse gas (GHG) emissions during construction and operation. The Proponent has committed to reduce GHG emissions where possible and use GreenPower and/or other renewable energy sources with a target for a minimum of 20% renewable energy sourced electricity during construction and 100% during operation.	
Contamination	There is potential for the presence of contaminated soils and groundwater in the project area due to former land uses (prior to construction of the Westlink M7). These include demolition of buildings that contained hazardous building materials, former market gardens, past industrial land uses, service stations, and waste management facilities. Sources of contamination associated with the Westlink M7 include areas of potential fill with unknown origin and illegal dumping. Potential areas of contamination could have an adverse impact on human and ecological health if disturbed during construction or left in place during operation. To manage contamination impacts during construction, the Proponent proposes to undertake detailed site investigations (DSI's), prepare and implement a Soil and Water Management Plan, and implement procedures for the management of saline soils and potential inland acid sulfate soils. Impacts during operation would be managed by an Operational Environmental Management Plan, and the assessment of redundant construction areas for future land uses. Contaminated groundwater may also be encountered during bridge piling work, which would need to be dewatered. If not managed appropriately, this could result in ecological and human health impacts. The Modification Report notes any extracted groundwater is expected to be disposed of off-site.	Detailed site investigations (DSI's) are to be undertaken in areas identified as moderate or high-risk contamination. If a DSI confirms the areas are of or identifies moderate or high risk contamination, an NSW EPA-accredited Site Auditor must be engaged to provide independent oversight to ensure that any risk is appropriately managed. A Remedial Action Plan and accompanying Section B Site Audit Statement(s) must be prepared. Site Audit Statement(s) and accompanying Site Audit Report(s) will be required to confirm the lands are suitable for the intended land use. An Unexpected Finds Procedure must be prepared before commencement of work and be implemented if unexpected contamination or asbestos is encountered during work. Any contaminated groundwater extracted from excavations during piling must be disposed of at a licensed waste facility.
Flooding	Existing on-site and regional detention basins were designed to contain the 1% AEP design storm event and mitigate impacts on the natural hydrology of the catchment, for all storm events up to 1% AEP in magnitude. The project would rely on these existing detention basins to manage potential flood impacts. *Construction*	Prior to undertaking updated flood assessments at the detailed design stage, the Proponent must consult DPE EHG to ensure the most up to date flood studies and data for Cabramatta Creek Catchment are used.

	The greatest potential for adverse impacts on flood behaviour associated with construction is associated with: • temporary access roads and working platforms required to widen existing bridges over creeks could obstruct the conveyance of flow, which may then impact the extent and depth of inundation and flow velocities in the creeks and their overbank areas; and • ancillary facilities, stored materials, and perimeter fencing have the potential to obstruct the conveyance of floodwater or displace floodplain storage. *Operation* Adverse flooding impacts associated with operation of the modification include: • increase in the rate and volume of runoff from the widened road pavement, which may impact flooding patterns in the receiving drainage lines downstream of the operational footprint • obstruction caused by the proposed additional piers to support the widened bridges, which has the potential to impact on flooding patterns and velocities in the drainage lines they cross. Mitigation measures proposed during construction include detailed construction planning, locating construction ancillary facilities outside high hazard flood areas (based on 1% AEP flood), flood emergency management measures, and locating spoil stockpiles in areas not subject to frequent inundation by floodwater. Measures to be adopted during operation include confirming the operational impact of the proposed modification on flood behaviour during detailed design, designing the modification to avoid adverse impacts on residential, commercial, and industrial development during a 1% AEP event, scour protection, and energy dissipation measures to manage increases in flow velocities and flood emergency management.	The modification must be built to limit impacts on flooding characteristics in areas outside the project boundary during any flood event up to and including the 1% AEP flood event.
Hazards and risk	There are potential hazards and risks associated with the storage, handling and transportation of hazardous and dangerous goods; damage to, or disruption of,	No additional conditions are recommended.

	underground utilities and services; and the potential to disturb contaminated land. There are also natural hazards such as flooding and bushfire risk at construction sites. The Department considers identified hazards and risks during construction can be managed by adhering to relevant regulations, policies, standards and legislation, and implementing emergency management plans as relevant. Consultation with utility providers would continue during detailed design and construction, to mitigate any risk of unplanned and unexpected disturbance of utilities. Identification, assessment, and mitigation measures related to hazard and risk are addressed through consideration of other issues such as traffic and transport, flooding, climate change, and sustainability. Potential operational hazards and risks generally relate to traffic incidents. These are also managed through implementation of relevant standards, and emergency management plans and response procedures developed specifically for the operation. During operation, there may be a decrease of some hazards and risks, such as by enhancing the Westlink M7 as an effective bushfire buffer, due to the removal of vegetation and sealing the existing median strip. The operation and increased capacity of the Westlink M7 may also provide greater access to the surrounding area in an extreme event.	
Non-Aboriginal Heritage	No direct impacts to heritage listed items are expected due to the proposed widening. Heritage items were identified near the motorway, including the Blacktown Native Institution historic site and the Rooty Hill historic site. Works near both these heritage items would be contained in the existing median area, and therefore there is no direct or indirect impacts to either of these sites. The Proponent identified potential indirect vibrational impacts to the water supply infrastructure and heritage-listed Upper Canal System around Cecil Hills. The Canal passes under the motorway in a tunnel in this section. The Upper Canal	The Department is satisfied that through the Proponent's continued consultation with WaterNSW, heritage experts, and recommended conditions relating to vibration, impacts to heritage items can be managed. The potential for vibrational impacts related to the Upper Canal System are considered in **Section 6.3**.

	System and notably “Shaft No. 4” may be impacted by vibration during construction and operation.	
Place and design	The modification would have visual impacts and temporarily change the landscape character due to construction works along the alignment and placement of ancillary facilities adjacent to the motorway, and permanently during operation as a result of road and bridge widening. Visual impacts from construction are often unavoidable. Proposed mitigation measures include landscaping and vegetative screening of ancillary facilities; designed in context and with Country. Once the widened Westlink M7 is operational, the absence of tree canopy and vegetation between the carriageway bridges where the motorway traverses’ riparian corridors would be the most visually prominent change. This would result in an overall hardening of the landscape and view within the Westlink M7 corridor. The Proponent has committed to replanting trees, shrubs, and grasses with Indigenous and riparian species where feasible. The design and layout of the Light Horse Interchange artwork (at the M4-M7 junction) would be highly affected by the modification. The commemorative garden, named in honour of Australia’s mounted military units, would be reinstated in consultation with the Returned & Service League (RSL), council, and community.	The Proponent must prepare a Design and Landscape Plan. This Plan is to be informed by a design review process undertaken by TfNSW’s Urban Design, Roads and Waterways Group, and an independent member from the NSW State Design Review Panel nominated by the NSW Government Architect. The review will include coordination of the M12 interchange (and associated artworks and sculptures) and reinstatement of the Light Horse interchange at the M4-M7 junction. A condition has been recommended requiring the Proponent to prepare a vegetation management plan to identify areas to replant with local provenance native species from the area, rehabilitation measures for each area to be rehabilitated, and specific measures to address weed management, erosion and sediment control/bank stabilization.
Property and land use	The Westlink M7 traverses a variety of land uses in three local government areas. Main impacts to property and land use occur during construction where temporary construction support sites would be established outside the existing corridor. The Proponent has committed to returning leased land that is impacted during construction to its pre-construction condition. Advice from agencies raised concerns regarding impacts upon the Upper Canal System and the Western Sydney Regional Park.	The Department has recommended conditions requiring the modification not impact on, and maintain access to, the Upper Canal System. The Western Sydney Regional Park must not be used for access, with demarcation of the construction footprint to avoid accidental encroachments into the Western Sydney Regional Park.

	During operation, some land acquisition will be required where bridge piers are required. The Proponent has identified that a portion of land is Crown Land currently subject to an Undetermined Aboriginal Land Claim. In response, the Proponent will refine the design of the modification to confirm the acquisition requirements, and consult relevant stakeholders and landowners.	
Social	The Social Impact Assessment (SIA) identified a range of social impacts and benefits that would be experienced by a variety of groups, including those who live near the motorway corridor and who use the motorway in their daily lives. The key construction impacts identified in the SIA included changes to: • way of life – through changes to traffic, access and land use (particularly within portions of the Western Sydney Parklands and Hoxton Park Reserve required for construction) • community – changes in amenity, increased sensitivity to changes to access and traffic, and the proposed impacts to the M4 Light Horse Interchange • accessibility – temporary changes to public transport services and the road network during construction, utilities work and construction compounds • health and wellbeing – variance in air quality, noise and traffic from construction actives, and associated stress • livelihoods – benefits for local businesses from construction, with potential impacts where construction may affect productivity. The M7 motorway has been in operation since 2005. There has been significant land use change since then (including housing estates). The widening would therefore not impact social cohesion or connectivity across the motorway corridor. The Proponent noted that during operation, increased traffic noise may be experienced, and widening would improve social outcomes when compared with the existing motorway through reduced travel times.	The Department notes the existing social impacts of the Westlink M7 and increased impacts experienced during construction. Through ongoing consultation with the community during construction, and the mitigation measures proposed by the Proponent, social impacts can be suitably managed.

Sustainability	The Proponent has committed to meeting the Infrastructure Sustainability Council (ISC) Infrastructure Sustainability (IS) Rating Tool rating of 'excellent'. This would be achieved through a Sustainability Management Plan which outlines project specific initiatives to be implemented during detailed design, construction and operation. The Department considers these measures appropriate and supports the Proponent's commitment to achieving an IS rating of 'excellent'.	A condition has been recommended for the preparation of a Sustainability Strategy to achieve a minimum excellent 'Design' and 'As built' rating under the ISC rating tool. A Water Reuse Strategy will also be prepared by the Proponent, to set out options for the reuse of collected stormwater and groundwater during construction.
Waste	The modification would generate waste types including excavated material/spoil, demolition waste, packaging materials, construction material waste, liquid waste, green waste, and general waste. Waste types would be segregated on-site. Potential spoil for re-use is expected to be limited. Material to be re-used on site would be stockpiled temporarily within the construction ancillary facilities prior to transportation and reuse. Where reuse is not viable, the material would be transported offsite for potential reuse or disposed of at a licenced receival facility.	The Department is confident that waste would be appropriately managed by recommended conditions, which require that waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any place that can lawfully accept such waste.

7 Evaluation

The Department considers the modification is in the public interest and should be approved, subject to conditions. The Department reviewed the Modification Report, Submissions Report and assessed key issues arising from the construction and operation of the project, considering:

- advice from relevant Government agencies, Fairfield City Council, Blacktown City Council and Liverpool City Council
- strategic NSW Government policies and plans
- relevant matters and objects of the *Environmental Planning and Assessment Act 1979.*

The project is consistent with NSW strategic planning policies and frameworks including:

- *Future Transport Strategy 2056* (TfNSW, 2018)
- *NSW Freight and Ports Plan 2018 – 2023* (TfNSW, 2018)
- *Staying Ahead: NSW State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022)
- *Greater Sydney Services and Infrastructure Plan* (TfNSW, 2018)
- *Greater Sydney Region Plan: A Metropolis of Three Cities* (Greater Sydney Commission, 2018)
- *Western City District Plan* (Greater Sydney Commission, 2018)
- *Central City District Plan* (Greater Sydney Commission, 2018).

Key benefits provided by the modification include:

- increased capacity of the existing Westlink M7 to accommodate growing demand and traffic volumes due to population growth and Western Sydney International (Nancy-Bird Walton) Airport
- significant travel time reductions for journeys along the motorway corridor, with travel time savings of up to 12 minutes in the afternoon peak in 2036
- improved traffic flows along the motorway, with traffic modelling predicting a reduction of 54% in the number of times vehicles would need to stop on the motorway, compared to current traffic conditions.

The Department is satisfied that issues raised in submissions have been appropriately considered and responded to by the Proponent. The Proponent identified and committed to implementing a range of environmental management measures to address identified environmental impacts. The Department has recommended conditions to reinforce these commitments, and address outstanding impacts. The Department considers that impacts can be mitigated, managed, or offset, through implementing the recommended conditions and the Proponent's commitments.

8 Recommendation

It is recommended that the Minister for Planning:

- **considers** the findings and recommendations of this report
- **determines** that the application SSI 663 MOD 6 falls within the scope of section 5.25 of the EP&A Act
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification
- **agrees** with the key reasons for approval listed in the draft notice of decision
- **modify** the approval SSI 663
- **signs** the attached Notice of Modification (see **Appendix H**).

Recommended by:

Jonathan Kerr
A/Senior Planning Officer
Transport Assessments

Recommended by:

Mary Garland
A/Director
Transport Assessments

9 Determination

The recommendation is **Adopted / Not adopted** by:

The Hon. Anthony Roberts MP
Minister for Planning

Appendices

Appendix A – List of Documents

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix B – Modification Report

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix C – Additional Information

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix D – Submissions and Government Agency advice

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix E – Submissions Report

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix F – Community views

Issue	Consideration
Project justification • support for widening • requests for public transport to be provided instead of traffic lanes within the median • the need for four lanes to be built in each direction	*Assessment* • The project involves widening of the motorway by adding two lanes (one in each direction) within the median, removing the ability for light or heavy rail to be delivered within the corridor. The Proponent has stated the proposed additional lanes do not preclude the use of the future potential for lanes of the motorway dedicated as public transport routes (bus services). • Current government strategies do not recognise the M7 corridor as a future public transport corridor. This is reflected within the Western City District Plan which details proposed and committed new public transport corridors and which were not considered when the project was originally approved. • Increasing the road capacity of the M7 as a key transport corridor is identified as a mechanism to support the objectives of the strategic metropolitan and transport documents shaping Sydney's growth. • Providing four lanes along the corridor (as requested in submissions) would likely exacerbate environmental and social impacts due to further land clearing and property acquisition and would bring the motorway closer to receivers who live adjacent to the current corridor. *Recommended Conditions/Response* • The Department has not proposed to remove the existing conditions relating to the public transport provision within the motorway corridor to ensure that use of the corridor by public transport is not prevented by this modification.
Traffic and active transport • construction traffic impacts on local roads • increased risk of accidents along the alignment due to additional capacity	*Assessment* • Traffic safety measures will be implemented during construction including reduced speed limits of up to 80 km/h, lane closures and full motorway closures during the widening of bridges. Full motorway closures will result in detours passing through residential areas adjoining the arterial road network. Proactive traffic measures would be implemented to manage these unavoidable construction impacts. The proposed detours include diverting traffic onto the adjoining road network. • Construction-related traffic impacts would be minimised by undertaking construction during the evening and night-time, reducing impacts on the majority of road users.

- request upgrades to surrounding infrastructure and roads, including the entry and exit ramps to the M7, the Richmond Road interchange, and the M2/M5 connections
- traffic flow impacts from the proposed widening of the M4 westbound on-ramp
- stopping bay design should be refined to allow heavy vehicles to reach motorway speed
- the provision of a rest area
- the shoulders of the motorway are utilised by cyclists training at high speeds and should remain accessible for cyclists
- request for a connection from Middleton Ave to Aviation Road out of the Parkbridge Estate
- concern over construction detours and lack of thought behind them
- improve connections and facilities for active transport
- request for enhancement of the existing shared user path

- The shoulder of the motorway would be closed to cyclists during construction and operation to allow for the reconfiguration of the M4 northbound exit and avoid conflicts between motorists and cyclists.
- No significant enhancements or additions to the existing shared user path adjacent to the Westlink M7 are proposed. The shared user path would be reinstated and or/repaired if sections are removed or damaged.
- The flow of traffic along the motorway network would be improved due to the reduction in the number of stops made by vehicles due to less congestion (predicted 54 % reduction in stops).
- The performance of the majority of intersections connecting with the motorway will not change. The Proponent has committed to investigating measures for improving performance at intersections where the level of service will deteriorate during detailed design.
- Other matters raised have been adequately addressed in the Submissions Report or are not within the scope of the modification application and have not been assessed.

Recommended Conditions/Response

The Department has recommended the following conditions:

- The proposed vehicle detour through Windsor Road, and the Windsor Road/Edinburgh Circuit/Sandringham Drive roundabout at Cecil Hills is prohibited.
- Additional active transport infrastructure must be provided to enhance the existing shared user path and mitigate the impact of the temporary closures of the path during construction and permanent closure of the motorway shoulder, in consultation with bicycle user groups and Councils.
- The widening works must not preclude the delivery of a future connection to Middleton Grange.
- The widening works must not preclude the delivery of Blacktown City Council's Mavis Street shared user path. In addition, the Proponent must provide Council with access to the motorway corridor in the location of the proposed path until the end of 2023 to allow for the construction of the active transport link.
- A Road Network Performance Plan must be prepared and assess network performance at intersections which would perform more poorly under the modification. The Plan must identify measures for improving performance.

		• Operational Road Network Performance Reviews must be undertaken within 12 months and at five years after the commencement of operation to confirm the adequacy of the mitigation measures implemented to improve performance.
Noise and Vibration • inadequate noise mitigation implemented when project was originally delivered • concern that the widening would exacerbate current noise impacts • request for additional noise walls • the use of compression brakes in residential areas by heavy vehicles • request for new noise walls between Elizabeth Drive and the Horsley Drive and between Wallgrove Road and Saxony Drive	*Assessment* • Construction would exceed noise management levels set out in the Interim Construction Noise Guideline (ICNG) (DECC, 2009) during standard hours and out-of-hours work (OOHW). This would occur along the alignment and cause the most impact where the M7 is nearby to residences. • Out-of-hours construction noise impacts are unavoidable due to constraints associated with construction activities in a live road corridor, which require partial or full road closures and can only be undertaken at night to avoid significant traffic disruptions on an existing motorway. Detours as a result of these road closures may also lead to a transfer of traffic noise impacts to the adjoining road network. • As the M7 is an operational motorway, many receivers are already noise affected. However, additional receivers have been identified due to the increased traffic noise impacts associated with the project. To reduce these impacts, the Proponent has proposed low noise pavement, noise barriers and at-property architectural treatment measures. To ensure these measures are effective, the Proponent will be required to undertake an operational noise review during detailed design to determine the final suite of mitigation measures. *Recommended Conditions/Response* The Department has recommended conditions in relation to the following: • Clear communication of respite periods with the community. • The development of an OOHW protocol, including coordination of utility management work. • The implementation of mitigation measures to manage traffic noise impacts on residents consequent to traffic detours. • Early implementation of at-property architectural noise treatments to provide a form of mitigation to construction noise impacts. • An operational review process involving determination of the final suite of operational noise mitigation measures to reduce operational noise.	

- The inspection of existing noise barriers and a requirement to upgrade existing noise barriers if they do not meet expected performance outcomes.
- The maintenance of any low-noise road pavements.
- Operational traffic noise monitoring and reporting, and implementation of further noise mitigation measures where noise monitoring (and modelling) indicates exceedance of operational noise criteria.

Appendix G – Consolidated Approval

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Appendix H – Notice of Modification

https://www.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening