Transport
for NSW

Richmond Road upgrade, Marsden Park

Addendum review of environmental factors

April 2025

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Acknowledgement of Country

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

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

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

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

Document control

Approval and authorisation

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Accepted on behalf of Transport for NSW by:	**Anthony Dillon** Project Manager
Signed:	
Dated:	

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Prepared by Jacobs and Transport for NSW.

Executive summary

The proposed modification

Transport for NSW proposes to modify Richmond Road upgrade between Elara Boulevard and Heritage Road, Marsden Park by adjusting the proposal area following detailed design and to facilitate general constructability (proposed modification).

Key features of the proposed modification would include:

- Increasing road height by up to an additional metre, from five metres to six metres above the existing road height
- Updating tie-ins to:
  - Charles Tompson Boulevard
  - Clydesdale Farm Road
  - Bolwarra Drive
  - Richmond Road
  - Existing driveway east of Richmond Road.
- Modifications to drainage infrastructure
- Widening shared user path from three metres to 3.5 metres
- Changing ancillary sites including:
  - Relocating the main project ancillary site from west of Richmond Road to the east of Richmond Road (AS1)
  - New compound area on Bolwarra Drive (AS2)
  - New stockpile area west of Richmond Road, north of South Creek (AS3).
- Changes to the construction footprint throughout, in particular at:
  - Tie-ins to Richmond Road
  - Existing driveway east of Richmond Road
  - AS1
  - Access track to the west of Richmond Road.
- Construction intersection and access upgrades from Richmond Road to AS3
- Provision for future works including the duplication of Richmond Road north of the project.

The construction of the proposed modification is expected to start in 2026 and would be completed over a 30-month period subject to approvals.

Background

Richmond Road is one of the main north-south arterial roads for Sydney's north-west, providing a vital link for freight and commuters between Blacktown and Richmond. Richmond Road forms part of the wider arterial network, from the M7 Motorway to new housing and employment precincts in the North West Growth Area (NWGA). An upgrade of Richmond Road was proposed to provide connectivity for the NWGA and improve flood evacuation for the Hawkesbury-Nepean Valley.

A review of environmental factors (REF) was prepared for the Richmond Road Upgrade between Elara Boulevard and Heritage Road, Marsden Park in October 2020 (project REF). The project REF was placed on public display between 2 November 2020 and 11 December 2020 for community and stakeholder comment. A submissions report, dated April 2021 and published with minor amendments in November 2024, was prepared to respond to issues raised. The REF was determined in August 2021 (any further reference in this Addendum to "the project "refers to the activities and scope of works described in the previously determined REF and submissions report).

This addendum REF provides a detailed description of the potential environmental impacts associated with the proposed modification for Richmond Road Upgrade, Marsden Park.

Need for the proposed modification

Following additional traffic modelling undertaken in 2024, improvements to the road design have been developed to further improve traffic flows.

The previous road design had undulations resulting in concerns about driveability. The proposed changes have addressed these concerns by adjusting the road height to create a smoother and safer driving experience. The proposed modification also connects to recent developments, with updated road connections, and allows for a future extension to duplicate Richmond Road north of the project

Additionally, the proposed modification addresses practical issues such as drainage, sight distances, and construction traffic movements. It also provides an alternative construction compound area, as the previous one described in the project REF is no longer available due to residential development.

Proposal objectives

The proposed modification is consistent with the project objectives. These objectives are:

- Provide safe and efficient access from the Marsden Park Precinct and Marsden Park North Precinct to Richmond Road
- Support the use of Richmond Road as the key freight route linking Richmond to the M7 Motorway, as well as for accessing major industrial areas such as Marsden Park along its length
- Ensure the road asset and infrastructure is designed to support emergency services
- To be consistent with the features of previous Richmond Road upgrades in line with the Growth Centres Road Framework, such as provisions for buses, pedestrians, cyclists, and motorists
- To reduce the number of crashes and serious injuries on the corridor in line with the Road Safety Plan 2021.

Options considered

Two options were considered for the proposed modification including:

- Option 1 – do nothing
- Option 2 – different location for compound site and other design changes.

Option 1 is no longer viable due to the main compound site now being used for residential development. Option 1 fails to address updated traffic modelling data and drivability concerns from fluctuations in the road level. The project's road connections with recent developments in the area also requires design changes to be made. Therefore, option 2 was selected as the preferred option as it:

- Meets the project objectives
- Is constructible
- Addresses updated traffic modelling
- Interfaces with recent development
- Facilitates future projects to the north.

Statutory and planning framework

The proposed modification is categorised as development for the purpose of a road and road infrastructure facilities and is being carried out by or on behalf of a public authority. Section 2.109 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP (Transport and Infrastructure)) permits development on any land for the purpose of a road or road

infrastructure facilities to be carried out by or on behalf of a public authority without consent. Therefore, the proposed modification can be assessed under Division 5.1 of the EP&A Act. Development consent from council is not required.

The proposed modification is within land to which the Blacktown Local Environmental Plan (LEP) 2015, Penrith Local Environmental Plan 2010 and Hawkesbury Local Environmental Plan 2012 applies. The proposed modification is considered to be consistent with the zoning objectives of the applicable land use zone under each LEP.

This AREF also addresses the relevant consideration of the *Biodiversity Conservation Act 2016* (BC Act), *National Parks and Wildlife Act 1974* (NPW Act), *Biosecurity Act 2015* (Biosecurity Act), *Protection of the Environment Operations Act 1997* (POEO Act) and *Western Parkland City Authority Act 2018* (WPCA Act).

Community and stakeholder consultation

Consultation was carried out with the Deerubbin Local Aboriginal Land Council as part of the site visit on 2 October 2024 for the proposed modification area. No issues were raised.

Blacktown, Hawkesbury and Penrith City Councils, the State Emergency Service (SES) and the Department of Planning, Housing and Infrastructure (DPHI) were consulted in December 2024 and January 2025 about the proposed modification as per the requirements of sections 2.10, 2.12 and 2.13 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 and section 3.24 of the State Environmental Planning Policy (Precincts - Central River City) 2021. Bradfield Development Authority (previously Western Parkland City Authority) was consulted in March 2025 as per the requirements of section 2.15 of the State Environmental Planning Policy (Transport and Infrastructure) 2021. Penrith City Council raised concerns about potential traffic and flooding impacts to residents caused by the proposed construction ancillary facility (AS3). The SES advised on management measures to ensure safety from flood risks. The Bradfield Development Authority supported the proposed modification. No responses were received from Blacktown and Hawkesbury City Council and DPHI. These matters have been considered within this addendum REF.

Various government agencies and stakeholders have also been consulted about the proposed modification including the Blacktown City Council design review panel. The design review panel raised safety concerns for pedestrians and cyclists as well as potential impacts to bus routes. Stockland was consulted regarding the Clydesdale Farm Heritage Wall and Gate located on their land. These matters have been considered within this addendum REF.

Environmental impacts

The main environmental impacts for the proposed modification are:

Traffic and transport

During construction, the proposed modification would cause some delays and congestion at the intersection of Richmond Road and the proposed ancillary site near Clydesdale Rural Estate (AS3). The southbound right turn into AS3 and the eastbound approach to Richmond Road would be most impacted.

Due to minimal gaps in traffic for right-turning vehicles out of AS3, construction traffic would increase intersection delays and queuing. These impacts will be temporary, limited to the construction phase of the project.

Construction traffic would have a minor impact to the operation of the Richmond Road / Garfield Road intersection, with the level of service of the northbound and southbound approaches degrading slightly during the AM peak in 2026 and 2027. The average delay on the southbound approach would be 75 seconds, while the average delay on the northbound approach would be 52 seconds. This is an eight second increase to the average delay on the southbound approach and a 14 second increase on the northbound approach compared to the anticipated existing traffic scenario in 2027.

Staff and worker parking will be located primarily at AS1. However, some light vehicle parking may occur along Bolwarra Drive, close to AS2. This may have a minor impact on local street parking.

To mitigate construction phase traffic impacts, a Road Occupancy License (ROL) and Construction Traffic Management Plan (CTMP) would be prepared by the construction contractor prior to commencing roadworks construction. The construction contractor will implement the requirements of the ROL and implement temporary traffic controls to manage traffic impacts. Staff parking will be limited to the ancillary sites, construction area and Bolwarra Drive.

Noise and vibration

Noise modelling was carried out with an updated methodology. The modelling took into account the actual locations of buildings instead of predicted locations as per the project REF.

Noise impacts have been predicted for the construction of the proposed modification. Worst-case noise levels and impacts at the Noise Catchment Area (NCA) in Marsden Park directly west of the proposed modification (NCA01) have generally increased from the project REF Noise and Vibration Impact Assessment (NVIA).

A number of construction stages are predicted to result in 'highly intrusive' noise impacts at the most affected receivers. Worst-case noise levels and impacts at Angus and Marsden Park east of the proposed modification (NCA02) have increased from the project NVIA. This is due to the proposed modification construction boundary being closer to the nearest resident at this NCA at Richmond Road. Noise levels at other receivers in the NCA02 remain similar to the project REF NVIA.

Worst-case noise levels and impacts at Berkshire Park and Windsor Downs (NCA03) generally remain consistent with the project REF NVIA, with the exception of the area around the proposed ancillary site AS3. Construction works at AS3 and the intersection to AS3 will result in noise impacts up to 'highly intrusive.' Vibration impacts assessed for the proposed modification were found to be similar to the project REF NVIA.

Construction noise impacts will be mitigated through measures including consultation with affected parties, works programming and practices to reduce noise effects.

Operational noise modelling for the proposed modification found that 75 residential receivers (50 buildings) would be impacted by noise greater than the relevant noise guidelines, up from 74 residential receivers (74 buildings) in the project REF NVIA.

Receivers approved and built after the project determination date (13 August 2021) have not been considered for noise mitigation as that responsibility falls on the developer. Display homes were also not considered for noise mitigation. Consequently, six receivers have been identified as potentially eligible for Transport for NSW noise mitigation. This includes five residential receivers along Chambers Street and Goodstart Early Learning. This is a reduction from the ten eligible receivers along Chambers Street identified in the project submissions report. The reduction is primarily due to the change in methodology, including modelling impacts on existing buildings instead of predicted buildings.

Non-Aboriginal heritage

The increase in road height by an additional metre potentially further impacts on the rural setting of Clydesdale Estate (a heritage item of state significance) by making Richmond Road a more noticeable and intrusive element when viewed from the heritage area in comparison to the project REF. Nevertheless, the scale of visual impact to the Clydesdale Estate remains moderate, consistent with the project REF. Similarly, raising and widening Richmond Road is expected to alter the rural setting from which St Phillips Church Cemetery derives part of its heritage significance. Therefore, minor adverse impacts to the historical and aesthetic heritage significance of St Phillips Church Cemetery are also expected as a result of the proposed modification.

During the construction phase, activities such as earthworks and drainage adjustments are expected to alter the rural setting and fabric of the Clydesdale Estate, resulting in minor temporary adverse impacts to its historic, aesthetic, and representative significance values.

Despite the new impacts of the proposed modification, the scale of impacts are consistent with the project REF.

Biodiversity

About an additional 0.03 hectares of Plant Community Type (PCT) 3320 (Cumberland Plain Woodland), which is listed as a critically endangered ecological community under the *Biodiversity Conservation Act 2016* (BC Act), would be impacted within the non-certified area. A non-certified area is an area that has not been marked for development at the strategic planning stage and requires biodiversity impact assessment. A total of 1.41 hectares of suitable habitat for the Cumberland Plain Land Snail, which is listed as endangered under the BC Act, would now be impacted by the project within the non-certified area. This would need to be offset per the Transport for NSW Biodiversity Policy.

About an additional 0.93 hectares of a mix of mature, native tree species would also be impacted within the non-certified area. Vegetation clearance would result in about 0.96 hectares of suitable foraging habitat for various fauna species listed on the BC Act and *Environment Protection and Biodiversity Conservation Act 1999* being impacted. About an additional 0.44 hectares of land occupied by *Grevillea juniperina* subsp. j*uniperina* within the non-certified area would also be impacted.

These additional impacts are not likely to significantly impact threatened species, populations, ecological communities, habitats or migratory species within the meaning of the *Biodiversity Conservation Act 1999*, *Fisheries Management Act 1994* and *Environment Protection and Biodiversity Conservation Act 1999*.

Hydrology, flooding and water quality

Hydrology and flooding

The upgraded Richmond Road would form an important evacuation route in times of flood. A minimum road level of RL 20.0 metres Australian Height Datum (AHD) has been adopted in the proposed modification. The upgraded section of Richmond Road would have a minimum elevation which approximates a 1-in-500 year flood event on the Hawkesbury-Nepean River. Drainage infrastructure has been sized to convey flows up to severe flooding event without overtopping the road.

The construction of the proposed modification would result in less than a 1 millimetre increase in peak flood levels due to floodplain storage displacement from Hawkesbury-Nepean River flooding, or up to 2 millimetres when considered in combination with other nearby road projects. As such, compensatory flood storage is no longer required, following agency consultation.

The proposed modification would not impact Major Tributary Flooding from South Creek. The proposed modification would result in minor increases in peak flood levels within the Marsden Park Precinct during a 1-in-100 and 1-in-500 year flood events but it would not reduce freeboard below 500 millimetres or result in adverse flooding impacts to existing development. The proposed modification would not adversely impact flooding conditions in existing development should rainfall intensities increase from future climate change. The proposed modification would result in increases in inundation in existing development in the Marsden Park Precinct during severe flood events but will not significantly change the flood hazard vulnerability.

Minor increase in peak flood levels and flows, and flow velocities within Marsden Creek are anticipated but can be managed through future planned development in the Marsden Park North Precinct.

Overall, the proposed modification would result in a minimal change in flood behavior and flood risk whilst providing a major benefit in providing an improved flood evacuation route.

Water quality

Up to four sediment basins would be constructed to capture and treat runoff before discharging into Marsden Creek and South Creek. Sediment basins are required to protect water quality downstream during construction. Discharges with a turbidity of up to 50 nephelometric turbidity units from controlled releases would not increase the ambient concentrations in South Creek and Marsden Creek. The discharges would also meet the recommended guideline limit for protection for aquatic ecosystems, visual amenity, and primary and secondary contact recreation.

Stockpiling of material during construction may increase pollutants being transferred to downstream waterways via wind and stormwater runoff. Without appropriate mitigation measures, this could lead to an increased risk of algal blooms, reduction in dissolved oxygen and poor water quality. The realignment of drainage infrastructure could also impact water quality due to the additional cutting required to extend the drainage infrastructure by about 50 metres.

During operation, the new culverts may cause increased flow velocities to the downstream receiving channels. The proposed modification also increases impervious surface area, which would increase pavement runoff and pollutant loads within the downstream environment. To mitigate these impacts five vegetated swales of varying length are proposed to provide treatment of runoff prior to discharge to South Creek or a tributary of South Creek. Modelling of these proposed controls indicates that there would be no adverse impacts as the pollutant loads following treatment by the swales would be below existing levels.

To mitigate these impacts safeguards and management measures identified in the project REF have been modified. Culvert and scour protection is recommended at all new culvert and pavement drainage pipes.

Topography, geology, soils and contamination

Changes in landforms and stockpiling from surrounding construction developments were observed within the proposed modification area during a site walkover. The contamination risk from imported fill, wastes and surface water has been reassessed to be moderate instead of low.

Earthworks would result in a minor change to the topography as the proposed modification raises the road level by one additional metre.

Safeguards and management measures identified in the project REF would be extended to the proposed modification area and are considered to be sufficient to mitigate these impacts.

Aboriginal heritage

One known Aboriginal archaeological site and one newly recorded site were identified within the proposed modification area. Two known sites, one newly recorded site and several areas of archaeological sensitivity were identified bordering the proposed modification area.

The proposed modification area overlaps an area that is covered under an existing Aboriginal Heritage Impact Permit (AHIP C0004249). Any works related to the project undertaken within this existing AHIP area will be required to comply with the AHIP conditions.

No new impacts to Aboriginal heritage are expected from the proposed modification, as the Aboriginal archaeological sites would be avoided by construction works by establishing an exclusion zone. Existing management measures are considered to be sufficient to mitigate these impacts. If impact to these sites cannot be avoided, extra assessment and an AHIP would be required.

Landscape character and visual impacts

As a result of the proposed modification, impacts to two previously assessed landscape character zones remain unchanged and the impacts to one zone (comprised of rural and open pasture) have increased due to the withdrawal of a development proposal within the Marsden Park North Precinct. The sensitivity of this landscape zone has increased from low to moderate, and moderate temporary impacts are expected during construction from works at AS1. Nevertheless, the magnitude of impact remains unchanged from the project REF as moderate. Overall, the impact rating is moderate to low. This is an increase from the project REF, which had rated the impact as low.

Existing viewpoints have been reassessed where there has been a change in the existing environment. Several viewpoints have been added in areas potentially impacted by the proposed modification, and two viewpoints have been removed for areas no longer impacted. There is no change in the impact to the viewpoints that were reassessed, while the new viewpoints were determined to have the following impacts:

- Two viewpoints would experience a low impact
- One viewpoint would experience a low to moderate impact
- One viewpoint would experience a moderate impact.

Existing management measures are considered to be sufficient to mitigate these impacts.

Property, land use and socio-economic

The proposed modification would require the acquisition of about an extra 0.1 hectares of land for various uses. About an extra 0.3 hectares of land would now be required for easements, and about 4.8 less hectares of land would need to be leased. About 3 hectares of land would be dedicated as a road by the landowner.

Due to the expansion of residential development in Marsden Park, more properties may be impacted. This includes properties between Bolwarra Drive and St Philips Place. Properties next to the AS3 construction compound may also experience temporary changes in visual amenity, noise and dust from construction activities due to the presence of the stockpile site.

Safeguards and management measures identified in the project REF are considered to be sufficient to mitigate these impacts.

Other impacts

Minor air quality impacts are expected from the proposed modification, particularly dust emissions caused by extra earthworks required for raising the road height.

Safeguards and management measures identified in the project REF are considered to be sufficient to mitigate these impacts.

Cumulative impacts

The proposed modification maintains a comparable footprint to the project REF. As a result, no additional cumulative impacts are anticipated beyond those previously considered.

Justification and conclusion

The proposed modification would enhance the connections to the surrounding road network through updated tie-ins and provision for a future connection to the duplication of Richmond Road to the north of the project. The proposed modification addresses updated traffic modelling (2024) and reduces fluctuations in the road level, improving the experience for commuters using Richmond Road.

The proposed modification may result in some minor increases in environmental impacts, including impacts to biodiversity, and construction phase water quality, traffic and noise. However, safeguards and management measures have been identified to avoid, minimise or mitigate these potential impacts.

This addendum REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed modification. The proposed modification is unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act.

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