

Executive summary

The proposal

Transport for NSW (TfNSW) proposes to widen the existing two-lane section of Great Western Highway at Raglan, east of Bathurst, NSW (the proposal) to improve efficiency and safety. About 3.7 kilometres of the Great Western Highway is proposed to be upgraded between about 385 metres east of Ceramic Avenue, Raglan and Ashworth Drive, Kelso.

Key features of the proposal include:

- Realigning the highway to the north of the existing highway
- Road widening to provide:
 - Two eastbound lanes for the length of the proposal
 - Two westbound lanes west of Napoleon Street
 - One westbound lane east of Napoleon Street
 - Shoulders on both sides of the highway
 - A variable-width central median for the length of the proposal with occasional traffic barriers.
- A 2.5 metre wide shared path along the highway between Eugenie Street and just west of Napoleon Street
- Provision of a 5.5 metre wide verge between the shared path and the southern edge of the highway to allow for a second westbound lane east of Napoleon Street
- Raising the highway by up to one metre
- Upgrading four junctions including Napoleon, Locke, and Nile Streets and Ceramic Avenue
- Upgrading the PJ Moodie Memorial Drive and Eugenie Street intersection with traffic signals and a light vehicle U-turn facility along Eugenie Street
- A widened median at the Napoleon Street junction to allow for future traffic signals
- Provision of street lighting
- Realignment of an unnamed tributary of Boyd Creek
- Driveway adjustment and upgrade where required for properties with direct access to the Great Western Highway
- Upgrading the access to Bathurst Sheds with an improved right-turn lane
- Relocation and/or adjustments of public utilities and street lighting
- Property acquisitions and adjustments
- Minor relocation and provision of widened shoulders at three bus stops
- Replacing, extending or installing drainage infrastructure
- A flood detention basin on the northern side of the Great Western Highway opposite Nelson Street
- Ancillary works including safety barriers, signage, line marking and environmental protection work
- Landscaping and rehabilitation work
- Temporary ancillary facilities including site compounds and stockpile sites.

Need for the proposal

The proposal is needed to substantially improve travel times and efficiency during peak travel periods while enhancing road safety for all road users. Travel efficiency and travel times would be improved by the proposal as a result of increased overtaking opportunities provided by additional travel lanes and increasing safe turning opportunities with additional dedicated turning lanes.

The proposal would complete the missing link for eastbound traffic between Bathurst and Glanmire, resulting in about nine kilometres of continuous eastbound overtaking lane from Bentinck Street in Bathurst and would also connect Raglan to Kelso with two westbound lanes.

The proposal would improve road safety by:

- Widening travel lanes and widening and sealing road shoulders
- Increasing safe turning opportunities through additional dedicated turning lanes
- Providing traffic control signals at the PJ Moodie Memorial Drive/Eugenie Street intersection
- Providing a new road pavement
- Formalising pedestrian and cycling facilities.

Proposal objectives and development criteria

The objectives of the proposal are:

- To improve journey time and reliability, including during peak travel periods such as holidays, special events and weekends
- Ease traffic congestion
- Improve connectivity to the wider road network
- Improve safety for all road users, particularly for overtaking and turning movements
- Minimise potential environmental impacts.

Options considered

Eleven options were considered for the upgrade of the Great Western Highway. Key differences between the options were:

- Widening location: Whether the highway would be widened to the north or south (offset widening) or widened both to the north and south (concentric widening)
- Number of lanes: Whether the highway would have one or two lanes in each direction
- PJ Moodie Memorial Drive / Eugenie Street intersection: Whether the intersection would have a roundabout, or a channelised right hand turn and auxiliary left turn arrangement.

The preferred option for the proposal is option 6. This option is considered best value for money, offering substantial improvements to the width of the highway, increased safe turning opportunities and improve travel efficiency.

During the strategic and concept design stages, design refinements were identified to further improve safety, travel efficiency and reduce flooding impacts. The proposal was also moved to the north as part of the concept design development. This change allowed for future widening, reduced impacts to properties south of the highway, reduced utility impacts and minimised impacts on the unnamed tributary of Boyd Creek. These refinements were applied to option 6 to arrive at the proposal design assessed in this REF.

Statutory and planning framework

Clause 94 of State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) permits development, on any land, for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the proposal meets the definitions of 'road infrastructure facilities' provided for by clauses 93 and 94(2) of the ISEPP, and is being carried out by TfNSW, it is permissible without consent under ISEPP. As a result, it can be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and development consent is not required.

This review of environmental factors (REF) fulfils TfNSW's obligations to consider the environmental impacts of the proposal under section 5.5 of the EP&A Act, and has been prepared in accordance with the provisions of clause 228 of the Environmental Planning and Assessment Regulation 2000. This REF also addresses the relevant considerations of the *Biodiversity Conservation Act 2016* (BC Act), *Fisheries Management Act 1994* (FM Act), *Heritage Act 1977* (Heritage Act), *National Parks and Wildlife Act 1974* (NPWS Act), and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Community and stakeholder consultation

TfNSW has formally consulted with Bathurst Regional Council and State Emergency Services (SES) in accordance with the requirements of the ISEPP. TfNSW has also carried out non-statutory consultation with agencies and utility companies, including NSW Department of Primary Industries (Fisheries) and WaterNSW. A Community and Stakeholder Engagement Plan was implemented for the proposal, which sets out the approach to consultation, the consultation activities carried out and how all stakeholder engagement would be managed.

TfNSW consulted with the community of Raglan and Kelso in January and July 2019. A community update was provided in July 2019 with information on the proposal. The community update invited the community to attend the project information sessions and to provide submissions on the concept design. Three project information sessions were held.

TfNSW will continue to consult with the community and stakeholders during development and delivery of the proposal.

Environmental impacts

The proposal would have some adverse impacts during construction and longer term positive impacts during operation. The adverse impacts would be managed by the implementation of mitigation measures and safeguards as described in **Chapter 6** of the REF and are summarised below.

Noise and vibration

During construction, there would be noise impacts at some sensitive receivers near the proposal where noise management levels (NMLs) are predicted to be exceeded. For these receivers, noise impacts during some stages of construction may be in the moderate to high range. TfNSW has identified potential mitigation measures to reduce these noise impacts during construction such as deploying acoustic screening around noisy plant and programming construction work to avoid out of hours work where possible. These potential impacts would be temporary for the duration of the construction works.

During construction, vibratory rolling may occur within 20 metres of residences and commercial buildings and this would also create disturbance. Additionally, there is one heritage item within the safe working distance of construction works. Where activities involving vibration-generating equipment occur within the vicinity of residents and other sensitive areas, work methods would be developed to avoid the potential for human discomfort and building damage.

During operation, the noise assessment identified 13 buildings which could be considered for additional noise mitigation. At-property architectural treatments would be provided if feasible and reasonable to mitigate any operational noise impacts.

Traffic and transport

During construction there would be travel delays that would affect commuter, bus and heavy vehicles traffic. The potential impacts caused by construction vehicle traffic would include:

- Increased travel times on roads within the proposal area due to construction speed limits near the site
- Increased travel times for motorists due to construction vehicles on roads and construction vehicles accessing the construction site
- Temporary closure of lanes where the proposal would tie into the existing road surface.

TfNSW will consult with affected people within the proposal about property access before construction starts.

The proposal would improve road safety and road network performance by providing dedicated deceleration/turning lanes at key junctions and intersections, widened and sealed shoulders and safe overtaking opportunities. The proposal would substantially improve traffic efficiency during peak traffic periods and events.

Landscape character and visual impacts

Once the proposal is built, there would be permanent visual and landscape changes throughout the proposal area. The main visual changes would be due to a new widened highway and the removal of the avenue of Poplar trees. The proposal area would be landscaped after construction to reinforce and enhance the character of the highway. Once mature, planted trees would provide a gateway to Bathurst.

TfNSW recognises this section of road as part of the gateway into Bathurst and as such TfNSW has worked with Bathurst Regional Council and Greening Bathurst to develop the landscaping design.

Hydrology and flooding

The proposal would generally improve flood and hydrology due to improved cross drainage and the provision of a flood detention basin at Nelson Street. In locations where cross drainage capacity is maintained there is potential for minor increases in peak upstream flood levels. The minor increase would not cause any adverse impacts as there are no existing dwellings, structures or infrastructure upstream of the culvert inlets that may be adversely impacted. The flood detention basin would reduce flood risk by up to 24 per cent between Christie Street and Adrienne Street in Raglan.

The proposal would also require realignment of the unnamed tributary of Boyd Creek. The creek realignment has been designed to consider the existing channel conditions and flooding behaviour.

Soils and contamination

High risk areas for contamination were identified next to industrial and commercial land uses within the proposal area. Further investigation would be required to assess whether any significant levels of contamination are present in these areas and the risk to construction workers and future maintenance workers involved with intrusive works.

Very low concentrations of Per- and polyfluoroalkyl substances (PFAS) was detected in soil, sediment and surface water, and do not pose an elevated health risk if exposure were to occur to those receptors. As such, all soils/sediments are suitable and can remain on the site or be used along the roadway given the low-level PFAS concentrations.

Property, Land use and Socio-economic

The proposal would have some socio-economic, property and land use impacts during construction. There would also be longer term impacts and benefits once the proposal is operating. During construction, impacts on the community and businesses in the study area may be associated with:

- Temporary adverse changes in local amenity due to noise and dust generated from construction activities
- Increased construction traffic and heavy vehicles travelling along the Great Western Highway
- Noise and light spill from night-time construction activities
- Temporary changes in local access and connectivity
- Adverse changes in visual amenity and local character due to the presence of ancillary sites and other construction infrastructure, and the clearing of vegetation, such as the removal of street trees along the Great Western Highway.

During operation the proposal would have long-term beneficial impacts on the community, businesses (including customers to local businesses, and freight and commercial vehicles) due to improved access and connectivity, particularly on weekends, during peak holiday periods and for events such as the Bathurst 1000.

Heritage

The proposal would directly impact the curtilage of the locally listed heritage item, Violet Hill (former Springdale and Abbotsford) including a former timber gate post. There would be no direct impacts on the homestead or its views or vistas. A Statement of Heritage Impacts was carried out which found that there would be no impact on the heritage significance of Violet Hill (former Springdale and Abbotsford).

The proposal area does not contain any previously recorded Aboriginal sites on the Aboriginal Heritage Information Management System (AHIMS). A preliminary assessment of the proposal area was carried out in accordance with Stage 1 of the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI). A walk over as part of the PACHCI was carried out and no evidence of Aboriginal heritage was identified and no further investigation is required.

Biodiversity

The proposal would require clearing of planted trees, shrubs and grassland dominated by exotic species. Nine apple trees (*Malus pumila*) would be removed, which could provide suitable foraging habitat for the Grey-headed Flying-fox, listed as Vulnerable under the BC Act and EPBC Act. While the removal of habitat may impact threatened fauna, tests of significance have found no significant impact to these species as a result of the proposal. No threatened species listed under the FM Act are likely to occur in creeks within the proposal. The creeks are in poor condition due to being ephemeral or lack of permanent water, disturbance by industry and development. Impacts to aquatic habitat would be of low magnitude and standard mitigation measures would be implemented to limit impacts.

Justification and conclusion

The proposal is consistent with state transport priorities to improve the highway's safety and efficiency, and would help to meet ongoing and future road network needs.

While there would be some environmental impacts as a consequence of the proposal, they have been avoided or minimised wherever possible through design and site-specific safeguards. The beneficial effects are considered to outweigh the mostly temporary adverse impacts and risks associated with the proposal.

The proposal is subject to assessment under Division 5.1 of the EP&A Act. This REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

The proposal would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. A Species Impact Statement (SIS) is not required. The proposal is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required. In addition, the proposal is not likely to have a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the EPBC Act. A referral to the Australian Department of the Environment and Energy is not required.

What happens next?

TfNSW will determine whether or not the proposal should proceed as proposed and will inform the community and stakeholders of this decision. If the proposal is determined to proceed, TfNSW will continue to consult with the community and stakeholders prior to and during construction.