

Bells Line of Road – Chifley Road upgrade

Review of Environmental Factors

Executive Summary

September 2016



BLANK PAGE

**Bells Line of Road Corridor –
Chifley Road upgrade
Review of Environmental Factors**

September 2016

Prepared by Coffey Environments Australia Pty Ltd

Provide Roads and Maritime Services Publication Number

Copyright: The concepts and information contained in this document are the property of NSW Roads and Maritime Services. Use or copying of this document in whole or in part without the written permission of NSW Roads and Maritime Services constitutes an infringement of copyright.

Bells Line of Road Corridor – Chifley Road Upgrade Project

Prepared for NSW Roads and Maritime Services

Prepared by
Coffey Environments Australia Pty Ltd
Level 19, Tower B, 799 Pacific Highway
Chatswood NSW 2067 Australia
t: +61 2 9406 1119 f: +61 2 9911 1003
ABN: 65 140 765 902

September 2016

ENAU RHOD03119AB

Executive summary

The proposal

Roads and Maritime Services (Roads and Maritime) propose to upgrade parts of Chifley Road between Bell and Lithgow. Chifley Road, becomes Bells Line of Road at the Darling Causeway intersection at Bell, and provides a secondary connection between the Central West of NSW and Sydney. The road also provides a local connection to residents along Chifley Road, Darling Causeway, Bells Line of Road and Lithgow.

A strategic corridor plan completed by the Australian and NSW Governments in October 2012 identified improvement work for the Bells Line of Road corridor, including safety and traffic improvements for Chifley Road.

Chifley Road is about 20 kilometres long and is located in the western section of the Bells Line of Road corridor between Bell and Lithgow in NSW. The proposal would upgrade the Scenic Hill and Clarence road over rail bridge sections of Chifley Road. Scenic Hill is located about three kilometres east of Lithgow and the Clarence road over rail bridge is located about five kilometres west of Bell.

The proposal includes the replacement of the existing Clarence road over rail bridge and providing a descending lane and improvements to the grade and curve at Scenic Hill. Key features of the proposal include:

- Widening and realigning Chifley Road at Scenic Hill and providing an additional descending lane and median barrier
- Improving the intersection at the Lithgow Ex-Prisoner of War Memorial Tower (located on Scenic Hill)
- Providing improved concrete drains along road cuttings
- Replacing and demolishing the existing road bridge over the railway line along Chifley Road at Clarence
- Widening and realigning the approaches to the new bridge over the railway line
- Improving the Clarence Colliery Road intersection with Chifley Road.

Need for the proposal

The Bells Line of Road and its westerly extension, Chifley Road, form one of two major routes which link the Sydney urban area with Lithgow and the NSW Central West region, through the Blue Mountains.

Chifley Road currently exhibits a high crash rate. The average annual casualty rate per kilometre is currently 0.36, which is over four times the rate of 0.074 for similar rural roads. The combination of narrow lanes and shoulders and poor vertical and horizontal road alignment has led to a high crash rate along the road. The curve improvements, road widening and the provision of an additional descending lane would reduce interactions between heavy and light vehicles, improving traffic flow and travel times. The replacement of the road over rail bridge would bring the bridge up to Australian Standards.

Improvements to this corridor have been identified as necessary in the *2012 Bells Line of Road Long Term Strategic Corridor Plan*. The proposal is required to provide long-term road safety benefits, provide more reliable travel times and improve freight access and efficiency in the region.

Proposal objectives

The objectives of the proposal are aligned with the strategic need and are to:

- Reduce the overall crash rate on Chifley Road
- Reduce the present rail safety risks at Clarence rail bridge
- Improve vehicle travel times and their operating costs on the road corridor
- Provide efficiency and consistency of traffic flows
- Minimise environmental impacts.

The objectives of the proposal are consistent with the Bells Line of Road Long Term Strategic Corridor Plan as they include significant road safety aspects.

Options considered

Roads and Maritime started to investigate options for upgrading Chifley Road between Bell and Lithgow in 2014.

The options considered by Roads and Maritime included:

1. Widening of the narrow (former) railway cuttings east of Clarence
2. Widening and barrier treatments for the Clarence road over rail bridge
3. Providing a descending lane at Scenic Hill
4. Improving the final westbound curve at Scenic Hill
5. Other safety improvement work as detailed in the Strategic Business Case (October 2014, updated June 2015).

A strategic assessment was then carried out to evaluate and prioritise the options. The assessment considered a range of safety, design, environmental and financial factors and drew on the findings of the road safety review and crash analysis, benefit-to-cost ratio analysis, preliminary environmental investigation, constructability review, geometric road design and various cost estimates.

Scenic Hill (comprising Options 3 and 4) and Clarence road over rail bridge (Option 2) were selected. These options provide the most effective use of available funds to deliver the necessary improvements to safety and travel conditions for Chifley Road between Bell and Lithgow.

Statutory and planning framework

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

As the current proposal is for a road and is to be carried out on behalf of Roads and Maritime, it can be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Development consent from council is not required.

This Review of Environmental Factors (REF) fulfils the requirements of Section 111 of the EP&A Act and has been prepared in accordance with Clause 228 of the Environmental Planning and Assessment Regulation 2000.

Community and stakeholder consultation

Consultation with potentially affected property owners, relevant government agencies and other stakeholders has been carried out. In February 2016, a community update brochure was released informing the community about the commencement of the design and the REF process. The preliminary concept design was displayed from 15 February to 21 March 2016 for community and stakeholder feedback to help guide future decision-making and design. Information about the proposal has also been placed on the Roads and Maritime project website.

Twelve submissions were received during the consultation period. Of the 12 submissions received, four were in support or conditional support of the proposal, seven were neutral and one did not support the proposal.

The main comments received included:

- Concerns about other sections of Chifley Road not proposed to be upgraded
- Consideration of other road users
- Consideration of biodiversity impacts
- Suggested changes to the proposal
- Requests for further information.

Roads and Maritime consulted with Lithgow City Council in February 2016 in accordance with the requirements of ISEPP. A Health and Safety in Design (HSiD) Workshop was held on 26 June 2016 with representatives of relevant government agencies. The workshop provided an opportunity to provide input to the design and to identify health and safety risks associated with the proposal.

Roads and Maritime will continue to consult with the community and stakeholders throughout development of the proposal. In particular, the REF will be placed on public display and comments invited. Submissions received as a result of the display will be addressed in a formal submissions report and considered when finalising the concept design and during development of the detailed design.

Environmental impacts

Roads and Maritime commissioned technical experts to assess the potential impacts of the proposal and to identify safeguards and management measures to avoid or limit these impacts. The main impacts that are likely to occur as a result of the proposal are summarised below.

Hydrology and water quality

Clearing of vegetation and earthwork needed to make the road improvements would expose the ground surface. During rainfall, runoff from these disturbed areas will carry into nearby waterways causing sediment build up in watercourse channels, potentially affecting flow regimes and water quality. Waterways and/or drainage lines could also be partially blocked or temporarily diverted during the earthwork. Standard measures to reduce erosion and control sediment runoff would be implemented throughout construction. Disturbed areas outside the footprint of the new road alignment would be progressively rehabilitated following construction in each area.

The proposal would increase the area of hard, impermeable surfaces (at Scenic Hill in particular), leading to an increase in the volume (and velocity) and potential pollutant load of stormwater running off the road. Scouring (and subsequent erosion) could also occur to the banks and watercourse channels downstream of the new culvert that will carry Dargans Creek under Chifley Road. The drainage system has been designed to limit the potential for scour and erosion and to effectively manage the speed of runoff from the road.

A Neutral or Beneficial Effect Assessment (NorBE) was carried out as the proposal area is located in the Sydney drinking water catchment. This assessment is included in Appendix B. The assessment concluded that the proposal is unlikely to have a detrimental impact on overall water quality in this catchment and impacts would be neutral.

Overall, the impacts on hydrology and water quality from the proposal would be temporary and minor, largely confined to the period of construction, and can be managed effectively through the implementation of the management and mitigation measures identified in sections 6.1 and 6.2 of this REF.

Biodiversity

The majority of the proposal footprint would overlies already disturbed areas within the existing road corridor, but would result in the clearing of about 13 hectares of native vegetation. Of this, about 0.03 hectares of Newnes Plateau shrub swamp ecological community in the Sydney Basin Bioregion (listed under the *Threatened Species Conservation Act 1995* (TSC Act)) which is a component of the Temperate Highland Peat Swamps on Sandstone ecological community listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), would be removed.

This vegetation clearance would remove habitat for seven fauna and one flora species listed under the TSC Act and/or the EPBC Act, which were recorded or had the potential to occur in the proposal area, including the gang-gang cockatoo (*Callocephalon fimbriatum*), diamond firetail (*Stagonopleura guttata*) and varied sittella (*Daphoenositta chrysoptera*).

The impact assessment concludes that the proposal would not have a significant impact on any threatened species, populations or ecological communities. The proposed vegetation being removed is relatively minor compared to the available occupied habitats in the area. Impacts would be further minimised through the implementation of management and mitigation measures identified in Section 6.4 of this REF, including avoidance through design.

Biodiversity offsets may be required in accordance with the Roads and Maritime Biodiversity Offset Guidelines (RMS, 2011b) and will be confirmed during detailed design dependent on the final vegetation clearance required for the proposal.

Noise and vibration

The use of construction equipment needed to build the road is expected to be the main source of noise for the proposal. Construction would, as far as practicable, be carried out during standard construction working hours – 7am to 6pm Monday to Friday, and 8am to 1pm Saturday.

Noise criteria have been set by the NSW Environment Protection Authority (EPA) to manage construction noise. During construction, noise levels may exceed EPA guidelines at three locations identified as noise sensitive at Scenic Hill and at two locations at the proposed Clarence road over rail bridge work site. For two residences near to the Scenic Hill proposal, the criteria is predicted to be exceeded by between 15 decibels and 19 decibels during standard work hours. For the two residences near to the Clarence road over rail bridge work site, the criteria is predicted to be exceeded by between 14 decibels and 18 decibels during standard work hours. There would be no exceedances of the highly noise affected criteria at any of the sensitive receivers.

A Noise and Vibration Management Plan will be prepared to manage noise and vibration through implementing mitigation measures to reduce construction noise levels to the extent that is feasible and reasonable. The Plan will generally follow the approach in EPA's Interim Construction Noise Guideline (ICNG) and Roads and Maritime guidelines and will include measures such as scheduling of works to minimise ongoing noise impact, and notification of all sensitive receivers prior to works commencing.

Management of work outside normal working hours would be addressed via the Noise and Vibration Management Plan.

Aboriginal Heritage

No Aboriginal heritage sites were found within or near the proposal area during database searches or field surveys. No areas of potential for Aboriginal heritage sites were identified in the proposal area.

The potential for sites to be present within the proposal area is limited by the geology and landscape of the site. No major changes to the landscape are proposed and the majority of work

would be within or next to the existing road corridor. The potential for a cultural heritage find during the work is considered to be low.

The Standard Management Procedure - Unexpected Heritage Items would be followed in the event that a known or potential Aboriginal object is found during construction. All personnel working on site would be provided with environmental training to achieve a level of competence and awareness of potential impacts on Aboriginal heritage.

Non-Aboriginal heritage

The proposal would not have any direct impacts on any heritage items listed under relevant State or Commonwealth legislation.

A number of potential heritage items assessed as being of local significance occur within the proposal area and 13 of these sites would be directly impacted by the work through burial, excavation or demolition. These items include the Clarence road over rail bridge, culverts and sandstone walls. The significance of potential impacts has been assessed as low, particularly after the application of the safeguards and management measures.

A non-Aboriginal Heritage Management Plan would be prepared and implemented with specific guidance on measures and controls to be implemented to avoid and mitigate impacts to non-Aboriginal heritage. Measures to be included in the Plan would include archival recording of sites to be buried or demolished and establishing exclusion zones around sites close to work areas.

Traffic and access

Chifley Road would remain open to traffic throughout the work. Road users may experience short-term disruptions including travel delays during traffic switches, safety barrier work and paving, when traffic controls or lane closures are in place. Speed limits would also be reduced during the work. These disruptions would be short-term, with minor impacts on road users expected.

Access to properties along Chifley Road and nearby businesses would be maintained during the work. Access to the Ex-POW Memorial may be restricted for short periods to enable the work to be completed safely.

Confirmation of the relocation of utilities and associated strategies would be carried out during detailed design in consultation with utility authorities.

Once the proposed work is complete, road users, pedestrians and cyclists are expected to benefit from improved safety, access and reduced travel times along Chifley Road.

Justification and conclusion

The proposal has substantial benefits relating to improved road safety, more reliable travel times and improved freight access and efficiency. The proposal is consistent with the NSW and Australian Governments' strategic priorities of improving the highway's safety performance and efficiency, and would help meet ongoing and future road network needs.

These benefits would not be realised if the proposal did not proceed, with subsequent implications for road safety along Chifley Road.

The concept design process has been instrumental in avoiding or reducing the severity of several potential environmental impacts from the proposal, relating to hydrology and drainage, terrestrial biodiversity, landscape and visual amenity and non-Aboriginal heritage. Safeguards and mitigation measures as detailed in this REF would reduce the significance of the expected impacts.

The benefits of the proposal would outweigh the potential negative environmental impacts from the proposal, which can be managed effectively with implementation of the safeguards proposed.

Display of the Review of Environmental Factors

This Review of Environmental Factors is on display for comment from Wednesday 28 September to Wednesday 26 October 2016. You can access the documents in the following ways:

Internet

The documents will be available as pdf files on the Roads and Maritime Services website at <http://www.rms.nsw.gov.au/projects/sydney-west/bells-line-of-road/chifley-road-upgrade.html>.

Display

The REF can be viewed at the following locations:

- Lithgow City Council
180 Mort Street
Lithgow NSW 2790
Open weekdays 8.15am to 4pm
- Lithgow Library
157 Main Street
Lithgow NSW 2790
Open weekdays 9am to 6pm
Saturday 9am - 12pm
- Roads and Maritime Services Bowenfels District Office
15-33 Coerwull Road
Bowenfels NSW 2790
Open weekdays 9am to 4pm

How can I make a submission?

To make a submission on the REF, please send your written comments to:

Bells Line of Road/Chifley Road Upgrade project team

Roads and Maritime Services

PO Box 973

Parramatta NSW 2124

Or

ChifleyRoadUpgrade@rms.nsw.gov.au

We are seeking community and stakeholder feedback on the proposal by Wednesday 26 October.

Privacy information

All information included in submissions is collected for the sole purpose of assisting in the assessment of this proposal. The information may be used during the environmental impact assessment process by relevant Roads and Maritime Services staff and its contractors.

Where the respondent indicates at the time of supply of information that their submission should be kept confidential, Roads and Maritime Services will attempt to keep it confidential. However there may be legislative or legal justification for the release of the information, for example under the *Government Information (Public Access) Act 2009* or under subpoena or statutory instrument.

The supply of this information is voluntary. Each respondent has free access at all times to the information provided by that respondent but not to any identifying information provided by other respondents if a respondent has indicated that the representation should be kept confidential.

Any respondent may make a correction to the information that they have provided by writing to the same address the submission was sent.

The information will be held by the Roads and Maritime Services, Bells Line of Road/Chifley Road Upgrade project team.

What happens next?

Following the submissions period, Roads and Maritime will collate submissions. Acknowledgement letters will be sent to each respondent. The details of submission authors will be retained and authors will be subsequently advised when project information is released.

After consideration of the comments, Roads and Maritime will determine whether the proposal should proceed as proposed or whether any alterations to the proposal are necessary. The community will be kept informed about this Roads and Maritime determination.

If the proposal proceeds, Roads and Maritime will develop the final design and tenders will be called for construction of the project.

If you have any queries, please contact the Roads and Maritime project team on 1800 874 897.

BLANK PAGE



rms.nsw.gov.au/projects



13 22 13



Customer feedback
Roads and Maritime
Locked Bag 928
North Sydney NSW 2059



**Roads &
Maritime**

September 2016
RMS 16.448
ISBN: 978-1-925582-02-4