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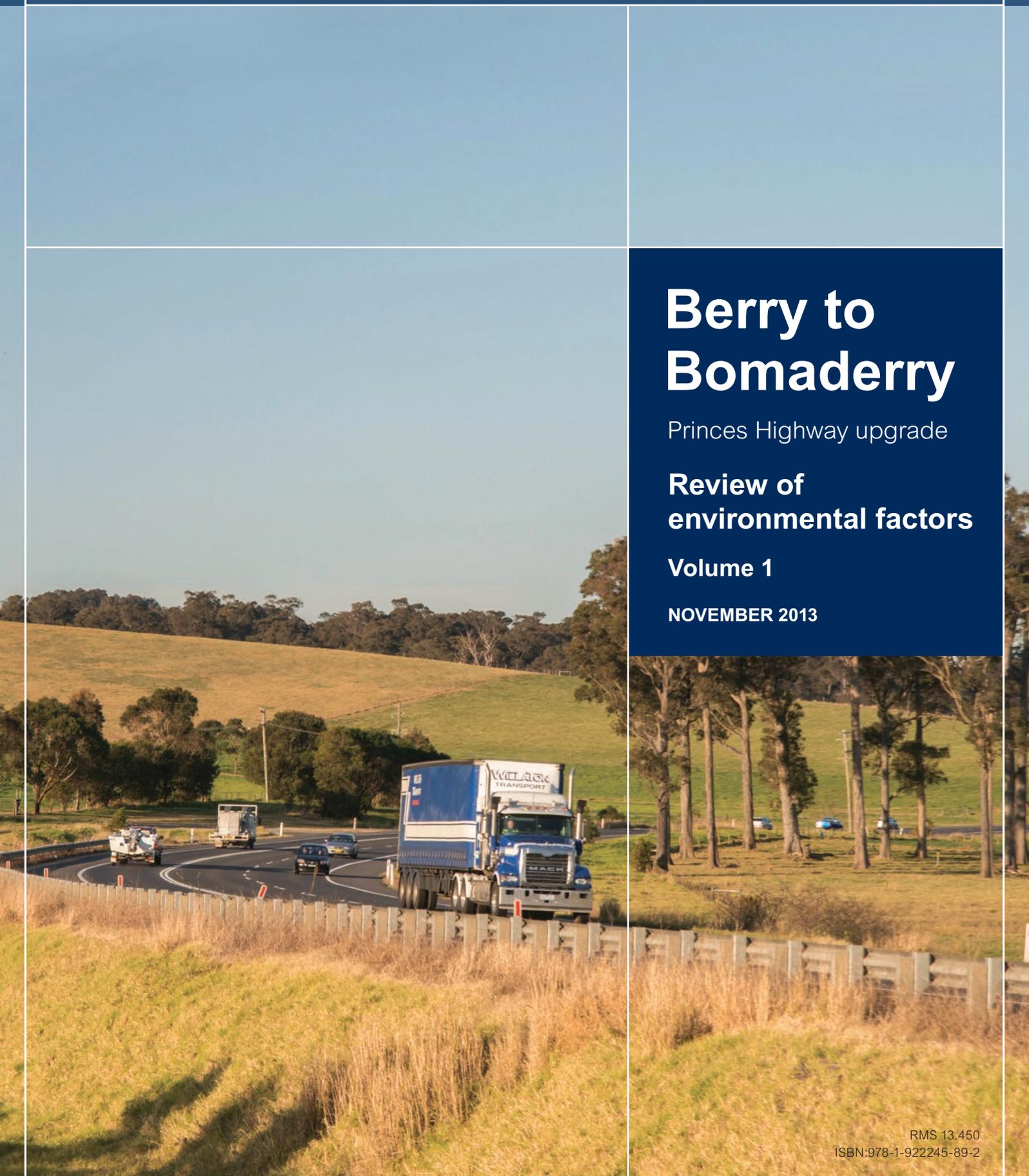
Berry to Bomaderry

Princes Highway upgrade

**Review of
environmental factors**

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Roads and Maritime Services

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Review of environmental factors

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Prepared for

Roads and Maritime Services

Prepared by

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Executive summary

The proposal

Roads and Maritime Services (Roads and Maritime) proposes to upgrade 11.5 kilometres of the Princes Highway between Schofields Lane (south of Berry) and Cambewarra Road, Bomaderry in New South Wales (NSW) (the proposal). The proposal would provide a four-lane divided highway (two lanes in each direction) with median separation.

Key features of the proposal would include:

- Upgrade of the existing highway, including widening from two lanes to a four-lane divided highway (two lanes in each direction) with median separation (wire rope barriers generally, or concrete barriers where space is constrained, such as at bridge locations).
- Provision for widening of the highway (if required in the future) to six lanes within the road corridor between Schofields Lane and around Pestells Lane.
- Tie-in to the Berry bypass to the north of the proposal.
- Grade-separated facilities¹ at:
 - Jaspers Brush Road and Strongs Road.
 - Morschels Lane and Devitts Lane.
- A grade-separated half-interchange at:
 - Pestells Lane and Meroo Road.
- Protected right turn bays at:
 - Mullers Lane (northbound).
 - Croziers Road (southbound).
 - At the u-turn facility between Strongs Road and Turners Lane at about chainage 23200 (northbound).
 - Between Strongs Road and Turners Lane at about chainage 24050, adjacent to Silos Winery (southbound).
 - Lamonds Lane (northbound).
 - Boxsells Lane (southbound).
 - South of Abernethys Lane at about chainage 28590 (northbound).
- U-turn facilities at:
 - Croziers Road (to travel northbound).
 - Between Strongs Road and Turners Lane at about chainage 23200 (to travel southbound).
 - Between Strongs Road and Turners Lane at about chainage 24050, adjacent to Silos Winery (to travel northbound).
 - Lamonds Lane (to travel southbound).
 - South of Abernethys Lane at about chainage 28590 (to travel southbound).
- A large cutting at Strongs Road, Jaspers Brush of around 300 metres long and up to a maximum of ten metres deep in addition to various smaller cuttings along the proposal.

¹ Unlike a standard grade separated interchange which has full length on-ramps and off-ramps, a grade separated facility has deceleration lanes to a connecting road that links to an overpass or underpass. Grade separated facilities have been used along the Pacific Highway and are informally referred to as Type S interchanges.

- Eight bridges over waterways²:
 - Creek crossing No. 1 – Unnamed drainage line at chainage 19350, a three span concrete structure around 44 metres long and three metres high.
 - Creek crossing No. 2 – Unnamed drainage line at chainage 19800, a single span concrete structure around 33 metres long and four metres high.
 - Creek crossing No. 3 – Flying Fox Creek, a single span concrete structure around 18 metres long and seven metres high.
 - Creek crossing No. 4 – Jaspers Brush Creek, a three span concrete structure around 44 metres long and six metres high.
 - Creek crossing No. 5 – Wileys Creek, a five span concrete structure around 76 metres long and five metres high.
 - Creek crossing No. 6 – Tandingulla Creek, a three span concrete structure around 44 metres long and three metres high.
 - Creek crossing No. 7 – Tullian Creek, a three span concrete structure around 44 metres long and five metres high.
 - Creek crossing No. 8 – Abernethys Creek, a three span concrete structure around 76 metres long and two metres high.
- Major drainage and flood mitigation structures:
 - O’Keefe’s Lane culvert – ten cell box culvert, with each cell around 2.5 metres wide, 1.5 metres high and about 70 metres long at chainage 21130.
 - Flood mitigation bridge – located just south of O’Keefes Lane at about chainage 21200, a three span concrete structure around 45 metres long and 3.5 metres high.
 - Pestells Lane culvert – eight cell box culvert, with each cell around 2.5 metres wide, 1.5 metres high and 130 metres long (between chainages 28020 and 28150).
 - Morschels Lane culvert – five cell box culvert, with each cell around 2.5 metres wide, 2.1 metres high and about 60 metres long at chainage 25070.
 - Overflow channel – 300 metre long channel located upstream of the alignment to allow flood waters to follow the existing drainage path (between chainage 22320 and 22650).
- A northbound heavy vehicle inspection bay at Jaspers Brush, staffed as needed and locked when not in use.
- Modifications to the connections between local roads and the highway, including Strongs Road, Jaspers Brush Road, Morschels Lane, Devitts Lane, Pestells Lane, Meroo Road and Abernethys Lane.
- Physical modifications to about 16 existing property accesses.
- Relocation and formalisation of existing southbound bus stops at Mullers Lane, Jaspers Brush Road, Morschels Lane and Lamonds Lane and existing northbound bus stops at Boxsells Lane, Croziers Road and Strongs Road. Bus stops would be relocated to sites where there is provision for safe vehicular access, set down and pick up.
- Removal of the current southbound bus stop adjacent to Croziers Road.
- Ancillary operational facilities, including permanent detention basins and stormwater treatment facilities.
- Tie-in with the existing highway at the Cambewarra Road / Moss Vale Road roundabout.
- Temporary construction ancillary facilities, including construction compounds, stockpile sites, haulage roads and sediment basins.

² Existing waterway crossings at Flying Fox, Jaspers Brush and Abernethys creeks are all currently spanned by bridges. These three bridges would be replaced as part of the proposal. The remainder of the new bridges would be constructed at the locations of existing culverts.

Need for the proposal

The proposal is one of a series of upgrades to sections of the Princes Highway which aims to provide at least a four-lane divided highway between Waterfall and Jervis Bay Road, Falls Creek. It is one of the last remaining sections of the highway to be upgraded and would add to the road safety and traffic efficiency benefits provided by the other Princes Highway upgrades.

The existing Princes Highway between Schofields Lane and Cambewarra Road is generally a two-lane undivided highway (one lane in each direction) with horizontal and vertical alignments often resulting in traffic travelling at lower speeds than the signposted speed limits and traffic inefficiencies. There are limited overtaking opportunities and many at-grade junctions with rural roads. Numerous private accesses onto the highway currently have poor sight lines due to the existing horizontal and vertical geometry.

The provision of additional capacity on the Princes Highway between Berry and Bomaderry is considered necessary to enable acceptable highway performance. Without the proposal, the continued growth in traffic on an unchanged road network would result in decreased road efficiency including increased travel times, adverse impacts on the local economy and a reduction in road safety which would likely result in an increase in the frequency of crashes on the Princes Highway and the 'Sandtrack'. The 'Sandtrack' is an alternative route to the winding, hilly section of Princes Highway between Gerringong and Bomaderry (via Fern Street, Crooked River Road, Gerroa Road and Bolong Road).

Proposal objectives

The objectives of the proposal include:

- Improve road safety.
- Improve efficiency of the Princes Highway between Schofields Lane and Cambewarra Road.
- Support regional and local economic development.
- Provide value for money.
- Enhance potential beneficial environmental effects and manage potential adverse environmental impacts.
- Optimise the benefits and minimise adverse impacts on the local social environment.

Alternatives and options considered

Alternatives

The following alternatives were considered:

- Base case ('do nothing').
- Upgrade of the Princes Highway.
- Upgrade of the 'Sandtrack'.
- Upgrade of the South Coast railway.

The preferred alternative was to upgrade the Princes Highway as this best met the proposal objectives. An upgrade of the Princes Highway would improve road safety and efficiency and would support regional and local economic development. An upgrade of the Princes Highway between Berry and Bomaderry would use the existing highway alignment thereby minimising impacts on the environment, communities and the local economy and providing value for money.

Route options

Route options for the proposal were identified and evaluated as part of a broader route options process for the series of upgrades to the Princes Highway between Gerringong and Bomaderry. This process was undertaken in consultation with the local community and considered the key environmental, social and economic constraints associated with the various route options.

Long list and short list options for upgrading the Princes Highway between Berry and Bomaderry generally followed the alignment of the existing highway, with some minor deviations around Meroo Meadow. It was considered that the existing horizontal alignment of the Princes Highway between Berry and Bomaderry would require little correction as it is relatively straight and flat. As a result, an upgrade of the existing alignment was carried forward as the preferred option as it best met the proposal objectives of providing value for money and minimising adverse social and environmental impacts, such as property acquisition and vegetation clearance.

Local road and property access

Local road and property access arrangements were identified through consideration of engineering and functional constraints and feedback from property owners along the alignment. These provide access to all local roads and properties along the length of the proposal and minimise additional travel time as much as possible for road users who may be affected by modified access arrangements. The proposed accesses meet the objective of road safety by providing safe and controlled access to all local roads and properties whilst minimising the number of right turns.

Statutory and planning framework

Clause 94 of the *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 is for the upgrade of a road and associated infrastructure facilities, 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). For the purposes of these works, Roads and Maritime is the proponent and the determining authority.

This review of environmental factors 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*. It has also considered the *Threatened Species Conservation Act 1995* (TSC Act), the *Fisheries Management Act 1994* (FM Act), and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Community and stakeholder consultation

Roads and Maritime considers meaningful and engaging community consultation to be an essential component of the proposal. As such, community and stakeholder consultation commenced in the initial stages of the proposal in March 2006, has continued throughout the environmental assessment and will be ongoing during the detailed design and construction phases of the proposal.

Community involvement has been an integral component in the development of the proposal. At each stage, Roads and Maritime has proactively engaged the community and stakeholders to increase public understanding of and participation in, the development of the proposal. The proposal has benefited from the input of local knowledge provided through community engagement, which has helped identify issues, potential mitigation strategies and opportunities to improve proposal outcomes.

Roads and Maritime has undertaken an ongoing, open and public consultation program with Aboriginal stakeholders since 2006. There are around 132 listed Aboriginal stakeholders including registered Aboriginal stakeholders) for the proposal, a number of which represent multiple people or groups.

Consultation has also been undertaken with Shoalhaven City Council. As required by clauses 13, 14 and 15 of ISEPP, Roads and Maritime provided Shoalhaven City Council with formal written notice of its intention to carry out the proposal. Council was also provided with a detailed description of the proposal and a copy of the Non-Aboriginal (historic) heritage assessment for the proposal. Council's comments have been considered and are addressed in the consultation chapter of this review of environmental factors.

Environmental impacts

Beneficial outcomes resulting from the proposal would include:

- Improved road safety, including:
 - The provision of a divided road with a central median barrier along the length of the proposal, which would help to control traffic turning into and out of local roads and property accesses across fast-moving two-way traffic.
 - A predicted 69 per cent reduction in total crashes along the proposal.
 - Safer access to and from drop-off facilities at bus stops for local residents.
 - Improved safety for cyclists on the highway through the provision of 2.5 metre wide shoulders. This would enable greater separation of cyclists from high-speed traffic than the existing situation.
- Improved traffic efficiency, including:
 - Higher safe operating speeds.
 - A reduction in travel times by about one minute along the proposal route.
 - Improved operational performance of the Princes Highway and a reduction of traffic on the 'Sandtrack'.
- Improved access to the existing tourism industry on the NSW South Coast.
- Improved access to markets and raw materials in Sydney and the Wollongong-Kiama area for industries in the Nowra area due to reduced travel times and increased road safety.
- Improved quality of surface water runoff into local waterways compared to the existing highway, as a result of the installation of an operational water quality treatment system.
- Improved flood immunity of the highway along the proposal route when compared with the existing highway.

The proposal would generate some short term adverse environmental and social impacts. These would include temporary increases in noise levels at some sensitive receivers as a result of construction noise and a reduction in traffic efficiency caused by speed limit restrictions and increased heavy and light vehicle movements along the road network during construction. In the longer-term, the proposal would result in some adverse environmental and social impacts that would require management, including:

- Changed access arrangements and modifications to local roads and properties. Local roads and accesses would be restricted to left-in / left-out movements due to the introduction of a central median and safety barrier fencing along the length of the proposal.
- During standard construction hours, 27 noise sensitive receivers would be highly noise affected (more than 75 dB (A)) during earthworks activities and 31 noise sensitive receivers would be highly noise affected during paving works.
- Increased operational noise levels at some properties. A number of sensitive receivers would be exposed to noise levels above the relevant operational noise criteria. To address noise impacts low noise pavement has been included in the concept design for the entire length of the proposal. In addition to low noise pavement, 42 residential receivers and one child care centre would be considered for architectural treatment.

- Potential direct and indirect impacts to 11.65 hectares of native vegetation (terrestrial and aquatic), including the following direct impacts to Endangered Ecological Communities (EECs):
 - Disturbance of 0.63 hectares of Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions (FWCF) EEC.
 - Removal of 0.53 hectares of the River-flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Coast Bioregions EEC (RFEFCF).
 - Removal of 0.30 hectares of the Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion EEC (ILGW).
- Complete loss of 10 and a partial impact to 14 sites, items or objects of Aboriginal heritage significance.
- Complete loss of two, and partial impact to eight sites, items or objects of non-Aboriginal (historic) heritage significance.
- Impacts to the existing landscape character of the proposal area. This is associated with the construction of two additional lanes along the length of the proposal, two grade-separated facilities, a grade separated half-interchange, eight new bridges over local waterways and a large cutting at Strongs Road, Jaspers Brush.
- The permanent acquisition of 46 hectares of land currently outside of the existing road reserve, some of which has already been acquired by Roads and Maritime.
- A reduction in the Level of Service (LoS) of the roundabout at the intersection of the Princes Highway and Cambewarra Road, Bomaderry. Without the proposal the roundabout would perform at an unacceptable level by 2039 and with the proposal it would perform at unacceptable 'critical' performance level by 2039. Roads and Maritime acknowledges that with or without the proposal, further investigation into the performance and upgrade of this roundabout is warranted as part of a separate study.
- A reduction in the number of bus stops on the Princes Highway in the proposal area, inconveniencing users who would be required to travel to and from other bus stop locations. However, consolidation of bus stops would improve overall safety.
- Potential impacts to four agricultural businesses as a result of changes to farm dam catchments, as well as potential impacts to the viability of one horse stud business as a result of land acquisition.

A number of safeguards and management measures have been identified to adequately address, manage and minimise potential adverse environmental impacts associated with the proposal. These management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

Justification and conclusion

The proposal would meet its objectives and would also satisfy key government strategies and plans, including the *Illawarra Regional Strategy* and *Shoalhaven – An Enterprising Alternative, an Economic Development Strategy*. These plans identify improvements to the Princes Highway as a priority to support the economy of the NSW South Coast.

The proposal has been designed in accordance with current Roads and Maritime road design guidelines, safety and traffic efficiency requirements. The proposal achieves acceptable environmental, social and economic outcomes, and delivers substantial road safety and road-user benefits. On balance, the proposal is considered justified.

The environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an environmental impact statement to be prepared and approval to be sought for the proposal from the Minister for Planning and Infrastructure under Part 5.1 of the EP&A Act. The proposal is unlikely to significantly affect threatened species, populations or ecological communities or their habitats, within the meaning of the TSC Act or FM Act and therefore a species impact statement is not required. The proposal is also unlikely to significantly affect Commonwealth land or have a significant impact on any matters of national environmental significance and therefore a referral to the Federal Minister for the Environment is not considered necessary.

Display of the review of environmental factors

This review of environmental factors is on display for comment between 1 November 2013 and 29 November 2013. You can access the documents in the following ways:

Internet

The documents will be available as pdf files on the Roads and Maritime website at www.rms.nsw.gov.au/roadprojects/projects/princes_highway/berry_bomaderry/index.html.

Display

The review documents can be viewed at the following locations:

- Shoalhaven City Council, 44 Bridge Road, Nowra.
1 November to 29 November, Monday to Friday 9am to 5pm.
- Nowra Library, 10 Berry Street, Nowra.
1 November to 29 November, Monday to Friday 9.30am to 7pm and Saturday 9.30am to 3pm.
- Office of Gareth Ward MP, 125 Terralong Street, Kiama.
1 November to 29 November, Monday to Friday 9am to 5pm.
- Office of Shelly Hancock MP, 1/57 Plunkett Street, Nowra.
1 November to 29 November, Monday to Friday 9am to 5pm.
- Roads and Maritime Wollongong office, 90 Crown Street, Wollongong.
1 November to 29 November, Monday to Friday 8.30am to 5pm.
- Gerringong upgrade community display centre, 446 Princes Highway, Gerringong.
1 November to 29 November, Monday to Friday 9am to 5pm.
- Berry project office, (Broughton Court) shop 3/113 Queen Street, Berry.
Friday 1, 8, 15, 22 and 29 November from 10am to 5pm, Saturday 9 November from 10am to 2pm, Thursday 14 November from 4pm to 7pm and Saturday 23 November from 10 am to 2pm.
- Nowra Showground Pavilion, West Street, Nowra.
Tuesday 12 November from 10am to 5pm and Thursday 28 November from 4pm to 7pm.

Staffed displays and stakeholder / community meetings will be held during the display of the review of environmental factors. Details of the static and staffed display dates, times and locations will be advertised in local papers, on the project website, emailed to registered stakeholders and provided in a community update distributed to the letter boxes of the local community (around 14,000 residents) prior to the display of the review of environmental factors. A project information line will be available throughout the exhibition period – 1800 506 976 (toll free).

Phone or email

Should you be unable to access the internet or visit one of the display locations, copies of the review documents can be obtained by contacting:

- Project Information Line: 1800 506 976 (free call)
- Email: berrytobomaderryupgrade@rms.nsw.gov.au

How can I make a submission?

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

Mail: Berry to Bomaderry upgrade
AECOM
PO Box Q410, QVB Post Office
Sydney, NSW, 1230.

Email: berrytobomaderryupgrade@rms.nsw.gov.au

Fax: 02 4221 2590

Submissions must be received by 29 November 2013.

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 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 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, Level 6, 90 Crown Street, Wollongong.

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 community 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 regarding this Roads and Maritime determination.

If the proposal goes ahead, Roads and Maritime proceeds with final design and tenders are called for construction of the project.

For more information:

Berry project office: Shop 3/113 Queen Street, Berry (open Fridays 10am to 5pm)

Project information line: 1800 506 976 (free call)

Web: www.rms.nsw.gov.au/bbu

Email: berrytobomaderryupgrade@rms.nsw.gov.au

Mail: Berry to Bomaderry upgrade
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