

2014-2015 Assessment Brief

Recommended rating:	Real potential
Current rating on the Infrastructure Priority List:	New submission
Initiative Name:	Bringelly Road upgrade - Stage 1.
Geography:	Sydney, New South Wales
Proponent:	NSW Government (Roads and Maritime Services)
Project description:	

The NSW Government proposes to upgrade Bringelly Road between King Street, Leppington and Camden Valley Way, Austral in South West Sydney. The proposal involves the widening of the road carriageway and the introduction of traffic lights and expansion of intersections. This is Stage 1 of the two stage plan to upgrade the full length of Bringelly Road.

Australian Government funding for the project was provided to support the development of the road network to the Western Sydney Airport. To date the business case and cost benefit analysis for this project has not included consideration of the airport and is based on 2011 traffic modelling.

Project objectives include:

- Increase road capacity to accommodate peak hour traffic volumes;
- Improve intersection operation so as to avoid traffic congestion in the AM and PM peak hours;
- Reduce the crash rate; and
- Improve multi modal access sufficiently to achieve a modal shift (i.e. provisions for pedestrian, cyclist bus and other road users).

Problems the project seeks to address are:

- With projected strong population and economic growth in the Sydney's South West Growth Centre (SWGEC), the current road corridor will be unable to accommodate forecast traffic without unacceptable delays and congestion;
- If Bringelly Road is not upgraded, the proponent argues that transport services in Western Sydney will be inadequate;
- The continued growth in traffic through intersections on Bringelly Road will also likely see an increase in the average crash rate in the locality; and
- In the absence of upgrade work, under forecast traffic loads the existing road asset will deteriorate quickly.

Project solution:

The project is located along Bringelly Road in western Sydney and involves widening 5.1 km of Bringelly Road from just west of Camden Valley Way, Leppington to the western side of the King Street intersection, Austral from the existing two-lane single carriageway road to a four-lane, and in part six-lane (between Eastwood Road and the Upper Canal Bridge), dual carriageway road divided by a central median. The road will have a posted speed limit of 80 km/h, and will include shared pedestrian and cycle paths along the length of the road, a two metre wide hard shoulder and 'short bus lanes' at the approaches to traffic lights.

Stage 2 of the overall plan to upgrade Bringelly Road (not considered in this assessment), will consist of upgrading Bringelly Road from King St to The Northern Road. The second stage is currently at the detailed design stage and building work is expected to start in late 2016 and be completed in 2018.

Maps for the project can be found at <http://www.rms.nsw.gov.au/documents/projects/sydney-west/infrastructure-plan/wisp-location-map-large.jpg>

Capital Cost of Initiative by Proponent (\$ millions, nominal, undiscounted):	\$268 million (P90)
Contribution sought by Proponent including requests for project development funding (\$ millions, nominal, undiscounted):	\$214 million (P90)
Other funding (source/amount/cash flow) (\$ millions, nominal, undiscounted):	NSW Government: \$54 million (P90) Developer contributions: Not shown
High level development and implementation program (month/year):	Start: January 2015 End: December 2017
BCR stated by proponent:	3.6:1 (P90 capital costs, 7% discount rate)

Strategic alignment summary

Alignment with Infrastructure Australia's Strategic Priorities:

The upgrade of Bringelly Road is about ensuring adequate transport capacity for a key growth area in Sydney. As such, it is aligned with Infrastructure Australia's strategic priority of developing Australia's cities and regions. The project will result in a more effective link between Sydney's existing motorways and the Sydney's South West Sydney Growth Centre, which will assist in integrating developing communities with existing centres.

The project is also likely to support the construction and operation of the Western Sydney Airport.

Alignment with State Strategic Priorities:

The Bringelly Road Upgrade – Stage 1 has previously been identified in a range of NSW Government's infrastructure planning documents, including *State Infrastructure Strategy*, *NSW Long Term Transport Master Plan* and *A Plan to Grow Sydney*, as important infrastructure to accommodate growth in South West Sydney related to the planned development of the Western Sydney Airport at Badgerys Creek and expected population growth in the region.

Problem assessment summary

According to the proponent, Bringelly Road will be unable to accommodate forecast traffic without unacceptable delays and congestion, reflecting the projected strong population and economic growth in Western Sydney. Traffic volumes along Bringelly Road (near the Leppington town centre) are predicted to increase from 9,550 vehicles/day in 2013 to about 50,000 vehicles/day by 2036, which will create congestion and is likely to result in an increase in crash rates in the locality. The proponent argues that without the proposed project, transport services in Western Sydney will be inadequate. Similarly, the growth in traffic through intersections on Bringelly Road is likely to see a continued increase in the average crash rates in the locality and in the absence of upgrade work the existing road asset will deteriorate quickly.

The root cause of the problems is the forecast growth in road based traffic and transport generated by an expanding South West Growth Centre (SWGCG). When developed, the region will contain about 110,000 new dwellings and 300,000 residents.

Further, demands on the current road will likely increase in response to the development of the planned Western Sydney Airport to the North West of Bringelly Road. A previous Environmental Impact Statement for the proposed Western Sydney Airport, completed in 1997, indicated that during construction of the airport traffic volume on Bringelly Road would increase by 950 vehicles per day of

which around a half would be heavy vehicles and would increase by around 6,000 vehicle per day when the airport opens and services 10 million passengers per year.

Solution assessment summary

Bringelly Road is one of a suite of projects that are aimed at accommodating growth in transport demand in the South West Growth Centre of Sydney and supporting the Western Sydney Airport. In its submission, the proponent has limited the options assessment to specific options for Bringelly Road. The planning process for the South West Growth Centre has arrived at Bringelly Road as a key road requiring upgrade.

The options assessment for Bringelly Road includes three options: a 'do nothing' option, option 1 involving a road along Bringelly Road, but deviating from the current corridor at the western end of the road, and option 2 which was the preferred option and on which its proposal is based. (Both project options are similar in terms of stage 1.)

The preferred option involves the widening of the existing two-lane single carriageway road to a four-lane, and in part six-lane (between Eastwood Road and the Upper Canal Bridge), dual carriageway road divided by a central median. The road will have a posted speed limit of 80 km/h, and will include shared pedestrian and cycle paths along the length of the road, a two metre hard shoulder on either side of the road and 'short bus lanes' at the approaches to traffic lights.

The capacity requirements for the upgrade of Bringelly Road have been determined based on *Austrroads Guide to Traffic Management Part 3: Traffic Studies and Analysis*, which specifies the typical mid-block capacities for various types of urban roads with intersections. Together with traffic forecasts, AECOM has identified required capacity for Bringelly Road over time – the preferred option is consistent with anticipated capacity requirements in 2031.

The traffic demand for Bringelly Road is also anticipated to increase over a relatively long period.

Economic appraisal summary

The stated BCR for the project is 3.6:1.

The economic appraisal is based on underlying transport analysis conducted by AECOM. In general, the cost benefit analysis methodology appears to be robust; however there are three critical issues not addressed in the analysis:

- The proponent has provided substantial detail on transport demand but has not provided a with and without project traffic modelling report. This information is critical to understanding the base case and verifying that estimated benefits (such as time savings) are reasonable;
- The assessment should be updated in line with the latest population projections for Sydney's South West Growth Centre. These projections have since been revised down, reflecting slower than expected population growth. This is likely to reduce the BCR, though the magnitude is unclear; and
- The impact of the Western Sydney airport, which may significantly increase the benefits.

Deliverability summary

The proponent has provided sufficient technical information on the project design to demonstrate that there has been adequate planning for project delivery. The risk assessment covers all the critical risks for the project. The governance structure is robust, with NSW Roads and Maritime Services (RMS) managing the project.

The proponent has completed a benefit realisation plan which clearly links the benefits to the objectives and problems the project is seeking to address and identifies strategies to monitor the projects performance following completion.

The project is anticipated to be funded in an 80:20 split by the Federal and State Government respectively. The proponent has concluded that given the low risk nature of the project, delivery as a PPP did not provide value for money.

The upgrade of Bringelly Road is a project included in the Special Infrastructure Contribution for the South West Growth Centre. Currently, the NSW Government funds 50 per cent of costs and developers fund the remaining 50 per cent of costs of projects identified in the South West Growth Centre. This funding arrangement reduces the case for Federal Funding of the project.

Because there are possibilities for user funding for new arterial roads in Greenfield development areas, Commonwealth funding should be targeted to areas of national significance, such as bringing forward the project timing to aid the development of the Western Sydney Airport.

Overall Assessment

The proponent has provided sufficient information to indicate that the problem being addressed is both significant and aligned to Infrastructure Australia's and the NSW Government's strategic priorities. The South West Growth Centre is an important part of accommodating growth in Sydney. A Western Sydney Airport would give further prominence to the development of this part of Sydney and would make the identified problems nationally significant.

The project BCR is 3.6:1.

Further information is required to better understand the broader programme of roads to support the development of the Western Sydney Airport and the impact supporting its construction would have on this project.

Infrastructure Australia Priority List Decision

Infrastructure Australia assesses the project be included on the Infrastructure Priority List at Real Potential and that IA will work with project proponents to further understand the broader programme of roads to support the development of the Western Sydney Airport, and the impact on this project.