

2014-2015 Assessment Brief

Recommended rating:	Ready to proceed
Current rating on Infrastructure Priority List:	Threshold
Initiative Name:	Gateway Motorway Upgrade North – Nudgee Interchange to Deagon Deviation
Geography:	Brisbane, Queensland
Proponent:	Queensland Department of Transport and Main Roads
Project description:	<p>The Queensland Government is proposing a series of upgrades to the Gateway Motorway North, including widening of approximately 11 kilometres of the motorway from four to six lanes between Nudgee and Deagon, north of Brisbane Airport.</p> <p>The Australian Government committed funding of \$929.6 million in the 2014-15 Budget. The Queensland Government has committed to funding the remainder of the project.</p> <p>Project objectives include:</p> <ul style="list-style-type: none"> • Support the economic growth potential of the Australia Trade Coast precinct, Port of Brisbane and adjoining commercial area; • The provision of a safe and efficient urban bypass road that enables access between markets, production and distribution centres, the Port of Brisbane and Brisbane Airport; and • Reducing input costs to business and industry. <p>Problems the project seeks to address are:</p> <ul style="list-style-type: none"> • Increased congestion and accident rates on the Gateway Motorway North, stemming from an increased number of commuter car trips, and activity expansion across the Australian Trade Coast precinct and the Port of Brisbane (in 2011, the Gateway Motorway North carried over 75,000 vehicles per day, with daily flows expected to increase by over 60 percent by 2026). <p>Project solution:</p> <p>The proposed solution involves a range of upgrades to the Gateway Motorway North, including:</p> <ul style="list-style-type: none"> • Widening of the motorway from four to six lanes between Nudgee and Deagon; • A cycle way alongside the motorway corridor; • Reconfigured Nudgee Interchange, including a new Nudgee Road bridge over the Motorway; • Interchange development at the Gateway Motorway/Deagon Deviation connection; and • A range of new and upgraded ramps and bridges. <p>The Gateway Motorway North links directly to the Bruce Highway and industrial/commercial precincts in Northern Brisbane and is the primary road link from the north to and from the Port of Brisbane.</p> <p>Maps for the project can be found at Queensland Government Department of Transport and Main Roads website, http://www.tmr.qld.gov.au/Projects/Name/G/Gateway-Motorway-North-Nudgee-to-Bracken-Ridge.aspx</p>
Capital Cost of Initiative by Proponent (\$ millions, nominal, undiscounted):	\$1,161 million (P90)
Contribution sought by Proponent including requests for project development funding (\$ millions, nominal, undiscounted):	\$929.6 million

Other funding (source/amount/cash flow) (\$ millions, nominal, undiscounted):	\$231.4 million (Queensland Government)
High level development and implementation program (month/year):	2014 / 2017
BCR stated by proponent:	5.5:1 (P90 capital costs, 7% discount rate)

Strategic alignment summary

Alignment with Infrastructure Australia’s Strategic Priorities:

The project aligns with Infrastructure Australia’s strategic priorities to ‘increase productivity’ and ‘expand productive capacity’ through delivering a more efficient freight network.

The Gateway Motorway connects to Brisbane’s international gateways – the Port of Brisbane and Brisbane Airport – and forms part of the National Freight Network and the National Land Transport Network. The project will contribute to one of the goals identified in the *National Land Freight Strategy*: completion of the northern link of the Gateway Motorway to freight specifications.

Alignment with State Strategic Priorities:

The Queensland Government has not published infrastructure strategies since March 2012. State infrastructure plans published before 2012 identify the project as a priority infrastructure upgrade.

Problem assessment summary

The core problems identified in the submission are traffic congestion, poor separation of local trips and freight movements, and high accident rates on the Gateway Motorway North.

Congestion has resulted from increasing local trips on the motorway and increasing work travel during peak periods. In 2011 over 75,000 vehicles per day used the Gateway Motorway North, with around 13% being medium and heavy commercial vehicles (Austroads Class 3 and above). Travel demand is expected to grow beyond 120,000 vehicles per day by 2026. The submission identifies that some links on the Gateway Motorway North operate at or near capacity for over six hours per day in the direction of peak traffic flow.

The submission states that the rising level of congestion has been a significant causal factor in the increase in accidents. The Gateway Motorway North accident rate is growing faster than vehicle kilometres travelled (the accident rate has increased by 71% while the vehicle kilometres travelled has only increased by 32% over a ten year period).

The submission notes that the accident rate on the motorway between Nudgee and the Deagon Deviation for the 10 years to 2009 was 34 per 100 million vehicle kilometres. The submission notes that this is considerably higher than that for the Pacific Motorway.

The causes of increased congestion are understood to include growth in trade, rising population levels, economic development and the expansion of the Australian Trade Coast precinct.

The causes of the congestion problems could be further explored to assist longer term planning for South East Queensland. These causes could include the lack of road pricing, land use planning decisions and the limited public transport alternatives available in some areas. The impacts of these factors have not been quantified or presented in a way that could help determine alternative options to address the root causes of congestion.

Solution assessment summary

The preferred solution is a suite of upgrades to the Gateway Motorway North, including widening of approximately 11 kilometres of the motorway from four to six lanes between Nudgee and Deagon, interchange works and ramp upgrades.

The solution assessment considered a short-list of options. Four options considered upgrades to the existing highway, and a fifth option considered construction of a new four-lane highway on a new alignment. Whilst a road-based solution is a reasonable response to the problem in the short term, alternative reform options and modes to provide an integrated transport system in the longer term could also have been considered.

The submission includes a discussion of options for road pricing, including a high occupancy toll, express toll lane and monetising ramp meter delay; however these options are not explored in detail. Concerns with road pricing raised in the submission include reduced viability due to the impact of tolls on patronage and a strong rationale for public sector funding due to market failure.

Given that the root cause of the problem is growth in freight traffic and population, detailed consideration of reforms, measures to improve freight efficiency and public transport options for addressing passenger vehicle congestion need to be addressed as part of a long term integrated transport plan for Brisbane.

Infrastructure Australia would also anticipate value in considering approaches to ensure reduced journey times and increased reliability for higher value traffic, such as freight traffic and high occupancy vehicles. The modelling for the project anticipates that speeds with the project in 2031 would be similar to speeds without the project in 2016, at 60-70 km per hour on average. The 2031 speeds represent a decline from 70-80 km/hour when the project is first available. Arrangements to preserve faster, reliable journey times for high value users could include dedicated lanes or future tolling arrangements.

Economic appraisal summary

The stated BCR for the project is 5.5:1.

The economic assessment framework broadly complies with cost benefit guidelines.

The updated BCR is likely to be somewhat overstated because the transport modelling has not accounted for induced demand.

The project would continue to have benefits well in excess of costs if the road were to be tolled, with relatively low levels of diversion and falling diversion rates over time. Infrastructure Australia is confident that the benefits are well in excess of twice the costs in the case that the project were to be tolled and adopting a conservative view on benefits.

Deliverability summary

The major works are being delivered through a design and construct contract. Three tenderers were shortlisted for the motorway upgrade works in November 2014 (Leighton Contractors, Lend Lease and NorthLink Joint Venture). Infrastructure Australia understands that a preferred tenderer will be announced in mid-2015.

The proponent has conducted a thorough risk assessment, identifying a range of risks related specifically to the procurement process in line with Queensland Department of Transport and Main Road's and the Australian Department of Infrastructure and Regional Development's guidelines. Where possible, risk mitigation strategies have been identified and appear adequate.

The project is to be funded in an 80:20 split between the Federal and State Governments respectively. Other funding arrangements were evaluated, but dismissed as the proponent has stated that Commonwealth funding has been granted on the basis of 'no tolling'. Tolls are currently in place

on parts of the Gateway Motorway, to the south of the project. The proponent has investigated the implications of tolling arrangements but no tolls are currently envisaged for the project.

Infrastructure Australia considers that there is a strong rationale to toll users of high value projects such as the Gateway Motorway Upgrade North to provide a sustainable funding source for transport infrastructure. In the case of this project, this could include tolling of freight movements in particular.

The proponent has engaged Transurban, to deliver the Gateway Upgrade North project (previously Queensland Motorways Limited was contracted to do this, but has since been purchased by a consortium led by Transurban). Transurban is currently responsible for the operation and maintenance of a 70 kilometre network of toll roads including the Gateway and Logan Motorways. The proponent expects that this arrangement will result in a number of benefits including:

- Allowing the Government to leverage the engineering procurement and project management expertise within Transurban;
- Ensuring the design of the project is optimised and interfaced with existing Gateway Motorway operations; and
- Transferring project management and procurement risks to Transurban.

The Department of Infrastructure and Regional Development has reviewed these arrangements as part of the Australian Government's project assurance processes for the development of a funding agreement with the Queensland Government and now understand that these will not lead to concerns in the procurement process.

Some share of funding for high demand projects such as the Gateway Motorway Upgrade North should come directly from users through tolling arrangements. The project is currently put forward by the Queensland Government on the basis that there will not be a toll for users. Analysis undertaken by the proponent indicates that, were the project to be tolled, a substantial funding share could be obtained from users. However, there would be diversion of traffic onto arterials with negative consequences for travel speeds on these routes.

The principles set out in the previous Infrastructure Australia Council's Urban Transport Strategy allow project assessments to be agnostic as to whether road pricing is applied or not. On balance, the absence of a lack of funding from users through road pricing is not of sufficient concern to keep this project at Threshold, given the substantial positive economic outcomes of the project.

Overall Assessment

Infrastructure Australia considers that the proponent has provided good evidence that increasing congestion along the Gateway Motorway North Corridor addresses a nationally significant problem impacting on the important international gateways of the Brisbane Airport and the Port of Brisbane. The proposed solution is a reasonable response to address this problem that delivers strong economic benefits. The delivery arrangements provide confidence that the expected economic benefits will be realised for this project.

Infrastructure Australia Priority List Decision

Infrastructure Australia assesses the project as Ready to Proceed on the Infrastructure Priority List.