

2. Need for the proposal

2.1 Regional context

The Pacific Highway plays an important part in linking the coastal regions in the area between Sydney and Brisbane. Many of these regions are currently experiencing significant rates of population growth and are predicted to continue this trend as local economies grow and also diversify from traditional tourism based economies. Tourism, however, remains an important economic generator for the area, and tourist traffic in holiday periods increases highway traffic volumes significantly.

2.2 Implications of doing nothing

2.2.1 The “do nothing” option

Consideration was given to the “do-nothing” option. The do-nothing option involves retaining the highway as the existing two-lane pavement and only undertaking maintenance works such as pavement patching and re-sheeting works and line marking when required.

Under a “do nothing” option, the Pacific Highway would continue to play an important role as a major local, intra and inter-regional road transport link and a main link between Sydney and Brisbane.

However, the implications of not upgrading would be ongoing and result in declining traffic and safety conditions and deteriorating community amenity along the existing highway between the Oxley Highway and Kempsey. Predicted traffic growth would further exacerbate the problems currently experienced with the existing road and traffic environment.

A key objective of the Oxley Highway to Kempsey project is to develop a dual carriageway with the potential to reduce target crashes to 15 crashes per 100 million vehicle kilometres over the project length. If the upgrading of the Oxley Highway to Kempsey section of the highway did not occur, it is projected that:

- ▶ By 2016, there would be 29.35 crashes per 100 million vehicle kilometres within the study area. This equates to an average of 0.9 fatal and 10.8 serious injury crashes per year; and
- ▶ By 2036, there would be 29.45 crashes per 100 million vehicle kilometres within the study area. This equates to an average of approximately 1.6 fatal and 17.8 serious injury crashes per year.

It is estimated that reducing the number of crashes would save the community in the order of \$4.2 million per annum by 2036, as well as reducing the personal effects of road crash trauma.

Other consequences would include:

- ▶ The deterioration of traffic conditions to unacceptable levels particularly at holiday times;
- ▶ A likely increase in vehicle accidents;
- ▶ A gradual increase in travel times;
- ▶ Increased conflict between local and through traffic;

- ▶ Inconsistency in road standard between the section of highway within the study area and the remainder of the Pacific Highway;
- ▶ Worsening road and traffic conditions with consequent adverse environmental effects such as noise, vibration and community disruption;
- ▶ Increased limitations for pedestrian access and risk of pedestrian accidents due to traffic growth;
- ▶ Exacerbation of community severance as access across the highway deteriorates; and
- ▶ Not meeting the objectives of planning and transport strategies, in particular the Pacific Highway upgrading program.

2.3 Summary of need

The consequences of not undertaking the Oxley Highway to Kempsey upgrade project include the steady reduction in safety and local amenity due to the conflict between local and through traffic caused by the increasing population of the area. Freight travel times and costs would increase in combination with the increased traffic volumes on the highway at peak holiday times, and there would be a consequent increase in community severance and isolation as highway access and functionality worsened.

The Oxley Highway to Kempsey upgrade is required to meet the economic and social requirements of one of the state's fastest growing regions. The project is required in order to improve transportation safety and efficiency, reduce accidents, facilitate orderly economic development, improve freight costs and travel times, allow for the separation of local and through traffic and provide a safe and efficient section of the state's transportation network.

2.4 Proposal objectives and design principles

2.4.1 The Pacific Highway upgrade program objectives

The Pacific Highway upgrade program is one of the largest infrastructure projects in the history of NSW. The objectives of the Pacific Highway upgrade program are to:

- ▶ Significantly reduce road accidents and injuries;
- ▶ Reduce travel times;
- ▶ Reduce freight transport costs;
- ▶ Develop a route that involves the community and considers their interests;
- ▶ Provide a route that supports economic development;
- ▶ Manage the upgrading of the route in accordance with ecologically sustainable development (ESD) principles; and
- ▶ Provide the best value for money.

2.4.2 The Oxley Highway to Kempsey project objectives

- ▶ Develop a dual carriageway road with potential to reduce crash rates to 15 crashes per 100 million vehicle kilometres over the project length;
- ▶ Develop a refined design that meets or exceeds B-double requirements, including at intersections, where required;
- ▶ Maximise the use of the existing road reserve, where possible;
- ▶ Integrate input from local communities into the development of the project through the implementation of a comprehensive program of community consultation and participation;
- ▶ Satisfy the technical and procedural requirements of the RTA with respect to the design of the project;
- ▶ Provide for transport developments that are complementary with land use;
- ▶ Allow for all connections, modifications and improvements necessary to upgrade the existing highway where it is retained as part of the project;
- ▶ Consider delay management strategies to minimise disruption to local and through traffic and maintain access to affected properties and land during construction;
- ▶ Provide flood immunity on at least one carriageway:
 - Target a 1 in 100 year flood event (1 per cent AEP); and
 - Minimum of at least a 1 in 20 year flood event (5 per cent AEP);
- ▶ Provide intersections designed to achieve at least a level of service 20 years post-completion to accommodate years the 100th highest hourly volume;
- ▶ Develop solutions that address community expectations for access to the new highway;
- ▶ Retain or replace existing rest areas within the study area;
- ▶ Develop a refined design generally meeting the criteria for a 110 km/h design speed for the vertical alignment and horizontal alignment;
- ▶ Ensure the project outcomes achieve value for money;
- ▶ Provide a strategy for future upgrades to be easily integrated into the project from both engineering and environmental perspectives; and
- ▶ Minimise the need to modify the preferred route option and refined design during subsequent project phases.

2.4.3 Design principles

The standard for the design of the Oxley Highway to Kempsey project is the RTA's *Draft Upgrading the Pacific Highway, Upgrading Program beyond 2006: Design Standards March 2005*. In addition to these standards, the RTA's *Road Design Guide* and Austroad's *Guide to Traffic Engineering Practice* will also be used.