



Warrell Creek to Urunga Upgrading the Pacific Highway

ENVIRONMENTAL ASSESSMENT

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3. Strategic justification and project need

This chapter explains why the upgrade of the Pacific Highway between Warrell Creek and Urunga is needed. It also addresses the strategic planning framework, which supports the need for an upgrade of the highway.

Director-General's requirements	Where addressed in the EA
Strategic Justification – outline the strategic outcomes for the Pacific Highway Upgrade Program (PHUP), including the respect to strategic need and justification, the aims and objectives of relevant State planning policies, the principles of Ecologically Sustainable Development, and cumulative and synergistic impacts associated with the Program as a whole. Identify how the project fits within these strategic outcomes and how impacts associated with the project will be considered and managed to achieve acceptable environmental planning outcomes across the PHUP. Project Justification – describe the need for and objectives of the project; alternatives considered (including the assessment of the environmental costs and benefits of the project relative to alternatives), and provide justification for the preferred project (including interchange locations) taking into consideration the objects of the <i>Environmental Planning and Assessment Act 1979</i>.	Section 3.1.1 Relationship of the Proposal to the Pacific Highway Upgrade Program Section 3.1.2 NSW and Australian Strategic Planning Policy and Framework Section 3.5 Statement of strategic need Section 20.2 Integration of the Program and Proposal with Principles of Ecologically Sustainable Development Section 20.4 Relationship between the proposed upgrade and the Objectives of the EP&A Act
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3.1 Strategic context

3.1.1 Relationship of the Proposal to the Pacific Highway Upgrade Program

The Proposal is an important component of the Pacific Highway Upgrade Program, which is needed to meet the NSW and Australian governments' commitments to upgrade the Pacific Highway between Hexham in NSW and the Queensland border in response to:

- Current constraints on transport infrastructure and the related need to improve accessibility and transport, both within individual regions and between regions.
- The need to improve the efficiency and integration of transport infrastructure, including improvements in the efficiency and productivity of the freight sector.
- The need to improve road safety.
- Increasing demand for urban development, especially on the Mid North Coast and North Coast of NSW.

The projects that make up the Pacific Highway Upgrade Program, including the Proposal, are intended to achieve the strategic outcomes noted above.

3.1.2 NSW and Australian strategic planning and policy framework

Nation Building Program

The NSW and Australian governments are providing \$3.6 billion as part of the Nation Building Program and Building Australia Fund to continue the upgrade of the Pacific Highway over the next five years to mid 2014.

AusLink White Paper

The AusLink White Paper Building our National Transport Future (Australian Government DOTARS 2004) is the Australian government's formal policy statement on land transport and identifies national objectives for the AusLink investment program. The White Paper promotes sustainable national and regional development and connectivity by contributing to the establishment of an integrated national transport network. The Pacific Highway is identified as a key element of the national transport network under the AusLink investment program and is also the key road between Sydney and Brisbane. The Pacific Highway Upgrade Program (including the Proposal) is consistent with the objectives of the AusLink investment program as it aims to improve connectivity within and between communities in the region, increase road safety, and promote sustainable development.

Sydney-Brisbane Corridor Strategy

The *Sydney-Brisbane Corridor Strategy* (DOTARS 2007) has been jointly developed by the Australian Department of Transport and Regional Services, the RTA, the NSW Ministry of Transport, the Queensland Department of Main Roads and Queensland Transport. The strategy identifies the Sydney-Brisbane corridor as one of the busiest links on the Australian transport network. Challenges along the corridor, particularly along the coastal route, include population growth, increased freight movements and rapid growth in passenger and local traffic. The strategy identifies transport deficiencies along the corridor, including safety and amenity issues and increasing congestion. Key objectives of the strategy are to achieve substantial duplication of the Pacific Highway in the short-term and

complete duplication of the Pacific Highway in the long-term. The Pacific Highway Upgrade Program, including the Proposal, is consistent with these objectives.

NSW State Infrastructure Strategy

The *State Infrastructure Strategy – New South Wales 2008-09 to 2017-18* (NSW Treasury 2008) provides strategic direction for planning and delivery of infrastructure in NSW in response to population growth. The strategy, which comprises a rolling 10-year plan for infrastructure projects, was first published in 2006 and is updated every two years. The strategy highlights the upgrading of the Pacific Highway as a priority investment, with the upgrading of the Warrell Creek to Urunga section of the highway identified as necessary for road safety and transport efficiency.

NSW State Plan

The *NSW State Plan: A New Direction for NSW* (NSW Government 2006) identifies priorities for the NSW Government over the next 10 years. The plan provides goals and targets for regional economies, environmental protection, employment and transport, including improving the efficiency and safety of the road network through maintenance and infrastructure development. The Pacific Highway Upgrade Program, including the Proposal, is consistent with these goals and targets. The expected reduction in crashes would help to meet the State Plan objective for road safety of 0.7 fatalities per 100 million vehicle kilometres travelled (MVKT).

Mid North Coast Regional Strategy

The *Mid North Coast Regional Strategy* (DoP 2009) establishes the guiding principles for the planning and management of sustainable growth in the Mid North Coast region. The strategy recognises the Pacific Highway as the primary north-south corridor for inter and intra-regional movements. It identifies the growth pressures that will be faced by the region and the importance of safe and efficient transport connections within and between regions along the Sydney-Brisbane corridor. The Pacific Highway Upgrade Program, including the Proposal, is consistent with the *Mid North Coast Regional Strategy* as it aims to improve traffic safety and efficiency along the Sydney-Brisbane corridor as the regional population grows.

Action for Air

The NSW Government initiative *Action for Air* (EPA 1998) is a 25 year plan to improve air quality. The plan, which was updated in 2006, identifies the reduction of motor vehicle emissions as a priority action and sets specific targets for reducing the per capita vehicle kilometres travelled. To achieve the targets of the plan, the government has developed two key transport initiatives:

- An integrated transport plan.
- An integrated freight management strategy across road, rail and other transport modes.

Although *Action for Air* has a focus on reducing air pollutants in urban environments, measures to improve traffic flow can also have beneficial effects in non-urban environments. Improving transport efficiency can also have the additional benefit of reducing greenhouse gas emissions per vehicle kilometre travelled. The Pacific Highway Upgrade Program and its component projects, including the Proposal, are consistent with the objectives of *Action for Air*.

3.1.3 Growth pressures

National transport growth

The Pacific Highway serves a large number of major regional centres and supports both local, regional and through freight and passenger transport activity. Centres such as Forster/Tuncurry, Taree, Port Macquarie, Kempsey, Coffs Harbour and Grafton are typically experiencing strong economic and population growth. Major economic activity along the corridor includes:

- A strong and mixed agricultural base, including dairy, beef cattle, fruit, aquaculture and herbs, forest products, plantations and processing which are transported to interstate destinations and also to the Port of Newcastle where the goods are exported.
- A strong manufacturing and agricultural equipment sector.
- Tourism, which is a significant traffic generator on the coast with extensive resort development and leisure attractions.

Sydney-Brisbane corridor

The Sydney Brisbane corridor is one of the busiest links on the Australian transport network with 40 per cent of Australia's population living along the corridor. The Pacific Highway plays a vital role in linking the coastal regions between Sydney and Brisbane, providing access to markets and sources of goods and services. Many of these regions are recording high rates of population and economic growth, particularly due to the development of strong tourism-based industries.

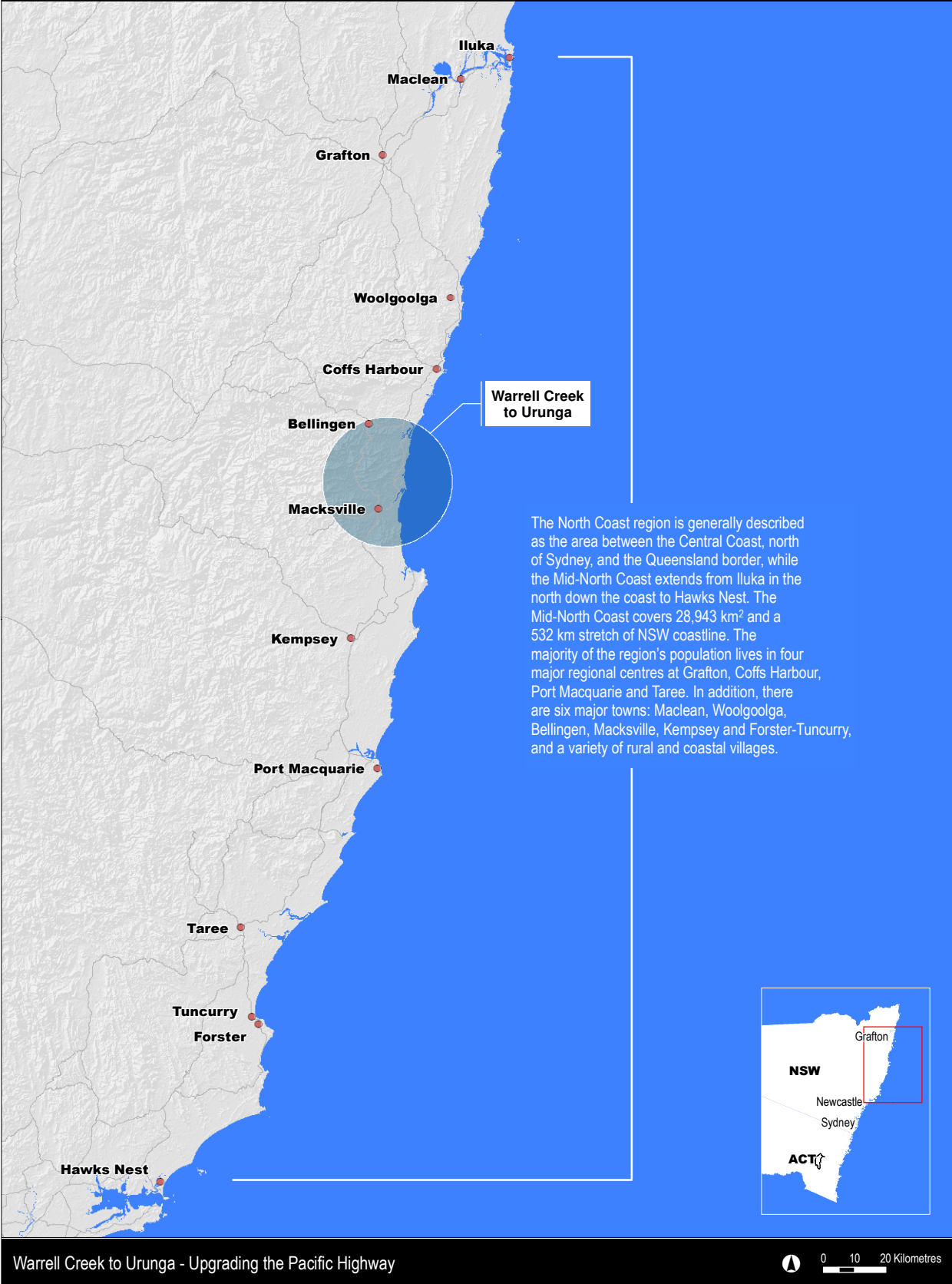
The Pacific Highway is one of the most important strategic corridors within the Australian road network. It acts as a vital link between Sydney and Brisbane as well as providing regional connections along the growing Mid North Coast and North Coast communities of NSW. The highway carries significant traffic volumes especially during the holiday periods.

There is substantial freight movement (with the majority being non-containerised) along the Pacific Highway to the ports located in Brisbane, Sydney and Newcastle. The Pacific Highway carries approximately eight million tonnes of freight annually. Local and intrastate road freight destined for the major cities and major markets is generated through agriculture, manufacturing and other local industries. This freight movement has led to conflicts between local traffic and heavy vehicles in several locations along the Pacific Highway, including Warrell Creek to Urunga.

Mid North Coast

The Mid North Coast region, as shown in **Figure 3-1**, is expected to experience the most significant gains (through internal migration) of any region in NSW. Population is set to grow from a current population of 333,400 to 424,400 by 2031, an increase of more than 27 per cent over 25 years (Department of Planning 2009a). The average annual growth rate is expected to be one per cent over the next 25 years, which will be among the highest growth rates in NSW (Department of Planning 2009a).

FIGURE 3-1 | MID NORTH COAST REGION



The majority of growth in the Mid North Coast region's population and economy is likely to be focused on coastal towns within the Port Macquarie-Hastings and Coffs Harbour local government areas, including the urban centres of Port Macquarie and Coffs Harbour. By 2031, an additional 58,400 dwellings will be required to satisfy population growth, the changing age structure, declining occupancy ratios and expected tourism demands (Department of Planning 2009a). These dwellings will be predominantly located within the existing urban areas.

The additional population over the next 25 years will generate the requirement for an estimated 47,000 new jobs. Of these new jobs, 75 per cent will be required to meet demands arising from the housing and servicing of the additional population, the remaining 25 per cent will need to be created in new industries or services supplying markets outside of the Mid North Coast (Department of Planning 2009a).

The high growth rates can be attributed to both an influx of retirees from larger urban centres, and to improved prospects due to tourism and retail demands for those seeking employment or to establish businesses. In this regard, the Pacific Highway provides an important transport route for access to employment within the central business district and surrounds, especially for those settled outside Coffs Harbour. Inland areas are not expected to grow at such rapid rates.

The current and forecasted population growth rates, and the growth in tourism within the Sydney–Brisbane corridor and the Mid North Coast region, will place increasing pressure on transport networks on the NSW coast. Improvements to road transport infrastructure are required to meet community expectations for safe and efficient travel, and to accommodate current and projected travel demand.

Levels of social and economic development are linked with population growth and investment. There is a strong connection between land use and transport infrastructure in terms of regional economic development. A high standard road network, linking regional areas and centres of growth, provides more efficient access to markets and sources of goods and services.

3.2 Need for the project

3.2.1 Local government

The Proposal is located within two local government areas, Nambucca Shire in the south and Bellingen Shire in the north, and includes the townships and villages of Warrell Creek, Donnellyville, Macksville, Bellwood, Nambucca Heads, Valla Beach, Urunga and Raleigh.

The population of Nambucca Shire in the 2006 census was 17,897, an increase of one per cent from the 2001 census (Australian Bureau of Statistics (ABS) 2006). More than half of the Shire's population resides in the eastern towns of Nambucca Heads and Macksville. Bellingen Shire has a population of 12,416 according to the 2006 census (ABS 2006). This is a two per cent population increase from the 2001 census. The main towns within the boundary of the Shire are Bellingen, Dorrigo, Urunga and Mylestom.

The Proposal is consistent with the objectives of the local environmental plans of both councils. It would assist in providing a more efficient and safer transport spine within these local government areas. The separation of local and through-traffic and the strategic location of interchanges would assist in providing integrated land use and transport solutions for existing and future urban/commercial areas. The study area is already experiencing

residential demand for commuters to Coffs Harbour. Local government land use and growth pressures are discussed further in Chapter 11 - *Land use and property*.

3.2.2 Road conditions

The condition of the Pacific Highway between Hexham and the Queensland border varies considerably from high-standard, divided carriageways to long sections of narrow two-lane roads. The roads also vary in their pavement condition and road geometry, which affects driver safety and transportation efficiency.

Between Warrell Creek and Urunga, the Pacific Highway is primarily a two-lane single carriageway road with occasional overtaking lanes. Accident histories show unacceptably high levels of traffic incidents in many areas. In particular, areas of concentration include Macksville and along the Pacific Highway in the vicinity of Hungry Head Road between Wenonah Head and South Urunga. The majority of crashes occur at intersections and as a result of the large number of private accesses onto the existing highway. The combination of these factors contributes to unacceptable road conditions on the Pacific Highway between Warrell Creek and Urunga.

The existing highway passes through the town centres of Warrell Creek, Macksville and Bellwood. This creates conflicts between local traffic, pedestrians and highway through-traffic. Local traffic is based around the Pacific Highway and the majority of trips involve travel on the highway. The highway is also the only sealed road providing connections between Warrell Creek, Macksville, Nambucca Heads and Urunga.

The Level of Service (LoS) of a section of road varies from A (good) to F (poor), depending on the number of lanes, traffic volumes and the frequency of intersection and junctions. The LoS on the Pacific Highway in the study area is currently operating at a LoS of E (at capacity). In 2033 the Pacific Highway without the proposed upgrade between Warrell Creek and Urunga would operate at a LoS of F (poor), unless highway upgrades are implemented. The Proposal would operate at a LoS of A (good) in 2013 and beyond to 2033 calculated using the Austroads Guide to Traffic Engineering Practice Part 2: Roadway Capacity (Austroads 1999).

LoS is discussed in more detail in Chapter 17 – *Traffic and transport*.

3.2.3 Traffic and road safety

3.2.3.1 Existing traffic

The RTA publishes historical Annual Average Daily Traffic (AADT) data for various Pacific Highway count stations, which have been used to provide an indication of historical growth in the study area. Traffic has generally increased steadily since 1982. The estimated average growth rate for overall traffic within the study area from 1982 to 2007 is 2.1 per cent per annum (base year 2007).

3.2.3.2 Future traffic

Traffic volumes on the Pacific Highway have grown in recent years due to natural growth in demand for travel, improvements to the Pacific Highway, population growth in the Mid North Coast region and along the eastern seaboard, and the resultant increase in economic activity.

With the overall improved efficiency of the Pacific Highway, some freight transport has shifted from the New England Highway corridor to the Pacific Highway. Although the townships of Warrell Creek, Macksville and Urunga

are expected to contribute little to the projected overall increase in travel demand, the Mid North Coast region in general will generate significant travel demand over the next 20 years. The predicted growth rate for traffic within the study area is 2.2 per cent per year (2007 base year).

3.2.3.3 Road safety

An historical crash analysis was carried out for the area covered by the Proposal. This analysis examined the area's crash history over a five year period from 2003 to 2007, based on crash data from the RTA Traffic Accident Database. A total of 229 accidents were recorded along the Pacific Highway between Warrell Creek and Urunga in this period.

With a crash rate of 25 crashes per 100 million vehicle kilometres travelled, this section of the Pacific Highway has almost twice the Pacific Highway Upgrade target rate of 15 crashes per 100 million vehicle kilometres travelled for the upgraded dual carriageway highway. The improved safety aspects of an M-class motorway would have a beneficial effect on the severity of accidents. Head-on crashes on the upgrade would be largely obviated and because of the required clear zones, the risk of impact with substantial vegetation is significantly reduced.

3.2.3.4 Travel times

There have been substantial improvements to the Pacific Highway in the last 10 years which have resulted in a reduction of travel times between Sydney and Brisbane. However, the Warrell Creek to Urunga section of the highway remains a major bottleneck for road traffic. This particularly applies to heavy vehicles, which must travel at low speed (60 kilometres per hour or lower) through the urban areas of Macksville, Bellwood and Urunga and are subject to an 80km/h limit through the village of Warrell Creek. Due to the limited overtaking opportunities, travel times can be influenced by slow moving vehicles.

Two objectives of the Pacific Highway Upgrade Program are to reduce travel times and freight transport costs. The Warrell Creek to Urunga upgrade would reduce travel time along the highway through the study area by approximately 25 per cent at signposted speed limits – from approximately 32 minutes to 23 minutes. During peak holiday periods, the travel time savings could be much greater. The combined benefits of the reductions in travel times and an efficient high standard dual carriageway highway would result in decreased freight transport costs and more reliability of travel. Duplication of the highway has the potential to significantly improve freight competitiveness for existing vehicles.

3.3 The “do nothing” option

The safety conditions of the section of the Pacific Highway between Warrell Creek and Urunga are discussed in Section 0. Predicted traffic growth would further exacerbate problems currently experienced with the existing road and traffic environment.

Without major upgrading of the Pacific Highway between Warrell Creek and Urunga, the predicted traffic growth would increasingly expose the deficiencies of the existing road environment over the forecast period.

Specific consequences of inaction in relation to the proposed upgrade would include:

- The deterioration of traffic operating conditions to unacceptable levels particularly at holiday times.

- At best, a likely continuation of the unacceptable accident record of this section of the highway, along with the associated social and economic costs. The more likely scenario is an increase in vehicle accidents.
- Increased travel times for both local and through-traffic.
- Increased conflict between local and through-traffic.
- An inconsistency in road standard between the section of highway within the study area and the remainder of the upgraded Pacific Highway.
- Deteriorating 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 the standard of access to and from the highway deteriorates.
- Failure to achieve the objectives of Australian and State planning and transport strategies, in particular the Pacific Highway Upgrade Program.
- Ongoing limitations on economic development of the area due to deteriorating levels of access for tourists and freight.

3.4 Proposal objectives

Specific objectives for the Proposal have been developed. **Table 3-1** details these objectives and how they relate to the overall objectives of the Pacific Highway Upgrade Program.

Table 3-1 Warrell Creek to Urunga Proposal objectives

Pacific Highway Upgrade Program objectives	Warrell Creek to Urunga Proposal objectives
Significantly reduce road accidents and injuries	■ Develop solutions for the ultimate grade separation of the Pacific Highway and local road intersections including consolidation of accesses by the use of service roads. ■ Provide rest areas within the investigation area. ■ Achieve safe driving conditions on the highway for travel speeds of 110 km/h in rural areas and 80 km/h in urban areas.
Improve transport efficiency by reducing travel times and freight costs	■ Have acceptable roadway capacity for traffic volumes 30 years after opening. ■ Develop a dual carriageway road that accommodates all vehicles up to and including B-Doubles.
Develop a route that involves the community and considers their interests	■ Provide acceptable access to properties. ■ Maintain highway access during flood conditions. ■ Integrate input from local communities into the development of the Proposal.
Provide a route that supports economic development	■ Provide connections from the upgraded highway to the key centres of Macksville, Nambucca Heads and Urunga. ■ Develop delay management strategies to minimise disruption to local and through-traffic and maintain access to affected properties and land during construction.
Manage the Program in accordance with ecologically sustainable development principles	■ Provide transport infrastructure that is complementary with surrounding land use.
Provide the best value for money	■ Ensure the Proposal outcomes achieve value for money. ■ Develop solutions that facilitate the staged construction of the Proposal.

3.5 Statement of strategic need

The objectives of the Proposal are consistent with the strategic planning and policy framework, including the goals and targets of key State and Australian government initiatives. The Pacific Highway Upgrade Program is a joint commitment by the NSW and Australian Governments.

The Proposal forms an essential part of the overall upgrade of the Pacific Highway between Hexham and the Queensland border. The projects that make up the Pacific Highway Upgrade Program are intended to achieve the core program objectives of improved road safety and reduced travel times.

The Minister for Planning has declared that segments of the Pacific Highway upgrade, including the Proposal, are a project to which Part 3A of the EP&A Act applies (the declared project). The Proposal has been declared as a critical infrastructure project under Section 75C of the EP&A Act.

Implementation of the Proposal would provide a higher standard road to better serve existing and future road users, with improvements in road safety and travel efficiency. The Proposal would also add to the safety and travel efficiency benefits provided by other Pacific Highway upgrade projects. It would also generate employment, with benefits to the local and regional economy.

Further justification for the Proposal is provided in Chapter 20 – *Justification and conclusion*. This includes consideration of the objects of the EP&A Act, including the principles of Ecologically Sustainable Development, and cumulative and synergistic impacts.