Roads and Traffic Authority of NSW

Oxley Highway to Kempsey
Upgrading the Pacific Highway

Environmental Assessment

MAIN VOLUME

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22. Strategic and Proposal justification

This chapter addresses the strategic need for the Proposal, including how it would meet the identified Proposal objectives and those of the Pacific Highway Upgrade Program.

The Director-General's environmental assessment requirements identify a number of key issues to be addressed in relation to the justification of the Proposal. **Table 22-1** indicates where the aspects of the Director-General's environmental assessment requirements that relate to justification of the Proposal are addressed, either in this chapter or in other chapters (in *italics*).

Table 22-1 Strategic and project justification

Environmental assessment requirements	Where addressed
Strategic Justification and Project - outline the strategic outcomes for the Pacific Highway Upgrade Program (PHUP), including with 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.	*Chapter 2 Strategic need for the Proposal* *Chapter 3 Proposal need, objectives and alternatives* *Chapter 10 Land use and property* *Chapter 21 Principles of ecologically sustainable development* **Sections 22.1**, **22.2** and **22.3**
Project Justification - describe the need for and objectives of the project; alternatives considered (including an assessment of the environmental costs and benefits of the project relative to alternatives), and provide justification for the preferred project taking into consideration the objects of the *Environmental Planning and Assessment Act 1979.*	*Chapter 2 Strategic need for the Proposal* *Chapter 3 Proposal need, objectives and alternatives* **Sections 22.4** and **22.5**

22.1 Benefits and impacts of the Pacific Highway Upgrade Program and the Proposal

The need for the Pacific Highway Upgrade Program and the Proposal is discussed in **Chapter 2 Strategic need for the Proposal** and **Chapter 3 Proposal need, objectives and alternatives**. The strategic and Proposal justification for the Pacific Highway Upgrade Program and the Proposal are outlined below in terms of their expected benefits.

22.1.1 Transport desired outcome: improved safety and travel times

The Pacific Highway Upgrade Program is expected to have significant benefits for transport and public safety.

Improvements to road safety would be realised through the construction of the Proposal. It is anticipated that the Proposal would reduce crashes from approximately 22 per 100 million vehicle kilometres based on the 2006 crash rate to approximately 12 per 100 million vehicle kilometres. This is well within the overarching objective of the Pacific Highway Upgrade Program to reduce the crash rate to 15 crashes per 100 million vehicle kilometres over its length. Along with economic benefits from reduced vehicle crashes, community benefits such as reduced trauma from the loss of family and loved ones would also be achieved.

Travel time savings for a highway user travelling in a car between the F3 Freeway and the NSW-Queensland border are estimated to be approximately 90 minutes, relative to the base case of no Pacific Highway Upgrade Program (beyond those upgrades that had already been completed on the Pacific Highway by 2006). Travel time savings would also be achieved by commercial vehicles, leading to significantly reduced freight costs and improved freight movement efficiencies.

The contribution of the Proposal to this total travel time saving is estimated to be approximately 6 minutes per vehicle during weekday peak period operation in 2016. This time saving would be greater in busy periods.

22.1.2 Economic desired outcome: improved opportunities for regional economic development

The Pacific Highway Upgrade Program would generate substantial regional economic development benefits in terms of supporting additional economic activity. Benefits would accrue from direct and indirect employment generated by construction expenditure and during operation through induced tourism and expansion of regional businesses, and the anticipated reduction in road transport costs.

The Proposal would ensure that the transport and economic benefits achieved by the other upgrades in the Pacific Highway Upgrade Program could be capitalised on by residents and businesses within the region. More specifically the tourism industry has the potential to experience growth from improved accessibility to and throughout the region. Freight transport and forestry industry costs are also expected to reduce due to reduced travel time and improved fuel efficiency. Importantly, the Proposal would support the targeted future levels of population and housing growth on the Mid North Coast as identified in the *Mid North Coast Regional Strategy* by improving the accessibility of existing and potential development sites from a regional, as well as a local perspective.

22.1.3 Social desired outcome: improved access to employment and community services

Road users would accrue substantial direct benefits from the Pacific Highway Upgrade Program, through improved safety, reduced crashes and reductions in the costs of travel. Reduced travel times and better accessibility on the local road network would also improve access to employment opportunities, and community services and facilities for resident populations throughout the local area and broader region. Flow-on effects would produce further social benefits in the form of increased economic activity and employment.

The key social benefits gained from the Proposal would relate to accessibility and public safety, including the separation of local and highway traffic. This would potentially result in opportunities for reduced transport cost, and improved community cohesion and amenity particularly for settlements along the Proposal route.

22.1.4 Environmental desired outcome: protection and enhancement of the natural and built environment

There is a range of cumulative environmental impacts associated with the Pacific Highway Upgrade Program. Some of the cumulative impacts are discussed earlier in the Environmental Assessment (ecology in **Chapter 15 Flora and fauna** and heritage in **Chapter 19 Aboriginal heritage** and non-Aboriginal heritage in **Section 20.2**).

There is also a range of amenity and other social impacts on some residents and communities that would occur as a result of the Pacific Highway Upgrade Program including impacts relating to visual amenity, noise and community severance. An important part of the Pacific Highway Upgrade Program has been the minimisation of these impacts through route selection and concept design as well as achieving consistency in approaches to assessment, design and environmental performance. Impacts would be further minimised through the environmental protection procedures adopted during construction, building upon environmental outcomes achieved as individual upgrades of the Pacific Highway Upgrade Program are successfully implemented.

There are also a number of cumulative environmental benefits of the Pacific Highway Upgrade Program. These include improved safety of fauna movement, improved regional air quality, lower resource use and reduced greenhouse gas emissions. In the case of many communities, amenity would be improved through the relocation of the Pacific Highway away from sensitive areas such as town centres and residential areas, providing opportunities for future settlement urban design enhancement and development. Residents would experience some amenity benefits where the existing highway would become a local access road. The community at Telegraph Point would experience amenity benefits such as improved access and travelling conditions, as well as enhanced connectivity. Telegraph Point would experience an overall reduction in noise, air quality impacts and an improvement in amenity as a result of the bypass to the east. The Proposal would separate the highway traffic (including the main heavy vehicle movements) from the local traffic flow in these areas and the severance caused by the existing highway would be significantly reduced.

22.1.5 Financial desired outcome: effective and efficient investment of financial resources

Quantifiable monetary benefits of the Pacific Highway Upgrade Program, such as savings in vehicle operating costs, travel time and avoided crashes, would be substantial. Based on the scenario that the entire Pacific Highway is opened as dual carriageways by 2016 the Pacific Highway Upgrade Program would have a net present value (taking into account travel time savings, travel costs, environmental costs and crash costs) of $2.9 billion (PricewaterhouseCoopers 2008).

The Proposal would provide tangible economic benefits at the local and regional level through improved accessibility and connectivity. The Proposal would support development and investment in areas such as the Sancrox industrial area and Area 13 Thrumster. The Proposal would also improve the viability of forestry activities in the area by providing better access to the state forests from a separate local road network that still has good grade separated access to the upgraded highway for regional connections.

No separate cost-benefit analysis has been carried out for the Proposal, however it could be expected that it would contribute to the total savings identified above in a way that is generally proportional to its length. Economic and value-for-money considerations have been integrated into the development of alternative routes for the Proposal, as well as in the selection process for the preferred route and the concept design.

22.2 Cumulative and synergistic impacts

Cumulative impacts can be described as the effect caused by successively adding the same impact to produce an accumulated effect. Synergistic impacts can be described as the effect of two or more impacts working together to produce effects that were not predicted.

Sections of the Pacific Highway Upgrade Program from Hexham (near the F3 Freeway in NSW) to the Queensland border are at varying stages of planning and development, with sections either complete, under construction or having had a preferred route identified. Achieving the objectives of the Proposal as part of the broader Program would result in a net benefit to the community through the development of a more efficient and safer highway.

The Proposal, as part of the broader Program, would contribute cumulatively and synergistically to both the positive and negative impacts of the Pacific Highway Upgrade Program. Importantly though, achieving the objectives of the Proposal as part of the broader Program would result in an overall net benefit to the community.

The upgrade of the Pacific Highway is integral in meeting the needs of regional and State transportation demands as growth pressures along coastal towns increase. Important transport, economic, social and environmental benefits would be achieved through the overall Pacific Highway Upgrade Program and the Proposal. While the Pacific Highway Upgrade Program and Proposal both seek to achieve the greatest benefits with the least negative effects, a range of potential negative impacts, some of which could be cumulative and/or synergistic, could also result as detailed in **Table 22-2**.

Table 22-2 Potential cumulative and synergistic impacts of the Pacific Highway Upgrade Program and the Proposal

Desired outcome	Pacific Highway Upgrade Program	Proposal
Transport: improved safety and travel times	Improved travel times could result in a potentially significant transfer of freight from rail to road due to reduced road transport costs, leading to an increase in heavy vehicles on the road (and associated safety and amenity implications).	Improvement to safety through the separation of local and highway traffic, improved highway access and improved service and access road network. Could reduce incentives for transfer of freight from road to rail. Minimal rail to road transfer is expected as result of the Proposal itself relative to the overall Pacific Highway Upgrade Program.
	Congestion and slower travel times during road works for the various individual upgrades.	Congestion and slower travel times would be expected during road works for sections of the Proposal that are on the existing highway. There would be only minor disruption in sections where the Proposal is offline to the existing highway, allowing ongoing use of existing road network to be maintained for most of the construction period. Some temporary access changes would occur during construction of bridges. Impacts would be relatively small and short-term in the context of the overall Pacific Highway Upgrade Program.

Desired outcome	Pacific Highway Upgrade Program	Proposal
Economic: improved opportunities for regional economic development	Some economic activities could be affected in towns that are bypassed. These could be positive or negative effects, depending on the nature of the activities within the context of the town.	The village of Telegraph Point would be bypassed; however businesses are not generally reliant on highway trade. A small number of businesses would be potentially affected by changes in access.
	Lack of availability of road materials for other projects.	Relatively large material quantities would be needed due to the scale of the Proposal, and the need for large structures, but there would be a relatively small impact in context of overall Pacific Highway Upgrade Program.
Social: improved access to employment and community services	The primary beneficiaries would be road users. Others in the community, including disadvantaged groups, would benefit to the extent that the improved road network would improve accessibility to services.	There would be a minor impact relative to overall Pacific Highway Upgrade program as interchange improvements and local road connections would benefit many in the community. The Proposal would improve the local road network by removing highway traffic.
	Increased severance and amenity impacts on farms or towns not bypassed or areas not upgraded.	Telegraph Point would be bypassed providing opportunities for improved community cohesion and enhanced settlement patterns. Some farms and properties located between the Proposal and the existing Pacific Highway would experience some severance impacts.
	Changes in the character and lifestyle of communities from induced development.	The Proposal generally traverses a rural area where development controls and local environmental plans restrict the type and level of development. There are some industrial and commercial activities adjacent to the Proposal. The Proposal would have a minor influence on induced development in context to the overall Pacific Highway Upgrade Program.
	Impacts on Aboriginal culture due to interference or disturbance of cultural heritage sites or items.	A minor impact is expected relative to the overall Pacific Highway Upgrade Program due to the small footprint of the Proposal in a generally disturbed agricultural area. Avoidance of significant impacts on potential areas of Aboriginal heritage has been incorporated into the route selection and concept design.

Desired outcome	Pacific Highway Upgrade Program	Proposal
Environmental: protection and enhancement of the natural and built environment	Loss of habitat and severing of wildlife corridors where new route alignments are constructed. Compensatory programs would offset impacts to some extent.	There would be a minor impact relative to overall Pacific Highway Upgrade Program due to land already being cleared for agriculture. Development of the Proposal has sought to minimise vegetation clearing where feasible. Fauna crossing structures have been incorporated into the design. Vegetation removal would be offset in part by revegetation and an offset package to be developed in consultation with DECCW and DII.
	Increases in fuel use and greenhouse emissions from growth in vehicle use and population levels in the region associated with increased accessibility arising from the Pacific Highway Upgrade Program.	No noticeable impact expected. Benefits for fuel use and greenhouse gas emissions are expected during operation of the upgraded highway.
	Impacts on landscape by the construction of new roads.	The Proposal would involve upgrading existing sections of the Pacific Highway. For sections of new alignment and watercourse crossings, the Proposal would represent a constructed element in a scenic landscape. Urban and landscape design measures would be a high priority.
	Some loss of agricultural land to the highway and to new induced development.	The Proposal would result in the loss of some agricultural land due to location in a rural area.
	General improvement in townscape and heritage values (with the exception of isolated locations) due primarily to the bypass of towns.	A positive impact on the townscape of Telegraph Point is expected as the Proposal would bypass the village and remove through traffic. Impacts on heritage items have been avoided and minimised. Heritage listed Maria River bridge would be retained. There would be a minor impact in context of overall Pacific Highway Upgrade Program.
Financial: effective and efficient way of investing financial resources	Net economic benefit from the Pacific Highway Upgrade Program.	There would be a range of immediate local economic benefits with isolated small negative impacts.

22.3 Managing the cumulative impacts

Table 22-3 summarises the actions, strategies and policies that have been, or are being, implemented in response to these issues, including integration with the principles of ecologically sustainable development. These have been developed as joint initiatives between the NSW and Australian Governments.

Table 22-3 Managing the cumulative impacts of the Pacific Highway Upgrade Program and the Proposal

Cumulative impact	Required management/action/response	Implementation and responsibility
Improved travel times would result in transfer of freight from rail to road	Investigate policies to improve the efficiency of rail operations and manage impacts of increased heavy vehicles on the road network.	• ARTC and RailCorp are implementing strategies to improve efficiency of rail operations. • RTA is implementing a Stopping Area Strategy and Fatigue Management Strategy. • RTA is increasing road maintenance funding commensurate with increased truck numbers.
Congestion and slower travel times due to the effects of road works for the various Pacific Highway upgrades	Investigate strategies for traffic management and safety improvements on these sections, particularly with respect to trucks and buses.	• RTA has developed a roadwork coordination scheme that offers ways to minimise the impact of roadwork delays. A key component of this strategy is the dissemination of regular information to Pacific Highway road users and local communities about expected construction and maintenance delays. This allows road users to plan their journeys and make decisions when scheduling activities. The RTA produces weekly and urgent traffic reports about potential delays. These reports are distributed to service stations along the highway, NRMA branches, RTA motor registries, local councils, tourist centres and the media. • Detailed traffic management measures (including work shutdowns during peak holiday periods) are prepared and implemented for individual Pacific Highway upgrades, and this would be undertaken for the Proposal.
Some businesses could be detrimentally affected by being bypassed	The village of Telegraph Point would be bypassed by the Proposal. Investigate measures to enhance visibility and access to bypassed towns and promote local development.	• The Department of Planning and the RTA are implementing a retail commercial policy, incorporating a highway service centre policy. • RTA identifies towns by signage and ensures provision of consistent signage. • Local government, tourism agencies, and regional economic development agencies identify and promote town industries for development. • Local government and regional economic development agencies evaluate long-term socio-economic effects on small towns and rural communities. • The Proposal would maintain and improve the safety of access to Telegraph Point.
Lack of availability of road materials for other projects	Investigate and develop strategies for sourcing road materials.	• RTA, DII, local government and quarry/development industries would undertake further studies to ensure provision of required materials.

Cumulative impact	Required management/action/response	Implementation and responsibility
Accessibility benefits not shared equitably	Investigate means to improve public transport, including provision of infrastructure for bus depots, bus stops, cycleways, etc.	• AusLink has provided significant funding for upgrading the passenger and freight rail networks. • Relevant authorities are investigating means to improve public transport services. • The Proposal provides improved safety for buses and cyclists through improvements to the local road network and removing the conflict between highway and local traffic.
Increased severance in towns not bypassed	The Proposal would involve bypassing the village of Telegraph Point. This would remove the existing severance of the village by removing highway traffic from the village centre. Kundabung is a village that is already severed. This would be improved through the introduction of an improved local road network including an overpass to connect the eastern and western sides of the village.	• The RTA has developed a Stopping Area Strategy, which is a means of coordinating vehicle stopping opportunities with local facilities as part of the Pacific Highway Upgrade Program. Advantage is taken of facilities provided by towns along the Pacific Highway. • The concept design for the Proposal includes a number of elements to reduce severance.
Changes in the character and lifestyle of communities (social and environmental effects of induced development)	Implement planning policies to mitigate inappropriate development types. Monitor cost of living and social justice changes in areas of rapid growth and target policies to disadvantaged groups.	• This is inherently controlled through local and State planning instruments and development application reviews as well as the Department of Planning for any major development. • The cost of living and housing affordability are typical indicators collected intermittently by a variety of measures at a local, State and Federal level.
Impacts on Aboriginal culture	Strategic assessment of potential impacts. Route planning based on longer sections of highway to provide greater flexibility to avoid culturally significant areas. Detailed assessment of local impacts during the Environmental Assessment. Involve Aboriginal communities in the road planning process. Monitor cumulative impacts.	• Extensive consultation with relevant Aboriginal groups has been undertaken for the Proposal in accordance with DECCW interim guidelines. • The commitments to environmental protection by the RTA in the Environmental Assessment include ongoing vigilance of construction and RTA personnel during the construction phase of the Proposal, identification of any potential item of Aboriginal archaeological value and appropriate management measures should any such item or area be uncovered. • Impacts are also monitored by the DECCW and Aboriginal land councils.

Cumulative impact	Required management/action/response	Implementation and responsibility
Reduction in biodiversity	Assist in consolidation of environmental data sources. Habitat protection by route selection, road design. Implement RTA policy and guidelines on habitat amelioration measures, including fauna crossing structures, fencing and signage, habitat compensation. Implement urban development strategies, which minimise effects on wildlife. Monitor cumulative impacts.	• The baseline monitoring information conducted for Pacific Highway upgrades is public information contained within the environmental assessments. These documents are provided to government, as are the results of longer-term monitoring during construction and operations. • The RTA is adopting a broader sectional approach to revegetation and offsets for the Pacific Highway Upgrade Program in consultation with DECCW. • Biodiversity impact predictions were undertaken as part of the options assessment process, which was commented on by the government and the public. • The Department of Planning has released its *Mid North Coast Regional Strategy,* which identifies a balance between providing sustainable growth for the region while promoting protection of the areas key environmental assets of the area. • The commitments to environmental protection by the RTA in the Environmental Assessment include monitoring during the construction phase of the Proposal. • Biodiversity objectives are included in the landscape strategy.
Increases in fuel use and greenhouse gases	Support improved road design, vehicle design and maintenance. Implement RTA policy on greenhouse reduction. The Proposal would result in a net reduction in greenhouse gas emissions through improved road conditions.	• The RTA has a strategy to develop road design principles that minimise fuel consumption and maximise fuel efficiency thereby minimising emissions. It also has a role on the Advisory Committee on Vehicle Emissions and the State's Motor Vehicle Maintenance Program. • The RTA has prepared a Greenhouse Reduction Plan to address and provide policy in relation to greenhouse gas emissions resulting from its activities. The aim of the plan is to minimise emissions.
Impacts on landscape	Minimise new area clearance and earthworks through road design and route selection. Implement or develop landscape strategies. Develop urban design strategies.	• The *Mid North Coast Regional Strategy* requires the protection of the scenic quality of the region including natural areas, attractive rural areas and areas adjacent to water bodies, headlands, skylines and escarpments. • The RTA has an overall urban design strategy for the Pacific Highway Upgrade Program, which would be implemented for the Proposal. • Impacts on natural or rural landscape values were assessed as part of the Environmental Assessment. Impact assessments and management measures would be implemented to reduce impacts.

Cumulative impact	Required management/action/response	Implementation and responsibility
Loss of agricultural land	Minimise impacts on prime agricultural land through route selection and design. Develop strategies that minimise impacts on rural land viability.	• Depending on the severity of impacts, management measures are devised and implemented as part of environmental assessments. • Controls incorporated at local government level as well by Department of Planning through the *Mid North Coast Regional Strategy.*
Reduction in water quality and impacts on flooding (including effects of climate change on highway upgrades)	Implement RTA specifications for water quality, including acid sulfate soils management. Implement water-monitoring programs in support of other measures. Implement erosion and sedimentation control plans for all Pacific Highway upgrades. Ensure provision of flood passage structures in design. Potential changes in flood levels were also modelled and considered. Implement residential development strategies, which minimise effects of land clearing and runoff and limit water extraction.	• Implementation of guidelines and policy are RTA standard procedures. • Water monitoring programs and erosion and sediment control are typical environmental management commitments made by the RTA where relevant. These would be implemented for the Proposal. • Flood passage is a standard RTA design procedure. Flooding assessment was completed for Proposal. • Residential impacts are controlled through local planning instruments and development application reviews, as well as by the Department of Planning for any major development.
Reduction in townscape and heritage values	Implement controls to maintain townscape and heritage values	• The options and preferred routes selection processes for individual Pacific Highway upgrades typically adopt indicators associated with heritage areas. • Planning agencies are responsible for other development controls.
Increased costs for provision of services due to induced development	Investigate options for assistance to local government, service and utility providers to bring forward provision of services.	• The master planning process at the NSW Government level has included wide consultation and publication to ensure all relevant parties are informed. The specific requirements are to be determined by each utility provider in accordance with current business planning practices. • The RTA is managing this issue through consultation with other government departments and utility providers.

22.4 Addressing the Proposal objectives

Table 22-4 demonstrates how the Proposal satisfies the identified objectives for this section of the Pacific Highway Upgrade Program.

Table 22-4 Oxley Highway to Kempsey Pacific Highway upgrade objectives and how the Proposal addresses these

Oxley Highway to Kempsey Pacific Highway upgrade objectives	How the Proposal meets the objectives
Develop a dual carriageway road with potential to reduce crash rates to 15 crashes per 100 million vehicle km over the project length.	The Proposal would provide a four lane dual carriageway (capable of being upgraded to six) that would improve safety. The crash rate is predicted to reduce to approximately 12 per 100 million vehicle km, from the current rate of approximately 22 per 100 million vehicle km based on 2006 data. This reduction would also see a reduction in crashes resulting in fatality.
Develop a refined design that meets or exceeds B-double requirements, including at intersections, where required.	The Proposal has been developed to cater for the requirements of B-doubles. The construction of interchanges and traffic arrangements, together with the proposed service road network, would meet design requirements for B-doubles.
Maximise the use of the existing road reserve, where possible.	The existing Pacific Highway would be retained for use in the upgraded highway in a number of locations, particularly in Sections C and D. In other locations, the existing highway would be retained for use as part of the service road network. The Proposal therefore maximises the use of the existing road reserve to the greatest extent possible.
Integrate input from local communities into the development of the project through the implementation of a comprehensive program of community consultation and participation.	The route option development, preferred route selection and environmental assessment processes have involved significant community consultation. A comprehensive consultation program is still being implemented. An example of where input from the local community has been incorporated into the Proposal's development is the proposed bypass of Telegraph Point. This route option was developed after consultation with the community at the route options development stage.
Satisfy the technical and procedural requirements of the RTA with respect to the design of the project.	The Proposal has been designed in accordance with the technical and procedural requirements of the RTA.
Provide for transport developments that are complementary with land use.	The Proposal would benefit economic development in the areas surrounding the Pacific Highway by improving access and reducing freight travel times.
Allow for all connections, modifications and improvements necessary to upgrade the existing highway where it is retained as part of the project.	The existing Pacific Highway has been retained for use in the upgraded highway in a number of locations, and as part of the proposed service road network. These sections have been incorporated into the Proposal, and upgrades to the existing highway would be undertaken where necessary.
Consider delay management strategies to minimise disruption to local and through traffic and maintain access to affected properties and land during construction.	Delay management strategies would be developed prior to construction, and would largely be dependent upon the staging strategy adopted at the time of construction. Where existing access arrangements cannot be maintained, alternative access would be provided for affected properties.
Provide flood immunity on at least one carriageway for a 1 in 100 year flood event and for all carriageways for a 1 in 20 year flood event.	The proposed embankment across the Hastings River would provide a 1 in 100 year average recurrence interval immunity. The proposed embankment across the Wilson River would provide for a 1 in 20 year flood event. The existing alignment across the Wilson River provides a 1 in 100 year immunity, and could be used as an alternate route in the event of a significant flood affecting the proposed embankment.

Oxley Highway to Kempsey Pacific Highway upgrade objectives	How the Proposal meets the objectives
Provide intersections designed to achieve at least a level of service 20 years post-completion to accommodate the 100th highest hourly volume.	The concept design incorporates interchanges and traffic arrangements designed to meet this level of service requirement. The Proposal would provide for better grades along the highway resulting in more efficient freight travel. Traffic flow would be improved, particularly at peak times.
Develop solutions that address community expectations for access to the upgraded highway.	Connecting service and access roads would provide access to the upgraded highway via interchanges and traffic arrangements, significantly improving road user safety.
Retain or replace existing rest areas within the Proposal area.	Existing rest areas would be removed and replaced by new rest areas.
Develop a refined design generally meeting the criteria for a 110 km/h design speed for the vertical alignment and horizontal alignment.	The concept design for the Proposal meets the criteria for a design speed of 110 km/h for the vertical and horizontal alignments. The Proposal would remove a number of curves in the existing highway alignment that do not meet current design standards, and would reduce the existing grades, particularly through Cooperabung Hill.
Ensure the project outcomes achieve value for money.	The Proposal would provide significant benefits to the community whilst still providing value for money. The concept design has considered a number of alternatives and has been developed with the aim of minimising costs whilst at the same time providing the best balance of environmental, community, engineering and economic requirements.
Provide a strategy for future upgrades to be easily integrated into the project from both engineering and environmental perspectives.	The Proposal is for a four-lane dual carriageway that is capable of being upgraded to six lanes. The upgrade would take place within the median, which has been designed with a width to accommodate an additional lane in each direction.
Minimise the need to modify the preferred route option and refined design during subsequent project phases.	Design refinement would occur during the detailed design phase however due to the comprehensive investigations undertaken to date no significant design refinements are expected.

22.5 Justification of the Proposal

The Proposal has been declared critical infrastructure under Part 3A of the EP&A Act and is considered essential to the State of NSW for economic and social reasons. The Proposal is needed to meet the economic and social requirements of one of the State's fastest growing regions. It would improve traffic safety and transport efficiency, assist in the provision of orderly economic development within the Mid North Coast region, and meet community requirements for the development of improved transportation links within and through the locality.

The construction of an upgrade of the scale and nature of the Proposal cannot be undertaken without environmental impacts. However, throughout the development of the Proposal, extensive investigations have been undertaken with regard to the route selection and concept design to avoid, minimise and mitigate potential impacts. These investigations have provided an understanding of the environmental constraints associated with the Proposal area, and have allowed for environmental management measures to be incorporated into the Proposal.

The Proposal has been developed with the aim of balancing the engineering performance requirements for the upgrade with acceptable environmental outcomes. In light of this aim, the Proposal has been designed to meet the Pacific Highway Upgrade Program design standards, while at the same time avoiding and minimising environmental impacts.

Where environmentally sensitive areas could not be avoided, environmental management measures have been incorporated into the Proposal to reduce the scale and severity and manage the impacts on those areas. Where residual impacts on flora and fauna would remain after the application of the environmental management measures, an appropriate offset package would be developed in consultation with DECCW and DII.

Taking into account the benefits that the Proposal would deliver to this area and the broader region, along with the environmental management measures and offsets included in the Proposal, it is considered that it would deliver an acceptable environmental planning outcome consistent with ecologically sustainable development principles.

22.5.1 Suitability of the site

The location and alignment of the Proposal allows for the retention and re-use of as much of the existing highway corridor and pavement as practicable. Where the Proposal involves a deviation away from the existing highway alignment, the existing highway would be retained for use in the local service road network. In areas where the Proposal incorporates the existing highway, an adjoining service road network would be developed. The network would comprise existing local road segments, along with new sections of road where required to provide continuous connections within the local community and to the proposed interchanges and traffic arrangements.

The route of the Proposal was chosen as it represents the best balance of the performance requirements for a motorway standard road and the environmental constraints and opportunities identified for the area. As demonstrated by the assessment in **Part C** of this Environmental Assessment, the site of the Proposal within the local area is considered to be the optimum location from an engineering, social, economic and environmental point of view.

22.5.2 Public interest

The Pacific Highway is a route of national, State and local strategic importance. The Pacific Highway is the primary transport link between Sydney and Brisbane, and provides a critical link within the NSW economy. The highway also connects the Mid North Coast with Sydney, the largest market in NSW. Locally the Pacific Highway serves as the key intra-regional transport corridor and is the primary connection for settlements within the Mid North Coast region.

Heavy vehicle movements, particularly at night, are a key factor that influence traffic conditions within the area. The interaction of local and highway traffic results in significant congestion and safety issues that are reflected in the crash records for the area. If the Proposal were not to proceed, the predicted population growth and associated increased local and highway traffic movements in the area would see a considerable increase in these risks and safety concerns commensurate with a decline in road conditions.

The Proposal would significantly improve the efficiency of travel, safety and accessibility for all road users. Additionally, the Proposal would extend the upgraded section of the Pacific Highway further northwards towards Coffs Harbour, assisting to complete important sections of the overall Pacific Highway Upgrade Program between Hexham (near the F3 Freeway in NSW) and the Queensland border.

22.5.3 Objects of the EP&A Act

The ways that the Proposal would meet the objects of the EP&A Act are outlined in **Table 22-5**.

Table 22-5 Justification of the Proposal against the objects of the EP&A Act

EP&A objects	The Proposal
(a) to encourage:	
(i) The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.	The concept design has considered a number of alternatives and has been developed with the aim of minimising costs whilst at the same time balancing environmental, community, engineering and economic requirements. Where impacts are predicted to occur, the Proposal includes measures for appropriate management. These measures are detailed in the following sections: • Agricultural land, refer to **Chapter 10 Land use and property**. • Natural areas, refer to **Chapter 10 Land use and property** and **Chapter 15 Flora and fauna**. • Forests, refer to **Chapter 10 Land use and property** and **Chapter 15 Flora and fauna**. • Minerals – no active mineral extraction would be affected. • Water, refer to **Chapter 12 Hydrology**, **Chapter 13 Water quality** and **Chapter 14 Groundwater**. • Cities, towns and villages, refer to **Chapter 10 Land use and property** and **Chapter 11 Social and economic**.
(ii) The promotion and coordination of the orderly and economic use and development of land.	The development of improved transport linkages, including highway performance for inter and intra-regional haulage, together with the improvement to highway access would assist to promote economic benefits for the region. No significant adverse impacts on land uses, land use patterns or local businesses are expected. Refer to **Chapter 10 Land use and property** and **Chapter 11 Social and economic**.
(iii) The potential provision and coordination of communication and utility services.	Utilities affected by the Proposal would be relocated and/or protected as described in **Section 6.4.19**.
(iv) The provision of land for public purposes.	The Proposal itself is proposed for a public purpose as part of the local, regional and national transport network.
(v) The provision and coordination of community services and facilities.	The Proposal would maintain and upgrade an important existing transport facility. It would improve access for communities to services and facilities locally and throughout the region.

EP&A objects	The Proposal
(vi) The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.	Minimisation of impacts to the ecological environment has been achieved through avoiding communities and species where possible, minimisation of the disturbance to these values and establishing specific management techniques such as fencing, rationalisation of the construction corridor and consideration of the location of ancillary construction facilities away from areas with high conservation values where possible. The Proposal includes ecological management principles and management measures to limit the impact on native flora and fauna species, with particular regard to threatened species, populations and ecological communities and their habitats. Refer to **Section 15.3** for a discussion on impacts to flora and fauna, and **Section 15.4** for the measures to mitigate those impacts.
(vii) Ecologically sustainable development.	Effective integration of economic and environmental considerations in decision-making processes has been achieved for the Proposal through the route option development and preferred route selection processes. The Environment Assessment has assessed the values of the environment and aligned management of the impacts to these values with the principles of ecologically sustainable development. Achievement of the principles of ecologically sustainable development is a key objective of the Proposal. A full description of the performance of the Proposal against these principles was provided in **21 Principles of ecologically sustainable development**.
(viii) The provision and maintenance of affordable housing.	The Proposal would be unlikely to adversely impact on or influence the provision or maintenance of affordable housing in the area.
(b) To promote the sharing of the responsibility for environmental planning between the different levels of government in the State.	The Proposal would be assessed and approved by the NSW Minister for Planning under Part 3A of the EP&A Act as detailed in **Chapter 4 Planning and approvals**.
(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.	The development of the Proposal has included extensive community involvement throughout all phases of the development of the Proposal, as described in **Chapter 5 Community consultation**.

22.6 Conclusion

The Proposal has been declared critical infrastructure under Part 3A of the *Environmental Planning and Assessment Act* 1979 (*EP&A Act* 1979). It is considered critical to the State of NSW for economic and social reasons.

This Environmental Assessment has identified the impacts likely to result from the Proposal's construction and operation, and has proposed environmental management measures to limit the potential environmental impacts.

Part C of the Environmental Assessment has assessed the likely impacts on the key issues identified by the Director-General's environmental assessment requirements. **Chapter 21 Principles of ecologically sustainable development** has assessed the likely impacts on other environmental issues not considered to be key issues by the Director-General's environmental assessment requirements. **Chapter 8 Environmental management** has outlined the environmental management structure to be implemented prior to and during the construction and operation phases of the Proposal.

The draft Statement of Commitments in **Appendix B** further develops the environmental management structure, and proposes measures to mitigate the Proposal's impact on the key and non-key issues discussed in the Environmental Assessment. The Statement of Commitments would be finalised by the RTA following public exhibition of this Environmental Assessment and consideration of submissions received. The final Statement of Commitments would form part of any approval.

The completion of this Environmental Assessment is the culmination of investigation ad assessment which has involved consideration of the potential impacts of the Proposal in a broad context.

The development of the Proposal has been undertaken considering the principles of ecologically sustainable development. It has involved three key stages leading to the commencement of the concept design and environmental assessment of the preferred option.

The Proposal has been developed to balance engineering requirements for a motorway standard road with environmental performance. The Proposal contains a range of environmental management measures to address the likely environmental impacts identified in this Environmental Assessment. A package of appropriate biodiversity offsets would be developed in consultation with DECCW and DII to resolve any residual impacts resulting from the construction and operation of the Proposal.

While the Proposal has been developed to avoid and minimise environmental impacts, it would be subject to further refinement at the detailed design stage in response to the outcomes of the approval process and the detailed site investigations to be undertaken at that time.

The Proposal would assist in meeting the overall goal of the Pacific Highway Upgrade Program, which is to provide a dual carriageway standard highway from Hexham (near the F3 Freeway in NSW) to the Queensland border. The Proposal would also achieve the specific Pacific Highway Upgrade Program objectives.

This Environmental Assessment has addressed the key issues and general requirements identified in the Director-General's environmental assessment requirements under Part 3A of the EP&A Act, together with the objects of the EP&A Act. Additionally, the Proposal would meet broader planning objectives including the *Mid North Coast Regional Strategy.*

The Proposal is expected to produce social, economic and transportation benefits on a local, regional, State and national scale, as well as some environmental benefits at a local scale as demonstrated throughout this Environmental Assessment.

It is concluded that the construction and operation of the Proposal should proceed, on the basis that the potential impacts are justified given the substantial local, regional, State and national benefits that it would generate.