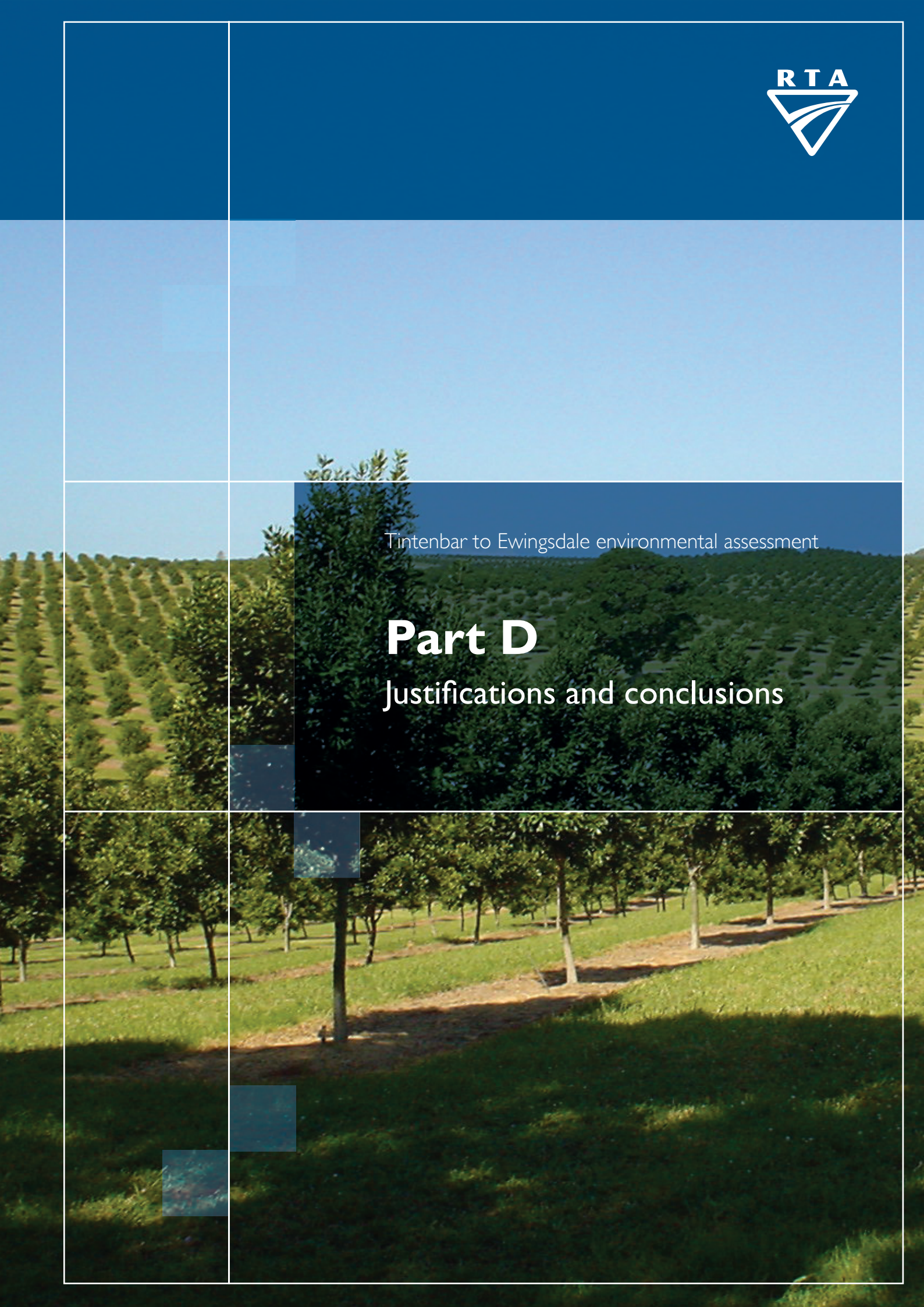

Tintenbar to Ewingsdale environmental assessment

Part D

Justifications and conclusions

21 Strategic and project justification

This chapter addresses the strategic need for the proposed upgrade, including how the proposed upgrade would meet the identified project needs and that of the Pacific Highway Upgrade Program. The table below identifies the key issues for the assessment in the environmental assessment requirements. Note that some of these issues are addressed in earlier chapters.

Environmental assessment requirements	Where addressed
Strategic Justification	
Outline the strategic outcomes for the Pacific Highway Upgrade Program, including with respect to strategic need and justification:	Section 2.1
> The aims and objectives of relevant State planning policies	Section 2.2
> The principles of ecologically sustainable development	Section 21.3
> Cumulative and synergistic impacts associated with the program as a whole	Section 21.2
Identify how the project fits within these strategic outcomes and how impacts associated with the project would be considered and managed to achieve acceptable environmental outcomes across the Pacific Highway Upgrade Program. Describe:	
> The need for and objectives of the project	Sections 2.4 and 2.6
> Alternatives considered (including an assessment of the environmental costs and benefits of the project relative to alternatives)	Section 2.4
> Provide justification for the preferred project taking into consideration the objects of the Environmental Planning and Assessment Act 1979	Sections 21.1 and 21.4

21.1 Benefits and impacts of the Pacific Highway Upgrade Program and the proposed upgrade

The *strategic and project need* for the Pacific Highway Upgrade Program (PHUP) and the proposed upgrade are discussed in Chapter 2.

The *strategic and project justification* for the PHUP and the proposed upgrade are outlined below in terms of their expected benefits and 'cumulative' and 'synergistic impacts' relative to the strategic objectives and desired outcomes of the program.

Expected benefits

Transport desired outcome: improved safety and travel times.

The program is expected to have significant benefits for transport and public safety.

The total reduction in the number of vehicle accidents as a result of the PHUP in the 30 years from 2006 are estimated to be 3,200 and 3,800, with a corresponding reduction in fatalities of between 130 and 155 (RTA 2005), relative to the base case of no upgrade.

The proposed upgrade would have a corresponding decrease in accidents, injuries and fatalities. The target for the proposed upgrade is a reduction in accident rates from 36 accidents per million vehicle kilometres travelled (MVKT) to 15 per MVKT.

Travel time savings for a highway user travelling in a car between the F3 Freeway and the NSW-Queensland border are estimated at approximately 90 minutes, relative to the base case of no upgrade (beyond what had already been completed by 2006) (RTA 2005). It follows that these travel time savings would also be achieved by commercial vehicles, thereby leading to significantly reduced freight costs.

The contribution of the proposed upgrade to this total travel time saving is approximately 2 minutes for cars and 2.5 minutes for commercial vehicles during normal operation. This time saving would be greater in busy periods.

Economic desired outcome: improved opportunities for regional economic development

The overall program would generate substantial regional economic development benefits in terms of the additional economic activity and employment induced by construction expenditure and the anticipated reduction in road transport costs. It is estimated that the present value of the increases in annual regional output by the program is $3.1 billion. An estimated creation of between 85,000 and 110,000 jobs (directly and indirectly) would occur during construction which would result in the generation of household income of approximately $2.5 billion to $3.3 billion. A large proportion of these would be associated with induced tourism and existing regional businesses expanding their output.

The proposed upgrade would ensure that the transport and economic benefits achieved by the other projects in the overall program are able to be capitalised on by the residents and businesses within the region. More specifically the tourism industry would experience growth from improved accessibility to the region. Freight transport costs would also be expected to reduce due to reduced travel time and improved fuel efficiency. Importantly, the proposed upgrade would also support the targeted future levels of population and housing growth on the North Coast as identified in the *Far North Coast Regional Strategy* (NSW Department of Planning 2006).

Social desired outcome: improved access to employment and community services

Substantial direct benefits of the program would accrue to road users, through improved safety, reduced crashes and reductions in the costs of travel. Reduced travel times would also improve access to employment opportunities and community services and facilities for resident populations. The flow-on effects would produce further social benefits in the form of reductions in costs for public transport users and increased economic activity and employment. Public transport users would, however, need to rely on possible cost reductions and beneficial flow-on effects for public transport availability to gain accessibility benefits.

The key social benefits gained from the proposed upgrade would relate to accessibility and public safety, including the separation of local and through traffic.

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

There are a range of cumulative environmental impacts associated with the PHUP. Some of the cumulative impacts are discussed earlier in the environmental assessment (ecology in **Chapter 12** and heritage in **Chapter 16**). There are also a range of amenity and other social impacts on some residents and communities that would occur as a result of the PHUP including impacts relating to visual amenity, noise and community severance. As an important part of the PHUP these impacts have been minimised through route selection and project design, and would continue to be minimised in the procedures associated with construction.

There are also a number of cumulative environmental benefits of the PHUP. These include (in general terms) improved air quality, lower resource use and reduced greenhouse gas emissions, and in the case of many communities improved amenity through the relocation of the Pacific Highway away from sensitive areas such as town centres and residential areas.

The proposed upgrade would have some environmental impacts which are discussed in detail in this environmental assessment, along with management measures to minimise these impacts. It is predicted to have benefits for regional air quality and greenhouse gas emissions. Other significant environmental benefits would be realised at the local level. Residents on the existing Pacific Highway, where this would become a local access road, would experience some amenity benefits. The proposal also includes a program of riparian restoration in which would provide environmental enhancement and improve local amenity.

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

Quantifiable monetary benefits of the program, such as savings in vehicle operating costs, travel time and avoided crashes, would be substantial. The program is estimated to result in net savings (after construction costs have been taken into account) with a present value of between approximately $540 million and $1.3 billion.

No separate cost-benefit analysis has been carried out for the proposed upgrade, however it could be expected that the proposed upgrade would contribute to the totals 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 proposed upgrade and in the selection process for the preferred route.

21.2 Cumulative and synergistic impacts

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. Furthermore important transport, economic, social and environmental benefits would be achieved through the overall program and the proposed upgrade. While the program and proposed upgrade both seek to achieve the greatest benefits with the least negative effects, a range of negative impacts, some of which may be cumulative, would also result (**Table 21.1**).

Table 21.1 - Potential cumulative and synergistic impacts of the program and proposed upgrade

Desired Outcome	Program	Project (proposed upgrade)
Transport: improved safety and travel times	> Improved travel times would 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).	> Minor travel time improvement expected; therefore, minimal rail to road transfer expected as result of proposed upgrade itself, relative to overall program.
	> Congestion and slower travel times during roadworks for the various upgrade projects.	> Minor disruption with proposed highway offline to the existing highway allowing existing road network to be maintained for most of the construction period. Some temporary access changes during construction of bridges however relatively small impact in context of overall program due to small scale of project.
Economic: improved opportunities for regional economic development	> Some economic activities may be affected in towns that are bypassed. These could be positive or negative effects, depending on then nature of the activities within the context of the town.	> No towns bypassed. > Small number of businesses potentially affected by changes in access.
	> Lack of availability of road materials for other projects.	> Relatively large material quantities needed for scale of project, due to need for large structures, but relatively small impact in context of overall program due to short upgrade length.
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 cost reductions and other flow-on effects are passed onto public transport users and consumers.	> Minor impact relative to overall program as interchange improvements and local road connections would benefit many in the community. Upgrade would improve local road network by removing through traffic.

Table 21.1 (cont)

Desired Outcome	Program	Project (proposed upgrade)
	> Increased severance and amenity impacts on farms or towns not bypassed or areas not upgraded.	> No towns bypassed. > Farms located between the proposed upgrade and the existing Pacific Highway would experience some severance impacts. A remnant land strategy has been developed to minimise impacts. Proposed highway for the most part follows the existing highway alignment closely and as such the impacts are minor in context of the overall program.
	> Changes in the character and lifestyle of communities from induced development.	> The proposed highway traverses a rural area where development controls and local environmental plans within the local government areas restrict the level of development. The proposed upgrade is considered to have a minor role in induced development and in context to overall program.
	> Impacts on Indigenous culture due to interference or disturbance to cultural sites of heritage.	> Minor impact expected relative to overall program due to small footprint of upgrade in a highly disturbed agricultural area and avoidance of significant impacts on potential areas of Indigenous heritage.
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.	> Minor impact relative to overall program due to land already cleared for agriculture, small area of vegetation removal, replanting of riparian vegetation and disturbed nature of existing vegetation.
	> 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 program.	> No noticeable impact expected (benefits for fuel use and greenhouse gas emissions expected with a positive outcome in terms of operation versus construction reached around 2022).

Table 21.1 (cont)

Desired Outcome	Program	Project (proposed upgrade)
	> Impacts on landscape by the construction of new roads.	> Substantial element in a scenic landscape. High impact relative to size of project, due to large structures proposed and location on escarpment. Urban and landscape design measures to be a high priority.
	> Some loss of agricultural land to the highway and to new induced development.	> No land expect to be lost to new induced development however loss of agricultural land due to location in a rural area.
	> Potential reduction in water quality and impacts on flooding managed through best practice methods.	> Minor impact relative to overall program due to poor existing water quality. Some potential benefits for water quality in Emigrant Creek catchment. Some localised minor negative impacts. > Location of proposed highway on plateau and escarpment avoids flood prone areas. Bridge structures designed for major flooding events.
	> General improvement in townscape and heritage values (with the exception of isolated locations) due primarily to highway bypasses.	> Minimal impact on townscapes. Significant heritage items have been avoided. Minor impact in context of overall program.
Financial: effective and efficient way of investing financial resources	> Net economic benefit from the PHUP.	> A range of immediate local economic benefits with isolated small negative impacts.

Managing the cumulative impacts of the Program and the proposed upgrade

Table 21.2 summarises the actions, strategies and policies that have or are being implemented in response to these issues, including integration with the principles of ecologically sustainable development. As identified, the proposed upgrade has a synergistic relationship with the program and as such management of the cumulative impacts of the proposed upgrade itself is also discussed.

Table 21.2 - Managing the cumulative impacts of the Pacific Highway Upgrade Program and the proposed upgrade

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.	> Australian Rail Track Corporation (ARTC) and RailCorp are implementing strategies to improve efficiency of rail operations. > RTA is implementing a Stopping Area Strategy – Driver Reviver Strategy. > RTA is increasing road maintenance funding commensurate with increased truck numbers.
Congestion and slower travel times due to the effects of roadworks for the various upgrade projects	> 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 adverse impact of roadwork delays on road users. A key component of this strategy is the dissemination of regular information to Pacific Highway road users and local communities about delays due to highway construction and maintenance activities. 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 projects, including the proposed upgrade.
Some businesses may be detrimentally affected by being bypassed (although the majority would benefit).	> Investigate measures to enhance visibility and access to bypassed towns and retail areas and promote local development. No bypasses associated with the proposed upgrade.	> Department of Planning (DoP) and RTA are implementing a retail commercial policy, incorporating a highway service centre policy. > RTA identifies towns by signage and ensures provision of consistent signage. > RTA provides good town access. > 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.

Table 21.2 (cont)

Cumulative impact	Required management/action/ response	Implementation and responsibility
Lack of availability of road materials for other projects	> Investigate and develop strategies for sourcing road materials.	> RTA, Department of Primary Industries, local government and quarry/ development industries are undertaking further studies to ensure provision of pavement materials.
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. The ARTC is currently upgrading the track and signalling on the North Coast Line. > The RTA is incorporating bus, cycle and pedestrian access improvements into Pacific Highway Upgrade Program projects. > The Ministry of Transport and local government are investigating means to improve public transport services. > The proposed upgrade provides improved safety for buses and cyclists on the existing highway.
Increased severance in towns not bypassed	> Develop strategies to reduce severance impacts, early consultation, crossings, tunnels, overpasses.	> The RTA has developed a Stopping Area Strategy, which is a means of coordinating vehicle stopping opportunities as part of the Pacific Highway Upgrade Program. Advantage is taken of facilities provided by major towns in convenient locations. > The concept design for the proposed upgrade includes a number of aspects to reduce severance, including maintaining the current local road network for motorists, cyclists and pedestrians.
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.

Table 21.2 (cont)

Cumulative impact	Required management/action/ response	Implementation and responsibility
Impacts on Indigenous 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 environmental assessment. > Involve Aboriginal communities in the road planning process. > Monitor cumulative impacts.	> Extensive consultation with relevant Aboriginal groups has been undertaken for the proposed upgrade in accordance with Department of Environment and Climate Change (DECC) 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 proposed upgrade, identification of any potential item of Indigenous archaeological value and appropriate action taken should any such item or area be uncovered. > Impacts are also monitored by the DECC and Aboriginal land councils.
Reduction in biodiversity	> Extensive consultation with relevant Aboriginal groups has been undertaken for the proposed upgrade in accordance with Department of Environment and Climate Change (DECC) 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 proposed upgrade, identification of any potential item of Indigenous archaeological value and appropriate action taken should any such item or area be uncovered. > Impacts are also monitored by the DECC and Aboriginal land councils.	> The baseline monitoring information conducted for every upgrade project is public information contained within the environmental assessments for the project. 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 compensatory habitat for the Pacific Highway Upgrade Program on consultation with DECC. > Biodiversity impact predictions were undertaken as part of the options assessment process, which was commented on by the government and the public. > The DoP has released its Far North Coast Regional Strategy 2006-31, which identifies a balance between providing sustainable growth for the region while promoting protection of the 'areas key environmental assets. > The commitments to environmental protection by the RTA in the Environmental Assessment include monitoring during the construction phase of the project. > As part of the project riparian restoration would be undertaken in consultation with local authorities.

Table 21.2 (cont)

Cumulative impact	Required management/action/ response	Implementation and responsibility
Increases in fuel use and greenhouse gases	> Support improved road design, vehicle design and maintenance. > Implement RTA policy on greenhouse reduction. > Encourage retention of freight on rail.	> The RTA has a strategy to develop road design principles to minimise fuel consumption and the improvement of vehicle engine design to maximise fuel efficiency and minimise 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 the minimising of emissions. > AusLink has provided significant funding for upgrading the passenger and freight rail networks. The ARTC is currently upgrading the track and signalling on the North Coast Line. > BASIX and other energy and resource conservation mechanisms introduced.
Impacts on landscape	> Minimise new area clearance and earthworks through road design and route selection. > Implement or develop landscape strategies, particularly north of Ballina. > Develop urban design strategies.	> ***The Far North Coast Regional Strategy 2006-31*** 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 its projects, which are implemented for the proposed upgrade. > Impacts on natural or rural landscape values were assessed as part of the project. Impact assessments and management measures would be implemented to reduce impacts.
Loss of agricultural land	> Avoidance of prime land through route selection and design. Develop strategies at project level that minimise impacts on rural land viability. > Investigate planning controls that minimise effects on prime agricultural land.	> The options processes for individual RTA projects typically adopt indicators associated with prime agricultural land loss. Depending on the severity of impacts, management measures are devised and implemented as part of project assessments. > Controls incorporated at local government level as well by DoP through the ***Far North Coast Regional Strategy 2006-31***.

Table 21.2 (cont)

Cumulative impact	Required management/action/ response	Implementation and responsibility
Reduction in water quality and impacts on flooding (including effects of climate change on highway upgrades)	> Implementation of RTA Acid Sulfate Soil management guidelines and RTA Water Policy. > Implement water monitoring programs in support of other such measures. > Implement erosion and sedimentation control plans at project level. > Ensure provision of flood passage structures in design. > 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 at the project level where relevant (and have been implemented for the proposed upgrade). > Flood passage is a standard RTA design procedure. Flooding assessment was completed for proposed upgrade. > Residential impacts are controlled through local planning instruments and development application reviews, as well as by the DoP for any major development.
Reduction in townscape and heritage values	> Implement controls to maintain townscape and heritage values.	> The options processes for individual RTA projects typically adopt indicators associated with heritage areas. > Planning agencies are responsible for other development controls. > Proposed upgrade has a high level of flood immunity and would not be expected to be affected by climate change.
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.

21.3 Integration of the program and proposed upgrade with principles of ecologically sustainable development

Ecologically sustainable development aims to sustain and conserve natural resources through 'using, conserving and enhancing the communities' resources so that the ecological processes, on which life depends, are maintained and the total quality of life, now and in the future, can be increased (Commonwealth Government of Australia, 1990).

The principles of ecologically sustainable development have been an integral consideration throughout the process of developing the proposed upgrade and assessing its benefits and impacts. In addition, the preparation and exhibition of the environmental assessment in itself contributes to the consideration of the principles of ecologically sustainable development. It makes detailed information about the proposed upgrade publicly available and assists in the decision on whether the proposed upgrade should proceed.

Definitions of the four principles of ecologically sustainable development quoted below are from the *Protection of the Environment Administration Act 1991*. The definitions from this act are cross referenced in the *Environmental Planning and Assessment Act 1979*.

Precautionary principle

If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and:

(ii) an assessment of the risk-weighted consequences of various options.

Intergenerational equity

The present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations

Conservation of biological diversity

Conservation of biological diversity and ecological integrity should be a fundamental consideration.

Improved valuation, pricing and incentive mechanisms

Environmental factors should be included in the valuation of assets and services, such as:

(i) *polluter pays* - that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost

effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The ways in which the Pacific Highway Upgrade Program as a whole, and the proposed upgrade respond to the principles of ecologically sustainable development are summarised in **Table 21.3** below.

Table 21.3 - Application of ecologically sustainable development principles to the program and proposed project

Relevant ecologically sustainable development principles	Program approach	Project approach
Precautionary principle	Early strategic assessment. Use of best available technical information and adoption of best practice environmental standards, goals and measures to minimise environmental risks.	Environmental risk analysis prepared at project application phase and updated in this environmental assessment. Conservative, "worst case" scenarios addressed in impact assessment. Best practice measures are included in the management measures proposed in Part C of this environmental assessment and incorporated into the draft Statement of Commitments in Appendix C.
Inter-generational equity	The decision to upgrade the Pacific Highway has integrated long and short-term economic, environmental, land use and social (including social equity) considerations, so that any foreseeable impacts are not left to be addressed by further generations.	Issues that have potential long-term implications, such as consumption of non-renewable resources, waste disposal, greenhouse emissions, removal of vegetation and impacts on visual amenity and water quality, have been avoided and minimised as much as possible through route/concept selection and application of management measures such as best practice water quality management and a comprehensive urban and landscape design strategy (see Part C and Appendix C).
Conservation of biological diversity	Recognition in the program of the rich biological environment of the North Coast of NSW and the need to avoid and control potential impacts throughout the length of the upgrade (e.g. through selection of which sections to upgrade).	The route/concept selection and design development have sought to avoid and minimise biodiversity impacts as much as possible. Riparian restoration would be undertaken as part of the proposed upgrade, while the landscape strategy includes biodiversity objectives.
Improved valuation, pricing and incentive mechanisms	Environmental and social costs/benefits considered alongside economic and financial costs/benefits in the decision to upgrade the Pacific Highway and in the selection of the highway sections to upgrade.	Environmental and social issues were considered in the strategic planning and establishment of the need for the project, and in the consideration of options. The value placed on these resources is evident in the extent of the planning, environmental investigations and design of management measures.

21.4 Relationship between the proposed upgrade and the objects of the Environmental Planning and Assessment Act 1979

The ways that the proposed upgrade would meet the objects of the *Environmental Planning and Assessment Act 1979* (EP&A Act) are outlined in **Table 21.4** below.

Table 21.4 - Performance of the proposed upgrade against the objects of the EP&A Act.

EP&A Act objectives	Performance of Proposed Upgrade
(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 proposed upgrade and associated mitigation and management measures detailed in the Environmental Assessment allow for the proper management of these issues. For discussion of: > Agricultural land, see Chapter 14. > Natural areas, see Chapter 12. > Forests, see Chapter 12 for natural forests; no forestry industry would be affected. > Minerals – no active mineral extraction would be affected. > Water, see Chapters 9 and 10. > Cities, towns and villages, see Chapters 14 and 17).
(ii) the promotion and co-ordination of the orderly and economic use and development of land,	The development of the proposed upgrade is anticipated to have significant economic benefits for the region, and for the movement of freight. No substantial adverse impacts on local businesses are expected (see Chapter 17).
(iii) the protection, provision and co-ordination of communication and utility services,	Utilities affected by the proposed upgrade would be relocated and/or protected as described in Section 5.14.
(iv) the provision of land for public purposes,	The proposed upgrade itself is proposed for a public purpose. No land reserved for public recreation would be affected.
(v) the provision and co-ordination of community services and facilities,	No community facilities occur within the proposed road reserve. Access to community facilities would be maintained, but altered in certain cases.
(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,	Protection of threatened species, populations and ecological communities, and their habitats is described in Chapter 12.
(vii) ecologically sustainable development, and	Achievement of the principles of ESD was a key design principle for the proposed upgrade. This is described in Table 21.3.
(viii) the provision and maintenance of affordable housing.	The proposed upgrade is unlikely to influence the provision and maintenance of affordable housing in the area.

Table 21.4 (cont)

EP&A Act objectives	Performance of Proposed Upgrade
(b) **To promote the sharing of the responsibility for environmental planning between the different levels of government in the State.**	This is a high level objective that does not apply specifically to individual projects. While the Minister for Planning would determine the project application under Part 3A, Ballina and Byron shires have been consulted extensively throughout the route selection and environmental assessment process.
(c) **To provide increased opportunity for public involvement and participation in environmental planning and assessment.**	Community involvement in the planning and assessment of the proposed upgrade is described in Chapter 4.

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Glossary

Term	Definition
Aboriginal Heritage Information Management System (AHIMS)	A list of known Aboriginal sites held by the DEC.
Acid Sulfate Soils (ASS)	Naturally acid clays, mud and other sediments usually found in swamps and estuaries. They may become extremely acidic when drained and exposed to oxygen, and may produce acidic leachate and runoff, which can pollute receiving waters and liberate toxins. ASS is classified as material, which is above the groundwater, is undergoing oxidation and has a pH of less than 4.0.
Acute noise levels	Road traffic noise levels received at private dwellings, that are predicted to be greater than 65dB(A) Leq(15hr) (day) and 60dB(A) Leq(9hr) (night), as presented in Practice Note IV, Step 3, part (2) of the RTA's (2001) Environmental Noise Management Manual.
Alignment	A detailed geometric layout, in plan and profile, following a general route.
Amenity	Natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributes.
Annual Exceedance Probability (AEP)	The chance of a flood of a given size (or larger) occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500 m^3/s has an AEP of 5%, it means that there is a 5% chance (i.e. a 1 in 20 chance) of a peak discharge of 500 m^3/s (or larger) occurring in any one year.
Archaeological Site	A site is defined as any material evidence of past Aboriginal activity that remains within a context or place that can be reliably related to that activity. Usually a site classification requires a minimum of two detected artefacts.
Annual Average Daily Traffic (AADT)	Volume representing the total traffic in both directions at each location, calculated from mechanically obtained axle counts.
Annual Average Daily Vehicles (AADV)	Represents the average number of vehicles passing in both directions during a 24-hour period estimated over a period of one year.
Batter	The side slope of walls, embankments and cuttings or the degree of such slope.
Carriageway	Portion of a road or bridge used by vehicles (inclusive of shoulders and auxiliary lanes).
Census	The enumeration of an entire population, usually with details being recorded on residence, age, sex, occupation, ethnic group, marital status, birth history, and relationship to head of household.
Culvert	An enclosed channel used for the passage of surface water under a road or other embankment.
Cut (batter)	The material removed (excavated) from the existing ground surface.
Decibel (dB)	A unit used in the comparison of powers and levels of sound energy. A comprehensive glossary of noise terms can be found in Section 1 of the RTA's Environmental Noise Management Manual (2001), which can be obtained from RTA's website at www.rta.nsw.gov.au/environment/noise/.

Term	Definition
dB(A)	Decibels using the 'A' weighted scale, measured according to the frequency of the human ear.
Design speed	A nominal speed used for the design of geometric features of the road, such as curves.
Dispersion	The spatial property of being scattered about over an area or volume.
Dual carriageway	A road with separated carriageways for traffic travelling in each direction.
Earthworks	The process of extracting, moving and depositing earth during construction.
Ecologically Sustainable Development (ESD)	Development that maintains and improves the total quality of life. Development both now and in the future in a way that maintains the ecological processes on which life depends. Key components of ESD are intergenerational equity, maintenance of biodiversity, improved economic evaluation of environmental costs and benefits and the precautionary principle.
Evaluation Criteria	A list of criteria and measurables used to evaluate the route options. Sieve 1 criteria were used to evaluate the long list of options. Sieve 2 criteria were used to evaluate the shortlist of options.
Fill (batter)	The material placed in an embankment.
Floodplain	Valley floor flat adjacent to a stream that is flooded by the 'annual' flood (often considered to be the flood with a recurrence interval of about 1.6 years).
Footprint	The footprint is indicative of the likely actual road reserve width requirements and includes the land that would be required for the physical roadway (highway and service roads), public utility plant (if required), earthworks, and maintenance clearances. The footprint also includes a margin for drainage or other works that may be required beyond the extent of earthworks.
Geotechnical	Work relating to soil mechanics, foundation engineering, rock mechanics, engineering geology, hydrogeology and materials testing.
Grade Separation	The separation of traffic so that crossing movements that would otherwise conflict are at different levels.
Groundwater	Water beneath the surface of the earth which saturates the pores and fractures of sand, gravel, and rock formations.
Habitat	The place where an organism lives, habitats are measurable and can be described by their flora and physical components.
Horizontal Alignment	The geometric form of the centreline of a roadway in the horizontal plane.
Hydrogeology	The branch of geology that studies the movement of subsurface water through rocks and the effect of moving water on rocks, including their erosion.
Hydrology	The study of the properties, distribution, use, and circulation of the water on Earth and in the atmosphere in all of its forms.
Interchange	A grade separation of two or more roads with one or more interconnecting carriageways or ramps.
Intersection	A meeting of two or more roads.

Term	Definition
Level of Service	A qualitative analysis providing a means of determining the traffic-carrying performance of a road or any element of it under the prevailing roadway and traffic control conditions.
Median	A strip of land which separates carriageways for traffic in opposite directions.
Noise Wall	A wall or barrier (noise barrier) erected to block or deflect noise.
Pairwise	A tool used to assess the relative importance of the evaluation criteria. It allows stakeholders the opportunity to weight the evaluation criteria in order of importance to them. This allows the study team to gain an understanding of which evaluation criteria are viewed as more important.
PM10	Usually airborne particulate matter less than 10 m (microns or one millionth of a metre) in diameter, a measure of dust.
PM2.5	Usually airborne particulate matter less than 2.5 m (microns or one millionth of a metre) in diameter, a measure of dust.
Portal	Entry and/or exit of a tunnel.
Potential Acid Sulfate Soil (PASS)	Defined as material below the groundwater which has not been oxidised and generally has a pH of greater than 4.0. The pH has the potential to become much lower when the soil is exposed to oxygen as a result of activities such as excavation and drainage.
Service Road	A subsidiary carriageway constructed between the principal carriageway and the property line, connected only at selected points with the principal carriageway. It reduces the number of access points to a major road, with a consequent improvement in safety.
Shoulder	The strip of pavement bordering the carriageway beyond the traffic lanes and constructed at the same level as the pavement surface. Used by traffic in emergencies and provides clearance to batter slopes.
Terrestrial	Living or growing on land; not aquatic.
Tributaries	Rivers or streams flowing into a larger river or lake.
Vertical Alignment	The geometric form of the centreline of a carriageway in the vertical plane.
Wetland	Land either permanently or temporarily covered by water. These areas are usually characterised by vegetation of a moist-soil or aquatic type.

Abbreviations

Term	Definition
AADT	Annual average daily traffic
ADWG	Australian Drinking Water Guidelines
AEP	Annual exceedence probability
AGO	Australian Greenhouse Office
AHD	Australian height datum
AHIMS	Aboriginal heritage information management system
ANZECC	Australian and New Zealand Conservation Council
ARTC	Australian Rail Track Corporation
BRS	Bureau of Rural Science
CCTV	Closed circuit television
CEMP	Construction environmental management plan
CSIRO	Commonwealth Scientific and Industrial Research Organisation
dB(A)	A-weighted decibels
DET	Department of Education and Training
Department of Environment and Conservation (DEC)	Former name for part of the current NSW Department of Environment and Climate Change
DECC	NSW Department of Environment and Climate Change (formerly DEC, EPA and NPWS)
DGA	Dense graded asphalt
DIPNR	NSW Department of Infrastructure Planning and Natural Resources
Department of Natural Resources (DNR)	Former name for part of the current NSW Department of Water and Energy
DPI	Department of Primary Industry
DoP	Department of Planning
DWE	NSW Department of Water and Energy
ECRTN	The former Environment Protection Authority's (EPA 1999) Environmental Criteria for Road Traffic Noise
EIS	Environmental Impact Statement
ENCM	The former EPA's (1994) Environmental Noise Control Manual

Term	Definition
ENMM	The RTA's (2001) Environmental Noise Management Manual
Environment Protection Authority (EPA)	Part of the current NSW Department of Environment and Climate Change (DECC)
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC	Act Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically sustainable development
FM Act	Fisheries Management Act
GDEs	Groundwater dependant ecosystems
GHG	Greenhouse Gas
LAeq noise levels	Constant sound pressure level which exhibits the equivalent acoustic energy of a fluctuating noise level, otherwise known as the 'energy-average' sound level
LALC	Local Aboriginal land council
LEP	Local Environmental Plan
LGA	Local government area
MVKT	Million vehicle kilometres travelled
NCREP	North Coast Regional Environmental Plan
NHMRC	National Health and Medical Research Council
NNTT	National native title claim
NRMMC	Natural Resource Management Ministerial Council
NSW	New South Wales
OH&S	Occupational Health and Safety
PAD	Potential archaeological deposit: any location considered to have a moderate to high potential for subsurface archaeological material
PHUP	Pacific Highway Upgrade Program
Probable maximum flood (PMF)	Largest flood that could conceivably occur at a particular location, which defines the extent of flood-prone land (the floodplain)
PPV	Peak particle velocity
QLD	Queensland
ROTAP	Rare or threatened Australian plants
RTA	NSW Roads and Traffic Authority

Term	Definition
SC	Shire Council
SEPP	State environmental planning policy
TAPM	The air pollution model
t CO2-e	Tonnes of carbon dioxide equivalent
TSC Act	Threatened Species and Conservation Act
VDV	Vibration dose valve
WSP	Water Sharing Plan
WP	Working Paper

Appendix A

Director General's requirements

NSW GOVERNMENT
Department of Planning

Contact: Dinuka McKenzie
Phone: (02) 9228 6348
Fax: (02) 9228 6355
Email: Dinuka.McKenzie@planning.nsw.gov.au

Our ref: 9037893

Mr Bob Higgins
General Manager, Pacific Highway
NSW Roads and Traffic Authority
PO Box 576
GRAFTON NSW 2460

Dear Mr Higgins

Director General's Requirements for the Environmental Assessment of Proposed Pacific Highway Upgrade between Tintenbar and Ewingsdale

The Department has received your application for the proposed Pacific Highway Upgrade between Tintenbar and Ewingsdale Project (Application Number: 07_0051).

I have attached a copy of the Director-General's requirements (DGRs) for the environmental assessment of the Project. These requirements have been prepared following the Planning Focus Meeting held on Monday, 16 April 2007 and in consultation with the relevant government agencies.

It should be noted that the Director-General's requirements have been prepared based on the information provided to date. Under section 75F(3) of the Act, the Director-General may alter or supplement these requirements if necessary and in light of any additional information that may be provided prior to the proponent seeking approval for the Project.

I would appreciate it if you could contact the Department at least two weeks before you propose to submit the Environmental Assessment for the Project to determine:

- the fees applicable to the application;
- relevant land owner notification requirements;
- consultation and public exhibition arrangements that will apply;
- options available in publishing the Environmental Assessment via the Internet; and
- number and format (hard-copy or CD-ROM) of the Environmental Assessment that will be required.

Prior to exhibiting the Environmental Assessment, the Department will review the document to determine if it adequately addresses the DGRs. The Department may consult with other relevant government agencies in making this decision. If the Director-General considers that the Environmental Assessment does not adequately address the DGRs, the Director-General may require the proponent to revise the Environmental Assessment to address the matters notified to the proponent. Following this review period the Environmental Assessment will be made publicly available for a minimum period of 30 days.

If your proposal includes any actions that could have a significant impact on matters of National Environmental Significance, it will require an additional approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Environment and Water Resources to determine if an approval under the EPBC Act is required for your proposal (6274 1111 or http://www.environment.gov.au).

Please note that the Commonwealth Government has accredited the NSW environmental assessment process for assessing impacts on matters of National Environmental Significance. As a result, if it is determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary Director-General's requirements will need to be issued.

If you have any enquiries about these requirements, please contact Dinuka McKenzie, A/Senior Environmental Planning Officer, Major Infrastructure Assessments on 02 9228 6348 or via email (dinuka.mckenzie@planning.nsw.gov.au).

Yours sincerely

Chris Wilson
Executive Director
As delegate for the Director-General

Director-General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

Application number	07_0051
Project	Pacific Highway Upgrade – Tintenbar to Ewingsdale
Location	Between the Ross Lane and the Ewingsdale Road interchanges of the Pacific Highway within the Byron Shire and Ballina Shire Local Government Areas.
Proponent	NSW Roads and Traffic Authority
Date issued	22 May 2007
Expiry date	22 May 2009
General requirements	The Environmental Assessment (EA) must include the following: 1. an **executive summary**. 2. a **detailed description** of the Project including: ▪ route alignment and corridor width; ▪ design elements (e.g. requirements for LOS, pedestrian and cyclists, rest areas and service centres etc); ▪ differentiate the limits of the Project with respect to the existing Pacific Highway including operational/ maintenance responsibilities; ▪ potential staging; ▪ ancillary facilities (e.g. compound site, batching plants etc); and ▪ resourceing (e.g. construction material needs, spoil disposal, natural resource consumption including water). 3. an **assessment of the key issues**, with the following aspects addressed for each key issue (where relevant): ▪ describe the existing environment; ▪ assess the potential impacts of the proposal at both construction and operation stages, in accordance with relevant policies and guidelines. Both direct and indirect impacts must be considered including potential interactions with the existing Pacific Highway (as relevant); ▪ identify how relevant planning, land use and development matters, (including relevant strategic and statutory matters), have been considered in the impact assessment and/ or in developing management/ mitigation measures; and ▪ describe measures to be implemented to avoid, minimise, manage, mitigate, offset and/or monitor the impacts of the Project and the residual impacts. 4. a **draft Statement of Commitments (SoC)**. The SoC must incorporate or otherwise capture all measures to avoid, minimise, manage, mitigate, offset and/or monitor impacts identified in the impact assessment sections of the EA and ensure that the wording of the SoC clearly articulates the desired environmental outcome of the commitment. The SoC must be achievable, measurable (with respect to compliance), and time specific, where relevant. 5. **certification** by the author of the Environment Assessment that the information contained in the Assessment is neither false nor misleading.
Key issues	▪ **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. ▪ **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.
	▪ **Land Use and Property -** including but not limited to:
	  ▪ impacts to directly-affected properties and landuses adjacent to the project, including: impacts to landuse viability and future development potential, including property title impacts; land sterilisation and severance impacts; and impacts to the connectivity and contiguity of small settlements including Newrybar and Knockrow;
	  ▪ consideration of project impacts on the attainment of the objectives of *Far North Coast Strategy*; and
	  ▪ development of a mitigation strategy aimed at promoting appropriate final land uses on lands subject to partial or full acquisition as a result of the project, in consultation with Ballina and Byron Shire Councils.
	▪ **Social and Economic -** including but not limited to:
	  ▪ local community socio-economic impacts associated with landuse, property and amenity related changes;
	  ▪ business (including agricultural producers) impacts on a case by case basis including impacts to the overall viability, profitability, productivity and sustainability of businesses;
	  ▪ regional economic impacts to the agricultural sector taking into account the total loss of regional and State Significant farmland as identified in the *Northern Rivers Farmland Protection Project* (Department of Planning, February 2005); and
	  ▪ regional economic impacts to the tourism sector taking into account agri-tourism impacts and impacts to local amenity, character and scenery.
	▪ **Surface and Ground Water -** including but not limited to:
	  ▪ water quality impacts to the catchments of Emigrant Creek and Wilson River, in consultation with Rous Water, taking into account impacts from both accidents and runoff (i.e. acute and chronic impacts) and considering relevant public health and environmental water quality criteria specified in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000*;
	  ▪ groundwater impacts, considering local impacts at each deep cutting and cumulative impacts on regional hydrology. The assessment must consider: extent of drawdown; impacts to groundwater quality; discharge requirements; and implications for groundwater-dependent surface flows (including springs and drinking water catchments), groundwater-dependent ecological communities, and groundwater users including the *Alstonville Basalt Groundwater Source Water Sharing Plan*;
	  ▪ flooding impacts, identifying changes to existing flood regimes, in accordance with the *Floodplain Development Manual* (former Department of Natural Resources, 2005) including impacts to existing receivers and infrastructure and the future development potential of affected land; and
	  ▪ impacts to waterways to be modified as a result of the project, including ecological, hydrological and geomorphic impacts (as relevant) and measures to rehabilitate the waterways to pre-construction conditions or better.
	▪ **Flora and Fauna -** including but not limited to:
	  ▪ consideration of threatened terrestrial and aquatic species, populations, ecological communities and/or critical habitat; and
	  ▪ assessment of the following issues: native vegetation loss; weed infestation; habitat fragmentation; impacts to wildlife corridors including riparian corridors; impacts to groundwater-dependent communities, riparian and aquatic habitat; and
	  ▪ consideration of regional scale cumulative impacts and identify the significance of the impacts of the project in the context of the PHUP.
	▪ **Noise and Vibration -** including but not limited to:
	  ▪ an assessment of operational road traffic noise impacts including consideration of local meteorological conditions (as relevant) and any additional reflective noise impacts from proposed noise mitigation barriers;
	  ▪ an assessment of construction noise and vibration including construction traffic noise and blasting impacts; and
	  ▪ the assessment(s) must take into account the following guidelines as

	relevant: *Environmental Criteria for Road Traffic Noise* (EPA 1999), *Environmental Noise Management Manual* (RTA, 2001), *Environmental Noise Control Manual* (EPA, 1994), *Assessing Vibration: A Technical Guideline* (DEC, 2006); and *Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990).
	▪ **Visual Amenity and Urban Design -** including but not limited to:
	  ▪ consideration of project and urban design (including noise barriers, retaining walls and landscaping) consistent with overall design of the PHUP and the existing (and desired) character of affected localities; and
	  ▪ consideration of the *Noise Wall Design Guideline* (RTA, 2006).
	▪ **Traffic** - including but not limited to:
	  ▪ demonstration of how the project design meets the traffic and transport objectives of the PHUP;
	  ▪ assessment of operational traffic and transport impacts to the local and regional road network, including direct impacts from traffic rerouting and modified access to the upgraded highway, and indirect impacts from the increased accessibility of the Ballina and Byron Shires; and
	  ▪ assessment of construction traffic impacts (including spoil haulage).
	▪ **Air Quality** - including but not limited to:
	  ▪ impacts to sensitive receivers (e.g. Newrybar School); consideration of local meteorological conditions; impacts to road users and other receivers at the tunnel section; and consideration of airborne pollutant impacts on drinking water catchments.
	▪ **Indigenous Heritage** – including but not limited to:
	  ▪ the consideration of both artefact and landscape scale mitigation measures, where relevant; and
	  ▪ consideration of regional scale cumulative impacts and identify the significance of the impacts of the project in the context of the PHUP.
	▪ **Environmental Risk Analysis –** notwithstanding the above key assessment requirements, the EA must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EA.

Consultation	You should undertake an appropriate and justified level of consultation with relevant parties during the preparation of the EA, including: ▪ local, State or Commonwealth government authorities and service providers such as Rous Water, the Department of Environment and Climate Change, the Department of Primary Industries, the Department of Water and Energy, the Department of State and Regional Development, Byron Shire Council and Ballina Shire Council; ▪ Specialist Interest Groups including Local Aboriginal Councils; and ▪ the public, including affected landowners. The EA must describe the consultation process, document all community consultation undertaken to date and identify the issues raised (including where these have been addressed in the EA).

Appendix B

RTA land acquisition policy

Land Acquisitions

Roads and Traffic Authority
New South Wales
www.rta.nsw.gov.au

2nd Edition
3 February 1999

Policy Statement

LAND ACQUISITIONS

The Road and Traffic Authority (RTA) is responsible for providing a safe and efficient road transport system in NSW.

Often it is necessary to acquire land to upgrade existing roads or construct new roads.

This document is a general guide to the procedures that are followed when the RTA acquires land and while it provides a comprehensive overview of the essential elements of the RTA's acquisition policy is not intended as a complete statement on the subject.

Throughout this document the term "affected" means affected by the acquisition or proposed acquisition of land. Payment of compensation only takes place where land is acquired.

Owners of property, that is affected by the acquisition of land required for roadworks, are generally aware of roads proposals either through enquiries made when purchasing the property, from proposals shown on Local Planning Schemes or through the RTA's community consultation for new projects.

(New road proposals are made public as soon as possible. It should be noted that the RTA is not required to acquire more land than is necessary for roadworks).

The Roads Act 1993 authorises the RTA to acquire land and payment for land is assessed in accordance with the provisions of the Land Acquisition (Just Terms Compensation) Act 1991.

The Roads Act 1993 and other legislation allows the RTA to enter land to carry out investigations. Consideration of those powers is outside the scope of this document.

One objective of the Land Acquisition (Just Terms Compensation) Act 1991 , referred to throughout this document as the Act, is to encourage the acquisition of land by negotiated purchase in preference to compulsory process. The RTA fully supports this objective.

The RTA generally purchases property as an owner initiated acquisition either under the "hardship" provisions of the Act or its "preferred option" policy (explained on page 2) or as an RTA initiated acquisition in preparation for immediate roadworks. When agreement is reached the purchase is completed by contract and transfer takes place similar to a sale in the open market, however it should be noted that the RTA's solicitor will prepare contracts.

Owner Initiated Acquisition under the provisions of the Act

Owners may experience difficulty in selling their property if part or the whole is designated for acquisition for roadworks. If an owner is unsuccessful in attempting to sell a designated property and is experiencing hardship, then a written application can be made to the RTA requesting acquisition under the "hardship" provisions of the Act. To be eligible for consideration for "hardship" acquisition a property must be designated for acquisition within the meaning of the Act. Land is designated for acquisition if:

(a) the RTA has, in connection with an application for development consent or building approval, given written notice that the land has been designated for road and future acquisition by the RTA ; or
(b) the land is reserved for a public purpose (road) indicated in an environmental planning instrument and the RTA is specified as the body responsible for acquiring the property.

To meet the Act's criteria for "hardship" acquisition an owner must demonstrate that it has become necessary to sell for pressing personal, domestic or social reasons or to avoid a loss in income and that attempts to sell the property have been unsuccessful because of the designation for acquisition by the RTA. If an owner meets the hardship criteria to the RTA's satisfaction, the RTA will agree to purchase the property and in effect becomes the purchaser that cannot be found in the market place. While it is the RTA's preference to complete hardship acquisitions by negotiated agreement, the compulsory process is alsoavailable to the land owner if preferred.

The RTA's basis of assessing payment in hardship matters is market value unaffected by road proposals. No other payments in addition to the unaffected market value are made as the owner's willingness to sell the property in the market place is taken as a preparedness to accept the normal costs associated with selling a property. It should be noted that in most circumstances an owner will not be responsible for a sales commission that would otherwise be payable if the property had been successfully marketed and sold through a real estate agent.

Owner Initiated Acquisition under the "Preferred Option" Policy

In the process of considering the location of a new road the RTA may examine several possible routes and a preferred option may be selected from those routes for further environmental impact study. As a result of community consultation the location of the preferred option will become known. This public knowledge could frustrate attempts by owners to sell properties potentially affected by the taking of land. Properties potentially affected by a preferred option proposal are not designated land because the actual route has not been finalised. Consequently the owners of such properties are not eligible for consideration to have their property acquired under the owner initiated acquisition provisions of the Act. The RTA is however prepared to consider the acquisition of such property outside the provisions of the Act.

The RTA will consider a request for acquisition if an owner can demonstrate hardship using the criteria specified in the Act. The acquisition will be at the discretion of the

RTA and subject to the availability of funds with each party being responsible for all their own costs. The basis of the purchase price will be the assessment of market value unaffected by the road proposal.

Where an acquisition is proceeding on this basis, compulsory acquisition is not an option. Where an agreement cannot be reached on the purchase price, the following procedure is available:

- The offer is withdrawn

- The owner to choose a valuer from a panel of independent valuers nominated by the Australian Property Institute and referred to the owner by the RTA for selection. In this way the valuer chosen is mutually acceptable to both the owner and the RTA.

- The selected valuer will act as an independent expert and will be commissioned by the RTA to carry out a valuation of the subject property.

- Each party is to be responsible for the payment of 50% of the valuation fee.

- The owner or the RTA may make written submissions to the valuer within the first seven (7) calendar days after the valuer is instructed.

- The independent expert's determination will be binding on both parties if the owner wishes to proceed.

- No further valuations will be obtained and the offer to acquire at the determined value will remain open for a period of three (3) months, after which time the offer will lapse.

If the offer lapses and a subsequent decision is made to proceed with the preferred option and the property remains affected, the RTA will recommence negotiations to acquire that part of the property required for roadworks when road construction is imminent.

Programmed Acquisition (RTA initiated)

When land is required for road construction the RTA will initiate acquisition by way of a letter to owners of property affected by the taking of land. The letter will advise the owner that a valuer representing the RTA will make arrangements to inspect the property and carry out a valuation for the purpose of submitting a formal offer for the owner's consideration. The letter invites land owners to submit an asking price, if that is desired, and also advises, that if the owner engages a registered valuer to value the property, the RTA will reimburse fees to the maximum amount specified in the letter.

Reimbursement of valuation fees is subject to the conditions contained in Appendix "A". The valuation report is to be in accordance with the "Basic Content of Valuation

Reports" contained in Appendix "B". It is expected that the valuer will act as an expert and not an advocate.

Division 3 of Part 4 of the Act, in particular Section 55, details the relevant matters to be considered when assessing payment and can be summarised as follows:

- Market Value. (unaffected by road proposals)
- Special Value.
- Severance.
- Disturbance.
- Solatium, and
- Any increase or decrease in the value of adjoining or severed land.

For a fuller understanding, refer to Sections 55 - 62 of the Act which are reproduced in Appendix "C". The heads of compensation to be considered are the same whether the acquisition is a negotiated purchase or is completed by compulsory process.

Following assessment, the RTA will submit written conditions of acquisition to owners for their consideration. One of those conditions will specify the maximum amount that the RTA is prepared to reimburse in respect to conveyancing costs. If the conditions of acquisition are acceptable, the matter will proceed to exchange of contracts and settlement. If the RTA's offer is not acceptable, it is suggested that the services of a registered valuer be engaged to carry out an assessment on the owner's behalf. If there is a difference between valuations, negotiations will take place in an attempt to resolve the matter. Every effort will be made to negotiate a mutually acceptable agreement.

Depending on the RTA's requirements it may be necessary to acquire the whole of a property or only part of a property. The terms "total" or "partial" are used to describe these situations.

Total Acquisition

There are additional considerations peculiar to total acquisitions:

It is strongly recommended to the property owner, that no commitment be made to purchase a replacement property until contracts are exchanged on the sale to the RTA.

If a deposit on a replacement property is required, the RTA will make an advance payment of up to 10% of the value of the property being acquired by the RTA. The advance payment will be made at the time of or after the exchange of contracts and will be subject to conditions required by the RTA's solicitor.

The market value of the property will be assessed having regard to the prime cost items and inclusions at the time of inspection. If it is the owner's intention to retain any item, it is necessary to indicate to the valuer at the time of inspection that an item is to be excluded so that a correct assessment can be made. Requests made after the valuation inspection may be refused or the valuation reduced by the value of the item.

The property must be left in a clean and tidy condition. In accordance with standard real estate transactions, vacant possession will be required on the date of settlement. The RTA will carry out an inspection on the date of settlement to ensure compliance and that all inclusions are intact.

Swimming pools should be clean on the day of settlement and should comply with any relevant statutory or Council requirements including fencing and signage.

Partial Acquisition

If only part of a property is required by the RTA, the letter opening negotiations will include a plan showing the new road boundary and the area and dimensions of that part of the property to be acquired.

The method of assessing the amount to be paid for the land is the "Before and After" method which requires two valuations to be carried out. The first valuation is of the property unaffected by road proposals. The second valuation, as at the same date, is of the residue land on the basis that the new road construction has been completed and the road in use. The difference between the two valuations is the payment for the land to be acquired.

The RTA will, at its own cost prior to or during roadworks, adjust services and public utilities as required, relocate fencing and reinstate access to the new road boundary. It should be noted that fencing will be relocated to the new road boundary to a standard similar to that existing. If considered necessary, the RTA will prepare a plan detailing property adjustments for consideration by the land owner and if acceptable that plan may form part of the contract for sale.

On occasion, the RTA may acquire the whole of a property if the effect of roadworks on the residue land is considered to warrant total acquisition. This applies if the owner purchased the property prior to the RTA formally indicating that the property is to be affected by the acquisition of land, or if the already affected property is to be further adversely affected by the acquisition of additional land. All relevant elements of compensation within section 55 of the Act will be considered.

Where an owner purchased the property in knowledge of the RTA's requirement, the RTA may acquire only that part required for road. If an owner purchased in knowledge of a road affectation and has requested the RTA to acquire the whole property the RTA may agree to total acquisition. However, if a decision is made to acquire the whole property compensation will be limited to market value unaffected by road proposals together with reasonable conveyancing and valuation costs. If an agreement cannot be reached on conditions of total acquisition, the RTA may elect to proceed with only the acquisition of the land required for road.

Entry for Roadworks

Once an acquisition has been settled, entry for roadworks can take place. On occasion, the RTA's road construction program requires entry prior to completion of the acquisition and in such matters the RTA relies on the owner's cooperation. If required and the owner is agreeable, the RTA may arrange formal right of entry on exchange of contracts or, entry by way of lease.

If an agreement cannot be reached to ensure the RTA's timely entry onto the required land for roadworks, the Minister may approve the issue of a written Proposed Acquisition Notice to compulsorily acquire the land.

COMPULSORY ACQUISITION

Compulsory Acquisition is a statutory process under the Act available to the RTA to acquire land. It also provides the means for resolving disputes about the amount of compensation payable if an agreement cannot be reached in a negotiated purchase. Generally the process is as follows:

The RTA seeks the Minister's approval to compulsorily acquire land.

- If the Minister approves, the RTA issues a Proposed Acquisition Notice to each party with a known legal or equitable interest in the land, (eg a registered proprietor, mortgagee, lessee, trustee) or with a right or privilege over the land, or in connection with it (eg, easement beneficiary, occupant, licensee, etc). The Notice advises of the RTA's intention to acquire the land after 90 days. However, a shorter period can be agreed by the owner and RTA, or can be approved by the Minister. A Proposed Acquisition Notice is accompanied by a Compensation Claim Form.

- The issue of a Proposed Acquisition Notice is recorded on the relevant Title registers at the Land Titles Office.

- During the 90 day (or shortened) period after the issue of the Proposed Acquisition Notice, negotiations may continue in an effort to purchase the land.

- During the 90 day (or shortened) period after the issue of the Proposed Acquisition Notice, the RTA seeks the Governor's approval to compulsorily acquire the land.

- If contracts for purchase have not been exchanged within the minimum Notice period and if the Governor approves, an Acquisition Notice is published in the Government Gazette within 120 days of the issue of the Proposed Acquisition Notice unless a longer period is agreed to in writing by the owner and the RTA.

- An extract of the Acquisition Notice is also published in a local newspaper.

- The RTA owns the land from the date of publication of the Acquisition Notice in the Gazette. The former owner's legal and equitable interests in the land are converted to an entitlement to compensation.

Advance Payment

Following the publication of the Acquisition Notice the RTA advises affected owners of the acquisition. It is generally prepared to offer to pay 90% of the RTA's purchase offer, in return for vacant possession of the land.

Terms of Continued Occupation

The RTA is entitled to charge rent for the land from the date of notification in the Gazette until possession is obtained. The terms of rental are, in the absence of an agreement, such reasonable terms as the RTA may determine. Unpaid rent may be deducted from compensation payable. Parties entitled to compensation are paid statutory interest on the amount of compensation such interest being calculated from the date of gazettal up until the date of payment.

Compensation

Each recipient of a Proposed Acquisition Notice is entitled to lodge a claim for compensation with the RTA. Also, anyone else who considers that they are entitled to compensation but did not receive a Proposed Acquisition Notice may lodge a claim. Claims must be on the prescribed form. Compensation is not paid until a properly completed claim has been lodged. If agreed, compensation may comprise land or works in whole or part settlement of a claim.

The Valuer General determines the amount of compensation (including legal and valuation costs) to be offered by the RTA in a Compensation Notice.

A Compensation Notice is issued within 30 days after notification of the compulsory acquisition in the Gazette. This Notice is issued whether or not a claim for compensation has been lodged. However, the Minister may approve delay in the issue of a Compensation Notice by up to an extra 60 days. In the case of competing claims the RTA may not issue a Compensation Notice until entitlement is resolved.

If the amount of compensation is accepted, and the necessary settlement papers and claim form are returned to the RTA properly completed, the RTA will pay the compensation within 28 days of receipt of those papers. Interest is paid on the compensation from the date of acquisition to the date of payment.

If the amount of compensation is not accepted, the claimant may lodge an objection with the Land and Environment Court. The objection should be lodged within 90

days of receiving the Compensation Notice. This ensures that the Court will hear the objection and determine the amount of compensation to be paid. Within 28 days after it is given notice of the institution of proceedings, the RTA will pay the claimant 90% of the compensation offered in the Compensation Notice as an advance on account of compensation, if that is acceptable to the claimant. Interest is also paid on the advance for the period from gazettal to the date that the advance is made. If it is not accepted, the advance and interest will be deposited into a trust account pending the Court decision.

If, within 90 days of a Compensation Notice issuing, the amount offered in that Notice has not been accepted and an objection has not been lodged with the Land and Environment Court, the offer is deemed to have been accepted. The RTA then deposits the amount offered plus interest into the trust account where it is held until it is accepted or until an objection is lodged with the Court. Money earned by the trust account deposit becomes part of the compensation.

If compensation is in the trust account six years after the date of acquisition and a claim has not been received, the compensation is paid to the State Treasurer and held in the Treasury until paid to an entitled claimant. Interest is not paid on the compensation for the time that it is held in the Treasury.

Occupation

People in lawful occupation of land compulsorily acquired and to whom compensation is payable are entitled to remain in occupation as tenants of the RTA until:

(a) the compensation is paid; or

(b) an advance payment of not less than 90% of the amount offered in the Compensation Notice is paid; or

(c) not less than 90% of the amount offered in the Compensation Notice is deposited into the trust account due to a deemed acceptance, Court action, or competing claims;

whichever occurs first.

Furthermore, people lawfully occupying any building which is their principal place of residence or place of business are entitled to remain in occupation as tenants of the RTA for three months after it is compulsorily acquired, regardless of whether any of the abovementioned payments have been made. However, the Minister may shorten that period.

The terms of occupancy, including rent, in the absence of an agreement with the claimant are determined by the RTA on reasonable terms and any unpaid rent can be offset against any compensation payable by the RTA.

Once the RTA is entitled to vacant possession, it may request the Sheriff to deliver possession of the land to the RTA. The Sheriff's costs may be recovered as a debt or deducted from any compensation payable.

APPENDIX "A"

REIMBURSEMENT OF VALUATION FEES – CONDITIONS OF PAYMENT

The purpose of the reimbursement of valuation fees is to provide the owner with the opportunity to obtain an independent valuation report from a Registered Valuer. The role of the Valuer is to provide a valuation report as to the owner's entitlement to compensation in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. In some cases the valuation will form the owners claim to the Roads and Traffic Authority (RTA) and in other cases the valuation report may act to verify that the compensation offered by the RTA is fair and reasonable. The Valuer is to act as an expert not as an advocate for the owner. The valuation must comply with professional standards.

The RTA is prepared to reimburse a fee incurred in obtaining a valuation report up to the maximum amount specified in the letter opening negotiations and subject to the following conditions:-

1. The Valuer engaged must be registered to carry out valuations for that particular type of property and preferably be a current member of the Australian Property Institute.

2. The Valuation Report shall be in accordance with Appendix "B" Basic Contents of Valuation Reports. The Valuer should be prepared to support the valuation in discussions with the RTA's Valuers.

3. A copy of the report in its final form signed by the valuer is to be supplied with and in support of the asking price.

4. Reimbursement will take place upon settlement of the acquisition, however the RTA will, under direction from the land owner, make a payment of 50% of the fee directly to the valuer following the valuation report being made available to the RTA.

Owners are advised to ensure that the Valuer is prepared to provide the valuation in accordance with the conditions outlined above and is also prepared to accept a fee to the maximum amount specified in the letter opening negotiations.

In the event that it is considered necessary to engage some other consultants such as Accountants, Town Planners, Surveyors, etc., prior approval in writing must be obtained if it is intended to seek reimbursement of these fees from the RTA.

APPENDIX 'B'

BASIC CONTENT OF VALUATION REPORTS

1. Evidence that the valuation was undertaken by the valuer who signed the report and disclosed his/her registration number together with a statement that he/she is registered to value the subject class of property.

2. Date of valuation and date of inspection.

3. Areas/dimensions and legal particulars of the land. Any legal constraints which would restrict development should be noted.

4. A description of the improvements.

5. A site plan showing position of improvements in relation to boundaries.

6. A floor plan showing accurate areas, date and the north point.

7. Specific list of inclusions

8. An outline of permitted land use under current relevant environmental planning instrument and/or local government codes.

9. A description of the class of land valued and the current or potential use of the land together with its location.

10. Details of the sales/rental information relied upon to arrive at the valuation, together with analysis and calculations.

11. Photographs of sales evidence.

12. Valuation rationale

13. Assessment of all individual Heads of Compensation as detailed in Land Acquisition (Just Terms Compensation) Act 1991.

14. The rental value of the property

APPENDIX "C"

EXTRACT FROM THE LAND ACQUISITION (JUST TERMS COMPENSATION) ACT 1991

Relevant matters to be considered in determining amount of compensation.

55

In determining the amount of compensation to which a person is entitled, regard must be had to the following matters only (as assessed in accordance with this Division):

(a) the market value of the land on the date of its acquisition;
(b) any special value of the land to the person on the date of its acquisition;
(c) any loss attributable to severance;
(d) any loss attributable to disturbance;
(e) solatium;
(f) any increase or decrease in the value of any other land of the person at the date of acquisition which adjoins or is severed from the acquired land by reason of the carrying out of, or the proposal to carry out, the public purpose for which the land was acquired.

Market value

56. (1) In this Act:

"**market value"** of land at any time means the amount that would have been paid for the land if it had been sold at that time by a willing but not anxious seller to a willing but not anxious buyer, disregarding (for the purpose of determining the amount that would have been paid):

(a) any increase or decrease in the value of the land caused by the carrying out of, or the proposal to carry out, the public purpose for which the land was acquired; and
(b) any increase in the value of the land caused by the carrying out by the authority of the State, before the land is acquired, of improvements for the public purpose for which the land is to be acquired; and
(c) any increase in the value of the land caused by its use in a manner or for a purpose contrary to law.

(2) When assessing the market value of land for the purpose of paying compensation to a number of former owners of the land, the sum of the market values of each interest in the land must not (except with the approval of the Minister responsible for the authority of the State) exceed the market value of the land at the date of acquisition.

Special value

57. In this Act:

"special value" of land means the financial value of any advantage, in addition to market value, to the person entitled to compensation which is incidental to the person's use of the land.

Loss attributable to severance

58. In this Act:

"**Loss attributable to severance"** of land means the amount of any reduction in the market value of any other land of the person entitled to compensation which is caused by that other land being severed from other land of that person.

Loss attributable to disturbance

59. In this Act:

"loss attributable to disturbance" of land means any of the following:

(a) legal costs reasonably incurred by the persons entitled to compensation in connection with the compulsory acquisition of the land;

(b) valuation fees reasonably incurred by those persons in connection with the compulsory acquisition of the land;

(c) financial costs reasonably incurred in connection with the relocation of those persons (including legal costs but not including stamp duty or mortgage costs);

(d) stamp duty costs reasonably incurred (or that might reasonably be incurred) by those persons in connection with the purchase of land for relocation (but not exceeding the amount that would be incurred for the purchase of land of equivalent value to the land compulsorily acquired);

(e) financial costs reasonably incurred (or that might reasonably be incurred) by those persons in connection with the discharge of a mortgage and the execution of a new mortgage resulting from the relocation (but not exceeding the amount that would be incurred if the new mortgage secured the repayment of the balance owing in respect of the discharged mortgage);

(f) any other financial costs reasonably incurred (or that might reasonably be incurred), relating to the actual use of the land, as a direct and natural consequence of the acquisition.

Solatium

60. **(1)** In this Act:
"**solatium"** means compensation to a person for non-financial disadvantage resulting from the necessity of the person to relocate his or her principal place of residence as a result of the acquisition.

(2) The maximum amount of compensation in respect of solatium is:

(a) except as provided by paragraph (b)-$15,000; *(see note at end of Extract)* or

(b) such higher amount as may be notified by the Minister by notice published in the Gazette.

(3) In assessing the amount of compensation in respect of solatium, all relevant circumstances are to be taken into account, including:

(a) the interest in the land of the person entitled to compensation; and

(b) the length of time the person has resided on the land (and in particular whether the person is residing on the land temporarily or indefinitely); and

(c) the inconvenience likely to be suffered by the person because of his or her removal from the land; and

(d) the period after the acquisition of the land during which the person has been (or will be) allowed to remain in possession of the land.

(4) Compensation is payable in respect of solatium if the whole of the land is acquired or if any part of the land on which the residence is situated is acquired.

(5) Only one payment of compensation in respect of solatium is payable for land in separate occupation.

(6) However, if more than one family resides on the same land, a separate payment may be made in respect of each family if:

(a) the family resides in a separate dwelling-house; or
(b) the Minister responsible for the authority of the State approves of the payment

(7) If separate payments of compensation are made, the maximum amount under subsection (2) applies to each payment, and not to the total payments.

Special provision relating to market value assessed on potential of land

61. If the market value of land is assessed on the basis that the land had potential to be used for a purpose other than that for which it is currently used, compensation is not payable in respect of:

(a) any financial advantage that would necessarily have been forgone in realising that potential; and

(b) any financial loss that would necessarily have been incurred in realising that potential.

Special provision relating to acquisition of easements or rights, tunnels etc.

62. **(1)** If the land compulsorily acquired under this Act consists only of an easement, or right to use land, under the surface for the construction and maintenance of works (such as a tunnel, pipe or conduit for the conveyance of water, sewage or electrical cables), compensation is not payable except for actual damage done in the construction of the work or caused by the work.

(2) If land under the surface is compulsorily acquired under this Act for the purpose of constructing a tunnel, compensation is not payable (subject to subsection (1)) unless:

(a) the surface of the overlying soil is disturbed; or

(b) the support of that surface is destroyed or injuriously affected by the construction of the tunnel; or

(c) any mines or underground working in or adjacent to the land are thereby rendered unworkable or are injuriously affected.

(3) If the land compulsorily acquired under this Act consists of or includes an easement or right to use the surface of any land for the construction and maintenance of works (such as canals, drainage, stormwater channels, electrical cables, openings or ventilators), the easement or right is (unless the acquisition notice otherwise provides) taken to include a power, from time to time, to enter the land for the purpose of inspection and for carrying out of any additions, renewals or repairs. Compensation under this Part is payable accordingly.

Note in respect to Solatium

In accordance with Section 60(2)(b) the maximum amount of Solatium was increased to $16,821 effective from the 1 July 1998. There may be further increases in the maximum amount of Solatium from time to time and it is suggested that you speak with the RTA's Property Acquisition staff for the latest information.

Appendix C

Draft statement of commitments

Draft statement of commitments

The Environmental Assessment for the proposed upgrade has identified a range of environmental outcomes and management measures that would be required to avoid or reduce its environmental impacts. These have been converted to specific commitments, which are described in this Appendix.

Overview

Chapters 9 to 20 of the Environmental Assessment identify a number of mitigation and management measures with the aim of minimising and/or mitigating, as far as practical, the adverse impacts associated with the proposed upgrade. These measures have informed the development of the draft Statement of Commitments that the RTA will implement as part of the construction and operation of the proposed upgrade.

The draft Statement of Commitments may be revised in response to public submissions to the Environmental Assessment and/or design changes made before final submissions to the Department of Planning. The final Statement of Commitments would be considered by the Department of Planning in assessing the proposed upgrade. Should approval be granted by the Minister for Planning, approval conditions would pay regard to the final Statement of Commitments. Any consortium or contractor selected to undertake further planning, design, construction and/or operation phases of the proposed upgrade will be required to undertake all works in accordance with the final Statement of Commitments.

Draft commitments

The draft Statement of Commitments includes for each commitment:

> An objective.
> Details of the commitment.
> Reference to the applicable timing of the commitment (pre-construction, construction and/or post construction).
> Reference documents influencing the objectives and implementation of the commitment.

Should approval be granted by the Minister for Planning, approval conditions would pay regard to the final Statement of Commitments. The following definitions apply in relation to this draft Statement of Commitments:

> Pre-construction: Work in respect of the proposed upgrade that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds (in locations meeting the criteria identified in Section 7.5.1 of the Environmental Assessment), or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
> Construction: All work in respect of the proposed upgrade other than that defined as a pre-construction activity/work.
> Operation: The operation of the activity, but not including commissioning trials of equipment, or temporary use of parts of the proposed upgrade during construction.

Objective	Ref No.	Commitment	Timing	Reference Document
General environmental management				
Ensure the potential impacts of the project are managed	EM1	A construction environmental management plan (CEMP) will be prepared and implemented to guide project delivery.	Pre-construction and construction	> Department of Planning Guideline for the Preparation of Environmental Management Plans. > RTA QA Specification G36, Section 4.1.1
	EM2	Operational environmental management measures will be implemented, as appropriate, to manage impacts during operation of the project (see commitments below).	Operation	
Communication and consultation				
Ensure effective consultation with the community	C1	The community will be informed through various media as to the proposed works schedules, areas in which these works are proposed and construction hours. Contact names and phone numbers of relevant staff will be provided.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Manual (RTA 1998)
	C2	The existing project website will be maintained, including periodic updates of work progress, consultation activities and proposed work schedules. The website will provide a description of relevant approval authorities and their area of responsibilities, and contact names and phone numbers of relevant staff.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Manual (RTA 1998)
Ensure effective management of complaints	C3	The existing 24-hour toll free project phone line will be maintained and advertised.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Manual (RTA 1998) > AS 4269 Complaints Handling

Objective	Ref No.	Commitment	Timing	Reference Document
Communication and consultation				
	C4	A system to receive, record, track and respond to complaints within a specified timeframe will be established, including procedures for non-compliance.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Manual (RTA 1998) > AS 4269 Complaints Handling
Maintain pro-active consultation with directly affected property owners.	C5	Property owners will be consulted about the implementation of mitigation measures that affect their property and any issues raised will be considered where reasonable and feasible.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Manual (RTA 1998)
Land use and property				
Provide appropriate level of compensation in relation to property acquisitions	L1	All property acquisitions will be negotiated with affected landholders in accordance with relevant legislation and RTA policy.	Pre-construction	> Land Acquisition (Just Terms Compensation) Act 1991 > RTA Land Acquisition Policy (RTA 1999)
Manage potential impacts on structures or properties due to construction or operation of the project	L2	Subject to land owner agreement and following appropriate notification, building and property condition surveys will be conducted on those structures or properties that may be affected. Owners of structures or properties will be given a copy of the inspection report prior to the commencement of construction. Where liable, any property damage caused directly or indirectly by the project's construction or operation will be rectified at no cost to the property owner(s). Alternatively, the RTA may negotiate compensation for the property damage with the property owner.	Pre-construction and construction	> RTA QA Specification G36AS 4349.1 Inspection of Buildings > ISO 4866 Mechanical Vibration and Shock – Vibration of Buildings – Guidelines for the Management of Vibrations and Evaluation of their Effects on Buildings

Objective	Ref No.	Commitment	Timing	Reference Document
Land use and property				
Promote appropriate final land uses on land subject to partial or full acquisition	L3	A remnant land strategy to minimise land use severance and sterilisation, and a mitigation strategy for final land uses will be implemented in consultation with Ballina and Byron Councils and in general accordance with the principles described in Section 14.4 of the Environmental Assessment.	Pre-construction and construction	> Land Acquisition (Just Terms Compensation) Act 1991 > RTA Land Acquisition Policy (RTA 1999)
Construction noise and vibration				
Limit construction noise impacts on sensitive receivers, and where reasonable and feasible, comply with relevant standards to reduce noise to an acceptable level.	CN1	Reasonable and feasible mitigation that seeks to achieve the construction noise objectives detailed in the Environmental Noise Control Manual (EPA 1994) will be developed and implemented during construction and will include measures in Commitments CN2 to CN8.	Pre-construction and construction	> Environmental Noise Control Manual (EPA 1994) > AS 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites
	CN2	Construction hours will normally be limited to between 7am and 6pm Monday to Friday and between 7am and 1pm Saturday. These works will only be undertaken after informing affected residents and consulting with the DECC and relevant local council(s).	Construction	> Protection of the Environment Operations Act 1997 > RTA Environmental Noise Management Manual (RTA 2001)
	CN3	Consultation with potentially affected residents will be undertaken with regard to the timing of noise generating activities.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Handling (RTA 1998)
	CN4	Operational noise controls will be installed early in the construction phase, where reasonable and feasible, to assist in the management of construction noise.	Construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Construction noise and vibration				
	CN5	All mechanical equipment and silencing equipment (where installed) will be well maintained.	Construction	> AS 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites
	CN6	Equipment not in use will be switched off to avoid unnecessary noise emissions.	Construction	
	CN7	Concurrent operation of noisy equipment will be avoided, as far as reasonable and feasible.	Construction	
	CN8	Construction noise will be monitored at sensitive receivers including during potentially high risk noise activities. The monitoring data will be analysed to determine compliance with the construction noise objectives and approval and/or licence requirements. Any necessary adaptive management requirements will be identified and implemented where reasonable and feasible.	Construction	> RTA Environmental Noise Management Manual (2001) > NSW Industrial Noise Policy (EPA 1999)
Limit construction vibration impacts on sensitive receivers and, where reasonable and feasible, comply with relevant standards to reduce vibration levels to an acceptable level.	CN9	Reasonable and feasible mitigation that seeks to achieve construction vibration criteria will be developed and implemented and will include measures in Commitments CN10 and CN11.	Pre-construction and construction	> Assessing vibration: A Technical Guideline (DEC 2006) > Environmental Assessment - Section 15.1.4
	CN10	Vibration monitoring and construction equipment testing will be undertaken at representative locations to ensure that vibration levels do not exceed applicable criteria. Any necessary adaptive management requirements will be identified and implemented where reasonable and feasible.	Construction	> Assessing vibration: A Technical Guideline (DEC 2006) > Working Paper 8 – Noise and Vibration Assessment

Objective	Ref No.	Commitment	Timing	Reference Document
Construction noise and vibration				
	CN11	Consultation with potentially affected residents will be undertaken with regard to activities that are likely to produce high levels of vibration.	Pre-construction and construction	> RTA Community Involvement Practice Notes and Resource Handling (RTA 1998)
Limit impacts on sensitive receivers associated with blasting activities during construction and, where reasonable and feasible, comply with relevant standard to reduce airblast overpressure and vibration levels to an acceptable level.	CN12	Air blast overpressure and vibration will be measured from test blasts to establish appropriate propagation characteristics for the site and increase the accuracy of blasting predictions.	Construction	> Assessing vibration: A Technical Guideline (DEC 2006) > Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC 1990)
	CN13	Reasonable and feasible mitigation that seeks to achieve airblast overpressure and vibration criteria will be developed and implemented.	Pre-construction and construction	> Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC 1990) > Working Paper 8 – Noise and Vibration Assessment
	CN14	Blasting vibrations and air blast overpressure will be monitored during construction. Any necessary adaptive management requirements will be identified and implemented where reasonable and feasible.	Construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Operation noise and vibration				
Limit operational noise impacts experienced at sensitive receivers and, where reasonable and feasible, comply with relevant standards to reduce noise levels to an acceptable level.	ON1	Operational noise mitigation measures will be designed and implemented to achieve applicable road traffic noise criteria where reasonable and feasible.	Pre-construction, construction and operation	> RTA Environmental Noise Management Manual (RTA 2001) > Environmental Criteria for Road Traffic Noise (EPA 1999)
Determine effectiveness of operational noise control measures	ON2	The design and implementation of operational noise mitigation measures will be undertaken in consultation with potentially affected residents	Pre-construction, construction and operation	> RTA Environmental Noise Management Manual (RTA 2001) > Environmental Criteria for Road Traffic Noise (EPA 1999)
	ON3	Monitoring of operational noise will be undertaken within one year of the opening of the proposed upgrade. Should the monitoring indicate that traffic noise levels exceed those predicted for the proposed upgrade, additional measures will be investigated and implemented where reasonable and feasible.	Operation	> RTA Environmental Noise Management Manual (RTA 2001) > Environmental Criteria for Road Traffic Noise (EPA 1999)
Traffic, transport and access				
Manage construction traffic impacts on local roads	T1	Pre- and post-operation road condition reports will be undertaken for local roads likely to be used during construction. Any damage, beyond normal wear and tear, will be repaired at no cost to relevant road authorities unless an alternative arrangement is agreed between the RTA and the relevant road authority.	Pre-construction operation	

Objective	Ref No.	Commitment	Timing	Reference Document
Traffic, transport and access				
	T2	> Construction vehicle movements, work programs and traffic control measures will be planned to maintain a balanced traffic flow. This will be achieved by: > avoiding or minimising traffic impacts during peak periods, long weekends and holiday periods. > considering other road works in the area and local traffic movements. > consulting with relevant road authorities. > providing prior communication of changes to traffic conditions to the affected community.	Pre-construction and construction	
Manage and limit disruption of property access during construction and operation	T3	Access to properties will be maintained during construction, and where necessary temporary alternative arrangements will be provided in consultation with the property owner.	Construction	> RTA Traffic Control at Work Sites > RTA QA Specification G10 Control of Traffic
	T4	Where any legal access would be permanently affected by the project, alternative access to an appropriate standard will be provided where feasible and reasonable in consultation with the property owner. Where alternative access arrangements are not feasible or reasonable and a property is left with no access, negotiations will be undertaken with the property owner for the acquisition of the property.	Pre-construction	> RTA Traffic Control at Work Sites > RTA QA Specification G10 Control of Traffic > Land Acquisition (Just Terms Compensation) Act 1991 > RTA Land Acquisition Policy (RTA 1999)

Objective	Ref No.	Commitment	Timing	Reference Document
Visual amenity				
Integrate the proposed upgrade into the surrounding landscape, minimise impacts from sensitive viewpoints, and maximise the quality of vehicle user experience.	V1	Undertake detailed design and construction to be consistent with the landscape and urban design strategy described in Section 5.15 and 18.4 of the Environmental Assessment.	Pre-construction and construction	> Urban and Regional Design Practice Notes, Beyond the Pavement (RTA 1999) > Pacific Highway Urban Design Framework (RTA 2005) > Working paper 11 – Urban Design, Landscape and Visual Assessment.
Integrate the proposed upgrade into the surrounding landscape, minimise impacts from sensitive viewpoints, and maximise the quality of vehicle user experience.	V1	Undertake detailed design and construction to be consistent with the landscape and urban design strategy described in Section 5.15 and 18.4 of the Environmental Assessment.	Pre-construction and construction	> Urban and Regional Design Practice Notes, Beyond the Pavement (RTA 1999) > Pacific Highway Urban Design Framework (RTA 2005) > Working paper 11 – Urban Design, Landscape and Visual Assessment.
Heritage				
Minimise impacts to Indigenous heritage	H1	Detailed design will minimise impact to the identified Aboriginal heritage items wherever reasonable and feasible.	Pre-construction	
	H2	Construction plans will show all identified Aboriginal heritage items within the construction corridor that will not be directly impacted by construction.	Pre-construction and construction	
	H3	Any identified Aboriginal heritage items in the construction corridor not directly impacted by construction will be fenced prior to any adjacent works and where appropriate, will be signposted.	Pre-construction and construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Heritage				
	H4	Construction personnel will be educated on their obligations for Aboriginal cultural materials under the National Parks and Wildlife Act 1979.	Construction	> Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) > RTA Aboriginal Liaison Protocol Aboriginal cultural heritage: standards and guidelines kit (DECC) > Protecting Aboriginal objects and places - interim guidelines for community consultation (DECC) National Parks & Wildlife Act 1979
	H5	In the event that human remains are encountered during construction, management measures referred to in Section 16.4 of the Environmental Assessment will be followed. The need for and function of this protocol will be included in site induction programs.	Construction	> Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) > RTA Aboriginal Liaison Protocol Aboriginal cultural heritage: standards and guidelines kit (DECC) > Protecting Aboriginal objects and places - interim guidelines for community consultation (DECC) National Parks & Wildlife Act 1979 > Working Paper 9 - Cultural heritage assessment

Objective	Ref No.	Commitment	Timing	Reference Document
Heritage				
	H6	In the event that Aboriginal objects (other than human remains) are encountered during construction in areas outside of previously recorded Aboriginal sites or potential archaeological deposits, the protocol referred to in Section 16.4 will be followed. The need for and function of this protocol will be included within site induction programs.	Construction	> Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) > RTA Aboriginal Liaison Protocol Aboriginal cultural heritage: standards and guidelines kit (DECC) > Protecting Aboriginal objects and places - interim guidelines for community consultation (DECC) National Parks & Wildlife Act 1979
Ensure ongoing Aboriginal stakeholder input to address potential impacts on Indigenous heritage items, areas, object and landscapes	H7	The registered Aboriginal stakeholders and the DECC will be consulted in the management and mitigation of impact to Aboriginal heritage including: > mitigation of impact to identified Aboriginal heritage items > the procedures to be followed if unknown Aboriginal heritage items are encountered during construction; and > the inclusion of identified Aboriginal heritage items in maintenance documents for use during operation.	Pre-construction and construction	> Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) > RTA Aboriginal Liaison Protocol Aboriginal cultural heritage: standards and guidelines kit (DECC) > Protecting Aboriginal objects and places - interim guidelines for community consultation (DECC) National Parks & Wildlife Act 1979
Minimise impacts to non-Indigenous heritage	H8	Detailed design will minimise impact to the identified non-Aboriginal heritage items wherever reasonable and feasible.	Pre-construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Heritage				
	H9	If any previously unidentified non-Aboriginal heritage are encountered, all works that would potentially impact the item and/ or its curtilage will cease immediately. The DECC and the RTA Senior Environmental Officer will be notified immediately and specialist advice will be sought if required. Works will not recommence until appropriate clearance has been received.	Pre-construction and construction	
Social and economic				
Minimise social impacts during construction and operation of the proposed upgrade.	S1	In addition to the commitments identified in this table under noise, air quality and visual which relate to social impacts, the following specific commitment will also be met: The location of ancillary construction facilities will take into account the proximity of residences.	Pre-construction	
Minimise economic impacts during construction and operation	S2	Ongoing consultation with potentially affected businesses will occur prior to and during construction to address individual concerns and issues and to identify any adaptive management requirements.	Pre-construction and construction	
	S3	Adequate signage will be implemented during construction and operation to ensure businesses and their patrons are aware of new access routes and/or potential disruptions.	Construction and operation	> Guidelines for Tourist Signage (RTA 2005)

Objective	Ref No.	Commitment	Timing	Reference Document
Surface water quality				
Minimise impacts to downstream surface water quality.	W1	Development and implement water quality control measures during construction including (but not limited to): Minimising disturbed areas. Construction of sediment basins as early as practical and feasible. Using sediment fences, check dams, level spreaders and other devices to supplement sediment basins. Implementing landscape treatments (or temporary cover crops) as early as practical and feasible.	Pre-construction and construction	> RTA QA Specification G38 Soil and Water Management. > RTA Code of Practice for Water Management (1999) > RTA Stockpile Management Procedures 2001 > Soils and Construction: Managing Urban Stormwater (Landcom 2004) > Managing Urban Stormwater – Soils and Construction Volume 2D – Main Road Construction (DECC – draft)
	W2	A specialist soil conservation consultant will be engaged during detailed design to assist in the development of erosion and sediment control measures and during construction to implement and improve measures.	Pre-construction	> Managing Urban Stormwater – Soils and Construction Volume 2D – Main Road Construction (DECC – draft)
	W3	A water quality monitoring program will be developed and implemented during construction.	Pre-construction and construction	> Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000
	W4	Ongoing communication will be maintained with Rous Water, with water quality monitoring results being made available.	Pre-construction, construction and operation	

Objective	Ref No.	Commitment	Timing	Reference Document
Surface water quality				
	W5	The water quality of discharges from the road reserve into the Emigrant Creek dam catchment will be monitored during operation to ensure that water quality meets the criteria discussed in Chapter 10 of the Environmental Assessment. Reasonable and feasible adjustments to water quality management during operation will be made if water quality management measures do not perform to these criteria	Operation	> Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 > Soils and Construction: Managing Urban Stormwater (Landcom 2004) > Managing Urban Stormwater – Soils and Construction Volume 2D – Main Road Construction (DECC – draft)
Groundwater				
Minimise impacts to groundwater flows during construction and operation	G1	Groundwater monitoring bores will be installed at an appropriate location downstream of cuttings predicted to impact on groundwater flows. Monitoring will be undertaken during construction and for one year of operation.	Pre-construction, Construction and operation	
	G2	If any essential water supply to any properties is affected, reasonable and feasible mitigation will be implemented in consultation with the relevant property owner(s).	Construction and operation	
Flora and fauna				
Minimise the impacts of vegetation clearance and habitat loss	F1	Detailed design will minimise the area of native vegetation to be cleared wherever reasonable and feasible.	Pre-construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Flora and fauna				
	F2	Construction plans will show ecologically sensitive areas within the construction corridor that will not be impacted by construction. Where clearing is required, the area will be fenced with highly visible temporary fencing or flagging tape to ensure that clearing does not extend beyond the area necessary.	Pre-construction and construction	
	F3	Known locations of threatened plants will be avoided where possible and fenced to protect them from direct and indirect impact.	Construction	
	F4	Clearing of vegetation will comply with appropriate RTA guidelines in relation to fauna rescues.	Construction	> RTA Pacific Highway Office guidelines for fauna rescue associated with roadworks.
	F5	Where alternative locations exist, nest boxes will be used to replace any removed tree hollows. Such a program will be developed in consultation with DECC.	Construction	
	F6	Riparian restoration will be undertaken where creeklines occur on land that is acquired as part of the proposed upgrade, but that would be outside the construction footprint.	Pre-construction and construction	
Minimise edge effects on adjacent vegetation	F7	Ancillary construction facilities will be sited away from areas of adjacent native vegetation.	Construction	
	F8	Waste material during construction will be stored away from adjacent native vegetation	Construction	
	F9	Weeds will be managed in the road reserve both during construction and operation.	Construction and operation	
	F10	Locally indigenous species will be used in landscape treatments.	Construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Flora and fauna				
Minimise habitat fragmentation, barrier effects, and road mortality	F11	Detailed bridge design and associated landscape treatment and revegetation will take into account terrestrial fauna movement opportunities along riparian corridors.	Pre-construction and construction	
	F12	The road reserve will be fenced at strategic points (primarily near creek crossings), to encourage wildlife movement beneath the highway.	Construction and operation	
Minimise impacts on aquatic habitat	F13	Waterway crossings will be designed and constructed to maintain fish passage in accordance with the fish habitat classification of each waterway and in consultation with the Department of Primary Industries (Fisheries).	Pre-construction and construction	> Fishnote: Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries). > Policy and Guidelines for Design and Construction of Bridges, Roads, Causeways, Culverts and Similar Structures (NSW Fisheries 1999). > Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge 2003).

Objective	Ref No.	Commitment	Timing	Reference Document
Air quality				
Minimise air quality impacts during construction	A1	Dust suppression and avoidance during construction will include the following measures: Minimise exposure of soils Where needed, stockpiles, work areas and exposed soils will be dampened to prevent the emission of dust from the site or areas kept in a condition which minimises wind blown or traffic generated dust using other means. All equipment for dust control will be kept in good operating condition. Silt will be removed from behind filter fences and other erosion control structures on a regular basis, so that collected silt did not become a source of dust; and Remove construction dirt from adjacent roads.	Pre-construction and construction	> Department of Environment and Climate Change Guideline Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales.
	A2	Dust generating activities will cease during high wind and when existing dust suppression methods are ineffective.	Construction	
	A3	Dust deposition and particulate monitoring will be undertaken during construction at sensitive receivers. Adaptive management measures will be undertaken where necessary and where reasonable and feasible.	Construction	> AS 3580.10.1-1991 Methods of Sampling Analysis of Ambient Air. > DECC Guideline Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales. > AS 2922 Ambient Air Guide for Siting of Sampling Equipment.

Objective	Ref No.	Commitment	Timing	Reference Document
Greenhouse gases and energy use				
Minimise greenhouse gas emissions during construction and operation	G1	During detailed design, opportunities will be identified to reduce operational greenhouse gas emissions and energy consumption wherever reasonable and feasible. Opportunities may include improvements to grade and road alignment, use of renewable energy technologies, use of energy efficient pavements and use of energy efficient street lights.	Pre-construction	
	G2	Energy efficient vehicles, plant and equipment (including office equipment) will be selected wherever reasonable and feasible.	Pre-construction and construction	
	G3	All vehicles and equipment will be maintained and serviced to meet the manufacturers' specifications.	Construction	
	G4	Low emission fuels will be used wherever reasonable and feasible.	Construction	
	G5	Where available, a renewable energy source accredited by the Green Power Accreditation Program and/or photovoltaic panels will be used for on-site electrical energy.	Construction	

Objective	Ref No.	Commitment	Timing	Reference Document
Waste				
Minimise and manage the production and impacts of waste during construction	WS1	The waste hierarchy (avoid/resource recovery/disposal) will be maximised during construction and will be incorporated into work programs and site inductions.	Pre-construction and construction	> Waste Avoidance and Resource Recovery Act 2001 Waste Avoidance and Resource Recovery Strategy (Department of Environment and Conservation 2006) > NSW Government's Waste Reduction and Purchasing Policy Environmental Guidelines > Assessment, Classification and Management of Liquid and Non Liquid Waste (EPA 1999)
	WS2	A waste register will be maintained, detailing types of waste collected, amounts, date/time and details of disposal.		
	WS3	Regular visual inspections to ensure work sites are kept tidy and to identify opportunities for reuse/ recycling.		
	WS4	Disposal of chemical, fuel and lubricant containers and solid and liquid wastes will occur in accordance with the requirements of the DECC.		> Assessment, Classification and Management of Liquid and Non Liquid Waste (EPA 1999)
	WS5	The reuse of materials will be maximised.		