

I. Introduction

The proposed upgrade of the Pacific Highway between Tintenbar and Ewingsdale is part of the Pacific Highway Upgrade Program, being implemented by the NSW Roads and Traffic Authority (RTA). It would link the northern end of the approved Ballina bypass to the existing dual carriageway at Ewingsdale west of Byron Bay.

The location of the proposed upgrade of the Pacific Highway between Tintenbar and Ewingsdale is shown in **Figure 1.1**.

Planning for the proposed upgrade began in late 2004, with the announcement of a study area. Milestones since then have included:

- > Expansion of the study area in 2005 to include possible route options on the coastal plain.
- > A Route Options Development Report (RTA 2005) and public display of a short list of route options in October 2005.
- > A Preferred Route Report (RTA 2006) and public display of the preferred route in September 2006.
- > A project application and accompanying Project Application Report (RTA 2007), submitted to the Department of Planning in April 2007.
- > Requirements for an environmental assessment for the proposed upgrade under Part 3A of the Environmental Planning and Assessment Act 1979, were issued by the Director-General of the Department of Planning in May 2007.

Copies of these documents can be found on the project web site www.rta.nsw.gov.au/pacific (click on Tintenbar to Ewingsdale).

The environmental assessment is provided in four volumes. Volume 1 incorporates the main body of the environmental assessment, and Volumes 2, 3 and 4 contain twelve supporting working papers, which provide additional technical background.

The main body of the environmental assessment is divided into four main parts:

Part A – Introduction and Need for the Proposal

Part B – The Proposal

Part C – Environmental Assessment of the Proposal

Part D – Justification and Conclusions

This environmental assessment has been prepared in response to the requirements issued by the Director-General of the NSW Department of Planning. The Director-General's requirements are provided at **Appendix A. Table 1.1** shows where particular issues listed in the Director-General's requirements have been addressed in the environmental assessment.

Table 1.1 - Addressing of the Director-General's requirements

DGRs	Where addressed
> Executive summary.	Executive Summary
A detailed description of the project including:	Part B - Chapters 5-6
> Route alignment and corridor width.	Section 5.2
> Design elements (e.g. requirements for LOS, pedestrian and cyclists, rest areas and service centres etc).	Section 5.3-5.12
> Differentiate the limits of the project with respect to the existing Pacific Highway including operational/maintenance responsibilities.	Section 5.12
> Potential staging.	Section 6.3.8
> Ancillary facilities (e.g. compound site, batching plants etc).	Section 6.6
> Resourcing (e.g. construction material needs, spoil disposal, natural resource consumption including water).	Section 6.5
An assessment of the key issues, with the following aspects addressed for each key issue (where relevant):	Part C - Chapters 9-19, Appendix C
> Describe the existing environment.	Chapters 9-19
> 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).	Chapters 9-19
> 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.	Section 2.2, Chapter 3
> Describe measures to be implemented to avoid, minimise, manage, mitigate, offset and/or monitor the impacts of the project and the residual impacts.	Chapters 10-19, Appendix C
Draft Statement of commitments	Appendix C
> 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.	
Certification of environmental assessment	Front of document
> Certification by the author of the Environment Assessment that the information contained in the Assessment is neither false nor misleading.	
Strategic justification and project	Part A - Chapter 2, Section 2.1 ,
> 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 Pacific Highway Upgrade Program.	

Table I.1 (cont)

DGRs	Where addressed
Project Justification	Chapter 2 and 21
> 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 <i>Environmental Planning and Assessment Act 1979</i> .	
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.	Section 14.3 (except for connectivity and contiguity impacts which are addressed in Section 17.3.4)
> Consideration of project impacts on the attainment of the objectives of <i>Far North Coast Strategy</i> .	Section 17.3.6
> 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.	Section 14.4
Social and Economic - including but not limited to:	Part C, Chapter 17
> Local community socio-economic impacts associated with landuse, property and amenity related changes.	Section 17.3.2 - 17.3.8
> Business (including agricultural producers) impacts on a case by case basis including impacts to the overall viability, profitability, productivity and sustainability of businesses.	Section 17.3.1
> Regional economic impacts to the agricultural sector taking into account the total loss of regional and State Significant farmland as identified in the <i>Northern Rivers Farmland Protection Project</i> (Department of Planning, February 2005).	Section 17.3.7
> Regional economic impacts to the tourism sector taking into account agri-tourism impacts and impacts to local amenity, character and scenery.	Section 17.3.8
Surface and ground water - including but not limited to:	Part C, Chapter 10 and 11
> 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 <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000</i> .	Section 10.3 - 11.3
> 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 <i>Alstonville Basalt Groundwater Source Water Sharing Plan</i> .	Section 11.3

Table I.1 (cont)

DGRs	Where addressed
> Flooding impacts, identifying changes to existing flood regimes, in accordance with the <i>Floodplain Development Manual</i> (former Department of Natural Resources, 2005) including impacts to existing receivers and infrastructure and the future development potential of affected land.	Section 9.5
> 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.	Section 9.6-9.7, 12.3.8, 12.4
Flora and fauna - including but not limited to:	Part C, Chapter 12
> Consideration of threatened terrestrial and aquatic species, populations, ecological communities and/or critical habitat; and	Section 12.3.2, 12.3.3, 12.3.4
> 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	Section 12.3.1, 12.3.5-12.3.6, 12.3.8 - 12.3.9
> Consideration of regional scale cumulative impacts and identify the significance of the impacts of the project in the context of the Pacific Highway Upgrade Program.	Section 12.3.10
Noise and vibration - including but not limited to:	Part C, Chapter 15
> 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.	Section 15.2
> An assessment of construction noise and vibration including construction traffic noise and blasting impacts.	Section 15.3
> The assessment(s) must take into account the following guidelines as relevant: <i>Environmental Criteria for Road Traffic Noise (EPA 1999)</i> , <i>Environmental Noise Management Manual (RTA, 2001)</i> , <i>Environmental Noise Control Manual (EPA, 1994)</i> , <i>Assessing Vibration: A Technical Guideline (DEC, 2006a)</i> ; and <i>Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC, 1990)</i> .	Section 15.1
Visual amenity and urban design - including but not limited to:	Part C, Chapter 18
> 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.	Section 5.15, 18.3 and 18.4
> Consideration of the <i>Noise Wall Design Guideline (RTA, 2003a)</i> .	Section 18.4
Traffic - including but not limited to:	Part C, Chapter 13
> Demonstration of how the project design meets the traffic and transport objectives of the Pacific Highway Upgrade Program.	Section 13.2
> 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.	Section 13.4.1-13.4.6
> Assessment of construction traffic impacts (including spoil haulage).	Section 13.4.7

Table I.1 (cont)

DGRs	Where addressed
Air quality - including but not limited to:	Part C, Chapter 19
> 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.	Section 19.4.2-19.4.4
Indigenous heritage - including but not limited to:	Part C, Chapter 16
> The consideration of both artefact and landscape scale mitigation measures, where relevant.	Section 16.4
> Consideration of regional scale cumulative impacts and identify the significance of the impacts of the project in the context of the Pacific Highway Upgrade Program.	Section 16.3.4
Environmental risk analysis	Chapter 8
> 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 environmental assessment.	
Consultation	Chapter 4
> 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	
> The public, including affected landowners.	
> The environmental assessment 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 environmental assessment).	

In deciding on the location of the proposed upgrade, a comprehensive assessment process was undertaken in consultation with the community and in recognition of ecologically sustainable development principles. This was to ensure that the preferred option achieved the best balance between social, environmental and economic constraints and opportunities. While this environmental assessment addresses the likely impacts of the proposed upgrade, it is important to recognise the substantial work that has already taken place to avoid or minimise potential impacts through the earlier assessment of route options. Previous work is described in **Section 2.7** while previous reports can be found on the project web site at www.rta.nsw.gov.au/pacific (click on Tintenbar to Ewingsdale).

The proposed upgrade has been developed to the stage of a concept design. On the basis of this concept design, the RTA is seeking project approval for the proposed upgrade under Part 3A of the *Environmental Planning and Assessment Act 1979*. Details and dimensions included are indicative only and are subject to refinement through the approval process and into detailed design and construction. Consideration of design changes and any more substantial modifications to the proposed upgrade would be undertaken as necessary and in accordance with applicable statutory planning requirements.

The RTA has considered the advice of all its specialists in the working papers and from this has developed a range of environmental management measures that are identified in the main body of the environmental assessment and the associated draft Statement of Commitments (**Appendix C**). The RTA proposes to comply with those environmental management and mitigation measures identified in the Statement of Commitments.

Figure I.1 - The proposed upgrade

