Hume Highway Duplication

Environmental Assessment Scoping Paper and Concept Plan

NOVEMBER 2006

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1. Introduction

1.1 Background

The Hume Highway, Sydney-Melbourne corridor is the major interstate freight corridor in Australia carrying over 20 million tonnes of road freight every year. In addition, the corridor is a very important part of the NSW state and regional road network. The total length of the Sydney-Melbourne corridor is 807km, 517km in NSW and 290km in Victoria. Within Victoria 100% is now dual carriageway, mostly of freeway standard. Within NSW 408km (79%) is dual carriageway, of which only 88km is grade separated freeway.

Of the 109km in NSW yet to be duplicated, the Albury Wodonga Freeway is under construction and due for completion in mid 2007, tenders have closed for the Coolac bypass with work due to commence in 2007 and planning is progressing on Sheahan Bridge duplication at Gundagai with tenders expected to be invited in late 2006. Completion of these projects will leave 87km of single carriageway on the Hume Highway, all located between the Sturt Highway junction and Table Top, north of Albury.

The NSW Roads and Traffic Authority (RTA) is proposing to duplicate the remaining single carriageway sections of the Hume Highway south of its intersection with the Sturt Highway, to north of Albury. The Australian Government has provided $800 million to duplicate the remaining single carriageways by 2009 except for the immediate town bypasses of Tarcutta, Holbrook and Woomargama. Under its AusLink program the Australian Government has further committed to completion of the duplication of the highway, including the bypasses by 2012. However, funding for construction of the bypasses is indicated to be in the next 5-year AusLink program commencing in 2009/10 and is subject to budgetary consideration.

1.2 Assessment and approval process under the Environmental Planning and Assessment Act, 1979

The *Environmental Planning and Assessment Act 1979 (NSW)* (EP&A Act) provides a framework for environmental planning and assessment in NSW. Part 3A of the *EP&A Act* provides an assessment and approval process for major infrastructure projects.

Major infrastructure or other development that, in the opinion of the NSW Minister for Planning, is of State or regional planning significance, may be declared under section 75B of the *EP&A Act* to be a project to which Part 3A applies. The Minister for Planning declared the Hume Highway Duplication to be a project to which Part 3A applies by order published in the NSW Government Gazette (No 114) dated 4 September 2006. Consequently, the Hume Highway Duplication requires the approval of the Minister for Planning under Part 3A of the *EP&A Act.*

The RTA lodged individual Major Projects Applications for the five sections which make up the Hume Highway Duplication. Environmental assessment requirements were issued by a delegate of the Director-General of the Department of Planning on 9 October 2006 and the RTA is proceeding with the preparation of a project level environmental assessment for each of the five sections.

By letter of 12 October 2006 the Minister for Planning advised the RTA in accordance with section 75(1) of the EP&A Act that a Concept Plan is required for the Hume Highway Duplication.

Correspondence accompanying this document therefore requests that the Director-General issue environmental assessment requirements for the Concept Plan.

Following the RTA's preparation of an environmental assessment in accordance with the above requirements, the remaining stages in the Concept Plan assessment and approval process will include:

- Department of Planning acceptance of the environmental assessment
- Public exhibition of the environmental assessment
- Consideration of submissions
- Preparation of the Director-General's Assessment Report
- Minister for Planning's decision on whether to approve the Concept Plan

1.3 Purpose and structure of this document

This document:

- Incorporates the Hume Highway Duplication Concept Plan.
- Generally describes the area affected by the Concept
- Outlines the development options considered by the RTA in formulating the Concept
- Aims to assist the formulation of environmental assessment requirements by the Director-General under Section 75N and 75F(3) of the Act

The structure of the remaining sections of this document is as follows:

- Section 2 – Site description and Concept Plan
- Section 3 – Development options
- Section 4 – Key environmental issues
- Section 5 – Proposed scope of environmental assessment

2. Site description and Concept Plan

2.1 Site description

The Hume Highway is the main freight route between Sydney and Melbourne and it is also a vital transport link for communities and industries in southern NSW. Between its intersection with the Sturt Highway to north of Albury the Hume Highway passes through a number of towns and localities. The largest towns are Holbrook (population approximately 1270), Tarcutta (population approximately 260) and Woomargama (population approximately 90). Other localities include Kyeamba, Mullengandra, Bowna and Table Top.

The existing environment of this area is dominated by agricultural pursuits, largely cereal farming and grazing. No major rivers are traversed by the Highway although a number of creeks are present, most notably Billabong Creek, Little Billabong Creek and Tarcutta Creek. The topography is characterised by north south running valleys and ridges of considerable relief. The Hume Highway traverses areas of low relief, including level floodplains and alluvial terraces and generally follows creek lines to avoid hilly and steep sections.

2.2 Concept description and Plan

The RTA is proposing to duplicate the remaining single carriageway sections of the Hume Highway south of its intersection with the Sturt Highway (approximately 37km south of Gundagai) to Mullengandra (approximately 41km north of Albury). Immediate funding has been received to duplicate those areas that remain as single carriageways by 2009, excluding the immediate town bypasses at Tarcutta, Holbrook and Woomargama. While the three town bypasses are also proposed, funding has not been made immediately available for these sections of work, however the Australian Government (under its AusLink program) has committed to upgrading these sections by 2012. These bypasses will be considered under a separate project and would be subject to their own environmental assessment.

The Concept is therefore described as the duplication of the Hume Highway at the following locations:

- Sturt Highway to Tarcutta, from the existing dual carriageway approximately 37 kilometres south of Gundagai to approximately 43 kilometres south of Gundagai;
- Kyeamba Hill, from approximately 67 kilometres south of Gundagai to approximately 76 kilometres south of Gundagai;
- Little Billabong, from approximately 85 kilometres south of Gundagai to approximately 93 kilometres south of Gundagai;
- Yarra Yarra to Holbrook, from approximately 98 kilometres south of Gundagai to approximately 110 kilometres south of Gundagai;
- Woomargama to Mullengandra, from approximately 131 kilometres south of Gundagai to approximately 141 kilometres south of Gundagai.

The Concept Plan is shown in Figure 2.1 following.

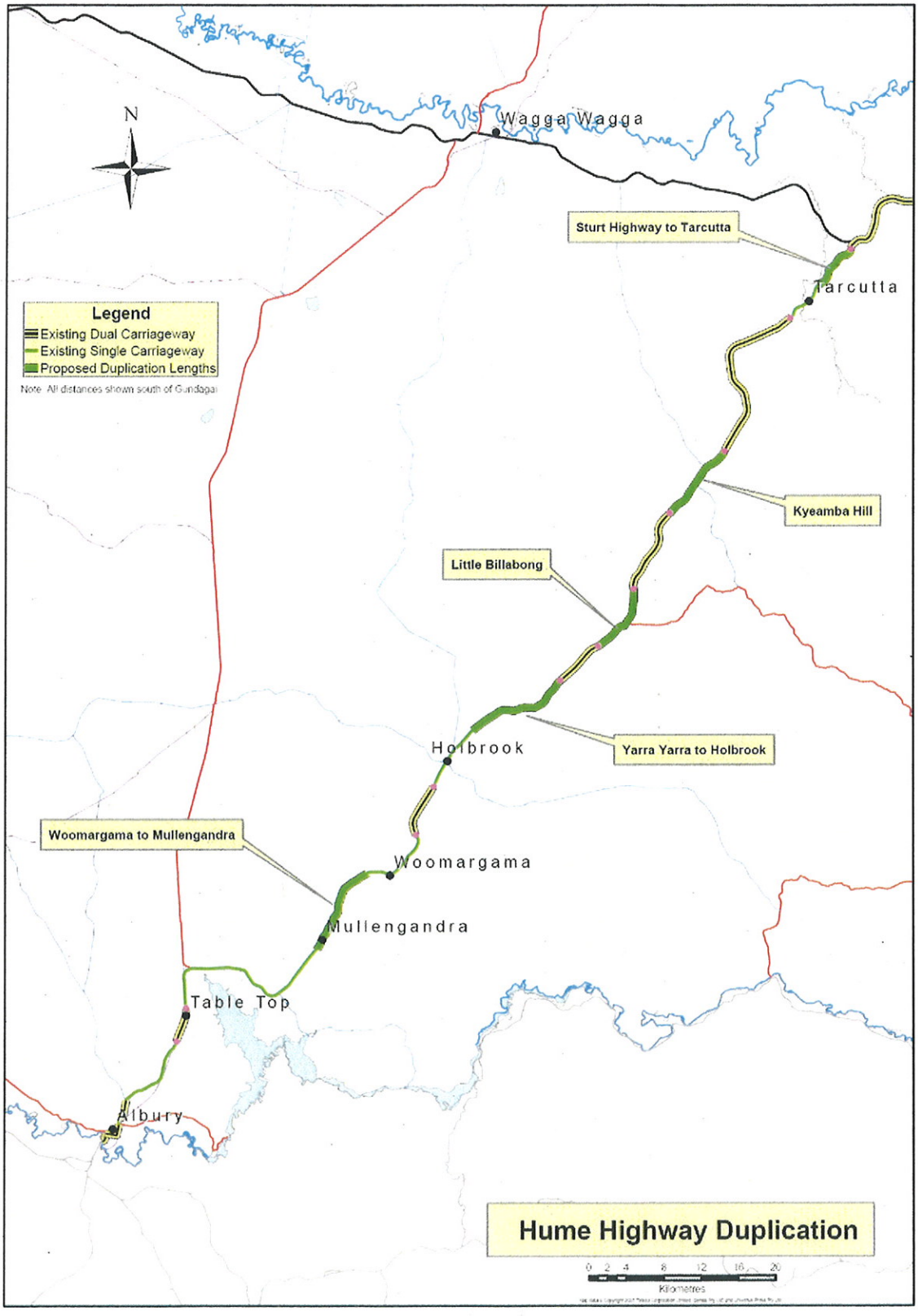

Figure 2.1 Hume Highway Duplication – Concept Plan

3. Development options

3.1 General

Section 75M of the EP&A Act requires that a concept plan outline any development options associated with a proposal. The following three options were considered:

- Do nothing option
- New dual carriageway option
- Hume Highway duplication option

Each of these three options is discussed in detail below. The Hume Highway duplication option has been selected as the preferred option and was the subject of the five Major Project Applications submitted to the Director-General of the Department of Planning on 12 September 2006.

3.2 Do nothing option

The Do Nothing option would maintain the highway in its current condition. The existing Hume Highway between the Sturt Highway intersection and Mullengandra is 104km in length and comprises a series of dual and single carriageway sections. The single carriageway totals 67km and is interspersed between adjoining dual carriageway lengths.

Road safety on the Hume Highway is a significant community concern. Recent studies have concluded that the crash rates on the single carriageway sections are higher in all categories (fatal, injury and total) than on the adjacent dual carriageway sections. Additionally, the single carriageway sections have crash rates higher than the Hume Highway as a total route.

Level of Service is a qualitative measure of traffic efficiency describing travel conditions on the basisi of such factors as speed and travel time, freedom to manoeuvre (eg overtaking), traffic interruptions, comfort, convenience and safety. There are six levels of service ranging from A, the best operating conditions, to F, the worst operating conditions. LoS C is described as satisfactory with some spare capacity and LoS D is operating at near capacity.

The single carriageway sections are currently operating as low as Level of Service (LoS) D for up to five hours per day and at an average LoS C. By 2016 the single carriageway sections would deteriorate to an average LoS D with significant night time periods (with high heavy vehicle volumes) at LoS E. This would further deteriorate with extended periods at LoS E by 2021.

The Hume Highway is the major freight corridor between Sydney and Melbourne and the reducing level of service is, and will continue to be, a major impediment to freight efficiency.

The Hume Highway has been progressively upgraded to dual carriageway standard and of the 807km between Sydney and Melbourne the 290km in Victoria is fully duplicated and 408km of 517km in NSW is duplicated. Projects are progressing to complete a further 21km leaving only 67km to be duplicated.

There are strong community expectations to provide dual carriageways over the full length of the Hume Highway and these have been reflected in the commitment under the AusLink Investment Programme to complete the duplication by 2012.

By all these measures - road safety, traffic and freight efficiency and community expectation - the Do Nothing Option is not considered acceptable.

3.3 New dual carriageway option

Provision of new dual carriageway over the full 45km project length would meet road safety, traffic and freight efficiency and community expectation objectives but would require a significantly increased investment and may delay completion and defer provision of the road user benefits.

New dual carriageway would also involve higher impacts on both biodiversity and agricultural lands (through increased acquisition requirements and potential property severance).

In some instances the existing Hume Highway would become redundant as the major transport corridor but would need to be retained within the local road network to provide local connectivity. This would increase the overall road network with consequent increased long term maintenance costs.

This option is not considered acceptable because of the increased environmental impacts associated with a new carriageway and unacceptable costs in terms of construction and maintenance.

3.4 Hume Highway duplication option

Over significant lengths the existing single carriageway sections of the Hume Highway are of a sufficient standard to continue to operate as one carriageway of a dual carriageway highway. Accordingly, dual carriageways can generally be delivered by provision of one new carriageway duplicating the existing highway. It is however recognised that over short lengths minor improvements would be required on the existing highway to correct deficiencies or provide upgraded facilities (eg grade separation of intersections).

Duplication of the highway delivers equivalent benefits to the provision of new dual carriageways and additionally would:

- maximise the use of an existing asset with minimal increase in total road network
- reduce land acquisition and agricultural impacts
- minimise construction resource requirements
- minimise biodiversity impacts
- facilitate connection to the existing dual carriageway sections
- minimise construction and operational costs
- maintain the existing and recognised road transport corridor

On these grounds duplication of the existing highway, with minor improvements to the existing highway where appropriate, was selected as the preferred option.

4. Key issues

4.1 General

The RTA has identified a number of key issues associated with the Concept Plan. The identified key issues are:

- Planning and strategic matters
- Biodiversity
- Aboriginal and non-Aboriginal heritage
- Resource use (water and road construction materials)
- Cumulative impacts

4.2 Planning and strategic matters

The Concept sits within a broader strategic context which requires coverage of the following:

- Relevant strategic planning documents such as the State Infrastructure Strategy and AusLink: *Building Our National Transport Future*
- Factors underpinning the need for the duplication such as improved level of service, road safety and freight efficiency
- Interaction with local and regional planning aims and the identification of any potential land use conflicts

4.3 Biodiversity

Potential issues associated with the duplication of the Hume Highway are likely to include the potential presence of species, populations or ecological communities listed as threatened under the NSW *Threatened Species Conservation Act 1995* (TSC Act), the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or the NSW *Fisheries Management Act 1974* (FM Act) and the presence of other significant environmental features including regionally significant species or habitats of conservation significance.

Summary of potential issues identified

- The presence of canopy species representative of Box-Gum Grassy Woodland which indicates that this endangered community may be present along the alignment
- Potential habitat for the Pink-tailed Worm Lizard.
- Potential habitat for the Brown Tree-creeper and the Regent Honeyeater in the form of Box-Gum Grassy Woodland, Box-Ironbark associations and mistletoes.
- Potential habitat for the Diamond Firetail in the form of Box-Gum Grassy Woodland, Derived Native Grassland and riparian vegetation.
- Potential habitat for the Black Bittern within certain riparian areas
- The presence of mature hollow-bearing trees that may provide habitat for native fauna.
- The aquatic ecosystems of various creeks, which may be sensitive to further disturbance.
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4.4 Aboriginal heritage

Potential issues associated with the duplication of the highway are likely to include the potential presence of Aboriginal cultural heritage including Aboriginal objects, sites and places. It should

be noted that there no previously identified sites on the Department of Environment and Conservations Aboriginal Heritage Information Management System (AHIMS) database located within any of the five duplication sections. However this result should be considered a consequence of the lack of Aboriginal cultural heritage investigations within the study area rather than evidence that Aboriginal objects, sites and places are not present within the study area. In addition not all sites will be able to be identified from surface inspection.

More recent investigations of the Concept Plan area with members of the Aboriginal community has identified a number of areas requiring further assessment (artefact scatters, scarred tress, PADs and isolated artefacts).

Summary of the potential issues identified

- Artefact scatter sites are most likely to be located in flat, well-drained areas near water sources.
- Creek lines and terraces may be particularly sensitive and may contain high-density occupation deposits.
- Mound sites may be located on the margins of wetlands and in flood channels.
- Scarred trees can occur anywhere where old growth trees are present - all trees in study area will need to be inspected.
- Burials are difficult to predict and may occur in areas of soft alluvial deposit (such as creek landforms.
- Isolated artefacts will occur anywhere across the landscape.

4.5 Non-Aboriginal heritage

Potential issues associated with the duplication of the highway are likely to include the presence of historical and archaeological sites. Database searches were undertaken of the State Heritage Register (SHR), the RTA's Heritage and Conservation Register, the Commonwealth and National Heritage Lists (CHL and NHL), the Register of the National Estate (RNE), the National Trust of Australia (NSW) as well as consultation of the Wagga Wagga Development Control Plan 2005, the former Hume Shire Development Control Plan, the Greater Hume Shire Council Background and Issues paper (the Greater Hume Shire Council is currently preparing a Local Environmental Plan). In addition a number of unlisted places of potential interest have been identified.

Summary of the potential issues identified

- Location of cluster of sheds and woolsheds
- Unknown location of Chinese Clearing site
- Kyeamba South Station and structures
- 'Komolo' ruins and potential archaeological relics
- Surveyor's tree
- Property of "Jannali"
- Property of "Beenly"
- The ruins located north of Racecourse road
- The presence of Woomargama town, including Woomargama Public School, St. Marks Church.
- The properties of Wyola, Montrose, Old Lumeah, The Hermitage, Lumeah, "Mullengandra" homestead and outbuildings.
- The former Royal Oak Hotel.
- St Luke's Church, and Mullengandra School building

4.6 Resource use (water and road construction materials)

General fill and select material would be primarily sourced from spoil created by the works. If additional fill is required it would be quarried from within or from adjacent to the Concept Plan corridor. In the event that additional fill is not available in the vicinity of the Concept Plan corridor, it would be sourced locally from existing quarries

Summary of potential issues identified - materials

- Potential that extraction of general fill and select material would be required adjacent to the Concept Plan corridor in all of the duplication sections.
- Potential that extraction of general fill and select material would be required outside of the Concept Plan corridor in some of the duplication section.
- Potential impacts on noise, existing traffic and road conditions and air quality associated with the number of truck movements required to transport materials including fill, select material, aggregate and sand.

The Concept Plan area is within the Murrumbidgee and Murray Catchment Management Areas (CMAs) and also passes through the sub-catchments of Tarcutta Creek, Kyeamba Creek and Little Billabong creek. There are no major rivers or wetlands within the Concept Plan area however a number of named and unnamed creeks are present as are springs and farm dams.

During construction, water may need to be sourced for various purposes. Where feasible, construction water will be sourced from groundwater and/or surface water.

Summary of potential issues identified - water

- Local water resources are under existing hydrological stress due to extractions for domestic and farming uses and drought.
- Where townships rely on groundwater and extractions for the Project may increase stress on this resource.
- Water may need to be imported, and carting of water would potentially impact on noise levels, existing traffic and road conditions and air quality associated with the number of truck movements required.

4.7 Cumulative impacts

The commitments entered into in the Memorandum of Understanding require completion of 67km of duplication by 2009. This would require construction activity on significant lengths at any one time with and would likely involve at some point construction over the full 67km between Sturt Highway and Table Top.

The level of activity would have cumulative impacts especially on resource requirements and traffic management (both construction and existing highway operational traffic).

Summary of potential issues identified

- A total of 67km of Hume Highway duplication is proposed to be constructed over a two and a half year period from mid 2007 to end 2009 and in combination with other projects in the area is likely to place pressure on local quarry resources.
- Construction over an extended length of highway is likely to cause accumulated delays and ongoing traffic management with potential for road user frustration
- Completion to dual carriageways for all but the 20km of the Hume Highway in the town bypasses may give rise to reduced compliance with speed limits through towns.
- The construction activity is likely to bring short term economic benefits to local communities providing employment and service industry opportunities.

5. Proposed scope of environmental assessment

Table 5.1 outlines the proposed scope of the environmental assessment for the Concept Plan. The scope of the environmental assessment is based on the preliminary assessment of key environmental issues discussed in Sections 4. All other issues are able to be managed through the detailed design stage and with the application of best practice measures and site-specific safeguards.

Table 5.1: Scope of the environmental assessment

Issue	Scope of studies for the Environmental Assessment
General	• Description of the Concept Plan. • Outline of construction activity. • Consideration of the principles of Ecological Sustainable Development with regard to the Concept Plan. • Consideration of statutory planning provisions.
Planning and strategic matters	• Identification of the broad strategic context of the Project considering National and State planning strategies. • Identification of the need and justification for Project
Biodiversity	• A strategic assessment of impacts to flora and fauna (terrestrial and aquatic. • Outline required consultation / investigation measures to be put in place prior to and / or part of detailed design and environmental assessment at project application stage.
Aboriginal and non-Aboriginal Heritage	• A strategic assessment of impacts Aboriginal and non-Aboriginal heritage. Note: Consultation with the Aboriginal community will be undertaken in accordance with the DEC's *Interim Community Consultation Requirements for Applicants* (January 2005) and *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (July 2005) and the RTA's *Aboriginal Liaison Protocol.*
Resource use	• A strategic assessment of the impact of extractive material requirements. • A strategic assessment of the impacts of extraction of water of water for construction including on groundwater.
Cumulative Impacts	• Assess the Concept Plan in its relationship with existing and proposed transport infrastructure and systems and to other developments occurring or proposed. • Identify potential cumulative impacts.
Draft Statement of Commitments	• A draft list of environmental commitments to be applied to the Project.

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