

1 Introduction

1.1 About the Project

The NSW Roads and Traffic Authority (RTA) has engaged Arup to undertake route option investigations, environmental assessments, and concept development for the proposed upgrade of the Pacific Highway between Tintenbar and Ewingsdale. This upgrade is part of the overall Pacific Highway Upgrading Program and would link the northern end of the approved Ballina Bypass to the existing dual carriageway at Ewingsdale. The route selection process documented in this report addresses route option investigations and assessments, and identifies a short list of route options.

Previous reports that addressed portions of the Pacific Highway being considered in the Tintenbar to Ewingsdale Upgrade include the Bangalow to St Helena Environmental Impact Statement (EIS) and the Ballina Bypass EIS.

The Bangalow to St Helena EIS was placed on public exhibition in 1999. The preferred route in the EIS, referred to as Option B, generally followed the existing highway. Northern Pacific Highway Noise Taskforce recommendations (RTA 2003a) were the catalyst for further review of Option B. Additionally, *the Bangalow to St Helena Pacific Highway Upgrade Submissions Report, Volumes 1 and 2* (RTA 2004a) outlined concerns of the preferred route. Thus, Option B Modified has been assessed as part of this report.

The Ballina Bypass EIS was placed on public exhibition in 1998. Planning approval has been received for the Ballina Bypass and the project is under development. Preparatory works have commenced on some sections of the Ballina Bypass, further geotechnical investigations and property negotiations are continuing.

The Tintenbar to Ewingsdale Upgrade project is required to meet the NSW Government's overall objective of fully upgrading the Pacific Highway to dual carriageway from Hexham to the Queensland border as shown in **Figure 1.1**.

1.2 Study Area

1.2.1 Original Study Area

The Tintenbar to Ewingsdale project commenced in October 2004 with the announcement of the original study area as shown in **Figure 1.2**. Following publication of the original study area and the November 2004 Community Information Sessions, individuals, communities, community groups and agencies raised concerns regarding the extent of the study area. In response to these concerns, the RTA initiated a desktop study to identify the feasibility of potential highway corridors outside of the original study area. Based on the outcomes of this study, the RTA decided to expand the study area. The process that led to the decision to expand the study area is shown in **Figure 1.3**.



Figure 1.1 Pacific Highway Upgrade Project

1.2.2 Revised Study Area

The expanded study area shown in **Figure 1.2** was publicly announced in April 2005. The boundaries of the expanded study area are:

- South to North: Sandy Flat Creek Road, just south of Tintenbar, north to the Ewingsdale residential area, a distance of approximately 23 km following the existing Pacific Highway.
- West: generally 0.5 km west of the existing Pacific Highway.
- East: Newrybar Swamp Road in the coastal flats, then up the coastal escarpment.

Figure 1.2 Original and Expanded Study Area

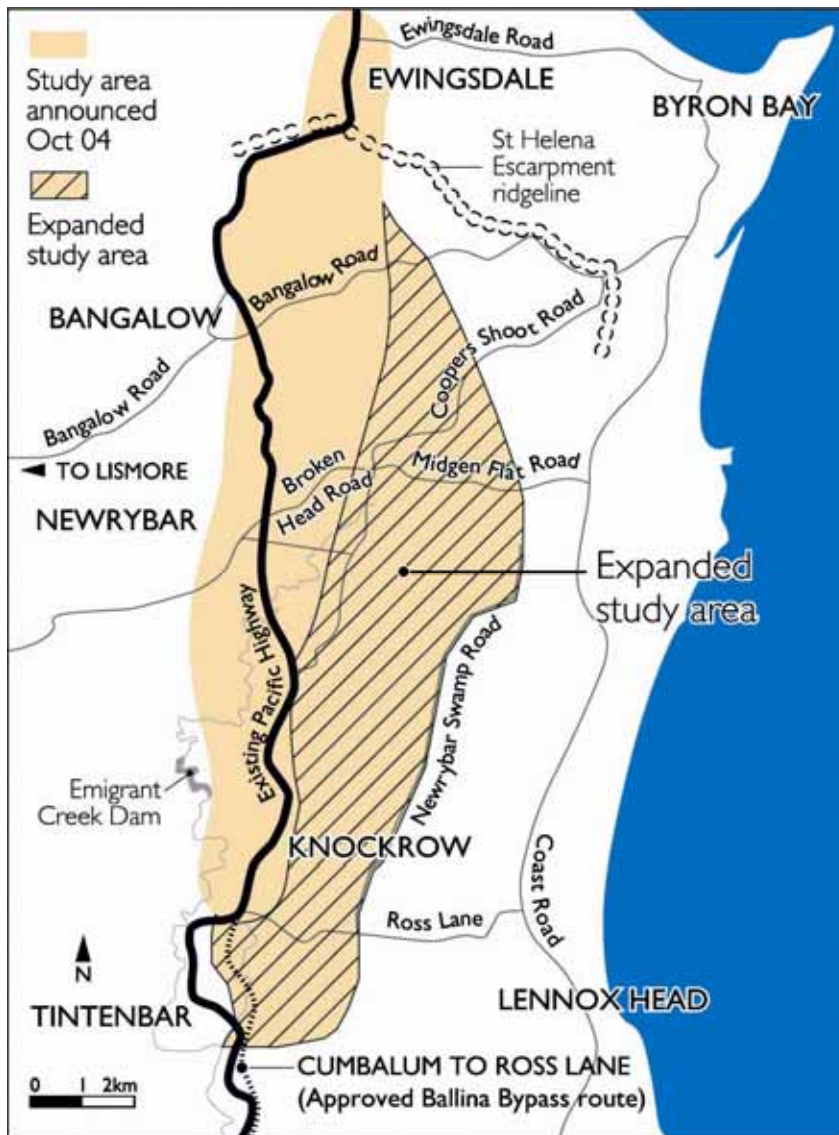
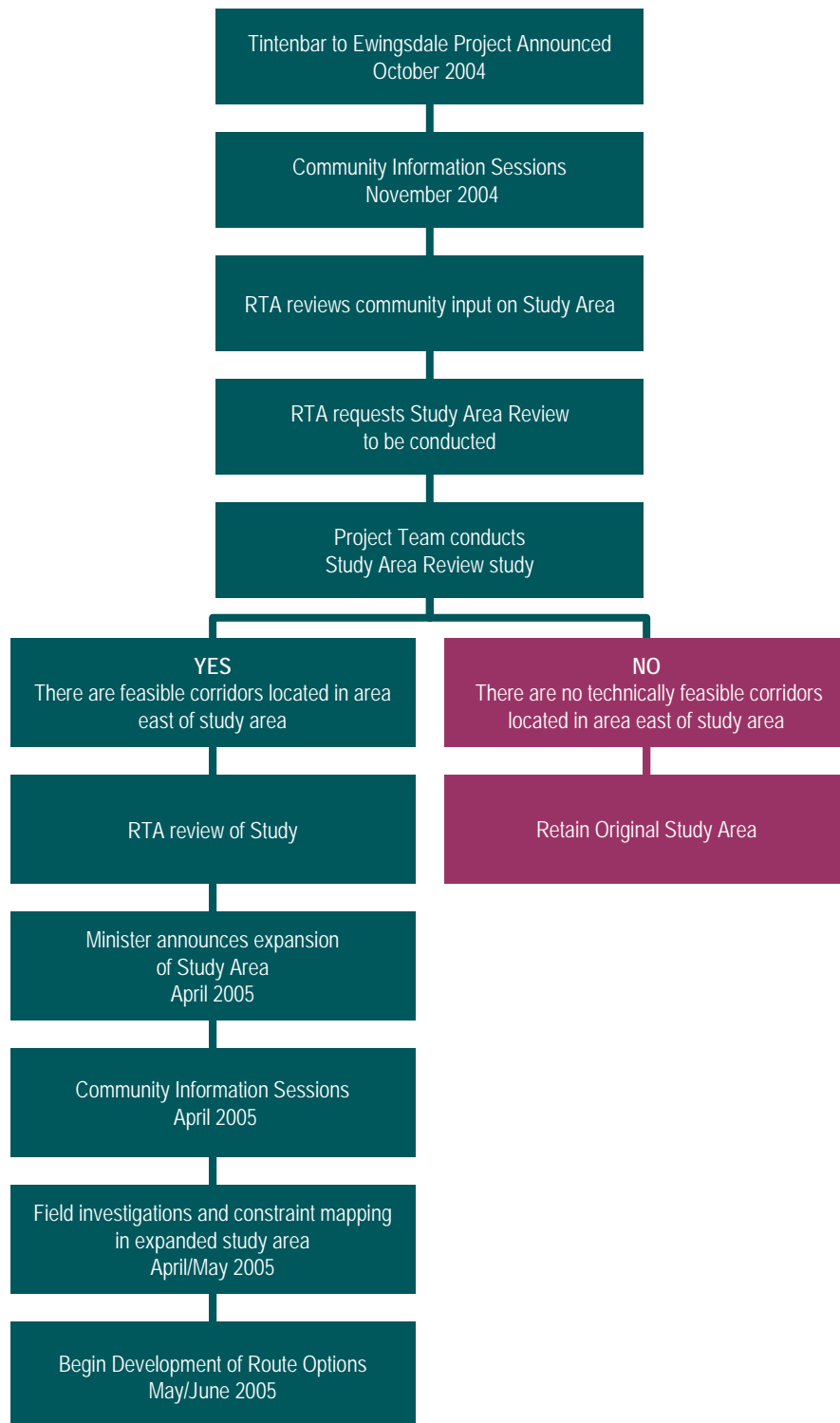


Figure 1.3 Decision Process to Expand Study Area



1.2.3 Existing Pacific Highway

The Pacific Highway is the main road transport corridor serving the North Coast of New South Wales and a major highway link between Sydney and Brisbane. The highway carries significant traffic volumes, especially during the holiday periods.

The Tintenbar to Ewingsdale section of the highway is largely a two-lane, two-way single carriageway with sections of overtaking lanes. In some sections, the highway alignment (both horizontal and vertical) does not meet existing RTA standards (see **Section 3.2.5**).

1.2.4 Ecologically Sustainable Development (ESD)

Sustainability principles outlined in both NSW and Commonwealth legislation will be considered in the upgrading of the Pacific Highway. The NSW *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) includes the following principles:

Schedule 2 of the EP&A Regulation defines the principles of ESD as:

- a) *the precautionary principle—namely, that 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.*
- b) *inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*
- c) *conservation of biological diversity and ecological integrity—namely that conservation of biological diversity and ecological integrity should be a fundamental consideration.*
- d) *improved valuation, pricing and incentive mechanisms—namely, that 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 and abatement,*
 - ii) *the users of goods and services should pay prices based on the full life cycle 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.*

ESD is given further definition and planning impetus through the *Byron Local Environmental Plan* (Byron Shire Council 1988, as amended). The Plan has as its aim to promote sustainable development within Byron Shire.

Application of ESD principles began in the early stages of the project through the identification of highway development constraints in the study area. These constraints guided the development of route options and the selection of the short list of options. Social, environmental and design evaluation criteria used in the project also reflect the ESD principles outlined above. ESD principles will be re-visited during the assessment of the short list of options following the Route Options Display and in any environmental assessments conducted for the preferred route.