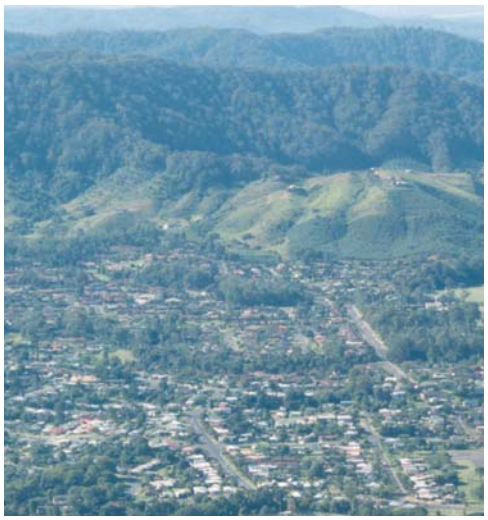
Department of
Infrastructure, Planning and Natural Resources

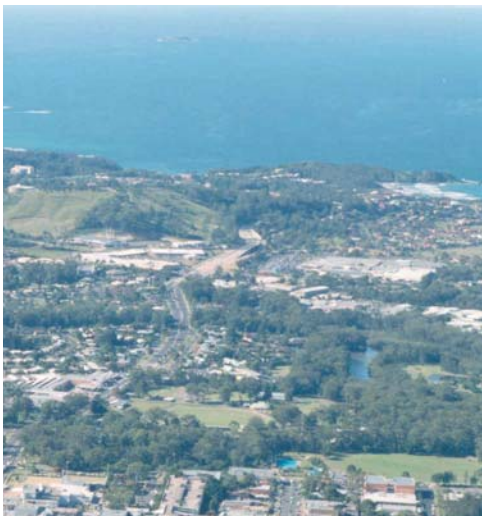
RTA

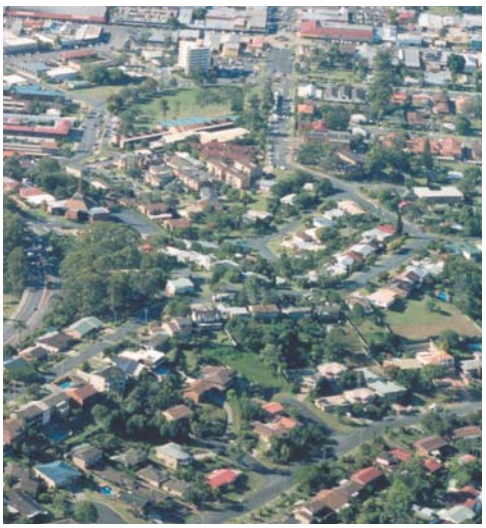
Coffs Harbour Highway Planning

Coffs Harbour Section

REVIEW OF THE COASTAL RIDGE WAY PROPOSAL
FEBRUARY 2004





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February 2004
Reference 1093.74.GE

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Executive Summary

Background and Context

The Coffs Harbour Highway Planning Strategy (CHHPS) is being developed with the objective of addressing the need to upgrade the Pacific Highway between Sapphire and Woolgoolga, while planning for future traffic needs within the Coffs Harbour urban area.

Objectives for the Strategy are listed in Table 1 as they relate to the principal objectives of the Pacific Highway Upgrading Program.

Table 1 Project Objectives

Pacific Highway Program Objectives	Coffs Harbour Highway Planning Strategy Objectives
Significantly reduced road accidents and Injuries	• A dual carriageway road with potential to reduce crash rates to 15 crashes per 100MVK over the project length.
Reduced travel times	• A design which would allow sign posting at a minimum of 100km/h in rural areas and 80km/h in urban areas. • Provide flood immunity on at least one carriageway for a 1: 100 year flood event
Reduced freight transport costs	• A design that minimises vehicle operating costs. • A design that meets or exceeds B-Double requirements, including at intersections where required.
A community satisfied with physical development of the route	• Integrate input from local communities into development of the Project through the implementation of a comprehensive program of community consultation and participation • A solution at all potential conflict points with local traffic that meets community expectations and maintains local connectivity.
A route that supports economic development.	• Provide transport developments that are complementary with land use • Consider delay management strategies to minimise disruption to local and through traffic and maintain access to affected properties and land during construction
Upgrading of the route managed In accordance with Ecologically Sustainable Development principles.	• Cumulative impacts assessed and addressed • Best environmental practical incorporated. • RTA Guidelines for managing environmental issues (biodiversity, noise impacts, water quality, acid sulphate soils, etc) are met.
Maximum effectiveness of expenditure objectives	• Maximise the use of the existing road asset where consistent with the Project • Ensure the project outcomes achieve value for money

Stakeholder Involvement

Since the project launch in September 2001, there has been extensive interaction with and involvement of a wide range of community groups and individuals. Details of community involvement activities and feedback from stakeholders have been documented in various reports prepared as part of the Coffs Harbour Planning Strategy.

A Community Focus Group was formed in January 2001 to assist communication between the project team, stakeholders and the local community. Feedback and information from the group has provided valuable input on project development issues and community attitudes to the project.

Identification of Upgrade Corridors

The Strategy was publicly launched in September 2001 and, in March 2002, an information sheet containing the following key announcements was released:

- identification of four initial corridor options for the northern section of the strategy area from Sapphire to Woolgoolga
- a decision that the inner corridor in the southern section of the strategy area between Sawtell and Sapphire / Moonee was the only potentially feasible bypass option suitable for further consideration
- commencement of a detailed comparison of upgrading the existing highway in the southern section of the strategy area as an alternative to an inner corridor bypass

Development of Coastal Ridge Way Proposal

In response to a request from Coffs Harbour City Council, a review of a proposal for a community generated western bypass corridor, known as the Coastal Ridge Way (CRW), has been undertaken in parallel with investigations into the Inner Bypass and Existing Highway corridors. The CRW was initially identified by members of the community and has been progressively developed in consultation with the main proponents. Development of the CRW was prompted by concerns regarding the perceived adverse social consequences (eg. noise, air quality, safety, property take, environmental and social) associated with the other future highway options that traverse through or closer to urban Coffs Harbour.

The CRW extends for about 38 km from Englands Road in the south to Arrawarra in the north. The northern section is the same alignment as Option A, which was investigated as one of the route options in the Sapphire to Woolgoolga section of the Strategy. This review is primarily concerned with the southern section of the CRW which bypasses the main urban area of Coffs Harbour. It is approximately 21 km long and extends from Englands Road north to the Bucca Road area.

This Review is being carried out to examine the key physical features, cost, traffic and economic performance of the CRW and to assess its impacts across a range of social and environmental planning issues. It has been prepared to accompany information material released for the strategic options stage of the southern (Coffs Harbour) section of the strategy area.

Main Design Features of the CRW

The preliminary engineering concept design for the CRW has been developed in consultation with the community proponents of the route. It comprises a high standard dual carriageway road that traverses rugged terrain of the Coastal Range to the west of Coffs Harbour and includes deep cuttings and fill embankments, 2.4km of tunnels through five major ridges and viaducts across three deep valleys.

The corridor passes through very rugged terrain and a preliminary appraisal of geological / geotechnical conditions has been completed including a comparative study of other roads constructed through similar terrain. This has confirmed that ventilated tunnels and major viaducts would be an essential component of the CRW in lieu of extremely deep cuttings (ie. greater than 60 m) and fill embankments (ie. greater than 40 m).

Traffic Issues

Traffic analysis by CHCC indicates that the CRW proposal would carry in the range of 7,600 - 9,200 vpd in 2021, with most of this traffic being through traffic (i.e. origin / destination outside Coffs Harbour). With such a bypass in operation, volumes on the existing highway route in 2021 are

predicted to reduce from approximately 45,000 vpd to approximately 41,000 vpd north of Bray Street and from 26,500 vpd to 18,900 vpd north of Moonee Beach Road.

An assessment of the heavy vehicle traffic that could potentially divert to the CRW bypass has also been undertaken. This indicates that the CRW could attract in the range of 1,300 – 1,500 heavy vehicles per day in 2021. The residual heavy vehicle volumes predicted to remain on the bypassed section of the Pacific Highway are predicted to reduce from 4,500 to 3,400 heavy vehicles per day north of Bray Street and from 2,900 to 1,600 heavy vehicles per day north of Moonee Beach Road. The analysis also found that the estimated travel time for heavy vehicles using the CRW between Englands Road and Bucca Road would be similar to the measured travel time for trucks currently using the Pacific Highway between the same points. Due to the unavoidable long steep gradients associated with the CRW proposal, the travel times and operating costs for heavy vehicles would potentially reduce the attractiveness of such a bypass option to these vehicles. On this basis, there is a risk that some proportion of the heavy vehicle traffic that would otherwise be attracted to the CRW may choose to remain on the existing Pacific Highway.

Predicted traffic volumes on the CRW were also compared with those for the Central Corridor Option which was "ruled out" in March 2002. This comparison showed that traffic volumes for both the CRW and the Middle Corridor are similar and that consequently, both options perform similar functions.

Socio-economic Issues

Moderate property impacts are anticipated for the CRW with the potential requirement for acquisition of about 474 hectares of mixed-use agricultural land (including approximately 11 hectares of B1 and B2 class banana lands) although the number of private properties is not large. The total land acquisition is significant as the corridor is 21.5 km long and a variable width reservation up to 300 m would be expected

The CRW traverses several sections of the Orara Ornithological Area which is listed as an "indicative place" by the Australian Heritage Commission. A preliminary assessment of indigenous heritage did not reveal any significant constraints in the Englands Road to Bucca Road section. However, consultation with representatives of the Aboriginal community indicated concerns about the inclusion of Option A from Moonee to Woolgoolga as the northern part of CRW. There is strong opposition to Option A among those informants.

Minor adverse amenity impacts would be anticipated near the corridor, with disturbance to a small number of isolated rural residences (viz. traffic noise, view changes, lighting and air quality). The changes along the corridor would have an adverse effect on public recreation areas and local eco-tourism ventures based in the State Forest. Potential amenity benefits through the town due to removal of through traffic removal may not eventuate if there is continued use of the Pacific Highway by heavy vehicles that may seek to avoid the steep sections of the CRW.

Some loss of passing trade for Coffs Harbour businesses that cater to through traffic would result. This could be severe for a relatively small number of businesses, but it would be a minor effect on the local economy, particularly as most businesses have a substantial local customer content.

Coffs Harbour is a tourist destination and tourism businesses form a vital part of the local and regional economy. Vehicle travel is the primary access mode and as high standard connections between the CRW and the City would be provided, the impacts on tourism would be minor and most likely positive.

Major cuttings, embankments and viaducts would cause significant impacts on scenic quality of the range landscape traversed by CRW. However, the overall visual impact is assessed to be low, due to the low population numbers and hence sensitivities along the corridor.

Potentially negative social cohesion and amenity issues could arise for future communities in the North Boambee release area with the CRW. However, there is an opportunity for CHCC to review the land use arrangements in that area to minimise this potential impact.

Biodiversity Issues

The CRW alignment was developed to minimise social and community impacts for the main urban area of Coffs Harbour. In doing so, it necessarily traverses the rugged natural environment of the forested ridges to the west of the City. In this regard, the indicative route for the CRW has been further developed so that the overall road formation and associated buffer areas do not intrude on the Ulidarra National Park. However, the route significantly affects diverse vegetation communities of the State Forest lands which would result in severe adverse impacts on biodiversity values. It passes through twelve vegetation types, all of which contain or have the potential to contain threatened species of flora and fauna. The route would affect about 90ha of native vegetation with clearing up to 200m wide in locations where wide cuttings and embankments are required. The CRW also has the potential to sever regionally significant wildlife linkages and koala movement corridors, restricting the access of fauna between large habitat areas to the west and the coast to the fauna overpasses and underpasses provided.

The CRW would affect 4.1ha of Forest Management Zones 2 and 3 which have been declared special management zones under the *National Park Estate (Reservations) Act 2002* and are recognised in the *Forestry Act 1916* as areas of State forest that have special conservation value. With certain exceptions, Section 21A of the *Forestry Act* prohibits such a declaration to be revoked except by an Act of Parliament or by notice of the Governor of NSW. The exceptions enabling revocation of special management zones only apply in certain circumstances and in accordance with the provisions of the *Forestry Act*.

The NSW Department of Environment & Conservation (DEC) (formerly National Parks & Wildlife Service) and the Commonwealth Department of Environment & Heritage (formerly Environment Australia) would have approval roles in relation to threatened species issues. In view of the nature of biological resources along the corridor and the significant magnitude of impact that would result, there are reasonable doubts regarding the ability of the CRW to achieve effective ecological impact mitigation, even with the assumed implementation of best practice measures (e.g. fauna overpasses and underpasses, compensatory habitat etc.). In these circumstances and considering the presence of alternative future highway corridors in the strategy area, there is no certainty that the required approvals could be secured.

Option A for the Sapphire to Woolgoolga section of the Strategy area forms the northern extension of the CRW proposal. This proposal passes through the recently declared addition to the Sherwood Nature Reserve. The Hon Bob Debus MP, Minister for the Environment, has advised the Hon Carl Scully MP, Minister for Roads, of the potential constraints and processes that may need to be adopted if a route through the Nature Reserve was selected as the preferred option. Should the preferred option traverse the Nature Reserve, a number of processes to enable the development of a road within a Nature Reserve would need to be followed, including the concurrence of the Minister for the Environment and the passage of an Act of Parliament to revoke the required section of the Nature Reserve. The RTA would also be required to consider the availability of suitable alternative routes, and proposals to minimise/mitigate and/or compensate for the environmental impacts of the proposal on the DEC estate.

Cost Estimate and Economic Issues

The very significant engineering features of the CRW from Englands Road to Bucca Road mean a correspondingly high cost estimate of $860M. This comprises a base cost of $642M, contingency cost

of $218M and an assumed construction period of six years. The main cost elements include tunnels ($323M) and earthworks ($191M). The total cost equates to an average cost of $39.5M per kilometre which is an extremely high rate for a major rural highway project.

A road user economic analysis of the CRW has been undertaken in accordance with the RTA's Economic Analysis Manual (2002). The results found that the CRW does not represent an attractive investment in highway infrastructure, with a Benefit-Cost Ratio of only 0.09 and a First Year Rate of Return less than 1%.

Conclusions

The review of the CRW proposal has found some stark contrasts in the key outcome areas that have been examined which are summarised as follows.

In socio-economic terms, the CRW would involve a range of adverse effects spanning property, business, amenity and social issues. However, because the route is generally well removed from the existing more populated urban precincts of Coffs Harbour, the number of potentially affected residents and property owners / users is small and the overall socio-economic impact is concluded to be low adverse. Certainly, the main advantage of the CRW proposal is that it fulfils the underlying reason for its development, that is, to minimise impacts on existing residential communities.

In functional terms, the CRW could serve as an effective bypass of the main Coffs Harbour urban area for a substantial volume of through traffic. However, the likely road geometry may be a deterrent to heavy vehicles in relation to travel time and vehicle operating costs to the extent that the CRW route could be unattractive and the existing highway route could continue to be used by through heavy vehicles. The strategic estimate indicates a cost of approximately $860M, far in excess of any other NSW Pacific Highway upgrade project. When coupled with the estimated travel benefits that would flow from the new route, the road user economic analysis clearly shows that the CRW proposal would represent a very poor investment in road transport infrastructure for NSW.

In biophysical terms, the CRW would result in very significant adverse impacts on the natural environment. The extremely rugged terrain and inferred geological conditions along the corridor necessitate major land disturbance and fundamentally influence the indicative design of CRW such that major earthworks, tunnels and viaducts are unavoidable (which in turn affect the project cost). Biodiversity impacts would also be very significant and the potential scale of impact is such that even the most comprehensive of mitigation measures would be unlikely to yield a satisfactory outcome in terms of ecological values.

Based on the review of the proposal, it is concluded that the CRW is contrary to the principles of ecologically sustainable development, and does not merit further consideration as an option for the future upgrading of the Pacific Highway due to:

- significant topographical constraints and engineering challenges associated with locating the CRW outside the coastal plain and into the steep and hilly terrain associated with the Coastal Range
- the poor functional performance of the proposal
- the high cost and poor economic viability of the proposal
- significant adverse impacts on flora and fauna.

Future Actions

The review will be on public display in Coffs Harbour and Woolgoolga. The dates and locations will be advised in the Community Update and in Press Notices. The displays contain a large scale map showing the proposal in greater detail.