

## INQUIRY INTO PACIFIC HIGHWAY UPGRADES: COFFS HARBOUR

**Organisation:** Roads and Traffic Authority of NSW  
**Name:** Mr Mike Hannon  
**Position:** Acting Chief Executive  
**Telephone:** 9218 6888  
**Date Received:** 17/11/2005

---

**Subject:**

**Summary**

\*G.P.S.C.s received 6pm 17/11/05  
H.H.



CE05/2468

Ms Tanya Bosch  
Director  
General Purpose Standing Committee No 4  
Legislative Council  
Parliament House  
Macquarie Street  
SYDNEY NSW 2000

Dear Ms Bosch

I refer to the Committee Chair's letter of 5 October 2005 regarding the further inquiry into Pacific Highway upgrades in the Coffs Harbour area, including an offer for the Roads and Traffic Authority (RTA) to make a submission in this regard.

As with our submission to the previous inquiry into Pacific Highway upgrades between Tintenbar and Ewingsdale and Woodburn to Ballina, I would like to thank the Committee for the opportunity to make a contribution and ask that you please find enclosed information, which may be relevant to the Committee's deliberations. The RTA does not claim confidentiality in relation to any part of this response. If you require further information or clarification, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mike Hannon'.

**Mike Hannon**  
Acting Chief Executive

17/11/05



# LEGISLATIVE COUNCIL – GENERAL PURPOSE STANDING COMMITTEE NO 4 INQUIRY INTO PACIFIC HIGHWAY UPGRADES: COFFS HARBOUR

## ROADS AND TRAFFIC AUTHORITY SUBMISSION

1) *That General Purpose Standing Committee No. 4 inquire into and report on:*

a) *the proposed upgrade of the Pacific Highway between Coffs Harbour and Woolgoolga, as outlined in the Coffs Harbour Highway Planning Strategy; and*

b) *the progress of the proposed Bonville upgrade of the Pacific Highway.*

2) *That the inquiry be in the same terms as, and conducted concurrently with, the inquiry into the Pacific Highway upgrades between Ewingsdale and Tintenbar, and Ballina and Woodburn, as reported to the House on 14 September 2005.*

---

## Coffs Harbour Highway Planning Strategy

### Background

Coffs Harbour is one of the largest and most rapidly developing regional areas in New South Wales. Coffs Harbour City Council estimates that the current population of the local government area (LGA) is 65,000 and anticipates that the population will grow to approximately 100,000 by 2030. ("Our Living City Discussion Paper", CHCC 2005).

The Coffs Harbour Highway Planning Strategy was launched in September 2001 to address the need to upgrade the two-lane section of Pacific Highway between Sapphire and Woolgoolga to a four-lane dual carriageway, while planning for future traffic needs within the Coffs Harbour urban area. Planning for the Strategy was funded by the NSW Government as part of the 10-year Pacific Highway Upgrading Program.

### Key Considerations

#### (a) Topographical Constraints

The topography of the study area is varied with dramatic and contrasting landform types – including the coastal strip in the east, the coastal range and the inland valleys of the Orara River and its tributaries to the west. This contrasting topography results in a unique landscape where the Great Dividing Range meets the sea. The area is a contrast of the ocean, rugged coastline, protected beaches, long narrow coastal plains, waterways, steep vegetated mountains and inland river valleys. It includes 51km of coastline with significant areas of State Forest, National Parks and areas of high conservation value.

The strategy study area has many scenic qualities of regional significance and of local value. The coastal range is particularly significant as the "green backdrop" to the ocean and urban settlement along the coastal plain.

The land is also in a long-term erosion process and contains some very steep slopes. Potential impacts on water quality are an important consideration due to the high rainfall and the relatively small size of the coastal creek catchments.

Like much of the Coffs Harbour coastal environment, the strategy area contains areas with significant natural attributes. These attributes are well recognised and environmental constraints have been extensively researched and documented. *Attachment A shows the topographical constraints presented by the region.*

#### (b) Existing and Future Travel Demand

##### *Existing Pacific Highway*

The existing Pacific Highway is the only continuous and, in many areas, the only north – south transport route through the Coffs Harbour area. As a result, the Highway in this area provides a major transport route for local traffic (including commuter traffic) in addition to its role as a major interstate and regional transport link.

The standard of the Highway varies from an urban arterial road through Coffs Harbour to semi-urban/rural dual carriageway through Korora to a 2-lane, 2-way road with occasional overtaking opportunities north of Korora (*See Attachment A*).

The number of vehicles on this section of the Highway varies considerably, with the most vehicles recorded through Coffs Harbour and numbers reducing with increasing distance from the city. For example, the 2004 Annual Average Daily Traffic (axle pairs) varied from approximately 39,000 in the Coffs Harbour CBD to approximately 11,000 north of Arrawarra Creek. ("Traffic Volume Data for Hunter and Northern Regions" RTA 2004).

As a major regional centre on the Pacific Highway, the Coffs Harbour area is a significant generator of road freight.

The number of vehicles on the Highway throughout the day also varies significantly. For example, in May 2005, the approximate number of vehicles at Korora ranged from nearly 1,900 per hour in the weekday morning peak hour to 100 per hour in the early hours of the morning. On the other hand, the number of semi-trailers and B-Doubles is relatively constant throughout the day, comprising 70 vehicles per hour (or 4%) for the morning peak hour traffic and between 30 and 70 vehicles per hour in the early hours of the morning. As a result, the vast majority of the variation in traffic volumes throughout the day is due to variations in light vehicles and, to a lesser extent, rigid heavy vehicles. The recorded traffic volumes show distinct morning and afternoon peak periods – a pattern which is typical for traffic flows comprising a significant proportion of commuter traffic. (RTA 2005).

The existing Highway between Coffs Harbour and Woolgoolga is primarily a 2-lane, 2-way road with occasional overtaking lanes. 2005 Annual Average Daily Traffic volumes (vehicles) on this section of the Highway varied between approximately 19,700 at Korora and 13,400 south of Woolgoolga. At approximately 5,450 vehicles per day, through traffic comprises 28% of the daily traffic flow at Korora and 40% of the traffic flow south of Woolgoolga. The volume of local traffic in the morning peak hour at Korora is estimated to be approximately 1,600 vehicles or 87% of the traffic flow. (RTA 2005)

### *Future Traffic Volumes*

Traffic volumes on the Highway are expected to increase in the future due to increases in interstate, regional and local (including commuter) traffic. For example, daily traffic volumes at Korora are expected to increase from 19,700 in 2005 to almost 40,000 in 2021, with volumes south of Woolgoolga increasing from 13,400 to 23,600 over the same period ("Sapphire to Woolgoolga Route Options Working Paper No.8 Traffic and Transport Assessment" RTA 2002).

Peak hour traffic volumes are also expected to increase, with the volume of morning peak hour traffic at Korora expected to increase to approximately 3,600 by 2021. The anticipated population increase in the Coffs Harbour northern beaches area is estimated to contribute approximately 1,500 (or 75%) of this increase in morning peak hour traffic volumes. ("Sapphire to Woolgoolga Route Options Working Paper No.8 Traffic and Transport Assessment" RTA 2002). Nearly all of these 1,500 additional vehicles will be local traffic with the majority being light vehicles used for commuting purposes. There would also be a lesser contribution by rigid heavy vehicles on local trips (tradesmen, delivery vehicles etc.). Semi-trailers and B-Doubles would constitute a very minor proportion of the morning peak hour increase resulting from the anticipated population increase in the northern beaches area.

In summary, local traffic volumes are, and will continue to be, the major component of traffic flows during the critical morning peak hour periods and will be the major contributor to the need to upgrade this section of the Highway, which is already experiencing capacity problems during the morning and afternoon peak periods.

## **(c) Community views**

Since the announcement of the Strategy in September 2001, there has been extensive interaction with and involvement of a wide range of community groups and individuals. Community updates were released at key stages during the development of the Strategy. These updates summarised the investigations and described the shortlisted route options and their main features. The information was placed on public display for comment.

In addition, a number of community liaison group meetings, public meetings and one-on-one meetings with individual property owners have also taken place at key stages of the development process.

Comments received from the community and stakeholders in response to public displays and via general project correspondence, as well as the local knowledge and feedback obtained through liaison group and public meetings, have all been carefully considered in determining the final preferred route for the Strategy.

The involvement of the community has been an important part of the Strategy development process.

#### **(d) Agriculture**

Both the Coffs Harbour bypass and Woolgoolga bypass sections of the preferred route traverse a number of agricultural properties. A desk-top assessment of the impact of the route options on agricultural land was undertaken during the option investigation phase of the Strategy. The study focused on the banana plantations predominately located on the steep slopes to the west of the existing Highway.

In recent years, the area of agricultural land (including banana plantations) in the Coffs Harbour area has been decreasing due to urban expansion. In response to increasing competition from the Queensland banana industry, there has also been increasing diversification of the agricultural industry in both the Coffs Harbour and Woolgoolga areas, with many landowners replacing bananas with other crops.

In the Coffs Harbour area, the preferred route would require the acquisition of approximately 80 hectares of agricultural land – including approximately 50 hectares of banana land. The implementation of a 300m aerial spraying buffer zone would affect an additional 270 hectares of banana land.

In the Woolgoolga area, the preferred route would require the acquisition of approximately 65 hectares of agricultural land – including approximately 12 hectares of 2<sup>nd</sup> and 3<sup>rd</sup> class banana land. The implementation of a 300m aerial spraying buffer zone would affect an additional 85 hectares of 2<sup>nd</sup> and 3<sup>rd</sup> class banana land.

## **Managing the Development Process**

### **(a) Route options**

Since planning for the Strategy began in September 2001, a wide range of potential road corridors and route options has been investigated. These have included options developed by the project team and options put forward by Coffs Harbour City Council and the community.

The options investigated for the Strategy fall within three broad strategic corridors:

- *Far Western Bypass*. - A bypass of Coffs Harbour and Woolgoolga through the Orara Valley, from Englands Road south of Coffs Harbour to Halfway Creek or Grafton.
- *CHCC Preferred Corridor*. - Options generally within a corridor adopted by Council in late 2003 as its preferred option for a bypass of Coffs Harbour and Woolgoolga.
- *Coastal Corridor*. Options along the coastal plain between Englands Road south of Coffs Harbour and Arrawarra Creek north of Woolgoolga, with a future extension to Halfway Creek.

*The route options investigated are shown in Attachment B and listed in Attachment C.*

While the broad intention of the planning process remains consistent with the original approach, it has necessarily evolved since investigations commenced. This is partly due to the complexity of coordinating the different upgrading priorities and functional requirements of the Highway through the local government area and the differing physical constraints, environmental constraints and social issues in the two broad sections of the Strategy area. In addition, ongoing community and stakeholder consultation has been a very important part of development of the Strategy. Activities undertaken by Coffs Harbour City Council including a Peer Review, undertaking their own community consultation process and the RTA's investigation of additional route options proposed by Council and the community resulted in an extension of the original timeframe by at least 18 months.

*Attachment D shows the planning process undertaken for development of the Strategy.*

## **(b) Preferred route**

On 7 December 2004, following community input, detailed investigations and discussions with a range of government agencies, the coastal route was announced as the preferred route for the Coffs Harbour Highway Planning Strategy.

This preferred route consists of the Inner South 1 (From England's Road to Coramba Road) and Inner North 2 (from Coramba Road to Korora) options for the Coffs Harbour section, an upgrade of the existing Highway from Sapphire to south Woolgoolga to dual carriageway standard and the Western bypass for the Woolgoolga section from South of Woolgoolga near Graham Drive north to Arrawara. *Attachment E shows the preferred route for the Strategy.*

The preferred route was found to provide the best overall balance between functional, environmental, social, economic and value for money considerations.

Investigation into the feasibility of the Far Western Bypass option concluded that it could not be justified within the foreseeable planning future due to the relatively low traffic volumes predicted to use it, the very high cost and the lack of staging opportunities.

The feasibility assessment of Council's preferred corridor found that options within the corridor, including the Coastal Ridge Way / Option A proposal, were not viable. This was due to significant engineering challenges, high cost, poor value for money, significant impacts on native flora and fauna, and impacts on a landscape of Aboriginal significance. They would also attract less traffic off the existing Highway and result in longer travel times and higher operating costs than the coastal route options.

## **The Next Steps**

For the southern (Coffs Harbour) section of the Strategy:

- The concept design for the preferred Inner South 1/Inner North 2 route is being refined to further reduce potential impacts, and identify future road reserve boundaries. Planning action will be taken to reserve the required corridor for the route.
- Assistance will be provided to council to replan the North Boambee Valley.
- The RTA, in conjunction with council, will prepare a package of works to manage the existing Highway through Coffs Harbour until the preferred route is constructed.

For the northern (Sapphire to Woolgoolga) section of the Strategy:

- Survey and geotechnical investigations for this section are underway and the concept design is being refined.
- The proposal will be the subject of an environmental assessment that will examine the potential impacts of the preferred route. The concept design and environmental assessment will be displayed for community comment prior to seeking approval to construct the project.

## **Bonville Upgrade**

The Bonville Upgrade entails the construction of a 9.6km dual carriageway deviation south of Coffs Harbour, between Perrys Road at Repton, and Lyons Road at Sawtell. It will link the Raleigh Deviation with the Lyons to Englands Road Upgrade (both completed) to a four-lane dual carriageway standard.

The planning process for the project included measures to deal with significant environmental constraints, including ensuring capacity for future growth of Coffs Harbour to the South and the maintenance of the ecological significance of the Bongil Bongil National Park. This required considerable planning and mitigation measures to be implemented by the RTA. The existence of a Koala colony necessitated further assessment of routes to ensure that the impact of the upgrade on flora and fauna was appropriately managed.

In September 2005, a shortlist of pre-qualified companies were invited to tender for the design, construction and 10-year maintenance of the upgrade. A contract is expected to be awarded next year, with construction to commence in the second half of next year. Construction of the Bonville Upgrade will form part of a program of works for upgrading the Pacific Highway beyond 2006 and the project is expected to be jointly funded by the State and Federal Governments.

## **Interim Road Safety Improvements**

The RTA has implemented several interim road safety measures at the Pine Creek section of the Pacific Highway, several kilometres south of Bonville, where fatal accidents occurred in 2004. These safety measures include:

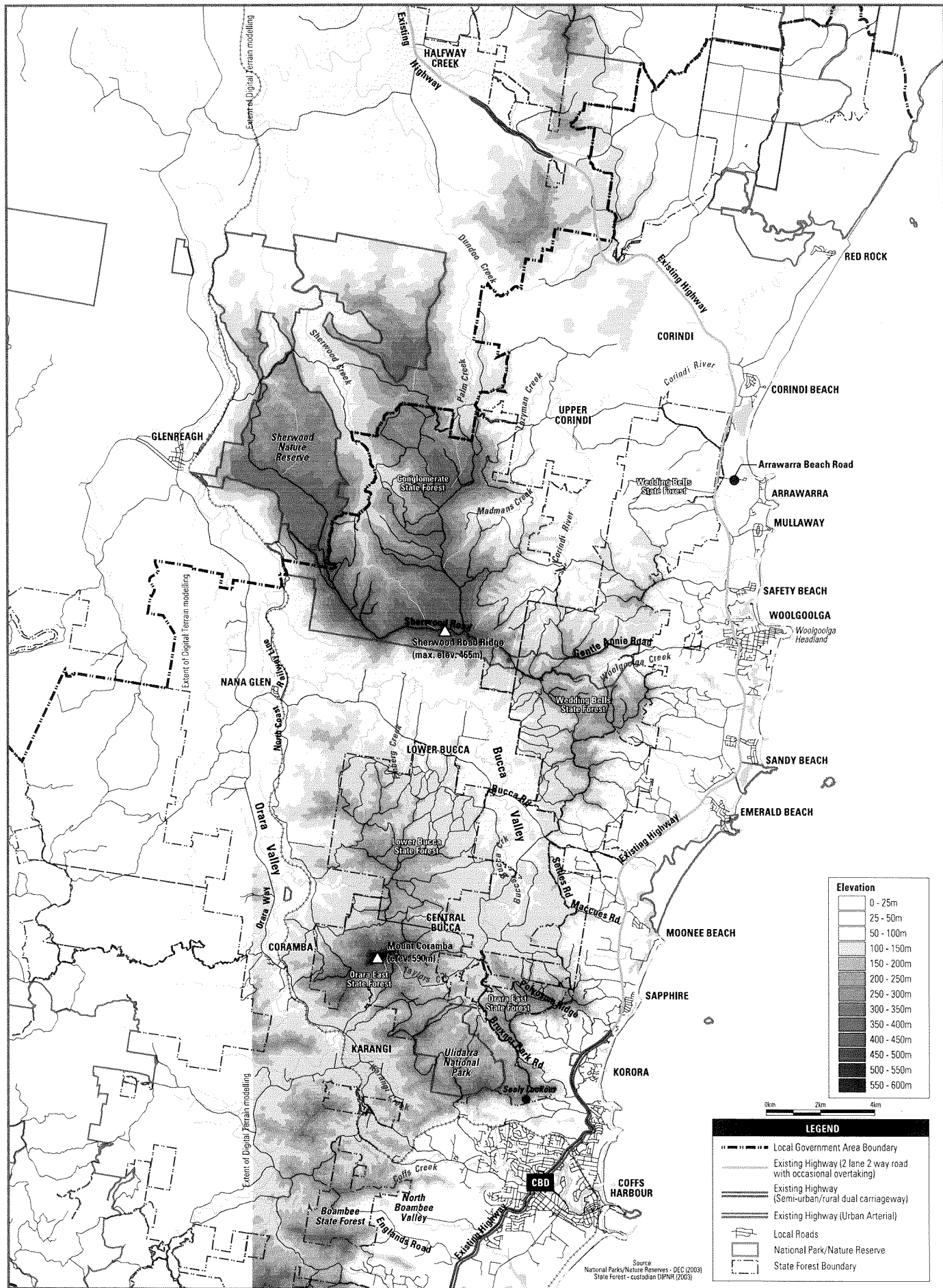
- Installation of additional speed zone signs over the Highway.
- Improved line marking and sign posting.
- Road resealing to improve skid resistance when driving during wet weather.
- These measures are being reviewed to decide if safety can be further improved with new measures, prior to completion of the upgrade.

In September 2005, the 80km/h limit through the Bonville township and the existing 90km/h limits on the approaches to Bonville were both further reduced to 60km/h and 80km/h, respectively.

In addition, the Minister for Roads announced that two speed cameras would be installed to cover both directions on the Highway in Bonville by Christmas of this year.

**ATTACHMENT A –  
TOPOGRAPHICAL CONSTRAINTS**





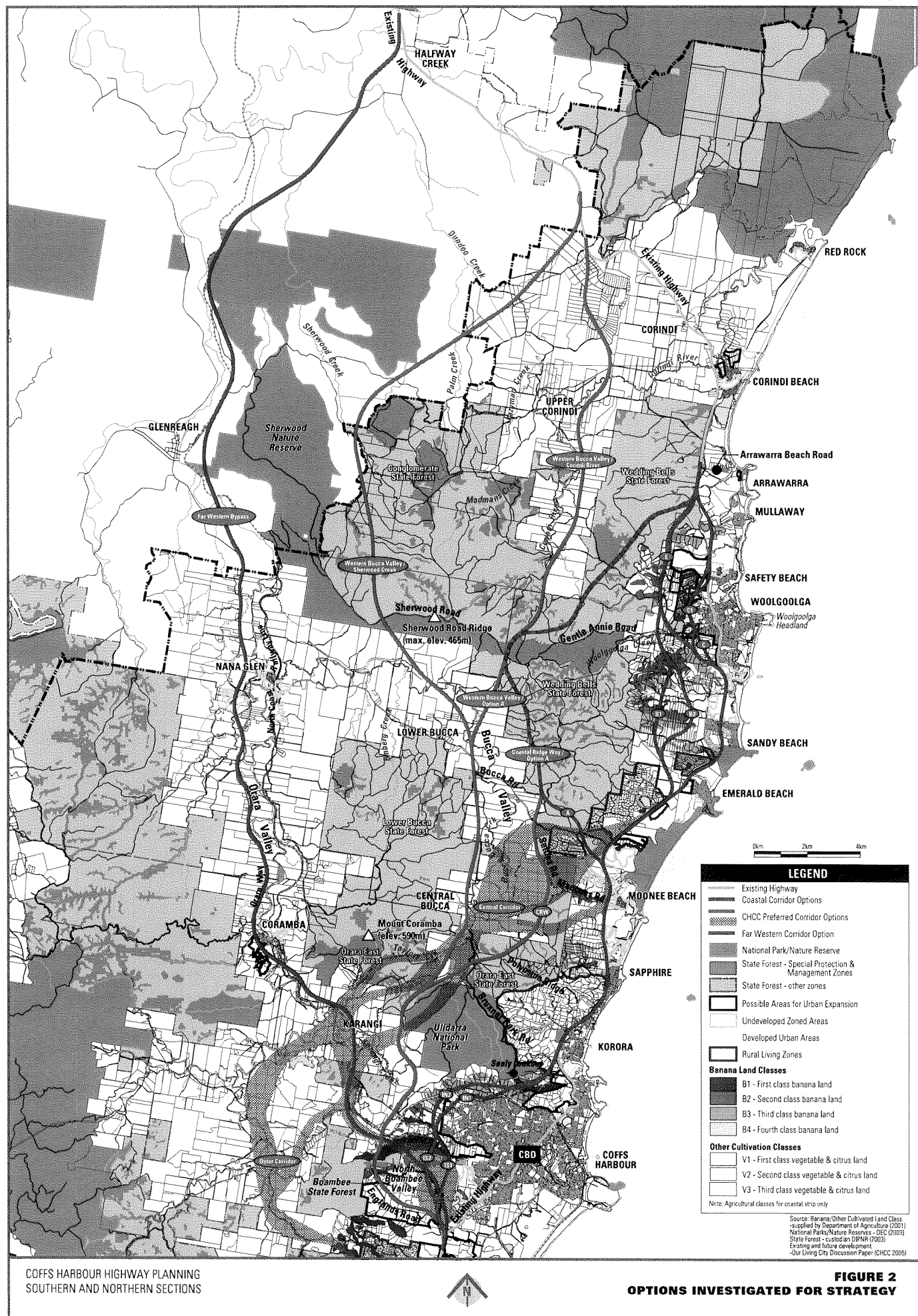
COFFS HARBOUR HIGHWAY PLANNING  
SOUTHERN AND NORTHERN SECTIONS

**FIGURE 1**  
**TOPOGRAPHICAL CONSTRAINTS**

**ATTACHMENT B –**

**(FIGURE 2)**

**LANDUSE AND OPTIONS INVESTIGATED FOR COFFS HARBOUR  
HIGHWAY PLANNING STRATEGY**



COFFS HARBOUR HIGHWAY PLANNING  
SOUTHERN AND NORTHERN SECTIONS

**FIGURE 2**  
**OPTIONS INVESTIGATED FOR STRATEGY**

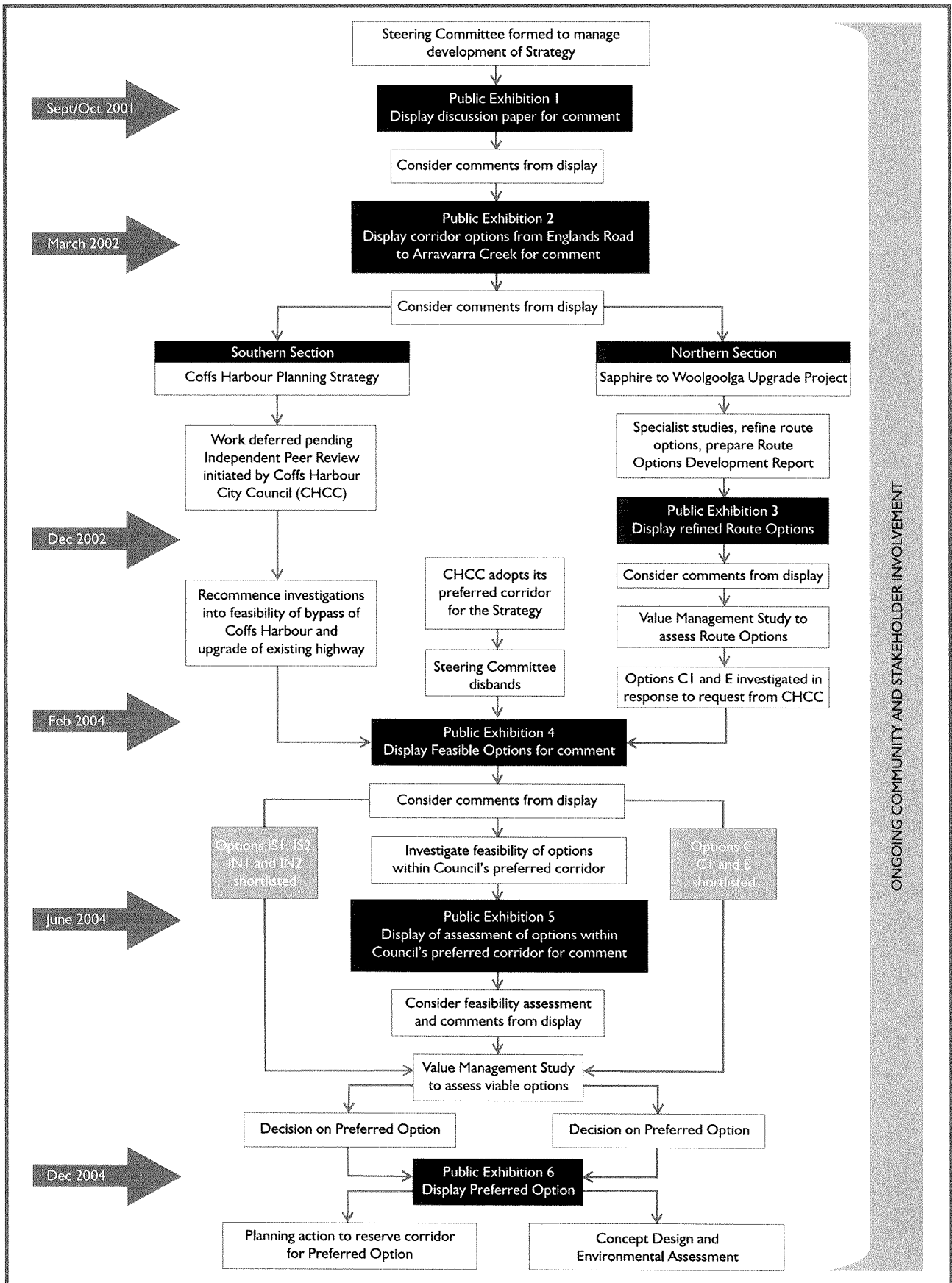
**ATTACHMENT C –  
ROUTE OPTIONS INVESTIGATED**

Summary features of corridor options

Feature	Far Western Bypass	CHCC Preferred Corridor route options	Coastal Corridor route options
<b>Physical design features</b>			
<b>Total route length</b>	54.3km	47.5 to 55km	52.7 to 53.8km
<b>Highest point above sea level</b>	160m	242m	97m
<b>Highest embankment</b>			
• without viaducts	40m	48 to 70m	23m
• with viaducts	30m	30 to 40m	na
<b>Deepest cutting</b>			
• without tunnels	65m	81 to 150m	60m
• with tunnels	45m	45m	29m
<b>Tunnels</b>			
• number of tunnels	up to 1	4 to 7	up to 3
• total length	up to 1km	1.82 to 5.42km	up to 1.32km
<b>Maximum grade of new alignment</b>	6%	6%	6%
<b>Longest uphill section</b>	4km	11km	2km
<b>Traffic Function</b>	Poor	Poor	Good
<b>Preliminary estimated cost (\$2003)</b>			
<b>Bypass / upgrade section:</b>			
Englands Road to Halfway Creek	\$930M	na	
Englands Road to Bucca Road	na	\$670M to \$860M	
Bucca Road to Halfway Creek	na	\$355M to \$980M	
Inner bypass of Coffs Harbour	na	na	\$280M to \$425M
Korora to South Woolgoolga	na	na	\$145M
Woolgoolga bypass	na	na	\$120M to \$135M
Arrawarra Creek to Halfway Creek	na	na	\$115M
Provision for future grade-separated interchanges	na	na	\$50M to \$80M
<b>Total cost for bypass / highway upgrade</b>	<b>\$930M \$17M / km)</b>	<b>\$1025M to \$1650M \$20M to \$32M / km</b>	<b>\$710M to \$900M \$14M to \$17M / km</b>
<b>Upgrade Bucca Road (8km)</b>		\$40M	
<b>Upgrade bypassed sections of existing highway</b>	\$180M <sup>(1)</sup>	\$180M <sup>(1)</sup>	Nil
<b>Total cost</b>	<b>\$1,110M</b>	<b>\$1,245M to \$1,870M</b>	<b>\$710M to \$900M</b>
<b>Ability to stage construction</b>	Very Limited	Limited to very limited	Good
<b>Economic viability</b>	Very poor (BCR < 0.5)	Very poor (BCR 0.25 to 0.49)	Fair (BCR 1.4 to 1.8)
<b>Socio-economic effects</b>	Moderate adverse	Low to moderate adverse	Moderate to high adverse
<b>Biophysical effects</b>	Moderate to very high adverse due to potential impact on Sherwood Nature Reserve, threatened species and wildlife corridors	Very high adverse due to impact on Sherwood Nature Reserve, protected zones in State Forests, threatened species and wildlife corridors	Low to moderate adverse
<b>Indigenous heritage effects</b>	Moderate adverse (inferred)	High adverse	Low adverse

(1) Delayed construction of these bypasses may necessitate capacity improvements between Arthur Street and Sapphire and a full upgrade of the existing highway between Sapphire and Halfway Creek at an estimated cost of \$530M.

**ATTACHMENT D –  
PLANNING PROCESS UNDERTAKEN FOR THE COFFS HARBOUR  
HIGHWAY PLANNING STRATEGY**



ONGOING COMMUNITY AND STAKEHOLDER INVOLVEMENT

**FIGURE 2  
COFFS HARBOUR HIGHWAY PLANNING  
STRATEGY PLANNING PROCESS**

**ATTACHMENT E –  
PREFERRED ROUTE FOR THE COFFS HARBOUR HIGHWAY  
PLANNING STRATEGY**



