

4 Design development

4.1 Alignment design issues and responses

A review of the recommended route for the Macksville to Urunga section of the project was undertaken following the value management workshop to investigate a number of refinements that were suggested by workshop participants and also as a result of an internal review by the project team.

Criteria used for assessment of design alternatives proposed were based on the project objectives outlined in *Section 2.2* of this report. A number of refinements have been made to the design of the route as outlined below and shown in Figures 4-1 to 4-4.

- Immediately north of Warrell Creek, the alignment of Option 1c was modified to increase the curve radii to 750metres and to provide the opportunity for an interchange where the Proposal would pass under Bald Hill Road (See **Figure 4-1**).
- The alignment of the crossing of the Nambucca River was modified to provide an effective connection between the northern end of Option 1c and the southern end of Option 2a. The proposed new alignment has been located so as to provide a minimum 100 metre offset between the alignment and the edge of SEPP 14 wetland No. 383 adjacent to Newee Creek (See **Figure 4-2**).
- The alignment of Option 2a was moved to the eastern side of Old Coast Road to allow the existing road to be maintained as a local access road and to limit property impacts. Within the Nambucca State Forest, minor modifications were also undertaken to reduce impacts on the special forest management zones within the forest and endangered ecological communities (See **Figure 4-2**).
- The alignment of Option 3a was modified in the vicinity of Boggy Creek to provide the opportunity for an interchange without the need to realign the existing Pacific Highway (See **Figure 4-3**).
- The alignment of Option 3a was modified in the vicinity of Cow Creek to minimize potential impacts on a site of significance to the Aboriginal community (See **Figure 4-3**).
- The alignment of Option 3a was modified in the vicinity of Oyster Creek Road to increase the curve radii to 750metres and provide an improved alignment for the crossing of the high voltage electrical transmission line (See **Figure 4-3**).
- North of the Kalang River, the alignment of Option 4b was moved slightly west to increase the separation between it and the adjacent SEPP 14 wetlands (See **Figure 4-4**).

Further refinement of the alignment would be considered during the development of the design and environmental assessment of the Proposal.

4.2 Interchange design issues

Access to the Macksville to Urunga section of the Proposal will be provided at the existing interchange at Raleigh and at proposed new interchanges located south of Macksville and west of Nambucca Heads. Alternative locations for the new interchanges were shown in the November 2005 community update and the November 2005 *Macksville to Urunga, Upgrading the Pacific Highway – Preferred Route Report* (RTA, November 2005).

Following further investigations, a workshop attended by representatives of Bellingen and Nambucca Shire Councils and consideration of the submissions received following the announcement of the preferred route, the preferred locations and layouts of the interchanges have been identified. They are described below and shown in Figures 4-1 to 4-4.

Interchange south of Macksville

The preferred location for the south Macksville interchange is at Bald Hill Road (see **Figure 4-1**). This option was seen to perform better than the alternative location as it:

- Is closer to Macksville.
- Provides improved access to Scotts Head, Warrell Creek and Donnellyville from both the highway and Macksville.
- Has less direct and indirect impacts on adjacent properties.

Interchange west of Nambucca Heads

The preferred location for the Nambucca interchange is near Boggy Creek (see **Figure 4-3**). This option was seen to perform better than the alternative location as it provides improved access to:

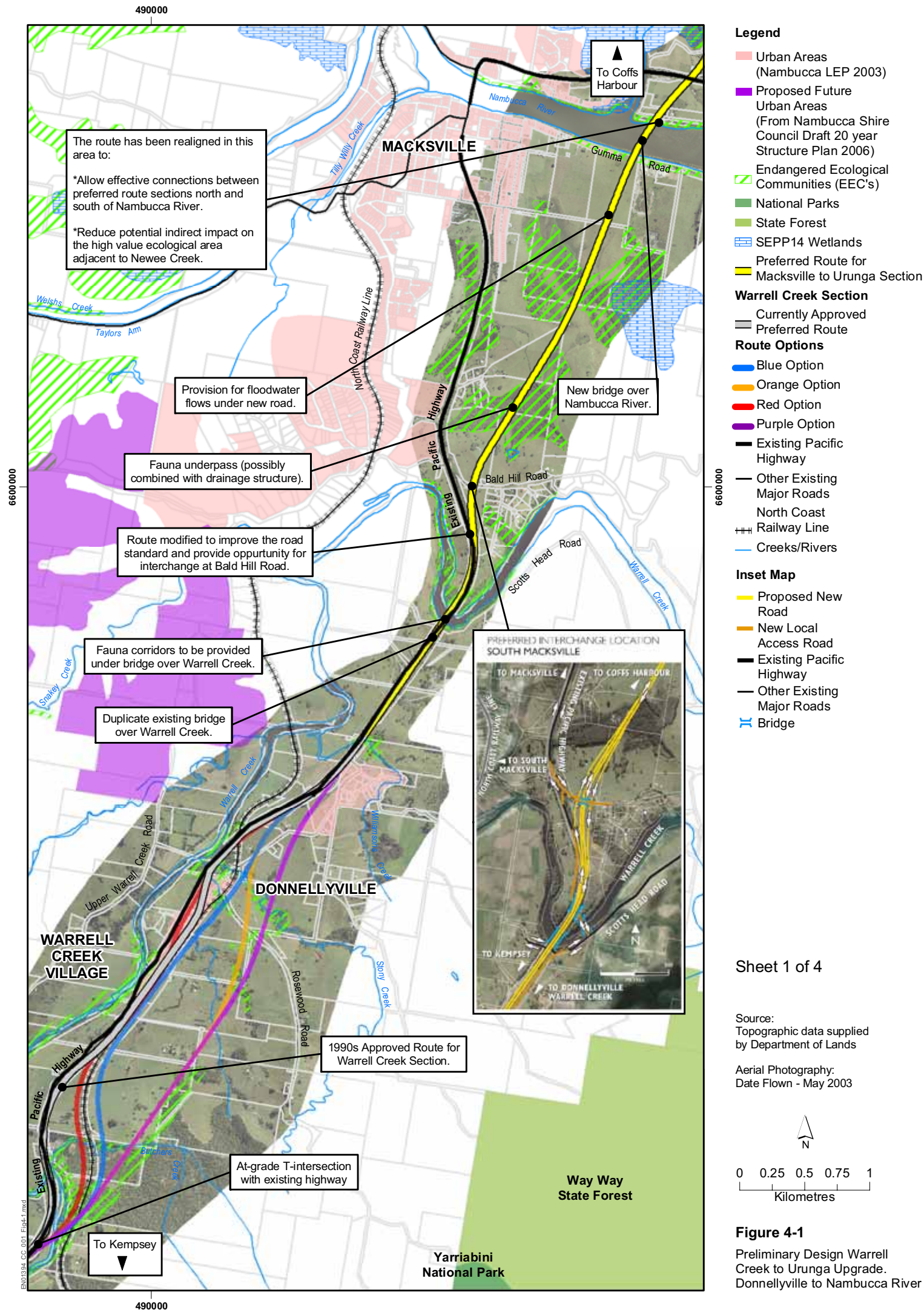
- Nambucca Heads, Valla / Valla Beach and adjacent areas and South Urunga.
- The Boggy Creek future urban area west of Nambucca Heads.

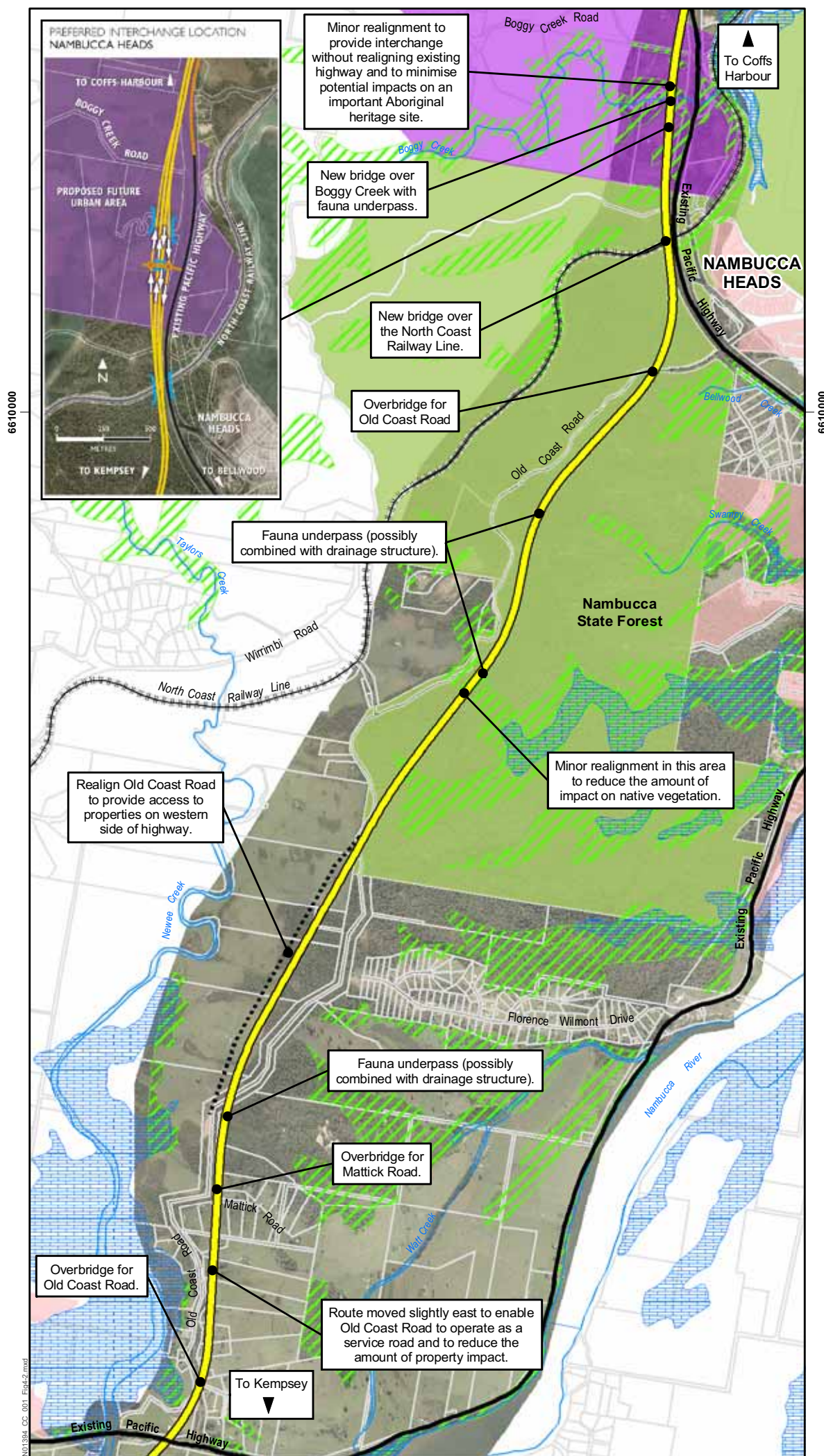
Raleigh interchange

The existing Waterfall Way interchange at Raleigh will be modified to tie in with the Proposal. The proposed layout for the modified interchange is shown in **Figure 4-4**.

Local access arrangements

In general, access between townships would not be affected as the existing highway and other local roads would be retained for access to townships, communities and properties. Where required, these roads would pass over or under the Proposal. Local access arrangements would be further investigated during the development of the design for the Proposal.





Legend

- Urban Areas (Nambucca LEP 2003)
- Proposed Future Urban Areas (From Nambucca Shire Council Draft 20 year Structure Plan 2006)
- Endangered Ecological Communities (EEC's)
- State Forest
- SEPP14 Wetlands
- Preferred Route for Macksville to Urunga Section
- Existing Pacific Highway
- Other Existing Major Roads
- Local Access Road
- North Coast Railway Line
- Creeks/Rivers

Inset Map

- Proposed New Road
- New Local Access Road
- Existing Pacific Highway
- Other Existing Major Roads
- Bridge

Sheet 2 of 4

Source:
Topographic data supplied
by Department of Lands

Aerial Photography:
Date Flown - May 2003

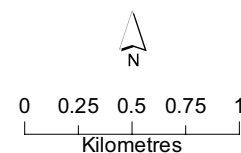


Figure 4-2

Preliminary Design Warrell Creek to Urunga Upgrade. Nambucca River to North Coast Railway Line west of Nambucca Heads

