

7. Value Management Workshop

7.1 Introduction

A two day Value Management Workshop (VMW) was held on 12 and 13 December 2005. The value management workshop was used to review and assess the four route options that were placed on public display against assessment criteria to help decide on a preferred direction for further investigation to progress the planning phase of the project. The assessments undertaken at the VMW were one input into the process for determining the preferred route for the project.

Workshop participants included representatives from:

- ▶ Port Macquarie-Hastings Council
- ▶ Department of Planning
- ▶ Department of Environment and Conservation
- ▶ Kempsey Local Aboriginal Land Council
- ▶ Community Liaison Group
- ▶ NRMA
- ▶ GHD Pty Ltd
- ▶ Kempsey Shire Council
- ▶ Department of Natural Resources
- ▶ Department of Primary Industry
- ▶ Dunghutti Elders
- ▶ Environmental Focus Group
- ▶ RTA

An independent facilitator from the Australian Centre for Value Management chaired the Workshop.

Full details of the VMW are presented in the Value Management Workshop Report (Australian Centre for Value Management, 2005) are publicly available on the Pacific Highway Upgrade website (www.rta.nsw.gov.au/pacific -click on Oxley Highway to Kempsey).

7.2 Route Option Assessment

During the VMW, participants developed assessment criteria under three key categories, based on what participants considered to be the most important issues for assessing the route options. The participants assessed the options for the Class M (motorway) scenario only. The three criteria categories were:

- ▶ Functional;
- ▶ Social and Economic; and
- ▶ Natural and Cultural Environment.

Workshop participants were then asked to weight the criteria within each of the three categories to determine which criterion were valued as being the most important and which criterion were valued as being less important. Weighting of criterion across each category was not undertaken.

A summary of the criteria developed by participants and the weighting applied to each criterion is provided in Tables 7.1 to 7.3.

Table 7.1 VMW Assessment Criteria – Functional Category

ID	Assessment	Relative Weighting
A	Potential for delays during construction for road users	-
B	Capacity to stage and achieve early benefits	37.5%
C	Safety risks during construction (conflict of construction with road users)	12.5%
D	Route length and grade efficiency (ie. travel time)	28%
E	Ability to gain benefits early (ie. Staging)	22%
Total		100%

Table 7.2 VMW Assessment Criteria – Social and Economic Category

ID	Assessment	Relative Weighting
A	Number and area of properties acquired	12%
B	Consolidation of communities	14%
C	Compatibility with existing businesses and planning proposals	27%
D	Views and aesthetics from the road corridor	-
E	Impacts on agricultural, forest and rural lands (commercial, productive land)	21%
F	Noise impacts on existing and new receivers	23%
G	Views and aesthetics of the road from the community	3%
Total		100%

Table 7.3 VMW Assessment Criteria – Natural and Cultural Environment Category

ID	Assessment	Relative Weighting
A	Impact on wildlife corridors	6%
B	Impact on Aboriginal heritage	26%
C	Impact on non Aboriginal heritage	2%
D	Impacts on waterways and wetlands	11%
E	Impact on threatened species (including koalas and habitat)	26%
F	Area of HCV/EEC vegetation cleared	26%
G	Total area of native vegetation cleared (excluding other criteria involving cleared vegetation)	3%
Total		100%

Workshop participants were then presented with the details of each of the four route options by project team.

Having become familiar with what each option entailed, workshop participants were asked to assess the route options in Sections A, B, C and D using the weighted assessment criteria above.

The assessment of options against the criteria enabled the route options within each project section to be ranked in order of value i.e. how well each option scored/performed against the assessment criteria within each category.

7.3 Summary of Assessment Results

The results of the options assessment for Sections A, B, C and D are shown in Tables 7.4 to 7.7 below. A ranking of 1 represents the highest ranking option within each category. Two equal numbers within a criteria category meant that two options perform equally well against the assessment criteria.

The strategic cost estimates presented in the following tables were available at the time of the VMW. These estimates have since been modified as a result of further investigations.

Table 7.4 VMW Ranking of Route Options - Section A

Option	Criteria Category			Cost (\$M)
	Functional	Social and Economic	Natural and Cultural Environment	
Blue / Green / Purple	1	2	1	280
Orange	1	1	2	230

Table 7.5 VMW Ranking of Route Options - Section B

Option	Criteria Category			Cost (\$M)
	Functional	Social and Economic	Natural and Cultural Environment	
Blue / Green	3	3	1	230
Purple	2	2	3	280
Orange	1	1	2	250

Table 7.6 VMW Ranking of Route Options - Section C

Option	Criteria Category			Cost (\$M)
	Functional	Social and Economic	Natural and Cultural Environment	
Blue / Green / Purple	2	1	1	65
Orange	1	2	2	80

Table 7.7 VMW Ranking of Route Options - Section D

Option	Criteria Category			Cost (\$M)
	Functional	Social and Economic	Natural and Cultural Environment	
Blue	2	1	1	145
Green / Purple / Orange	1	1	1	170

As a result of the discussions over the two days of the workshop, the group agreed to the following conclusions:

- ▶ The preferred corridor option recommended was a comprised of the Orange Option in Sections A and B, the common Blue / Green / Purple options in Section C and the common Green / Purple / Orange option in Section D, subject to the points noted below;
 - The Study Team needed to prove up the materials arising from the workshop including the recorded assumptions and the “subject to “ items accompanying the recommendations;
 - The workshop group acknowledged that the recommendations are made based on the level of information available at the time of the workshop which requires supplementation;
 - The significant environmental impacts (i.e. flora and fauna impacts) needed to be costed with realistic allowances for mitigation measures factored into the project budget;
 - Continued consultation with the Aboriginal communities and the Elders was required to clarify possible heritage constraints (and any potential LALC matters which may impact on the project);
 - Staging and local access arrangements for the project (i.e. separated carriageway, Class M or Class A road standards) were to be finalised; and
- ▶ The workshop was a positive experience that embraced perspectives across a broad cross section of stakeholders, which contributed to the successful workshop outcomes.

7.4 Issues Raised at the Value Management Workshop

The group raised a number of issues during the VMW that required further investigation by the study team. The recommendation of the Orange Option in Section A and B, the common Blue / Green / Purple in Section C and the common Green / Purple / Orange option in Section D was subject to these issues being investigated further.

Table 7.8 lists the issues raised by participants and describes the results / outcomes of the follow up investigations.

Table 7.8 Issues Raised at the VMW with Responses

Issue	Response
Section A	
Considering the potential for realignment at the northern end of Section A to minimise impacts on the Cairncross State Forest and Rawdon Creek Nature Reserve (i.e. move the corridor to the east and parallel to the highway).	A modification to the Orange option, known as the Refined Orange option was developed to minimise intrusion into Cairncross State Forest and Rawdon Creek Nature Reserve within Section A. The alignment of this option is located closer to the existing highway.
Access for existing residents along the south bank of the Hastings River being maintained.	Access arrangements will be developed during the concept design of the preferred route. Final access arrangements will depend upon the location of the grade separated interchange, which will also be determined during concept design. Generally accesses will be rationalised and/or modified in a Class A scenario, and provided via local access roads in the Class M scenario.
Resolving a suitable “Gateway” presentation for Port Macquarie from the north.	Subject to the final location of a grade separated interchange either south of Fernbank Creek or in the vicinity of Blackmans Point Road. To be finalised as part of the concept design phase.
Section B	
Appreciation that the mitigation measures are likely to involve substantial costs (possibly above any “averaging” costs employed in the estimates).	<p>Preliminary cost estimates for all options have been developed to date using industry standard methodology. These estimates currently provide for substantial contingencies due to the preliminary nature of the design, and will be refined during the concept design of the preferred route.</p> <p>The estimates allow for environmental and social mitigation measures, and are based on the extensive experience of the RTA with previous highway upgrade projects.</p>
Undertaking the feasibility of realigning the Orange option to enable joining the corridor recommendations in Sections A and B (i.e. moving the corridor further to the east) and avoiding / minimising the impacts on environmental considerations, farms and the State Forests.	A modification to the Orange option, known as the Refined Orange option was developed to minimise intrusion into Cairncross State Forest and Rawdon Creek Nature Reserve within Section A. The alignment of this option is located closer to the existing highway. As discussed in Section 6.5 moving the alignment further to the east was also considered.
Completion of detailed environmental studies in Cairncross State Forest and north of Wilson River (near Wilmaria Drive) to determine the impacts.	Following the VMW, a Refined Orange option was developed that resulted in less severance of Cairncross State Forest. This alignment was subject to a similar level of ecological field investigations as undertaken for the four original options. The results of these investigations indicates that there is a similar level of impact relative to the Orange option in terms of habitats impacted.

Issue	Response
An Aboriginal cultural heritage assessment (based on engagement with the local Aboriginal people).	Following the announcement of the preferred route further detailed ecological investigations will be undertaken. At this stage the potential impacts will be identified and feasible mitigation measures will be developed in consultation with relevant stakeholders including DEC. A preliminary Aboriginal heritage assessment and additional consultations with the local Aboriginal community has been undertaken to date to ascertain the presence of listed and unlisted sites and areas of cultural sensitivity within the study area. Following the announcement of the preferred route further detailed Aboriginal heritage investigations and consultation will be undertaken.
A better understanding of impacts on businesses and properties in the area.	Following the announcement of the preferred route further investigations and consultation will be undertaken with the all affected parties and the general community to ensure the impacts are identified and feasible mitigation measures developed.
Section C	
Ensuring the developed design has minimal impacts on the Cooperabung Hill climb track.	To be investigated further in the concept design phase.
Section D	
Having more detail and a better appreciation of the impacts on the flora and fauna for this option.	Following the announcement of the preferred route further detailed ecological investigations will be undertaken. At this stage the potential impacts will be identified and feasible mitigation measures will be developed in consultation with relevant stakeholders including DEC.
Detail of the mitigation measures for fauna being practical and feasible to avoid the east to west segregation / severance.	
Refining the option to minimise incursion into the Maria River State Forest (i.e. move closer to existing highway) whilst balancing the separation of the corridor from the existing highway during construction (i.e. safety issues during construction).	The two option corridors developed for Section D are located in close proximity to one another. The Blue option corridor is located closer to the existing highway alignment, thus minimising intrusion within the state forest. Both option corridors were further considered in the selection of the preferred route as documented in Section 8 of this report.
Clarification of the cost difference between this corridor option and the Blue option.	Strategic cost estimates used at the VMW. To be refined further during the concept design phase.

7.5 Refined Orange Option

Following the completion of the VMW and due to issues raised at the VMW, the Orange option through Sections A and B were investigated further with the aim of refining the orange option so as to minimise impacts on Cairncross State Forest, Rawdon Creek Nature Reserve, koala habitat, tea tree farming and key agricultural land. As a result, a refined orange option was developed from Fernbank Creek to Wilson River. The refined orange option is shown in Figure 7.1 and described below.

Section A

The realignment for the Refined Orange option commences at a point further north than the Orange option, at Fernbank Creek. However, the Refined Orange option has been moved to the east at the crossing of the Hastings River so that it minimises the impact on Cairncross State Forest and Rawdon Creek Nature Reserve further to the north. The option then rejoins the existing highway alignment approximately 900 metres south of Blackmans Point Road where duplication of the existing highway is proposed through to Blackmans Point Road.

The new realignment over Hastings River impacts on four existing residences in Glen Ewan Road and two additional rural residences on the northside of Hastings River. The alignment also has an impact on land owned by Birdon Marine (western end) which will reduce potential land for future redevelopment.

The proposed twin bridges over Hastings River would be shorter with the refined orange alignment. However, additional bridges would be required over Glen Ewan Road.

Impact upon and severance of Cairncross State Forest and Rawdon Creek Nature Reserve is reduced by the refined alignment.

Section B

At Blackmans Point Road the refined orange alignment follows the existing highway alignment for 2 km north of Blackmans Point Road where the alignment departs from the existing highway to the east, passing through the westerly section of a parcel of Cairncross State Forest.

From the northern end of the Cairncross State Forest the alignment then passes between the eastern end of Moorside Drive and the tea tree plantation and then in a northerly direction towards the eastern end of Dulhunty Island, crossing the Wilson River in a similar location to the orange option.

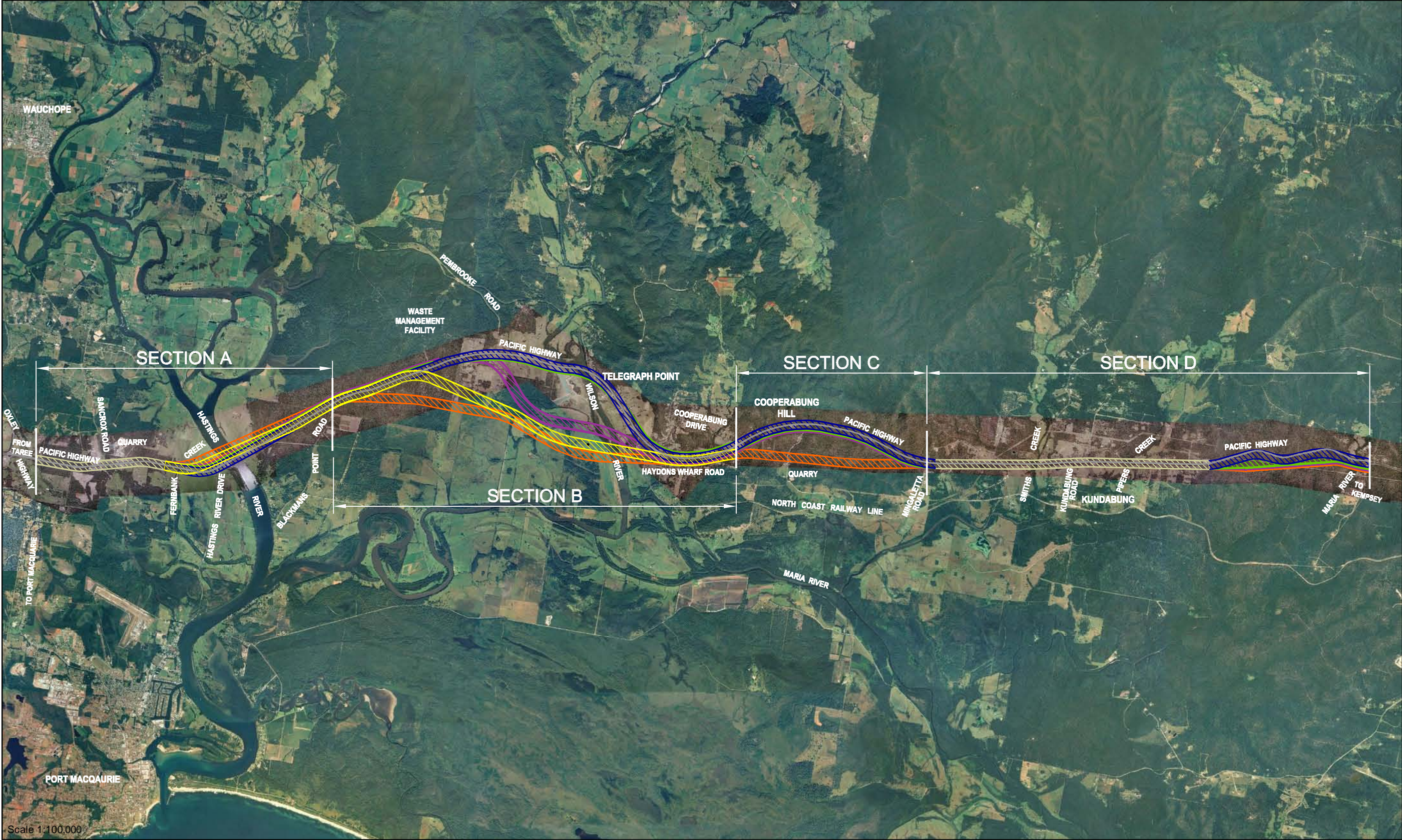
As is the case with the orange option the alignment in this area lies outside the study area set for the project in November 2004.

Most of the existing highway in the 2.0km section that the refined alignment follows has been identified as not suitable for upgrade to 200 km/hr design standard and would require reconstruction.

Although acquisition and severance of the Cairncross State Forest has been reduced over the orange option, there is an increase in the number of properties affected by the alignment in the vicinity of Moorside Drive, as well as increased noise receivers. The 'Skirmish' business located on Bill Hill Road is directly impacted by the refined alignment.

The refined orange option was presented at the Project Team Route Selection Workshop for consideration along with the four previously short listed options.

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<p>0 1 2 3 Kilometres</p> <p>Map Projection: Universal Transverse Mercator Horizontal Datum: Geodetic Datum of Australia 1994 Grid: Map Grid of Australia, Zone 56</p>		<p>LEGEND</p> <table border="0"> <tr> <td></td> <td>Blue option</td> <td></td> <td>Purple option</td> <td></td> <td>Common corridor for all options</td> </tr> <tr> <td></td> <td>Green option</td> <td></td> <td>Orange option</td> <td></td> <td>Refined Orange option</td> </tr> </table>		Blue option		Purple option		Common corridor for all options		Green option		Orange option		Refined Orange option
	Blue option		Purple option		Common corridor for all options									
	Green option		Orange option		Refined Orange option									

Spatial layers courtesy of Port Macquarie - Hastings Shire Council, Kempsey Shire Council, NSW Department of Environment and Conservation, NSW Forests, NSW Department of Lands and NSW Roads and Traffic Authority

Refined Orange Route Option

Figure 7.1

