

8. Project Team Route Selection Workshop

8.1 Introduction

Following the VMW, the study team undertook the assessment and selection of the preferred option based upon the performance of each option under various assessment criteria. The objective of the workshop was to select a preliminary route for the project for further development at concept design stage. The analysis included the four options that had been displayed in October-November 2005 as well as the Refined Orange Option. All of these options were assessed against agreed assessment criteria by the project team.

Issues arising from the submissions in response to the public display of the route options, and the outcomes from the VMW were used to inform participants.

The assessment was a simple comparison of the four publicly displayed options (Blue, Green, Purple & Orange) plus a sub-option of the Orange Option in section A and B arising out of the VMW, known as the Refined Orange Option. The comparison assessed which option, on balance, would provide best value for money.

8.2 Key Principles

The assessment of the options was based on satisfying the program objectives to the greatest extent. Criteria were developed to enable comparison between the options. The criteria were reviewed and then grouped into three categories encompassing the program objectives as stated in Section 2. The categories were:

- ▶ Functional;
- ▶ Community; and
- ▶ Environment.

The key aim of the assessment was to differentiate between the options. Therefore, criteria that did not differ between options were not assessed.

8.3 Assessment Criteria

The agreed assessment criteria under the functional, community and environment categories and their relevant descriptive measures are listed in Tables 8.1, 8.2 and 8.3 below.

Table 8.1 Project Team Assessment Criteria - Functional

Summary Title	Descriptive Measure
Transport efficiency – light vehicles	Travel time for passenger vehicles measured in seconds.
Engineering risks	Length of route through floodplain and / or soft soils; Extent of cut and fill in steep areas; and Extent of widening of existing cuttings.

Summary Title	Descriptive Measure
Transport efficiency – heavy vehicles	Travel time for Heavy Vehicles measured in seconds.
Re-use of existing assets	Length of existing road pavement re-used as part of the new highway carriageway.
Staging opportunities	Group discussion and consensus on whether or not the route option would enable staging of the works to be undertaken in order to achieve early benefits in safety, transport efficiency and / or other Pacific Highway Upgrade Program objectives.
Safety during construction	Extent of areas where speed zones would be required during the works; and Extent of traffic interfaces with the works area.

Table 8.2 Project Team Assessment Criteria - Community

Summary Title	Descriptive Measure
Noise for private properties	Weighted noise impact score based on property distances from the route option centreline to address existing and new noise receivers.
Community severance / consolidation	Changes in access provisions for the townships of Telegraph Point and Kundabung.
Private properties acquired	Area of private land (excluding commercial farms) to be acquired and the number of affected owners.
Houses / structures acquired	Number of houses and other structures directly affected by the route option.
Visual amenity	Length of the proposed route through high visual constraint areas. This measure was agreed to be highly subjective.
Commercial business impacts	Potential negative impacts on commercial businesses through acquisition of land and loss of access and visibility.
Loss of public estate	Loss of access to areas of public recreation lands.
Aboriginal heritage	Number of significant sites and key cultural areas within the 250m wide route corridor study area.
Non-Aboriginal heritage	Number of significant and / or registered sites within the 250m wide route corridor study area.
Loss of productive land	Extent of impact upon land currently zoned for rural, horticultural or forest management.

Table 8.3 Project Team Assessment Criteria - Environment

Summary Title	Descriptive Measure
SEPP 14 – areas	Wetlands affected by the route option
SEPP 14 – extent of severance	Where residual SEPP 14 land is remaining on either side of the route corridor.
Water quality	Number of watercourses the route option would cross as an indication of potential risk to water quality through the project route.
Native flora – threatened species	Number of potentially threatened flora species within the 250m wide route corridor study area.
Native flora – vegetation	Area of native vegetation to be cleared.
Native flora – communities	Area of Endangered Ecological Communities affected
Native fauna – known threatened species	Area of habitat to be cleared which would have the potential for threatened species to be present. Areas were defined as having high, medium and low potential.

8.4 Assumptions

The discussion and outputs of the workshop were based upon the following assumptions:

- ▶ The assessment of all options was based on a Class M corridor to ensure a comparative basis in how they are assessed, particularly against the primary objectives of the Pacific Highway Upgrade Program; and
- ▶ The assessment does not need to reflect in any detailed way on the positives or negatives of the options, but rather to emphasise how they address the issues, concerns and potential improvements raised in the VMW and the Route Options Submissions Report.

8.5 Scoring and Ranking Process

The criteria in each category were ranked in terms of importance using a paired comparison matrix approach in order to determine a weighting. The weighting was then used in determining a score for each criterion, which was then summed to provide the ranking of each option within the three categories.

The ranking categories represent the “value” of the option. This was then considered alongside the estimated construction cost (“money”) to determine the “value for money” of each option. The assessed rankings for each project section are presented in Tables 8.4 to 8.7.

The data used during the Project Team Route Selection Workshop to compare options against the assessment criteria is presented in Appendix A. It should be noted that the data presented in Appendix A was updated following the Value Management Workshop as a result of additional investigations being undertaken. As a result some of the data / statistics may differ to that contained in Appendix 4 of the Value Management Workshop Report. A copy of the Value Management Workshop Report (Australian Centre for Value Management, 2005) can be viewed on the project website: www.rta.nsw.gov.au/pacific (click on Oxley Highway to Kempsey).

Table 8.4 Project Team Ranking of Route Options – Section A

Option	Criteria Category			Cost (\$M)
	Functional	Community	Environment	
Blue / Green / Purple	3	1	1	229
Orange	1	1	3	194
Refined Orange	1	3	2	214

Table 8.5 Project Team Ranking of Route Options – Section B

Option	Criteria Category			Cost (\$M)
	Functional	Community	Environment	
Blue / Green	3	4	1	223
Purple	3	3	4	255
Orange	1	1	3	222
Refined Orange	2	1	2	230

Table 8.6 Project Team Ranking of Route Options – Section C

Option	Criteria Category			Cost (\$M)
	Functional	Community	Environment	
Blue / Green / Purple	1	1	1	66
Orange	1	2	2	77

Table 8.7 Project Team Ranking of Route Options – Section D

Option	Criteria Category			Cost (\$M)
	Functional	Community	Environment	
Blue	1	1	1	144
Green / Purple / Orange	1	1	1	164

8.6 Summary of Recommendations

Section A

Workshop participants recommended that the Orange Option be adopted as the preferred route because the Orange Option:

- ▶ Was the best performing option in terms of addressing the assessment criteria listed under the categories of Functional criteria and Community criteria;
- ▶ Would potentially better satisfy community expectations through this section;
- ▶ Has the least potential impact on key river-based businesses and adjacent residences;
- ▶ Has the lowest capital (project) cost; and
- ▶ On balance, represents the best overall value for money option.

Section B

Workshop participants recommended that the Refined Orange Option be adopted as the preferred route because the Refined Orange Option:

- ▶ Has the least impact on productive lands; and
- ▶ Although the Orange Option is the best performing in terms of addressing the functionality assessment criteria and lowest capital cost, the Refined Orange Option performs better in terms of the Environmental assessment criteria.

Section C

Workshop participants recommended that the common Blue / Green and Purple Option be adopted as the preferred route because the Blue / Green / Purple Option:

- ▶ Was the best performing option in terms of addressing the assessment criteria listed under the categories of Environmental criteria, Functional criteria and Community criteria; and
- ▶ Has the lowest capital (project) cost; and
- ▶ On balance, represents the best overall value for money option.

Section D

Workshop participants recommended that the Blue Option be adopted as the preferred route because the Blue Option:

- ▶ Was the best performing option in terms of addressing the assessment criteria listed under the categories of Environmental criteria, Functional criteria and Community criteria;
- ▶ Has the lowest capital (project) cost; and
- ▶ On balance, represents the best overall value for money option.

This recommendation differed to the VMW recommendation of the common Green / Purple / Orange option however, it agrees with the VMW 'subject to' which sought to lessen the impact on Maria River State Forest by minimising the deviation from the existing highway.