

5 Value Management Analysis of Route Options

As noted in **Section 1.7**, the VMW is one of the three streams of input to the preferred route selection process described in **Chapter 7**. The value management process was established to review highway planning investigations and identify the values that are collectively important within the study area. As part of this process a Corridor Assessment Workshop was held in August 2005, to bring together a wide range of stakeholder interests and expertise, followed by the VMW in December 2005.

The assessments and evaluations of the VMW are described in detail in the *Tintenbar to Ewingsdale Value Management Workshop Report* (RTA 2006). The key issues and outcomes from the value management process are summarised below.

5.1 Corridor Assessment Workshop

The objective of the Corridor Assessment Workshop was to obtain a common understanding of the highway upgrade project and the work undertaken to date, and to agree on assessment criteria and weightings with which to evaluate corridor options later in the project's development.

The Corridor Assessment Workshop drew from the perspectives and detailed specialist knowledge of the workshop participants. The participants identified challenges that the project must address and what the project must achieve to be successful.

Assessment criteria were developed for three key perspectives – Functional; Social and Economic; and Natural and Cultural Environment. The group developed weightings for the criteria within each of the three perspectives.

5.2 Value Management Workshop

The objective of the VMW was to bring together key stakeholders to:

- Recap the findings of the Corridor Assessment Workshop undertaken in August 2005.
- Share with participants what has happened since the Corridor Assessment Workshop.
- Review the shortlisted options developed and identify potential improvements to meet the project objectives.
- Evaluate the shortlisted options using the assessment methodology developed in the Corridor Assessment Workshop.
- Recommend a direction to progress the project.

Stakeholders participating in the VMW included: Ballina and Byron Shire Councils, DoP, Department of Natural Resources (DoNR), DEC, DPI, Rous Water, Northern Rivers Regional Development Board, Jali Local Aboriginal Council, Arakwal Group, Department of School Education, Newrybar Public School, NSW Ambulance, Rural Fire Service, Optus, NRMA, NSW Road Transport Association, Rail Infrastructure Corporation, and representatives of the CLG and AFG established for the project.

The VMW group reviewed the material presented at the Corridor Assessment Workshop including the project program, objectives, and framework, and a preliminary analysis of issues raised in the RODR submissions.

Participants embraced the methodology developed in the Corridor Assessment Workshop, but the assessment criteria and weightings were revisited and a modified set of criteria were agreed for use at the VMW. The assessment criteria were recast under four key perspectives – Functional, Social, Economic, and Natural and Cultural Environment – and re-weighted. The key assessment criteria for each perspective were identified as:

- Functional Perspective
 - Improve safety and reduce accidents (local and on the highway) e.g. fog, staging to bring on results earlier, etc.
 - Potential for effective access points and links.
 - Buildability.
 - Use of existing highway, infrastructure and utilities.
- Natural and Cultural Environment Perspective
 - Impact on Aboriginal cultural heritage.
 - Impact on native and regenerated vegetation (including threatened species of flora and fauna).
 - Impact on EECs and remnant native vegetation.
 - Risk to drinking water catchments.
 - Impact on wildlife corridors and terrestrial and aquatic habitats.
- Social Perspective
 - Noise – social impact of noise: number, relative, new receivers.
 - Severance of communities.
 - Impact on the community's views (including quality of life and landscape).
 - Proximity to sensitive receivers (e.g. school, health, air quality).
 - (Social) Impact on agricultural lands.
- Economic Perspective
 - Impact on agricultural lands.
 - Impact on local businesses – directly and indirectly.
 - Impact of changed hydrology (flooding, springs etc).

The VMW group reviewed the shortlisted route options using their weighted assessment criteria with a view to differentiating the corridor options under each of the four key perspectives. The VMW ranking of the shortlisted route options is shown in **Table 5.1**. The options were ranked on a comparative basis, 1 was the highest ranking.

Table 5.1 Rankings Ascribed by the Value Management Workshop

	Functional	Natural & Cultural Environment	Social	Economic	Capital \$(M)
Option A1 – A2	5	1	1	1	320
Option A1 – B2	5	2	2	4	340
Option B1 – A2	1	2	3	1	310
Option B1 – B2	1	4	5	4	330
Option C	1	5	5	6	320
Option D	1	5	3	1↓	305
Option T1	1	1	1	2	80
Option T2	1	1	2↑	1	90

Note: ↓ – A consensus was not reached regarding agricultural land values; further studies were requested. Due to the high weighting of the criterion, Option D could move from the highest ranked option to the lowest ranked option in the Economic perspective.
 ↑ – The VMW considered there to be little difference between T1 and T2 on social issues and that further noise analysis might demonstrate an increased favourability of T2 compared to T1.

5.3 Outcomes of Value Management

The VMW group also provided recommendations for further investigation and route option refinement. The conclusions and recommendations agreed by the VMW group are listed below.

- All corridor options have impacts in the study area (there is no perfect option).
- Option B2 and Option C1 should not be considered further.
- Option A1, Option A2, Option B1, and Option D were preferred over other options, subject to further investigations.
- Further investigations recommended included:
 - The agricultural economic impacts of Option D (including agricultural land values and relative impacts).
 - The noise impacts of tunnel approach options T1 and T2.
 - Examination of frequent rainfall events that relate to farming irrigation practices and water management in the zone between the surface and 'ground water' levels.
 - Air quality and emissions from potential highway corridors; and establish a view on the potential impact on public health.
- There is opportunity to look at combinations of A1 and B1 to find the most suitable alignment in terms of the assessment values recorded.
- Further investigation of economic impacts for both the regional and local perspective.

The results of the VMW were reported to the community via a notice placed in local newspapers in late December 2005. The VMW Report was placed on the RTA project website in March 2006. The outcomes of this stream of work are considered in the route selection process described in **Chapter 7**.

