Mount Victoria to Lithgow
Great Western Highway Upgrade
Concept design
Community and stakeholder feedback report
April 2013
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Appendix A - Key stakeholder responses
1. Introduction

The Australian Government in partnership with the NSW Government has committed $250 million as part of the Nation Building Program to commence an upgrade of the Great Western Highway between Mount Victoria and Lithgow.

Planning for the upgrade of the Great Western Highway between Mount Victoria and Lithgow began in 2008. A wide range of route options were investigated, including options proposed by the community outside the initial study area (Newnes Plateau). A preferred route that generally follows the existing Great Western Highway (referred to as the orange corridor) was selected and announced in May 2010. Further refinement of the alignment has led to the concept design for the upgrade.

In July 2012 the Australian and NSW governments announced a $250 million revised investment program for the upgrade of the Great Western Highway between Katoomba and Lithgow. The revised investment program includes:

- Upgrading the Great Western Highway at Forty Bends, east of Lithgow, to three lanes on the current alignment.
- An enhanced safety upgrade package between Mount Victoria and Lithgow including safety upgrades through Mount Victoria village, Little Hartley and Hartley and at the Jenolan Caves Road intersection where major work was previously proposed.
- Finalising the concept design and road boundaries for the future upgrade of the highway between Mount Victoria and Lithgow and requesting councils to adopt these in their local environmental plans.
- Using remaining funds from the joint $250 million for safety upgrades between Katoomba and Mount Victoria.

The Mount Victoria to Lithgow concept design and road boundaries were placed on display for community comment between 17 July 2012 to and 26 October 2012. During that period a number of community meetings and displays were held in Mount Victoria, Hartley and South Bowenfels.

This report outlines stakeholder and community feedback about the concept design. The report also includes Roads and Maritime Services' (RMS) comments on, and response to the feedback.

A total of 125 written responses were received. The formal comment period closed on 26 October 2012, however, late comments were accepted up until 31 January 2013. A range of issues were also recorded on flip charts at community meetings and displays. While these issues have not been counted in the statistics in this report they have been incorporated into the analysis of feedback in Section 4 of this report.

Following the completion of the concept design, RMS will approach Blue Mountains City Council and Lithgow City Council to formally reserve the highway corridor in their local environmental plans. The boundaries of the corridor would be based on the final concept design. Timing of
project approval and construction, other than the Forty Bends section, would depend on funding availability.

1.1. Changes to concept design

A number of refinements have been made to the concept design that was displayed in 2012. These refinements include:

• In response to community feedback about potential impacts on the Hartley Historic Site, RMS has agreed that the service road will no longer provide for through traffic, nor pass the Royal Hotel. This will minimise impacts on heritage.

• Community feedback indicated a preference for a connection between Darling Causeway and the Great Western Highway to reduce heavy vehicles travelling through Mount Victoria. In response, RMS has developed an option to provide a connection for vehicles travelling between Katoomba and Bells Line of Road.

• Locations of eastbound and westbound heavy vehicle rest areas were previously identified. In response to community feedback the layout will be designed to minimise impact.

• The curve of the highway near Fernhill has been improved to integrate better with the Forty Bends section of the highway once it has been constructed, and to allow for a consistent 100 kilometre per hour design speed from the Hartley Valley to South Bowenfels.

• Minor improvements have been made to the turning arrangements on some side roads.

• The number of water quality basins has been reduced on local roads.

For more detail on the final concept design, refer to the Mount Victoria to Lithgow Concept Design, Completion Report which can be downloaded from RMS’ website.

1.2. Structure of this report

This community feedback report is divided into five sections:

• Section 1: Introduction – this section provides an introduction to the report, background on the concept design development process and information about the community feedback report.

• Section 2: Approach to consultation – this section provides information about the concept design consultation process.

• Section 3: Feedback - provides a statistical analysis of the feedback received from the community and stakeholders about the concept design.

• Section 4: Analysis of feedback – this section provides a summary of the feedback received and RMS’ response to the feedback.

• Section 5: Next steps – this section provides a summary of the next steps in the concept design development process.
- Appendix A: This appendix provides a summary of the feedback received from stakeholder agencies and community groups.
2. Community and stakeholder engagement

The needs and interests of the community and other key stakeholders residing within, or having an interest in, the study area are diverse. It is therefore paramount that effective consultation activities be implemented to maximise community involvement and capture the range of views throughout all stages of project development, from selection of route options to detailed design.

In order to achieve these aims RMS sought to:

- Implement a clear consultation framework that complemented the development process and project milestones.
- Ensure that affected property owners, the community and stakeholders are well informed about the concept design.
- Provide affected property owners, the community and stakeholders with an opportunity to provide feedback, ask questions and to identify areas of concern with respect to the concept design.
- Minimise speculation and misinformation about the planning process through the provision of good information.
- Build relationships and resolve issues to progress the planning process.

Outputs from previous consultation events are available on RMS’ website.

2.1. Concept design display

2.1.1. RMS Website

The concept design and associated documents were displayed on RMS’ website between 17 July and 26 October 2012. During this period the community and stakeholders were invited to comment on the concept design. Late comments were accepted up until 31 January 2013.

2.1.2. Community Update

A community update was distributed to about 10,000 local households and businesses between Mount Victoria and Lithgow, and was made available at five static display locations and on RMS’ website.

The community update invited comment on the proposed concept design and road boundaries. A tear-off, reply paid, feedback form was included in the community update to assist people to make a comment. A copy of the community update is available on RMS’ website.

2.1.3. Phone, email and letter

Written comments were also accepted via letter, email and a toll free 1800 number (1800 035 733) was provided for enquiries.
2.1.4. Community meetings and displays

During the consultation period a number of community meetings and displays were conducted by RMS. The schedule is outlined in Tables 2-1 and 2-2.

The community meetings included a presentation by RMS, a question and answer session and one-on-one discussions focused on the concept design. The staffed displays provided opportunity for more detailed one-on-one discussions with members of the project team. Issues raised at the community meetings and staffed displays were recorded on flip charts and are also summarised in this report.

Table 2-1: Community meetings and staffed displays

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Event type</th>
<th>Number of attendees*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 August 2012</td>
<td>Noon to 2pm</td>
<td>Mount Victoria Public School</td>
<td>Community meeting</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>6pm to 8pm</td>
<td>Hartley School Building</td>
<td>Community meeting</td>
<td>54</td>
</tr>
<tr>
<td>9 August 2012</td>
<td>Noon to 2pm</td>
<td>Hartley School Building</td>
<td>Community meeting</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>6pm to 8pm</td>
<td>Mount Victoria Public School</td>
<td>Community meeting</td>
<td>52</td>
</tr>
<tr>
<td>11 August 2012</td>
<td>10am to Noon</td>
<td>Union Theatre, Lithgow</td>
<td>Community meeting</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>1pm to 3pm</td>
<td>Union Theatre, Lithgow</td>
<td>Staffed display</td>
<td>5</td>
</tr>
<tr>
<td>17 October 2012</td>
<td>10am to 2pm</td>
<td>The Bowen Inn, South Bowenfels</td>
<td>Staffed display</td>
<td>11</td>
</tr>
<tr>
<td>18 October 2012</td>
<td>Noon to 2pm</td>
<td>Hartley School Building</td>
<td>Staffed display</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>6pm to 8pm</td>
<td>Mount Victoria Public School</td>
<td>Staffed display</td>
<td>40</td>
</tr>
</tbody>
</table>

* Numbers are approximate and represent community members who registered at the meeting

Static displays (that is, displays where no RMS team members are present) were held at five locations between 17 July 2012 and 26 October 2012. Posters, copies of relevant reports and community updates about the proposed concept design were available at the display locations (refer to Table 2-2).
### Table 2-2: Static display venues

<table>
<thead>
<tr>
<th>Dates</th>
<th>Venues</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 July to 26 October 2012</td>
<td>Blue Mountains City Council</td>
</tr>
<tr>
<td></td>
<td>Katoomba Library</td>
</tr>
<tr>
<td></td>
<td>Lithgow City Council</td>
</tr>
<tr>
<td></td>
<td>Lithgow Library</td>
</tr>
<tr>
<td></td>
<td>RMS Motor Registry, Lithgow</td>
</tr>
</tbody>
</table>

#### 2.2. One–on–one discussions with property owners

Both before and after the 2012 display of the concept design, the project team undertook direct consultation with a number of property owners whose properties had the potential to be directly affected by the concept design.

#### 2.3. Invitation to comment - stakeholder agencies

Letters were sent to the following government agencies inviting comment on the concept design:

**Australian Government**
- Department of Sustainability, Environment, Water, Population and Communities

**NSW Government**
- Department of Family and Community Services
- Department of Primary Industries
- Hawkesbury Nepean Catchment Management Authority
- Office of Environment and Heritage, Heritage Branch
- Office of Environmental and Heritage, National Parks and Wildlife Service
- NSW Office of Water
- NSW Police
- RailCorp
- Rural Fire Service
- Sydney Catchment Authority

**Local Government**
- Blue Mountains City Council
- Lithgow City Council
3. Feedback received

This section provides a statistical summary about the feedback received from the community and stakeholders during the concept design display.

3.1. Written responses

A total of 125 written responses were received up until 31 January 2013. The written responses were received via:

- 59 feedback forms.
- 35 letters (including one letter signed by seven respondents).
- 31 emails.

3.2. Key stakeholder responses

Table 3-1 highlights those government and community organisations that provided feedback about the concept design. A summary of the feedback from each of the government agencies and community organisations can be found in Appendix A.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>State government agencies</td>
<td>Department of Primary Industries, NSW Office of Water</td>
</tr>
<tr>
<td></td>
<td>Department of Trade and Investment, Regional Infrastructure and Services, Resources and Energy Division</td>
</tr>
<tr>
<td></td>
<td>Hawkesbury-Nepean Catchment Management Authority</td>
</tr>
<tr>
<td></td>
<td>NSW Heritage Council</td>
</tr>
<tr>
<td></td>
<td>Office of Environment and Heritage, National Parks and Wildlife Service</td>
</tr>
<tr>
<td>Local government</td>
<td>Blue Mountains City Council</td>
</tr>
<tr>
<td></td>
<td>Lithgow City Council</td>
</tr>
<tr>
<td></td>
<td>Central NSW Councils (Centroc)</td>
</tr>
<tr>
<td>Community organisations</td>
<td>Blackheath Highway Action Group</td>
</tr>
<tr>
<td></td>
<td>Hartley Highway Action Group</td>
</tr>
<tr>
<td></td>
<td>Central West Transport Forum</td>
</tr>
<tr>
<td></td>
<td>Nature Conservation Trust of NSW</td>
</tr>
<tr>
<td></td>
<td>The National Trust of Australia</td>
</tr>
<tr>
<td></td>
<td>South Bowenfels Rural First Service Brigade</td>
</tr>
</tbody>
</table>
3.3. Source of feedback

Figure 3-1 provides an outline of the source of written feedback, that is, the number of responses by postcode, where the postcode is known.

Figure 3-1: Number of responses by postcode

3.4. Feedback from community meetings

A range of issues were also recorded on flip charts at the community meetings. These issues are not counted in the statistical data but they have been incorporated into the analysis of feedback in Section 4. For numbers attending community meetings refer to Table 2-1.

3.5. Issues

The feedback received was grouped into 12 main issue categories. Each response was reviewed and categorised according to the issues raised, with sub-issues also being identified in order to provide more detailed analysis and understanding of the issues raised. The issues and sub issues are shown in Table 3-2. Table 3-2 also shows the number of times issues were raised in written responses. If an issue was raised more than once, this has been recorded.
Table 3-2: Issue and sub-issues

<table>
<thead>
<tr>
<th>Issue / sub-issue</th>
<th>Number of times raised in written responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project justification</strong></td>
<td></td>
</tr>
<tr>
<td>Opposed to concept design</td>
<td>194</td>
</tr>
<tr>
<td>Supports project</td>
<td>92</td>
</tr>
<tr>
<td>Funding allocation</td>
<td>39</td>
</tr>
<tr>
<td>Value for money and cost</td>
<td>20</td>
</tr>
<tr>
<td>Safety</td>
<td>13</td>
</tr>
<tr>
<td>Travel time</td>
<td>21</td>
</tr>
<tr>
<td>Opposed to Forty Bends upgrade</td>
<td>3</td>
</tr>
<tr>
<td>Crash data</td>
<td>3</td>
</tr>
<tr>
<td>Alternative transport options</td>
<td>1</td>
</tr>
<tr>
<td><strong>Design engineering</strong></td>
<td></td>
</tr>
<tr>
<td>Intersections</td>
<td>137</td>
</tr>
<tr>
<td>Service road</td>
<td>39</td>
</tr>
<tr>
<td>Heavy vehicle rest stops</td>
<td>29</td>
</tr>
<tr>
<td>Number of lanes</td>
<td>22</td>
</tr>
<tr>
<td>Speed limit</td>
<td>20</td>
</tr>
<tr>
<td>Route</td>
<td>8</td>
</tr>
<tr>
<td>Scale of design and severance</td>
<td>8</td>
</tr>
<tr>
<td>U-turn bay</td>
<td>4</td>
</tr>
<tr>
<td>Cycleways</td>
<td>2</td>
</tr>
<tr>
<td>Road shoulder</td>
<td>2</td>
</tr>
<tr>
<td>Road gradient</td>
<td>1</td>
</tr>
<tr>
<td><strong>Road user concerns</strong></td>
<td></td>
</tr>
<tr>
<td>Safety improvements</td>
<td>85</td>
</tr>
<tr>
<td>Victoria Pass</td>
<td>36</td>
</tr>
<tr>
<td>Freight vehicles/trucks</td>
<td>13</td>
</tr>
<tr>
<td>Traffic</td>
<td>9</td>
</tr>
<tr>
<td>Speeding</td>
<td>8</td>
</tr>
<tr>
<td>Maintenance</td>
<td>7</td>
</tr>
<tr>
<td>Black ice</td>
<td>5</td>
</tr>
<tr>
<td>Construction impacts</td>
<td>4</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td></td>
</tr>
<tr>
<td>Route selection</td>
<td>74</td>
</tr>
<tr>
<td>Consultation approach</td>
<td>45</td>
</tr>
<tr>
<td>Report quality</td>
<td>20</td>
</tr>
<tr>
<td>Planning and approval</td>
<td>5</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Environmental impact assessment</td>
<td>50</td>
</tr>
<tr>
<td>Fauna and flora and vegetation removal</td>
<td>21</td>
</tr>
<tr>
<td>Environmental impacts</td>
<td>12</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td></td>
</tr>
<tr>
<td>Darling Causeway</td>
<td>34</td>
</tr>
<tr>
<td>Local access</td>
<td>18</td>
</tr>
<tr>
<td>Pedestrian access</td>
<td>11</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
</tbody>
</table>
3.6. Issue ranking

Figure 3-2 shows the number of times issues were raised in written responses, ranked highest to lowest.

**Figure 3-2: Ranking of issue categories**
The top four issues raised in written responses are provided in Table 3-3 below. A detailed breakdown of each issue and a preliminary comment from RMS is provided in Section 4 of this report.

**Table 3-3: Top four issue categories**

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Issue category</th>
<th>Number of times raised</th>
<th>Description of issue category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project justification</td>
<td>194</td>
<td>This category refers to the reasons why the community support or oppose the concept design.</td>
</tr>
<tr>
<td>2</td>
<td>Design engineering</td>
<td>137</td>
<td>This category refers to the technical aspects and specific design issues related to the concept design.</td>
</tr>
<tr>
<td>3</td>
<td>Road user concerns</td>
<td>85</td>
<td>This category refers to the issues that impact upon stakeholders who travel on the highway and surrounding local roads.</td>
</tr>
<tr>
<td>4</td>
<td>Process</td>
<td>74</td>
<td>This category refers to the issues around project management and the approach to community feedback.</td>
</tr>
</tbody>
</table>
4. Analysis of feedback

This section summarises the feedback about the concept design received from the community and stakeholders. Each written response was given a unique registration number. The registration numbers are noted under each issue heading.

The pie charts presented under each issue heading reflect the number of times issues were raised in the written responses. In some responses issues were raised more than once and this has been recorded.

Verbal feedback from community meetings is also reported on in this section of the report. While these issues are not counted in the pie charts they have been considered in the analysis of feedback.

4.1. Project justification

This category refers to reasons why the community support or oppose the concept design. This issue category was raised 194 times in responses.

**Figure 4-1: Project justification**

4.1.1. Project justification – opposed to concept design

**Registration numbers**
8, 9, 56, 58, 60, 61, 72, 78, 79, 80, 81, 82, 83, 85, 88, 93, 94, 101, 103, 105, 107, 109, 111, 113, 114, 120, 121, 125

**Feedback in written responses**
Opposition to the concept design was raised 92 times in 28 responses. In summary, opposition to the concept design is based on the impacts of a major highway through the Hartley Valley. A number of responses also stated a general objection to the concept design and its inclusion in the Blue Mountains City Council and Lithgow City Council local environmental plans.

A number of respondents stated that they felt the upgrade was unnecessary. Other respondents noted a preference for increased spending on rail infrastructure.
Blackheath Highway Action Group rejected the concept design on the basis that it fails to consider the impacts on the future viability of the proposed upgrade, including factors such as the carbon tax and predicted future increases in fuel costs.

**Feedback from community meetings**

Participants raised strong opposition to the concept design and its inclusion on local environmental plans. A participant stated that they have not been convinced by RMS that the upgrade to the highway between Mount Victoria and Lithgow is necessary. Another participant noted that the NSW long term transport strategy may change the need for the concept design.

**RMS comment on feedback**

Opposition to the concept design is acknowledged. The Australian and NSW governments have agreed to follow the recommendations of the 2012 independent review with respect to the Forty Bends upgrade proceeding as the first stage of the Great Western Highway upgrade between Mount Victoria and Lithgow.

Under the revised investment program, RMS would manage and deliver the following program by 2016:

- Upgrade the Great Western Highway at Forty Bends to three lanes.
- Undertake safety upgrades through Mount Victoria village, Little Hartley, Hartley and at the Jenolan Caves Road intersection.
- Use any remaining funds from the joint $250 million for safety upgrades of the Great Western Highway between Katoomba and Mount Victoria.
- Finalise the concept design and road boundaries and request that councils reserve the corridor in their local environmental plans. The concept design enables the road corridor to be reserved for the longer term, should funding become available in the future.

The strategic need for the upgrade of the Great Western Highway between Mount Victoria and Lithgow is outlined in Section 1.4 of the Roads and Maritime Services, Mount Victoria to Lithgow Concept Design, Concept Report, July 2012 (Concept Report) which is available on RMS’ website.

4.1.2. Project justification – support for project

**Registration numbers**

1, 4, 9, 11, 14, 17, 19, 21, 22, 26, 30, 32, 33, 35, 36, 39, 40, 44, 48, 51, 52, 53, 64, 65, 68, 69, 74, 84, 92, 102

**Feedback in written responses**

Support for the project was raised 39 times in 30 responses. In summary, feedback included general support for the concept design’s vision and road safety improvements. Particular reference was made to the need to bypass Mount Victoria and Victoria Pass to improve safety. Support for the designs sensitivity to local the community, heritage and environment was also expressed by respondents, including comments from the Blue Mountains City Council.
Feedback from community meetings
Some participants expressed strong support for the concept design.

RMS comment on feedback
Support for the concept design is acknowledged.

4.1.3. Project justification – funding allocation

Feedback in written responses
Funding allocation was raised 20 times in 17 responses. In summary, some respondents expressed disappointment that part of the $250 million allocated to the current upgrade would be diverted to the area between Katoomba and Mount Victoria.

Concern was also raised about the allocation of funding to upgrade Forty Bends. Reference was made to the low benefit cost ratio for this section of the highway.

Some respondents suggested that other sections of the highway had a more pressing need for upgrade including the Hartley Valley, River Let Hill, Victoria Pass and Bells Line of Road. Other respondents suggested that the funding should be allocated to rail upgrades.

Feedback from community meetings
The 2012 independent review commissioned by the NSW Government found that the upgrade of Forty Bends is an appropriate response to the closures and crashes experienced on that part of the road. The independent review assessed the upgrade of Forty Bends as a worthwhile investment despite a low benefit cost ratio. The major reason is the potential for lessening the impact of black ice. The upgrade of Forty Bends fits into the longer-term plan and would be delivered as part of the current funding as would safety work in Mount Victoria and other parts of the Hartley Valley.

4.1.4. Project justification – value for money and cost

Feedback in written responses
Value for money was raised as an issue 18 times in 16 responses. The cost effectiveness of the concept design was questioned with particular reference to the 2012 independent review which found that the project did not represent value for money. Some respondents noted that better value for money would be gained from the Newnes Plateau route or upgrading the Bells Line of Road. Lithgow City Council and Central NSW Councils (Centroc) raised concerns about the cost and therefore feasibility of the project.

The cost of the project was raised three times. Respondents noted that the concept design would cost more than anticipated. Blackheath Highway Action Group raised concerns that the concept design does not fully address the estimated cost of the project.
Feedback from community meetings
Participants raised concerns that resources were being wasted on the concept design. Questions were also raised over the accuracy of cost estimates regarding construction and the concept design.

RMS comment on feedback
While it is acknowledged that the 2012 independent review found that the concept design did not represent value for money and recommended a revised investment program (as outlined in Section 4.1.1), the Australian and NSW governments have agreed to complete the concept design and request councils to reserve the corridor in their local environmental plans.

The total estimated cost for this project is high as a direct result of the topographical and geotechnical complexities at the Mount Victoria end of the project that have necessitated the use of tunnels and viaducts in the preferred route. The high cost estimate for the project means that funding is not available to proceed with constructing the project in one stage. In July 2012, the Australian and NSW governments announced a $250 million revised investment program for the upgrade of the Great Western Highway between Katoomba and Lithgow. The revised investment program included upgrading the highway at Forty Bends. Forty Bends is the only stage of the concept design that would be constructed within the current funding. Should further stages of the concept design be developed in the future, detailed costs would be developed at the appropriate time.

4.1.5. Project justification – safety

Registration numbers
84, 88, 92, 101, 102, 104, 105, 116, 120

Feedback in written responses
Safety was raised as an issue 13 times in nine responses. In summary, some respondents expressed support for the safety upgrades proposed for Mount Victoria village and Hartley Valley. However, it was suggested that widening the highway adjacent to commercial premises is the only enhancement required.

Concerns were also raised about the risk of roadside trees through Hartley Valley.

Some respondents, including Blue Mountains City Council and Centroc, noted general support for the concept design. Respondents noted that the concept design would make for safer access both onto and off the highway for residents, school buses and emergency services.

RMS comment on feedback
The comments regarding safety improvements within the concept design are noted. A number of these safety improvements would be delivered within the enhanced safety program to be delivered within the $250 million investment from Australian and NSW governments (refer to Section 4.1.1 for details of the revised investment program).
4.1.6. Project justification – opposed to Forty Bends upgrade

Registration numbers
88, 101

Feedback in written responses
Opposition to the Forty Bends upgrade was raised three times in two responses and was of a general nature. The Hartley Highway Action Group stated that the Forty Bends upgrade seems excessive, particularly the Whites Creek Bridge.

Feedback from community meetings
A participant noted that since the upgrade of Forty Bends in 2008 there has been a significant reduction in crashes in this location, while Hartley continues to have crashes. Another community member queried why Forty Bends is being treated differently to Hartley.

RMS comment on feedback
The Australian and NSW governments have agreed to follow the recommendations of the 2012 independent review with respect to the Forty Bends upgrade proceeding as the first stage of the Great Western Highway upgrade between Mount Victoria and Lithgow. The 2012 independent review recommended that the upgrade of the highway at Forty Bends proceed as this upgrade would improve safety and reliability of travel and reduce the likelihood of crashes and potential road closures in winter months due to the formation of black ice.

Details of the Forty Bends upgrade design can be found in RMS’ Forty Bends Review of Environmental Factors, Submissions Report (Forty Bends REF Submissions Report) on RMS’ website.

4.1.7. Project justification – travel time

Registration numbers
79, 86, 122

Feedback in written responses
Travel time was raised as an issue on three occasions with respondents questioning the value of a project that only decreases travel time by 11 to 12 minutes. Some respondents suggested that the time saved would be lost because of traffic lights and other delays further down the highway.

Feedback from community meetings
Participants were doubtful about the estimated travel time saving of 12 minutes.

RMS comment on feedback
The key objective of the Mount Victoria to Lithgow concept design is to improve safety for all road users. Other important objectives include improving road freight efficiency, catering for the mix of through, local and tourist traffic and being sensitive to the area’s natural environment, heritage and local communities.

The concept design would result in an overall improvement in the traffic and transport environment for the area in line with the above objectives. The concept design would also
improve freight travel times by realigning curves and reducing grades. This would enable trucks
to travel at the posted speed for longer sections and improve road safety by reducing the mix of
local and through traffic and realigning dangerous curves.

4.1.8. Project justification – crash data

Registration numbers
43, 105

Feedback in written responses
The crash data was raised twice in written responses, and was mainly around the validity of
using Forty Bends crash data as a basis for funding priorities. Blackheath Highway Action
Group also highlighted crash statistics in relation to Medlow Bath and between Medlow Bath
railway station and Evans Lookout.

Feedback from community meetings
Participants asked about the availability of up to date crash data for Forty Bends.

RMS comment on feedback
The latest crash data for Forty Bends is shown in Figure 4-2 which outlines details of crashes in
the vicinity of Forty Bends between 2008 and 2011.

Figure 4-2: Crashes near Forty Bends between 2008 and 2011

The comments regarding crashes at Medlow Bath are noted. Medlow Bath is outside the scope
of the concept design. RMS confirms that any funds remaining from the revised investment
program will be directed to safety upgrades between Katoomba and Mount Victoria. RMS has recently started to consult the community about safety issues between Katoomba and Mount Victoria. Details are available on RMS’ website.

4.1.9. Project justification – alternative transport options

Registration numbers
102

Feedback in written responses
Alternative transport options were raised by Blue Mountains City Council. In summary, Blue Mountains City Council requested that RMS consider council policies about providing connectivity.

RMS comment on feedback
Access and connectivity are discussed in the Concept Report which is available on RMS’ website. Also refer to RMS’ comments on the service road in Section 4.2.1.

4.2. Design engineering

This category refers to technical aspects and specific design issues related to the concept design. This issue category was raised 137 times in responses.

Figure 4-3: Design engineering

4.2.1. Design engineering – service road

Registration numbers
51, 60, 85, 101, 102, 109, 123, 124

Feedback in written responses
The service road was raised as an issue 29 times in eight responses. In summary, Lithgow City Council and others raised strong objections to the service road being directed through Hartley Historic Site and to reopening the Glenroy Bridge. The main objection was that traffic and vibration from the service road would be detrimental to heritage listed buildings and structures.
National Parks and Wildlife Service raised concerns over the original section of Mitchells Road from the Royal Hotel to the former Post Office, stating that it is not wide enough to safely allow two-way traffic. National Parks and Wildlife Service expressed support for service road option 3 through Hartley Historic Site which is outlined in the Concept Report.

Blue Mountains City Council requested that the service road pavement be upgraded before handing over to council to allow for the maximum asset life.

**Feedback from community meetings**

Participants at community meetings raised a number of issues about the service road including the impact of vibration from traffic through Hartley Historic Site, the design of the Little Hartley bypass (a cul-de-sac is preferred), the potential for heavy traffic to use the service road if the highway is blocked and the quality of maintenance of the service road.

**RMS comments on feedback**

In response to community and other stakeholder concerns about the potential impact of the concept design on the Hartley Historic Site, including the reopening of Old Bathurst Road through Hartley Historic Site, an additional three alternative design options have been developed. All of the alternative design options remove through traffic from Hartley Historic Site. One property to the north of the site would have a slightly larger impact as a result of the alternative design options. The three options would remain as part of the concept design and no further work will be undertaken to confirm the final design at this time. When funding is made available for this section of the highway upgrade the options would be reassessed.

As a general principal, the access and connectivity provided by the service road will remain part of the concept design.

4.2.2. Design engineering – heavy vehicle rest stops

**Registration numbers**

40, 51, 60, 61, 79, 80, 81, 85, 88, 93, 101, 102, 104, 107, 109, 118

**Feedback in written responses**

Heavy vehicle rest areas were raised 22 times in 16 responses with concerns focused on the location of the rest areas in the Hartley Valley. Lithgow City Council, Centroc and Hartley Highway Action Group requested that no heavy vehicle rest areas be located in Hartley Valley.

Some respondents suggested alternative locations, including:

- Along the Bell - Newnes - Central West route.
- Inzitari Shell station at the turnoff from the Great Western Highway to Lake Lyell.
- Lidsdale or Forest Drive near the heavy vehicle checking station at Mount Boyce.
- Mount Boyce.

Blue Mountains City Council raised strong concerns over the failure of the concept design to address heavy vehicle issues at the Caltex service station, Mount Victoria.
Feedback from community meetings
Participants expressed strong opposition to the location of heavy vehicle rest areas in Hartley Valley. Browns Gap Road and Mount Boyce were noted as preferred alternative locations.

RMS comments on feedback
The provision of heavy vehicle rest areas on key rural freight routes contributes to managing fatigue, improving road safety, managing rural and regional roads and transporting freight.

RMS is working on various strategies to manage heavy vehicle driver fatigue. The provision of rest opportunities for heavy vehicle drivers is a key element of these strategies. In consultation with the heavy vehicle industry, RMS has adopted a spacing parameter where major heavy vehicle rest areas must be provided generally every 100 kilometres. This strategy is outlined in RMS’ (formerly Roads and Traffic Authority) Strategy for Major Heavy Vehicle Rest Areas on Key Rural Freight Routes in NSW (January 2010).

RMS recognises community concern about the impact of the heavy vehicle rest areas. Locations of eastbound and westbound heavy vehicle rest areas were previously identified. These locations will be included in the road boundaries for future heavy vehicle rest areas. In response to community feedback the details of the layout and design will be reassessed with a view to minimising the impacts at the detailed design stage when funding becomes available.

RMS has established a working group to consider issues associated with heavy vehicle parking in the vicinity of the Caltex Service Station at Mount Victoria. RMS recognises that a collaborative approach with the community and a range of stakeholder organisations is required to address concerns about heavy vehicles in Mount Victoria.

4.2.3. Design engineering – number of lanes

Registration numbers
4, 14, 17, 32, 43, 51, 54, 65, 67, 75, 99, 104, 110

Feedback in written responses
Respondents raised issues around the number of lanes 20 times in 13 responses. The key focus was that the highway should be two lanes each way for the length of the project. In particular it was noted that, as four lanes would be required in the future, it would be short-sighted not to provide these as part of the proposed upgrades.

Feedback from community meetings
The three lane (only) upgrade at Forty Bends was highlighted as a major deficiency. Participants questioned the cost difference between constructing three or four lanes at Forty Bends.

RMS comments on feedback
The concept design has four lanes from Soldiers Pinch through to the top of River Lett Hill to provide for road gradients and safe access to local roads. The Forty Bends section generally provides for three lanes and this is considered adequate to cater for traffic volumes for this section for the next 20 years. Similarly, consideration of existing traffic and safety indicates that a two lane design is generally appropriate for the section through South Bowenfels. Traffic
volumes are lower between Mount Victoria and Lithgow compared to other sections of the highway in the Blue Mountains. However, the concept design reserves a boundary for four lanes (two lanes in each direction) for its entire length, should four lanes be required in the future.

4.2.4. Design engineering – intersections

Registration numbers
18, 27, 33, 45, 46, 51, 55, 56, 65, 77, 81, 95, 96, 98, 100, 105, 113, 116

Feedback in written responses
Concerns about intersections were raised 39 times 18 responses. In summary, respondents raised the following issues about intersections within the concept design:

- Safe turning lanes were requested, particularly for those turning right across traffic onto the Great Western Highway.
- Improved safety was requested for eastbound vehicles turning right into Mudgee Street from the Great Western Highway.
- Concern was raised about the impact of the roundabout at Mudgee Street, particularly on the Rural Fire Service station.
- Improved safety was requested at Ambermere Drive, Baaners Lane, Browns Gap Road and Coxs River Road intersections.
- Concern was expressed about safety of the turn off to/from Mount Victoria at the eastern end as proposed in the concept design.
- Intersections need to be well lit.

A number of respondents provided feedback about intersections outside the concept design such as Blackheath and Mount Victoria village.

Feedback from community meetings
Participants expressed concern about a range of intersection treatments including the closure of Forty Bends Road at the western end, the design of the Jenolan Caves Road intersection, the right turn onto the highway at Baaners Lane and the eastern access to Mount Victoria and the ‘no right turn’ onto the highway at the bottom of Victoria Pass.

RMS comments on feedback
Details of intersections and interchanges within the concept design are addressed in Section 6.3 of the Concept Report.

In response to community feedback the concept design has been amended at the following intersections:

- Old Bathurst Road – the formal roundabout has been removed and space has been provided for buses to pull over to the side to facilitate pick up and drop off of passengers.
• Mudgee Street – the formal roundabout has been removed to limit impact on adjoining properties including the Rural Fire Service station. A u-turn bay is provided to facilitate pick up and drop off of bus passengers.

• Baaners Lane – the u-turn bay has been moved 100 metres further down the lane.

• Safety upgrades in Mount Victoria village and Blackheath are outside the scope of the concept design and are currently being considered as part of the safety upgrade program.

• RMS notes the concern about the Mudgee Street intersection.

4.2.5. Design engineering – speed limit

Registration numbers
23, 31, 43, 61, 67, 80

Feedback in written responses
Speed limit was raised as a concern eight times in six responses. Some respondents expressed support for the recent speed limit review which reduced the speed limit to 80 km/h. It was noted that the reduced speed limit makes it easier to access the highway from side roads.

Other respondents disagreed with the reduced speed limit and raised concerns that the reduced speed limit would lead to travel delays and impacts on carbon tax. It was suggested that there should be one speed limit across the Blue Mountains with the exception of the urban areas.

Feedback from community meetings
RMS was congratulated on lowering the speed limit to 80 km/h through the Hartley Valley. Participants requested that the speed limit be kept to a minimum on the upgraded highway. It was suggested that the concept design should include an 80 km/h speed limit.

RMS comments on feedback
The recent speed zone review determined that 80 km/h is an appropriate speed given the existing road conditions.

The concept design incorporates a speed limit of 100 km/h for the majority of the alignment. The exceptions to this speed limit are the two tunnels and the section through South Bowenfels which would be 80 km/h. Appropriate speed and intersection treatments have been determined taking into consideration the many and varied constraints on this road.

4.2.6. Design engineering – route

Registration numbers
16, 24, 31, 34, 87, 107, 114

Feedback in written responses
Issues relating to the concept design route were raised eight times in seven responses. In summary, respondents were concerned about with the number of bends and curves in the concept design. Concern was also raised over the route connecting Mount Victoria village to the highway. Two respondents also suggested that the concept design should bypass Lithgow and some respondents suggested that Bells Line of Road should be upgraded instead.
Feedback from community meetings
Some participants expressed the view that the concept design should remain within the existing highway alignment. Others expressed concern about trucks using the service road as an alternative route. A number of general comments were made about the need to straighten the design of the highway.

RMS comments on feedback
The concept design has been designed in accordance with RMS road standards and is primarily within the preferred route buffer zone displayed in May 2010. Curves in the design reflect the natural and physical constraints that must be considered in the design process.

The preferred route for the upgrade was selected following extensive consideration of alternative highway alignments and will not change. The concept design has gone beyond the preferred route buffer zone in some areas for the following reasons:

- An improved road alignment has been identified.
- The concept design has been extended east of Browntown Oval and west of McKanes Falls Road.
- Some service road connections and upgrades to side roads fall outside the buffer zone.
- Water quality measures.

Mount Victoria residents would have the option of travelling eastbound to join the upgraded highway or westbound via Victoria pass.

4.2.7. Design engineering – scale of design

Registration numbers
61, 82, 107, 113

Feedback in written responses
Issues around the scale of the design were raised four times with comments such as:

- The viaducts and tunnels would be excessive and divide the community.
- The concept design has been over engineered and would be too costly.
- It would be better to keep things simple, practical and achievable.

RMS comments on feedback
The concept design is consistent with the governments’ strategic priorities. These priorities focus on improving the highway’s safety performance and efficiency, and meeting future, long-term road network needs. The scale of the design reflects RMS’ response to the crash history for this section of the Great Western Highway which is three and a half times higher than the State Plan target, and up to 50 per cent higher than the state average of 30.4 per 100 million vehicle kilometres travelled (MVKT) for a two lane two way roadway.
4.2.8. Design engineering – cycleways

Registration numbers
3, 99

Feedback in written responses
Respondents recommended that a pathway for cyclists, joggers and walkers should be included in the concept design. The issue of cycleways was raised twice.

RMS comments on feedback
The concept design incorporates a local access strategy (service road) into its development. In addition to catering for cyclists and pedestrians, this access strategy would:

- Separate local traffic movements where possible resulting in increased safety.
- Reduce right turns on the highway by about 90 per cent.
- Allow for traffic diversions in case of crashes on the highway.
- Provide enhanced local tourism and business opportunities.
- Cater for cyclists and pedestrians.

4.2.9. Design engineering – u-turn bays

Registration numbers
15, 35

Feedback in written responses
The u-turn bay at McKanes Falls Road was raised twice. In summary, strong opposition to the u-turn bay was raised by one respondent. Another respondent commented that the u-turn bay would prevent crashes.

RMS comments on feedback
U-turn facilities have been provided in the concept design as part of a broader access strategy to ensure that safe and efficient access to property and the highway is maintained. No change is proposed to the u-turn bay at McKanes Falls Road.

An additional u-turn bay would be included at Old Bathurst Road to replace the roundabout and a wider bus turning bay would be provided at Mudgee Street to replace the roundabout.

4.2.10. Design engineering – road shoulder

Registration numbers
77, 115

Feedback in written responses
Issues around the road shoulder were raised twice. Concerns was raised about the impact of the proposed two metre road shoulders on private property. Concerns about the road shoulders in Mount Victoria village were also raised.
Feedback from community meetings
Participants requested that RMS guarantee the width of the breakdown lanes.

RMS comments on feedback
A typical cross section of road shoulder widths within the concept design would include:

- A median width of generally 5 - 11 metres with the exception of the section through South Bowenfels.
- A left shoulder (external shoulder) typically 2.5 metres wide on each carriageway.
- A right shoulder (internal shoulder adjacent to the median) typically one metre wide on each carriageway.

Additional width would be provided for verges, sufficient for batter rounding and inclusion of guide posts or safety barriers where required. Further consideration of shoulder widths and any potential impact on property would be undertaken during the environmental impact assessment and detailed design stages of the future upgrade.

Proposed design changes for the Mount Victoria village safety upgrade are outside the scope of the concept design.

4.2.11. Design engineering – road gradient

Registration numbers
51

Feedback in written responses
Blue Mountains City Council was supportive of the reduction in road gradient.

Feedback from community meetings
A participant questioned the angle of the camber on the bottom of Victoria Pass and on River Lett Hill. A participant also expressed doubt about the ability to decrease the gradient on River Lett Hill.

RMS comments on feedback
The project design criteria specify a desirable maximum gradient of six per cent with an absolute maximum of eight per cent. A key constraint between Mount Victoria and Lithgow is the steep topography, therefore the concept design has sought to minimise the road gradient. The concept design also provides for a more constant gradient.

For more information about the concept design road gradient on River Lett Hill refer to Section 5.1.10 of the Concept Report which is available on RMS’ website.
4.3. Road user concerns

This category refers to issues that impact upon stakeholders who travel on the highway and surrounding local roads. This issue category was raised 85 times.

**Figure 4-4: Road user concerns**

4.3.1. Road user concerns – safety improvements

**Registration numbers**
4, 13, 34, 44, 51, 54, 71, 74, 77, 78, 81, 90, 91, 92, 101, 102, 104, 105, 109, 113

**Feedback in written responses**
Safety improvements were raised as an issue 36 times in 21 responses. In summary, support was expressed for the safety upgrades proposed for the existing highway. Support was also given for the inclusion of 'point-to-point' cameras to control the speed of both cars and trucks.

Respondents raised a number of safety concerns about the existing highway including the driving conditions experienced in poor weather, the danger posed by black ice, the need for improved lighting, issues associated with heavy vehicles and the fact that white line marking is not visible at night or in the rain.

With regard to the concept design, concerns were raised about the impact of sun glare on vehicles exiting the viaducts.

The Hartley Highway Action Group noted that the bridge over the railway at Mount Victoria needs to be widened. Blackheath Highway Action Group and others made a number of comments about safety concerns at Blackheath and the plans to upgrade the highway between Mount Victoria and Katoomba.

**Feedback from community meetings**
Participants suggested that the highway upgrade include variable message signs.

**RMS comments on feedback**
RMS notes the support for the safety upgrades and the comments about current safety concerns. A number of these concerns will be addressed by the safety upgrades at Forty Bends, Hartley Valley and Mount Victoria which are currently being developed. The issue of sun
glare at the exit to the viaduct would be considered at an appropriate future stage of the concept design development process.

4.3.2. Road user concerns – Victoria Pass

Registration numbers
10, 64, 101, 105, 108, 111

Feedback in written responses
Victoria Pass was raised as an issue 13 times in six responses. In summary, respondents including the Blackheath Highway Action Group and the Hartley Highway Action Group raised a range of concerns about Victoria Pass including the quality of the recent safety upgrades, dangerous curves, water on the road, road camber, speeding, trucks and crashes.

Feedback from community meetings
Participants raised a range of concerns about Victoria Pass including conditions on the top and bottom curves, the length of barriers, overtaking lanes, dangerous curves, the emergency stopping ramp and crashes.

RMS comments on feedback
Victoria Pass is outside the scope of the concept design. However, RMS notes the comments about Victoria Pass and the concerns following the recent safety upgrades. RMS will consider if further work is required at Victoria Pass in the context of the safety upgrade proposals for Hartley Valley and Mount Victoria village.

4.3.3. Road user concerns – freight vehicles and trucks

Registration numbers
14, 28, 58, 78, 85, 103, 105

Feedback in written responses
Freight vehicles and trucks were raised as an issue nine times in seven responses. In summary, some respondents expressed concerns about the number and size of heavy vehicles using the highway both within and outside the project area. Others were concerned that if the concept design were to be constructed, it would mean that larger B-doubles would use the highway. Concerns were also expressed about additional constraints being placed on heavy vehicles using the highway and the longer term impacts for freight transport across the Blue Mountains. The Blackheath Highway Action Group commented that noise from compression braking is negatively impacting on residents and tourist establishments.

Feedback from community meetings
Participants stated they would like to see trucks off the road and an increase in the use of the rail network.

RMS comments on feedback
Transporting freight by road is a key element of the NSW economy. There is no current proposal to provide for heavy vehicles greater than 19 metres on the Great Western Highway.
The recently completed safety improvements to the top and bottom curves of Victoria Pass will not allow larger vehicles to use the highway. No further amendments or constraints on heavy vehicles beyond existing constraints are proposed.

4.3.4. Road user concerns – traffic

Registration numbers
33, 78, 85, 103, 105, 109

Feedback in written responses
Traffic was raised as an issue eight times in six responses. In summary, concerns were raised about the concept design resulting in more traffic congestion and noise. Respondents also commented that the concept design does not address the fact that traffic heading west will be stopped by traffic lights at Lithgow and similarly, at Katoomba for traffic heading east. Traffic through Lithgow, particularly at Easter, all holiday weekends and including when Bathurst car races was also raised as a concern.

The Blackheath Highway Action Group raised concern over a range of traffic constraints on the highway, including speed zones, school zones, traffic lights and traffic hot spots on the highway.

Feedback from community meetings
A participant expressed concern over traffic queues backing up at Forty Bends due to the limited extent of the work. Other participants noted that the upgrade should be extended to Mudgee Street and Rydal Road.

RMS comments on feedback
Traffic and transport investigations were undertaken as part of the development of the concept design. The concept design has considered local traffic movements and through traffic mixing with heavy freight vehicles on the highway. The concept design would result in an overall improvement in the traffic and transport environment for the area in line with the objectives of the Mount Victoria to Lithgow upgrade program.

The concept design would also improve freight travel times by realigning curves and reducing grades. This would enable trucks to travel at the posted speed for longer sections and improve road safety by reducing the mix of local and through traffic and realigning dangerous curves.

Details of traffic counts and key features of the concept design that would result in road safety and freight efficiency outcomes are outlined in the Concept Report which can be viewed on RMS’ website.

With regard to the impact of traffic lights, speed zones, school zones and other constraints, it should be noted that the concept design was developed for a rural highway environment. As traffic moves into the urban areas, the traffic issues change and these are outside the scope of the concept design.

4.3.5. Road user concerns – speeding

Registration numbers
10, 27, 73, 101, 105,
Feedback in written responses
Speeding was raised as an issue seven times in five responses. Respondents raised concern about traffic still speeding despite the recent drop in the speed limited to 80 km/h. The introduction of a point-to-point camera was noted as a positive initiative.

The Hartley Highway Action Group, the Blackheath Highway Action Group and others raised concerns about speeding in a range of locations outside the scope of concept design including Victoria Pass.

Feedback from community meetings
A number of participants expressed concerns about speeding. Some participants requested that the speed limit be further reduced to 70 km/h, particularly at the exit to Old Bathurst Road. Several requests were made to include point-to-point cameras. Participants suggested that the concept design include a safe place for police vehicles to monitor speed.

RMS comments on feedback
The concept design incorporates a speed limit of 100 km/h for the majority of the alignment. The exceptions to this speed limit are the two tunnels and the section through South Bowenfels which would be an 80 km/h zone.

RMS acknowledges that speeding is a major concern for the community and is in regular communication with police about enforcement.

As a result of speed limit reviews conducted by RMS and the NSW Centre for Road Safety, the following changes were made to the speed limits on the Great Western Highway between the bottom of Victoria Pass and South Bowenfels on 2 July 2012:

- The speed limit from the bottom of Victoria Pass to the bottom of River Lett Hill, a length of 7.3 kilometres, was reduced from 90 km/h to 80 km/h.
- The speed limit between the top of River Lett Hill to South Bowenfels, a length of 4.1 kilometres, was reduced from 90 km/h to 80 km/h.

The existing 80 km/h car and 40 km/h truck and bus speed limits on this section of the Great Western Highway were retained.

In October 2012, the NSW Government announced that point-to-point speed enforcement would be introduced to govern about 15-kilometres of the Great Western Highway between Mount Victoria and Lithgow. The exact camera locations would be determined following a site assessment. A timeframe for installation is yet to be decided by RMS.

Point-to-point enforcement lengths work by measuring the amount of time it takes a heavy vehicle to drive between two points and then calculates the average speed of the vehicle. If the vehicle’s average speed is higher than the speed limit for the length of road, the driver would be booked for speeding.

4.3.6. Road user concerns – maintenance
Feedback in written responses
Maintenance was raised as an issue five times in three responses. In summary, concerns were raised over poor management and maintenance on the existing highway. In particular the poor state of the current road surface was raised. Some respondents expressed concern over how the service road would be maintained.

Feedback from community meetings
Participants raised a range of maintenance issues including who will maintain the service road, the need to keep the edge of the highway clear to reduce shade and the fact that gravel from driveways washes over the road at River Lett Hill.

RMS comments on feedback
The concept design incorporates a road surface which is designed in accordance with RMS and AustRoads design standards. The road surface would be assessed during the detailed design phase of the project and, if required, would be upgraded at the appropriate time.

Some upgrading of the road surface through Hartley Valley would be considered in the context of the current Hartley Valley safety upgrade.

RMS will continue to maintain the highway. The maintenance of the service road would be negotiated with local councils at the time of the upgrade.

4.3.7. Road user concerns – construction impacts

Registration numbers
34, 80, 90

Feedback in written responses
Construction impacts were raised as an issue three times. In summary, respondents raised concerns about traffic delays caused by recent upgrade works, particularly on Victoria Pass. Concern was also raised about delays associated with the construction of the concept design.

Feedback from community meetings
Participants expressed concerns about the traffic delays and reduced safety caused by the construction at Forty Bends. Participants noted that motorists may be forced to use Bells Line of Road. One participant queried where site works and construction yards would be located.

RMS comments on feedback
A construction traffic management plan would be developed as part of the construction management process at the appropriate time. Directly affected stakeholders would be consulted to ensure impacts are minimised.

4.3.8. Road user concerns – black ice

Registration numbers
4, 77, 79, 87
Feedback in written responses
Black ice was raised as an issue in four responses. In summary, respondents expressed general concerns about the impact of icy road conditions and black ice on road safety. The Central West Transport Forum raised concerns over the failure of the concept design to fully address the shadowing and consequent icing problems caused by Hassans Walls.

Feedback from community meetings
A number of participants queried how RMS will address black ice with particular reference to Whites Creek Bridge. Others were concerned that the alignment of Forty Bends cuts further into the hillside which could mean more black ice, not less. One member of the community noted that the highway should be heated at Forty Bends. Participants also expressed concern that the old Hartley Bridge gets particularly icy.

RMS comments on feedback
A black ice management plan is being developed as part of the design development process for the Forty Bends upgrade. The Forty Bends detail design aims to minimise the impact of shadowing and therefore the formation of ice in this area. Refer to the Forty Bends Review of Environmental Factors, October 2012 (Forty Bends REF) and the Forty Bends REF Submissions Report for more detail on the management of black ice.

4.4. Process
This category refers to issues around project management and the approach to the community. This issue category was raised 74 times in responses.

Figure 4-5: Process

4.4.1. Process – route selection

Registration numbers
42, 58, 60, 61, 68, 71, 72, 76, 78, 79, 80, 81, 82, 85, 87, 88, 91, 93, 101, 104, 105, 109

Feedback in written responses
Route selection was raised 45 times. Respondents expressed strong support for the Newnes Plateau route (purple corridor), and requested that RMS reconsider this as an option.
Some respondents expressed concern over the changes from the 2010 preferred route, with particular reference to the alignment of the tunnel under Mount York Road. Other respondents suggested moving the alignment in some locations to new alternative routes.

The Central West Transport Forum, Hartley Highway Action Group and Centroc all express general concerns over the concept design route.

**Feedback from community meetings**

Participants expressed a preference for the Newnes Plateau route. A number of other specific route issues were raised about the extent of the Forty Bends upgrade, the bypass of Mount Victoria, property impacts and the need for a dedicated freight route.

**RMS comments on feedback**

RMS involved the community in an extensive consultation process to select the preferred route. The preferred route for the concept design (known as the orange corridor) was announced by the former Minister for Roads in October 2010. This orange corridor is still the preferred route for the upgrade of the Great Western Highway between Mount Victoria and Lithgow. It is not proposed to revisit the preferred route of the highway upgrade as part of the revised investment package.

4.4.2. Process – consultation approach

**Registration numbers**

1, 28, 29, 34, 35, 55, 60, 61, 64, 79, 80, 87, 101, 102, 108, 113, 115

**Feedback in written responses**

The consultation approach was raised 20 times as an issue. In summary, respondents made both positive and negative comments about the consultation process. Concerns were raised about the importance of consultation, the quality of materials, staff changes, the purpose and timing of consultation and the need to continue consulting with the community.

Some respondents, including Central West Transport Forum, noted a desire to see regional industry, police and local government representatives at community meetings. Blue Mountains City Council and Lithgow City Council made general comments about their inclusion in the public consultation process.

**Feedback from community meetings**

Some participants expressed concern that the consultation undertaken by the 2012 independent review was not inclusive. Other participants expressed dissatisfaction with the consultation process. Some participants requested that RMS involve the community in developing the safety upgrade between Blackheath and Medlow Bath.

**RMS comments on feedback**

The concept design was displayed for community feedback between 17 July 2012 and 26 October 2012. Government agencies and emergency services were notified about the display (refer to Section 3.2 and Appendix A of this report).
Throughout the display process RMS consulted directly with a range of stakeholders including affected property owners, police and emergency services, community action groups, government agencies and local Members of Parliament.

All feedback received up until end January 2013 has been considered by RMS and summarised in this community feedback report. RMS has provided comment within this report to assist the community to understand how their comments have been considered in the final concept design. The final concept design will be displayed for information at Lithgow City Council and Blue Mountains City Council.

While no further community meetings are proposed at this stage of the development process, RMS will continue to liaise directly with affected property owners. RMS will update the project web page and respond to queries regarding the concept design.

4.4.3. Process – report quality

Registration numbers
14, 34, 85, 117, 123

Feedback in written responses
The quality of the Concept Report was raised five times. Respondents raised issues about perceived inconsistencies within the Concept Report. Other concerns included the scale of the plans and the incorrect direction of an arrow in the Little Hartley inset on page 14 of the July 2012 community update. The key issue was the ability of the respondents to understand the concept design and provide meaningful feedback.

Feedback from community meetings
A participant expressed concern that the 2012 independent review was based on 2005 crash data which was out of date. Another participant expressed concern about the small scale of the plans in the community update and Concept Report.

RMS comments on feedback
RMS notes the comments regarding the quality of the reports and maps. RMS acknowledges that it is difficult to provide public information in brochures at a scale that can be easily understood. For this reason plans are also posted on RMS’ website and larger scale sketches are provided to affected property owners, as required.

With regard to the error in the community update, RMS acknowledges this error which will be rectified in any future publications.

RMS has reviewed the options in the concept report and confirms that the correct options are shown in all sections of the report.

For more information about the latest crash data refer to Section 4.1.8 of this report.

4.4.4. Process – planning and approvals

Registration numbers
60, 87, 111
Feedback in written responses
Planning and approvals were raised as issues four times. In summary, two respondents requested that the concept design and road boundaries not be placed on local environmental plans until a resolution with the community has been reached.

Feedback from community meetings
Participants asked about the planning approval process and noted concerns that the road corridor will be reserved within local planning instruments before planning approval is achieved.

RMS comments on feedback
The planning approval process for the concept design would be in accordance with the requirements of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. It is anticipated that RMS would be the responsible approval authority for any future environmental impact assessment under Part 5 of the *EP&A Act*.

It should be noted that RMS does not propose to start the planning approval process for the remainder of the concept design under the present investment program. The concept design would be finalised for the purpose of reserving the road corridor for a future upgrade.

The environmental impact assessment of the Forty Bends section of the concept design has recently been completed. More information can be founding the Forty Bend REF submissions report which is available on RMS’ website.

4.5. Environment
This category refers to environmental impacts related to the concept design. This issue category was raised 50 times in the responses.

Figure 4-6: Environment

4.5.1. Environment – environmental impact assessment

Registration numbers
17, 97, 124
Feedback in written responses

Concerns around environmental assessments were raised 21 times in three responses. In summary, the NSW Office of Water outlined a number of relevant policies and mitigation measures that the environmental impact assessment should take into account. The issues raised include water management including impact on surface water, sustainable management of groundwater, water supply, groundwater dependent ecosystems, water courses and riparian land, watercourse crossings, location of the construction compound site and water treatment basins.

In relation to the service road Option 4, the National Parks and Wildlife Service commented that no assessment appears to have been made of the road capacity directly between the Corneys Garage and Ivy Cottage.

One respondent also stated that Berghoffers Pass should be assessed carefully due to instability of the rock in some areas.

Feedback from community meetings

Participants expressed concern that RMS has not adequately considered environmental and heritage issues, in particular remnant vegetation and hanging swamps. Participants questioned the environmental impact of the heavy vehicle rest areas, in particular the noise from trucks using this facility.

RMS comments on feedback

RMS notes the feedback regarding environmental impact assessment. The following corridor studies were undertaken in 2011 as a key input to the development of the concept design. These studies build on previous studies undertaken as part of the route options assessment. They assess the environmental constraints to be considered during the development of the concept design and report on field investigations and desk top studies carried out to verify baseline information.

The studies are preliminary assessments for project planning purposes to support the development of the concept design:

- Aboriginal archaeological survey assessment.
- Air Quality.
- Biodiversity.
- Contaminated Land.
- Land use, property and socio-economics.
- Groundwater.
- Noise and vibration.
- Non-Aboriginal heritage.

The above corridor studies identify requirements for further surveys that are recommended for a future environmental impact assessment to address the significance of impacts identified.
The results obtained in these preliminary assessments would be progressed to a greater level of detail in the environmental impact assessment and planning approval phase of the project when funding is available.

The corridor studies can be found on RMS’ website.

4.5.2. Environment – fauna and flora and vegetation loss

Registration numbers
30, 59, 72, 85, 95, 102, 112

Feedback in written responses
Issues around fauna and flora were raised 11 times in seven responses. In summary, a number of respondents made both positive and negative comments about the fauna crossings proposed within the concept design.

A number of respondents, including government agencies, raised concerns about vegetation clearing and the need to protect valuable vegetation communities and habitat. Specific reference was made about Grassy Box Woodland in the Hartley Reserve Trust Area and the area covered by the Glenroy and Morning View Trust Agreement.

The removal of mature trees, which form part of a green corridor for birds and animals, was also raised in one response.

Feedback from community meetings
One participant suggested that RMS needs to implement a weed control program.

Participants expressed concern that the concept design could destroy remnant vegetation. Participants also noted the need for vegetation clearing to prevent the formation of black ice at Forty Bends.

RMS comments on feedback
RMS notes the feedback regarding the protection of flora and fauna and the potential impact on remnant vegetation and habitat from vegetation clearing. These matters would be considered as part of the environmental impact assessment at an appropriate future stage in the development process. RMS would ensure that any future development meets all legal requirements with regard to protection of vegetation.

The matter of fauna passages in the vicinity of Forty Bends is considered in more detail in the Forty Bends REF and the Forty Bends REF Submissions Report which is available on RMS’ website.

The issue regarding weed control along the highway has been referred to the relevant maintenance team within RMS.

4.5.3. Environment – environmental impacts

Registration numbers
6, 33, 37, 59, 72, 102, 103, 116, 124,
Feedback in written responses
Concerns around environmental impacts were raised 17 times in nine responses. In summary, respondents raised concerns about environmental impacts such as road kills, erosion, weed introduction, bush fire mitigation impacts, visual pollution and the extraction of natural resources. Concerns were also raised about impacts including noise and vibration, drainage, air quality, offsetting and environmental management of environmentally sensitive areas or farmland. Blue Mountains City Council raised general concerns about the adverse impacts of the project on the environment.

RMS comments on feedback
RMS notes the feedback regarding environmental impacts including noise and vibration, drainage, air quality, offsetting and environmental management. These matters would be considered as part an environmental impact assessment at an appropriate future stage in the development process.

4.6. Property impacts
This category refers to financial and non-financial impacts on private property. This issue category was raised 50 times in responses.

4.6.1. Property impacts – non-financial

Registration numbers
2, 6, 12, 25, 29, 42, 55, 60, 62, 63, 71, 83, 85, 87, 95, 106, 109

Feedback in written responses
Non-financial property impact was raised as an issue 25 times in 17 responses. In summary, concerns related to loss of privacy, additional noise, the impact of car headlights, personal hardship, lifestyle changes, loss of mature trees, relocation or replacement of services and general impacts from the tunnels and turning circles.

Lithgow City Council and Central West Transport Forum raised concern over general disturbance and the proximity of the highway to residential premises. The National Trust,
Australia commented about the impacts on the heritage causeway at Billesdene Grange and noted the heritage significance of Little Hartley.

The NSW Department of Trade and Investment highlighted that the concept design is about 400 metres north of the Mount Victoria Clay Pit (ML259) and suggested that RMS contact the licence holder.

**Feedback from community meetings**
Participants expressed concern about the impact of the heavy vehicle rest areas on private land. Participants also noted that if the road corridor boundaries were placed on local environmental plans, this could cause problems for people trying to buy or sell.

**RMS comments on feedback**
RMS acknowledges that affected property owners are concerned about property impacts. New or widened roads can have impacts due to their proximity, such as increased noise or a change in drainage/flooding characteristics. RMS must identify the effects of a road project on adjoining communities and propose measures to reduce these environmental or social effects where possible.

People are often concerned about noise and RMS has prepared a document entitled ‘How noise is addressed’ which can be downloaded from RMS’ website or by calling the toll free community information line on 1800 035 733.

Refer to RMS comments in 4.6.2 regarding RMS' hardship acquisition policy. Property impacts would be considered further at an appropriate future stage of the development process.

**4.6.2. Property impacts – loss of property value**

**Registration numbers**
6, 56, 62, 72, 79, 83, 94, 95, 102

**Feedback in written responses**
Loss of property value was raised as an issue 11 times in nine responses. In summary, the majority of respondents raised concerns about the potential negative financial impact that the concept design could have, and request more detail on how RMS would provide compensation for the loss of property value. The Blue Mountains City Council also raised concerns over the negative impact on the value of property. Some respondents expressed concern about the concept design being incorporated into local environmental plans and noted that this may devalue property, sterilise land and affect re-sale value.

**Feedback from community meetings**
Participants expressed the view that the concept design would have a negative impact on property values. Participants queried if RMS would take property values into consideration and address the financial implications and compensation for property owners in the short-term. Some participants expressed concern that affected properties could be sterilised for many years as the concept design may never be constructed.
RMS comments on feedback

RMS acknowledges that affected property owners are concerned about the impact on property values because of the project. The Roads Act, 1993 provides the basis for RMS to acquire land. Some aspects of the acquisition process can be complex. RMS’ policy is described in the ‘Land Acquisition Information Guide’ which is available on RMS’ website or by calling the toll free community information line on 1800 035 733.

RMS generally acquires property:

- After a project has been approved.
- When funds are available for acquisition.

The announcement of a preferred route or concept does not mean that a ‘programmed acquisition’ process starts. In some circumstances RMS may consider acquiring property before a project is approved if:

- ‘Hardship’ is demonstrated by the owner in writing to RMS.
- Funds have been allocated to the project.

The purchase price is based on the assessment of the market value of the property, unaffected by the road proposal. If a landowner who is directly affected by the concept design demonstrates hardship as per RMS’ policy, then RMS may consider acquisition.

4.6.3. Property impacts – acquisition process

Feedback in written responses

RMS’ property acquisition process was raised as an issue eight times in six responses. In summary, multiple comments were made in relation to private property acquisition as a result of the proposed tunnel. General comments were made about the need for resumption of land.

Feedback from community meetings

Participants requested that RMS confirm that funding would be available to purchase affected properties. A participant queried why some property acquisition is already underway.

RMS comments on feedback

Refer to RMS comments in 4.6.2 above. RMS confirms that the funding allocation includes the cost of property acquisition and property adjustment, for those upgrades proceeding to construction.

4.6.4. Property impacts – socio-economic

Registration numbers

9, 43, 60, 72, 102
Feedback in written responses
The impacts on property and business were raised as issues six times. In summary, concerns were raised about the impact on future business investment plans in the village and on prime grazing lands and the ability for business owners to make a living.

Blue Mountains City Council raised two points regarding the social cohesion and the commercial viability of the Blue Mountains township, in particular regarding Mount Victoria village.

RMS comments on feedback
RMS notes the feedback about impact on property and businesses. For further information refer to the Mount Victoria to Lithgow Alliance, Land Use, Property and Socio-Economics, November 2011 corridor study. The study is available on RMS’ website.

4.7. Access

This category refers to issues related to the accessibility aspects of the concept design. This issue category was raised 62 times in responses.

Figure 4-8: Access

4.7.1. Access – Darling Causeway

Registration numbers
3, 20, 22, 24, 32, 38, 45, 66, 77, 89, 92, 102

Feedback in written responses
Darling Causeway was raised as an issue 18 times in 11 responses. In summary, the majority of respondents raised the need for a connection between Darling Causeway and the Great Western Highway to prevent trucks travelling through Mount Victoria village, in particular on Harley Avenue. Blue Mountains City Council also raised this issue as a key area of concern.

Feedback from community meetings
Participants were concerned about the fact that there would be no direct access between the upgraded highway and Darling Causeway.
RMS comments on feedback
The concept design considered three options for a connection to Darling Causeway. The connection was initially not included on the basis of cost and environmental impact.

An additional option to connect Darling Causeway to the Great Western Highway has been developed to allow access for vehicles travelling between Katoomba and Bells Line of Road. Details of this option can be found in the Concept Design Completion Report on RMS’ website. The option will remain as part of the concept design and no further work will be undertaken to confirm the final option until funding is available. The final arrangement for access to Darling Causeway would be determined as part of the future detailed design stage.

4.7.2. Access – local access

Registration numbers
3, 20, 24, 47, 61, 102, 118, 124

Feedback in written responses
Local access was raised as an issue 11 times in eight responses. In summary, concerns were around local access between Mount Victoria and the upgraded highway, access to driveways and access to Baaners Lane.

National Parks and Wildlife Service commented that service road Option 3 would provide adequate access Hartley Historic Site via the service road. Blue Mountains City Council comments that the concept design would have a negative impact on access to private properties.

Feedback from community meetings
Participants expressed a view that the most important issue is access to the highway. Other participants expressed concern about removing existing access rights.

RMS comments on feedback
The concept design incorporates a local access strategy which aims to:

- Separate local traffic movements where possible resulting in increased safety.
- Reduce right turn movements to and from the upgraded highway.
- Cater for traffic diversions in case of incidents on the upgraded highway.
- Provide opportunities for local tourism and businesses to develop.
- Cater for cyclists and pedestrians.

It is proposed that access would be generally controlled along the full length of the upgraded highway. Access to the upgraded highway would be limited to formal intersections and some emergency access points.

Some local roads would be connected to the local service road, either by the construction of bridges over or under the upgraded highway or by re-routing sections of the local road network.
Between the base of Victoria Pass and Jenolan Caves Road, access to individual properties would generally be provided via the local service road. A series of short service roads would also be provided at Forty Bends and South Bowenfels to provide for safe property access.

Access to some properties would be affected or augmented as part of the concept design. Property adjustments would be designed in consultation with the affected property owner. Temporary access arrangements may also be required during construction at some locations. Access to all properties would be maintained as part of the concept design.

RMS has agreed to two changes to access arrangements in the concept design:

1. At Hartley Historic Site, the service road will no longer provide for through traffic, nor pass the Royal Hotel.
2. An option to connect the upgraded highway with Darling Causeway for vehicles travelling between Katoomba and Bells Line of Road has been developed.

4.7.3. Access – pedestrian

Registration numbers
3, 14, 108, 124

Feedback in written responses
Pedestrian access was raised as an issue five times. In summary, the National Parks and Wildlife Service raised two issues about limited pedestrian movement within the Hartley Historic Site. One respondent raised the safety of bushwalkers accessing Victoria Falls Road. This concern related to the need to cross the four lane highway at this point. One respondent recommends a walking and bridle track should extend from the end of Innes Road, Mount Victoria into bushland.

RMS comments on feedback
Pedestrian movements at Hartley Historic Site and Victoria Falls Road would be considered at an appropriate future stage in the development process. Pedestrian movements within Mount Victoria are outside the scope of the concept design.

4.8. Heritage

This category refers to issue related to Aboriginal and non-Aboriginal heritage. This issue category was raised 33 times in responses
4.8.1. Heritage – non-Aboriginal

Registration numbers
60, 79, 83, 85, 88, 101, 102, 106, 113, 123, 124

Feedback in written responses
Non-Aboriginal heritage was raised 21 times in 11 responses. Respondents, including Blue Mountains City Council and NSW Heritage Council, were focused on how the concept design would impact the heritage precinct of Hartley and Little Hartley which are protected under legislation.

The National Parks and Wildlife Service highlighted the potential archaeological sites adjacent to Hartley Historic Site and noted that potential deposits should be carefully managed as this is a site of State significance. The NSW Heritage Council supports the protection and mitigation measures in the concept design.

Feedback from community meetings
Participants raised concerns about the impact on the convict-built causeway at Billesdene Grange and the heritage vista through the valley.

RMS comments on feedback
RMS notes the comments regarding heritage impacts. One of the key objectives of the concept design is to be sensitive to the area's natural environment, heritage and local communities.

Identified non-Aboriginal heritage items recorded have been considered throughout the development of the concept design. The concept design has been modified to avoid or limit the impact on these items.

The concept design has been designed to minimise impacts on the proposed heritage conservation zone at Little Hartley and the proposed environmental protection areas in the vicinity of Victoria Pass.

Of particular importance to the development of the concept design is the avoidance of heritage items identified on the State Heritage Register (SHR) or heritage items listed on the relevant

Figure 4-9: Heritage
local environmental plans. These items are listed in the Concept Report which is available on RMS’ website.

A detailed non-Aboriginal heritage study of the highway corridor was undertaken in November 2012 and this report is also available on RMS’ website.

4.8.2. Heritage – Aboriginal

**Registration numbers**
72, 79, 88, 124

**Feedback in written responses**

Aboriginal heritage was raised four times. In summary, it was noted that the Hartley Valley is of great significance to the local Aboriginal community. Concerns were raised about the potential destruction of Aboriginal artefact sites located within the project area.

National Parks and Wildlife Service stated that extreme caution needs to be taken when assessing stone tools in relation to an Aboriginal site recorded in the conservation management plan.

**Feedback from community meetings**

Participants raised concerns about the potential destruction of an Aboriginal heritage site and valuable farmland on River Lett Hill.

**RMS comments on feedback**

RMS acknowledges that there is a potential for Aboriginal heritage items, archaeological sites or other culturally important locations to be disturbed as part of the development of the highway upgrade. In addition to a number of known Aboriginal sites within the vicinity of the future upgraded highway, there are potentially more sites yet to be identified.

There has been assessment at each of the known sites including Aboriginal, social, historic, scientific and aesthetic values. Further investigations as part of the environmental impact assessment would be required to assess potential archaeological deposits that may be impacted by the concept design.

More detail about Aboriginal heritage investigations can be found in the Concept Report and the Aboriginal Archaeological Survey Assessment which can be found on RMS’ website.
4.9. Tunnel

This category refers to the proposed tunnel. This issue category was raised 28 times in responses.

Figure 4-10: Tunnel

4.9.1. Tunnel – design

Registration numbers
6, 37, 41, 49, 50, 78, 87, 97

Feedback in written responses
Issues relating to the design of the proposed tunnel were raised 14 times in eight responses. In summary, respondents raised a number of issues about construction methods, alignment, depth, ventilation, excavated materials, safety, transport of hazardous materials and maintenance.

The NSW Office of Water stated that the proposed tunnel should be sealed to avoid the long term take-up of groundwater. Central West Transport Forum commented that construction of the tunnels would be expensive and may require some restrictions on hazardous material and oversize loads.

Feedback from community meetings
Participants raised a number of issues about the tunnel including proximity to houses, exit and entry points, traffic flow, sound barriers, the type of rock to be excavated and construction methods.

RMS comment on feedback
Two tunnels are proposed in the concept design:

- Twin, two-lane short tunnels under the Blue Mountains Railway Line and Darling Causeway north of Mount Victoria Railway Station.
- A bypass of Mount Victoria through twin, two-lane tunnels about 1.4 kilometres long.
The proposed tunnel options were favoured because they provided the best outcomes in terms of visual impact, noise, improved road geometry and safety. Constructability and location of the tunnel portals is the main driver of the tunnel alignment and geometry. Impact on rail infrastructure is also a key consideration. The location of the tunnel portals was determined under the advisement of a tunnel specialist involved in the concept design process. The portals are in the safest location following due consideration of the risk of rock-fall arising from their location on talus slopes.

At its deepest point the tunnel would be about 120 metres below ground level. The tunnel would be at least 50 metres below ground level from the nearest residence.

Ventilation stacks are not required for the proposed tunnel. The tunnels provide for the natural flow of air for ventilation. The tunnel gradient would facilitate the movement of air out of the tunnels. In the case of fire, exhaust fans would draw smoke out of the tunnels. It is worth noting that the traffic volumes at Mount Victoria would be less than a tenth of the traffic volumes in the M5 East tunnel.

The design of the tunnels has incorporated data around the projected traffic volume. Two lanes are considered adequate for projected volumes. Further consideration would be undertaken during the detailed design phase.

With regard to noise at the point where vehicles emerge from the tunnels, a limited assessment of noise impacts (in accordance with the concept design stage) has been undertaken to determine if noise barriers or other noise treatments would be required. Further detailed noise investigations would be undertaken at an appropriate future stage in the development process, if required.

4.9.2. Tunnel – logistics

Registration numbers
37, 49, 57

Feedback in written responses
The issue of logistics was raised six times by one respondent in three separate submissions. The respondent outlined the extent of amenities that would be required when building a tunnel, including a car park, power, water, sewers and the location of dumped rock. The respondent suggested that RMS acquire his property.

RMS comment on feedback
These comments are noted by RMS. These matters would be considered at an appropriate future stage in the development process.

4.9.3. Tunnel – safety

Registration numbers
7, 42, 50, 52, 90
Feedback in written responses
Tunnel safety was raised six times in five responses as an issue of concern. Specific issues regarding tunnel safety included fire, air pollution, silica dust, runaway vehicles, accident potential, chemical spills, breakdown lanes and emergency evacuation. Restrictions on hazardous materials were also raised.

Feedback from community meetings
Participants raised concerns about transportation of hazardous or explosive goods, emergency access, ventilation and safety precautions in case of crashes.

RMS comment on feedback
The concept design development process included consideration of fire and spill management, ventilation of smoke and vehicle exhaust and a deluge system for fire emergencies. Tunnel safety systems would notify drivers of a break down in the tunnel to allow motorists to use other routes. In case of emergency, pedestrian access would be provided between the tunnels. Emergency vehicles would access a crash via the opposite tunnel and use the pedestrian access. There would also be an emergency u-turn facility at each end of the tunnels. These measures would be considered further in the detail design phase.

With regard to the transport of dangerous goods, RMS notes that most materials could be transported through the tunnels including fuel. Victoria Pass would still available for the transport of explosive materials that require a permit or for other drivers who do not wish to use the tunnels.

Ventilation stacks are not required for the proposed tunnel. The tunnels provide for the natural flow of air for ventilation. The tunnel gradient assisted by fans, would facilitate the movement of air out of the tunnels. It is worth noting that the traffic volumes at Mount Victoria would be less than a tenth of the traffic volumes in the M5 East tunnel.

4.9.4. Tunnel – location

Registration numbers
42

Feedback in written responses
The location of the tunnel was raised by one respondent as an issue. The respondent highlights that Option 1 follows the location of the 2010 preferred route and that in Option 2, the tunnel moves outside the northern limit of the preferred route.

RMS comment on feedback
The alignment of the tunnel has been determined following extensive geotechnical assessment by a tunnel specialist. The locations of the tunnel portals have been carefully selected taking into consideration the steep and unstable terrain. The locations of the tunnel portals have therefore determined the alignment of the tunnels.
4.10. Project development

This category refers to project development matters such as the construction program and project management. This issue category was raised 19 times in responses.

**Figure 4-11: Project development**

4.10.1. Project development – construction program

**Registration numbers**
1, 19, 54, 69, 119, 122

**Feedback in written responses**
Construction timing was raised seven times in six responses. In summary, respondents requested information about the timing of construction, specifically the expected start and finish dates of the project. They also made recommendations about construction priorities.

**Feedback from community meetings**
Some participants noted that the 2012 independent review recommended deferring the concept design and some construction until 2033. Information was requested about the timing of construction on other sections beyond Forty Bends and for the safety upgrade.

**RMS comments on feedback**
The Australian and NSW governments have agreed to follow the recommendations of the 2012 independent review of the Great Western Highway upgrade west of Katoomba. As a result the Australian and NSW governments have agreed on a revised investment program for the highway upgrade between Katoomba and Lithgow.

While the Forty Bends section of the concept design will proceed to construction, the remainder of the concept design does not form part of the revised investment program and will not proceed beyond the concept design stage under the current funding allocation. Refer to Section 4.1.1 for more detail on the revised investment program.
4.10.2. Project development – project delays

Registration numbers
5, 43, 67, 84

Feedback in written responses
Four respondents expressed frustration over multiple project delays and a perceived waste of time and money spent on impact studies and community consultation. In summary, respondents urged RMS to immediately start construction of the highway upgrade. Concern was also expressed about political decisions delaying the project and diverting money away from a Mount Victoria bypass.

Feedback from community meetings
Participants raised concerns over the lack of action despite many years of discussion and consultation.

RMS comments on feedback
RMS acknowledges that planning for the upgrade of the highway is a lengthy process. However RMS is committed to involving the community at key stages of the design development process. RMS is also committed to ensuring that the highway upgrade delivers positive environmental, social and economic outcomes. To achieve this, a range of studies and field investigations must be undertaken to inform the design development process.

The recent changes to the funding investment between Katoomba and Lithgow have been agreed by the Australian and NSW governments following the 2012 independent review of the project. Refer to comments in 4.1.1.

4.10.3. Project development – road ownership

Registration numbers
51, 102, 104, 118

Feedback in written responses
Concerns over issues of road ownership were raised five times in four responses. In summary, Blue Mountains City Council, Lithgow City Council and Centroc raised concerns over the potential transfer of the roads to councils.

Feedback from community meetings
A community member questioned what would happen to the old highway if the concept design were to be built, and who would have responsibility for maintaining it.

RMS comments on feedback
RMS notes the feedback regarding ownership and maintenance. Ownership and maintenance of the service road would be negotiated with councils at the appropriate time in the development process.
4.10.4. Project development – project uncertainty

**Registration numbers**
42, 43

**Feedback in written responses**
Project uncertainty was raised in two responses. In summary, respondents perceived that the route is subject to change and political interference.

**Feedback from community meetings**
Participants expressed doubt that the concept design would ever be built. Participants also queried the fact that the concept plan would be for the 'longer term' but that this term was not defined.

**RMS comments on feedback**
The Australian and NSW governments have agreed to follow the recommendations of the 2012 independent review of the Great Western Highway upgrade west of Katoomba. As a result, the Australian and NSW governments have agreed on a revised investment program for the highway upgrade between Katoomba and Lithgow. Refer to Section 4.1.1 for more detail on the revised investment program.

4.11. Urban design

This category refers to issues related to the design aesthetics and amenity. This issue category was raised 18 times in responses.

**Figure 4-12: Urban design**
4.11.1. Urban design – local amenity

Registration numbers
16, 40, 85, 109, 124

Feedback in written responses
Local amenity was raised as an issue seven times including one response signed by a group of residents. The respondents expressed strong concerns about the impact of the service road through Hartley Historic Site on local amenity.

One respondent suggested that Mount Victoria and Lithgow should be bypassed to provide the local community with a better life and less noise. It was noted that the concept design provides an opportunity to do something for local businesses.

RMS comments on feedback
Refer to comments about the service road in Section 4.2.1.

4.11.2. Urban design – landscaping

Registration numbers
43, 102

Feedback in written responses
Landscaping was raised six times in two responses. One respondent suggested that RMS look at overseas autobahns, bridges and tunnels for landscaping ideas. Blue Mountains City Council raised a number points in regards to the concept design and landscaping.

Feedback from community meetings
Participants requested more detail about the type of barrier that would be used in front of the church at South Bowenfels.

RMS comments on feedback
More information about urban design can be found in the Urban Design Report, June 2012. This report is available on RMS’ website.

4.11.3. Urban design – visual amenity

Registration numbers
78, 81, 102

Feedback in written responses
Visual amenity was raised five times in three responses. In summary, concerns were raised about the visual impact on Hartley Valley which is viewed as an area of beauty and historical significance. Specific reference was made to the visual impact of the viaducts.

Blue Mountains City Council states that the concept design must maintain or improve the visual amenity of the highway corridor and that all electricity wires should be placed underground.
RMS comments on feedback

A detailed urban design report was prepared in conjunction with the concept design in June
2012. The aim of the urban design strategy is to ensure that the highway upgrade would be
physically, visually and operationally integrated with its surrounding environment. This report is
available on RMS’ website.
5. Next steps

5.1. Future development of the project

Following finalisation of the concept design, including the design refinements noted in this report, RMS will approach Blue Mountains City Council and Lithgow City councils to reserve the corridor in their local environmental plans. The boundaries of the corridor would be based on the final concept design.

The intention of providing the proposed boundaries to each of the councils would be to reserve the corridor for future development of the highway when required and once appropriate funding is available. Construction of the remaining stages would depend on further funding being made available for future development of the upgraded highway upgrade. At this stage RMS is not planning to proceed with the planning approval process.

5.2. Revised investment program

Work is continuing on the development of the Forty Bends upgrade as the first stage of the concept design to be progressed to detailed design and construction. Work is also progressing on the development of safety upgrades for Mount Victoria village and the Hartley Valley. In addition, RMS has started consulting the community regarding potential safety upgrades between Katoomba and Mount Victoria.

5.3. Future consultation

The toll free project information line (1800 035 733) will continue to operate and the project website will be updated throughout future stages of the project. Any future updates on these components of the upgrade of the Great Western Highway between Katoomba and Lithgow will be available on RMS’ website at: www.rms.nsw.gov.au/roadprojects

5.4. Acknowledgement

Roads and Maritime Services (RMS) wishes to acknowledge and thank the communities and stakeholders who have given their time and shared their knowledge of the local area with RMS. This commitment has made a valuable contribution to the final concept design.
6. References

- Roads and Traffic Authority Strategy for Major Heavy Vehicle Rest Areas on Key Rural Freight Routes in NSW, January 2010.
- Mount Victoria to Lithgow Alliance, Land Use, Property and Socio-Economics, November 2011.
- Roads and Maritime Services, Great Western Highway Upgrade, Mount Victoria to Lithgow, Urban Design and Landscape Concept Report, June 2012
- Roads and Maritime Services, Mount Victoria to Lithgow Great Western Highway Upgrade – Concept Design - Concept Report, July 2012.
- Roads and Maritime Services, Great Western Highway Upgrade, Forty Bends Review of Environmental Factors, Volumes 1 and 2.
- Comber Consultants, Aboriginal Archaeological Survey and Assessment, November 2012.
- Roads and Maritime Services, Mount Victoria to Lithgow Great Western Highway Upgrade – Concept Design - Completion Report, March 2013.
Appendix A - Key stakeholder responses

This appendix provides a summary of the issues raised by stakeholder organisations, including government and community organisations, during the consultation period. RMS comments on the issues raised by individual stakeholders are incorporated in Section 5 of this report.

Government organisations

Blue Mountains City Council

Blue Mountains City Council supports the concept design of Mount Victoria to Lithgow, stating the design will significantly improve traffic and the transport environment. Blue Mountains City Council noted the improved road alignment, gradients and treatment at crash locations (Forty Bends, Jenolan Caves Road, Coxs River Road and Victoria Pass). Additionally, Blue Mountains City Council acknowledged RMS’ positive approach and sensitivity to the diverse range of fauna and flora habitats, heritage items, consideration of the impacts on locally based tourism, impacts on other social infrastructure and economic industries as well as cultural and scenic values of the Mount Victoria and Hartley Valley villages.

Blue Mountains City Council raised the following issues for consideration in regards to the concept design:

- Greater Blue Mountains World Heritage Area is incorporated on the World Heritage List. The city being located in this environment places responsibility on the community, the Blue Mountains City Council and other agencies to ensure that impacts of urban development are carefully managed.

- The Blue Mountains provide connectivity between regional NSW and Sydney as well as essential links for the Blue Mountains community, allowing access to local services.

- Concerns were raised about continuous access to private properties and services as well as the value of private properties and how this may be affected by the proposal. It was noted that the concept design must retain social cohesion and commercial viability of the Blue Mountains township.

- Impact on cultural and heritage items, the environment (native vegetation, water catchment management), aesthetic values and amenity of the Blue Mountains environment would need to be appropriately assessed and minimised.

- Urban design, landscaping and maintenance of the development will need to be carefully considered to obtain high quality outcomes.

- Ownership and maintenance responsibilities of access roads and old sections of the highway need to be defined.

- Consideration of the ongoing viability of business within the Mount Victoria village, and the socio-economic impacts of the concept design.

- Blue Mountains City Council would like to see a connection with the Darling Causeway from the bypass to allow heavy vehicles to bypass Mount Victoria village.
• RMS needs to address the heavy vehicle parking issues currently experienced by the Caltex petrol station in Mount Victoria.

• Installation of underground power cables are sought for all parts of the Great Western Highway upgrade program.

• Drainage and stormwater systems to be considered in regards to Blue Mountains City Council feedback.

• Blue Mountains City Council requested that consultation with RMS continues in the future as the concept plan is developed.

Central NSW Councils (Centroc)

Centroc supports the concept design for the Mount Victoria to Lithgow alignment. In particular Centroc supports the proposed reduction in gradient over the course of the design, the removal of intersections along the highway and the safety upgrades of others. Centroc voiced disappointment that part of the funding for the current upgrade may potentially being diverted from this area to the area east of Mount Victoria.

Centroc identified that it would like the following aspects of the concept design to be considered:

• Entire length of the upgrade to be dual lanes in both directions.

• Not opening Hartley Historic site to thorough traffic by reinstating the Glenroy Bridge.

• Removal of heavy vehicle rest areas along the valley section of the alignment.

• Centroc expressed concerned about:

  • The cost of the project and therefore the feasibility of the concept design proceeding in the near future.

  • Potential transfer of roads to council responsibility.

NSW Department of Primary Industries, Office of Water

The Office of Water made comment to statutory requirements of RMS as a road authority and public authority which exempts the requirement for approval or access licence with regards to water management. However the Office of Water does request that RMS demonstrates compliance with the NSW Office of Water Guidelines for Controlled Activities (2012).

The Office of Water made a number of comments relating to the statutory and legislative framework that should be considered as part of the construction and development of the proposed highway. Particular consideration should be given to water management and the unique ecosystems (such as hanging swamps and riparian land).

The department has a preference for the tunnel to be sealed to avoid long term take-up of groundwater. The department highlights the importance of watercourse crossings and riparian corridors and potential impacts on the water quality such as erosion. Additionally, the department made comment on the water treatment basins, suggesting they are located outside of the riparian corridors to avoid any disruption to these areas and the vegetation.
NSW Department of Trade and Investment Regional Infrastructure and Services, Resources and Energy Division

The NSW Department of Trade and Investment provided advice to RMS about the location of a local mineral resource in the vicinity of the concept design. This is located within the southern half of the Little Hartley section. The Department of Trade and Investment suggested contacting CSR Building Products Ltd. No other mineral resource issues were identified.

Hawkesbury-Nepean Catchment Management Authority

Hawkesbury-Nepean Catchment Management Authority provided feedback to RMS on the concept design. Hawkesbury-Nepean Catchment Management Authority detailed statutory requirements for vegetation removal, as well as making particular note of the following:

- The offset packaging required.
- The Threatened Ecological Communities (TEC) and threatened species within the area of interest. Hawkesbury-Nepean Catchment Management Authority expressed concern about their conservation.
- The habitat value of vegetation proposed for clearing including; remnant vegetation, connecting tree canopies, tree hollows, fallen timber and leaf letter, riparian zones, nectar bearing trees, and linkages to the World Heritage Areas of the Blue Mountains National Park and other parts of the landscape.
- The Hawkesbury-Nepean Catchment Management Authority noted support for the inclusion of fauna crossings in the concept design to enable reconnection of habitat corridors in key locations.

Lithgow City Council

Lithgow City Council provided support for the concept design with specific mention about the increased safety of the road from this design. Lithgow City Council noted disappointment that part of the $250 million in funding for the current upgrade would be diverted from the area to east of Mount Victoria.

Lithgow City Council noted the following positive aspects of the design:

- The reduction in gradients, for example Mount Victoria and River Lett Hill.
- Removal of some intersections along the highway and safety upgrades to others.

The council outlined areas they would like RMS to address in the concept design:

- Make the entire length of the road dual carriageway in both directions.
- Would not like any traffic directed through Hartley Historic Site, or the opening of Glenroy Bridge, just beyond the Hartley Historic Site.
- Would not like any heavy vehicle rest areas along this section of the road.

The council also outlined a number of concerns they have about the proposal:

- The cost and feasibility of the project proceeding into the near future.
• Potential transfer of road to council responsibility.
• Large footprint and impacts on private property.
• Impacts on the rural fire service shed on council land. It was requested that both parties be consulted prior to acquisition of any land.

The council made note that they would like to be updated and informed of all future design developments on this project.

**NSW Heritage Council**

The NSW Heritage Council provided comment to the concept design. The NSW Heritage Council identified concerns around the proposed service road in Hartley Valley which the NSW Heritage Council believes has unacceptable impacts to the Hartley Historic site. The NSW Heritage Council raised concerns about the impact of the road alignment and proposed service road on the amenity and range of heritage protected building forms in this area. The NSW Heritage Council supports only option three outlined in the concept design. The NSW Heritage Council believes this option would have minimal impact on the historic site yet still allow for public access to the site in the same way the proposed service road connection would. The NSW Heritage Council recommends RMS removes the proposed service road from the concept design, thus keeping intact the historic values, amenity and architectural integrity of Hartley Historic site.

**NSW Office of Environment and Heritage – National Parks and Wildlife Service**

National Parks and Wildlife Service provided comment on the concept design. National Parks and Wildlife Service provided detailed comment about the options at various areas of the alignment, primarily focusing on the Hartley Historic Site outlining concerns about the impact on the heritage and archaeological deposits in this location. National Parks and Wildlife Service outlined support for option three in regards to the Hartley Historic Site service road configuration. National Parks and Wildlife Service noted that this option would have minimal impact on the historic site and does not adversely impact on the proposed development of the site over the next few years as detailed in the Hartley Master Plan.

**Community organisations**

**Blackheath Highway Action Group**

Blackheath Highway Action Group opposes the concept design for the proposed upgrade of the Great Western Highway between Mount Victoria and Lithgow, and noted that they would like both Australian and NSW governments to reject the design. Blackheath Highway Action Group made comment that they would like to see a new long term approach that looks at the Blue Mountains in its whole context.

Blackheath Highway Action Group submitted a number of comments and concerns to RMS in relation to the concept design:

• The concept design is noted as being contrary to the recommendations of the 2012 independent review.
• The concept design does not take into account the findings of the Central West Transport Needs Study, particularly in relation to projected increases in traffic movements on the Great Western Highway in the lower Blue Mountains.

• The concept design is noted as being contrary to the recommendations of the NSW Long Term Transport Master Plan draft report.

• The concept design has been prepared and released for public comment before the Bells Line of Road Strategic Corridor Plan has been released.

• The concept design is noted as being contrary to the recommendations of the Infrastructure NSW’s, State Infrastructure Strategy released 3 October 2012 in relation to road and rail movements from Western Sydney.

• The concept design does not address the estimated costs of the project.

• The concept design does not acknowledge government policy preventing B-double trucks travelling along the highway through the Blue Mountains.

• Proceeding with the concept design is noted as being contrary to more than 3500 public submissions made in November 2009.

• The concept design fails to consider the impacts on the future viability of the upgrade (for example the carbon tax, fuel cost, economic and tax factors).

• The upgrade should consider a wider area, including Mount Boyce to Katoomba.

• The concept design does not recognise the impact of the proposed upgrade on the highway through the Blue Mountains, an area where tourism is the backbone of the upper Blue Mountains economy.

• Blackheath Highway Action Group raised a number of concerns relating to RMS’ upgrade of the Victoria Pass, safety, line marking, poor visibility, speeding, camber of the westbound lane, and drainage in particular. Blackheath Highway Action Group also requested RMS extend the barrier on the bottom corner of Victoria Pass.

Blackheath Highway Action Group also made a number of comments relating to the Great Western Highway which fall outside the concept design area. This included mention of the Blackheath Highway Safety Management Plan.

**Central West Transport Forum**

Central West Transport Forum is an organisation representing a road development interest group based in Cowra. The main concern expressed by the Central West Transport Forum was about the development of an efficient linkage between regional NSW and Sydney. Central West Transport Forum noted that they did not support the concept design as it is currently designed and located. Central West Transport Forum noted they would like an alternative route be developed, across Darling Causeway to Bells Line and Newnes Junction then through the Australian Defence Force reserve to meet the Great Western Highway at Marrangaroo. Central West Transport Forum would like this alternative option, investigated by Cardno Consultants to be given more consideration.
Central West Transport Forum highlighted a number of concerns:

- Curve at South Bowenfels is too sharp.
- The shadowing and consequent icing problems on the road near Hassans Walls may be reduced but not removed as a result of the concept design.
- Before the project can be fully operational the tunnels must be constructed, which would be at a very high cost and may restrict hazardous or oversize loads. Ongoing ventilation and maintenance may also be needed.
- Substantial disturbance to private property within the Hartley Valley.

Additionally, Central West Transport Forum commented on the consultation approach, with the opinion that there was a lack of regional representatives of public, industry and local government leadership at consultation meetings. Central West Transport Forum suggested RMS considers incorporating a regional advisory committee that could enable regular opportunities for road development liaison.

**Hartley Highway Action Group**

Hartley Highway Action Group provided comment on the Hartley Valley impact of the concept design. Hartley Highway Action Group raised concerns about the impact the upgrade road would have on the European and Aboriginal heritage in the Hartley Valley. Hartley Highway Action Group raised strong concerns regarding the preservation of the heritage in this area. The organisation does not support the concept design and road boundaries proposed by RMS and do not want these boundaries to be set in each of the council local environmental plans.

Hartley Highway Action Group highlighted a number of concerns:

- Minimise impacts on historic qualities of the Hartley Valley during any upgrade to the Great Western Highway.
- Enhancement of rail freight capacity taking the load off the road system.
- Improve safety on the existing road through the valley.
- Strategic routes for heavy road freight.
- Route selection was incorrect, due to the topography in the valley - there would be a great impact, and a major highway shouldn’t be located here. Additionally, the service road would run through two defined heritage villages, Little Hartley and Hartley. Truck parking areas should not be located in Valley, alternative areas for their location suggested by Hartley Highway Action Group were Mount Boyce or to the west in pine forest country.
- The context of the heritage precincts at Hartley and Little Hartley.
- Community in the Hartley valley would be divided.
- Forty Bends upgrade would be a waste of tax payers’ money, better spent elsewhere between Katoomba and Mount Victoria.
- Funding allocation and project justification.
• Hartley Highway Action Group also noted their appreciation and thanks to RMS for the announcement to install point-to-point speed cameras to control speed in the Valley.

**Nature Conservation Trust of NSW**

Nature Conservation Trust provided feedback on the concept design focusing on the impacts on a conservation area located on private property near River Lett Hill. NCT cites concerns about the threatened and endangered species of animals and plants located on this property that would be impacted by the concept design. Nature Conservation Trust noted that the valuable vegetation, communities and habitat for threatened species provides an important ‘stepping stone’ for the environment and landscape, linking areas around the Blue Mountains. Nature Conservation Trust stated that they would like the conservation area on this property to stay intact. Nature Conservation Trust also highlighted concerns about the impact the concept design would have on the Aboriginal heritage on this property. Nature Conservation Trust noted that they would like these factors considered prior to a final decision being made and potential re-route around this site.

**The National Trust of Australia (New South Wales)**

The New South Wales branch of the National Trust of Australia provided feedback on the concept design on behalf of a resident in the Hartley Valley. This resident was particularly concerned about the impacts of the concept design on the heritage values of their property. The National Trust of Australia did not support any of the three options outlined for the location of the service road in Hartley Valley due to the impact of the design on this private property and the heritage located on this land. The National Trust of Australia suggested a full bypass of the village be considered by RMS.

**South Bowenfels Rural Fire Service**

RMS met with a representative from the Rural Fire Service to discuss vehicle movements and impacts of the concept design on this organisation.

The key issues outlined by the Rural Fire Service were:

• Access to the fire shed off Mudgee Street.

• Requirement for an appropriate turning circle to access the fire shed with Category 2 tankers.

• Maintenance of parking around the shed for volunteer fire fighters and workers.

Discussions with the Rural Fire Service have led to further design work and potential changes to the layout of the alignment in front of the fire shed. The design will provide suitable access to the Rural Fire Service trucks and vehicles.