Katoomba to Lithgow
Great Western Highway Upgrade

Hartley Valley safety upgrade
Community feedback report

March 2013
Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance

Contents

1. Introduction 1
   1.1. Background 1
   1.2. The project 1
   1.3. Project objectives 1
   1.4. Purpose of this report 2

2. Approach to consultation 3
   2.1. Consultation objectives 3
   2.2. Consultation 3
       2.2.1. Community update 3
       2.2.2. Phone and email 3
       2.2.3. Staffed displays 3

3. Feedback 5
   3.1. Responses 5
   3.2. Source of responses 6
   3.3. Issue ranking 7

4. Issues by category and sub-issue 9
   4.1. Design engineering 9
       4.1.1. Intersections 9
       4.1.2. Road gradients 10
       4.1.3. Road shoulder 11
       4.1.4. Number of lanes 11
       4.1.5. Speed limit 12
       4.1.6. Cyclists 12
       4.1.7. Design general 12
   4.2. Road user concerns 13
       4.2.1. Safety improvements 13
       4.2.2. Maintenance 14
       4.2.3. Freight vehicles and trucks 14
       4.2.4. Speeding 15
   4.3. Project justification 16
       4.3.1. Supports project 16
       4.3.2. Cost of project 16
       4.3.3. Funding allocation 17
   4.4. Environment 18
       4.4.1. Air quality 18
       4.4.2. Drainage 19
       4.4.3. Environmental assessment 19
       4.4.4. Noise and vibration 19
   4.5. Heritage 20
       4.5.1. Conservation of European heritage 20
       4.5.2. Heritage studies 21
4.6. Property impacts 22
4.6.1. Non-financial property impacts 22
4.7. Process 23
4.7.1. Consultation approach 24
4.7.2. Field investigations 24
4.7.3. Graphic design 24
4.7.4. Route selection 24
4.7.5. Project management 25
4.8. Access 25
4.8.1. Local access 25
4.8.2. Pedestrian access 26
4.9. Urban design 27
4.9.1. Landscaping 27

5. Next Steps 29

List of Tables

Table 2-1: Staffed displays 4
Table 3-1: Issue categories and sub-issues 6
Table 3-2: Responses by postcode 7

Table of Figures

Figure 3-1: Ranking of issue categories 7
Figure 4-1: Design engineering 9
Figure 4-2: Road user concerns 13
Figure 4-3: Project justification 16
Figure 4-4: Environment 18
Figure 4-5: Heritage 20
Figure 4-6: Property impacts 22
Figure 4-7: Process 23
Figure 4-8: Access 25
Figure 4-9: Urban design 27

Appendix A - Community Update
1. Introduction

1.1. Background

The Great Western Highway is the major arterial road linking the Sydney metropolitan area to the Blue Mountains, Lithgow, Bathurst and other regional centres in central west New South Wales.

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. This decision addresses recommendations from an independent review of the proposed upgrades of the Great Western Highway west of Katoomba.

The revised package of upgrades would enhance safety outcomes and maximise benefits to the community by targeting specific deficiencies. Roads and Maritime Services (RMS) will manage and deliver the following by mid 2016:

- Upgrading the 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 from Mount Victoria to Lithgow and requesting councils to adopt these in their Local Environmental Plans.
- Using the remaining funds from the joint $250 million Australian and NSW government commitment for safety upgrades of the Great Western Highway between Katoomba and Mount Victoria.

1.2. The project

The proposed safety upgrade of the Great Western Highway in the Hartley Valley is a government initiative to improve safety. The Hartley Valley safety upgrade extends between the bottom curve of Victoria Pass to the east and the eastern extent of the Forty Bends upgrade to the west, excluding the recent upgrade of River Lett Hill.

These improvements would provide more consistent intersection treatments on the Great Western Highway and an improved road with wider shoulders.

1.3. Project objectives

The Hartley Valley safety upgrade consists of road improvements to achieve the following objectives:

- Provide an alignment that meets 90 km/h design speed, appropriate for the 80 km/h posted speed limit.
• Provide consistent formation width, with a minimum of two metre shoulders and appropriate clear zones.

• Upgrade the existing intersections at Coxs River Road, Ambermere Drive, Baaners Lane, Browns Gap Road, Mid Hartley Road, Old Bathurst Road and Jenolan Caves Road.

• Lengthen the existing downhill overtaking lane on River Lett Hill.

• Minimise property and environmental impacts.

1.4. Purpose of this report

The safety upgrade plans and feasibility assessment were displayed for community comment from 8 October to 26 October 2012. During that period staffed displays were held in South Bowenfels, Hartley and Mount Victoria.

This report provides a summary of community feedback and preliminary comment from RMS on the issues raised by the community in response to the safety upgrade plans.
2. Approach to consultation

2.1. Consultation objectives

The objectives of the community consultation were to:

- Ensure that the Hartley Valley community and stakeholders were informed about the safety upgrade proposal.
- Provide the Hartley Valley community with an opportunity to provide feedback, ask questions and to identify areas of concern with respect to the safety upgrade proposal.
- Identify issues and concerns raised by the Hartley Valley community and stakeholders for consideration in the design development process.

2.2. Consultation

The plans for the Hartley Valley safety upgrade were displayed on RMS’ website for community comment from 8 October to 26 October 2012.

2.2.1. Community update

A community update was distributed to about 7,500 local households and businesses between Mount Victoria and Lithgow. The community update sought comment on the enhanced safety upgrade program, including the Hartley Valley safety upgrade.

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 included at Appendix A.

2.2.2. Phone and email

Written comments were also accepted via email (MV2Linformation@MV2L.com.au) and a toll free line (1800 035 733) was provided for enquiries.

2.2.3. Staffed displays

Three staffed displays were held in the local area between Mount Victoria and Lithgow (as detailed in Table 2-1 below). The safety upgrade proposals were exhibited at the staffed displays and the community were able to ask questions of the project team. Issues raised at the staffed displays were recorded on flip charts and are summarised in this report.
## Table 2-1: Staffed displays

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Number attending</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 October 2012</td>
<td>10am to 2pm</td>
<td>Bowen Inn, Lithgow</td>
<td>11</td>
</tr>
<tr>
<td>18 October 2012</td>
<td>noon to 2pm</td>
<td>Hartley School building</td>
<td>20</td>
</tr>
<tr>
<td>18 October 2012</td>
<td>6pm to 8pm</td>
<td>Mount Victoria Public School</td>
<td>Over 40</td>
</tr>
</tbody>
</table>
3. Feedback

This section highlights the issues raised by the community and stakeholders during the comment period for Hartley Valley safety upgrade.

3.1. Responses

A total of 13 written responses were received by RMS during the consultation period. The written responses were received via:

- Eight feedback forms.
- Five emails.

More than 85 per cent of written responses were received from residents of Hartley and Little Hartley. No responses were received from government agencies.

Each response was reviewed and summarised according to the issues raised. The issues have been extracted and collated.

Where similar issues have been raised a single RMS comment has been provided.

Following the community feedback, issues were placed into the following general categories and sub categories as shown in Table 3-1.
Table 3-1: Issue categories and sub-issues

<table>
<thead>
<tr>
<th>Issue category /sub-issue</th>
<th>Number of times raised in responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design engineering</strong></td>
<td>18</td>
</tr>
<tr>
<td>Intersections</td>
<td>6</td>
</tr>
<tr>
<td>Road gradient</td>
<td>3</td>
</tr>
<tr>
<td>Number of lanes</td>
<td>3</td>
</tr>
<tr>
<td>Speed limit</td>
<td>2</td>
</tr>
<tr>
<td>Road shoulder</td>
<td>2</td>
</tr>
<tr>
<td>Design general</td>
<td>1</td>
</tr>
<tr>
<td>Cycleway</td>
<td>1</td>
</tr>
<tr>
<td><strong>Road user concerns</strong></td>
<td>15</td>
</tr>
<tr>
<td>Safety improvements</td>
<td>10</td>
</tr>
<tr>
<td>Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Speeding</td>
<td>1</td>
</tr>
<tr>
<td>Freight vehicles/trucks</td>
<td>1</td>
</tr>
<tr>
<td><strong>Project justification</strong></td>
<td>10</td>
</tr>
<tr>
<td>Supports project</td>
<td>4</td>
</tr>
<tr>
<td>Cost of project</td>
<td>3</td>
</tr>
<tr>
<td>Funding allocation</td>
<td>3</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>7</td>
</tr>
<tr>
<td>Environmental assessment</td>
<td>3</td>
</tr>
<tr>
<td>Noise and vibration</td>
<td>2</td>
</tr>
<tr>
<td>Air quality</td>
<td>1</td>
</tr>
<tr>
<td>Drainage</td>
<td>1</td>
</tr>
<tr>
<td><strong>Heritage</strong></td>
<td>5</td>
</tr>
<tr>
<td>European heritage</td>
<td>4</td>
</tr>
<tr>
<td>Heritage studies</td>
<td>1</td>
</tr>
<tr>
<td><strong>Property impacts</strong></td>
<td>4</td>
</tr>
<tr>
<td>Non-financial</td>
<td>4</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>4</td>
</tr>
<tr>
<td>Route selection</td>
<td>1</td>
</tr>
<tr>
<td>Graphic design</td>
<td>1</td>
</tr>
<tr>
<td>Consultation approach</td>
<td>1</td>
</tr>
<tr>
<td>Field investigations</td>
<td>1</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>3</td>
</tr>
<tr>
<td>Local access</td>
<td>2</td>
</tr>
<tr>
<td>Pedestrian access</td>
<td>1</td>
</tr>
<tr>
<td><strong>Urban design</strong></td>
<td>1</td>
</tr>
<tr>
<td>Landscaping</td>
<td>1</td>
</tr>
</tbody>
</table>

3.2. Source of responses

The number of comments received by postcode and corresponding town of respondents can be found below in Table 3-2.
Table 3-2: Responses by postcode

<table>
<thead>
<tr>
<th>Postcode</th>
<th>Suburb</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2790</td>
<td>Hartley</td>
<td>3</td>
</tr>
<tr>
<td>2780</td>
<td>Leura</td>
<td>1</td>
</tr>
<tr>
<td>2790</td>
<td>Lithgow</td>
<td>3</td>
</tr>
<tr>
<td>2790</td>
<td>Little Hartley</td>
<td>5</td>
</tr>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>1</td>
</tr>
</tbody>
</table>

3.3. Issue ranking

The top five issues raised regarding the Hartley Valley safety upgrade are described below:

1. Design engineering
   This category refers to technical aspects and specific design issues related to the proposal.

2. Road user concerns
   This category refers to issues that impact upon stakeholders who travel on the highway and surrounding local roads.

3. Project justification
   This category refers to reasons why the community support or oppose the proposal.
4. Environment
This category refers to environmental impacts and studies related to the proposal.

5. Heritage
This category refers to heritage concerns and heritage studies that have or are required to be conducted.
4. Issues by category and sub-issue

This section highlights the issues raised by the community and stakeholders during the consultation period relating to the Hartley Valley safety upgrade.

4.1. Design engineering

This issue category refers to technical aspects and specific design issues related to the Hartley Valley safety upgrade proposal. This issue category was raised 18 times in written responses.

**Figure 4-1: Design engineering**

Most responses were in relation to the safety of intersections along the Great Western Highway throughout the Hartley Valley, in particular Coxs River Road.

Respondents also raised concerns about the road gradient, number of lanes, past and proposed speed limit and one general comment about the safety upgrade design.

The need for a wide shoulder to accommodate cyclists was also raised.

4.1.1. Intersections

**Feedback in written responses**

This issue was raised six times. Four respondents were focused on treatments required to improve the Coxs River Road intersection, in particular the need for a protected turning lane (eastbound).
Two responses commented on the Browns Gap Road intersection. One respondent supported the proposal while another requested that more be done to improve safety at this intersection.

One response highlighted that the options for turning onto the highway are only useful to traffic turning left. Traffic turning right does not have a safe berth in the centre of the highway.

**Feedback from staffed displays**
Questions were raised about the protected right turn arrangements at Coxs River Road intersection and the sight distance approaching this intersection.

The proposed Browns Gap Road and Baaners Lane intersection was proposed to be constructed off the existing carriageway to improve constructability.

It was suggested that the right turn out of Jenolan Caves Road onto the highway needs an acceleration lane.

**RMS comments on feedback**
All intersections will be designed to meet current standards. The improved vertical and horizontal geometry will provide adequate sight distance for right turning vehicles to select a gap in both traffic streams and safely join the highway traffic.

Options for the design and construction of Browns Gap Road and Baaners Lane intersections are currently being considered. A balance between constructability, environmental impacts and property impacts will need to be achieved.

#### 4.1.2. Road gradients

**Feedback in written responses**
This issue was raised three times by one respondent. The respondent focused on changes to the road gradient proposed in the safety upgrade in relation to the Nioka property and Billesdene Grange. In particular, concern was raised about the high batters proposed in order to reduce gradients and improve sight distance. It was noted that this may have a negative impact on vistas to and from heritage properties. It was also noted that widening should avoid impacts on Billesdene Grange.

**RMS comments on feedback**
RMS will aim to minimise the amount of earthworks required for the Hartley Valley safety upgrade while still meeting the design criteria and standards. Where the existing vertical geometry does not meet the design speed some cut and fill will be required to achieve sight distance and safety outcomes.

RMS will consult with individual landowners over any specific property access issues.

An environmental impact assessment will be undertaken, known as a Review of Environmental Factors (REF), as part of the design development process. This assessment will consider the impact on heritage properties and identify mitigation measures if required.
4.1.3. Road shoulder

Feedback in written responses
This issue was raised twice in written responses. The respondents focused on an increase in the width of the road shoulder. One respondent suggested increasing the proposed two metre shoulders to three metres, which would improve safety for people trying to access local businesses.

Another respondent raised concerns about the existing cutting at ‘Chinaman’s Bend’ and the need for it to be cut back further to allow for the proposed two metre shoulders.

Feedback from staffed displays
A question was raised about the width of the road shoulders and whether they will be wide enough to keep traffic flowing while the garbage and recycling collections are carried out.

RMS comments on feedback
The provision of a wider shoulder at specific locations to facilitate access to property will be further investigated during the course of detail design development. A wider shoulder would permit following vehicles to pass to the left of right turning vehicles and left turning vehicles to slow clear of through traffic. Where it is warranted and there is sufficient width in the road reserve to provide additional sealed shoulder this will be considered.

The design at specific locations is still being determined however impacts on the environment and adjoining properties will be minimised as much as possible. Detailed geotechnical investigations will be undertaken to support the design of the highway upgrade.

4.1.4. Number of lanes

Feedback in written responses
This issue was raised three times in written responses. The respondents were focused on making the highway four lanes for the whole length of the upgrade.

One respondent noted the need to maintain the overtaking lane at Mid Hartley Road.

RMS comments on feedback
The widening of the Great Western Highway through the Hartley Valley to four lanes is beyond the scope of the Hartley Valley safety upgrade.

The Mid Hartley Road overtaking lane has already been removed due to its non-conformance with current design standards after introduction of a protected right turn lane at the intersection.
4.1.5. Speed limit

Feedback in written responses
This issue was raised twice. One respondent focused on the need to reduce speed limits further through the valley to 60 km/h. This respondent noted that previous works have failed to prevent traffic speeding.

The other respondent commented that the speed limit should be 90 to 100 km/h for the whole length of the upgraded highway.

RMS comments on feedback
The speed limit on the highway was recently reviewed and it was determined that an 80 km/h limit was appropriate. Changes to the posted speed limit of the Great Western Highway through the Hartley Valley are beyond the scope of the Hartley Valley safety upgrade.

4.1.6. Cyclists

Feedback in written responses
This issue was raised once. The respondent was focused on the need to provide a safe location for active cyclists to ride in the shoulder as part of the Hartley Valley safety upgrade.

Feedback from staffed displays
A query was raised about whether cyclists will be catered for through the Hartley Valley.

RMS comments on feedback
While no specific treatments are proposed to cater for cyclists as part of the safety upgrade, a minimum two metre sealed shoulder will be provided.

4.1.7. Design general

Feedback in written responses
One respondent raised concern that the safety upgrade is actually the groundwork for ‘a future motorway’.

Feedback from staffed displays
A request was also made that RMS remove the bottom curve on River Lett Hill.

RMS comments on feedback
Funding has been provided by the Australian and NSW governments for a safety upgrade of the Great Western Highway through the Hartley Valley. The aim of the proposed work is to provide safety improvements to the highway and is consistent with the funding goals. The safety upgrade proposal is a standalone proposal and not based on future upgrades to the overall concept design.

Realignment of the bottom curve on River Lett Hill is beyond the scope of the Hartley Valley safety upgrade.
4.2. 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 15 times in written responses.

Figure 4-2: Road user concerns

Most responses were in regards to road safety improvements required in the Hartley Valley. Required maintenance work on the Great Western Highway in the Hartley Valley was also raised, as well as concerns about speeding and large freight vehicles.

4.2.1. Safety improvements

Feedback in written responses

This issue was raised nine times. One respondent raised the need for adequate reflector indicators at River Lett Hill and again at Jenolan Caves Road.

One respondent requested that RMS increase the radius of the left-hand bend (westbound) at Old Bathurst Road.

It was commented that the provision of turning lanes will add to safety between Browns Gap Road and Hartley Historic Village, although there was concern over the entry at Old Bathurst Road.

One respondent suggested that there should be a protected right turn provided at Billesdene Grange for westbound traffic to pass turning vehicles. It was further suggested that a left hand turn lane into Billesdene Grange driveway for eastbound vehicles would also be of assistance.

The need to improve the curves on Victoria Pass was raised by one respondent four times as well as the failure of previous safety works done on the Pass.
**RMS comments on feedback**

All intersections will be designed to meet current standards. Appropriate line marking, reflectors and signs will be provided.

Preliminary investigations of the curve near Hartley Historic Village indicated that an improved alignment would have significant impacts on heritage property and require substantial earthworks and land acquisition. The estimated costs far outweighed the potential benefits and the option was not considered further. RMS is currently investigating other options to make this curve safer, while limiting the impact on property and the environment. These options will provide better separation and drainage.

The provision of a wider three metre shoulder to facilitate access to properties will be further investigated during the course of detail design and provided where appropriate and possible. A wider shoulder would permit following vehicles to pass to the left of right turning vehicles and left turning vehicles to slow, clear of through traffic.

High speed traffic entering the Hartley Historic Village precinct is considered inconsistent with the low speed pedestrian/traffic environment. A deceleration lane would permit vehicles to slow prior to entering the historic precinct.

The safety upgrade to the top and bottom curve of Victoria Pass was undertaken by RMS, introducing a central barrier to reduce the likelihood of head on crashes in particular. Straightening of the curves does not meet the necessary design guidelines for highway gradients and would have significant environmental impacts. RMS will consider if any further work is required within the context of the current safety upgrade proposals.

### 4.2.2. Maintenance

**Feedback in written responses**
This issue was raised three times by one respondent. The respondent raised the desire for a culvert to be fenced and kept clear of debris near their property. Additionally it was noted that the access road and driveway behind the culvert should be tarred and maintained to prevent erosion during storms. It was noted that storms cause sediment to wash across all lanes of traffic.

**RMS comments on feedback**
RMS will consult with impacted residents to determine treatment options for this location.

### 4.2.3. Freight vehicles and trucks

**Feedback in written responses**
This issue was raised once. The respondent believes that the real aim of the upgrade to Victoria Pass was to permit 26 metre B-doubles, which are currently banned, to travel across the Blue Mountains.
RMS comments on feedback
There is no current proposal to allow heavy vehicles greater than 19 metres in length to use sections of the Great Western Highway where they are presently banned. The recently completed safety improvements to the top and bottom curves of Victoria Pass will not allow larger vehicles to use the highway.

4.2.4. Speeding

Feedback in written responses
This issue was raised once. The respondent was focused on the limited effectiveness of current speed limits and police patrols on reducing speeding of both private vehicles and trucks through Little Hartley.

Feedback from staffed displays
A respondent requested that point to point cameras be included as part of Hartley Valley safety upgrade.

RMS comments on feedback
The improved vertical and horizontal geometry will provide compliant sight distance between vehicles leaving properties and those approaching on the highway. Warning signs will be provided where warranted.

In October 2012 the installation of point-to-point speed enforcement was announced by the MP for the Blue Mountains. This will govern a 15-kilometre stretch of the Great Western Highway between Mount Victoria and Lithgow.
4.3. Project justification

This category refers to reasons why the community support or oppose the Hartley Valley safety upgrade proposal. This issue category was raised 10 times in written responses.

**Figure 4-3: Project justification**

General support for the safety upgrades through the Hartley Valley was raised by three respondents. The cost of the Great Western Highway upgrade and support for alternate funding allocations were also raised.

4.3.1. Supports project

**Feedback in written responses**
Support for the project was raised four times. The respondents expressed support for the proposed safety upgrade or specific elements of the safety upgrade, including sealed shoulders.

**Feedback from staffed displays**
Support was shown for the proposal to improve the intersection at Coxs River Road and Ambermere Drive.

**RMS comments on feedback**
Support for the project, or specific improvements, are noted.

4.3.2. Cost of project

**Feedback in written responses**
This issue was raised three times. The respondents were focused on the excessive cost of the project and cost savings that could have been made with earlier action.
One respondent noted that it is a waste of money to upgrade one lane only in each direction as this is no different to current highway and the cost to add lanes at a later date will be more expensive.

One respondent noted that a cost in lives, injury and economic loss from crashes could have been curtailed by earlier action.

**RMS comments on feedback**

It is acknowledged that the design development process takes time and money. RMS is committed to involving the community at key stages of the design development process. The changes to the highway upgrade investment program were a direct result of community calls for change.

The purpose of the safety upgrade is to improve safety with minimal disruption and impact. The concept design reserves the land for a future major upgrade of the highway.

### 4.3.3. Funding allocation

**Feedback in written responses**

This issue was raised three times. One respondent noted that the bypass behind the Harp of Erin should be a funding priority.

Two respondents noted that the Hartley Valley safety upgrade should take priority over the Forty Bends upgrade.

One respondent noted that Victoria Pass and River Lett Hill are existing sections that need the most attention.

**Feedback from staffed displays**

One participant commented that the safety upgrades at Hartley Valley and Mount Victoria village should take priority over the Forty Bends upgrade.

Another participant would prefer the deviation behind Little Hartley from the Log Cabin (Lolly Shop) to west of the cemetery to be built now instead of the Forty Bends upgrade.

A question was raised as to why any of the proposed safety upgrades are required.

**RMS comments on feedback**

A road safety review undertaken by RMS in October 2010 identified road safety issues in the Hartley Valley.

The Australia and NSW governments have agreed to follow the recommendations of the 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. Parts of the allocated funding are being used for safety upgrade works within both the Mount Victoria village and
Hartley Valley. Any remaining funds will be directed to safety upgrades between Katoomba and Mount Victoria.

4.4. Environment

This category refers to environmental impacts and studies related to the Hartley Valley safety upgrade proposals. This issue category was raised seven times in written responses.

Figure 4-4: Environment

Concerns over the environmental assessment already conducted and the need for future environment impact studies were raised three times by one respondent.

Noise and vibration was raised in two responses, in regards to current freight traffic and the potential for an increase in noise pollution at heritage properties as a result of the safety upgrade. Concerns over air quality and drainage issues were also raised.

4.4.1. Air quality

Feedback in written responses

This issue was raised once with the respondent describing an air contamination issue caused from the trucks which frequently use the existing poor quality road shoulder. The respondent noted that the sealed road shoulder had deteriorated and fine clay dust has become an issue. The respondent indicated they are currently being treated medically for this problem.

RMS comments on feedback

As part of the Hartley Valley safety upgrade, it is proposed to provide a minimum sealed shoulder of two metres. Specific locations where additional sealed shoulder width is required will be determined in consultation with adjacent landowners.
4.4.2. Drainage

Feedback in written responses
This issue was raised once. The respondent identifies the need for a culvert which is not shown in the current proposal and states that related water flow from the existing culvert should not be impeded by the safety upgrade.

RMS comments on feedback
The design placed on display in October was preliminary and did not show existing or proposed drainage. As part of the design process RMS will assess the existing drainage across the highway and upgrade where required.

An environmental impact assessment will be undertaken, known as a Review of Environmental Factors (REF), as part of the design development process. This assessment will consider the impact on water courses and identify mitigation measures if required.

4.4.3. Environmental assessment

Feedback in written responses
This issue was raised three times by one respondent. The respondent made reference to a 1999 Environmental Impact Study (EIS) which noted the need to avoid impact on the curtilage of Billesdene Grange and the heritage listed causeway.

Concerns were also raised regarding the quality of geotechnical conditions in the vicinity of Nioka and the Log Cabin, should widening and cutting be required.

RMS comments on feedback
The 1999/2000 environmental impact assessment was based on a different design to the one currently proposed. RMS is required to undertake a new environmental impact assessment, known as a Review of Environmental Factors (REF). This REF will consider heritage issues such as the causeway adjacent to Billesdene Grange.

Detailed geotechnical investigations will be undertaken to support the design of the highway upgrade.

4.4.4. Noise and vibration

Feedback in written responses
This issue was raised twice. One respondent focused on the current noise pollution caused by compression braking and the need for signs to address this.

The other respondent suggested there will be increased noise pollution for heritage residences, including the Harp of Erin, Kerosene Cottage, Meades Farm and Billesdene Grange. It was also noted that Ambermere Rose Inn may be adversely affected by vibration.
**RMS comments on feedback**

RMS will consider additional signs at the appropriate stage in the design development process.

An environmental impact assessment will be undertaken as part of the design development process. This assessment will consider the impact of noise and vibration and identify mitigation measures if required.

Noise and vibration from heavy vehicles is partly caused by a vehicle’s suspension reacting to a rough road surface. The Hartley Valley safety upgrade would include an upgraded road surface, which would be smoother and reduce the potential for development of noise and vibration impacts from road traffic.

### 4.5. Heritage

This category refers to heritage concerns and heritage studies that have or are required to be conducted. This issue category was raised five times by two respondents in the written responses.

**Figure 4-5: Heritage**

Concerns over the protection of European heritage were raised by two respondents. Additionally one of those respondents also raised a concern over the findings of a heritage study previously conducted by RMS.

#### 4.5.1. Conservation of European heritage

**Feedback in written responses**

This issue was raised four times by two respondents. One respondent noted the need for conserving the heritage stone causeway near Billesdene Grange and also the damaging
impacts to heritage properties that will be caused by increased vibration. The respondent suggested that the road widening occur on the southern side to avoid impact.

The other respondent raised their concern over the widening of the highway in front of the Harp of Erin. The property is in close proximity to the highway and it was noted that widening should occur on the other side of the highway. This respondent also raised the need for protecting all heritage properties in the Hartley Valley.

**Feedback from staffed displays**

One participant raised concerns over impact to the convict causeway. In particular it was suggested widening occurs on the southern side to avoid impact.

**RMS comments on feedback**

Directly affected property owners will be contacted by the project team once the design development process is further advanced and more detail is known about the potential nature of the impacts.

As part of the Hartley Valley safety upgrade the impact on adjoining properties will be minimised as much as possible. Where impacts are unavoidable RMS will consult with the land owner as part of the development of the project.

An environmental impact assessment will be undertaken, known as a Review of Environmental Factors (REF), as part of the design development process. This assessment will consider noise and vibration and the impact on heritage items and identify mitigation measures if required.

### 4.5.2. Heritage studies

**Feedback in written responses**

This issue was raised once. The respondent refers to a previous environmental impact study conducted by RMS in 1999 which states that ‘the Proponent shall ensure that the causeway entrance to Billesdene Grange is not impacted by the project’. The respondent notes the need for RMS to abide by this condition.

**RMS comments on feedback**

The 1999/2000 environmental impact assessment was based on a different design to the one currently proposed. RMS is required under the Environmental Planning and Assessment Act to undertake a new environmental impact assessment, known as a Review of Environmental Factors (REF). This REF will consider heritage issues such as the causeway adjacent to Billesdene Grange.
4.6. Property impacts

This category refers to financial and non-financial impacts on private property. Non-financial issues were raised four times in written responses.

Figure 4-6: Property impacts

Concerns over the impacts of previous and future road works were raised in all four responses.

4.6.1. Non-financial property impacts

Feedback in written responses
This issue was raised four times by two respondents. One respondent raised the issue of the impacts on their property caused by previous RMS construction work. The respondent also listed the required mitigation measures to be put in place before any new construction could occur.

Another respondent raised concern over negative impacts to their dam, caused by previous works on Victoria pass, and the impact that future pavement work would have on the dam and their property.

Both respondents requested further consultation with RMS.

One resident has an issue with vibration from the highway having detrimental impacts on their property and invited RMS’ engineers to view the current damage.

Feedback from staffed displays
One participant raised concern that the cadastral lines on the safety upgrade proposals appear to be incorrect.
A number of residents also asked specific questions about the extent and nature of potential impacts to their properties.

**RMS comments on feedback**

Once a construction methodology for the work has been developed, specific mitigation of construction vibration impacts would be resolved. Prior to commencing work property condition surveys will be undertaken.

Vibration from heavy vehicles is generally caused by a vehicle’s suspension reacting to a rough road surface. The Hartley Valley safety upgrade will include an upgraded road surface, which would be smoother and minimise the potential for development of vibration impacts from road traffic.

All reasonable mitigation measures to prevent property damage due to construction vibration would be considered, including the use of non-vibrating rollers when working near buildings.

Directly affected property owners will be contacted by the project team once the design development process is further advanced and more detail is known about the potential nature of the impacts.

**4.7. Process**

This category refers to issues around project management and the approach to the community. This issue category was raised four times in written responses.

**Figure 4-7: Process**
4.7.1. Consultation approach

Feedback in written responses
This issue was raised once. A respondent noted that they are having difficulty getting information about the safety upgrades even though they may be affected by the proposal. The respondent also raised concern about not being contacted directly by the project team.

RMS comments on feedback
Directly affected property owners will be contacted at key stages of the design development process, including when more detail is known about the potential nature of the impacts.

4.7.2. Field investigations

Feedback in written responses
This issue was raised once. The respondent indicated that no more studies should be conducted and that the highway upgrade should go ahead.

RMS comments on feedback
RMS is required under the Environmental Planning and Assessment Act to undertake an environmental impact assessment for the purpose of obtaining planning approval. The assessment will be a Review of Environmental Factors or REF.

4.7.3. Graphic design

Feedback in written responses
This issue was raised once. The respondent noted that the plans are hard to interpret and that further explanation is required.

RMS comments on feedback
The design information previously released for the Hartley Valley safety upgrade was preliminary and a more detailed concept design is currently being prepared. As part of the works the impacts on adjoining properties will be minimised as much as possible. Where impacts are unavoidable RMS will consult with the land owner as part of the design development process.

4.7.4. Route selection

Feedback in written responses
This issue was raised once. The respondent focused on returning the road near the foot of Victoria Pass to the straight line originally built under the direction of the fourth Surveyor General of NSW, Sir Thomas Mitchell.

RMS comments on feedback
The safety upgrade to the top and bottom curve of Victoria Pass was undertaken by RMS, introducing a central barrier to reduce the likelihood of head on crashes in particular. Straightening of the curves does not meet the necessary design guidelines for highway
gradients and would have significant environmental impacts. RMS will consider if any further work is required within the context of the current safety upgrade proposals.

4.7.5. Project management

Feedback from staffed displays
At the staffed display concern was raised by one participant over the way in which RMS has managed the Mount Victoria to Lithgow project. Specific concerns included that some existing trees along the highway are too close to the road, particularly in front of the fish shop.

RMS comments on feedback
As part of the safety upgrade appropriate clear zones would be provided. Where environmental or property constraints prevent the removal of existing hazards within the clear zone guard rail or wire rope would be used.

4.8. Access

This category refers to issues centred on accessibility aspects of the Hartley Valley safety upgrade. This issue category was raised three times in written responses.

Figure 4-8: Access

Access issues were related to pedestrian movements and local access issues for the school bus and access to private property during construction works.

4.8.1. Local access

Feedback in written responses
This issue was raised twice. One respondent suggested the need for a safe area for local buses to stop to the north of Baaners Lane which would be of benefit to local school students, parents and the bus driver.
The other respondent raised concern over the need for access to private property during any construction works and cited a previous example where this was not provided.

**Feedback from staffed displays**

This issue was raised five times during the staffed display, including the following points:

It was recommended that there should be a drop off and pick up of point for school children at the corner of Baaners Lane and Great Western Highway, and that the existing drop off point can be dangerous. The existing bus stop near Ambermere Drive should also be retained.

A comment was made that the safety upgrades through Hartley should provide good access to existing properties, in particular for the school bus stops on each side of the road at each access.

It was suggested that all businesses in the Hartley Valley need a three metre shoulder to assist motorists to stop.

An individual request was made that property access midway up River Lett Hill be formalised to enable residents to do a u-turn to access their daughter’s property.

**RMS comments on feedback**

A construction traffic management plan would be prepared to effectively manage traffic and access during construction of the highway upgrade. If adjoining landowners have specific concerns RMS will work with them to determine the appropriate action.

As part of the safety upgrade, the need for school bus stop areas will be determined and provided where possible.

The provision of a wider, three metre shoulder to facilitate access to property will be further investigated during the course of detailed design development. A wider shoulder would permit following vehicles to pass to the left of right turning vehicles and left turning vehicles to slow clear of through traffic. Where it is warranted and there is sufficient width in the road reserve to provide additional sealed shoulder this will be considered.

Directly affected property owners will be contacted by the project team once the design development process is further advanced and more detail is known about the potential nature of the impacts.

### 4.8.2. Pedestrian access

**Feedback in written responses**

This issue was raised once. The respondent indicated there would be no room for a verge to allow pedestrian movement between Little Hartley heritage houses and businesses. The respondent noted that the bypass of Little Hartley (proposed in the Mount Victoria to Lithgow concept design) provided the opportunity for a pedestrian, horse, and cycle path either side of the Great Western Highway, which would be attractive to tourists.
RMS comments on feedback
Where the existing road reserve width allows, the existing verge will be maintained. The need for pedestrian facilities at specific locations will be assessed as part of the design process. The Harp of Erin bypass is beyond the scope of the Hartley Valley safety upgrade.

4.9. Urban design
This category refers to issues related to design aesthetics and amenity. This issue category was raised once in the written responses.

Figure 4-9: Urban design

A concern was raised over the potential removal of vegetation that provides a shield between a private property and the highway. The respondent requested information about any measures proposed to protect privacy and manage noise impacts.

4.9.1. Landscaping

Feedback in written responses
This issue was raised once. The respondent was focused on the potential removal of native vegetation in order to widen the pavement. The resident communicated that this vegetation is a noise and privacy shield from the highway and would like provisions to be made so that a barrier in some form is maintained.

RMS comments on feedback
As part of the Hartley Valley safety upgrade the impacts on the environment and adjoining properties will be minimised as much as possible. Where impacts are unavoidable RMS will consult with the land owner as part of the design development process. An environmental impact assessment will be undertaken as part of the design development process. This
assessment will consider the impact of vegetation removal, noise and vibration and identify mitigation measures if required.
5. **Next Steps**

Design development is continuing for the Hartley Valley safety upgrade. Once the concept design is completed an environmental impact assessment will be undertaken, known as a Review of Environmental Factors (REF). This will assess the potential environmental impacts associated with the proposed Hartley Valley safety upgrade. The REF is the means by which RMS obtains planning approval for the safety upgrade.

The detailed design will incorporate any environmental safeguards, mitigation and management measures identified in the REF.

Once the detail design has progressed sufficiently, RMS will meet with individual property owners to discuss any potential property impacts, adjustments to property boundaries or property acquisition that may be required to proceed to construction of the safety upgrade.

RMS also proposes to undertake further community consultation once the concept design for the Hartley Valley safety upgrade is complete.

RMS will continue to keep the community informed as the design development process progresses.
Appendix A - Community Update

The community update can be downloaded from the Katoomba to Lithgow project web page (click on Project documents).