



Australian Government

**BUILDING OUR FUTURE**



Hartley Historic Site curve, Great Western Highway. Aerial photos of Hartley Historic Site curve supplied by DIODRONE

# Mount Victoria village, Hartley Valley to Forty Bends upgrade Great Western Highway

January 2017

The Australian and NSW governments are undertaking a \$250 million upgrade package on the Great Western Highway between Katoomba and Lithgow to improve traffic flow, safety and travel conditions.

The Great Western Highway upgrade is being carried out in sections to provide road users with a better travelling experience and includes a number of projects which are underway, including safety upgrades at Forty Bends, in the Hartley Valley and Mount Victoria village.

The remaining funding will be used for safety upgrades in a priority order between Katoomba and Mount Victoria.

## Project benefits

The upgrade of the Great Western Highway, Mount Victoria and Hartley Valley to Forty Bends will:

- Provide improvements along the existing highway, including changes to curves to make them safer
- Make highway intersections with local roads safer
- Improve the road surface and widen road shoulders
- Provide concrete and wire rope safety barriers
- Provide a road surface at Forty Bends that lessens the risk of black ice formation
- Provide new toilet facilities westbound at Fernhill.

## Hartley Valley safety upgrade work complete

Five kilometres of safety upgrades opened to traffic at the end of December despite wild weather hampering work through Hartley Valley and River Lett over the winter months.

Severe weather conditions which included temperatures being too low to lay asphalt meant the placement of the final layer of the road surface through the valley between the Hartley Cemetery and Mount Victoria, and River Lett to Jenolan Caves Road, had been postponed.

Heavy rain events also hampered work through the area, putting the brakes on progress across the project, including the placement of a concrete road surface at Forty Bends designed to reduce the occurrence of black ice.

With the sun shining and warmer weather, the placement of the final layer of the asphalt road surface between the Hartley Cemetery and Mount Victoria, and River Lett to Jenolan Caves Road, resumed late last year and was completed, while concreting at Forty Bends is continuing.

Five kilometres of road including 10 upgraded intersections from the bottom of Victoria Pass to the bottom of River Lett Hill was finished before the end of December.

## Project background

Roads and Maritime started engaging with the community about route option development for the Great Western Highway between Mount Victoria and Lithgow in 2008.

In September 2011 Evans and Peck were engaged to undertake an independent review of the proposed upgrade of the Great Western Highway west of Katoomba, following concerns raised by members of the local communities about environmental, cultural, social and economic impacts of the proposed upgrade projects.

As a result of the review, the Australian and NSW governments agreed on a revised program of work focusing on an enhanced safety work program. Work began in Hartley Valley / Forty Bends in December 2014, and in Mount Victoria village in December 2015.

## Addressing local traffic hazard

Part of the \$250 million upgrade package on the Great Western Highway includes upgrading Forty Bends, east of Lithgow, to three lanes with the specific purpose of reducing the risk posed by black ice formation.

Forty Bends has a significant level of risk of black ice formation due to the road lying on the southern side of Hassans Walls from which cold air drains down the slopes (known as katabatic wind), particularly on clear, calm nights, leading to the formation of frost or ice if humidity levels are high.

The risk of black ice formation is intensified as a result of shadows caused by Hassans Walls and roadside vegetation limiting sunlight reaching the highway, especially during winter.

To reduce the risk of black ice forming on the highway the road upgrade includes:

- Realigning the highway within the existing road corridor creating one continuous bend staged further away from the bottom of the slope
- The removal of some vegetation to maximise sunlight falling on the road
- The installation of concrete pavement which tends to be warmer than asphalt surfaces.

The Forty Bends upgrade has also included the construction of the Whites Creek Arch that will allow cold air to pass through rather than rising to the road surface, further reducing the risk of black ice forming.

The arch will also act as a fauna crossing for animals.



**More than 2,460 people  
inducted on the  
Hartley Valley  
to Forty Bends  
upgrade**

## Hartley Historic Site curve improvements

To provide safer access to the Hartley Historic Site, the Old Bathurst Road and Great Western Highway intersection has been upgraded to improve sight distance for motorists and provide a safer road environment.

The intersection has been shifted about 12 metres to the north to tie in with the realigned Hartley Historic Site curve. Realigning the road near the Hartley Historic Site will improve travel conditions by substantially upgrading the curve of the Great Western Highway.

The road surface will also be improved with the section of highway featuring a single westbound lane and a dual east bound lane allowing overtaking.

## Victoria Pass closure ensures safe work zone

The closure of the west bound lane on the Great Western Highway's Victoria Pass allowed the final layer of asphalt to be placed on the road at the bottom of the Pass in Hartley Valley safely.

Closed for one night in November, west bound traffic was diverted across the Darling Causeway and down Bells Line of Road / Chifley Road to rejoin the Great Western Highway at Dunn's Corner in Lithgow.

The closure was determined to be the safest way of managing traffic, both for the sake of motorists and workers and ensured the work was carried out at the Hartley Valley location in the most efficient way possible.

Concrete kerb pour at Forty Bends.



## Retaining village character

As part of the Australian and NSW government's \$250 million upgrade package being delivered between Katoomba and Lithgow on the Great Western Highway, safety upgrades are being carried out through Mount Victoria village.

Safety upgrades through the village are being carried out in three sections which collectively extend 400 metres west of Browntown Oval to immediately west of Mount York Road.

Improving local road safety, the upgrade work includes the construction of six retaining walls which are needed due to the steep topography of Mount Victoria village, and specifically to support the realignment of the highway where needed.

The highest of the retaining walls, 5.3 metres, is located between Mount Piddington Road and Hooper Street where the highway has been moved 20 metres to the north-east to improve the road alignment. The retaining wall has been finished with a traffic safety barrier.

In keeping with the character of Mount Victoria village, all retaining walls visible from the highway will be finished by a stonemason in natural sandstone with some landscaping to be carried out on and around several of them.

## Traffic changes

Traffic was recently moved onto the newly constructed alignment of the Great Western Highway between Hooper Street and Harley Avenue in Mount Victoria village.

Due to the change in traffic arrangements between Hooper Street and Harley Avenue, access from the Great Western Highway to Mount Piddington Road will be closed until mid-2017.

During this time work will be carried out to realign and improve access to Mount Piddington Road, with local access to Mount Piddington Road maintained via Hooper Street, Carlisle Parade, Apex Avenue and Sylvania Street in Mount Victoria village.



**Improve  
pedestrian safety**

**Around 1 km of pedestrian path is being built or upgraded on one or both sides of the Great Western Highway through Mount Victoria village as part of the safety upgrade work.**

## Intersection safety improvements

Work being carried out in Mount Victoria village includes intersection upgrades to improve safety and better manage traffic flow.

Nine intersections will be upgraded or improved to increase sight distance for motorists, improve ease and safety of access to and from the highway, reduce congestion at intersections on the highway and enhance local connectivity.

Some of the upgrades include:

- Dedicated right turn bays at Harley Avenue, Mount Piddington Road, Kanimbla Valley Road and Selsdon Street
- A dedicated left turn bay at Mount York Road with the use of line marking
- Installation of widened road shoulders at Victoria Falls Road
- Left in/left out only vehicle movements at Hooper Street and Cecil Road with the use of appropriate sign posting and line marking.

Widening the highway shoulders by up to three metres on each side of the road will also assist traffic movements around intersections through Mount Victoria village.



**434 people inducted on the  
Mount Victoria  
village worksite**

A 5.3 m retaining wall at Mount Victoria under construction.



## Other local road safety upgrades

The Great Western Highway \$250 million safety upgrade is being carried out in sections to provide road users with a better travelling experience and includes the projects underway at Forty Bends, in the Hartley Valley and Mount Victoria village.

The remaining funding will be used for safety upgrades in a priority order between Katoomba and Mount Victoria, passing through the townships of Blackheath and Medlow Bath. This project has not yet started.

The proposal would improve safety between Katoomba and Mount Victoria by widening the highway shoulders, providing dedicated turn lanes and carrying out other safety work.

Roads and Maritime prepared a Review of Environmental Factors to examine the potential impacts of the proposed upgrade to the Great Western Highway, Katoomba to Mount Victoria, and outline measures to reduce and manage the impacts. This Review was displayed for community and stakeholder comment early in 2016.

Roads and Maritime has considered all of the feedback about the proposed Katoomba to Mount Victoria upgrade and has prepared a Review of Environmental Factors Submissions Report which provides a summary of the comments and our responses and an overview of the design refinements that will be made.

The Submissions Report is available at <http://www.rms.nsw.gov.au/projects/western-nsw/katoomba-lithgow/katoomba-to-mount-victoria.html>.

Great Western Highway, Blackheath.



131 450

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## What are the next steps for Mount Victoria village, Hartley Valley to Forty Bends?

Consultation on strategic design

Investigations to develop concept design and Review of Environmental Factors

Consultation report

Consultation on concept design and Review of Environmental Factors

Submission report and finalise detailed design

Award construction tender

Carry out construction

Open to traffic

WE ARE HERE

## For more information

For more information about the project please contact the project team by:

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January 2017  
RMS 16.623



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