

Great Western Highway Upgrade Program – Katoomba to Lithgow

Katoomba to Blackheath (East Section)

Consultation Report

October 2022



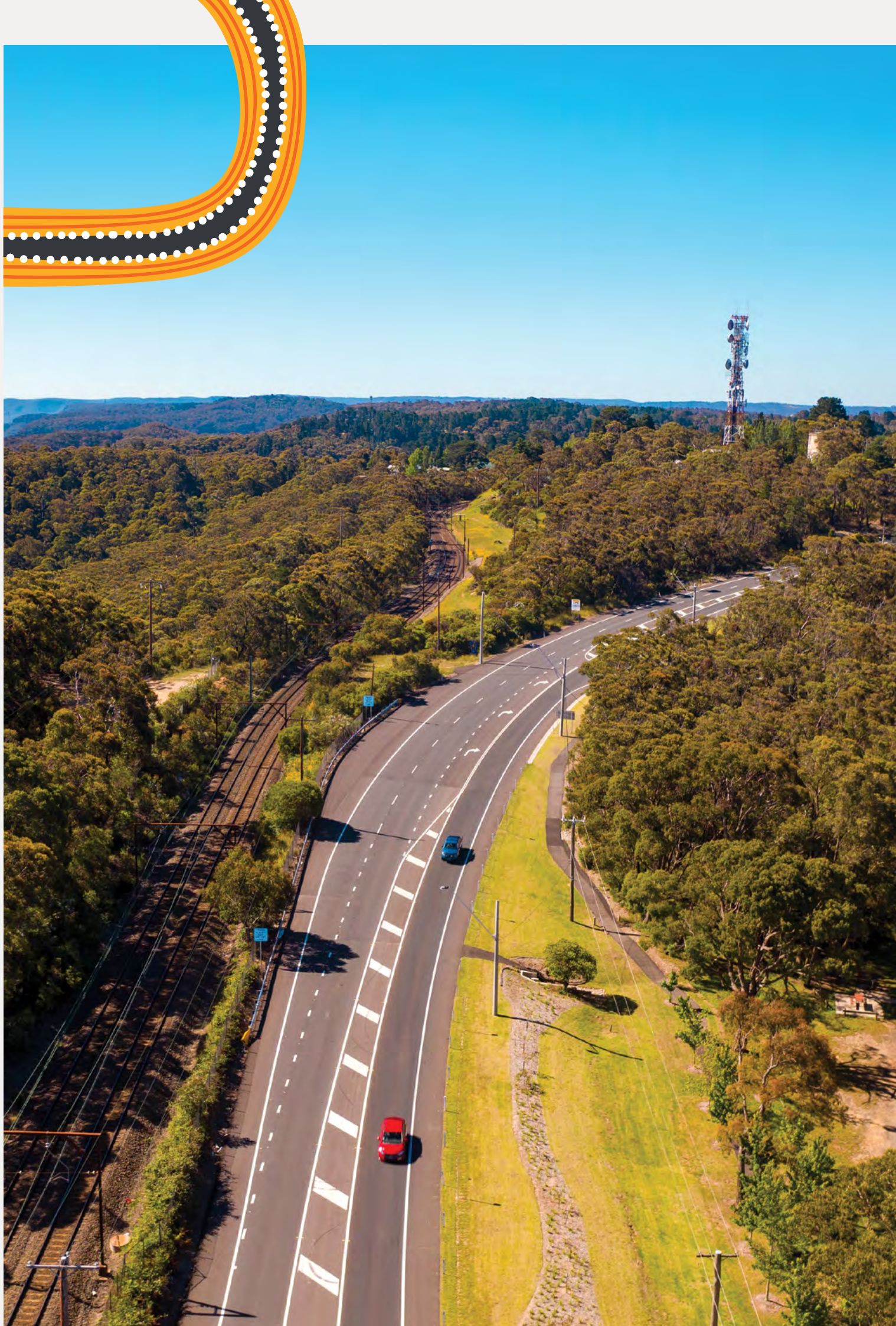
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Executive summary

Together, the Australian and NSW Governments have committed more than \$2.5 billion towards the East and West sections of the Great Western Highway Upgrade, between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively.

The Katoomba to Lithgow duplication will provide major economic and safety benefits. It will improve the connection between Central West NSW and Sydney, reduce congestion, improve resilience and freight productivity, and provide a safer and more reliable journey for thousands of residents, commuters, tourists and freight operators who travel in, around and through the Blue Mountains.

In November 2019, the strategic corridor for the proposed upgrade of 34 kilometres of the Great Western Highway between Katoomba and Lithgow was released to the community for feedback. This included the previously reserved corridor from Mount Victoria to Lithgow and a new corridor between Katoomba and Mount Victoria.

A summary of feedback from the 2019 consultation period can be found at nswroads.work/gwhd

The Great Western Highway between Katoomba and Blackheath is mostly a two-way undivided carriageway with one lane in each direction. The highway services freight, tourist and general traffic with volumes of about 20,000 vehicles per day near Katoomba and traffic growth is expected to continue.

Transport proposes to upgrade around 3.5 kilometres of the highway between Rowan Lane in Katoomba and Bellevue Crescent in Medlow Bath and around 1.8 kilometres of the highway between the existing rail overbridge in Medlow Bath to about 200 metres east of Tennyson Road in Blackheath to a four lane divided highway as part of the “East Section” of the Great Western Highway Upgrade.

The proposed upgrade would use modern design standards to improve safety by separating carriageways, improving gradients and straightening curves as much as possible.

The Katoomba to Blackheath (East Section) Review of Environmental Factors (REF) and concept design was publicly displayed and feedback was sought from the community from 15 May until 19 June 2022.

This report provides a summary of the consultation process implemented during the REF display and outlines the next steps in the progression of the Great Western Highway Upgrade Program.

Submissions to the Katoomba to Blackheath REF have been categorised and formally responded to in the Submissions Report, which is now available on the project website.

“

Project is justified, traffic is getting worse through the mountains and , particularly between Medlow Bath and Mt Victoria.

Feedback received during consultation

“

The mountains landscape is part of the wonder and beauty of our World Heritage listed park, it should not be sacrificed for a road.

Feedback received during consultation

Purpose of this report

This Consultation Report summarises the community engagement activities undertaken during the display of the Katoomba to Blackheath REF.

Between Sunday 15 May and Sunday 19 June 2022, Transport carried out public consultation on the REF and concept design for the upgrade of the Great Western Highway between Katoomba to Blackheath.

Consultation was widely promoted within the Blue Mountains, the Central West and Western Sydney and all interested stakeholders were invited to provide formal feedback.

The insights and feedback received are taken into account as part of the environmental assessment process.

The project team will use the knowledge gained to enhance the design to minimise impacts on, and create added benefits in, the proposal corridor.

We will continue to build and maintain relationships with the community and stakeholders throughout all phases of the Katoomba to Blackheath upgrade and the wider Great Western Highway Upgrade Program, and will continue to update the community as the program progresses.

“

Everything that is done on the plateau has an impact on the National Park. The hydrology of the Blue Mountains is particularly sensitive and hanging swamps have already been affected by this kind of development.

Feedback received during consultation

“

Providing suitable access will connect regional NSW with more business opportunities and help grow the regions.

Feedback received during consultation



Artist's representation of the Twin Bridges near Explorers Road looking west

Program context

The Great Western Highway Upgrade Program

The Great Western Highway Upgrade Program (the Program) proposes to deliver 34 kilometres of four lane carriageway between Katoomba and Lithgow.

Together, the Australian and NSW Governments are investing \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow.

Within that overall funding commitment, the Australian and NSW Governments have committed more than \$2.5 billion towards the East and West sections of the Great Western Highway Upgrade, between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively.

The Katoomba to Lithgow duplication will provide major economic and safety benefits. It will improve the connection between Central West NSW and Sydney, reduce congestion, improve resilience and freight productivity, and provide a safer and more reliable journey for thousands of residents, commuters, tourists and freight operators who travel in, around and through the Blue Mountains.

The NSW Government has progressively upgraded sections of the Great Western Highway to make it

safer and more reliable for all road users. There has been a 77 per cent reduction in fatal crashes and a 28 per cent reduction in casualties between Leura and Warrimoo since this section of the highway was duplicated and upgraded.

We now propose to upgrade and duplicate the highway between Katoomba and Lithgow, completing and realising the potential of decades of work in upgrading the Great Western Highway across the Blue Mountains.

In February 2020, the Program was listed by Infrastructure Australia as a priority initiative. This means that it is officially recognised as a priority infrastructure investment which Australia needs in order to secure a sustainable and prosperous future.

77 per cent
drop in fatal crashes

28 per cent
drop in casualties
for all vehicle types.

Demonstrated duplication safety improvements for all vehicles between Leura and Warrimoo

Figure 1 Once the Great Western Highway Upgrade Program is complete, the Great Western Highway will be at least two lanes in each direction from Broadway to Wallerawang



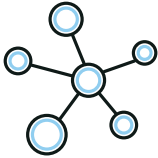
Delivering benefits for all road users

The Program from Katoomba to Lithgow aims to deliver the following benefits:



Improved safety:

reduced safety risks along the corridor for all road users



Enhanced network performance:

improved congestion and travel time reliability



Improved and promoted

regional economic development and productivity, and increased freight efficiency



Enhanced liveability and amenity:

maintained and improved local amenity and character, and protected environmental cultural assets



Improved resilience and future proofing:

a dependable and adaptable transport network which enables continuity of transport and essential services.

The essential transport role of the Great Western Highway

The Great Western Highway acts as the key road transport route across and along the Great Dividing Range for all vehicles, including emergency and essential services, local commuters, through commuters, tourists and freight. Those travelling into and through the Blue Mountains largely choose to travel by road.

Local residents use the highway every day to get to and from work, do their shopping, take children to and from school, and enjoy the area's natural attractions and recreational opportunities.

Creating a dual carriageway from Katoomba to Blackheath would help emergency services to respond to incidents faster, and help drivers to get safely past incidents on the road. It will improve travel times and make the trip times more predictable and reliable.

Tourism in the Blue Mountains and Central West is growing. Tourists rely on the highway to visit some of the world's most beautiful National Parks and World Heritage areas and to travel through to tourist destinations on either side of the mountains.

This increase in tourism provides economic benefits for those communities and NSW as a whole, but is contributing to the congestion experienced through the Blue Mountains.

The Great Western Highway plays a key role in tourism in the Blue Mountains and beyond

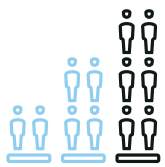


More than 95 per cent
of people travelling through the Blue Mountains between Katoomba and Lithgow for non-freight trips choose to travel by road

As a state highway, the Great Western Highway's role as a transport corridor is critical for NSW.

The Program can unlock the potential of the Central West and Orana, home to more than 300,000 people and the State's third largest regional economic contributor.

An improved, reliable connection between regional NSW and Sydney will attract more investment and help to create jobs. A better connection will make it easier for regional communities to access essential services, jobs and education. This will make our regions more attractive places to live, work and invest.



The Central West and Orana is home to more than

300,000 people

The Great Western Highway is part of the National Land Transport Network and a crucial freight corridor between Sydney and the Central West.

Around half of all freight in the Blue Mountains is carried on the road network, and around 40 per cent of that freight begins or ends its journey on or nearby the highway, supporting the local economy.

The Great Western Highway is one of four major regional freight connections into Sydney, but is the only one currently limited to 19 metre B-double and 20 metre Performance Based Standards (PBS) vehicles.

To meet future demand, the upgraded highway will be designed to carry more productive modern PBS heavy vehicles which are essential to helping NSW meet its growing freight needs. PBS vehicles have the highest safety standards and, because they can carry more, can move more freight with fewer trips.

Future customers will continue to rely on both road and rail along the Katoomba to Lithgow corridor.

For more information on PBS vehicles and how they could benefit the Blue Mountains, please go to nswroads.work/gwhfreight



More than half of the freight moved between Katoomba and Lithgow is transported by road

Highway capacity

The Great Western Highway between Katoomba and Lithgow has a higher average traffic volume than other duplicated highways.

There are more than 15,000 vehicle movements per day in Blackheath, more than 19,000 at Medlow Bath, and more than 20,000 at Katoomba.

Traffic peaks and congestion are common both during the week and weekends with journey times increasing by at least 20 minutes at peak times.

Congestion is especially restrictive during special events and the school holiday periods. Breakdowns and other unexpected traffic events can also cause significant delays along the highway which can result in up to 90 minutes of additional travel time.

Traffic on the Great Western Highway is projected to grow and the upgrade is being planned to deliver long term resilience and capacity.

The upgrade will improve congestion and safety, and cater for future growth beyond 2036.



The Great Western Highway Upgrade Program will

support growth in key industries

in the Central West and Orana



The upgrade will increase the highway's capacity from 750 vehicles per hour between Katoomba and Lithgow, to 2000 vehicles per hour

The Katoomba to Blackheath upgrade

Transport proposes to upgrade around 3.5 kilometres of the highway between Rowan Lane in Katoomba and Bellevue Crescent in Medlow Bath and around 1.8 kilometres of the highway between the existing rail overbridge in Medlow Bath to about 200 metres east of Tennyson Road in Blackheath, to a four lane divided highway.

The section of the Great Western Highway through Medlow Bath is also being upgraded, as part of the Medlow Bath upgrade. For more information on this upgrade please go to nswroads.work/gwhmedlow.

Without the upgrade, the performance of the highway is expected to deteriorate and approach operational capacity more often over the next fifteen years. Drivers would face more regular congestion along the highway and delays at intersections, with few opportunities to overtake slower vehicles.

Providing a four lane divided carriageway between Katoomba and Blackheath would increase the capacity of the highway, reducing congestion and improving intersection performance. This would allow traffic to flow smoothly, reducing travel time for motorists.

The proposed upgrade follows the general alignment of the existing Great Western Highway as much as possible, however it does diverge in places to ease tightly curved sections and improve gradients.

In March 2019 the NSW Government committed \$2.5 billion to an upgrade between Katoomba and Lithgow.

History of the upgrade

From 2008 -2013, Transport consulted with the local community about an upgrade of the Great Western Highway from Mount Victoria to Lithgow. A concept design was completed in 2013 and the selected road corridor reserved in the Local Environmental Plans for the Blue Mountains and Lithgow City councils.

In March 2019, the NSW Government committed \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow. Transport consulted with the local community along the entire corridor in November and December 2019.

In the 2021 Federal budget, the Australian Government committed \$2.03 billion towards the delivery of the eastern and western sections of the upgrade, including the section between Katoomba and Blackheath.

Transport investigated a wide range of upgrade options between Katoomba and Lithgow, to make sure the connection minimised environmental impacts, supported local economies and improved travel times and safety.

A range of options connecting these towns were progressively evaluated against viability criteria.



Artist's impression of Pulpit Hill Heritage Area

The result of the options selection process was to progress a surface upgrade of the highway between Katoomba and Lithgow, including duplication of the existing roadway, improved intersections and facilities and an upgraded active transport link through the mountains.

Traffic modelling indicates that approximately 40 per cent of traffic on the Highway between Katoomba and Little Hartley is traveling between Katoomba, Medlow Bath, Blackheath, Mount Victoria and/or the Darling Causeway.

The strategic design for the upgrade of the Great Western Highway from Katoomba to Lithgow was released for community consultation on 07 November 2019, with consultation continuing to 16 December 2019.

Since the current highway is a constrained space, early design development sought to use as much of the existing road corridor as possible to minimise impacts on the environment and manage costs.

Benefits

Upgrading the highway presents many opportunities to improve road use, safety, and village liveability. It will allow Transport for NSW to clear congestion points, separate long-distance and local traffic and cater for future demand for safer and more productive road freight vehicles.

The proposed Katoomba to Blackheath upgrade would use modern design standards to improve safety by separating carriageways, reducing gradients and straightening curves as much as possible.

Two lanes in either direction would provide opportunities to overtake safely and allow installation of median treatments, which help prevent head on collisions.

Intersection improvements at Nellies Glen Road, Explorers Road and Foy Avenue will provide safer entry and exit from the highway.

The section from Katoomba to Medlow Bath has steep terrain and is constrained by the ridgeline, the rail line, and the Blue Mountains National Park. The proposed twin bridges near Explorers Road between the high points along the ridgeline to the north of Katoomba are included to overcome these constraints.



Artists representation of Foy Avenue and Great Western Highway intersection

Katoomba to Blackheath concept design

What does the concept design include?

The concept design is developed in sufficient detail to allow an assessment of likely environmental, social and economic impacts so that stakeholders can consider the proposed project and provide feedback.

Design map

Key features of the concept design featured in the Katoomba to Blackheath REF include:

- Widening around 3.5 kilometres of the Great Western Highway between Rowan Lane in Katoomba and Bellevue Crescent in Medlow Bath to provide two lanes in each direction
- Connections to the Medlow Bath Upgrade

- New concrete twin bridges (about 400 metres long) over the valley from Pulpit Hill near Explorers Road
- Upgraded intersections at Nellies Glen Road, Explorers Road and Foy Avenue
- Improved visitor parking at the Pulpit Hill heritage interpretation area
- A new truck stopping area to the west of Explorers Road
- Upgrade of the Great Blue Mountains Trail to maintain active transport connections between Katoomba and Medlow Bath
- New formalised bus stops on the highway at Nellies Glen Road (westbound), Explorers Road (eastbound) and Foy Avenue
- Widening around 1.8 kilometres of the Great Western Highway between the existing rail overbridge in Medlow Bath to about 200 metres east of Tennyson Road in Blackheath, to provide two lanes in each direction
- Connections to the existing highway, providing two lanes in each direction

- Road connection ‘stubs’ for the future Great Western Highway tunnel bypass
- Relocation of the electrical sectioning hut in the rail corridor from next to the highway opposite Coachhouse Lane, on to Station Street
- Extension of the Great Blue Mountains Trail alongside the National Park and Great Western Highway between Medlow Bath and Blackheath
- A new truck stopping area about one kilometre west of Medlow Bath
- Upgraded and new drainage infrastructure and water quality controls

“ Safe walking and cycling paths connecting towns are very welcome, and will add a lot of value for residents and visitors.

Feedback received during consultation

Figure 2 Katoomba to Blackheath concept design displayed during the consultation period



Consultation

Values

Transport's values underpin our decisions and behaviours when working with customers, stakeholders, partners and colleagues. They include:

- **Customer focus** – We place the customer at the centre of everything we do
- **Collaboration** – We value each other and create better outcomes by working together
- **Solutions** – We deliver sustainable and innovative solutions to NSW's transport needs
- **Integrity** – We take responsibility and communicate openly
- **Safety** – We prioritise safety for our people and our customers.

Communication objectives

The communication objectives for this Program are to:

- Provide clear, consistent and timely information to communities, stakeholders and customers on the Program
- Build relationships and a database of contacts of interested and concerned community members with whom Transport will continue to engage with throughout the development and delivery of the Program

- Provide meaningful opportunities for the community to provide feedback
- Listen to community and stakeholder views to help shape the design of the Program
- Raise awareness of the Program and its benefits and impacts throughout all phases including planning and construction
- Establish relationships and build trust with the local community, particularly local stakeholder groups, businesses and any directly impacted residents/landowners
- Provide clarity to the local community on the Katoomba to Blackheath concept design
- Actively accept and respond to feedback and input from the local community on elements of the concept design, including within the period of consultation.

The Program aims to minimise impacts to the unique natural and cultural qualities of the Blue Mountains, and local consultation is a vital part of that process.



Artist's representation of the shared path near Explorers Road

Consultation method

Consultation on the REF commenced on Sunday 15 May and closed on Sunday 19 June 2022. Consultation ran alongside the announcement that the preferred option from Blackheath to Little Hartley was the 11 kilometre tunnel.

Consultation sessions featured both the Katoomba to Blackheath REF and the Blackheath to Little Hartley preferred tunnel strategic design. Attending community members had access to project specialists from both sections at several sessions. There were two online sessions which targeted the East section online and one face to face session at Little Hartley which focused on the tunnel.

The REF was published on the Katoomba to Blackheath project interactive web portal at **nswroads.work/gwheastconsult** and made available for download.

During the display period, hard copies of the REF were available for viewing at Katoomba Library, Katoomba Council Headquarters, Glenbrook Customer Service Counter and Blaxland Library. Hard copies were provided via mail upon request.

The REF and concept design consultation was widely promoted within the Blue Mountains, the Central West and Western Sydney through print and radio advertisements, social media, print and electronic newsletters, and static displays.

Six public consultation sessions were held between 23 May and 9 June 2022 which were a mixture of online and face-to-face sessions.

Two general online sessions and two targeted online sessions were held. The targeted online sessions focused on localised impacts during and after construction and biodiversity and water quality.

The face-to-face consultation sessions were held at Katoomba and Blackheath.

Local Aboriginal community members were invited to a consultation session focused on Aboriginal cultural heritage, held before the Katoomba face-to-face consultation. Local knowledge holders have also been consulted, following Transport's Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) process.

Phone consultations were offered for anyone unable to engage either online or in person.

Transport sought to make the information in the

REF accessible to the community through its virtual consultation room and interactive web portal, which provided access to the REF in separate chapters and technical papers, an interactive map, fact sheets highlighting key issues in the REF, answers to frequently asked questions, videos and images.

Formal feedback was welcomed through the interactive web portal, email or mail during the consultation period.

The community was able to contact the project team on the details below:

- 1800 953 777
- gwhd@transport.nsw.gov.au
- PO Box 334, Parkes NSW 2870
- nswroads.work/gwhd

Stakeholders and community members were encouraged to provide feedback on the REF, including the following items and impacts:

- concept design
- landscape character and visual impact
- biodiversity
- Aboriginal heritage
- non-Aboriginal heritage
- noise and vibration
- property and land use
- traffic and transport
- construction
- connections
- flooding, surface and groundwater
- socio-economic
- project justification
- timing.

“

You must preserve the cultural heritage otherwise the architects of this project and it's sponsors will be unfavourably viewed in years to come.

Feedback received during consultation

How consultation took place

Tool/Activity	Description
Communications material	
Community update Appendix A	<p>A six-page community update with two-page map of the concept design was developed and delivered to residents from Katoomba to Blackheath.</p> <p>The distribution zone for the community update is included as Appendix I.</p> <p>The community update was made available on the project web portal at nswroads.work/gwheastconsult</p> <p>Contacts registered to the Program database were sent an eNewsletter advising that consultation on the REF was open and providing a link to the community update online.</p> <p>Hard copies of the community update were available at the static displays and at face-to-face consultation sessions.</p>
Fact sheets Appendix B	<p>Fact sheets that highlighted how the Katoomba to Blackheath REF had considered and addressed key themes from previous consultation including noise and vibration, biodiversity, cultural heritage, and active transport were developed. These were available as individual fact sheets that could be downloaded from the project web portal at nswroads.work/gwheastconsult</p> <p>A 20-page booklet of the fact sheets which included a reply paid submission form which could be completed by hand and posted to the project team was also compiled and printed. The fact sheet booklet was available at the static displays and at face-to-face consultation sessions.</p>
Frequently asked questions Appendix C	<p>A six-page Frequently Asked Questions document was compiled and made available on the project web portal at nswroads.work/gwheastconsult Hard copies of the FAQs were available at the static displays and at face-to-face consultation sessions.</p>
Static displays	<p>Static displays with communications material were provided at Katoomba Village Shopping Centre, Katoomba and Blaxland libraries, Blue Mountains City Council and Glenbrook Customer Service Counter.</p> <p>Hard copies of the REF were available for viewing at the Katoomba and Blaxland libraries, Blue Mountains City Council and Glenbrook Customer Service Counter.</p>
eNewsletters	<p>Contacts registered to the Program database were sent an eNewsletter announcing the commencement of the REF display period on 15 May.</p>
Poster Appendix E	<p>A poster promoting the REF display and consultation sessions was provided at the static displays at Katoomba Village Shopping Centre, Katoomba and Blaxland libraries, Blue Mountains City Council and Glenbrook Customer Service Counter.</p>

Tool/Activity	Description
Consultation sessions and community meetings	
Consultation sessions	<p>Community consultation sessions were a mixture of general and targeted online sessions and COVIDSafe face-to-face sessions.</p> <p>General online sessions</p> <ul style="list-style-type: none"> Monday 23 May: 6.30pm–8.00pm Thursday 9 June: 6.30pm–8.00pm <p>Targeted online sessions</p> <ul style="list-style-type: none"> Biodiversity & water quality – Tuesday 31 May: 6.30pm–8.00pm Localised impacts during & after construction – Thursday 9 June: 6.30pm–8.00pm <p>Face-to-face sessions</p> <ul style="list-style-type: none"> Wednesday 25 May: 4.30pm–8.00pm* Seminar Room, Katoomba Cultural Centre, 30-32 Parke Street, Katoomba Saturday 4 June: 10am–12pm Blackheath Neighbourhood Centre, 41 Gardiner Crescent, Blackheath <p>* Included a targeted consultation session from 4.30pm–6.00pm focused on Aboriginal cultural heritage.</p>
Stakeholder group meetings	<p>The following stakeholder group meetings were held during the formal exhibition period, with the exception of Blue Mountains Council where a second meeting was held with local councillors to align with their regular meeting.</p> <ul style="list-style-type: none"> Friday 20 May, Medlow Bath Residents Association Thursday 26 May, Blue Mountains Council REF workshop Tuesday 31 May, Blue Mountains Bicycle Forum Thursday 2 June, Blue Mountains City Council Cycling Committee Tuesday 7 June, Blue Mountains City Council Heritage Advisory Committee Tuesday 21 June, Blue Mountains Council councillors briefing (tunnel and east)



Left: Static display at Katoomba Shopping Village with copies of communications material
 Right: Face to face consultation session during the REF display

Tool/Activity	Description																																				
Media and advertising																																					
Advertisement	An advertisement about both the Katoomba to Blackheath REF and concept design and the preferred tunnel display was published in:																																				
Appendix F	<ul style="list-style-type: none">• Cowra Guardian, Thursday 19 May• Forbes Advocate, Thursday 19 May• Lithgow Mercury, Friday 20 May• Mudgee Guardian, Friday 20 May• Parkes Champion Post, Thursday 19 May• Blue Mountains Gazette, Wednesday 18 May• Bathurst Western Advocate, Tuesday 17 May and Thursday 19 May• Dubbo Daily Liberal, Tuesday 17 May and Thursday 19 May• Orange Central Western Daily, Tuesday 17 May and Thursday 19 May• Oberon Review, Thursday 19 May• Penrith Western Weekender, Friday 20 May <p>An advertisement to advise consultation was closing soon was published in:</p> <ul style="list-style-type: none">• Cowra Guardian Thursdays - 26 May, 2 June, 9 June• Forbes Advocate Thursdays - 26 May, 2 June, 9 June• Lithgow Mercury Fridays - 27 May, 3 June• Mudgee Guardian Fridays - 27 May, 3 June• Parkes Champion Post Thursdays - 26 May, 2 June, 9 June• Blue Mountains Gazette Wednesdays - 25 May, 1 June, 8 June• Bathurst Western Advocate Tuesdays - 23 May, 31 May, 7 June• Dubbo Daily Liberal Tuesdays - 23 May, 31 May, 7 June• Orange Central Western Daily Tuesdays - 23 May, 31 May, 7 June• Oberon Review Thursdays - 26 May, 2 June, 9 June• Penrith Western Weekender Fridays - 27 May, 3 June																																				
Radio	<p>A thirty-second radio advertisement about the REF display was aired on four radio stations covering Sydney, the Blue Mountains and Central West NSW.</p> <table><tr><th colspan="6">Number of radio spots</th></tr><tr><th>Station</th><th>19–20 May</th><th>23–27 May</th><th>30–3 May/June</th><th>6–9 June</th><th>Total spots</th></tr><tr><td>2LT (Lithgow/ Katoomba)</td><td>4</td><td>7</td><td>7</td><td>5</td><td>23</td></tr><tr><td>WSFM (Sydney)</td><td>4</td><td>7</td><td>7</td><td>5</td><td>23</td></tr><tr><td>Radio 1089 (Orange)</td><td>4</td><td>7</td><td>7</td><td>5</td><td>23</td></tr><tr><td>2BS (Bathurst)</td><td>4</td><td>7</td><td>7</td><td>5</td><td>23</td></tr></table>	Number of radio spots						Station	19–20 May	23–27 May	30–3 May/June	6–9 June	Total spots	2LT (Lithgow/ Katoomba)	4	7	7	5	23	WSFM (Sydney)	4	7	7	5	23	Radio 1089 (Orange)	4	7	7	5	23	2BS (Bathurst)	4	7	7	5	23
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Tool/Activity	Description
Media releases Appendix G	One media release was distributed via the Program website and through engagement with local media: <ul style="list-style-type: none"> Katoomba to Blackheath REF display period announced – community invited to have their say (15 May 2022)
Digital tools and social media	
Website and interactive web portal	The Great Western Highway Upgrade Program - Katoomba to Lithgow website, nswroads.work/gwhd , pointed to the project interactive web portal at nswroads.work/gwheastconsult which provided information about consultation, including an online interactive map, booking form for consultation sessions, and online submissions form.
Facebook Appendix H	Facebook was used to provide information about the consultation period with three posts on the NSW Roads page staggered to appear over eight weeks: <ul style="list-style-type: none"> Post 1 – 17 - 23 May 2022 Post 2 – 24 - 30 May 2022 Post 3 – 31 May - 9 June 2022
Direct contact channels	
Email	The Program's email address was publicised for the community to contact the project team directly with queries, concerns and to make formal REF. The project email address is gwhd@transport.nsw.gov.au
Phone	The project hotline was advertised for the community to contact the project team directly with queries and concerns, and to book phone and online consultations. The hotline number is 1800 953 777 .



The virtual engagement room on the Katoomba to Blackheath REF interactive web portal

Consultation summary

Overview

During the consultation period, 107 members of the community and stakeholders made submissions.

The community update and concept design fact sheet booklet were distributed to all residents along the corridor. Twenty reply paid submissions were received.

Twenty five per cent of submissions fully or partially supported the proposal and 66 per cent objected to the proposal. The remaining nine per cent of submissions offered no position on whether they supported or objected to the proposal.

5456 individuals visited the interactive web portal during the REF display period, with a total of 13,523 page views and 1464 video plays.

The three social media ads collectively reached 66,854 Facebook users across the Blue Mountains, Hartley Valley and Western Sydney. The posts, which promoted the consultation period and process, attracted 179 reactions, 270 comments, and 51 shares.

Six community information sessions were held and collectively attended by 113 people, with some people attending two or more sessions.

Community consultation sessions were a mixture of general and targeted online sessions and face-to-face sessions. Thirty-two people attended general online sessions and 20 people attended targeted online sessions. Thirty-one people attended the face-to-face session at Katoomba and 30 people attended the face-to-face session at Blackheath.

For those unable to attend an online or face-to-face session, phone consultations were offered and encouraged.



107

members of the community and stakeholders made formal submissions

66

were online submission forms, **54** were emailed and **20** were posted in

113

people attended **six** consultation sessions

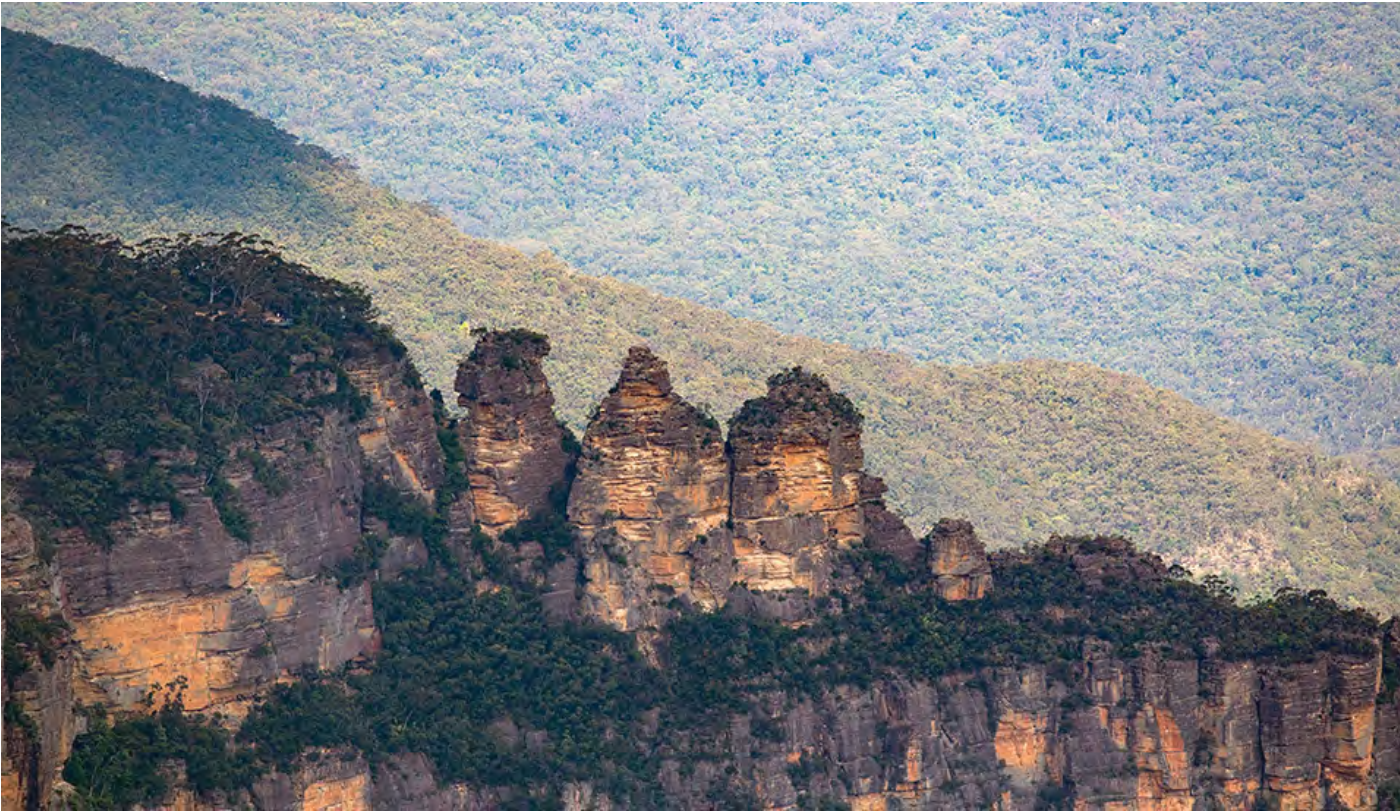
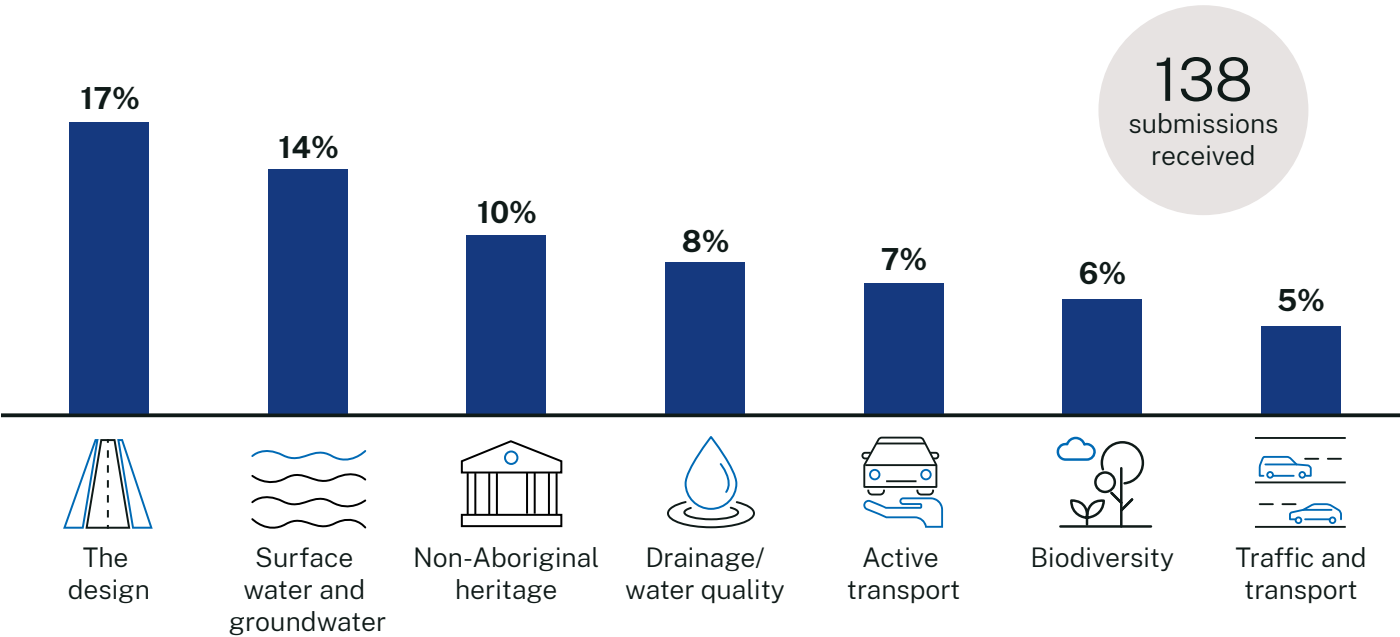
5,456

people visited the interactive web portal, with **13,523** page views and **1,464** video plays

179

reactions, **270** comments, and **53** shares were received on three social media posts

Key issues raised in REF submissions



Transport is committed to minimising impacts during construction of the Katoomba to Blackheath upgrade

Next steps

Construction on the Katoomba to Blackheath upgrade is expected to start in late 2023. We will continue to update the community about construction plans in the coming months.

The environmental assessments for the Central Section of the Program from Blackheath to Little Hartley are progressing, with the Environmental Impact Statement (EIS) expected to be on public display in late 2022.

The determination of the Medlow Bath REF was deferred. Transport will determine the East Section and Medlow Bath REFs together to capture all potential impacts of the upgrade between Katoomba and Blackheath.



Artist's representation of the Great Western Highway over Explorers Road

Appendices

Appendix A – Community update



Australian Government

BUILDING OUR FUTURE



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors | Community Update



Artist representation – Great Western Highway, near Pulpit Hill, looking west. (indicative only, final layout to be determined through detailed design).

Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is proposing to widen the Great Western Highway between Katoomba and Blackheath to two lanes in each direction. The upgrade is split into two sections:

- Katoomba to Medlow Bath between Rowan Lane, Katoomba and Bellevue Crescent, Medlow Bath (about 3.5 kilometres)
- Medlow Bath to Blackheath between Station Street, Medlow Bath and Tennyson Road, Blackheath (about 1.8 kilometres)

Transport is now seeking your feedback on the Review of Environmental Factors (REF) and concept design for the proposed Katoomba to Blackheath Upgrade.

Your input is important in helping to design the best upgrade we can for the Katoomba to Blackheath section. We invite you to review the proposed plans, understand the environmental impacts and have your say.

**Have
your say**

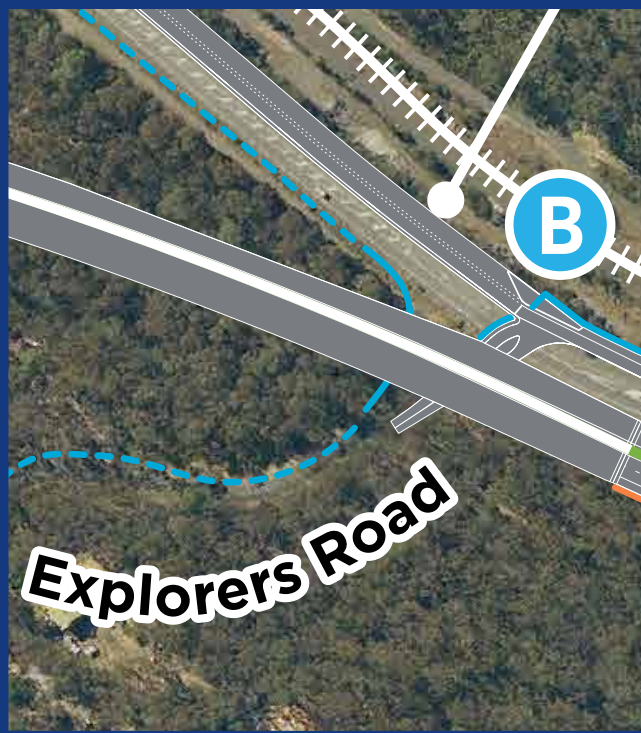
Formal submissions on the REF and concept design are invited until **Sunday 19 June 2022** and we encourage you to take the opportunity to have your say. Visit our virtual consultation room at nswroads.work/gwheastconsult or talk to staff at one of our consultation sessions to find out more.

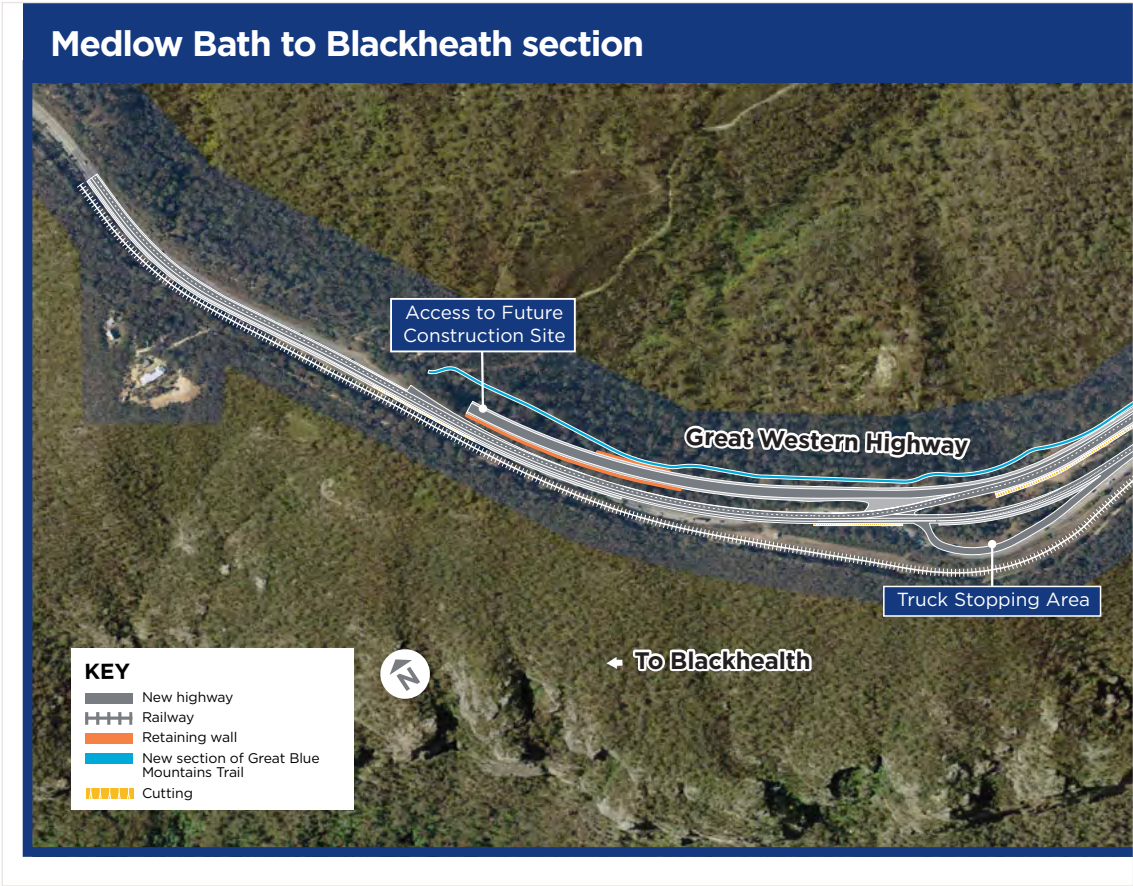
May 2022





2. Explorers Road / Great Western Highway intersection







Katoomba to Blackheath tunnel not viable

Transport investigated a wide range of upgrade options between Katoomba and Lithgow, to make sure we deliver a connection that minimises environmental impacts, supports local economies, improves travel times and safety and is financially responsible.

A range of options connecting these towns were evaluated against viability criteria and program objectives. Options were narrowed down and reviewed further, and challenged by expert panels as part of an option analysis to confirm their performance against objectives and viability criteria.

The program objectives for the Great Western Highway Upgrade Program are:

- Economic development, productivity, and recovery
- Resilience and future proofing
- Network performance
- Safety
- Amenity, liveability, and environment.

The viability criteria used for the options analysis include things like:

- Safety
- Long-term needs
- Technical feasibility
- Environmental impacts
- Economic outcomes.

The Medlow Bath surface bypass, tunnel bypass and the Katoomba to Blackheath alternate corridors, including a longer tunnel, failed the initial assessments on grounds of technical feasibility, environmental impacts and excessive construction costs.

The Katoomba to Blackheath alternate corridor option failed the technical feasibility test for the same reason and had unacceptable environmental impacts, particularly to the national park and nearby hanging swamps.

While the cost of a 19-kilometre tunnel has not been formally estimated, the dollar per kilometre cost estimate suggests a total cost in excess of \$10 billion.

A tunnel between Katoomba and Blackheath would also fail to serve the high volume of local traffic.

Traffic modeling indicates that approximately 40 per cent of traffic on the Highway between Katoomba and Little Hartley is traveling between Katoomba, Medlow Bath, Blackheath, Mount Victoria and/or the Darling Causeway.

This traffic would not use a tunnel that began between Katoomba and Medlow Bath.



Artist's representation of twin bridge near Explorers Road, looking east (indicative only, final layout to be determined through detailed design).

Katoomba to Blackheath Upgrade benefits:



Improve
road alignment

Water quality



Recognising
Historical significance



Improving
safety



Connecting
communities



New pathways
for active transport



Better, safer and more
reliable trips
for customers and communities

Have your say on the Katoomba to Blackheath Upgrade

You are invited to have your say on the REF and concept design for the proposed Katoomba to Blackheath Upgrade.

An REF is undertaken to assess the potential impacts of a proposed development or activity on the environment, to ensure compliance with the NSW Environmental Planning and Assessment Act 1979 and any other relevant state and national laws.

It includes investigations into all environmental impacts, and includes ways the project proposes to identify, mitigate and manage those impacts.

We have developed fact sheets that highlight how the East section upgrade REF has considered and addressed key themes from previous consultation:

- cultural heritage
- active transport
- biodiversity and water quality.

The fact sheets will give you an overview, however, we encourage you to read the full REF document to gain a complete understanding of all impacts, before you make a submission on any issue.

The proposal has been developed in response to the feedback received during previous community consultation periods in 2019 to 2021, in addition to feedback from key stakeholders.

The concept design is around 80 per cent complete. We welcome your feedback on how we can improve the design before it is finalised.

To view the full REF, the concept design and fact sheets go to nswroads.work/gwheastconsult. To have a hard copy of the REF posted to you, or if you need help locating specific specialist reports or studies that you are interested in, contact the project team at gwhd@transport.nsw.gov.au or call **1800 953 777**.



Artist representation, Nellies Glen Road looking west.

Medlow Bath REF determination

In response to community concerns about the potential to not fully consider cumulative impacts along the highway due to the separation of the Medlow Bath and the Katoomba to Blackheath Upgrade REFs, we have delayed the determination of Medlow Bath until after

This will allow us to consider issues raised during both displays to ensure we are considering them in relation to the neighbouring project. More information about the determination of the Medlow Bath REF which was displayed from 27 July to 5 September 2021, and the Submissions Report will be provided later this year.

Transport takes its responsibilities towards protecting the environment very seriously. We have worked closely with the community and Blue Mountains City Council with regards to the environmental assessment between Katoomba and Medlow Bath and we have listened to the feedback we have received.

Deferring the determination will help Transport to make sure it considers all of the potential impacts in one simultaneous review, and provide more confidence to the Blue Mountains community about the environmental assessment of this critical infrastructure project.

We will continue to work with the community and with Council as the project progresses, and to be open and transparent about the environmental assessment process.

Medlow Bath pedestrian bridge

The Medlow REF display included a proposed design for a new pedestrian bridge over the Great Western Highway at Medlow Bath.

Feedback received during the REF display included a wish to have a greater say in what the bridge would look like.

Transport has listened and we will come back to the community with more information about the bridge including possible design changes seeking feedback.

Next steps

Transport will use your feedback to continue to refine and improve the Katoomba to Blackheath Upgrade.

Construction on the Katoomba to Blackheath Upgrade is expected to begin in 2023.

The Environmental Assessment for the Central section (Blackheath to Little Hartley) will be available for exhibition and consultation in late 2022.

Katoomba to Blackheath Upgrade REF and concept design feedback form

You are invited to comment on the REF and concept design for the Katoomba to Blackheath Upgrade. If you would like to mail your feedback, please detach and use this reply paid feedback form on the back page.

Please ensure you include a postal or email address with your submission. Unverified submissions cannot be included.

Submissions close at midnight on **Sunday 19 June 2022**.

View the REF and concept design

You can view the Katoomba to Blackheath REF and concept design:

- online in our virtual consultation room at nswroads.work/gwheastconsult
- As a printed copy at one of these locations:
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Speak to the project team

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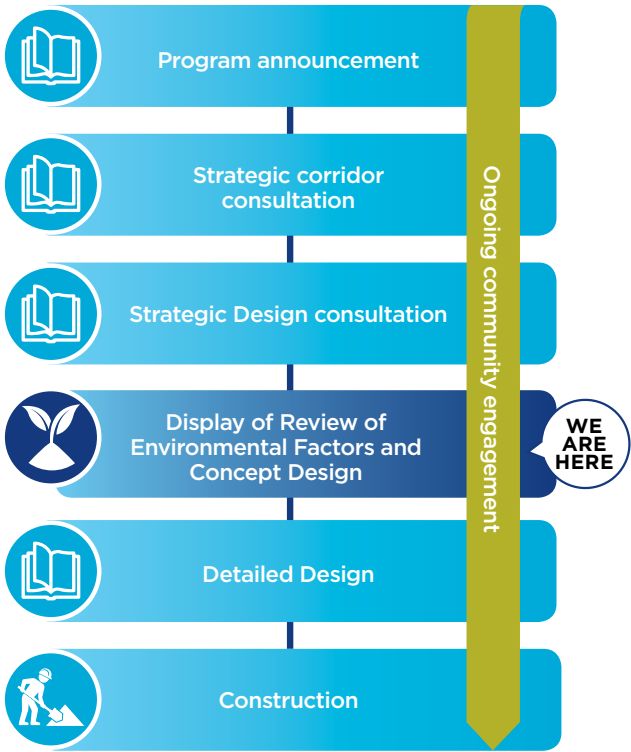
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Program Update



Contact us

Sign up for our eNewsletter at nswroads.work/gwhd so you never miss a project update or register for a consultation session.

1800 953 777

gwhd@transport.nsw.gov.au

nswroads.work/gwhd

Great Western Highway Upgrade Program
PO Box 334, Parkes NSW 2870

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22.055

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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Biodiversity fact sheet

May 2022



Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade for community consultation until to Sunday 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.



Manage
environmental impacts
from road projects

This fact sheet summarises key points related to Biodiversity chapter in the in the REF and concept design for the Katoomba to Blackheath Upgrade.

To read the complete chapter, refer to Chapter 6, section 3 in the Review of Environmental Factors.

Transport is committed to minimising environmental impacts during construction and delivery of the upgrade. We have carried out extensive biodiversity studies along the Katoomba to Blackheath Upgrade corridor, and our investigations are continuing to make sure we fully understand the flora and fauna in the area.

Biodiversity assessments

Following background research and habitat suitability assessments, Transport carried out targeted vegetation, flora and fauna field surveys from October to December 2020 and from June and September 2021. These investigations were carried out within the 'proposal area' – which is the area where the design is contained – and also a much larger 'study area' to ensure biodiversity surveys are thorough and far-reaching.

The proposal area and study area is surrounded by native vegetation to the north, north-east, west and south-west and connects in part to the Blue Mountains National Park. Parts of the study area have been previously impacted by historical land clearing, residential and commercial development and existing infrastructure, which has slightly reduced the vegetation connectivity in areas.

There is 68.80 hectares of native vegetation and 15.11 hectares of non-native vegetation within the study area which are rich in Plant Community Types (PCT), such as Sydney Peppermint, Narrow leaved Peppermint and Prickly Tea-Tree.

The proposal and study area are home to several threatened fauna species and one threatened flora species – the Needle Geebung, which were identified during the field studies.

The threatened fauna species include the Pygmy Possum, the Large Bentwing-bat, Little Bentwing-bat, Gang-gang Cockatoo, Greater Broad-Nosed Bat, Eastern Freetail Bat, Yellow-bellied Sheathtail Bat and the Brown Treecreeper.

In response to the biodiversity impacts identified during both the construction and operational phases of the project, we would include mitigation measures such the installation of nest boxes and habitat replacement where appropriate.

A Fauna and Flora Management Plan would be developed in the lead up to construction and would form part of the Construction Environment Management Plan (CEMP). It would outline actions Transport can take to protect local flora and fauna and may contain additional mitigation measures needed as identified during the detailed design stage.

Construction impacts

The upgrade would require the removal of 47.56 hectares of native vegetation, up to 15 hectares of which is National Park land which is subject to a revocation process ongoing between Transport and National Parks and Wildlife Services. None of this land is located within the World Heritage listed section of the Blue Mountains National Park. Construction would impact threatened flora and fauna species, mainly through the removal of their foraging and shelter habitat and making it harder for them to get across the widened road corridor.

We have avoided direct impacts to the Blue Mountains Swamp near the twin bridges in the Katoomba to Medlow Bath section by shifting the location of the bridge foundations to sit further away from the swamp. A five metre exclusion zone would also be established around the swamp during construction to ensure work activities occur at a safe distance away. There may still be indirect impacts to around 0.12 hectares of the swamp such as dust, light spill, weed incursion, water run-off or erosion. To avoid this, the bridge design looks at drainage locations to ensure drains are not located over the swamp. The CEMP would also consider further mitigation measures used during construction such as the sediment control, collecting water run-off and managing dust.



Isopogon anemonifolius or 'broad-leaved drumsticks'.

Fauna habitat and connectivity

The proposal would result in an increased road crossing distance (from about 30 metres to about 100 metres in some locations). This would reduce connectivity across the widened Great Western Highway and increase the risks to local fauna.

To counter this, we have carried out significant assessments for identified threatened species to examine whether vegetation removal associated with the proposal would impact threatened biota.

There are 231 hollow bearing trees in the study area and up to 207 of them have the potential to be directly impacted. The size of the hollows ranged from five to 30 centimetres and have been observed to be home to Rainbow Lorikeets and Sulphur-Crested Cockatoos. Eighteen are thought to be nest trees for Gang-Gang Cockatoos. We will look for ways to reduce these impacts wherever possible and practical during the finalisation of the design, which happens after the REF. Additional mitigation measures are also laid out in the Fauna and Flora Management Plan used during construction.

To manage potential impacts for fauna, during detailed design we will consider the merits of fauna crossing structures at appropriate locations, such as underpasses, glider poles or underpasses. These can help to mitigate the impacts that the upgrade could have on habitat connectivity and fauna movement. including fauna crossing structures (underpasses/glider poles/overpasses) to mitigate the potential impact of a reduction in habitat connectivity and fauna movement as part of the upgrade.

National Parks and Wildlife engagement

We are working closely with National Parks and Wildlife to determine what revocation outcomes might work best for them as part of our biodiversity mitigation strategy and National Park and Wildlife Revocation Plan.

To read more about National Parks and Wildlife's policy, visit www.dpie.nsw.gov.au and search *Revocation, recategorisation and road adjustment policy* | NSW Environment, Energy and Science



Ecologist undertaking a vegetation survey transect.



Eastern Pygmy Possum.

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Contact us

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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors

Aboriginal and Non-Aboriginal cultural heritage fact sheet

May 2022



Pulpit Hill Heritage Precinct - artist impression, subject to change during detailed design.

Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Blackheath to Katoomba Upgrade for community consultation until 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

This fact sheet summarises key points related to Aboriginal and non-Aboriginal cultural heritage impacts as described in the REF and concept design for the Katoomba to Blackheath Upgrade.

To read the complete chapter on the potential impacts to Aboriginal and non-Aboriginal heritage, refer to Chapter 6.9 and 6.4 respectively in the Review of Environmental Factors.



**Recognising
Historical significance**

A cohesive approach to cultural interpretation

Transport will be working with Aboriginal cultural heritage specialists Balaringi and non-Aboriginal heritage specialists GML on a heritage cultural interpretation strategy that spans the area from Katoomba to South Bowenfels, east of Lithgow. Transport acknowledges the rich and diverse history of the Blue Mountains and is considering how to mitigate the impacts of the upgrade and respectfully honour our past.

The history of the Blue Mountains has been shaped by both the Gundungurra and Darug Aboriginal people and European exploration west of the Great Dividing Range.

The proposal occurs on the land of the Dharug people, which was known as Muru-Marak, or mountain pathway, known to have been important to and extensively used by Aboriginal people. Aboriginal groups in the upper Blue Mountains used the natural resources near the proposal, hunted emus and kangaroos along the Macquarie River and ate native flora.

As part of the REF preparation, we carried out an Archaeological Survey Report which assessed a 37 kilometre section of the Great Western Highway between Katoomba and Lithgow and covered the East, Medlow, Central (that is, between Blackheath and Little Hartley) and West sections of the Great Western Highway Upgrade. A 50-metre buffer was applied either side of the proposed road alignment, which is the study area for this assessment. The study area included the Katoomba to Medlow Bath and Medlow Bath to Blackheath sections that are the subjects of this REF.

Field walkovers with representatives from the Derubbin Local Aboriginal Land Council and a desktop assessment also formed part of this Survey Report.

No Aboriginal cultural heritage items were identified on the State Heritage Register or Aboriginal Heritage Information Management System database.

Construction involves ground disturbing activities potentially impacting Aboriginal cultural heritage items, however no items are registered and the proposal area has been disturbed significantly over time. If we discover an item of potential cultural significance during construction, we would use Transport's unexpected finds procedure in accordance with the Aboriginal Heritage Management Plan which will be prepared and implemented as part of the overall Construction Environment Management Plan.

Non-Aboriginal Cultural Heritage

The 1813 crossing of the Blue Mountains by Blaxland, Lawson and Wentworth occurred near the proposal. Aboriginal people played a significant part in their crossing by helping them to find food and follow pathways used by Aboriginal groups to cross the mountains.

Non-Aboriginal heritage across the Blue Mountains is also largely related to crossing the mountains. As transport connections across the Blue Mountains have developed, they have supported the growth of key settlements in the region.

The section of Highway between Katoomba to Blackheath contains several non-Aboriginal heritage historical landmarks such as Pulpit Hill, the site of the Explorers Tree, Bonnie Doon, the Hydro Majestic and the heritage railway stations at Blackheath and Medlow Bath.



1814 Survey map, Pulpit Hill location. Source Blue Mountains City Council

Will construction impact heritage items?

During construction there would be temporary impacts to some of the identified heritage items near the proposal. This would largely be visual impacts caused by the movement and operation of various machinery and vehicles, especially within the Katoomba to Medlow Bath section.

The proposal would also directly impact the northern section of the Bonnie Doon curtilage, along the existing road shoulder, as vegetation would be cleared to widen the road and construct a drainage basin in this area.

To mitigate impacts in this location, the proposal intends to integrate design elements with existing landforms to create natural appearances, maximise bushland reconstruction and bushland seedlings where possible. Screening elements which incorporate shrubs and trees where possible would also be used in the design to complement and integrate with the existing environment.

Historically significant dwellings located in the proposal area include the Gatekeepers Cottage and The Pines. Neither are directly impacted by the proposal.

During construction there is a potential for vibration impacts to heritage items.

We will prepare a vibration assessment to evaluate any potential impacts of the proposal to historical dwellings if required.

The Pulpit Heritage Interpretation area

The proposal would impact the existing heritage interpretation area, the area around Pulpit Hill, the Stone Arrangements curtilage and where the Explorers Tree once stood. The 'Stone Arrangements' mark a known convict grave site from 1882. The stones are grouped together symbolically to mark the grave.

To protect and preserve this area, we propose to relocate Nellies Glenn Road around the existing heritage interpretation area. Improvements like new parking and a re-interpretation and acknowledgement of the Explorers Tree and an unmarked convict grave site, are also proposed.

We will prepare a Conservation Management Plan for the Pulpit Hill area to manage the heritage significance of the site and guide the management of the site both during and after construction.

Heritage specialists are consulting with the local community about the Pulpit Hill area, and we will make information available to everyone as this develops.



Passage over the Blue Mountains' by Edwards Purcell 1821

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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors –

Landscape character and visual impact fact sheet

May 2022



Artist impression – subject to change during detailed detail. View from Pulpit Hill Heritage Precinct, looking west.

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Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade for community consultation until Sunday 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

This fact sheet summarises key points related to landscape character and visual impacts as described in the Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade.



Respecting
character and
responding to place

nswroads.work/gwhd

Page 1 of 5

To read the complete chapter on the potential impacts to landscape character and visual impacts, refer to Chapter 6.5 in the Review of Environmental Factors.

Transport are sensitive to the area's natural and built environment and we appreciate the value that the community place on their villages and the bushland setting of the Great Western Highway. Transport is working to make sure that in any upgrade, the Katoomba to Blackheath section retains its heritage and visual aesthetic.

We welcome further suggestions to help integrate the design into its surroundings and minimise impacts on the heritage and culture important to the community.

Landscape character and visual impact assessment

We recognise and respect the strong sense of place that residents, visitors and through-traffic attach to the Katoomba to Blackheath section of the highway.

We have carried out an extensive assessment of the potential impacts of the upgrade on the landscape character and visual amenity.

As part of the assessment, six Landscape Character Zones (LCZs) were identified and assessed:

- Pulpit Hill (the area currently accessible via Nellies Glen Road near Explorers Road)
- 'Enclosed Bushland' (the area between Pulpit Hill and the Plateau)
- Medlow Bath Western Plateau
- Medlow Bath East Village
- the Ridgeline Transition (between Medlow Bath and Blackheath).

The assessment found that the upgrade would have a high impact on Pulpit Hill and a high to moderate impact on the Enclosed Bushland largely due to removal of vegetation and the increase of road infrastructure close by.

The remaining LCZs would have moderate to moderately low impacts.

To mitigate the impacts, the design would focus on integrating design elements with existing landforms, creating natural appearances, maximising bushland reconstruction and bushland seedlings where possible.

Retaining walls would be designed to have high quality finishes that keeps in with the character of the Great Western Highway.

Where possible, screening design elements and road infrastructure will weave in shrubs and trees to complement and integrate with the existing environment.



Great Western Highway, north of Foy Ave. Artist impression, subject to change during detailed design.

Landscape and urban design strategy

The proposal provides an opportunity to balance the amenity and livability of the towns and villages along the highway, with traffic movement on the road.

The proposal uses landscape and urban design principles in the road design to minimise visual impacts.

The urban design component of the Katoomba to Blackheath Upgrade explores opportunities to help people engage with Aboriginal and non-Aboriginal heritage, along with the nature and character of the places in Katoomba through to Blackheath.

This includes the active transport strategy in development which promotes better pedestrian and cycling connections along the Great Blue Mountains Trail. See the Active Transport Fact sheet for more detail. We invite community feedback on features that could be included to further cycling and pedestrian amenity.

Reducing the impact of our work

During construction, there would be temporary visual impacts for residents located close to construction sites. Motorists, pedestrians and cyclists traveling through the area would also observe the movement and operation of machinery and work vehicles, temporary fencing, lighting and ancillary facilities.

Visual impacts would also be observed from properties located on Rowan Lane, Katoomba; Foy Avenue and Delmonte Avenue, Medlow Bath and Explorers Road. Explorers Road residents located down the valley would also be able to observe construction of the twin bridges.

Within the Medlow Bath to Blackheath section, visual impacts would be experienced by residents who live on Coachhouse Lane and Station Street, Medlow Bath near the southern end of the section.

There are no anticipated permanent landscape or visual impacts expected to result from construction. Contractors would be required to rehabilitate all work sites prior to and at the end of the construction period.

The proposal is expected to have a positive influence and would use urban design to minimise visual impacts in the following ways:

- improving cyclist and pedestrian access through new and upgraded, multi-use access tracks
- reconstructing bushland, and bushland seeding where possible
- using native and endemic plantings along the highway outside of the villages
- maximising revegetation along the highway to reduce perceived corridor width
- investigating opportunities for additional tree plantings along the proposal corridor

When we are building

During construction there would be temporary visual impacts near the work as people will be able to see earthmoving and construction equipment, stored materials and stockpiles.

We will use screens to minimise the visual intrusion of construction facilities which will be removed when work is complete. Temporary lighting will also be screened or diverted to reduce unnecessary light spill during construction.

The greatest visual impacts would be experienced by residents that overlook the construction sites due to their proximity to the proposed work sites at the following locations:

Katoomba to Medlow Bath section:

- Residents on Rowan Lane, Katoomba; and residents on Foy Avenue and Delmonte Avenue, Medlow Bath.
- Residents on Explorers Road, particularly those down the valley near the construction of the twin bridges.
- Medlow Bath to Blackheath section:
- Residents on Coachhouse Lane and Station Street, Medlow Bath near the southern end of the section.



Improve active transport – Great Blue Mountains Trail east of Medlow Bath. Artist impression, subject to change during detailed design.



Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Active Transport fact sheet

May 2022



Artist impression, subject to change during detailed design. View from the shared pathway near Explorers Road, looking west.

Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade for community consultation until Sunday 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

This fact sheet summarises key points related to active transport as described in the REF and concept design for the Katoomba to Blackheath Upgrade of the Great Western Highway.

To read the complete chapter on active transport inclusions, refer to Chapter 3, section 2 in the Review of Environmental Factors.



New pathways
for active transport

Active transport

One of the key features of the Great Western Highway upgrade is the provision of new active transport connections and upgrade of the existing active transport connections along the highway on what is known as the Great Blue Mountains Trail.

Although the Great Blue Mountains Trail is marked as a regional on-road cycle route and identified on the Blue Mountains Cycling Map, it does not meet the standards of a formal cycle route, and no other formal cycling facilities exist on the Great Western Highway. Most of the pedestrian activities between Katoomba and Blackheath take place on off-road sealed and unsealed bush walking tracks.

When the upgrade is complete, the Great Blue Mountains Trail would provide uninterrupted pedestrian and cyclist access between Katoomba and Blackheath. The trail would be sealed with bitumen or asphalt or surfaced with concrete, as appropriate along the length.

The Great Blue Mountains Trail is one of many active transport trails that runs alongside the Great Western Highway between Katoomba and Lithgow. The trail largely follows the Great Western Highway and the proposed active transport improvements would either relocate, upgrade or connect with existing sections of this trail between Katoomba and Medlow Bath and provide an improved accessible trail from Medlow Bath to Blackheath.

We want to provide an active transport connection that will encourage more people to use the trail and improve the experience for the pedestrians and cyclists who already do.

This is particularly the case between Medlow Bath and Blackheath where new connections to the trail would further encourage safe travel between Medlow Bath and Blackheath.



Improve active transport – Great Blue Mountains Trail east of Medlow Bath. Artist impression, subject to change during detailed design.

New active transport features:

Katoomba to Medlow Bath:

The existing trail would start at the western end of Rowan Lane, Katoomba. The trail would be upgraded along the Highway to Nellies Glen Road via the reinstated Bonnie Doon Reserve bus stop.

Pedestrians and cyclists using the upgraded active transport trail on Nellies Glen Road would be able to access the heritage interpretation area at Pulpit Hill via a new carpark, or continue on the existing Great Blue Mountains Trail to the Six Foot Track and Explorers Road. A new trail between Bathurst Road and Explorers Road would provide users with a more comfortable and direct connection along the highway.

North of the upgraded intersection between Great Western Highway and Explorers Road, the existing active transport trail would be retained, with a short deviation around the western base of the twin bridges planned as part of the upgrade.

The existing active transport trail would continue for about 250 metres before joining a section of upgraded trail, allowing users to access the existing trail network along Foy Avenue.

Further west of the upgraded Great Western Highway / Foy Avenue intersection, an upgraded active transport trail would follow the highway and connect to Bellevue Crescent and Medlow Bath.

Explorers Road:

We are investigating further opportunities to connect to a new section of active transport trail on the eastern side of the highway, which would run from Katoomba to Explorers Road. This would be between the road and rail line through to Explorers Road and provide a flatter trail, making walking and cycling easier.

Medlow Bath to Blackheath:

As part of the upgrade, a new length of Great Blue Mountains Trail would run along the eastern side of the Great Western Highway. It would provide a connection alongside the Blue Mountains National Park from the Medlow Bath Railway Station via Coachhouse Lane to Tennyson Road in Blackheath.

We have designed the active transport trails in this section to follow the natural topography and would use an existing trail within the Blue Mountains National Park which is currently used for maintenance and emergency access.

The trail in this section would keep its current purpose but would be opened to provide access to other existing trails in the National Park.

The proposal would not alter the existing Great Blue Mountains Trail along Station Street.

Experiencing local heritage on foot or a bike:

We have designed the proposal to complement the heritage significance of the area by creating spaces for accessible areas celebrating local heritage. Improved active transport trails and heritage interpretation areas like the one at the former site of the Explorers Tree near Nellies Glen Road would mean that more riders and pedestrians would be able to explore the many heritage features of the mountains.

Impacts to trails during construction:

The active transport trail between Katoomba and Medlow Bath would be closed during construction of the westbound lanes of the highway. There would be no impacts to other active transport trails during construction.

Access to the Six Foot Track would still be possible via Explorers Road when Nellies Glen Road is closed during construction.

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submission to: **Transport for NSW Katoomba**

to Blackheath (East) REF Submission

PO Box 334, Parkes NSW 2870

Contact us

Sign up for our eNewsletter online at nswroads.work/gwhd and you'll never miss a project update.

Follow us on Facebook – search 'NSW Roads'.



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gwhd@transport.nsw.gov.au



1800 953 777



Great Western Highway

Upgrade Program

PO Box 334, Parkes NSW 2870



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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Cumulative impacts fact sheet

May 2022



Indicative treatment at basin outlet (source: Blue Mountains City Council).

Together, the Australian and NSW Governments are investing more than \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow.

The Katoomba to Lithgow duplication will provide major economic and safety benefits. It will improve the connection between Central West NSW and Sydney, reduce congestion, improve resilience and freight productivity, and provide a safer and more reliable journey for thousands of residents, commuters, tourists and freight operators who travel in, around and through the Blue Mountains.

Transport for NSW (Transport) takes its responsibilities towards protecting the environment very seriously. We are committed to minimising impacts to the natural environment, local heritage and property during construction and delivery of the Upgrade Program.

Each section of the Great Western Highway Upgrade Program will undergo environmental assessment via either a Review of Environmental Factors (REF) or an Environmental Impact Statement (EIS).

When each environmental assessment is completed, there will be an exhibition and consultation period.

Community feedback is vital in shaping the program, and alongside investigations and studies, will help us to determine the final design for the Highway Upgrade.

We welcome your feedback on how we can deliver the best upgrade possible between Katoomba and Lithgow.

What is the difference between an EIS and an REF?

Transport has obligations under the NSW Environment Planning and Assessment Act 1979 and other State and Commonwealth legislation to assess and mitigate impacts that may result from the Great Western Highway Upgrade Program.

Environmental assessment involves detailing these legal obligations, identifying all environmental impacts the upgrade may have, and proposing mitigation measures for those impacts.

An REF is a common way to assess proposed upgrades. It examines the likely extent of environmental impacts of a proposal and the measures required to mitigate any adverse impacts.

It will also help determine whether the activity is likely to have a significant effect on the environment, threatened species, populations, ecological communities or their habitats.

An EIS is required if the proposal will have a significant effect that cannot be mitigated. It is also required for certain types of developments, including State Significant Infrastructure, or if the Minister for Planning requests that the proposal be reviewed by EIS.

An EIS requires the same investigations, impact identification, assessment, and mitigation measures as an REF.

Information in the REF or EIS helps determine whether the Project can be approved. If the legal obligations to identify, assess and propose adequate mitigation measures are not met, Transport for NSW will not be able to begin construction.

Why is Transport assessing sections of the upgrade separately?

The Great Western Highway Upgrade from Katoomba to Lithgow is comprised of four overarching major road upgrades which, while all connected, are all very different in nature:

- Katoomba to Blackheath Upgrade of 5.5 kilometres of the existing surface road through challenging mountains terrain confined by a mountain ridgeline and the rail corridor. It will be assessed by an REF.

- Medlow Bath Upgrade of 1.8 kilometres of the existing surface road, a new pedestrian bridge and station upgrade in an urban environment, in a corridor which has been reserved to allow for the duplication of the road. It will be assessed by an REF.
- Blackheath to Little Hartley (Central) Upgrade including construction of a technically and environmentally complex 11 kilometre tunnel bypass of Blackheath and Mount Victoria. It will be assessed by an EIS.
- Little Hartley to Lithgow (West) Upgrade of 14 kilometres of the existing surface road through a rural landscape and the population centres of Little Hartley, Hartley, and South Bowenfels. It will be assessed by an REF.

These sections have very different environments, which make them suitable for separate environmental assessments. This will allow Transport to complete assessment in the East and West sections and begin delivering benefits and safety improvements in these sections while we complete the more complex environmental assessment and design for the tunnel between Blackheath and Little Hartley.

How is Transport assessing the upgrades between Katoomba and Medlow Bath?

The upgrade through Medlow Bath will deliver much-needed safety upgrades that are needed with or without the broader upgrade program.

Transport was originally planning to begin work on this section much earlier than the rest of the Katoomba to Blackheath section, so we began an early environmental assessment.

However, the Project has been successful in securing additional funding, which has allowed us to bring forward the upgrade for the entire section between Katoomba and Blackheath.

We have worked closely with the community and Blue Mountains City Council, and we have listened to the feedback that they have provided.

As a result, we have now resolved to defer determination of the Medlow Bath REF until we can consider and determine it at the same time as the REF for the corridor between Katoomba and Blackheath.

How does Transport assess cumulative impacts?

When more than one road project is happening in the same area around the same time, it is important for Transport to consider the cumulative impacts they may have on the local community and environment, and what can be done to minimise them.

TfNSW is required to assess cumulative impacts of not just road projects. This section considers the overall environmental effect of the activity, drawing together the potential impacts across environmental factors as well as taking account of other existing or known likely future activities (government or private).

A cumulative impact assessment that addresses environmentally sustainable design considerations would identify where the proposal adds to impacts upon an environmental aspect from past, concurrent or planned activities and would:

- Create risk of serious or irreversible harm i.e., consider air quality, climate change, waste and biodiversity.
- Compromise the well-being of future generations i.e., consider social equity, economic equity and access to resources.
- Compromise biological diversity or ecological integrity. The organisation of the property, land use and socio-economic sections may vary depending on the project so these sections may be combined or kept separate.

Construction impacts like traffic delays, noise or dust can also accumulate over time and create more pressure for those affected by the various projects.

Therefore, when a Transport project carries out an REF or EIS environmental assessment, it assesses all potential cumulative impacts during both construction and operation.

The cumulative impact assessments undertaken for all stages of the Great Western Highway Upgrade Program have considered not only the other stages of the Program, but also other current and planned future projects and developments near the Great Western Highway between Katoomba and Lithgow.

Planning for all stages of the Upgrade Program have progressed far enough for Transport to understand the impacts of each project and assess the potential cumulative impacts across the entire planned upgrade.

The potential cumulative impacts of the proposal and other nearby projects are being assessed for both the construction period and for up to ten years after the construction is finished.

How will cumulative impacts be managed?

Traffic and transport – Construction of various stages of the upgrade may take place at the same time. If this occurs, we will carefully plan construction to allow the highway to remain open and minimise traffic disruption and delays.

Water quality – Although the projects may have impacts to surface water, flooding and groundwater, these are being carefully assessed and we are planning mitigation methods. These will include features like pit and pipe networks to capture surface run off, and the measures we will put in place as part of the upgrade will improve the water quality and control along the proposed upgrade.

Impacts to **Aboriginal heritage, biodiversity, and landscape character and visual impact** are being assessed across the entire 34 kilometres of the planned upgrade and into a buffer zone beyond the upgrade's footprint, to make sure that all potential impacts are identified and effectively managed.

Transport will also continue to consult with local councils, construction contractors and project specialists to identify and manage cumulative impacts.

What studies does Transport carry out for environmental assessment?

Considerations/investigations include but are not limited to:

- | | |
|-------------------------------------|---|
| • Aboriginal heritage | • Noise and vibration |
| • Air quality | • Non-Aboriginal heritage |
| • Biodiversity | • Socio-economic/land use |
| • Bushfire | • Soil |
| • Climate change and sustainability | • Surface water, flooding and water quality |
| • Contamination | • Traffic and access |
| • Flood and hydrology | • Visual impact |
| • Greenhouse gasses | • Waste |
| • Groundwater | |
| • Health impacts | |

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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Noise and vibration fact sheet

May 2022



A noise logger set up in Katoomba.

Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade for community consultation until 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

This fact sheet summarises key points related to noise and vibration impacts as described in the REF and concept design for the Katoomba to Blackheath Upgrade.

To read the complete chapter on the potential noise and vibration impacts, refer to Chapter 6.6 in the Review of Environmental Factors.



Noise

Transport understands that construction work can be noisy, which is why we will use a range of measures to reduce the impact of our work in the Katoomba to Blackheath Upgrade.

We have carried out a thorough noise and vibration assessment examining the potential impact to the community while we upgrade the Highway and afterwards.

We are committed to minimising noise and vibration impacts on local communities during construction activities and will manage the impacts in line with the Construction Noise and Vibration Guideline (Transport, 2016).

Existing noise levels in the proposal area are generally dominated by road traffic from the Great Western Highway and from trains passing in the rail corridor.

Most construction work would take place during standard working hours. Residences located closest to the work should not experience significant noise impacts.

In the long term, noise would be decreased once the Great Western Highway Upgrade is complete, due to the inclusion of low noise pavement to reduce traffic noise from the Highway.

At-property noise treatments would also be considered by Transport during detailed design for properties where noise levels may exceed the adopted criteria.

Vibration

We understand people are sensitive to vibration and some can feel it even at very low levels. This is why the vibration criteria we need to meet during our work to avoid annoying you is more stringent than the criteria used to prevent property damage.

The main potential source of vibration during construction would be the excavation of hard rock. Transport will focus on managing and reducing vibration to prevent damage to properties and heritage structures.

Properties located close to the proposal may be offered a pre-construction property survey, or a 'delapidation survey' which is carried out by an external assessor. This survey creates a record of property's condition before construction begins to ensure that, in the unlikely event property damage occurs because of construction, it can be remediated.

Vibration is of particular concern when we are working close to heritage and other buildings. We will carry out regular vibration monitoring to reduce the potential for damage.

When we are building

We do not expect construction traffic to increase the local noise levels during construction.

We would schedule louder works during standard construction hours as much as possible, to reduce the impacts on surrounding people and properties.

Other noise mitigation measures would be considered for residents next to the project during louder works, such as alternative accommodation, noise blankets or finishing unavoidable loud night work before midnight when possible. They will be detailed in the Construction Noise and Vibration Management Plan.



Online portal - noise map. Look at changes in noise levels during and after construction near your property.

How we measure noise



Noise is measured in decibels. Our ears generally do not notice changes of one to two decibels. We also do not hear incremental changes in noise.


To our ears, a change of 10 decibels sounds either half or double as loud. For example, a motorcycle is about 10 decibels louder than a lawnmower but sounds around twice as loud.

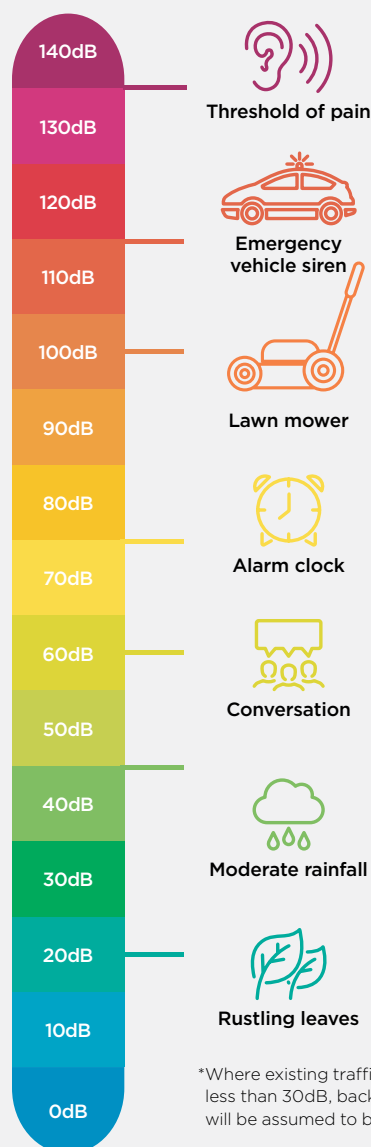
At Transport, noise is measured, predicted and assessed in accordance with relevant legislative guidelines.

Our assessments are conservative and always assess the worst case scenario. We often find that the actual noise caused by a project is lower than we predicted.

Standard guidelines for noise are:

 **50** decibels at night
 **55** decibels during the day
for new **freeways or main roads**

 **55** decibels at night
60 decibels during the day
for upgrades of **existing roads**



Noise assessments

Transport has used noise monitoring data and traffic surveys, a comprehensive noise study, site investigations and noise modelling to predict noise levels that would arise from the proposed Katoomba to Blackheath Upgrade.

Through the noise assessments, we identified residences and businesses likely to be affected by noise at different stages of construction (site preparation, site establishment, vegetation clearing, roadworks, finishing works).

Our studies found that noise and vibration impacts would reduce in the long-term as the Great Western Highway Upgrade Program moves to completion.

Visit the online portal at nswroads.work/gwheastconsult to explore the interactive noise map where you can enter your address to see how noise levels might change near your property during and after construction.

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Wednesday 25 May 4.30pm – 8pm

- Aboriginal stakeholder engagement session 4.30pm – 6pm
- General session 6pm – 8pm

Location: 30–32 Parke Street, Katoomba

2. Blackheath Neighbourhood Centre

Saturday 4 June 10am – 12pm

Location: 41 Gardiner Crescent, Blackheath

Register for a consultation session at

nswroads.work/gwheastconsult

Bookings are essential for all sessions.

Face-to-face sessions will be held pending COVID restrictions.

Contact us on **1800 953 777** or

gwhd@transport.nsw.gov.au to have a phone consultation if you prefer.

How to make a formal submission

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nswroads.work/gwheastconsult, email us at **gwhd@transport.nsw.gov.au**, or mail a printed submission to: **Transport for NSW Katoomba to Blackheath (East) REF Submission PO Box 334, Parkes NSW 2870**

Contact us

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nswroads.work/gwheastconsult



gwhd@transport.nsw.gov.au



1800 953 777



**Great Western Highway
Upgrade Program
PO Box 334, Parkes NSW 2870**



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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Water quality fact sheet

May 2022



Indicative treatment at basin outlet (source: Blue Mountains City Council).

Together the Australian and NSW Governments are investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) is presenting a Review of Environmental Factors (REF) and concept design for the Katoomba to Blackheath Upgrade for community consultation until Sunday 19 June 2022. We invite the community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

This fact sheet summarises key points related to water quality impacts as described in the REF and concept design for the Katoomba to Blackheath Upgrade.

To read the complete chapter on the potential impacts on surface and groundwater during construction and operation of the proposal refer to section 6.1 of chapter 6 of the REF and the Surface Water and Groundwater Technical Assessment Working Paper (Aurecon, 2021), provided in Appendix D.

Water quality



The Katoomba to Blackheath Upgrade lies adjacent to the Blue Mountains National Park within the Hawkesbury-Nepean catchment, the longest coastal catchment in NSW draining around 21,400 square kilometres. The northern portion of the proposal also lies within the Blackheath Special Area (drinking water catchment). Transport have developed the proposal with a beneficial effect on surface water runoff into these drinking catchments.

The proposal area sits between creeks running along both the eastern and western sides of the Great Western Highway and contains Key Fish Habitats (as defined in the Fisheries Management Act 1991) and hanging swamps which are identified as being threatened a threatened ecological community (TECs).

Surface water and groundwater

Transport would manage the surface water run off or discharge from the proposal area (particularly from the Medlow Bath to Blackheath section) very carefully, as it would flow into the Blue Mountains National Park and existing special catchment areas.

There are two groundwater sources located within the proposal area – the Sydney Basin Blue Mountains Groundwater Source to the east and the Sydney Basin Cocks River Groundwater Source to the west. These groundwater sources support local hanging swamp ecosystems, which are mostly reliant on groundwater seeps out along bedding planes and layers in the sandstone.

As part of the preparation of the Review of Environmental Factors we carried out detailed planning about managing potential impacts to soil and water quality during construction and consider appropriate mitigation or management measures where impacts are identified. We would further develop this work into the Soil and Water Management Plan (SWMP) as part of the Construction Environment Management Plan (CEMP) which is developed prior to construction.

Water quality management

The key potential construction impacts of the proposal on surface water and groundwater include:

- surface water quality impacts if sediment laden runoff is released to waterways during construction
- surface water and groundwater quality impacts as a result of accidental leaks and spills.

Managing impacts to water quality is a key priority for the project team. To manage impacts, a SWMP will be prepared and implemented as part of the overarching CEMP.

The SWMP will identify risks relating to soil erosion and water pollution and describe how these risks will be addressed during construction. It will also include detailed water monitoring plans to monitor existing surface water and groundwater and monitor changes to water quality during construction.

Run off from construction materials such as fuel and chemicals, stockpiles or ancillary facility operations (site compounds) also pose risks for water quality management during construction if not managed properly.

For this reason, we have deliberately located ancillary facilities for the proposal more than 40 metres away from local waterways.

The SWMP will also include several erosion and sediment control measures which must be maintained during construction.

To limit downstream flooding impacts and possibly hanging swamp impacts, the design features sediment detention basins located downstream of some drainage locations. Where possible, these permanent drainage structures will be installed as early as possible to filter and clean at the site water before it is released into the catchment. In partnership with Blue Mountains City Council, we are also adopting learnings from studies that have identified the impacts that rising pH levels can have on hanging swamps.

The water quality treatment system will be developed further during detailed design and will include:

- layout and detail of the drainage system including outlet design
- inclusion of bio-filtration, pollutant traps and rock pooling practices to remove velocity, separate pollutants and treat flows within the system
- minimisation of discharge flows from the sediment detention basins, to limit scouring in the drainage channels
- design within and around the waterways
- assessment of culverts and stormwater inlets in the local waterways and recommendation for scour protection within the Medlow Bath to Blackheath section.

Hanging swamps

Transport acknowledges the importance of protecting the hanging swamps within or near the Katoomba to Medlow Bath and Medlow Bath to Blackheath proposal area, specifically those located:

- under the proposed twin bridges in the Katoomba to Medlow Bath section
- on the north-eastern side of the Medlow Bath to Blackheath section.

The proposal would increase the road footprint and thereby could cause minor operational flood impacts downstream due to increases in volume, frequency and rate of stormwater runoff coming off the larger road. This could potentially impact the hanging swamps.

The proposal may also affect sensitive environments near the proposal and may lead to extended periods of drying or waterlogging, introduction or increase in weeds and changes habitat suitability for dependant flora and fauna at the Blue Mountains Hanging Swamp specifically.

However, the proposed water quality and drainage network would result in a beneficial impact on water quality as the proposal would help to minimise hydrologic impacts to surrounding sensitive environments.

Please refer to Section 3.2.3 and Section 6.1.3 of the REF for further information.

The erosion and sediment control measures contained within the SWMP would also help to manage and minimise damage to the hanging swamps during construction.

Recent scientific studies have raised concerns about the impact of increasing pH levels on Blue Mountains Hanging Swamps. We are committed to further understanding these results and we plan to partner with Blue Mountains City Council to explore opportunities to achieve best practice in water quality design as part of the Proposal.

One of the ways pH levels can be minimised is by not using concrete which contains certain ingredients in construction. For example, Transport specifies the avoidance of concretes containing flyash. Using quality materials is a priority for the upgrade, as is ongoing consultation with key stakeholders including Water NSW and Blue Mountains City Council.



A hanging swamp located in the study area.

What is an REF?

Transport has legal obligations to assess and mitigate impacts that may result from a proposed activity. An REF details these legal obligations, and the environmental impacts and proposed mitigation measures of a project.

What is a concept design?

A concept design is developed in sufficient detail to allow an assessment of likely environmental, social and economic impacts so stakeholders can provide feedback. It may change based on feedback received.

View the REF and concept design

You can view the Katoomba to Blackheath REF and concept design:

- online in our virtual consultation room at nswroads.work/gwheastconsult
- As a printed copy at one of these locations:
 - Katoomba Library
 - Katoomba Council Headquarters (foyer)
 - Glenbrook Customer Service Counter
 - Blaxland Library

Speak to the project team

We will hold a mixture of online and face-to-face information sessions.

We recommend that you view the REF and concept design before you speak with the team or make a submission.

Online

General sessions:

- Monday 23 May 6.30pm – 8pm
- Thursday 9 June 6.30pm – 8pm

Targeted sessions:

Biodiversity and water quality:

- Tuesday 31 May 6.30pm – 8pm

Localised impacts during and after construction:

- Monday 6 June 6.30pm – 8pm

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Page 4 of 4

Great Western Highway East – Katoomba to Blackheath Review of Environmental Factors and concept design feedback form

You are invited to comment on the Review of Environmental Factors and concept design for the Katoomba to Blackheath Upgrade. To have your input formally considered, and receive a response in the Submissions Report, please ensure you include a postal or email address with your submission. Unverified submissions cannot be included. If you would like to mail your feedback, please detach and use this reply paid feedback form by 19 June.

[illegible]Email address:

22.055

Privacy Transport for NSW (“we”) are collecting information from your submission (including your name, contact details and comment) to use for the purpose of public consultation, including on the Great Western Highway Upgrade Program - Katoomba to Lithgow (“the project”) and to contact you for feedback on our consultation process more generally. We may release reports which outline how community feedback on the project has been considered but will not disclose any personal information provided as part of your submission in those reports. Providing personal information is voluntary, however we rely on your participation to ensure the accuracy and reliability of the information obtained and we may not be able to communicate with you directly if you do not provide your personal information. Your personal information will not be disclosed without your consent, except where required by law. Your personal information will be held and managed by Transport for NSW in accordance with the Privacy and Personal Information Protection Act 1998 (NSW). For further information about how we manage your personal information, please see our Privacy Page at www.transport.nsw.gov.au/about-us/transport-privacy or contact us at privacy@transport.nsw.gov.au.



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Australian Government



Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Review of Environmental Factors – Frequently asked questions

May 2022



Artist impression – subject to change during detailed detail. View from Pulpit Hill Heritage Precinct, looking west.

How will the upgrade improve road safety?

Transport for NSW (Transport) traffic data shows that this section of the Great Western Highway has a higher than average crash rate for the state.

Highway upgrades can improve safety for road users. For example, there has been a 77 per cent reduction in fatal crashes and a 28 per cent reduction in casualties between Leura and Warrimoo since this section of the highway was duplicated and upgraded.

The proposal is to widen the Highway between Rowan Lane in Katoomba and Tennyson Road in Blackheath from one to two lanes in each direction with a centre median.

This would significantly increase road safety for motorists by providing safe opportunities to overtake, separate traffic travelling in opposite directions, and straightening out curves and crests as much as possible.

The new left turn lane at Foy Avenue, upgraded intersections, new shoulders and the removal of roadside hazards along the corridor would also increase road safety.

Improved active transport links and new active transport connections would also increase safety for cyclist and pedestrians.

nswroads.work/gwhd

What will the Pulpit Hill heritage interpretation area be like?

A heritage interpretation area is a place that celebrates and educates us about natural and cultural heritage, and how it relates to ourselves and our ancestors. It can do this in many ways, including using original objects, firsthand experience, illustrations or digital storytelling.

The proposal would impact the site where the Explorers Tree stood, and the area around Pulpit Hill.

To protect and preserve the area, we propose to relocate Nellies Glenn Road around the existing heritage interpretation area to preserve and expand it, creating a facility that encourages tourist use and raises awareness.

Improvements like new parking and a re-interpretation and acknowledgement of the Explorers Tree and improved links to an unmarked convict grave site, are also proposed.

We will prepare a Conservation Management Plan for the Pulpit Hill area to manage the heritage significance of the site and provide for ongoing management during and after construction.

Heritage specialists will consult with the local community about how to interpret the Pulpit Hill area, and we will make information available to everyone as this develops.

Why are you building twin bridges at Explorers Road?

In order to improve the alignment and grade of the existing highway near Explorers Road, we have designed two bridges, one going in either direction, to straighten out the highway, flatten the otherwise steep incline for motorists and improve safety for traffic traveling in opposite directions.

An urban design and landscape strategy would be developed to help maintain the existing character of the local area. This strategy would inform design elements including the proposed twin bridges, retaining walls, exposed cut, fill embankments, bicycle and pedestrian connections, replanting and landscaping.

How will you reduce impacts on the natural environment?

Transport is committed to minimising impacts to the natural environment. We have carried out extensive biodiversity studies along the upgrade corridor, and our investigations are continuing to make sure we fully understand the flora and fauna in the area, and how to protect it.

The upgrade would use as much of the existing road corridor as possible, to minimise environmental impacts. We will prepare a Flora and Fauna Management Plan and the detailed design for the road would minimise native vegetation and habitat removal. We will use both native and exotic species to vegetate disturbed areas in a way that compliments the character of the local environment.

We are working closely with National Parks and Wildlife to determine what revocation outcomes might work best for them as part of our biodiversity mitigation strategy and National Park and Wildlife Revocation Plan.

To read more about National Parks and Wildlife's policy, visit the www.dpie.nsw.gov.au and search 'Revocation, recategorisation and road adjustment policy'.

Why is Transport determining both REFs together if they are still separate environmental assessments?

Transport is responding to community feedback and will defer the determination of the Medlow Bath REF until it can be considered at the same time as the Katoomba to Blackheath REF.

Protecting the Blue Mountains environment and the livability of the villages along the highway is critical. Transport appreciates the feedback provided by Blue Mountains City Council and the community, which will help us to achieve that.

Whilst they are separate REFs, they will be considered together to ensure that potential cumulative impacts (that is impacts that may occur upon an environmental aspect, i.e. water quality, air quality) from each of these projects are fully understood and considered in the respective impact assessments.

How will the upgrade promote travel time savings?

This section of the Great Western Highway currently experiences slow travel speeds with limited overtaking opportunities and steep hills (more than double the recommended maximum level). Delays of up to 80 minutes or more in peak times by motorists if there is an incident.

Creating a dual carriageway from Katoomba to Blackheath, including the Medlow Bath upgrade, would respond to incidents faster, which would get drivers safely past incidents on the road. This would improve travel times and make your trip time more predictable and reliable.

Why can't we start the tunnel at Katoomba?

We are developing upgrade options that are appropriate to each section of the Highway.

In Medlow Bath we can upgrade the surface road through town with minimal property and environmental impacts, provide a clear buffer between the road and footpath, and improve safety for motorists, cyclists and pedestrians with the shared pathway and pedestrian bridge. The upgrade can achieve this while still providing opportunities to support and enhance the character of Medlow Bath village as a tourist destination.

Why is Transport doing an REF?

Transport for NSW takes its responsibilities towards protecting the environment very seriously. We have worked closely with the community and Blue Mountains City Council on environmental assessment for the Project and we have listened to the feedback that they have provided.

As a result, we have now resolved to defer determination of the Medlow Bath Review of Environmental Factors (REF) until we can consider and determine the REF for Medlow Bath at the same time as the REF for the rest of the corridor between Katoomba and Medlow Bath.

Whilst undertaking the environmental assessment for the program as separate REFs and an Environmental Impact Statement for the Central section does not avoid our requirement to assess environmental impacts, we appreciate that the community has concerns and we are acting on the feedback we have received.

To ensure that program impacts are adequately captured, Transport will continue to assess cumulative impacts for all sections as the program progresses.

Considerable effort has gone into the optioneering and design of the Great Western Highway upgrade, as a result there is no direct impact to the World Heritage Area.

How will the upgrade improve access for emergency services?

Increasing the Great Western Highway from one to two lanes in each direction would make access more reliable for local and regional communities and emergency services.

Congestion, limited overtaking opportunities and steep gradients can delay emergency services travelling to the site of incidents. Traffic incidents or natural disasters can restrict traffic flows due to congestion.

Increasing the number of lanes from one to two lanes in each direction would make access more reliable for emergency services during emergencies such as traffic incidents and bushfires.

It would allow us to set up contra-flow – where traffic on the blocked side of the Highway is moved over to the other side of the road, and the flow of traffic in one lane is temporarily reversed – if required, and the design would include more opportunities for emergency crossover at intersections.

The upgrade would also include room on the shoulder – where width permits – to allow emergency services to stop to attend incidents.

Is my property going to be impacted by acquisition?

We have been talking to affected owners about impacts to their property and the acquisition process.

How will you improve services for pedestrians and cyclists?

One of the key features of the upgrade is the provision of new active transport connections and improvement of existing active transport pathways along the Great Western Highway on what is known as the Great Blue Mountains Trail.

When the upgrade is complete, the Great Blue Mountains Trail would provide uninterrupted pedestrian and cyclist access between Katoomba and Blackheath. The trail would be sealed with bitumen, asphalt or surfaced with concrete, as appropriate along the length.

The Great Blue Mountains Trail is one of many active transport trails that runs alongside the GWH between Katoomba and Lithgow. The trail largely follows the alignment of the Great Western Highway and the proposed upgrade would either relocate, upgrade or connect with existing sections of this trail between Katoomba to Medlow Bath and provide a new accessible trail from Medlow Bath to Blackheath.

We want to provide an active transport connection that will encourage more people to use the trail and improve the experience for the pedestrians and cyclists who do. We would also provide for improved off-road cycling.

This is particularly the case between Medlow Bath and Blackheath where new connections to the trail mean that pedestrians and cyclists would no longer need to cross the Great Western Highway at Station Street to travel between Medlow Bath and Blackheath.

We invite community feedback on how you think we could make walking and cycling easier for everyone.

What would the speed limit be?

The speed limit would be 80 kilometres per hour between Katoomba and Blackheath, apart from Medlow Bath, where the existing 60 kilometres per hour limit will be retained.

Will access change for locals living near Nellies Glen Road, Explorers Road or Foy Ave?

Yes, it will be safer to access these roads, as part of the upgrade includes improvements to intersections at Nellies Glen Road, Explorers Road and Foy Avenue.

The changes include:

- A new dedicated left turn lane into Foy Avenue and Nellies Glenn Road, creating improved access and safety for local traffic accessing these roads.
- Nellies Glen Road, which is currently left in only, would become left in and left out.
- There would be no direct connection from Explorers Road to the highway. East bound traffic would use a new service road under the twin bridges to turn right in/right out of Explorers Road. West bound traffic would use Nellies Glen road to turn left in/left out from the Highway. We acknowledge this is a change for local traffic, however, separating highway traffic from local traffic at this intersection would make entry and exit to the highway much safer for everyone.
- Access at Foy Avenue would become, left in and left out and right in only. The right hand turn out of Foy Avenue would be removed for safety reasons and traffic would be directed to use the UTurn bay at Bellevue Crescent.

Why have you removed the right turn out of Foy Avenue?

Our priority is ensuring the safety of all road users. Safety is the priority of this upgrade, and there was no safe way to retain the right turn out of Foy Avenue.

There is not enough site distance to ensure a safe right turn out in an 80 kilometre per hour environment.

The cutting on the highway to the east of Foy Avenue also means that an acceleration lane cannot be featured in the design.

How will I travel east from Foy Avenue?

Drivers exiting Foy Avenue can use the safe new UTurn bay at Bellevue Crescent, to be completed as part of the Medlow Bath upgrade before changes are made to this section of the Highway.

How will you protect Aboriginal cultural heritage?

Transport takes its responsibility to protect Aboriginal and non-Aboriginal cultural heritage very seriously. Along Aboriginal design agencies Balarinji and GLM. We have been working with the local Aboriginal community and specialist archaeologists to identify and protect Aboriginal cultural heritage in the proposal area. This has included extensive Aboriginal cultural heritage investigations along the entire proposed Great Western Highway upgrade Program corridor, following Transport's Procedure for Aboriginal Cultural Heritage Consultation and Investigation.

An Aboriginal Cultural Heritage Assessment Report has been prepared which assesses Aboriginal cultural values potentially impacted by the project. We are consulting with, and will be led by, local knowledge holders in the Aboriginal community to help develop measures to avoid impacts to Aboriginal cultural heritage sites and items where possible or mitigate impacts if we cannot avoid them. This would include protection and salvage measures, and curation of any artefacts.

We are also working with Aboriginal design agency Balarinji to identify appropriate indigenous history to celebrate in the urban design and cultural interpretation sites being delivered as part of the upgrade.

How will you protect non-Aboriginal cultural heritage?

Transport takes its responsibility to protect Aboriginal and non-Aboriginal cultural heritage very seriously. A Conservation Management Plan will be prepared for Pulpit Hill and surrounds to manage the heritage significance of the site and provide for ongoing management.

We will refine the concept design following the REF to minimise heritage impact on the Pulpit Hill and curtilage and use design treatments to celebrate this site.

Pulpit Hill contains a known convict grave site from 1822, which is marked by the 'Stone arrangements' – a collection stones grouped together to mark the grave. The site has been previously disturbed, however, if it is not possible to completely avoid the Stone Arrangements, then we will carry out more studies to gain a better understanding of the significance of the site, including:

- An Historical Archaeology Assessment including a Historical Research Study
- An Archaeological Research Design (ARD) for archaeological work
- An archaeological test excavation of a portion of the Stone Arrangements and a soil analysis to confirm the presence of graves
- Further Ground Penetrating Radar (GPR) studies to verify previous study results.

Can you fix the pinch point at Blackheath first?

The Blackheath to Little Hartley section of the Great Western Highway upgrade design is now progressing with tunnel investigations.

The environmental assessment of the Blackheath to Little Hartley section is due to be completed in 2022.

Environmental assessment and designs for the surface road upgrade between Katoomba to Blackheath are much further advanced and we can start delivering

benefits to these road users while we continue to investigate and build the tunnel bypass of Blackheath.





While we progress tunnelling plans, options for improving mobility at Blackheath would also be investigated and consulted on with the community.



Indicative treatment at basin outlet (source: Blue Mountains City Council).

Contact us

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Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

**Display of Review of Environmental Factors and Concept Design,
Katoomba to Blackheath Upgrade, now until Sunday 19 June 2022**



Artist representation - Great Western Highway, near Pulpit Hill, looking west. (indicative only, final layout to be determined through detailed design).

Together, the Australian and NSW Governments are investing more than \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow.

The Great Western Highway East – Katoomba to Blackheath Review of Environmental Factors (REF) and concept design are on display for feedback until **19 June 2022**. All formal submissions must be received or postmarked by midnight, **19 June**. The Katoomba to Blackheath REF is a formal display process, and Transport for NSW will provide a submissions report on submissions received.

View the East REF and concept design

- Online at our virtual consultation room nswroads.work/gwheastconsult
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- **Thursday 9 June** 6.30pm – 8pm

Targeted sessions:
Biodiversity and water quality:

- **Tuesday 31 May** 6.30pm – 8pm

Localised impacts during and after construction:

- **Monday 6 June** 6.30pm – 8pm



For more information

 nswroads.work/gwhd


 gwhd@transport.nsw.gov.au

 1800 953 777

Register for an information session at nswroads.work/gwheastconsult

Please see our web portal for further details. Contact us by phone or email to book a personal phone consultation.

Appendix E – Advertisements



Australian Government

BUILDING OUR FUTURE



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Transport for NSW

Great Western Highway

East – Katoomba to Blackheath

Display of Review of Environmental Factors and Concept Design, Katoomba to Blackheath Upgrade, until Sunday 19 June 2022

Speak to the project team

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Great Western Highway

East – Katoomba to Blackheath

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**Have
your say**

Closing soon

Find out more

 nswroads.work/gwhd

 gwhd@transport.nsw.gov.au

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22.058

Appendix F – Media release

**Paul Toole**

Deputy Premier
Minister for Regional NSW
Minister for Police

Sam Faraway

Minister for Regional Transport and Roads

MEDIA RELEASE

Sunday, 15 May 2022

HAVE YOUR SAY ON KATOOMBA TO BLACKHEATH GREAT WESTERN HIGHWAY UPGRADE

The community is invited to have its say on a concept plan and Review of Environmental Factors (REF) for the upgrade of the Great Western Highway between Katoomba and Blackheath.

Deputy Premier and Minister for Regional NSW Paul Toole said the upgrade, which includes widening the highway to deliver dual lanes in both directions, would ease congestion between Katoomba and Blackheath, with a safer alignment and more opportunities to overtake slow-moving traffic.

“The Great Western Highway upgrade will improve safety for the thousands of people living in and travelling through the Blue Mountains on the highway every day,” Mr Toole said.

“The plans include new concrete twin bridges over the valley from Pulpit Hill near Explorers Road, upgraded intersections at Nellies Glen Road, Explorers Road and Foy Avenue, and an upgrade of the Great Blue Mountains Trail to improve active transport connections between Katoomba and Medlow Bath.

“This is a heavy traffic route to the Blue Mountains villages of Medlow Bath, Blackheath and Mount Victoria, and then onto the Central West, so it’s important we take on community feedback to ensure we deliver an upgrade locals want and need.”

Minister for Regional Transport and Roads Sam Faraway said the release of the REF and concept plan was an important milestone in the duplication of the highway’s capacity between Katoomba and Lithgow.

“I urge community members to have their say on these plans which will see thousands of road users benefit daily from the planned improvements,” Mr Faraway said.

“We have listened to the community’s concerns about having enough time to provide their feedback and the REF will go on display for 36 days from Sunday, 15 May, to Sunday, 19 June.

“Hard copies are available from the foyer of the Katoomba Council headquarters, the Glenbrook Visitor Information Centre, Springwood Library and Blaxland Library, or online in our virtual consultation room at nswroads.work/gwheastconsult.”

Together, the Australian and NSW Governments have committed more than \$2.5 billion towards the East and West sections of the Great Western Highway Upgrade,

between Katoomba and Blackheath, and between Little Hartley and Lithgow, respectively.

Key features

The Katoomba to Blackheath stretch of the upgrade has been split into two sections - from Rowan Lane, Katoomba to Bellevue Crescent, Medlow Bath and from Station Street, Medlow Bath to Tennyson Road, Blackheath.

Katoomba to Medlow Bath:

- widening about 3.5 kilometres of highway to provide two lanes in each direction between Rowan Lane in Katoomba and Bellevue Crescent in Medlow Bath
- connections to the Medlow Bath upgrade section
- new concrete twin bridges over the valley from Pulpit Hill near Explorers Road about 400 metre long
- upgrading intersections at Nellies Glen Road, Explorers Road and Foy Avenue
- improving visitor parking and expansion of the Pulpit Hill heritage interpretation area
- a new eastbound truck stopping area near Explorers Road
- upgrading the Great Blue Mountains Trail to improve active transport connections between Katoomba and Medlow Bath
- new bus stops at Nellies Glen Road (westbound), Explorers Road (eastbound) and Foy Avenue.

Medlow Bath to Blackheath:

- widening about 1.8 kilometres of highway to provide two lanes in each direction between Station Street in Medlow Bath and Tennyson Road in Blackheath
- extending a new link with the Great Blue Mountains Trail alongside the National Park and Great Western Highway between Medlow Bath and Blackheath
- a new westbound truck stopping area about one kilometre west of Medlow Bath.

Information sessions

Face-to-face information sessions for everyone in the community will be held at the Hartley Community Hall (Wednesday 18 May, 6pm-8pm), Katoomba Cultural Centre (Wednesday 25 May, 4:30pm - 8pm) and Blackheath Neighbourhood Centre (Saturday 4 June, 10am - 12pm).

Online sessions will be held on Monday 23 May and Thursday 9 June at 6:30pm.

To register for the online sessions, go to nswroads.work/gwheastconsult where you can also view an animation of the proposal and click through to make a formal submission online.

Submissions can also be made via email to gwhd@transport.nsw.gov.au or by post to Transport for NSW, Katoomba to Blackheath (East) REF Submission, PO Box 334, Parkes NSW 2870.

****Vision pack here:**

<https://www.dropbox.com/sh/1zwy0h4jk3ub6qw/AACQz6bO9v7YloV6Us3H4tbZa?dl=0>

**MEDIA: Alex Bernhardt | Deputy Premier | 0448 203 742
Larissa Mallinson | Minister Farraway | 0422 044 061**

Appendix G – Social media ads - Facebook

Post 1 - 17 to 23 May 2022



Transport for NSW

16 May

Have your say on the Review of Environmental Factors, Katoomba to Blackheath Upgrade! Register for an information session.



NSWROADS.WORK/GWHINFO

Register today

Great Western Hwy Upgrade

Book Now

54

81 comments 10 shares

Post 2 – 24 to 30 May 2022



Transport for NSW

16 May

Have your say on the Great Western Hwy Upgrade from Katoomba to Blackheath Review of Environmental Factors. Register below.



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Register today


Great Western Hwy Upgrade

Book Now

66

100 comments 24 shares


Post 3 – 31 May to 9 June



Transport for NSW

16 May

Last chance! Have your say on the Katoomba to Blackheath Review of Environmental Factors. Register below.



NSWROADS.WORK/GWHINFO

Register today

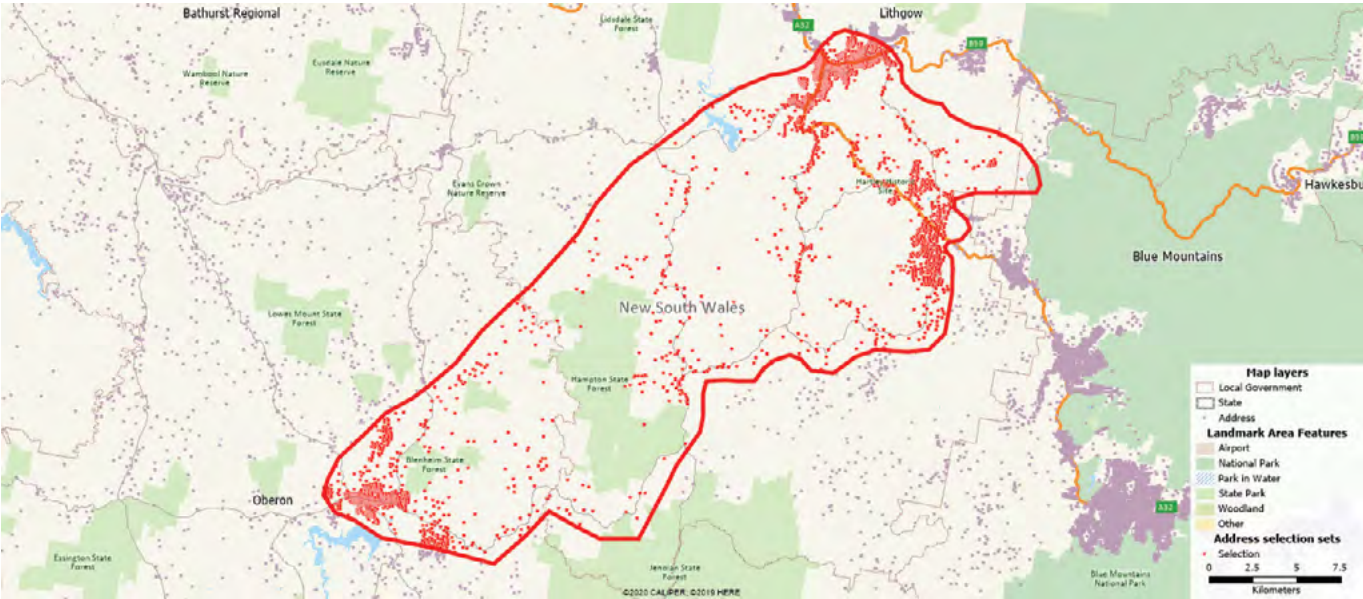
Great Western Hwy Upgrade

Book Now

51

70 comments 15 shares

Appendix H – Community Update distribution zone



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