



Transport for NSW

Great Western Highway Upgrade Program

Blackheath to Little Hartley Long Tunnel Investigation

Community Update | April 2021



Artist's representation of the proposed portal south of Evan's Lookout Road, approaching Blackheath

The NSW Government is investing \$2.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow. The program will provide safer, more efficient, more reliable journeys, and better connect communities with the Central West.

With the selection of the Evans Lookout Road entry and exit point as the preferred tunnel portal for Blackheath, Transport for NSW are now investigating the feasibility of a longer tunnel between Blackheath and Little Hartley as part of the Great Western Highway Upgrade Program.

A longer tunnel could deliver further benefits for the residents of the Blue Mountains and the Central West.

The proposed tunnel would begin at a portal south of Evans Lookout Road, in Blackheath, and emerge at the base of Mount Victoria, at Little Hartley, bypassing both Blackheath and Mount Victoria.

The new design would allow the Great Western Highway Upgrade Program to deliver a safer tunnel route with a gentler gradient, improving travel times and resilience and reducing vehicle emissions.

The Blackheath to Little Hartley Tunnel is in the early stages of investigation and confirmation of this tunnel option is subject to further studies.

We will hold public consultation on the route between Blackheath and Little Hartley later this year.

Longer tunnel benefits – a closer look



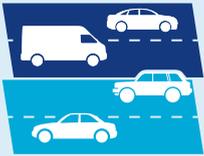
A safer journey

Transport for NSW continually review and update our design standards to help us create safer roads.

It has been 10 years since we designed the original Mount Victoria bypass of tunnels and viaducts.

A redesign with a more direct tunnel route will allow us to make the tunnel safer, incorporating modern design and safety improvements. This also allows us to reduce and straighten out curves and gradient changes.

This will provide a smoother, safer journey from Little Hartley to Blackheath.



Decreased congestion

The recent school holidays coincided with the closure of the Bells Line of Road following damage in extreme weather.

This forced even more traffic on the Great Western Highway, highlighting the congestion experienced during peak periods like long weekends and holidays.

Traffic backs up from the traffic lights in Blackheath and queues down the Victoria Pass, leading to some vehicles overheating and breaking down, making congestion worse.

A longer tunnel will remove these choke points and allow a better flow of traffic.



Travel time savings

Creating a longer tunnel between Blackheath and Little Hartley will divert through traffic from the townships of Mount Victoria and Blackheath.

This will improve travel times for through traffic by reducing congestion from local traffic.

Locals will experience more reliable trips as well, with through traffic diverted from the existing Great Western Highway.



Reduced vehicle emissions

Vehicle emissions increase as roads steepen and vehicle engines have to work harder.

Victoria Pass is currently one of the steepest sections of highway in NSW.

The longer tunnel allows us more distance to reduce the gradient of the journey into the mountains.

Impact on the environment is an important consideration of the project and we are installing air quality monitors along the corridor to study the effect of the upgrade on emissions from the corridor, and expect that it will lead to a reduction in total emissions.



Less disruption to traffic

Most of the construction work for a long tunnel would happen underground.

Building portals and connecting roads is one of the most disruptive parts of a tunnel Upgrade.

With less work on the surface – particularly between Blackheath and Mount Victoria – the upgrade will have less impact on traffic.



A more reliable connection

Recent extreme weather has again highlighted that the Blue Mountains needs a connection through the mountains that ensures reliable access for emergency services and general traffic under all conditions.

A long tunnel between Blackheath and Little Hartley will create an additional option for travel in the Mountains, alongside the existing surface Highway between Blackheath and Little Hartley, and the Bells Line of Road.

Property impacts

What impacts will there be to private property?

The Blackheath to Little Hartley long tunnel is in the very early stages of design. At this stage we hope to be able to minimise property impacts. We will be able to confirm this more accurately as the design develops.

Eastern portal

There is the potential for construction to create some disturbance for residents in properties near the proposed Blackheath tunnel exit.

We are in contact with these owners to discuss what construction impacts might be like, and possible solutions.

We are refining the portal design, and looking for ways to reduce impacts further.

Western portal

The improved location of the Western Portal may allow us to reduce property impacts somewhat, although there will still be some property acquisition required.

More investigation on the long tunnel option is needed before we can determine if this new portal will proceed

We are also in contact with these owners to discuss the change in impacts.

Mount Victoria

In Mount Victoria it is likely that property impacts will be greatly reduced as the tunnel would form a complete bypass of the town.

It will be some time before we can confirm this, as more investigations are needed before we rule out the Mount Victoria portal.

What impacts will there be to the National Park?

The Great Western Highway Upgrade Program will not have any impacts on the Blue Mountains World Heritage Area or threatened species.

We are responding to community feedback by protecting the villages of Blackheath and Hartley Historic Village.

Blackheath to Katoomba next to the existing Great Western Highway

Approximately 20 hectares of National Park and Sydney Water Catchment land will be required from land south of Evans Lookout Road, and along the Highway between Katoomba and Blackheath.

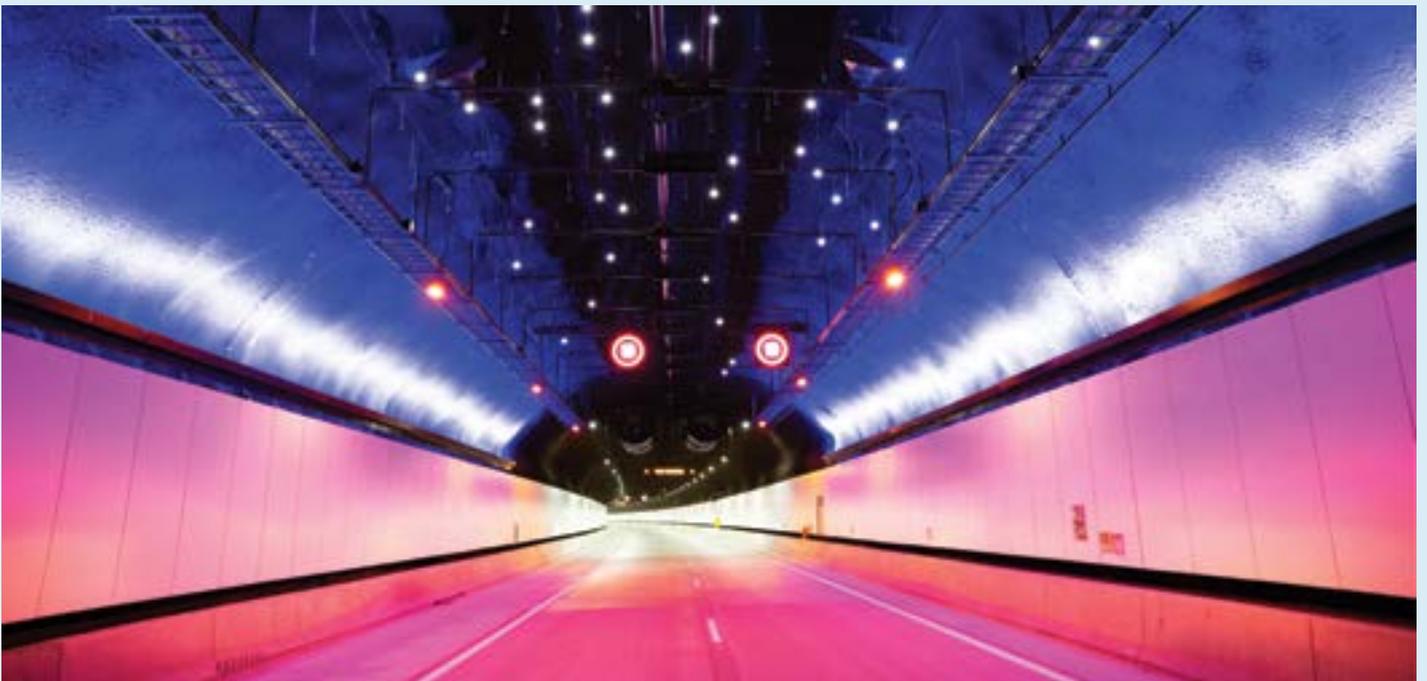
Using this section of National Park land allows us to minimise impacts on the township of Blackheath.

It includes space for utilities, maintenance access, fauna control, water storage and quality control; as well as the strip of land needed to widen the Highway between Blackheath and Katoomba.

Hartley Valley

Near Historic Hartley Village we propose to use of 2.5 hectares of the Hartley Valley Nature Reserve. This land was identified during earlier consultation on the Lithgow to Mount Victoria bypass plans, as protection of the township and protect its historic buildings was identified as a key community issue. Use of these 2.5 hectares will allow us to keep the road corridor away from the village.

We are working closely with National Parks on these revocations.



Longer tunnels, such as NorthConnex (pictured) include aesthetic design features to reduce monotony and help motorists maintain their concentration, reducing risk of incidents.

The tunnel route

What is the proposed tunnel route?

We are developing a strategic design for the longer tunnel, which would provide a more direct route between Blackheath and Little Hartley.

A redesign with a more direct tunnel route would make the tunnel safer, incorporating modern design and safety improvements and reducing and straightening out curves and gradient changes.

This would provide a safer, higher-quality dual carriageway route.

In 2020 we consulted on a tunnel bypass for Blackheath. This bypass will be incorporated into the proposed longer tunnel and will use the portal supported by the community.

Further technical studies are needed to determine the exact alignment of the route underground.

Where would the tunnel start and finish?

At its eastern end, the tunnel exit and entry point would be around 400m south of Evans Lookout Road, Blackheath.

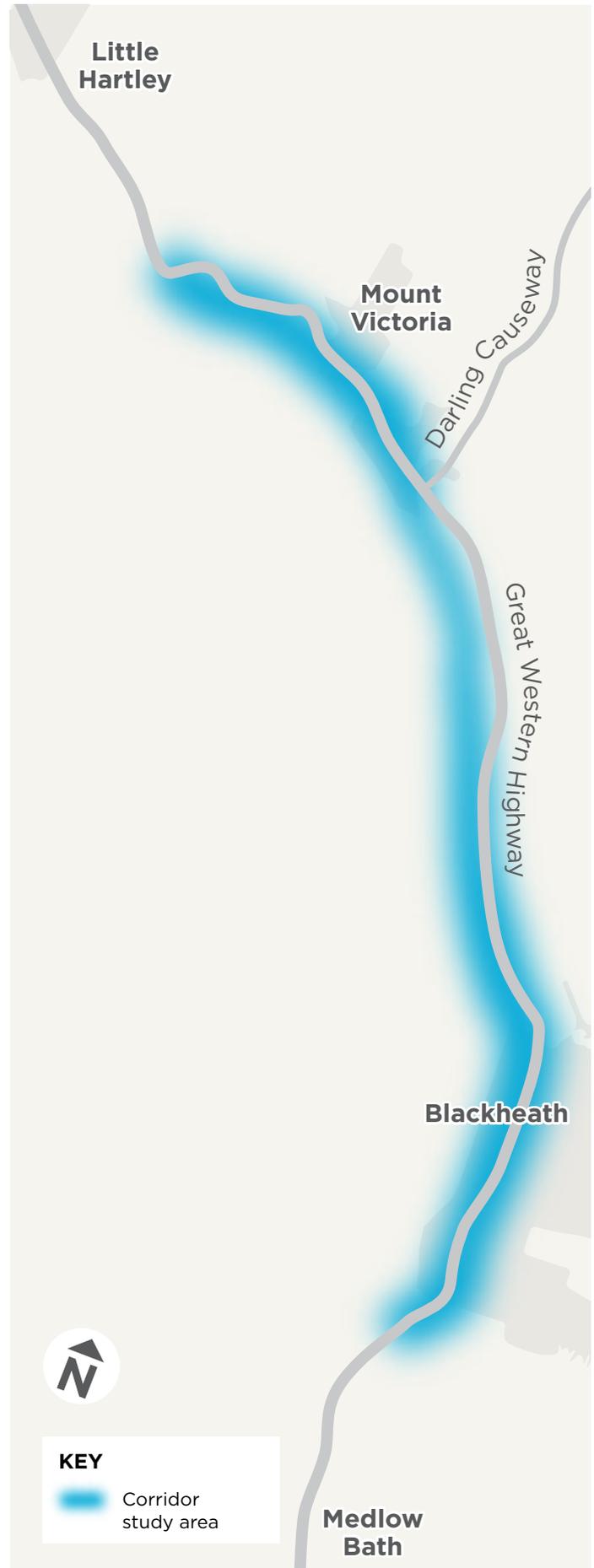
The selection of this portal responds to strong community feedback during the Blackheath Route Options consultation in November 2020, and avoids the use of Sutton Park.

It also helps us to minimise impacts on local homes.

At the western end, the tunnel would exit at the base of Victoria Pass, but may now be located closer to the existing highway.



Impacts to Sutton Park will be avoided



The proposed corridor study area for the Blackheath to Little Hartley Long Tunnel. Even though most of the tunnel will be deep underneath the surface, we are still designing the route to avoid the Greater Blue Mountains World Heritage Area.

Air quality

Clean air for the Mountains and the Valley

We are committed to improving air quality. As our population continues to grow, we recognise the importance of delivering transport infrastructure that meets high air quality standards.

Air quality and human health is a key priority when designing road tunnels for NSW roads.

Will the tunnel need ventilation outlets?

Further studies are required to determine what ventilation the tunnel needs, whether ventilation outlets are necessary, and where they might be located.

Ventilation outlets are designed to take tunnel air up and away from populated areas around tunnel portals.

The proposed portals are located away from populated urban areas, which may mean ventilation outlets are not required.

Ventilation outlets eject tunnel air high into the atmosphere, where it is diluted hundreds of times as it mixes with the surrounding air.

Air quality monitors

From June and July we will install air quality monitors at key points along the road corridor to gather information about the existing roadside air quality.

The location of the monitors does not indicate the final upgrade route of the Great Western Highway.

Monitors are placed to ensure we fully understand the environment of the Blue Mountains and the Hartley Valley, and identify all impacts of the proposed upgrade.

Air quality monitoring stations measure concentrations of air pollutants such as carbon monoxide and nitrogen dioxide, as well as ozone and particulate matter within the air. They also monitor weather conditions, including temperature, wind direction and wind speed.

Monitoring operates 24 hours per day, seven days per week and must meet strict operational guidelines that are set out in Australian Standards.

The equipment is tested and calibrated twice a month to ensure the data they collect is accurate.

Monitoring stations emit a low level of noise, including from the operation of the fans and pumps. This noise is not intrusive, and is generally less than local traffic noise.

The Upgrade will not be approved until we can demonstrate that all potential impacts have been identified and acceptably mitigated.



A typical air quality monitoring station

Other tunnel options

Why can't you tunnel under the whole Blue Mountains?

A tunnel from Penrith to Lithgow would be nearly twice as long as the longest road tunnel in the world, and would be extremely expensive to build and operate. In addition, it would only be of benefit to the traffic traveling all the way through the mountains.

The local Blue Mountains community would have little access to a tunnel this deep under the mountains, and incident management would also be difficult if an accident or breakdown occurred in a tunnel this long.

A tunnel under the entire mountains would not provide any benefits to the high level of local traffic that use this section of the highway. This option would also not provide benefit to the approximately 40 per cent of freight on the Highway that starts or ends its journey between Lithgow and Katoomba, on or nearby the Highway.

Why doesn't the proposed tunnel go under Medlow Bath?

The road corridor in Medlow Bath is wide enough to allow the surface road to be safely upgraded, with minimal impacts to environment and property.

Where the road is suitable, we are designing an upgrade that uses the existing road corridor.

Upgrading the Great Western Highway through Medlow Bath will allow us to address known safety concerns, and provide treatments such as turning bays and improved entry and exit points for the Highway.

What is happening to the 2013 Mt Victoria tunnel design?

In 2010 we consulted on a Highway upgrade between Forty Bends and Mount Victoria.

That consultation resulted in a design for a bypass of Mount Victoria and Victoria Pass using tunnels and viaducts (bridges), finalised in 2013.

We believe that we can deliver a new and improved design, given the advances in road design and tunnel technology in the years since, and extend the tunnel to connect with the planned Blackheath tunnel

This 2013 bypass plans cannot be formally discounted until the new longer tunnel option has been fully investigated and proven to be a better option.

When will you tell us more?

More investigation is needed to help us complete the strategic design for the Blackheath to Little Hartley tunnel and determine whether it is viable.

We are taking time to investigate the longer tunnel from Blackheath to Little Hartley. Transport for NSW is prioritising this work and will keep the community informed as the design is developed.

We will hold public consultation on the route between Blackheath and Little Hartley later this year.

Contact the Great Western Highway Upgrade team

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