

Blackheath to Little Hartley Upgrade



Blackheath village.

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) has conducted extensive investigations into the feasibility of a tunnel between Blackheath and Little Hartley. Investigations have confirmed that two identical (twin) tunnels, one eastbound and one westbound, around 11 kilometres long would deliver more benefits

for the environment, the community and road users than two shorter tunnels beneath the villages of Blackheath and Mount Victoria. Transport will take the Blackheath to Little Hartley tunnel option forward for further development, community consultation and environmental investigation.

Approvals and next steps

Who will approve the upgrade?

The Department of Planning and Environment (DPE) will ultimately determine whether the proposed tunnel can proceed. The Upgrade will not be approved until Transport can demonstrate that all potential impacts have been identified and acceptably mitigated.

In its determination, DPE will identify conditions of approval for the project and Transport will then make sure that the DPE requirements are met.

When will the Environmental Impact Statement (EIS) and concept design be completed and available for the community to view?

The EIS is scheduled to be placed on public exhibition in the second half of 2022. The EIS will be based on the concept design and the assessments of the impacts and benefits of that design.

Benefits of the upgrade

What will happen to the current highway from Blackheath to Little Hartley?

The existing Great Western Highway from Blackheath to Little Hartley will provide an alternate route. It would continue to serve local traffic, tourists, or anyone seeking to use the existing Highway in preference to the tunnel.

Will there be jobs for locals in the construction of the tunnel?

During design and construction, the Program will create thousands of jobs, with opportunities for local people and businesses to get involved.

A Skills, Employment and Industry Development Strategy is being developed which will focus on six key areas of local employment, youth employment, skills development, diversity, Aboriginal participation, and industry and business development.

What are the travel time savings of the tunnel?

The Great Western Highway can become very congested during peak periods and motorists can suffer substantial delays. During the 2021 Easter long weekend motorists experienced delays in excess of two hours between Katoomba and Lithgow.

The Blackheath to Little Hartley tunnel would separate through traffic and local trips and bypass pinch points.

Modelling to date indicates that in 2036, the tunnel could save motorists travelling between Katoomba and Lithgow up to half an hour during busy periods.

Travel times would also be far more reliable, with trips during peak and regular hours likely to vary by only a few minutes.

Will the tunnel carry a toll?

No. There is no intention to make this a tolled road.

Why has the 11 kilometre tunnel option been chosen over the two bypass tunnel option? What benefits does a tunnel between Blackheath and Little Hartley offer motorists?

Investigations have confirmed that the Blackheath to Little Hartley tunnel option would deliver more benefits than the two tunnel option to all road users and the community. Benefits of the Blackheath to Little Hartley tunnel include:

- Reduced environmental impacts
- Reduced congestion
- Alternate routes
- Reduced gradient
- Safer alignment
- Reduced emissions
- Reduced construction impacts

Has Transport investigated extending the tunnel to Medlow Bath?

Tunnels of various lengths, including a tunnel from Katoomba to Blackheath and a tunnel underneath Medlow Bath, were initially assessed against the viability criteria and program objectives. They failed these initial assessments on grounds of technical feasibility, environmental impacts, and excessive construction costs.

Transport must provide an upgrade that benefits the maximum number of road users. A tunnel between Katoomba and Blackheath would not be accessible for the high volume of local traffic that uses the highway each day between Katoomba and Mount Victoria.

Construction impacts

What impact would there be on highway users during construction?

Most of the construction of the Blackheath to Little Hartley tunnel would happen underground, minimising impacts to traffic on the surface.

However there would be some impacts, including increased construction traffic and traffic interruptions when the tunnel is being connected to the surface highway.

Further information on construction impacts such as dust, out of hours work, parking or access changes, noise and vibration, and traffic impacts will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

How much noise and vibration will there be during construction?

Impact assessments and identification of mitigation measures for noise and vibration impacts will be carried out as part of the Environmental Impact Statement.

Further information will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

Will construction take place during the day or night?

Where possible, the above ground and external construction activities would be carried out during standard construction hours.

How long would the project take to complete?

Construction of the tunnel and the links to the surface highway could take around six to seven years.

What sort of machine will Transport use to build the tunnel? How do they work?

The tunnel would be constructed using two tunnel boring machines (TBMs) - one for each of the twin tunnels - and, in certain sections, road headers (a large excavator with a mounted rotating cutter head) to cut through rock.

The TBMs would be launched from Little Hartley and tunnel towards Blackheath.

The NSW Government is highly experienced in building and operating tunnels in Australia. TBMs have been successfully used to construct more than 30 kilometres of tunnels for the Sydney Metro project.

The TBMs are specifically built for the conditions they will meet on the job. A TBM uses a rotating cutter head which can excavate through both hard and loose rock. Behind the cutter head is a chamber where the excavated rock is collected.

As the TBM moves forward, precast concrete lining segments are installed in the excavated tunnel by a rotating machine towards the rear of the TBM. This instant installation of the lining greatly reduces the risk of impacts to groundwater.

How will spoil removal be managed?

Tunnelling generates a high volume of spoil (excavated soil or earthen materials).

Sites for tunnel spoil storage and disposal are currently being investigated.

The Environmental Impact Statement will assess resource use and waste management and identify opportunities for the avoidance, minimisation and reuse of waste.

Further information will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

Community and stakeholder consultation

How can we comment on the preferred option?

Transport welcomes your feedback on the preferred option.

You can find out more about the preferred option by attending one of the face to face or online community information sessions. You can make comment on the preferred option by emailing the project team at gwhd@transport.nsw.gov.au or leaving comments on our interactive map which can be found at nswroads.work/gwhtunnel.

This is an informal feedback process and a submissions report will not be provided. Formal submissions will be invited during the public exhibition period for the Environmental Impact Statement and concept design later this year (2022).

How will the community be involved in the development of the next stage of the design?

Transport is pleased to be presenting the initial design for the Blackheath to Little Hartley tunnel, and invites the community to provide any feedback they have at this time.

This feedback will be considered in the further development of the preliminary concept design which will be used as the basis for the Environmental Impact Statement (EIS).

The Department of Planning will place the EIS on display for community feedback in the second half of 2022 for a minimum of 28 days. Formal submissions will be invited at this time and responded to in a Submissions Report.

The EIS and Submissions Report will be provided to the Department of Planning and Environment for project approval.

The exhibition process is your opportunity to have your say on the development of the Blackheath to Little Hartley tunnel. Your submissions will again be considered in the refinement and finalisation of the tunnel design.

How can we comment on the Environment Impact Statement (EIS) studies?

The Environmental Impact Statement will be placed on public exhibition for a minimum of 28 days in the second half of 2022.

During the public exhibition period the community and other stakeholders will be invited to make formal submissions on the EIS.

The Secretary for the Department of Planning and Environment will provide all submissions made to Transport as the proponent.

The Secretary will require Transport to formally respond to all issues raised through a Submissions Report.

Where can I find the design for the tunnel?

The preliminary design has been prepared for the preferred option. This will be developed over the next few months and will be used as part of the environmental impact assessment.

The Preferred Option Summary Report contains a map of the key features of the preferred option.

A copy of the preferred option can also be found at nswroads.work/gwhtunnel.

Further information on the developed concept design will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

Design

How deep will the tunnel be?

The design is progressing and final depths are still to be confirmed, however the Blackheath to Little Hartley tunnel is estimated to be at least 20 metres underneath Evans Lookout Road in Blackheath and more than 100 metres beneath Mount Victoria.

How have the locations of the tunnel portals been decided?

At its eastern end, the Blackheath to Little Hartley tunnel portal would be around 400m south of Evans Lookout Road, Blackheath. This location responds to strong community feedback during the Blackheath Route Options consultation in November 2020, and avoids the use of Sutton Park as a portal location.

The western portals would be located at the base of Victoria Pass, in the Hartley Valley, around two kilometres east of Little Hartley.

These portal locations have been chosen to minimise impacts on property and the sensitive Blue Mountains environment.

Further details on the location and design of the tunnel portals, and assessment of the potential environmental impacts will be communicated when the Environmental Impact Statement is exhibited in the second half of 2022.

Environmental assessments

What impact will the tunnel have on sensitive ecological sites? What measures will be put in place to minimise those impacts?

Design of the Blackheath to Little Hartley tunnel will focus on minimising impacts to the sensitive Blue Mountains environment.

The Blackheath to Little Hartley tunnel minimises surface works and impacts to the National Park.

There are no direct impacts to the Greater Blue Mountains World Heritage area.

Options to fully line the tunnel, to minimise impacts on sensitive groundwater system are being explored and will be presented when the Environmental Impact Statement is exhibited in the second half of 2022.

Great Western Highway Upgrade Program

What impacts will the tunnel have on the National Park and the Greater Blue Mountains World Heritage Area?

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

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.

We are working closely with National Parks in relation to this requirement.

Will there be ventilation stacks?

Air quality and human health is our priority when designing road tunnels for NSW.

Strict NSW air quality requirements will ensure that air pollution levels are appropriately managed inside and outside the tunnel. These requirements are amongst the most stringent in the world.

Transport is carrying out studies to determine what ventilation the tunnel needs, whether ventilation outlets are necessary, and where they might be located.

How will groundwater impacts be managed during construction/operation?

The Great Western Highway Upgrade aims to minimise impacts to the sensitive Blue Mountains environment.

We are aware of the very complex and sensitive groundwater environment in the Mountains.

We are carrying out extensive investigations to make sure that we are fully informed on the environment and identify designs and construction methods that would protect groundwater and the unique hanging swamps in the mountains.

We are modelling different tunnel designs to ensure that we do not interfere with groundwater connections.

The preferred construction method is for a segmentally lined tunnel that minimises groundwater ingress during construction and operation. This key response is being adopted to manage groundwater drawdown and the impacts of groundwater drawdown on groundwater dependent ecosystems.

Further information will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

Traffic management and operational impacts

Will businesses in Blackheath and Mount Victoria be impacted due to the bypass?

Research has shown that, while businesses in a bypassed town can experience a downturn in revenue in the first 12 months after opening, particularly service stations, and food and beverage outlets as they often rely on passing trade, in the longer-term highway bypasses do not have adverse economic impacts on towns, and instead result in economic benefits.

The NSW Government offers the Bypassed Town signage initiative, which aims to encourage travellers to stop and visit bypassed towns.

Traffic modelling, social impact assessments and business impact assessments will be undertaken as part of the Environmental Impact Statement to understand the operational impact the tunnel would have on local businesses.

Further information will be available when the Environmental Impact Statement is exhibited in the second half of 2022.

Will the tunnel increase the number of heavy vehicles that travel through the Blue Mountains?

Traffic modelling conducted for the upgrade program to date does not indicate that the upgrade would induce much additional traffic on to the highway beyond the current projected growth.

Most of the heavy vehicles travelling into or out of the Blue Mountains would use the tunnel, bypassing Blackheath and Mount Victoria.

As part of the Environmental Impact Statement, further traffic studies will be undertaken to understand the operational impact the tunnel would have on the local road network.

What noise impacts will the operation of the tunnel have?

Noise modelling will be completed for the Environmental Impact Statement to help Transport understand the noise levels resulting from construction and operation of the tunnel, including operational infrastructure. Where required, mitigation measures will be designed as part of this study.

Further information will be available when the EIS is exhibited in the second half of 2022.

Great Western Highway Upgrade Program

How will Transport ensure that the tunnel is safe and respond to emergency incidents?

The NSW Government tunnel design standards result in tunnels that are amongst the safest in the world, and we would incorporate safety provisions that are state of the art.

The final tunnel design would include many safety systems and equipment to deal with incidents. These might include visual and audible communication systems; emergency escape passages; access for emergency services vehicles; a water deluge system to suppress fire, and emergency smoke extraction systems.

Communications systems and CCTV are used to monitor tunnel activity and respond to incidents as they occur.

What will happen to heavy vehicle traffic entering the highway from the Darling Causeway?

Heavy vehicles entering and exiting the Highway from the Darling Causeway would continue to use the existing surface highway through Mount Victoria and Blackheath.

However, with most heavy vehicles from the Central West using the tunnel bypass there would be a substantial reduction in the volume of heavy vehicles coming through these townships.

How will Transport carry out safety inspections, with the Mount Boyce Heavy Vehicle Safety Station not able to check traffic in the tunnel?

Options for managing heavy vehicle safety checking are being considered as the design progresses.

The new location is yet to be determined. The existing Mount Boyce safety station will remain operational until an alternative location is established.

What would be the speed limit in the tunnel?

The design of the tunnel is being developed to Austroads standards to ensure the safety of all road users. Transport is aiming for a speed limit of at least 80 kilometres per hour.

Will there be property acquisitions and are those property owners already aware?

Transport for NSW aims to minimise property impacts wherever possible.

The Blackheath to Little Hartley tunnel would require some at-surface property acquisition and some subsurface acquisition.

Transport will contact affected owners to discuss any possible impacts once the design matures

Where subsurface acquisition is required, Transport will contact owners of directly affected properties at the relevant time.

Contact us

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



nswroads.work/gwhd



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