

Blackheath to Little Hartley Upgrade



Blackheath village.

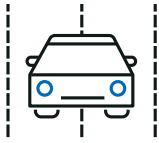
Together, the Australian and NSW Governments are investing more than \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow.

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.

We will hold online and face-to-face information sessions to answer your questions about the tunnel.

Register for an information session at nswroads.work/gwhtunnel



Strategic alternatives

Four strategic alternatives were considered for the project:

- Do nothing
- Bells Line of Road upgrade
- Main Western Railway Line upgrade
- Great Western Highway upgrade

The Great Western Highway upgrade was selected as the preferred strategic alternative.



Blackheath to Little Hartley options

Following consideration of a long list of all options for the upgrade, including tunnels of different lengths, and with consideration for the Blackheath consultation processes, four options were shortlisted to be considered for the upgrade:

- Minimum scope option
- Surface upgrade option
- Two tunnel bypass option (Blackheath and Mount Victoria tunnel bypasses)
- Single tunnel option (Blackheath to Little Hartley tunnel)

Both tunnel options were shortlisted to minimise environmental and social impacts, including to the Blue Mountains National Park and avoid all impacts to the Greater Blue Mountains World Heritage Area. In 2021 the NSW Government announced that Transport would investigate the feasibility of the Blackheath to Little Hartley Tunnel.

Consideration of long list included Blackheath Co-Design and community consultation processes.



Tunnel design options

Two shortlisted tunnel options were considered further for the Great Western Highway upgrade:

- Blackheath and Mount Victoria tunnel bypasses
- Blackheath to Little Hartley single tunnel bypass



Preferred option

Investigations confirmed the Blackheath to Little Hartley tunnel is the most viable option.

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Environmental Assessment and concept design

The Blackheath to Little Hartley tunnel will progress for further assessment and consultation. Transport will undertake:

- Environmental Impact Statement (EIS)
- Concept design

The EIS and concept design are anticipated to be exhibited for consultation and feedback in late 2022.

Overview

In 2010, Transport consulted on a preferred option for an upgrade of the Great Western Highway between Mount Victoria and Lithgow. This consultation process confirmed a tunnel and viaduct bypass of Mount Victoria and Victoria Pass, and the alignment was adopted into the Local Environment Plans of Lithgow and Blue Mountains City Councils.

In 2019, the State Government committed funding towards the upgrade of the road corridor between Katoomba and Lithgow and Transport began consultation on strategic options for this upgrade.

During 2020, Transport consulted with the Blackheath Co-Design Committee (BCC) on four broad route options for the upgrade at Blackheath. The BCC advised that their preferred option was a tunnel bypass of Blackheath.

Broader community consultation on the preferred option for Blackheath confirmed that the community preferred a tunnel bypass between portals south of Evans Lookout Road and near the existing Mount Boyce heavy vehicle safety station.

In May 2021, the NSW Government announced that Transport would investigate the feasibility of a tunnel between Blackheath and Little Hartley.

Studies have confirmed that two identical (twin) tunnels, one eastbound and one westbound, around 11 kilometres long between Blackheath and Little Hartley is the most viable option and Transport will take this option forward for further development, community consultation and environmental investigation.

Key features of the Blackheath to Little Hartley tunnel

A preliminary concept design has been prepared for the Blackheath to Little Hartley tunnel and will continue to be developed with further consultation and environmental assessments. The concept design will be used as the basis of an Environmental Impact Statement (EIS), which will be publicly exhibited and feedback invited from the community in the second half of 2022.

Key tunnel features

- Two identical (twin) tunnels, one eastbound and one westbound, around 11 kilometres long, generally to the south of the existing Great Western Highway and Mount Victoria.
- Two lanes of traffic flow in each tunnel, to separate traffic and increase safety.

- Road shoulders to allow vehicles to stop safely without interrupting traffic flow.
- A possible tunnel depth of up to 200 metres below ground at the deepest point to the south of Mount Victoria.
- Tunnel operations facility including ventilation systems, drainage management, signage, lighting, and emergency evacuation systems.

Features of the tunnel are subject to further development of the concept design, EIS and detailed design.

Tunnel portals

At its eastern end, the tunnel exit and entry point would be around 400 metres 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 portal 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 provided for comment in the EIS.

Ventilation

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

Ventilation requirements will be confirmed when the concept design and EIS are exhibited in the second half of 2022.

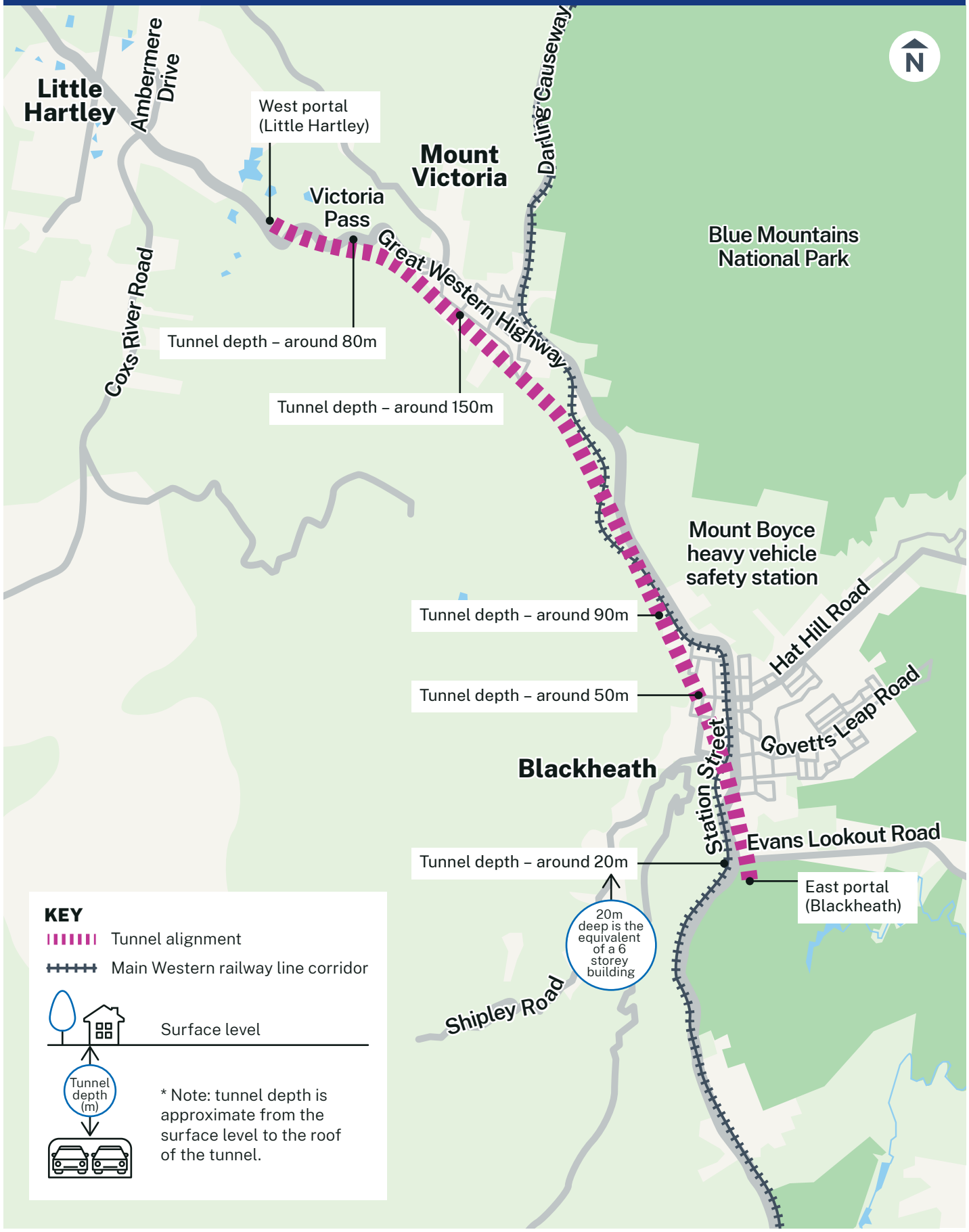
Tunnel Depth

Tunnelling is a safe and frequently used construction technique that significantly reduces impacts on local properties while still enabling major infrastructure to be delivered in residential areas.

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 Mt Victoria.

This EIS will address any potential environmental impacts tunnelling at these depths may have during construction and operation.

Blackheath to Little Hartley tunnel map



Why the Blackheath to Little Hartley tunnel is the preferred option

Investigations have confirmed that a tunnel between Blackheath and Little Hartley would deliver more benefits for the environment, the community and road users than two shorter bypass tunnels of Blackheath and Mount Victoria.

A safer journey

A tunnel between Blackheath and Little Hartley would provide a more direct route. It would also make the journey safer, incorporating modern design and safety improvements and reducing and straightening out curves and gradient changes.

Less disruption to traffic

Most of the construction work for the 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 enables reliable access for emergency services and traffic under all conditions. The tunnels will create an additional option for travel in the mountains, alongside the existing surface highway, and Bells Line of Road.

Travel time savings

Creating a tunnel between Blackheath and Little Hartley will divert through traffic from the townships of Mount Victoria and Blackheath. This will improve travel times by reducing local traffic congestion, making more reliable trips.

Reduced environmental impacts

With only two portals and the highway route moved underground, there would be less impacts on National Park.

How will we build the tunnel?

The tunnels would be constructed using two tunnel boring machines (TBMs) and in some sections, road headers (large excavators with a mounted rotating cutter head) to cut through rock.

The TBMs would be launched from Little Hartley and complete work at Blackheath.

The NSW Government is highly experienced in building and operating tunnels. 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 face on the job. The 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 is progressively installed in the excavated tunnel, greatly reducing the risk of impacts to groundwater.

To ensure that homeowners are protected, property condition assessments will be offered to homes within a certain distance from the tunnel before and, where requested, after construction.



Tunnel boring machine used on the Sydney Metro project.



Ecologist undertaking vegetation surveys in the Great Western Highway Upgrade program corridor.

Environmental assessments

We realise that how we assess and mitigate environmental impacts is important to you. Environmental assessments are currently underway and full details will be provided in the EIS, however we can provide this early information about assessments carried out so far and what is planned.

Ventilation and air quality

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.

Air quality controls resulting from the proposed tunnel ventilation system will be subject to expert independent technical review co-ordinated by the NSW Chief Scientist and Engineer, and will need to meet strict requirements set by the Department of Planning and Environment (DPE) and the Environment Protection Licence issued by the Environment Protection Authority (EPA).

We anticipate the upgrade will lead to a reduction in total emissions due to the decrease in gradients and the reduction of stop/start driving due to a more efficient flow of traffic.

Groundwater management

Transport acknowledges the importance of protecting groundwater and the valuable Blue Mountains ecosystems that rely upon it. To protect the environment, 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 groundwater assessment includes characterising the existing environment including climate, topography, geology, and groundwater occurrence, quality and use, including groundwater dependent ecosystems. We will use this information to develop a groundwater model to assess and mitigate potential groundwater-related construction and operational impacts.

Spoil management

Tunnelling generates a high volume of spoil (excavated soil or earthen materials). The EIS will assess resource use and waste management and identify opportunities for the avoidance, minimisation and reuse of waste. We are working to determine where spoil will be stored, and how to minimise impacts to the Hartley Valley.

Great Western Highway Upgrade Program

Biodiversity

The Blue Mountains are home to unique biodiversity, protected through National Parks and the Greater Blue Mountains World Heritage Area.

The upgrade will be designed to avoid or minimise impacts to biodiversity, including threatened flora and fauna species, native vegetation and important habitat areas.

We will assess the potential impacts of the upgrade on biodiversity during construction and operation by using the NSW Biodiversity Assessment Methodology, as per the *NSW Biodiversity Conservation Act 2016*.

Where impacts to biodiversity cannot be completely avoided, Transport will consider offsets consistent with the **NSW Biodiversity Offsets Scheme**, more information on the Scheme can be found at www.environment.nsw.gov.au.

Aboriginal and non-Aboriginal heritage

Early investigations into Aboriginal cultural heritage along the Katoomba to Blackheath and Little Hartley to Lithgow sections of the Great Western Highway Upgrade Program have been completed.

Investigations will soon be carried out for the Blackheath to Little Hartley section of the upgrade.

We will continue to consult with local knowledge holders who have registered as a Registered Aboriginal Party (RAP) on the project's Aboriginal Focus Group. The RAPs are invited to put forward nominations for Aboriginal site officers to supervise and assist in archaeological investigations.

Assessment of non-Aboriginal heritage will involve a literature and database review, field surveys, consultation with local heritage stakeholders, and significance and impact assessments.

We will design measures to minimise construction and operation impacts to Aboriginal and non-Aboriginal heritage areas as part of the EIS.

Next steps

Transport will further develop the preliminary concept design which will be used as the basis for the EIS. The Department of Planning and Environment will place the EIS on display and invite community feedback in the second half of 2022. We will write to you again to inform you of the exhibition dates.

The EIS exhibition is your opportunity to have your say on the development of the Blackheath to Little Hartley tunnel.

What is an EIS?

As the project is state significant infrastructure, an EIS is required to assess the potential economic, environmental, and social impacts. The EIS must be prepared to address the NSW Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs).

The EIS will be placed on public exhibition for a minimum of 28 days. Formal submissions must be made in writing and will be responded to in a Submissions Report.

What is a concept design?

The concept design is developed in sufficient detail to allow an assessment of likely environmental, social and economic impacts.

Talk to the project team

We will hold online and face-to-face sessions in May and June 2022 to answer your questions about the tunnel.

Online sessions

- **Monday 23 May** 6.30pm – 8.00pm
- **Thursday 9 June** 6.30pm – 8.00pm

Face-to-face sessions

- **Wednesday 18 May** 6.00pm – 8.00pm
Hartley Hall, Mid Hartley Road, Hartley
- **Wednesday 25 May** 6.00pm – 8.00pm
Seminar Room, Katoomba Cultural Centre
30-32 Parke Street Katoomba
- **Saturday 4 June** 10.00am – 12.00pm
Blackheath Neighbourhood Centre,
41 Gardiner Crescent, Blackheath

Register for a consultation session at nswroads.work/gwhtunnel

Bookings are essential for face-to-face sessions, which will be held pending COVID restrictions or the occurrence of local cases at the time of the events.

The face-to-face consultation sessions will also include the project team for the Katoomba to Blackheath (East section) upgrade to provide information on the Review of Environmental Factors, which assesses the potential environmental and social impacts during construction and operation of the project, as well as recommends measures to manage and minimise potential impacts from the project. More information on the East section upgrade can be found at: nswroads.work/gwheastconsult.

How to provide feedback

We welcome your feedback on the Blackheath to Little Hartley tunnel and it will be taken into consideration as we refine the concept design and prepare the EIS. Formal submissions will be invited during the display of the EIS in the second half of 2022, after which a Submissions Report will be provided.

You can provide feedback by writing to us via email or mail, calling the project number, or adding comments to the interactive map on the project website at nswroads.work/gwhtunnel. See our contact details below.

Great Western Highway Upgrade Program update

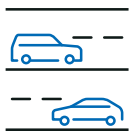
Environmental assessments are progressing on the Katoomba to Blackheath (East section) and Little Hartley to Lithgow (West section) projects.

As we complete the more complex planning and environmental assessment of the Blackheath to Little Hartley upgrade, Transport can begin delivering benefits along the east and west sections of the Great Western Highway.

Construction contracts for the upgrades at Medlow Bath and Coxs River Road on the Great Western Highway Upgrade are expected to be awarded by the end of 2022.

We expect to complete construction of the upgrade between Katoomba and Lithgow within eight to ten years.

View more information on the full Upgrade Program at nswroads.work/gwhd.



Less
congestion



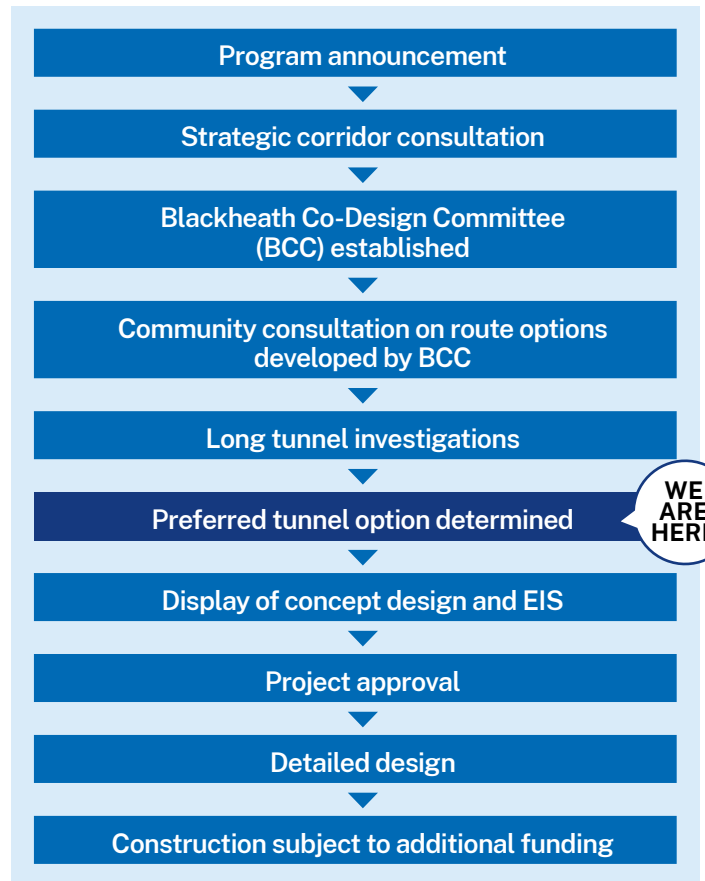
Safer town centre
for cyclists and pedestrians



Through traffic
moved underground

May 2022
22.094

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Contact us

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



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