Appendix C
Community engagement

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Appendix C – Community engagement

This appendix includes a summary of the key issues received from community engagement carried out for the upgrade of the Great Western Highway between Blackheath and Little Hartley (the project) and identifies where in the environmental impact statement (EIS) these key issues are addressed. Feedback provided by the community was analysed and considered during the preparation of the EIS.

Table 1 Key issues raised during community engagement for the project

Key issues raised	Where addressed in the EIS
Project alternatives and options	
Strategic alternatives • rail options should be considered as an alternative to upgrading the existing Great Western Highway through the townships and communities in the Blue Mountains • upgrade of the Bells Line of Road should have been considered as an alternative route for the upgrade of the Great Western Highway between Katoomba and Lithgow to a four lane carriageway (the Upgrade Program) • support for improvements to the existing Great Western Highway, rather than a tunnel • questions related to whether the project includes upgrade of the existing Great Western Highway • support for a tunnel to be built as part of the Upgrade Program consistent with a 2019 NSW Government election commitment • interest and support for the Upgrade Program providing a faster and safer connection through and between the Blue Mountains and Sydney	• four strategic alternatives were considered for the Upgrade Program, including upgrade of Bells Line of Road and the Main Western Railway Line (rail) • a surface road upgrade was one of four options considered for the project. The Blackheath to Little Hartley tunnel option was ultimately selected as the preferred option as it best addressed the identified project need and best met the project objectives • key benefits of the project include improved network performance and safety improvements, detailed in Chapter 2 (Strategic context and project need) • for further information on the strategic alternatives considered for the project, as well how the preferred option was developed and the associated benefits, refer to Chapter 2 (Strategic context and project need) and Chapter 3 (Project alternatives and options).

Key issues raised	Where addressed in the EIS
Tunnel options • support for a Blackheath to Little Hartley tunnel option, which would include twin tunnels around 11 kilometres long between Blackheath and Little Hartley, connecting to the upgraded Great Western Highway at both ends (long tunnel option) as part of 2020 consultation on Blackheath route options • support for a Blackheath and Mount Victoria tunnel bypasses option, comprised of two separate tunnel bypasses (one of Blackheath and one of Mount Victoria) and surface road upgrades between these two locations (short tunnel option) as part of 2020 consultation on Blackheath route options • concern that the route for the preferred option did not resemble previous options investigated	• the Blackheath to Little Hartley tunnel option would address the identified project need and best meet the project objectives and was therefore selected as the preferred project. Chapter 3 (Project alternatives and options) provides a discussion on how the preferred option best meets the project needs and objectives • a Blackheath and Mount Victoria tunnel bypasses option was considered as part of preferred options analysis for the project. This option was ultimately not selected as the preferred option for the project based on its performance against the Blackheath to Little Hartley tunnel option. Chapter 3 (Project alternatives and options) includes a discussion of options considered for the project as well as how the preferred option was developed from previous options.
Ventilation options • request for further information regarding the type of ventilation outlet that would ensure safe operation of a tunnel	• two options for ventilation facilities are being considered for the project; ventilation outlet (whereby tunnel emissions would be dispersed via ventilation outlets near tunnel portals) and portal emissions (whereby tunnel emissions would be dispersed via the tunnel portals). All relevant impact assessment chapters include consideration of potential impacts related to both ventilation options. For further information on the tunnel ventilation system and the options being considered for the project, refer to Chapter 3 (Project alternatives and options) and Chapter 4 (Project description).
Placemaking	
• request for further information on the placemaking opportunities that would be delivered by the project • request for further information on the plans for Mount Victoria village	• ongoing investigation and consultation with the relevant councils is being undertaken related to potential opportunities for placemaking initiatives as a result of the project. This includes consideration of opportunities to improve at-surface active transport infrastructure between Blackheath and Little Hartley. This infrastructure would be subject to separate planning approvals and may be delivered by others. For further information on placemaking opportunities considered as part of the project, refer to Appendix N (Technical report – Urban design, landscape and visual) • Mount Victoria village plans are beyond the scope of this project and are not included in the EIS.

Key issues raised	Where addressed in the EIS
Environment	
Heritage, the Blue Mountains National Park and Greater Blue Mountains World Heritage Area • concern regarding protecting the cultural and historic heritage of the townships along the Great Western Highway • concern regarding potential impacts to the sense of community of the townships in the Blue Mountains and the Greater Blue Mountains World Heritage Area • request for further details regarding the potential impacts on the National Park and the process for revocation of National Park land	• the project would not have a significant impact on heritage items. Chapter 16 (Aboriginal cultural heritage) and Chapter 17 (Non-Aboriginal heritage) include assessments on Aboriginal and non-Aboriginal heritage • the project would result in improved amenity for residents of Blackheath and Mount Victoria due to reduced traffic and associated noise and air quality emissions from the existing Great Western Highway. The project would also provide a bypass route for heavy vehicles, avoiding local townships and two school zones and reducing the mix of through and freight traffic with local and tourist traffic • the project has avoided direct impacts to Greater Blue Mountains World Heritage Area and has minimised indirect impacts including potential visual, noise and vibration and air quality impacts. Chapter 12 (Biodiversity) summarises the potential indirect biodiversity impacts to the Blue Mountains National Park, and Chapter 18 (Landscape and visual) includes an assessment of potential indirect visual impacts to the Greater Blue Mountains World Heritage Area. Chapter 14 (Surface water and flooding) and Chapter 13 (Groundwater and geology) include discussion on impacts to the sensitive receiving environments in the Blue Mountains National Park • part of the project south of the Blackheath portal traverses land previously reserved under the *National Parks and Wildlife Act 1974* as part of the Blue Mountains National Park. The National Parks reservation for this area was revoked by the NSW Parliament in August 2022. Chapter 20 (Business, land use and property) outlines the National Park revocation process and provides a high-level assessment of the revocation.
Air quality • concern relating to the location of proposed ventilation outlets and how air pollution would be managed • concern relating to potential visual impacts of ventilation outlets	• two options for ventilation facilities are being considered for the project: emissions via ventilation outlets and emissions via tunnel portals. If the ventilation outlet option is selected as the preferred ventilation design option, a ventilation building and ventilation outlet at the tunnel portals at Blackheath and Little Hartley would be required. Chapter 4 (Project description) describes the two ventilation design options being considered for the project, including the indicative locations of ventilation outlets • the air quality assessment for the project found that for the worst affected receptors, ambient air quality concentrations were generally lower in 'with project' scenarios compared to 'without project' scenarios. The project may provide potential benefits to human health by reducing the concentration of certain pollutants. For further information on the air quality and human health impact assessment undertaken for the project, refer to Chapter 9 (Air quality) and Chapter 10 (Human health) • given the presence of other project infrastructure at the tunnel portals, visual impacts from the presence of ventilation outlets (if selected as the preferred ventilation

Key issues raised	Where addressed in the EIS
	design option) are considered moderate. Chapter 18 (Landscape and visual) includes a visual impact assessment of the two ventilation design options being considered for the project.
Noise and pollution • concern regarding noise and pollution during operation of the Upgrade Program	• the air quality assessment for the project found that for the worst affected receptors, ambient air quality concentrations were generally lower in 'with project' scenarios compared to 'without project' scenarios. The project may provide potential benefits to human health by reducing the concentration of certain pollutants. • Operation of the project is expected to result in reduced noise levels at a large number of sensitive receivers where the tunnel provides a bypass to the existing surface road. For further information on noise and pollution during project operation and potential human health impacts, refer to Chapter 9 (Air quality), Chapter 10 (Human health) and Chapter 11 (Noise and vibration) • Chapter 24 (Cumulative impacts) assesses the potential cumulative impacts from the project as well as the other components of the Upgrade Program regarding noise and pollution.
Biodiversity • concern regarding potential impacts of the project on local native flora and fauna • concern regarding potential impacts of the Upgrade Program on the surrounding natural environment	• the project has been designed to minimise impacts to biodiversity and would not impact threatened flora or threatened ecological communities. The project would however result in removal of around 9.76 hectares of native vegetation and at least 20 hollow bearing trees, potentially impacting threatened fauna habitat for Commonwealth and State listed species. Residual biodiversity impacts would be offset in accordance with the NSW Biodiversity Assessment Method. Chapter 12 (Biodiversity) summarises the potential impacts to flora and fauna • the project would not directly impact on groundwater dependent ecosystems. Indirect impacts have the potential to occur to groundwater dependent ecosystems as a result of changes to water quality and hydrological processes. Chapter 12 (Biodiversity) and Chapter 13 (Groundwater and geology) summarises the potential impacts for groundwater and groundwater dependent ecosystems • landscaping and other measures, such as considering murals and surface decoration of ventilation outlets (if selected as the preferred ventilation design option), and landscaping imitating pockets of native trees, would be considered as part of the project to reduce potential landscape character and visual impacts. Chapter 18 (Landscape and visual) includes an assessment of potential visual impacts to the environment surrounding the project • Chapter 24 (Cumulative impacts) assesses the potential cumulative impacts from the project as well as the other components of the Upgrade Program on the surrounding natural environment.

Key issues raised	Where addressed in the EIS
Water quality • concern regarding the potential impact of tunnelling on water systems and aquifers • concern regarding the potential impact of construction on groundwater and the Sydney Water Catchment	• the project would not have a significant impact on surface water, groundwater and flooding. The project has been developed to minimise groundwater drawdown through the project tunnelling methodology, and drawdown is unlikely to adversely impact bore yields and production for groundwater users. Chapter 3 (Project alternatives and options) provides further discussion on how the adopted construction methodology has been selected to minimise impacts to groundwater • a neutral or beneficial effect (NorBE) assessment on water quality has been undertaken and has determined that the project would have a beneficial effect on water quality in the Sydney drinking water catchment. Chapter 14 (Surface water and flooding) provides an assessment of the project's impact on water catchments and water quality.
General environmental assessment • request for more information regarding technical investigations, assessment, and studies for the Upgrade Program	• Chapters 8 to 24 of the EIS provide a summary of the technical environmental assessment carried out for the project • Chapter 24 (Cumulative impacts) assesses the potential cumulative impacts from the project, including potential impacts assessed for other components of the Upgrade Program • technical environmental assessment carried out for the other Upgrade Program components are provided in the respective Review of Environmental Factors for the Katoomba to Blackheath Upgrade and the Little Hartley to Lithgow Upgrade.
Transport and traffic	
Congestion and traffic volumes during operation of the Upgrade Program • concerns regarding the safety of road users, including cyclists, as a result of increased heavy vehicles on the highway and the multiple speed limit changes • concern regarding increased traffic congestion in towns where congestion is already an issue • concern about traffic volumes and safety along the Great Western Highway	• the project would reduce the number of vehicles (including heavy vehicles) on the section of the existing Great Western Highway between Blackheath and Little Hartley and would provide a consistent posted speed along the Upgrade Program • reductions in traffic volumes on the existing Great Western Highway would improve the amenity and safety for active transport users. Road safety impacts and potential traffic impacts are further discussed in Chapter 8 (Transport and traffic).
Freight and dangerous goods • queries related to road freight on the corridor, including consideration of wide loads • concern regarding the increased size of freight vehicles moving through	• during construction, the proportion of heavy vehicles along the Great Western Highway would remain relatively consistent between 2018 (existing conditions) and 2026 (peak construction year) comprising between 10-25% of the weekday peak hour traffic volumes without the project • in 2040, the project would result in a slight reduction in heavy vehicles travelling on the existing Great Western Highway between Blackheath and Little Hartley when

Key issues raised	Where addressed in the EIS
communities and potential impacts to tranquillity and pollution • queries related to the transportation of dangerous goods in the tunnel • concern regarding heavy vehicles opting to use the surface road rather than the tunnel to access Darling Causeway at Mount Victoria	compared to without the project as the project would provide a new connection for higher productivity freight vehicles longer than 20 metres between Blackheath and Little Hartley. Chapter 8 (Transport and traffic) summarises the traffic assessment undertaken for the project including a discussion on anticipated heavy vehicle movements • a decision on whether dangerous goods transport would be allowed through the tunnel would be made during ongoing design development. Chapter 22 (Hazards and risks) includes discussion on the storage, use and transport of dangerous goods and hazardous substances.
Speed • request that the speed limit should remain a consistent 100 km/h to support the current and future demand for an efficient connection from Sydney to the Central West	• the posted speed limit within the tunnel would be 80 km/h, and the tunnel on- and off-ramps at Blackheath would have a posted speed limit of 25 km/h. The project has been designed with consistent (and relatively slight) in-tunnel gradients which would allow for a more consistent travel speed and less speed differences compared with the existing highway. The project would provide a consistent posted speed along the Upgrade Program and has been designed to improve level of service for predicted traffic volumes in future years and scope to accommodate future growth. Chapter 3 (Project alternatives and options) includes a discussion on how the project has been designed to meet project needs and objectives. Chapter 8 (Transport and traffic) summarises the traffic assessment undertaken for the project, including assessment of travel times and speeds with the project, and Chapter 4 (Project description) describes the posted speed limit within the tunnel and on the tunnel on- and off-ramps.
Active transport • queries related to whether cycle paths will be provided by the project and how uptake will be encouraged as the current use of shared paths in the area is low	• reductions in traffic volumes on the existing Great Western Highway between Blackheath and Little Hartley would improve the amenity and safety for active transport users on this section of the highway. Ongoing investigation and consultation with the relevant councils is being undertaken in relation to potential opportunities for placemaking initiatives as a result of the project. This includes consideration of opportunities to improve at-surface active transport infrastructure between Blackheath and Little Hartley. This infrastructure would be subject to separate planning approvals and may be delivered by others. For further information on placemaking opportunities, refer to Chapter 4 (Project description). Chapter 8 (Transport and traffic) summarises the traffic assessment undertaken for the project, including a discussion on potential improvements for active transport users.
Property and business	
• request for information on the property acquisition process • concern regarding lack of certainty about route options	• the project has been designed and developed to minimise property acquisitions and has prioritised the use of Transport for NSW land. Notwithstanding this, some temporary use and permanent acquisition would be required. Further details on the property acquisition

Key issues raised	Where addressed in the EIS
for homes and businesses, particularly at Blackheath • concern from business owners that their livelihood will be affected if their businesses are acquired or impacted by the project • concern regarding impacts to recreational opportunities which attract tourists to the region and provide economic benefit to local industry	process can be found in Chapter 20 (Business, land use and property) • consultation has been ongoing with the community and key stakeholders during project development. Transport consulted with the broader Blue Mountains community regarding route options in October and November 2020, and targeted residential and business surveys were undertaken to inform the social impact assessment for the project. Chapter 7 (Community and stakeholder engagement) summarises the consultation and engagement undertaken as part of the project • operation of the project is expected to increase tourism expenditure within the region, benefitting accommodation and other local businesses. Downturns in passing trade are expected to be short-term, and the long-term impacts on passing trade would generally be positive. Chapter 20 (Business, land use and property) summarises the business and economic assessment undertaken for the project.
Construction impacts	
Impacts on property and receivers • concern regarding the impact of construction on the environment and existing properties • interest in the construction timeframe for the Upgrade Program • concern related to commuter congestion during construction of the Upgrade Program, including impacts on local roads • concern regarding construction noise and disruption from the project	• Chapters 8 to 24 of the EIS summarise the technical environmental assessment carried out for the project and outline environmental mitigation measures, including assessment of construction impacts • subject to planning approval, construction of the project is planned to commence in 2024 and continue until 2031. The project is expected to be open to traffic by 2030. Chapter 5 (Construction) discusses the construction program for the project including its relationship with other components of the Upgrade Program • management of construction traffic would be in accordance with the Construction Transport Management Plan and site-specific mitigation measures, including minimising haulage vehicle movements and peak traffic generating activities during the AM and PM peak hours, weekend peak hours and on peak weekends and public holidays where practicable. For further information on construction traffic impacts, refer to Chapter 8 (Transport and traffic). Chapter 24 (Cumulative impacts) assesses the potential cumulative traffic impacts of the project and other components of the Upgrade Program • construction noise and vibration would be managed in accordance with the Construction Noise and Vibration Management Plan to be prepared as part of the Construction Environmental Management Plan. For further detail on construction noise impacts, including ground-borne noise from tunnelling, refer to Chapter 11 (Noise and vibration).

Key issues raised	Where addressed in the EIS
Construction workforce • queries regarding local employment opportunities during construction	• where feasible, sourcing construction materials from local suppliers would be preferred during construction of the project. During construction, temporary uplift in revenues is expected for local construction, retail and accommodation related businesses located locally and within the regional area. Construction workforce details, and business and economic impacts during construction are further detailed in Chapter 5 (Construction) and Chapter 20 (Business, land use and property).
Spoil and waste • queries regarding how spoil management including removal, duration of work, reuse, and heavy vehicle movements would occur during construction	• excess spoil that cannot be reused within the project or for other parts of the Upgrade Program would be loaded directly into trucks and removed from site for appropriate reuse. Disposal of spoil that cannot be reused is highly dependent on the final classification of spoil and the availability of sites that can accommodate both the class and volumes of spoil expected. A number of off-site spoil reuse sites are being investigated for the project, described in Chapter 5 (Construction). Chapter 21 (Resource use and waste management) includes further discussion on spoil management for the project • the tunnelling methodology for the project whereby spoil is transported westbound from the Little Hartley construction site minimises the number of heavy vehicles travelling through the townships of Blackheath and Mount Victoria and associated traffic, safety and amenity impacts. Chapter 8 (Transport and traffic) includes a discussion on anticipated heavy vehicle movements during construction.
Hazards and risk • concerns regarding rock falls due to geological disturbance from construction of the tunnel	• appropriate and proven construction and mitigation measures would be applied to reduce the risk of rock fall during project construction, including the use of appropriate personal protective equipment, frequent tunnel inspections, scaling, progressive installation of properly secured ground support, safety fencing and overhead protection. Chapter 22 (Hazards and risks) includes further discussion on potential hazards and risks during construction.
Community consultation	
• interest in the 2020 co-design process for the Upgrade Program and how the community could be involved • request for a longer consultation period for the 2019 strategic corridor consultation, away from the Christmas holidays • request for extended consultation periods and face-to-face consultation methods, during 2020 consultation, as well as suggestions for future engagement	• transport established the Blackheath Co-Design Committee in early 2020 to enable close collaboration with local stakeholders and community representatives. In October and November 2020, Transport consulted with the broader Blue Mountains community regarding route options. In May and June 2022, Transport conducted briefings with key stakeholders and held face to face and online information sessions to present the preferred option to the community. Seeking feedback that informs project decisions is a key objective of Transport's Stakeholder Engagement Strategy for the project. Further information can be found in Chapter 7 (Community and stakeholder engagement) • the NSW Department of Planning and Environment (DPE) has placed this EIS on public exhibition. A series of community engagement activities will be undertaken during public exhibition of the EIS including an EIS

Key issues raised	Where addressed in the EIS
	summary document, an interactive map on Transport's Upgrade Program website, fact sheets which summarise the technical assessments in the EIS, responses to frequently asked questions, print, radio and social media advertising, community information sessions and stakeholder briefings (both in person and via online engagement tools). The community and stakeholder engagement carried out during construction would include updates on planned construction activities and would respond to concerns and enquiries in a timely manner, seeking to minimise potential impacts where possible. Chapter 7 (Community and stakeholder engagement) summarises the consultation and engagement undertaken as part of the project, including details on how consultation activities would be managed during project construction.
Business case and cost	
• interest in the status and development of the Upgrade Program business case, cost benefit analysis and economic impact assessment • concerns the Upgrade Program would not provide a strong return on investment • queries around whether the project was supported by Infrastructure Australia	• the Upgrade Program business case and cost benefit analysis are beyond the scope of this EIS • supporting the current needs and future growth of Sydney and Central West NSW through an efficient transport network is fundamental to the liveability, productivity and sustainability of Greater Sydney and NSW. The project would create up to 1,100 jobs during construction, and $130 million dollars in value added annually. The regional economy is expected to be positively impacted during operation, with around $8.7 million in value added and 48 jobs supported annually. For further detail on the project's need and economic benefit, refer to Chapter 2 (Strategic context and project need) and Chapter 20 (Business, land use and property) • the importance of the project has been recognised by infrastructure bodies in Australia, including infrastructure Australia which has included the Upgrade Program in the National Infrastructure Priority List. Chapter 2 (Strategic context and project need) provides further detail on the need for the project.