

Chapter 19

Social impacts

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19 Social impacts

This chapter summarises the social impact assessment (SIA) carried out for the upgrade of the Great Western Highway between Blackheath and Little Hartley (the project). The full SIA is provided in Appendix O (Technical report – Social).

19.1 Assessment approach

19.1.1 Overview

The SIA considers both local community impacts and impacts likely to occur on a broader or more regional scale. It has been prepared in accordance with the Social Impact Assessment Guideline for State Significant projects (Department of Planning, Industry and Environment (DPIE), 2021e) (the SIA guideline), which provides a consistent framework and approach to the assessment of social impacts associated with State significant infrastructure projects in NSW. In accordance with the SIA guideline, the following methodology was adopted for the assessment:

- development of a social baseline for the social locality, based on analysis of Australian Bureau of Statistics (ABS) 2021 and 2016 Census data¹ (ABS 2021; ABS, 2016), and identification of community stakeholders, social indicators and community assets
- community consultation including residential interviews and business surveys carried out in April 2022 to understand key community values, aspirations and concerns held by the community
- assessment of the potential social impacts of construction and operation of the project considering the social impact categories identified in the SIA guideline, including assessment of the residual impacts following the application of proposed mitigation measures
- identification of appropriate mitigation measures to manage potential impacts.

19.1.2 Social locality

The social locality for the SIA reflects the project's likely area of influence. The social locality includes the following ABS State Suburbs (SSCs) as shown in Figure 19-1:

- Blackheath SSC
- Mount Victoria SSC
- Little Hartley SSC
- Kanimbla SSC.

Of these SSCs, Blackheath SSC and Mount Victoria SSC are located in the Blue Mountains Local Government Area (LGA); and Little Hartley SSC and Kanimbla SSC are located in the Lithgow LGA.

In addition to the social locality, social infrastructure within a two kilometre radius of the project has also been considered.

¹Some 2021 Census data required for the SIA was not available during preparation of the report (including data relating to employment status, industry of employment, method of travel to work and socio-economic indexes for areas). In these instances, 2016 data was used to develop the social baseline. The SIA has also used more recent consultation results, including SIA-project specific consultation undertaken in April 2022 to inform the social baseline.

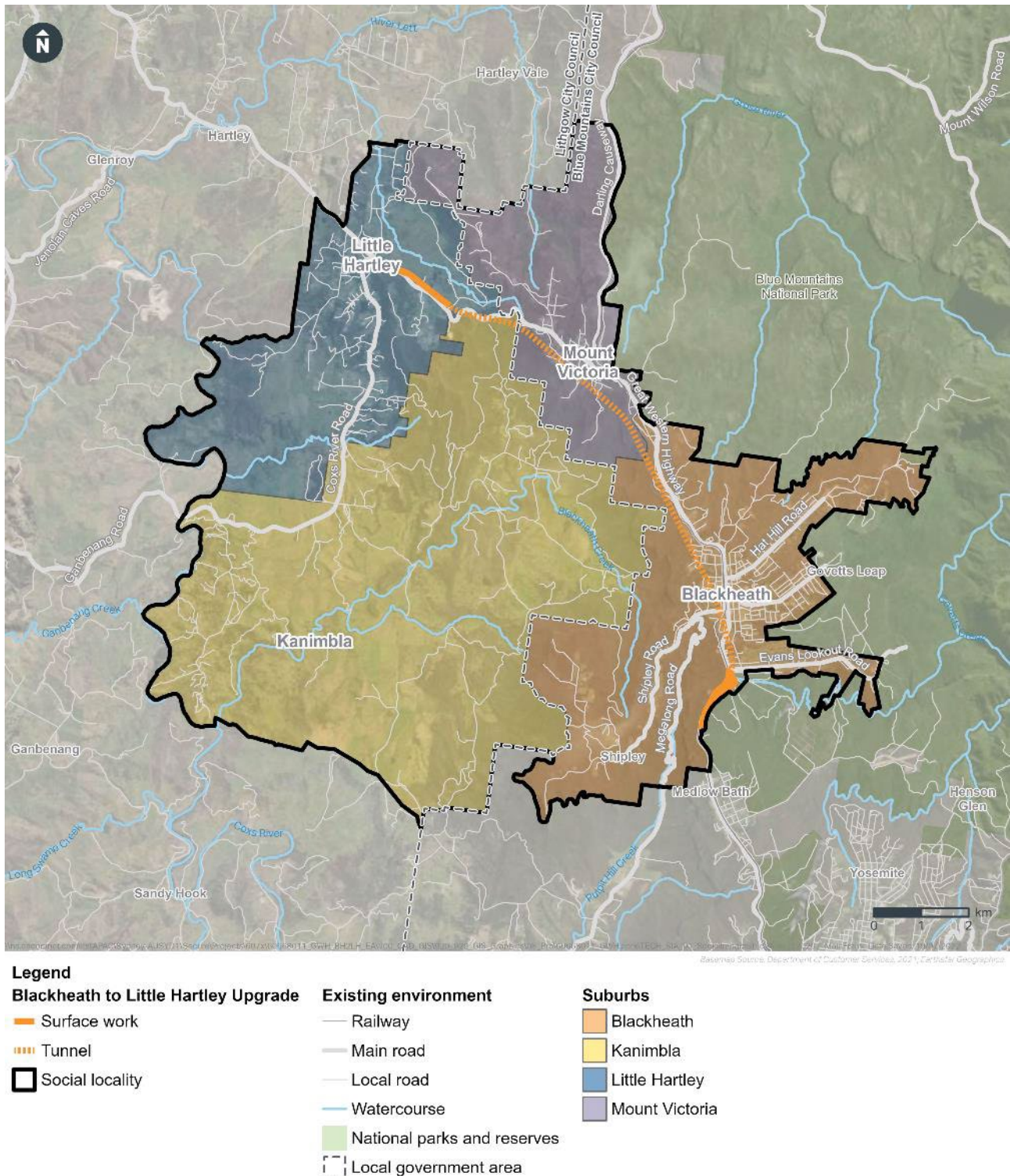


Figure 19-1 Social impact assessment social locality

19.1.3 Assessment of significance

Potential social impacts from the project would be varied in nature and would include both positive and negative impacts; tangible or intangible impacts; and physically observable or psychological impacts.

The significance of potential social impacts has been determined using the likelihood and magnitude matrix in Figure 19-2. The SIA has been prepared with reference to the categories outlined in the SIA guideline, and potential impacts have been grouped by these categories accordingly in Section 19.3 and 19.4.

	MAGNITUDE LEVEL					
		Minimal	Minor	Moderate	Major	Transformational
LIKELIHOOD	Almost certain	Low	Medium	High	Very High	Very High
	Likely	Low	Medium	High	High	Very High
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	Medium	High
	Very unlikely	Low	Low	Low	Medium	Medium

Figure 19-2 Social impact significance matrix (DPIE, 2021a)

19.2 Social baseline

The social baseline describes the social context without the project (i.e. prior to the commencement of construction or operation). It documents the existing social environment, conditions and trends relevant to the social locality and social impacts of the project.

19.2.1 Demographic profile

The demographic profile of the social locality, in comparison to the whole of NSW, is presented in Figure 19-3.

DEMOGRAPHIC PROFILE: SOCIAL LOCALITY

0.08%

of NSW's
population

Total population
of social locality is
6,430



**10-16
years**

older than
the NSW
median



Socio-economic advantage and disadvantage ratings relative to other Australian suburbs



Over
84%
of people
speak English
only at home



Full time
employment



Over
80% people use a car to
travel to work



Family
households
are dominant

Blackheath &
Mount Victoria



Cars per
dwelling

Kanimbla &
Little Hartley



Figure 19-3 Demographic profile of the social locality

19.2.2 Social infrastructure

Social infrastructure relevant to the project is shown in Figure 19-4 to Figure 19-7 and includes:

- **educational facilities** – within proximity to the project these generally include primary schools, combined schools (with both primary and secondary students), and childcare centres
- **health, medical and emergency services** – a range of healthcare services are located within the social locality, generally within the Blackheath town centre
- **aged care facilities** – there are limited aged care facilities within the social locality. Several aged care facilities are located further away in regional centres such as Katoomba and Lithgow
- **places of worship** – these generally include churches
- **community service facilities** – within proximity to the project these generally include community centres, public libraries, museums and galleries, community gardens and cemeteries. The majority of community service facilities are located in the Blackheath town centre
- **sporting and recreational facilities** – within proximity to the project these generally include passive and active recreational spaces such as parks and sporting facilities. In addition to these facilities, the Blue Mountains National Park is a regional attractor which provides recreational opportunities, such as walking and mountain biking trails.

Social infrastructure is generally clustered around the Blackheath town centre, which includes a range of community and recreational facilities, as well as local medical services. Some social infrastructure is also located around the Mount Victoria town centre, including childcare centres, a school (mixed primary and secondary school) and some local parks. There is limited social infrastructure present within Little Hartley and no social infrastructure identified in Kanimbla.

One social infrastructure facility (Browntown Oval) would be located directly adjacent to the northwest of the Soldiers Pinch construction site. Browntown Oval comprises a sports ground available for use by the general public and community groups.

There are around 512 short-term accommodation properties within the social locality. Occupancy rates for short-term accommodation vary throughout the year with the highest occupancy rate generally between April to June, and busiest periods typically being weekends and school holidays. There is a relatively low proportion of long-term accommodation in the social locality, when compared to NSW, generally likely due to the high volume of short-term rental accommodation and holiday homes in the area. Further discussion of accommodation in the social locality is provided in Section 3.6 of Appendix O (Technical report – Social).

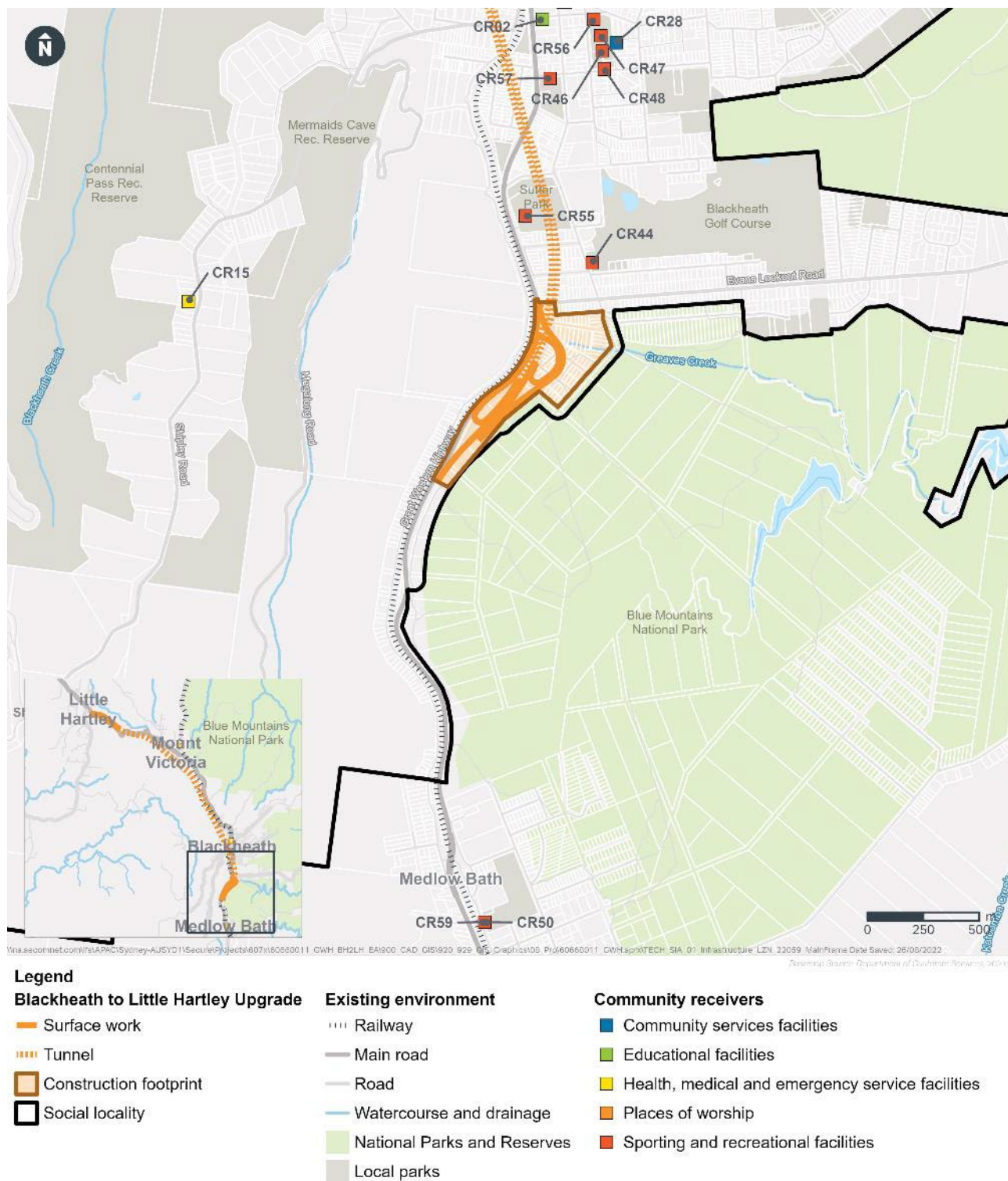
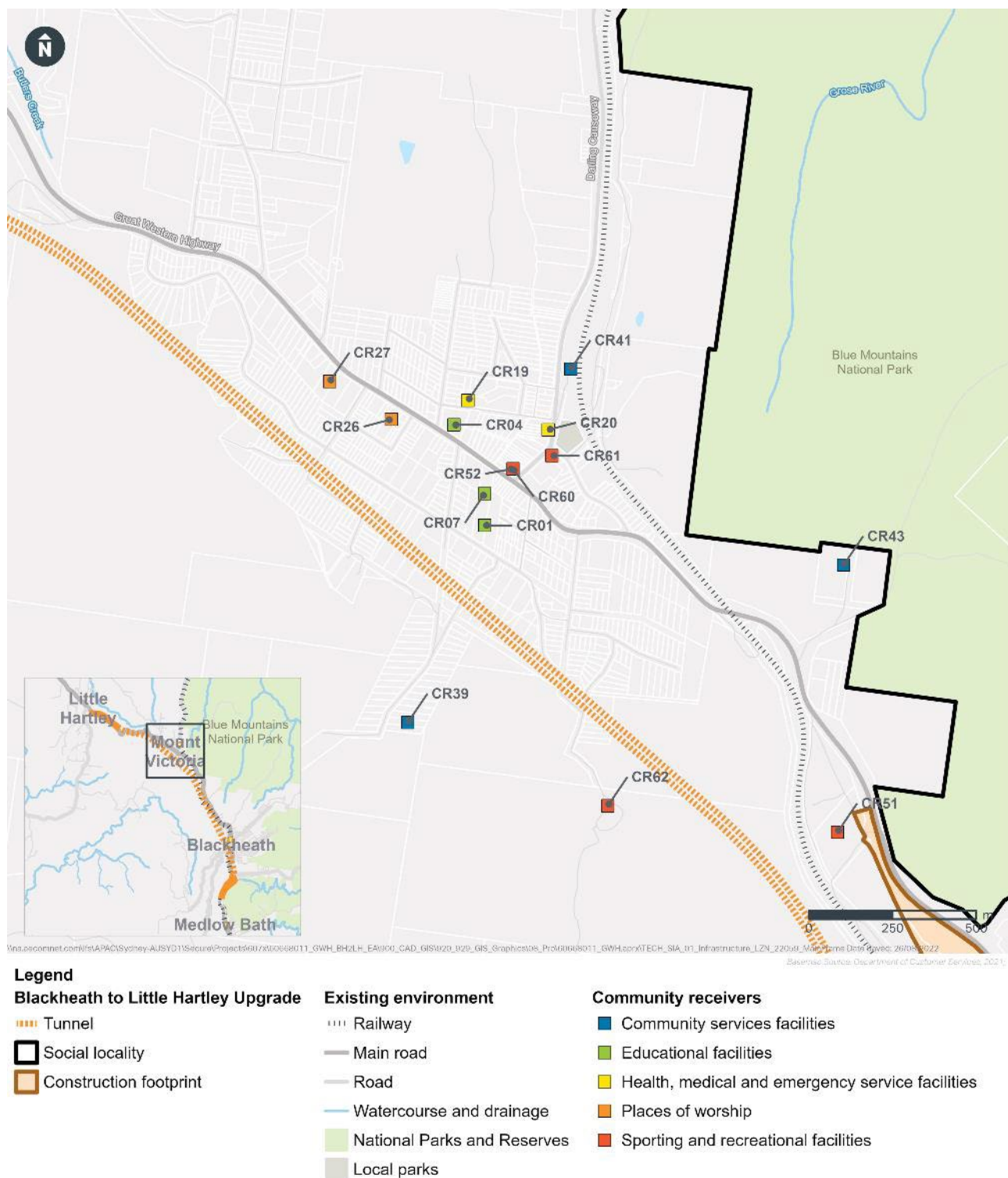


Figure 19-4 Social infrastructure at Blackheath – map 1





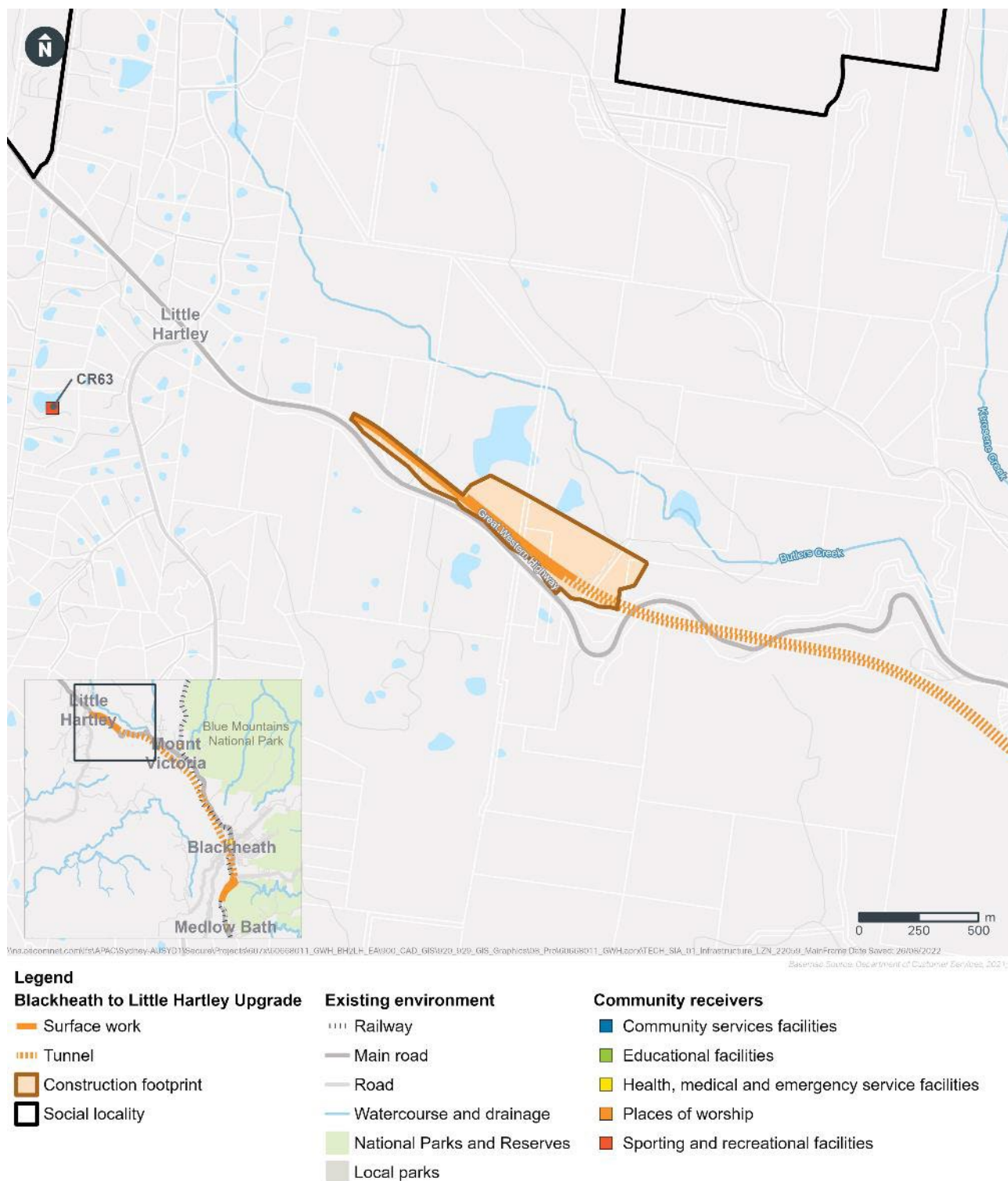


Figure 19-7 Social infrastructure at Little Hartley

19.2.3 Community values, aspirations and concerns

As per the SIA guideline, a range of engagement techniques including residential interviews and business surveys have been employed to canvass the views of a wide range of affected people within the community. A summary of community values, aspirations and concerns identified from this community consultation is provided in Table 19-1. Community values, aspirations and concerns as well as other outcomes of community consultation are further described in Section 4 of Appendix O (Technical report – Social).

Table 19-1 Community values, aspirations, and concerns

Values	Aspirations	Concerns
<ul style="list-style-type: none">• Proximity to the natural environment (i.e. the Blue Mountains National Park) and associated recreational opportunities such as bushwalking• Community facilities and services (i.e. community groups, museums, galleries, art facilities and schools)• Social elements of the community (i.e. closeness to the community, friendly neighbours and presence of young families)• The existing local character (i.e. the 'small town feel' and quiet nature of the area).	<ul style="list-style-type: none">• Improvements in local facilities and social infrastructure in Blackheath and Mount Victoria• Preservation of township character in Little Hartley.	<ul style="list-style-type: none">• Traffic congestion and travel time• Road safety• Healthcare access• The local economy.

19.3 Potential impacts – construction

A summary of the potential social impacts of construction of the project before and after mitigation is provided in Table 19-2. While the residual risk rating of a small number of the predicted construction impacts remains medium, impacts are predominantly temporary and would be minimised through the implementation of the mitigation measures identified in Table 19-5.

The demographic profile of people in close proximity to the construction footprint was not discernible as any one particular group (based on social, cultural, economic, gender or other factors). Based on the residual impact significance assessment in Table 19-2, the potential for impacts to local rental affordability during the construction of the project may affect distributive equity.

The increased demand for accommodation by the construction workforce may affect people on lower incomes who rent in the region. This demographic group may include marginalised groups such as single parents, women and people who speak English as a second language. Further discussion on potential impacts to distributive equity during construction is provided in Section 5.9 of Appendix O (Technical report – Social).

Table 19-2 Potential social impacts during construction

Initial impact significance	Mitigation measure	Residual impact significance
Way of life		
<p>Changes to how people move around</p> <p>Temporary modifications to the existing road and public transport network, and the presence of construction traffic where construction haul routes are proposed, may disrupt the ability of residents, visitors and road users to move around their local area.</p> <p>Given that impacts would be generally limited to the Great Western Highway corridor, with only minor traffic disruptions on local streets, the magnitude of impact would be minor. These impacts would be likely to occur. As such, the overall significance of the impact would be medium (negative).</p>	<ul style="list-style-type: none"> • implementation of the Construction Environmental Management Plan (CEMP) and Construction Transport and Access Management Plan (CTAMP) as well as other transport management measures identified in Chapter 8 (Transport and traffic) • clear, frequent and inclusive communication through the implementation of the Stakeholder Engagement Strategy • establishment of a monitoring process through the Social Impact Management Plan (SIMP), to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	Low (negative)
<p>Acquisition of property</p> <p>If compensation does not allow property owners and tenants to access similar housing in the local area, acquisition may result in residents needing to relocate to other more affordable areas or incurring increased levels of debt to remain in the area.</p> <p>People who are required to relocate because of property acquisition may also experience a degree of physical and emotional stress, particularly for the elderly, disabled, long-term residents or those with poor health. Private property acquisition for the project would affect two landowners (refer to Chapter 20 (Business, land use and property)). As per the SIA guideline, potentially vulnerable and marginalised groups have been identified and considered as part of this assessment. These proposed property acquisitions are generally not in areas which are considered socially disadvantaged relative to other Australian suburbs.</p>	<ul style="list-style-type: none"> • acquisition required for the project would be carried out in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> (NSW) • where required discussions would be held with affected property owners concerning the purchase, lease, or licence of land • landowners and tenants of landowners affected by acquisition would be supported by access to counselling services throughout the process and a community relations support toll-free telephone line would be established to help respond to community concerns. 	Nil

Initial impact significance	Mitigation measure	Residual impact significance
Overall, given the minimal acquisition required, the magnitude of impact would be minor. These social impacts would be unlikely to occur. The overall significance of the impact would be low (negative).		
<p>Access to and use of social infrastructure Access to social infrastructure at Blackheath and Mount Victoria may be indirectly affected by temporary increases in travel times due to the presence of construction vehicles in the general area, including in particular access to Browntown Oval, as this intersection of the Great Western Highway would be used by construction vehicles accessing the Soldiers Pinch construction site.</p> <p>Overall, as social infrastructure in the locality would generally still be available for use, the overall magnitude of impact to users of social infrastructure within the social locality as a whole would be minor. These social impacts would be likely to occur. The overall significance of impacts to the access and use of social infrastructure would be medium (negative).</p>	<ul style="list-style-type: none"> consultation would be carried out with managers of Browntown Oval about construction timing and potential impacts, with the aim of minimising potential disruptions to Browntown Oval implementation of the CEMP and CTAMP as well as other transport management measures identified in Chapter 8 (Transport and traffic) clear, frequent and inclusive communication through the Stakeholder Engagement Strategy establishment of a monitoring process through the SIMP to facilitate feedback and review and amend mitigation measures if required to respond to specific impacts. 	Low (negative)
Community		
<p>Demographics and community composition Potential impacts to the makeup and identity of the community may arise from the introduction of construction workers to the social locality. Potential community concerns may include community concerns associated with the inward movement of a typically young, male workforce into established towns, including concerns about worker attitudes and perceptions of safety impacting existing values and sense of community.</p> <p>Overall, given the size of the local population and construction workforce, the project may result in temporary impacts to the local demographic profile, including an increase in daytime population, which may raise concerns</p>	<ul style="list-style-type: none"> the construction workforce would be sourced from the local area where possible, to manage the need for people to relocate to the area for the duration of construction, and to contribute to local employment opportunities. This would be a focus of the Skills, Employment and Industry Development Strategy being implemented for the Upgrade Program, including this project 	Low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
among community members. The magnitude of this impact would be moderate. The likelihood of the project resulting in broader demographic changes during construction would be possible. As such the overall significance of the impact would be medium (negative).	<ul style="list-style-type: none"> • construction workers would be briefed on respectful and appropriate behaviours in the community • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy • establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	
<p>Social cohesion and sense of place</p> <p>Temporary changes in access may exacerbate the existing barrier associated with the existing Great Western Highway.</p> <p>The presence of construction traffic may impact the ability of pedestrians and cyclists to cross-roads, or increase travel times for vehicle users, somewhat limiting their opportunity to socialise within the community, however construction vehicle volumes would be relatively small and spread across 24 hours per day.</p> <p>People may also experience some limited amenity impacts from construction at town centres, or places of social infrastructure.</p> <p>The magnitude of this impact would be moderate. Overall, the likelihood of these impacts occurring would be possible. As such the overall social significance in relation to community cohesion and sense of place would be medium (negative).</p>	<ul style="list-style-type: none"> • implementation of the CEMP, CTAMP, Construction Noise and Vibration Management Plan (CNVMP) and mitigation measures identified to address noise, traffic, air quality and landscape and visual impacts • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy • establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	Low (negative)
Accessibility		
<p>Access and connectivity</p> <p>Changes to access and transport networks can affect the ability of residents and members of the local community to get to work, study or visit friends and family.</p> <p>Minor increases in travel times would occur due to changes to the road network during construction. Though some on-site parking would be provided for workers within the construction sites, some workers may use</p>	<ul style="list-style-type: none"> • implementation of the CEMP and CTAMP, as well as other transport management measures identified in Chapter 8 (Transport and traffic) • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy 	Low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
<p>street-parking which may impact the availability of street parking for residents and visitors.</p> <p>Active transport trails to be provided as part of the Great Western Highway East – Katoomba to Blackheath and Great Western Highway Upgrade Program – Little Hartley to Lithgow (West Section), would be maintained during construction of the project. Some temporary modifications to existing pedestrian or cyclist facilities may be required, such as the Little Hartley construction site where construction vehicles would need to cross over the shared path.</p> <p>Access to a recreational trail located near the intersection of Browntown Oval and the Great Western Highway would be temporarily impacted by the Soldiers Pinch construction site during construction. If required, the trail would be temporarily diverted around the Soldiers Pinch construction site to maintain public safety, potentially increasing both the walking or cycling travel time and travel distance by around 150 metres. The temporary change would not result in an impact to the availability of recreational trails for use in the social locality.</p> <p>The overall magnitude of the impact on access and connectivity during construction would be minor. The likelihood of these impacts occurring would be likely. As such the overall social significance in relation to access and connectivity would be a medium (negative) impact.</p>	<ul style="list-style-type: none"> establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	
<p>Utilities and digital access</p> <p>Temporary disruptions to utilities, whether planned or unplanned, have the potential to adversely impact the ability of residents and local businesses to access and use infrastructure. This could include temporary loss of operation of business-critical machinery or equipment, impacts upon residential household routines, or interruptions to classes at education facilities. Utility disruptions, in particular to telecommunications infrastructure, could also impact residents' ability to work or study from home.</p> <p>During construction, public utilities and services may be temporarily disrupted while they are relocated, or for safety reasons. Where required, services would be protected, relocated</p>	<ul style="list-style-type: none"> utility checks and consultation with the relevant utility providers would be carried out during design development and construction to confirm the presence of utilities and utility protection measures clear, frequent and inclusive communication through the Stakeholder Engagement Strategy. 	Low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
<p>or removed before construction to avoid disruption or damage to this powerline, or other existing services located in the vicinity of the project.</p> <p>Overall, the magnitude of this impact is considered to be moderate. The likelihood of these impacts occurring would be unlikely. As such the overall social significance in relation to utilities and digital access would be medium (negative).</p>		
<p>Access to accommodation</p> <p>The project is expected to support an indicative peak construction workforce of up to 1,100 full time equivalent jobs over the duration of construction. Some of this workforce is likely to require short and long term accommodation within the social locality and region more broadly.</p> <p>Around 50 per cent of the peak workforce may require requiring longer-term relocation near the project. Use of the longer term private rental market in the social locality to accommodate workers would likely limit supply for existing residents who rent, and potentially increase prices for rental properties. Low-income households may be particularly sensitive to these changes, may experience rental stress and/or may be at risk of displacement from the area.</p> <p>Overall, the magnitude of the impact of the project on accommodation would be moderate. The likelihood would be possible, resulting in an overall medium (negative) impact.</p>	<ul style="list-style-type: none"> the construction workforce would be sourced from the local area where possible, to manage the need for people to relocate to the area for the duration of construction, and to contribute to local employment opportunities. This would be a focus of the skills and employment strategy implemented for the project (see Table 19-5) development of a workforce accommodation strategy to confirm accommodation requirements and options, which would aim to minimise potential adverse impacts to the rental market and short-term accommodation availability. 	Low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
Health and wellbeing		
<p>Health and wellbeing impacts</p> <p>Impacts to the health and wellbeing of residents and visitors within the vicinity of the construction footprint may arise during construction including direct impacts such as such as increased stress, due to ongoing construction impacts.</p> <p>Unmitigated dust impacts from construction activities present a low risk to community health. Worst case scenario noise modelling has identified potential sleep disturbance impacts to some receivers during construction with the potential to cause annoyances and stress. Potential changes in safety may also arise for pedestrians, cyclists, and vehicle users due to changes in the transport network and the presence of construction vehicles.</p> <p>The magnitude of impacts on health and wellbeing during construction would be moderate. Groups with pre-existing health conditions (both physical and mental health), or the elderly and young children are likely to experience a heightened sensitivity to health and wellbeing impacts. As such, the magnitude of impact on health and wellbeing during construction for these groups is considered to be moderate. The likelihood of these changes affecting health and wellbeing would be possible.</p>	<ul style="list-style-type: none"> • implementation of the CEMP, CTAMP, CNVMP as well as mitigation measures to address noise, traffic, air quality and landscape and visual impacts • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy • establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	<p>Medium (negative) for vulnerable groups, low (negative) for other residents and visitors</p>
Surroundings		
<p>Local amenity</p> <p>Construction of the project has the potential to temporarily affect amenity as a result of changes to traffic, noise and vibration, air quality, landscape character and visual amenity.</p> <p>Residents and visitors to the area near the Blackheath construction site may experience a temporary reduction in surrounding amenity and enjoyment of the area due to a high (unmitigated) risk of impacts related to dust soiling.</p> <p>Noise modelling has identified potential sleep disturbance impacts to some receivers during construction.</p> <p>Vegetation clearing and the establishment of construction sites may temporarily affect some</p>	<ul style="list-style-type: none"> • implementation of the CEMP, CTAMP, CNVMP and mitigation measures to address noise, traffic, air quality and landscape and visual impacts • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy • establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed 	<p>Medium (negative)</p>

Initial impact significance	Mitigation measure	Residual impact significance
<p>people's enjoyment of the visual character of the area, particularly at Blackheath.</p> <p>Overall, there would be several changes to amenity in the social locality during the construction of the project, which would collectively have a moderate magnitude in areas where people live and interact. The likelihood of this impact would be likely. The overall significance of the social impact would therefore be high (negative).</p>	<p>and amended if required, to respond to specific impacts.</p>	
<p>Natural features</p> <p>Potential impacts to the natural features associated with the Blue Mountains National Park which are integral to the environmental values of the residents and the broader community would generally be confined to the construction footprint and its immediate surroundings.</p> <p>There would be direct and indirect impacts to biodiversity during construction which could impact the environmental values of the area including loss of vegetation and flora and fauna habitat.</p> <p>Public access and use of recreational areas of the Blue Mountains National Park would generally be maintained, allowing people to continue to use natural features of the area which they value.</p> <p>The overall magnitude of impact would be minor, given that the area to be directly affected is relatively compact and restricted to the construction footprint. The likelihood of impacts to natural features which people value would be likely. The overall social significance of impacts to natural features of the social locality would be medium (negative).</p>	<ul style="list-style-type: none"> • implementation of the CEMP, CTAMP, CNVMP, Construction Flora and Fauna Management Plan (CFFMP) and mitigation measures to address noise, traffic, air quality, landscape and visual and biodiversity impacts • clear, frequent and inclusive communication through the Stakeholder Engagement Strategy • establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	<p>Low (negative)</p>
<p>Crime, safety and security</p> <p>The presence of construction footprint may result in changes to perceptions of safety in the area, including changes to local sight lines, restrictions in pedestrian traffic reducing passive surveillance, the provision of new surfaces for graffiti, or the attraction of thieves to the construction footprint.</p> <p>The construction sites would be secured and are generally located away from urban centres and are unlikely to be targets for crime or substantially change the presence of passive</p>	<ul style="list-style-type: none"> • potential safety concerns would be manageable through the application of the principles of Crime Prevention Through Environmental Design at construction sites • regular communication with the community and stakeholders throughout construction would also allow residents to 	<p>Nil</p>

Initial impact significance	Mitigation measure	Residual impact significance
<p>surveillance in these areas. Some community members may however experience some concern about a potential reduction in safety and security.</p> <p>Based on the nature of the potential safety impacts, and location of the construction sites away from urban centres, the magnitude of impact would be minimal. The likelihood of construction sites substantially changing the security of the surrounding area would be unlikely. As such the overall significance of impact would be a low (negative) impact.</p>	<p>understand construction plans and therefore be better prepared for the temporary changes to the area.</p>	
Culture		
<p>Community values</p> <p>Construction of the project has the potential to impact the following key resident and community values identified during consultation:</p> <ul style="list-style-type: none"> proximity to the natural environment and associated recreational opportunities – impacts to the environmental values of the area associated with vegetation removal, loss of habitat and indirect impacts on the viability of habitat (e.g. due to dust, noise and light spill) community facilities and services – access to these facilities from areas outside the town may be indirectly affected by temporary increases in travel times due to the presence of construction vehicles along the Great Western Highway social elements of the community – changes in access, where required, may somewhat exacerbate the existing barrier to social cohesion associated with the motorway existing local character – the visibility of construction footprint and equipment, and exceedances of noise management levels at nearby receivers would contribute to a reduction in the character of the area. <p>Overall, construction of the project may temporarily affect elements which the community value, however the majority of these would remain available for use by the community. The magnitude of changes to community values would be moderate. These would be possible, resulting in a medium (negative) impact.</p>	<ul style="list-style-type: none"> implementation of the CEMP, CTAMP, CNVMP, CFFMP and mitigation measures to address noise, traffic, air quality, landscape and visual and biodiversity impacts clear, frequent and inclusive communication through the Stakeholder Engagement Strategy establishment of a monitoring process through the SIMP, to facilitate feedback on construction impacts and enable measures to be reviewed and amended if required, to respond to specific impacts. 	<p>Medium (negative)</p>

Initial impact significance	Mitigation measure	Residual impact significance
<p>Landscape elements valued by Aboriginal communities</p> <p>Construction of the project may impact on Country and intangible Aboriginal cultural values.</p> <p>Landscape and visual impacts on surrounding bushland could impact on valued elements of the landscape. Furthermore, two partial construction leases; one at Soldiers Pinch and one at Little Hartley required for construction would be subject to unresolved Aboriginal Land Claims (refer to Chapter 20 (Business, land use and property)). This may indicate that the use of these areas during construction may temporarily limit access to an area which is of importance to Aboriginal communities and stakeholders.</p> <p>Impacts to wellbeing and livelihoods of Aboriginal communities, or cultural or spiritual loss, could arise from these and other potential impacts to Country. Ongoing design development would continue to include engagement with Aboriginal knowledge holders to minimise this impact.</p> <p>Overall, the potential magnitude of this impact is considered moderate. The likelihood of negative impacts to landscape elements valued by Aboriginal communities has been considered unlikely. As such the overall significance of impact would be a medium (negative) impact.</p>	<ul style="list-style-type: none"> ongoing implementation of a Connected with Country design process as described in Chapter 4 (Project description), which includes ongoing engagement with Aboriginal stakeholders. 	Low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
<p>Non-Aboriginal culture and heritage</p> <p>The construction of the project has the potential to affect the non-Aboriginal cultural value of the area.</p> <p>Potential moderate direct impacts are predicted to the curtilage of the locally significant Soldiers Pinch heritage item, which was a historical road and rail route that passed through the area in 1814, however these would be temporary in nature. Potential impacts to the Mount Victoria Stockade (state significance) and Plough Inn (local significance) are considered moderate and major respectively. The project would not impact the Blue Mountains National Park or Greater Blue Mountains World Heritage Area. Potential impacts to the Greater Blue Mountains Area (Additional Values), which has been nominated for inclusion on the National Heritage List, would be negligible considering the small section being affected relative to the overall size of the nominated item.</p> <p>Given that potential impacts to historic heritage items from the project are generally considered negligible to minor, or would be temporary in nature, the magnitude of potential social impacts associated with impacts to non-Aboriginal heritage are considered minor. The likelihood of these impacts occurring would be likely. As such the overall significance of impact would be a medium (negative) impact.</p>	<ul style="list-style-type: none"> • implementation of the CEMP, Construction Heritage Management Plan (CHMP) and mitigation measures to manage heritage impacts • a detailed archaeological survey will be carried out within those parts of the Mount Victoria Stockade site and the potential Plough Inn site that would be directly affected by construction of the project, and which have not been previously disturbed/ surveyed by the Little Hartley to Lithgow Upgrade project • development of a heritage interpretation strategy for the project which identifies key stories and interpretive opportunities related to non-Aboriginal heritage. The strategy would address historic and contemporary heritage and community values and would identify innovative and engaging opportunities for interpretation. 	Low (negative)
Livelihoods		
<p>Business impacts</p> <p>Businesses across the social locality may be affected during construction by temporary changes in passing trade, access and travel time (for employees, customers, and deliveries), changes to parking availability and impacts to local amenity. Potential impacts to the operation and viability of businesses can in turn affect people's livelihoods (for example, their ability to sustain themselves through employment or business opportunities).</p> <p>Businesses may experience temporary amenity impacts associated with increases in noise and vibration, potential utility disruptions and changes to traffic conditions during construction. The overall magnitude of adverse amenity</p>	<ul style="list-style-type: none"> • a skills and employment strategy has been developed to enhance potential business and economic benefits including identification of how the project would promote opportunities for upskilling and training of the local workforce • access to local businesses would be maintained during construction • ongoing consultation with local businesses to allow for time to prepare for changed traffic conditions. 	Medium (negative) and Low (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>impacts to businesses would be minor. The likelihood of these impacts being experienced within the social locality would be possible, resulting in a medium (negative) social impact.</p> <p>Key benefits would include temporary uplift in revenues of retail businesses in the social locality (such as food and beverage businesses), which would experience an increase in passing trade due to the presence of construction workers in the area. Due to the presence of construction activities, local and regional construction contractors and businesses who service or supply goods to the construction industry are also expected to experience an increase in business activity. The overall magnitude of economic benefits during construction in the social locality would be moderate. The likelihood of these impacts being experienced within the social locality would be possible, resulting in a medium (positive) social impact.</p>		
<p>Tourism impacts Businesses which rely on tourism are likely to be affected by changes in amenity and passing trade.</p> <p>While there may be some benefits to local accommodation providers due to a potential upturn in trade, changes in amenity and availability of accommodation during construction could have a temporary negative impact on the attractiveness of the area to tourists, and flow on effects on employment in tourism. This could impact livelihoods by impacting people's capacity to earn an income throughout employment in tourism.</p> <p>The overall magnitude of tourism-related impacts to livelihoods during construction in the social locality would be minor, and the likelihood would be possible, resulting in a medium (negative) social impact.</p>	<ul style="list-style-type: none"> • implementation of the CEMP, CTAMP, CNVMP and mitigation measures to address noise, traffic, air quality and landscape and visual impacts • construction workers would be sourced from the local area, where possible, to manage demand on accommodation. This would be a focus of the skills and employment strategy for the project (see Table 19-5) 	Low (negative)
<p>Economic impacts Construction activity can benefit the economy by injecting money into the local, regional and state economies. This can result in employment and business opportunities for people.</p> <p>The capital expenditure required for the project would create increased opportunities for both businesses and workers associated with</p>	<ul style="list-style-type: none"> • to enhance potential business and economic benefits, a Skills, Employment and Industry Development Strategy is being implemented for the Upgrade Program, including this project, to 	Medium (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>construction, while also resulting in substantial flow-on impacts to other parts of the local economy, including for local businesses and the local workforce within the social locality. Construction businesses, industries and skilled workers in the social locality would also experience these benefits.</p> <p>Increased employment opportunities as a result of temporary revenue increases would provide livelihood benefits through supporting local business and employment in these businesses.</p> <p>The overall magnitude of economic benefits during construction in the social locality would be moderate, given that the benefits would likely be dispersed across the broader region. The likelihood of these impacts being experienced within the social locality would be possible, resulting in a medium (positive) social impact.</p>	<p>promote opportunities for upskilling and training of the local workforce. Its key focus areas are jobs, skills, diversity and business initiatives that achieve local economic and social outcomes</p>	
Decision making systems		
<p>Despite the consultation carried out to date (refer to Chapter 7 (Community and stakeholder engagement)), there is the potential for some community members to express dissatisfaction with their ability to influence the decision making, construction methodology or design of the project.</p> <p>The preparation and exhibition of the environmental impact statement is a statutory process which enables people to make a submission expressing their support, objection or comments on the project and its potential impacts.</p> <p>Given that the views and experience of decision-making systems can vary substantially from person to person, a magnitude and likelihood rating has not been applied.</p>	<p>Transport for NSW (Transport) would continue to listen to and engage with the community during the project, including the construction period and seek to address any such issues as far as reasonably practical. This would include the provision of community complaint and information lines which would be made accessible to different groups within the community</p>	<p>Nil</p>

19.4 Potential impacts – operation

A summary of the potential social impacts of operation of the project before and after mitigation is provided in Table 19-3.

The demographic profile of people impacted during operation was not discernible as any one particular group (based on social, cultural, economic, gender or other factors). Based on the residual impact significance assessment in Table 19-2, it is unlikely that there would be particular associated distributive equity impact on the basis of social group. During operation concerns may be raised by those likely to be affected by direct amenity impacts, including those living or working nearby to the portals of the tunnel who may be exposed to greater noise, air quality, and visual impacts.

While the project would operate for long enough to result in intergenerational impacts, the potential for these is expected to be limited on the basis that the project would continue to provide a similar benefit for people in subsequent generations as it does at the commencement of operation.

While some social cost would be borne by the current generation (such as adverse amenity impacts during the construction period), the SIMP will guide monitoring and adaptive management of social impacts resulting from the project for the first three years of operation. Further discussion on potential impacts to distributive equity during operation is provided in Section 6.9 of Appendix O (Technical report – Social).

Table 19-3 Potential social impacts during operation

Initial impact significance	Mitigation measure	Residual impact significance
Way of life		
<p>Changes to how people move around</p> <p>By diverting a substantial proportion of through traffic (including freight) into the project tunnels, the project would allow the existing Great Western Highway to mainly cater for local traffic which would substantially improve movement for residents and the broader community in and around Blackheath and Mount Victoria. This would also improve road safety for motorists and active transport users by separating through and local traffic and reducing potential traffic conflicts.</p> <p>The project would also improve travel times to employment centres outside the social locality, such as Greater Sydney and Lithgow, for residents who use the tunnels. This would generally include residents near Blackheath travelling west, and residents near Little Hartley travelling east.</p> <p>The project would also improve the resilience of the Great Western Highway corridor between Blackheath and Little Hartley to bushfire risk and other natural disasters as the new tunnel would provide an additional route of travel across this section of the Blue Mountains.</p> <p>Given the potential extent of improvements, the magnitude of impact would be major. These impacts would be likely to occur. As such, the</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • as set out in Chapter 8 (Transport and traffic), Transport would continue to work with local councils to investigate an active transport link between Blackheath and Little Hartley separately to the project. Other potential opportunities for active transport and placemaking initiatives would be subject to ongoing investigation and consultation with relevant local councils • community and stakeholder engagement 	High (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>overall significance of the positive impact would be high.</p> <p>Access to and use of social infrastructure The project has the potential to positively affect the ability of residents to access social infrastructure within the social locality, particularly via the existing Great Western Highway which would mainly cater for local traffic.</p> <p>The substantial reduction to traffic volumes along the existing Great Western Highway through Blackheath and Mount Victoria would noticeably improve the accessibility and amenity of these townships. Reduced through traffic would generally result in improved travel times for local traffic accessing social infrastructure within the social locality.</p> <p>The majority of social infrastructure is located within the Blackheath and Mount Victoria centres, and at a considerable distance from the tunnel portals. As such there is expected to be limited potential for direct adverse amenity impacts to these receivers during operation.</p> <p>The overall magnitude of the improvement in access to social infrastructure would be moderate. These social impacts would be likely to occur. The overall significance of impacts to the access and use of social infrastructure would be high (positive).</p>	during ongoing design development.	
Culture		
<p>Demographics and community composition No change to the demographic profile of the social locality is anticipated, as the project would only require a small operational workforce. The project is also unlikely to enable other changes that may induce any substantial demographic changes, however the improvements in accessibility resulting from the project may make the social locality a more desirable area to live.</p> <p>The overall magnitude of this impact would be minor. The likelihood of the project resulting in broader demographic changes during operation would be very unlikely. As such the overall significance of the impact would be low.</p>	N/A	Nil

Initial impact significance	Mitigation measure	Residual impact significance
<p>Social cohesion and sense of place</p> <p>A reduction in traffic on the existing Great Western Highway would improve the ability of residents and visitors to safely and efficiently interact in the local area, particularly in Blackheath and Mount Victoria (e.g. by improving travel times (for motorists) and minimising potential interaction between active transport users and heavy vehicles while crossing the road). This would contribute to an improvement in the overall social cohesion of the social locality and could enhance the sense of place through potential activation of these locations. Reduced traffic volumes and a substantial reduction in heavy vehicles on the existing Great Western Highway would also offer improved amenity, further enhancing sense of place.</p> <p>The magnitude of this impact is considered to be moderate. The likelihood of these impacts occurring would be likely. As such the overall significance of the positive impact would be high (positive).</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • as set out in Chapter 8 (Transport and traffic), Transport would continue to work with local councils to investigate an active transport link between Blackheath and Little Hartley separately to the project. Other potential opportunities for active transport and placemaking initiatives would be subject to ongoing investigation and consultation with relevant councils • community and stakeholder engagement during ongoing design development. 	High (positive)
Accessibility		
<p>Access and connectivity</p> <p>The project would divert a substantial proportion of through traffic from the existing Great Western Highway into the twin tunnels, allowing the existing surface section of the highway to mainly cater for local and tourist traffic. Reductions in traffic volumes on the existing Great Western Highway would improve the amenity and safety for active transport users. Additionally, by providing an alternative route to the existing Great Western Highway alignment between Blackheath and Little Hartley, the project could improve network resilience by improving access for emergency vehicles in the event of an incident.</p> <p>Overall, the project would provide substantial access and connectivity benefits both locally and regionally. These benefits would improve access to jobs, businesses, education, services, and social</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • as set out in Chapter 8 (Transport and traffic), Transport would continue to work with local councils to investigate an active transport link between Blackheath and Little Hartley separately to the 	High (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>facilities for the community, including vulnerable persons. These benefits would also address the community concerns associated with existing traffic congestion and road safety identified in the residential interviews.</p> <p>Given the benefits associated with access and connectivity and the importance of these benefits to the community, the magnitude of impact would be major. The likelihood would be likely, resulting in a high (positive) significance.</p>	<p>project. Other potential opportunities for active transport and placemaking initiatives would be subject to ongoing investigation and consultation with relevant councils</p> <ul style="list-style-type: none"> community and stakeholder engagement during ongoing design development. 	
<p>Access to accommodation</p> <p>Once operational, the project would generally not impact the availability of accommodation within the social locality, due to the small operational workforce requirements. Accommodation facilities may benefit from an increase in business, due to an increase in visitors/tourism as a result of improvements in amenity associated with decreased traffic on the existing Great Western Highway.</p> <p>The overall magnitude of impacts to access to accommodation would be minimal. The likelihood of the project to impact the availability of accommodation in the social locality would be very unlikely. As such the overall significance of the impact would be low.</p>	N/A	Nil

Initial impact significance	Mitigation measure	Residual impact significance
Health and wellbeing		
<p>Health and wellbeing impacts</p> <p>Operation of the project would result in a decrease in the level of exposure to nitrogen dioxide in the population within the study area that may have some long term health benefits. Operation would also result in lower levels of exposure to particulate matter concentrations, which has the potential for some long term health benefits to the community.</p> <p>Some receivers are expected to experience noise in excess of the adopted noise criteria, though the majority would experience a change of noise levels less than two dB(A), which is unlikely to be discernible or impact on health.</p> <p>Maximum localised / individual risk to health associated with particulate matter has been identified as lower under the ventilation outlet design option, however both ventilation options would result in low, acceptable impacts. The ventilation outlet option is predicted to result in more exceedances of noise management levels compared to the portal emissions option, however the differences are relatively minor (i.e. up to nine additional receivers affected) and during emergency conditions.</p> <p>Overall, operation of the project may result in both positive and negative impacts on health and wellbeing of residents. The overall likelihood of these impacts occurring would be likely. The magnitude of positive impacts is considered to be minor, with the magnitude of adverse impacts to health and wellbeing also being minimal. On this basis, the overall social significance of health and wellbeing would be medium (positive) and low (negative).</p>	<ul style="list-style-type: none"> mitigation measures would be implemented to manage operational noise impacts and thereby minimise the potential for health-related impacts to some receivers. Mitigation measures to manage noise and vibration during operation of the project are discussed in Chapter 11 (Noise and vibration) an air quality monitoring program will be developed in consultation with relevant stakeholders and implemented to confirm the in-tunnel air quality and ambient air quality performance of the project during the first two years of operation. 	Medium (positive) and low (negative)
Surroundings		
<p>Local amenity</p> <p>The project would generally improve amenity experienced by residents and visitors around Blackheath and Mount Victoria by reducing the volume of traffic on the existing Great Western Highway.</p> <p>Road traffic noise and vehicle emissions within the town centres of Blackheath and Mount Victoria are expected to decrease due to the reduction in vehicles using the surface road.</p> <p>Potential reductions in amenity may occur due to</p>	<ul style="list-style-type: none"> adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome as set out in Chapter 8 (Transport and traffic), Transport would 	High (positive) and low (negative)

Initial impact significance	Mitigation measure	Residual impact significance
<p>noise impacts from fixed facilities for receivers at Blackheath. The ventilation outlet design option would result in exceedances at more receivers than the portal emissions design option, though exceedances are relatively minor for both options.</p> <p>Adverse visual impacts are likely to be confined to discrete areas at the end of the tunnel where surface works and operational infrastructure are proposed, including at Blackheath and Little Hartley. The portal emissions option would only moderately reduce the impact rating at these points, given the presence of other large operational infrastructure.</p> <p>The combined impact of improvements in amenity would be of moderate magnitude and would be likely to occur. This would result in a high (positive) social impact significance in bypassed areas.</p> <p>The combined impact of potential adverse impacts to residents and visitors closest to portal infrastructure would be minor, given that there are relatively fewer receivers in these locations compared to the townships. This impact would be likely to occur, resulting in medium (negative) impacts in areas closest to portal infrastructure.</p>	<p>continue to work with local councils to investigate an active transport link between Blackheath and Little Hartley separately to the project. Other potential opportunities for active transport and placemaking initiatives would be subject to ongoing investigation and consultation with relevant councils</p> <ul style="list-style-type: none"> • community and stakeholder engagement throughout detailed design development • additional measures if a ventilation outlet option is adopted, such as the murals painted on the building at Evans Lookout Road, Blackheath, which pay homage to the natural environment within the Blue Mountains • operational noise and air quality monitoring to confirm that relevant targets are achieved • community and stakeholder engagement during ongoing design development. 	
<p>Natural features</p> <p>The project would minimise impacts to the Blue Mountains National Park and biodiversity relative to other project options considered (for example, a surface road upgrade), as it would primarily be located underground.</p> <p>There is the potential for indirect impacts to adjacent vegetation and habitat (e.g., due to a change in land use patterns) and potential impacts on aquatic ecology due to changes in hydrology and water quality. Surface infrastructure would partly detract from the landscape amenity of the bushland along the Great Western Highway. If selected, the ventilation outlet option would</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • development of a landscape concept design plan for the project to ensure that new native plantings are 	<p>Low (negative)</p>

Initial impact significance	Mitigation measure	Residual impact significance
<p>comprise a 10 metre structure which could result in additional minor landscape impacts relative to the portal emissions option.</p> <p>Access and connectivity benefits from reduced traffic on the existing Great Western Highway between Blackheath and Little Hartley could enhance people's ability to access recreational facilities associated with the National Park.</p> <p>Overall, operation of the project would result in indirect impacts to natural features that could impact the environmental values of the area. The social implications of these impacts would be minor in magnitude, and likely to occur, resulting in an overall medium (negative) social impact.</p>	<p>consistent with the existing landscape character and screen views to the proposed operational infrastructure.</p>	
<p>Crime, safety and security</p> <p>Given that the project largely comprises underground infrastructure, there are limited surface elements which have the potential to be affected by or generate crime and security-related risks. A reduction in traffic on the existing Great Western Highway would also be expected to improve road safety for pedestrians and active transport users, by reducing their interaction with vehicles.</p> <p>The tunnel portals would be located away from prominent public areas. Other operational ancillary facilities (including the tunnel operations facility at Blackheath and ventilation outlets, if required) would be co-located with the portals.</p> <p>Taking into account the low level of concern expressed by the community in relation to this issue, the magnitude of impact would be minimal. Given the nature of the project, with limited security-related risks, adverse impacts to crime, or a deterioration in security in the community is considered unlikely to occur. The overall significance of the impact would be low (negative).</p>	<ul style="list-style-type: none"> operational ancillary facilities would be secured, include adequate lighting and would be designed with consideration of Crime Prevention Through Environmental Design principles. 	Nil
Culture		
<p>Community values</p> <p>Operation of the project has the potential to impact the following key community values identified during consultation:</p> <ul style="list-style-type: none"> proximity to the natural environment and associated recreational opportunities – the presence of surface infrastructure may 	<ul style="list-style-type: none"> adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would 	Medium (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>somewhat detract from the appearance of bushland within the social locality</p> <ul style="list-style-type: none"> community facilities and services – substantial reduction to traffic volumes along the existing Great Western Highway through Blackheath and Mount Victoria would noticeably improve the accessibility and amenity of these townships, where the majority of community facilities and services are located social elements of the community – the substantial reduction in traffic on the surface road would improve people's ability to safely and efficiently interact in the local area, particularly in town centres in Blackheath and Mount Victoria, e.g., by improving travel times (for vehicle users). This would contribute to an improvement in the overall social cohesion of the social locality the existing local character – the level of amenity within areas bypassed by the project, particularly in Blackheath and Mount Victoria town centres, is anticipated to improve, thereby enhancing the existing local character of these areas. However, in areas closest to portal infrastructure in Blackheath and Little Hartley, residents and visitors to the area may experience adverse changes in their surroundings associated with noise, visual and air quality impacts. <p>Overall, as the project is expected to enhance elements of the community which are were identified to be highly valued, the overall magnitude of impacts upon community values would be minor, and would be likely to occur, resulting in a medium (positive) impact.</p>	<p>provide a high quality design outcome</p> <ul style="list-style-type: none"> community and stakeholder engagement during ongoing design development. 	

Initial impact significance	Mitigation measure	Residual impact significance
<p>Aboriginal culture and heritage</p> <p>Operation of the project is unlikely to impact identified elements of Aboriginal culture and value. In response to the key principles for action in the Connecting with Country Draft Framework (Government Architect NSW, 2020b), the project would be a visual interpretation of the cultural identity of the Country. The operation of the project would also be unlikely to change people's access to and use of identified cultural sites.</p> <p>However, if not appropriately managed through the design process, ongoing impacts associated with the operation of the project, for example landscape and visual impacts associated with surface infrastructure, could impact upon elements of the area which are valued by Aboriginal communities.</p> <p>Based on the above, the likelihood of negative impacts to Aboriginal cultural heritage and values would have moderate consequences and would be very unlikely. As such the overall significance of impact would be a low (negative) impact.</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • in line with the Designing with Country framework (Government Architect NSW, 2020a), engagement with Aboriginal knowledge holders with a view to incorporating Aboriginal culture and heritage into the design development of the project • community and stakeholder engagement throughout ongoing design development. 	<p>Nil</p>
<p>Non-Aboriginal culture and heritage</p> <p>Operation of the project is unlikely to impact identified elements of non-Aboriginal culture and value including the community's existing level of access to and appreciation of non-Aboriginal heritage items.</p> <p>The likelihood of negative impacts to non-Aboriginal heritage and values is considered to have moderate consequences and would be very unlikely. As such the overall significance of impact would be a low (negative) impact.</p>	<ul style="list-style-type: none"> • adoption of urban design objectives and criteria and implementation of the State Design Review Panel process set out in Chapter 4 (Project description) would provide a high quality design outcome • heritage interpretation strategy to address historic and contemporary heritage and community values and identify innovative and engaging opportunities for interpretation • community and stakeholder engagement throughout ongoing design development. 	<p>Nil</p>

Initial impact significance	Mitigation measure	Residual impact significance
Livelihoods		
<p>Business impacts</p> <p>During the operation of the project, visitors travelling in vehicles may choose to travel via the project, thereby reducing their opportunity to visit businesses in bypassed areas. While some businesses which rely on passing trade may be adversely affected in the short-term, in the medium to longer term there are expected to be improved conditions for businesses due to improvements in local amenity. Businesses which service local residents and tourism would generally remain viable, thereby retaining employment opportunities for people within these businesses.</p> <p>The magnitude of this impact would be minor. The likelihood of this occurring would be possible given that similar impacts have occurred as a result of other bypass projects (refer to Appendix P (Technical report – Economics and business)). As such the overall social significance would be medium (negative), however would improve over time as improvements in local amenity would potentially attract further visitors.</p>	<ul style="list-style-type: none"> implementation of a strategy for directional signage to ensure effective and appropriate signposting for key locations along the project, to continue to attract visitors. Transport would also consult with relevant councils regarding opportunities to encourage visitors to areas which are bypassed by the project. 	Low (negative)
<p>Tourism related impacts</p> <p>By improving access to the Blue Mountains National Park and other cultural and recreational opportunities (e.g. Mount Victoria Museum), walking trails and sporting facilities, the project is expected to increase tourism expenditure within the Blue Mountains and Lithgow LGAs, including within the social locality.</p> <p>Accommodation and other businesses which cater to tourism may benefit from an increase in demand, as bypassed areas become more attractive to visit due to decreases in traffic, in particular heavy vehicles, on the existing Great Western Highway, and the subsequent improvements in amenity that would arise.</p> <p>Potential growth of tourism related businesses may create more job opportunities in the long term. The magnitude of this impact would be minor. The likelihood of this occurring would be possible given that similar impacts have occurred as a result of other bypass projects (refer to Appendix P (Technical report – Economics and business)). As such the overall social significance would be medium (positive).</p>		Medium (positive)

Initial impact significance	Mitigation measure	Residual impact significance
<p>Economic impacts</p> <p>The operation of the project is expected to have broader economic benefits to the region in which the social locality is situated (comprising the Blue Mountains and Lithgow LGAs).</p> <p>During the first ten years of operation, the project is predicted to provide a direct impact of between around \$8 and around \$10 million per annum in net output for Blue Mountains City Council and Lithgow City Council LGAs (refer to Appendix P (Technical report – Economics and business)).</p> <p>The broader economic benefits of the project would likely result in flow on effects for livelihoods within the social locality. In particular, an increase in tourism spend in the area would provide greater opportunity for people to earn an income through employment in the tourism industry.</p> <p>The overall magnitude of economic benefits during operation in the social locality would be considered minor, given that the benefits would likely be dispersed across the broader region. The likelihood of these impacts being experienced within the social locality would be possible, resulting in a medium (positive) social impact.</p>		Medium (positive)
Decision-making systems		
<p>Community engagement has been undertaken throughout the development of the project, including at key strategic design stages (refer to Chapter 7 (Community and stakeholder engagement)). Further, the preparation and exhibition of the environmental impact statement is a statutory process which enables people to make a submission expressing their support, objection or comments on the project and its potential impacts. Once operational, the project would have limited impact upon people's ability to interact in decisions that affect them.</p> <p>Given that the views and experience of decision-making systems can vary substantially from person to person, a magnitude and likelihood rating has not been applied.</p>	Transport will continue to listen and engage with the community throughout the detailed design and seek to address any such issues as far as reasonably practical.	Nil

19.5 Environmental mitigation measures

19.5.1 Performance outcomes

Performance outcomes for the project in relation to social impacts are listed in Table 19-4 and identify measurable performance-based standards for environmental management.

Table 19-4 Social performance outcomes

SEARs desired performance outcome	Project performance outcome	Timing
<p>The project is designed to provide socially sustainable outcomes.</p> <p>The project will maximise the social and economic welfare of the community.</p> <p>The project will deliver better development outcomes by minimising negative social impacts and enhancing positive social impacts on affected communities</p>	<p>Design and implement the project to provide a net positive social and economic outcome, including:</p> <ul style="list-style-type: none"> • avoiding or minimising the environmental impacts of the project during construction and operation (refer to project objectives in other areas) • avoiding or minimising direct and indirect impacts on social infrastructure • avoiding or minimising disruptions to local businesses during construction • maximising project employment within the region during construction and operation, subject to project needs and qualifications of regional resources • develop and implement clear, timely and inclusive stakeholder engagement and information measures. 	Design, construction and operation

19.5.2 Mitigation measures

Mitigation measures to avoid, minimise or manage potential social impacts as a result of the project are detailed in Table 19-5. A full list of environmental mitigation measures for the project is provided in Appendix R (Compilation of environmental mitigation measures).

Table 19-5 Environmental mitigation measures – social impacts

ID	Mitigation measure	Timing
SI1	<p>A Social Impact Management Plan (SIMP) will be prepared and implemented during construction and for the first three years of operation of the project. The SIMP will be prepared in consultation with the relevant local councils and will guide monitoring and adaptive management of social impacts resulting from the project. The SIMP will include details of:</p> <ul style="list-style-type: none"> • desired social outcomes for the project • adaptive management and mitigation strategies to address potential impacts • a process of monitoring predicted social impacts against actual impacts • indicators used to monitor desired social outcomes • a process for reporting on social impacts • identification of appropriate stakeholder responsibilities. <p>The SIMP will be developed taking into account the requirements of the Skills, Employment and Industry Development Strategy for the Great Western Highway Upgrade Program, and the environmental mitigation measures developed for potential business, land use and property impacts.</p>	Construction and operation

ID	Mitigation measure	Timing
SI2	Managers of social infrastructure located adjacent to the construction footprint (including Browntown Oval) will be notified of the timing and duration of construction works and engaged in relation to the management of potential impacts on the social infrastructure, with the aim of minimising potential disruptions to the use of the social infrastructure from construction activities.	Construction
SI3	Construction workers for the project will be employed from the local area, where possible, to manage the need for people to relocate to the area for the duration of construction, and to contribute to local employment opportunities.	Construction
SI4	A construction workforce accommodation strategy will be prepared to confirm workforce accommodation requirements and options, in order to minimise potential adverse impacts to the rental market and short-term accommodation availability. This strategy will include consultation with local councils to better understand the market and how worker demand may be managed.	Design and construction
SI5	Opportunities to encourage visitors to areas that are bypassed by the project will be identified in consultation with the relevant local councils and other relevant government agencies. This will include development and implementation of a directional signage strategy during construction and operation of the project, and in accordance with applicable traffic signage standards and guidelines. The strategy will be developed with the aim of signposting key locations along the project corridor, and identifying the range of services, businesses and social infrastructure within the bypassed areas.	Design, construction and operation
SI16	Stakeholder engagement activities carried out during construction will be accessible to a range of groups in the community. This will include, at a minimum, a range of engagement methods (including options for physical copies of engagement materials) and opportunities for translated materials, upon request.	Construction