

6.8 Socio-economic, property and land use

The potential impacts on socio-economic, property and land use during construction and operation of the proposal have been assessed as part of the *Great Western Highway Upgrade – East Project Socio-economic impact assessment* (Aurecon, 2022a), provided in Appendix J.

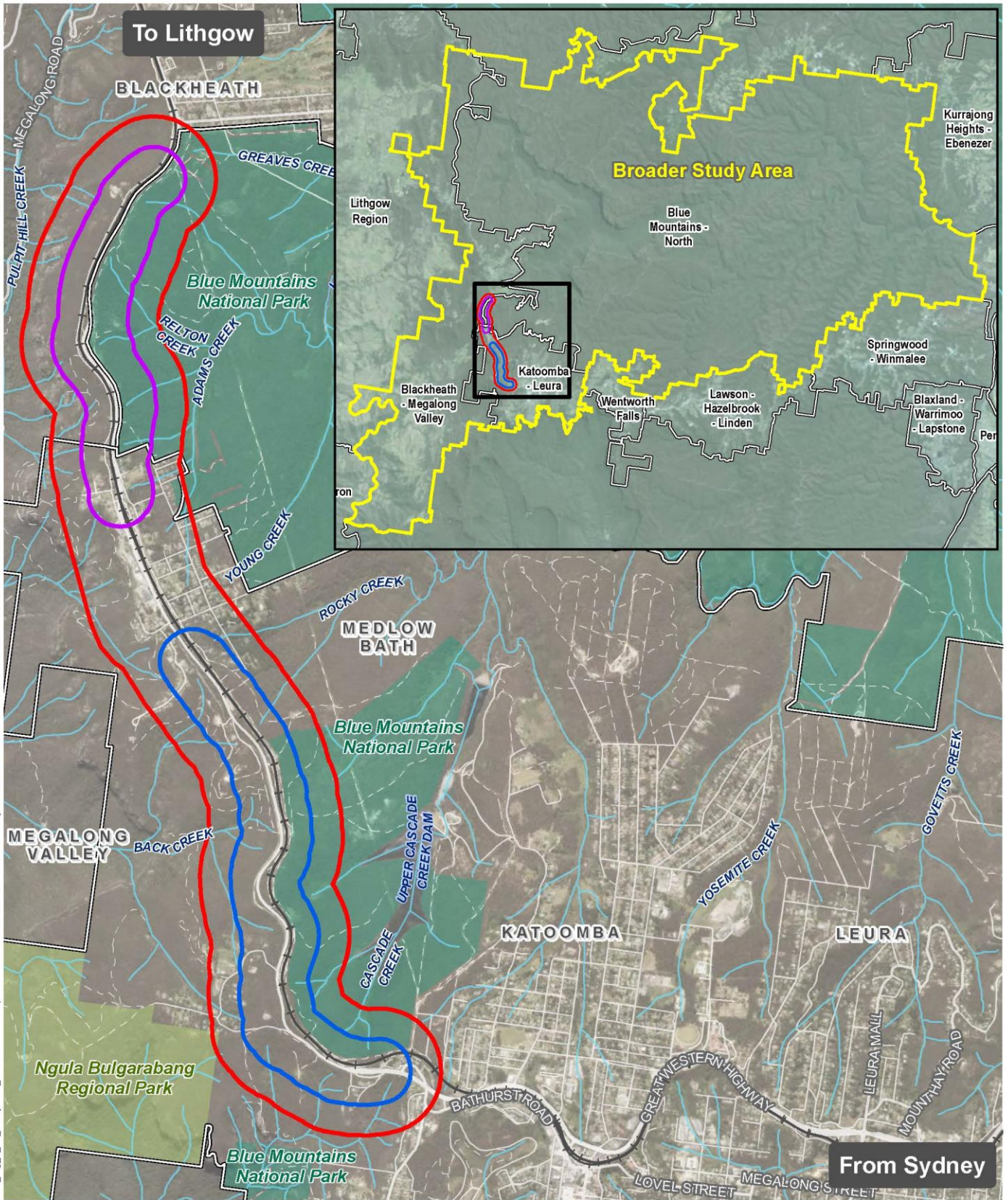
6.8.1 Methodology

The socio-economic impact assessment has been prepared for a 'moderate' level assessment as specified by Transport's *Environmental Impact Assessment Practice Note – Socio-economic Assessment (EIA-N05)* (Transport, 2020a). The methodology for the assessment included:

- a review of statutory planning and legislative requirements, including a review of existing State and local government strategies relevant to the social and economic environment of the study areas, including the *Blue Mountains Community Strategic Plan 2035* and the *NSW Western City District Plan* (Greater Sydney Commission, 2018).
- a site visit on Monday 8 February 2021 to examine the existing environment and assess the potential direct and indirect impacts of the proposal
- identification of the existing socio-economic environment of the study areas, including
 - data on land use and development, population, demographics, local business and industry, employment, income and dwelling characteristics in the study area
 - access, connectivity, existing social infrastructure and community features
 - key community issues from previous community consultation for the overall Great Western Highway Upgrade Program
- identification and assessment of the potential socio-economic impacts of the construction and operation of the proposal
- recommendation of measures to avoid, minimise and manage potential impacts on the socio-economic environment.

Study area

The socio-economic impact assessment consisted of three study areas in line with EIA-N05 (Transport, 2020a), which are shown in Figure 6-13 and outlined in Table 6-57.



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- Direct study area - Katoomba to Medlow Bath section
- Direct study area - Medlow Bath to Blackheath section
- Socio-economic study area
- ABS Statistical area 2
- Blue Mountains National Park
- Ngula Bulgarabang Regional Park
- Railway

Source: Aurecon, LPI, DPIE

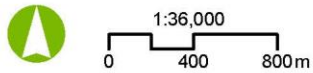


Table 6-57: Study areas for the socio-economic assessment

Study area	Description	How the assessment is informed by the study area
Direct study area	200 m buffer around the Katoomba to Medlow Bath and Medlow Bath to Blackheath sections separately. This includes residents who live just off the Great Western Highway but may still experience direct impacts of the proposal.	Direct impacts are assessed in this area, which include impacts on amenity impacts (noise and visual), property and access, and the surrounding community.
Socio-economic study area	400 m buffer from the outer edge of the design, which encompasses both the Katoomba to Medlow Bath and Medlow Bath to Blackheath sections. This considers the walking distance around the proposal.	Indirect impacts of the overall proposal (primarily impacts to access and connectivity, as well as some amenity impacts that may occur from people using the proposal but not as frequently as those within the direct study area).
Broader study area	Based on the following Australian Bureau of Statistics (ABS) 'Statistical Area 2' areas: <ul style="list-style-type: none"> Katoomba – Leura Blackheath – Megalong Valley Blue Mountains – North. Comparison of these areas are made against the Blue Mountains LGA and Greater Sydney.	Representative of the surrounding Blue Mountains community likely to use the Great Western Highway corridor through the proposal area. Key features of the surrounding area include train stations, retail, town centres and places of special/community interest and develop context about the existing environment. By understanding the broader study area, movements through and around the Great Western Highway are assessed to determine the potential impacts of the overall proposal.

6.8.2 Criteria

The significance of likely impacts has been assessed based on the sensitivity and magnitude of the impacts. These terms are defined as follows:

- **Sensitivity** – the qualities of the receptor which influence its vulnerability to change and capacity to adapt.
- **Magnitude** – the scale, duration, intensity and scope of the overall proposal including how it will be constructed and operated.

The socio-economic assessment applied the impact grading matrix presented in EIA-N05 to assess the level of significance for potential negative impacts only.

Table 6-58: Criteria applied in the socio-economic impact assessment to assess the level of significance

Sensitivity		Magnitude			
		High	Moderate	Low	Negligible
	High	High	High-moderate	Moderate	Negligible
	Moderate	High-moderate	Moderate	Moderate-low	Negligible
	Low	Moderate	Moderate-low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

6.8.3 Existing environment

Population and demography

In 2016, the population of the broader study area was 18,798, which was about 23.8 per cent of the Blue Mountains LGA population (ABS, 2016). Key features of the population include that:

- the broader study area has an older population, when compared with the Blue Mountains LGA and Greater Sydney
- there is a high Aboriginal and Torres Strait Islander population (about 2.6 per cent in 2016, compared with 1.5 per cent for Greater Sydney)
- in 2016, Katoomba – Leura and Blackheath – Megalong Valley had lower than average economic and social conditions for people and households compared with the Blue Mountains LGA and whole of NSW
- in 2016, employment in accommodation and food services, health care and social assistance, retail trade and education and training comprised the highest proportion of the work force in both the broader study area and Blue Mountains LGA
- in 2016, the broader study area had the highest proportion of people walking to work or working from home compared to the Blue Mountains LGA and Greater Sydney
- population is expected to increase by about six per cent in the Blue Mountains LGA from 78,835 in 2016 to 83,578 in 2041
- the number of households in the Blue Mountains LGA is expected to increase by 9.55 per cent between 2016 and 2036.

Land use

The proposal is located in the Blue Mountains LGA and occurs in the suburbs of Katoomba, Medlow Bath and Blackheath. The direct study area comprises a mix of land use areas defined in the *Blue Mountains Local Environmental Plan 2015* (LEP), as outlined in Section 4.1.2.

Within the proposal area, the Great Western Highway is a two-lane road zoned as SP2 – Infrastructure. It is located within a wide corridor which has grassed and vegetated areas along its extent. Housing is mostly set back from the Great Western Highway road corridor, except near the towns of Katoomba, Medlow Bath and Blackheath, where some properties are located next to the road corridor.

The Katoomba to Medlow Bath section is bounded by mostly private or Council-owned property to the west and the Main Western railway corridor to the east. Residential properties in this area are set back from the road corridor and accessed via local roads from the western side of the highway.

The Medlow Bath to Blackheath section is bounded by the Main Western railway corridor to the west and the Blue Mountains National Park to the east. While part of the Blue Mountains National Park forms the Greater Blue Mountains World Heritage Area, the section immediately adjacent to the proposal is not part of the World Heritage Area. The direct study area between Medlow Bath and Blackheath is mostly undeveloped, with some dispersed properties to the west.

The socio-economic study area and broader study area contain a range of industrial, commercial, agricultural and residential land uses, including some land in Medlow Bath zoned as SP3 – Tourist and RE1 – Public Recreation. There are accommodation and tourism services, as well as local town centres and villages comprised of small businesses, community services and facilities. To the west of the socio-economic study area is a steep escarpment overlooking Megalong Valley.

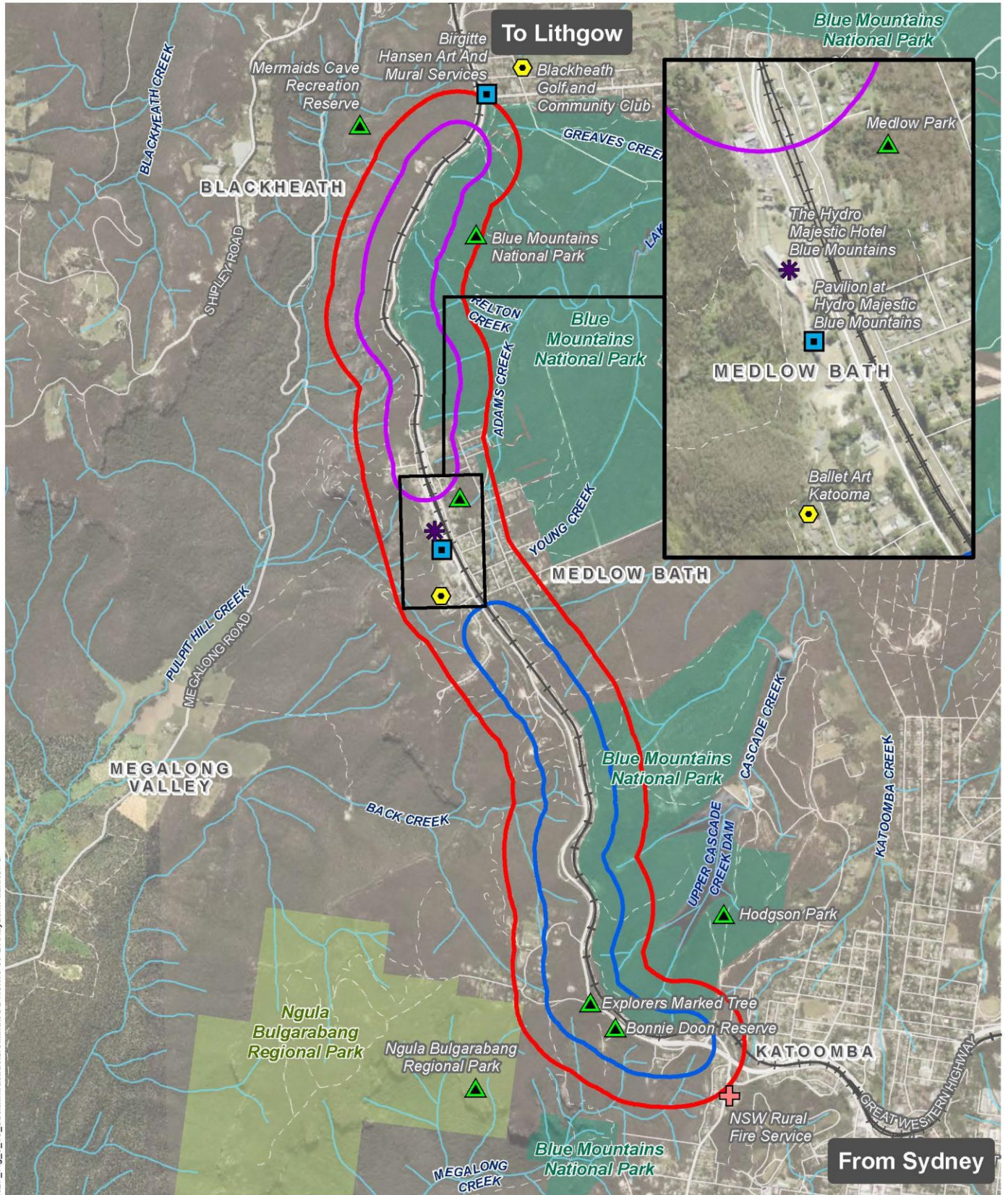
The broader study area is likely to experience some development in the coming years, consistent with existing land uses. The Blue Mountains Wildlife and Tourism Development Park and Great Western Highway Upgrade program are both currently in the planning phase and would improve tourism opportunities and connectivity in the Blue Mountains respectively.

Social infrastructure facilities

The social infrastructure near the proposal is shown in Figure 6-14. Within the direct study area, the key items of social infrastructure are parks and reserves, including the Bonnie Doon Reserve near Katoomba and the Blue Mountains National Park to the east of the proposal. Areas of community interest include:

- Blue Mountains National Park, which has a range of iconic lookouts, waterfalls, Aboriginal culture, historic walking tracks, mountain biking, and other adventure sports. There are notable sites including the 'Three Sisters' at Echo Point, Katoomba, the Blue Mountains Heritage Centre and destinations near Blackheath, such as Govets Leap and Grand Canyon. The Blue Mountains National Park contains pathways, resources and cultural associations important to the local Aboriginal community.
- Pulpit Hill and surrounds, which was identified on an 1814 Survey Map as a key site on the first road west across the Blue Mountains. Pulpit Hill includes areas of heritage significance near the now removed Explorers Tree, convict graves and an old rail house.
- Water NSW Special Catchment Area, which protects water quality by providing buffer zones of bushland around dams and immediate catchment areas. These special catchment areas are not open to the public through areas of National Park.

There is a high degree of mobility of residents and visitors to the proposal area between Katoomba, Medlow Bath and Blackheath. In Katoomba, there is a high level of social infrastructure, including schools, education facilities, and recreation facilities. The Great Western Highway provides an important link to social infrastructure facilities in the broader study area.



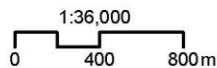
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- Direct study area - Katoomba to Medlow Bath section
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- Railway

Social infrastructure

- ✱ Business
- Community facilities, centres, halls
- + Emergency services
- ▲ Parks and reserves
- Recreational facilities

Source: Aurecon, LPI, DPIE



Projection: GDA2020 MGA Zone 56

Access and connectivity

Private vehicle use

Within the broader study area, residents are typically reliant on private vehicles. In 2016, only 6.5 per cent of households did not own a private vehicle (ABS, 2016).

There is no formal parking along the Great Western Highway in the proposal area. The closest formal parking to the proposal is available in Katoomba, Medlow Bath and Blackheath.

There is an informal parking area on Nellies Glen Road near the heritage interpretation area. At present, this poses an ongoing safety hazard and makes resident access challenging. There are also informal emergency stopping locations along the Great Western Highway where the road shoulder is wider.

Freight

The Great Western Highway forms part of the freight and heavy vehicles network connecting the Central West and Orana, Blue Mountains, Western Sydney and Greater Sydney regions. It currently carries around 9 million tonnes of road freight each year, with a further 7 million tonnes transported by rail. The Great Western Highway currently accommodates freight and heavy vehicles up to 19 metre B-Doubles (over 50 tonnes).

About half of the freight which passes through Blue Mountains is transported by road, to allow efficient and direct access to retail precincts and industrial areas. This freight includes refrigerated goods, livestock and retail goods. The dominant patterns of freight movement are:

- east to west - manufactured products, food and general freight such as furniture and fuel
- west to east – timber, food and agricultural products and sand and gravel from quarries in the Blue Mountains.

Heavy vehicle traffic makes up about 23 per cent of total traffic volume between Katoomba and Medlow Bath and about 22 per cent of total traffic volume between Medlow Bath and Blackheath. For further details on heavy vehicle traffic, refer to Section 6.7.3.

Active transport

Within the proposal area, there is one formal active transport trail along the Great Western Highway, between Rowan Lane and Bonnie Doon Reserve. This forms part of the Great Blue Mountains Trail, which runs along the western side of the Great Western Highway between Katoomba and Blackheath. Most of the pedestrian activities in the socio-economic study area take place on off-road sealed and unsealed bush walking tracks.

While it is marked as a regional on-road cycle route, no formal cycling facilities exist on the Great Western Highway. Shared paths which form part of the Great Blue Mountains Trail are identified on the Blue Mountains Cycling Map.

Community values

Community feedback received while developing the *Blue Mountains Community Strategic Plan 2035* (CSP; Blue Mountains City Council, 2017) identified the following directions for the CSP:

- Lead: inspiring leadership
- Protect: an environmentally responsible city
- Care: an inclusive, health and vibrant city
- Live: a liveable city
- Move: an accessible city
- Thrive: an economically sustainable city.

These directions contribute to the liveability of the Blue Mountains LGA and this has been reflected within the community consultation undertaken for the proposal (refer to Section 5.2).

The CSP aims to foster the social and economic well-being of the communities, while maintaining and protecting the surrounding World Heritage Area for future generations. It is noted that tourism and events are important to the community across the Blue Mountains LGA.

6.8.4 Potential impacts

Construction

Property acquisition and adjustments

The proposal would require the acquisition and adjustment of properties within the direct study area. In addition, some land parcels would also be temporarily leased for ancillary facilities and construction work. A list of properties impacted and details on the property acquisition process is provided in Section 3.6.

Property acquisition can result in stress and anxiety, particularly for owners that are vulnerable to forced relocation such as requiring assistance, older or of lower levels of economic resources. For the Katoomba to Medlow Bath section, about 36 properties to the west of Great Western Highway would be acquired. Most of these properties are Council owned, so there are limited impacts to private residential properties. There would be six full private property acquisitions, five of which are vacant land.

A portion of the Medlow Bath to Blackheath section is on land currently reserved as national park. The land which would be revoked is not currently publicly accessible due to its location within the Water NSW Blackheath Special Catchment Area so there would not be a loss of recreation land due to this revocation.

Property acquisition and adjustments for the overall proposal would have a moderate social impact. The overall significance would be:

- moderate-low for the Katoomba to Medlow Bath direct study area due to the moderate sensitivity of stakeholders and low magnitude of temporary and permanent changes during construction
- moderate-low for the Medlow Bath to Blackheath direct study area due to the low sensitivity in using existing publicly owned land and moderate magnitude of temporary and permanent changes to land ownership during construction.

Land use

Land use changes during construction would be mostly confined to the proposed ancillary facilities. These areas would be restored to their previous use upon completion of construction. The land use changes associated with construction of the proposal include:

- the bridge launch site, bridge ancillary facility and Bonnie Doon brick pit site ancillary facilities, which are currently zoned C1 – National Parks and Nature Reserves and C2 – Environmental Conservation
- the ancillary facility south of Evans Lookout Road, Blackheath, which is currently zoned C2 – Environmental Conservation.

The land use would change on the part of the Blue Mountains National Park within the Medlow Bath to Blackheath section which would be revoked prior to determination of this REF. This would change the land use from C1 – National Parks and Nature Reserves to SP2 – Infrastructure.

Changes to land use during construction would have minimal social or economic impact. There would be low sensitivity to changes in land use during construction by the community and broader study area of the proposal. This would be due to the type and small number of areas potentially impacted, including areas which are near existing road corridor or not easily accessible by the public. There would be moderate magnitude of the changes, resulting in the overall significance of the impact being moderate-low.

Access and connectivity

The proposal would result in some temporary changes to access and connectivity within and surrounding the direct study area. This would include:

- temporary delays and alternative traffic arrangements for resident, tourist, freight and commercial vehicle movements along the Great Western Highway during construction of the proposal
- temporary changes to local street access for Nellies Glen Road and Explorers Road
- temporary lane closures near Nellies Glen Road and Foy Avenue
- provision of alternative rail corridor and Blue Mountains National Park access as required
- temporary closure of the parking area on Nellies Glen Road
- temporary relocation of bus stops at Bonnie Doon Reserve and Foy Avenue
- detours and temporary closure of the Great Blue Mountains Trail (between Katoomba and Medlow Bath only).

There would be no changes to bus routes between Katoomba and Blackheath. Temporary, localised delays for individual bus services may occur due to traffic management on the operating highway. Emergency service access along the highway and to Coachhouse Lane would also be maintained during construction.

Changes to traffic conditions along the Great Western Highway would impact the liveability of the socio-economic study area. Residents may feel stressed or anxious in response to changes to the road network and temporary access routes. This may also be inconvenient for regular active transport path users, especially those with limited mobility. Lane closures during construction would be timed during low traffic periods (such as at night or outside peak periods) where possible to reduce impacts on the local road network and road users.

Delays due to construction would also lead to increased stress and anxiety for locals and regular users of the Great Western Highway. The magnitude of these impacts would depend on how long delays are expected and the staging of the proposal. Delays that impact on freight movement could have a negative economic impact, resulting in stress and unease for suppliers.

The sensitivity of people to changes in access and connectivity would be moderate. The overall significance would be:

- moderate for the Katoomba to Medlow Bath direct study area due to the moderate magnitude of the temporary changes during construction
- low for the Medlow Bath to Blackheath direct study area due to the low magnitude of the temporary changes during construction.

Social infrastructure facilities

The proposal would result in temporary changes on traffic movement and access points, impacting people accessing social infrastructure such as parks for recreation. There would also be temporary impacts to amenity for people using parks.

Several social infrastructure facilities within the socio-economic study area would be impacted by construction of the proposal, including:

- Bonnie Doon Reserve, which would experience negative short-term impacts. The proposal would impact public access to Bonnie Doon Reserve during construction, due the potential use of the Brick pit site as an ancillary facility. Pathways around the reserve, Nellies Glen Road and the Great Blue Mountains Trail between Katoomba and the reserve would be closed. There would be noise and visual impacts, inconveniencing locals and tourists who use this area for recreation purposes. Where possible, Transport would identify detours or temporary alternative access to Bonnie Doon Reserve.

- Pulpit Hill heritage area, which would experience direct and high non-Aboriginal heritage impacts through road widening, earthworks, bridge construction, intersection upgrades and carpark construction (refer to Section 6.4.2). Temporary impacts to this area include visual amenity and noise impacts which may affect community values around the natural environment. Public access and use of the site during construction would be limited.
- Medlow Park, which would experience accessibility impacts during construction, due to reduced speeds through the proposal area. Patronage may also increase at Medlow Park during construction due to disruption of other recreational sites, including Bonnie Doon Reserve or Pulpit Hill.
- Blue Mountains National Park between Medlow Bath and Blackheath, which would experience visual, noise and air quality impacts. However, this part of the National Park is within the Blackheath Special Catchment Area and so access is already legally restricted. As such, the impacts of the construction of the proposal on surrounding receivers would be limited.

The overall level of significance of impacts would be moderate-low due to moderate sensitivity of social infrastructure to potential construction impacts, including visual and noise impacts and low magnitude of impacts.

Commercial operations and businesses

The construction of the proposal would have minimal negative impacts on commercial operations and businesses, including people working from home. These impacts would be related to visual, air quality, access, noise and vibration during construction. These impacts would be particularly evident near:

- Mountain House, Nellies Glen Road and Karuna Sanctuary, Saywell Road, due to construction of upgraded intersections and the proposed twin bridges. There would be impacts to access during construction due to alternate traffic arrangements and potential delays due to construction on the Great Western Highway. Noise and vibration associated with construction are not expected to impact on business activities due to their setback from the Great Western Highway.
- The United Petroleum due to the presence of construction equipment and machinery at the adjoining proposed ancillary facility. This may impact the patronage to the business due to the reluctance of some patrons to access the petrol station due to construction work.
- Businesses in Medlow Bath which may experience access and connectivity impacts and concerns about loss of passing trade during the construction of the proposal. These businesses, and those located in the Medlow Bath section of the socio-economic area would also be impacted by the Medlow Bath Upgrade. Cumulative impacts of the proposal are discussed in Section 6.11.

The proposal would also create additional employment opportunities for construction and trade workers and lead to an increase in expenditure in the broader study area during construction.

Construction of the proposal may lead to amenity impacts for residents working from home. High levels of construction noise may impact concentration and interrupt work from home, leading to frustration and concern. The construction noise impacts of the proposal are discussed further in Section 6.6.4.

The overall level of significance of impacts would be moderate-low. This is due to low sensitivity of businesses to potential construction impacts because of the existing environment and large distance to construction activities for many of the businesses and moderate magnitude of the impacts.

Amenity and community values

The proposal would result in a reduction of amenity and community values. This would be due to the high sensitivity of the area and substantial changes proposed to the existing heritage interpretation area (Katoomba to Medlow Bath section) and the Blue Mountains National Park (Medlow Bath to Blackheath section).

The greatest temporary amenity impacts during construction would be:

- during construction activities that use noise or vibration intensive equipment for receivers closer to the highway or areas further away from the Great Western Highway due to topography, especially near the valley north of Explorers Road
- noisy work required outside standard construction hours which may have adverse impacts on the health and wellbeing of residents
- visual impacts of construction plant and machinery, including lighting for nightworks would also impact those living within, visiting and travelling through the direct study area
- partial removal of the bushland surrounding the Great Western Highway resulting in a larger cleared area with construction machinery, impacting the spatial character and liveability of the direct study area, particularly surrounding the Pulpit Hill heritage interpretation area
- air quality impacts, including an increase in dust levels from vegetation removal, stripping of topsoil and excavations associated with earthworks, as well as from heavy vehicle movements near the proposal, resulting in the community avoiding social infrastructure.

Construction activities would move along the corridor as construction progressed, so that one group of sensitive receivers would not be exposed to amenity impacts for the entire construction period.

The Blue Mountains City Council CSP identified that the community values the natural environment. The proposal would require vegetation removal for the widening of the Great Western Highway, impacting the natural backdrop for recreational users within this area. This may result in a loss of vegetation (refer to Section 6.3.3) and a sense of loss and impacts to feelings of community character. This would be most noticeable near Pulpit Hill in the Katoomba to Medlow Bath section and near the part of the Blue Mountains National Park proposed for revocation as part of the Medlow Bath to Blackheath section. However, the lack of known Aboriginal cultural heritage sites in the proposal area and management measures to be implemented (refer to Section 7.2), potential impacts to Blue Mountains National Park cultural heritage and values are not expected to be significant.

The CSP also identified that the community also values movement. Construction of the proposal would temporarily impact the accessibility and connectivity of residents, motorists, pedestrians, cyclists and businesses along the Great Western Highway.

The overall level of significance of impacts would be moderate due to high-moderate sensitivity of the community to changes in amenity and values and moderate magnitude of the impacts.

Operation

Property acquisition and adjustments

All property acquisition or adjustments would occur during construction. No further acquisition would take place during operation. As such, the impacts of property acquisition and adjustments during operation of the proposal would be negligible.

Land use

The operation of the proposal would result in minor permanent changes in land use. Most changes to land use would be related to the construction of the proposed road corridor in areas that were previously vegetated or vacant. These areas would be rezoned as SP2 – Infrastructure and be removed from recreational use.

However, the Medlow Bath to Blackheath section, would have a new publicly accessible recreational trail to the east of the Great Western Highway between Medlow Bath and Blackheath. This would provide positive impacts on recreation as the land is currently closed to public access.

The overall significance would be:

- moderate-low for the Katoomba to Medlow Bath direct study area due to the low sensitivity of land occupiers, owners and the community to permanent changes in land use and moderate magnitude of these changes
- moderate for the Medlow Bath to Blackheath direct study area due to the moderate sensitivity of land occupiers, owners and the community to permanent changes in land use and moderate magnitude of these changes.

Access and connectivity

The proposal would result in substantial access and connectivity benefits. Operation of the proposal would improve travel times and safety for motorists and commuters travelling along the Great Western Highway. This would result in decreased motorist stress and anxiety and improved driver confidence through:

- improved resilience of the road corridor during breakdowns, crashes, extreme weather events or other emergencies, with the ability to maintain traffic flow during these events
- reduction in congestion for emergency vehicles along the road corridor
- improved safety of vehicles overtaking
- improved safety of and reduced queuing at intersections, especially Nellies Glen Road and Foy Avenue
- improved safety of bus stops, especially through the relocation of the Bonnie Doon Reserve bus stop to Nellies Glen Road.

There may also be initial confusion and frustration from the community at the proposed changes to the intersections at Explorers Road and Foy Avenue. This would lead to increased travel times for residents.

The proposed upgrade to the Pulpit Hill heritage interpretation area on Nellies Glen Road would result in positive impacts for residents who currently are disrupted by informal parking in this area. Improved connectivity at this location would also lead to an increased likelihood of the community visiting this area for recreation and result in improved physical and mental wellbeing of the community. The reintroduction of a redesigned left-out turn previously removed to safety concerns would also improve safety for motorists using Nellies Glen Road.

Improved freight transport access and efficiency would result in fewer vehicles on the road and positive impacts on the community. A reduction in freight vehicles would decrease frustration from other motorists at congestion and slow movement, increasing liveability in the socio-economic and broader study area. The provision of heavy vehicle stopping bays would also improve safety for heavy vehicle drivers.

The proposal would improve liveability and active transport facilities by maintaining access to, and upgrading parts of, the Great Blue Mountains Walking Trail. This would have a positive impact on pedestrians and cyclists, allowing continued physical and mental benefits of exercise and ongoing enjoyment of important local areas.

Between Medlow Bath and Blackheath, the proposed new active transport trail would have a positive impact on the community who would have a new access link between the villages. Pedestrians and cyclists would no longer need to cross the Great Western Highway at Station Street to travel between Medlow Bath and Blackheath. This would have a positive impact on tourism as trails contribute to the wider attraction of recreation in the Blue Mountains.

The overall level of significance of impacts would be moderate-low due to moderate sensitivity of road and active transport users to changes in access and connectivity and low magnitude of the impacts.

Social infrastructure facilities

Reduced congestion due to the proposal would improve connectivity and access to services and social infrastructure facilities within the direct study area and socio-economic study area.

Several social infrastructure facilities within the socio-economic study area would be impacted by operation of the proposal, including:

- Bonnie Doon Reserve, which would experience positive impacts due to the reopening of the reserve. The proposal would reinstate improved access to nature and natural recreation, which is important to the community.
- Pulpit Hill heritage area, which would be reinstated in line with the Heritage Interpretation Strategy to be developed for the proposal. This would have a positive impact by recognising heritage significance and providing an attractive site for locals and tourists to visit. Parking is also currently an issue in the area and better parking facilities for visitors would be provided.
- Blue Mountains National Park between Medlow Bath and Blackheath, which would experience improved accessibility.

The overall level of significance of impacts would be low due to low sensitivity of social infrastructure during operation of the proposal and low magnitude of impacts.

Commercial operations and businesses

The proposed increase in road capacity and traffic efficiency would benefit commercial operations and businesses near the direct study areas. Tourism businesses are expected to benefit from improved access and connectivity due to the proposal. It is expected that there would be minimal impacts to business patronage due to access changes to Explorers Road. There would also be flow on effects to economic productivity and growth for freight carriers and vehicles travelling on the Great Western Highway and within the broader study area.

The overall level of significance of impacts would be low due to low sensitivity of businesses during operation and low magnitude of the impacts.

Amenity and community values

Community consultation for the proposal identified that the local community values movement and connectivity, especially given high private motor vehicle ownership. The proposal would have positive impacts to all road users by improving movement and reducing congestion as well as by providing access to improved walking and cycling opportunities. These impacts would improve liveability in the socio-economic study area, through reduced time in traffic, reduced frustration from congestion, and access to active transport links. However, the operation of the proposal may result in increased noise within the socio-economic study areas. These impacts are outlined in Section 6.6.4.

Community values of local heritage and amenity would be impacted by the proposal. These impacts include:

- The reduction of natural bushland and changes to the spatial character would impact visual amenity within the Katoomba to Medlow Bath direct study area and northern portion of the Medlow Bath to Blackheath direct study area (refer to Section 6.5.3)
- A sense of cultural and historical loss and impacts to liveability within the socio-economic study area due to heritage impacts to Pulpit Hill and the surrounding environs, during the operation of the Katoomba to Medlow Bath section (refer to Section 6.4.3). However, it is noted that the proposal would include the consolidation and improvement of the Pulpit Hill heritage interpretation area on Nellies Glen Road (refer to Section 3.2.3). The proposal would relocate the Nellies Glen Road intersection, allowing the existing heritage interpretation area to be retained and extended and provide improved visitor parking. This would better connect the individual and separate heritage items associated with Pulpit Hill, to provide a more cohesive Aboriginal and non-Aboriginal interpretation of the area.

The overall level of significance of impacts would be moderate due to high-moderate sensitivity of the community to changes in amenity and values and moderate magnitude of the impacts.

6.8.5 Safeguards and management measures

Safeguards and management measures for socio-economic, property and land use impacts are outlined in Table 6-59. Other safeguards and management measures that would address socio-economic, property and land use impacts are identified in Sections 6.4.4, 6.5.4, 6.6.5, 6.7.5 and 6.9.4.

Table 6-59: Safeguards and management measures – socio-economic, property and land use

Impact	Environmental safeguards	Responsibility	Timing	Reference
Socio-economic	<p>A Communication Plan (CP) will be prepared and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The CP will include (as a minimum):</p> <ul style="list-style-type: none"> • people or organisations to be consulted during the delivery of the proposal • procedures and mechanisms for the regular distribution of information about the proposal • mechanisms to keep relevant stakeholders updated on construction activities, schedules and milestones • avenues for the community to provide feedback (including a 24-hour, toll free proposal information and complaints line) or to register complaints through which Transport will respond to community feedback • a process to resolve complaints and issues raised. <p>The CP will be prepared in accordance with the <i>Community Involvement and Communications Resource Manual</i> (Roads and Traffic Authority, 2008).</p>	Contractor	Detailed design / pre-construction	Additional safeguard
Community consultation	Transport will continue to consult with the community until the completion of the proposal. Discussions would include the nature and timing of construction work.	Transport	Pre-construction / construction	Additional safeguard
Property acquisition	<p>Land acquisition will occur in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> and the <i>Local Government Act 1993</i>.</p> <p>Transport will continue to consult with Blue Mountains City Council regarding council owned land and assets. The design for the proposal will also be refined during detailed design to minimise impacts on community land, where possible.</p>	Transport	Pre-construction	Additional safeguard
Amenity	Amenity impacts will be managed through other safeguards for the proposal (including those related to noise and vibration, visual changes, heritage and traffic)	Transport	Pre-construction / construction	Additional safeguard
Changes in access	Temporary and permanent changes in access will be discussed with impacted land occupiers (including Sydney Trains and NPWS) prior to commencement of construction and during construction activities should arrangements change. This includes properties which may be impacted by intersection upgrades at Nellies Glen Road, Explorers Road and Foy Avenue.	Transport	Pre-construction / construction	Additional safeguard

Impact	Environmental safeguards	Responsibility	Timing	Reference
Social infrastructure	Transport will consult with local community groups that use facilities including the walking/ hiking trails throughout construction.	Transport	Pre-construction/ construction	Additional safeguard
Relocation of bus stops	Public transport users will be notified in advance of any changes to bus stop locations through signage at the existing bus stop during construction. Public transport users will also be notified of permanent bus stop relocations. Adequate way finding signage will be installed. Consultation with the relevant bus authorities will be undertaken to mitigate potential impacts to bus routes.	Transport	Pre-construction / construction	Additional safeguard
Traffic management for all road users, including pedestrians and cyclists	Transport will consider opportunities for alternative transport arrangements to provide access for vulnerable community members who would normally access the Great Blue Mountains Trail. Alternative routes for active transport users during construction will be clearly identified by signage and the use of traffic controllers where required.	Transport	Pre-construction / construction	Additional safeguard
Provision of parking	Transport will develop a car parking strategy to inform the operation of upgraded car parking opportunities (including near the Pulpit Hill interpretation area) in conjunction with the Great Western Highway Upgrade – Medlow Bath.	Transport	Detailed design / pre-construction	Additional safeguard