

# **Chapter 20**

## **Business, land use and property**

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## 20 Business, land use and property

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This chapter summarises the business, land use and property assessment carried out for the upgrade of the Great Western Highway between Blackheath and Little Hartley (the project). The full business and economic impact assessment is provided in Appendix P (Technical report – Economics and business).

### 20.1 Assessment approach

The approach to the assessment of the potential economic and business impacts of the upgrade of the Great Western Highway between Blackheath and Little Hartley (the project) included:

- definition of the study area
- identification and consultation with local community members and businesses who could be affected by the project
- quantitative assessment of local business and economic impacts to determine the expected net change in economic activity associated with the construction and operation of the project on both the regional and state economies
- qualitative assessment of other potential economic impacts of the project identified through literature review and community and stakeholder consultation
- identifying mitigation measures for local businesses.

The approach to the assessment of the potential property and land use impacts of the project included:

- reviewing the existing environment with regard to existing properties and land uses around the project
- reviewing key strategic land use planning policies and documents relevant to the project to identify future land uses and planning and development controls
- assessing the potential impacts on properties including those that would need to be acquired to construct and operate the project
- assessing the potential impacts on land uses during construction and operation of the project
- identifying mitigation measures to avoid, minimise and manage impacts on property and land use.

### 20.2 Existing environment

#### 20.2.1 Local businesses

For the purposes of the business impact assessment, the study area comprised the suburbs of Blackheath, Kanimbla, Mount Victoria and Little Hartley. These suburbs represent the areas where the more immediate impacts of the project have the potential to occur and are shown in Figure 20-1.

Businesses in the study area are generally clustered along the existing Great Western Highway at local town centres including Blackheath, Mount Victoria and Little Hartley (shown in Figure 20-1). A description of the local businesses for each suburb in the study area is provided in Table 20-1.

Table 20-1 Description of local businesses within the study area

Business centre	General description
Blackheath	Blackheath has an antique centre in the Victory Theatre, several gift stores, a supermarket, general store and several cafes and restaurants. There are two fuel stations in Blackheath, both situated on the existing Great Western Highway. Blackheath has around 50 accommodation options listed on booking.com, including hotels, cottages, cabins and motor inns.
Mount Victoria	Mount Victoria has a retro-style cinema, public gardens and is in close proximity to several walking trails and lookouts. The business composition in Mount Victoria includes a newsagency, a post office, and several retail stores and food and beverage venues. There is also one fuel station on the corner of the current route of the Great Western Highway and Mount York Road. Mount Victoria has around 10 accommodation options listed on booking.com, including several old grand homes which have been converted to guest houses.
Little Hartley	The Little Hartley village has a lolly shop, a café, a pizza shop and a pub (though this is currently closed). Little Hartley also has an art gallery, hosts garden shows throughout the year and is located a short distance from a range of activities including horse riding, fishing and bushwalking. Little Hartley has three accommodation options listed on booking.com and a caravan park on Browns Gap Road.
Kanimbla	Kanimbla itself does not feature any businesses outside of the three accommodation options listed on booking.com, however, it is in close proximity to the larger centres of Blackheath, Mount Victoria and Katoomba. There are also a number of walking trails, lookout points and campgrounds around Kanimbla which attract visitors.

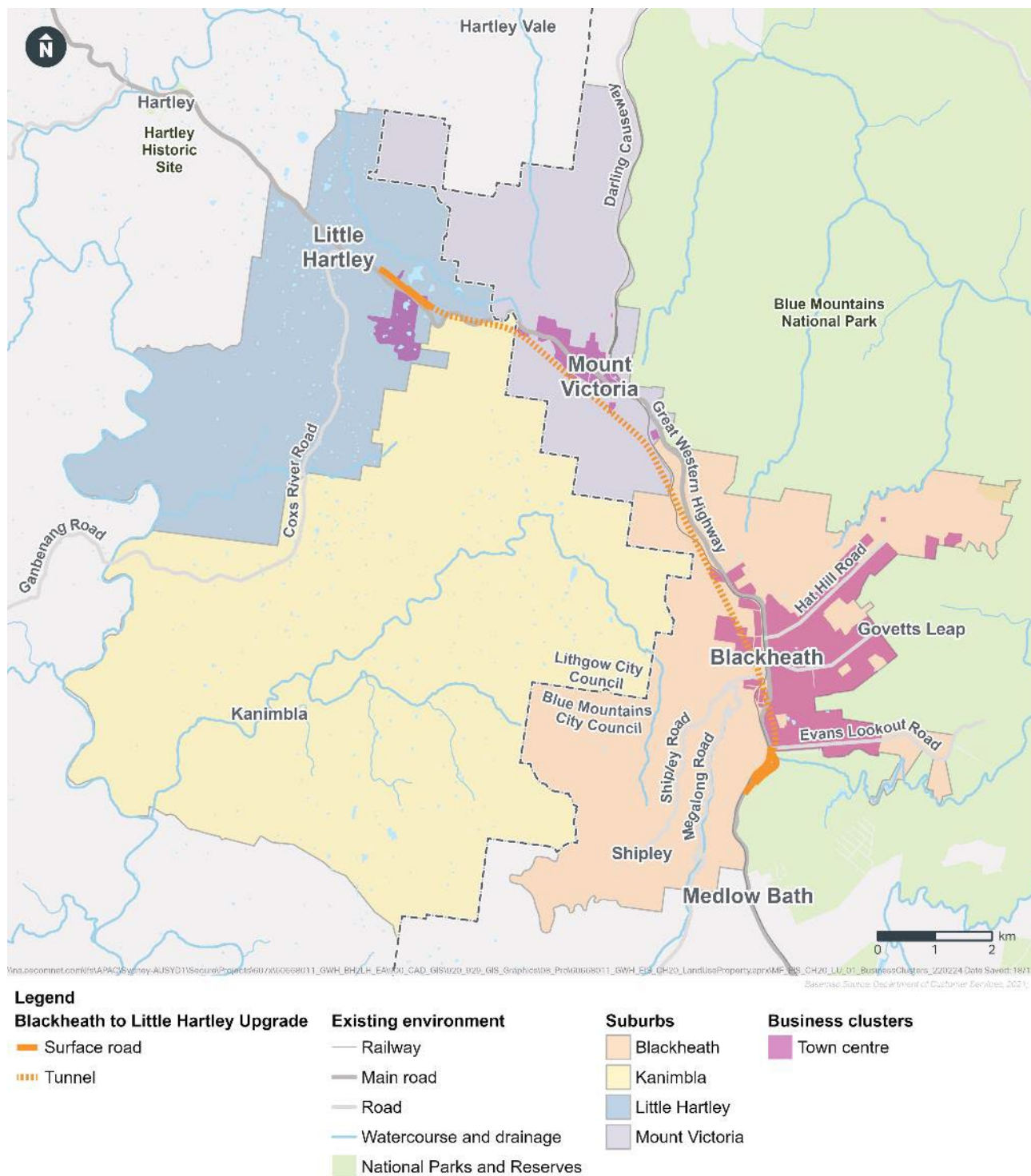


Figure 20-1 Town centres within the study area

## 20.2.2 Economic context

For the purposes of the economic impact assessment, the regional area covering the Blue Mountains and Lithgow local government areas (LGAs) has been considered to represent the expected area of influence related to the project. A summary of the existing economic environment of the regional area is provided in Figure 20-2.

# ECONOMIC CONTEXT OF THE REGIONAL AREA

**1.22%**

of NSW's population

Total population of regional area is 100,296



**3.2 million**  
domestic day visitors

to the Blue Mountains National Park in 2018



Almost \$800 million in tourist expenditure in year 2018



## TOP THREE EMPLOYERS IN THE REGIONAL AREA



Healthcare & social assistance



Accommodation & food services



Education & training industries



**Mining**

Rental, hiring & real estate services

Make up 30% of total value added in the regional area



**24,255**  
full time equivalent workers employed in regional area



Most businesses have less than **20 employees**

Figure 20-2 Economic context of the regional area



### 20.2.3 Land use and property context

The project would be located on land within the Blue Mountains and Lithgow LGAs. Land use zoning around the project is set by the following environmental planning instruments:

- Blue Mountains Local Environmental Plan 2015 (Blue Mountains LEP 2015)
- Lithgow Local Environmental Plan 2014 (Lithgow LEP 2014).

For the purposes of the land use and property assessment, the project has been divided into three sections based on existing land use as follows and described below:

- Blackheath
- Blackheath to Mount Victoria
- Mount Victoria to Little Hartley.

The project is located within the Sydney Drinking Water Catchment and partially located within the Blue Mountains Special Area at Blackheath, which lie within the larger Hawkesbury-Nepean River catchment as shown in Chapter 14 (Surface water and flooding). Land within these catchments plays an important role in capturing drinking water for Greater Sydney.

The NSW Exploration and Mining Titles database (Department of Regional NSW, 2019) has been reviewed. No exploration or mining licences are located within the project's construction footprint.

One mining licence (ML 259) applies to a small area of land about 220 metres south of the Little Hartley construction footprint. This mining licence covers an area of around 11 hectares in which mining activities for clay and shale minerals are currently carried out. The licence was renewed on 18 August 2018 and is due to expire on 18 August 2039.

Land subject to the mining area would not be impacted by construction or operation of the project.

#### **Blackheath**

Land use zones at Blackheath are defined under the Blue Mountains LEP 2015 as shown in Figure 20-3. The majority of land within this area is characterised by Zone E1-E4 denoting various conservation zones.

The Blackheath landscape is dominated by the Great Western Highway alignment, a two lane road running through the middle of the town. Blackheath Station is located in the town centre, west of the Great Western Highway. The rail line servicing Blackheath Station runs in a north-south direction at this location, following a similar alignment to the Great Western Highway.

The current land uses generally comprise commercial properties located in the Blackheath town centre (see Table 20-1). Beyond the town centre is predominately low density residential with small pockets of medium density residential land uses. The majority of residential properties consist of one and two story detached dwellings. A small area of industrial land use is located adjacent to Blackheath Station, consisting of a mechanical and various other businesses.

Several areas of public recreation are located just outside of the town centre including Campbell Rhododendron Gardens, Blackheath Memorial Park, Blackheath Oval, Whitley Park, Sutton Park and Blackheath Gardens. The Blue Mountains National Park is located east of the Great Western Highway and Blackheath Station is a dominant feature of the Blackheath landscape.

Around Blackheath, the project would affect land previously reserved under the *National Parks and Wildlife Act 1974* (NPW Act) as part of the Blue Mountains National Park, zoned as C1 national parks and nature reserves. This area of National Park was revoked by Act of Parliament in August 2022 and land in this area is now zoned as SP2 infrastructure (see Figure 20-3). Details of the National Park revocation are provided in Table 20-3 and a discussion of impacts resulting from this revocation process is provided in Section 20.3.

Changes in land use associated with the Great Western Highway East – Katoomba to Blackheath Upgrade (Katoomba to Blackheath Upgrade) at Blackheath form the baseline environment considered at Blackheath. For further information on the baseline environment, refer to Chapter 5 (Construction).





## **Blackheath to Mount Victoria**

Land use zones between Blackheath and Mount Victoria are defined under the Blue Mountains LEP 2015 as shown in Figure 20-4.

The vast majority of this area is made up of the Blue Mountains National Park and other nature reserves and recreational areas. This area also includes the Great Western Highway, a two lane road running from the southeast to the northwest through the middle of Mount Victoria, and Mount Victoria Station located around 300 metres north of the existing Great Western Highway alignment.

The land use in this area is consistent with the semi-rural character of Mount Victoria. Upon the approach to Mount Victoria town centre, the Great Western Highway alignment is bordered to the east by the Blue Mountains National Park and other surrounding bushland. Within the Mount Victoria town centre, low density residential and commercial land uses adjoin the Great Western Highway. The majority of residential properties consist of one and two story detached dwellings. Commercial land uses are described in Table 20-1.

Public recreation areas are located at Browntown Oval and Mount Victoria Memorial Park. Mount Victoria Public School is located 150 metres west of the Great Western Highway and places of worship are also located along the road.

The Blue Mountains National Park is a dominant feature at this location, bordering the Great Western Highway to the east along with environmental conservation areas surrounding the Great Western Highway and Mount Victoria town centre.

## **Mount Victoria to Little Hartley**

Land use zones around Mount Victoria are defined by the Blue Mountains LEP 2015 and land use zones around Little Hartley are defined by the Lithgow LEP 2014 as shown in Figure 20-5.

The land use in this area is generally consistent with the rural character of Little Hartley, with the majority of the section characterised by environmental conservation zones.

The Great Western Highway is a dominant feature of the landscape, with some residential and commercial properties either side of the alignment at Little Hartley. Residential properties within this section are detached, single story dwellings and are primarily located on larger pieces of land resulting in the properties being well set back from the road. Commercial properties are described in Table 20-1.

A large area designated as primary production is present to the north of the Great Western Highway, with large lot residential land use present in the western portion of this section. Public recreation between Mount Victoria and Little Hartley includes Mitchell Ridge Lookout.

Changes in land use associated with the Great Western Highway Upgrade Program – Little Hartley to Lithgow (West Section) (Little Hartley to Lithgow Upgrade) form the baseline environment considered at Little Hartley. The Little Hartley to Lithgow Upgrade would occupy land zoned as SP2 infrastructure in the future. For further information on the baseline environment, refer to Chapter 5 (Construction).

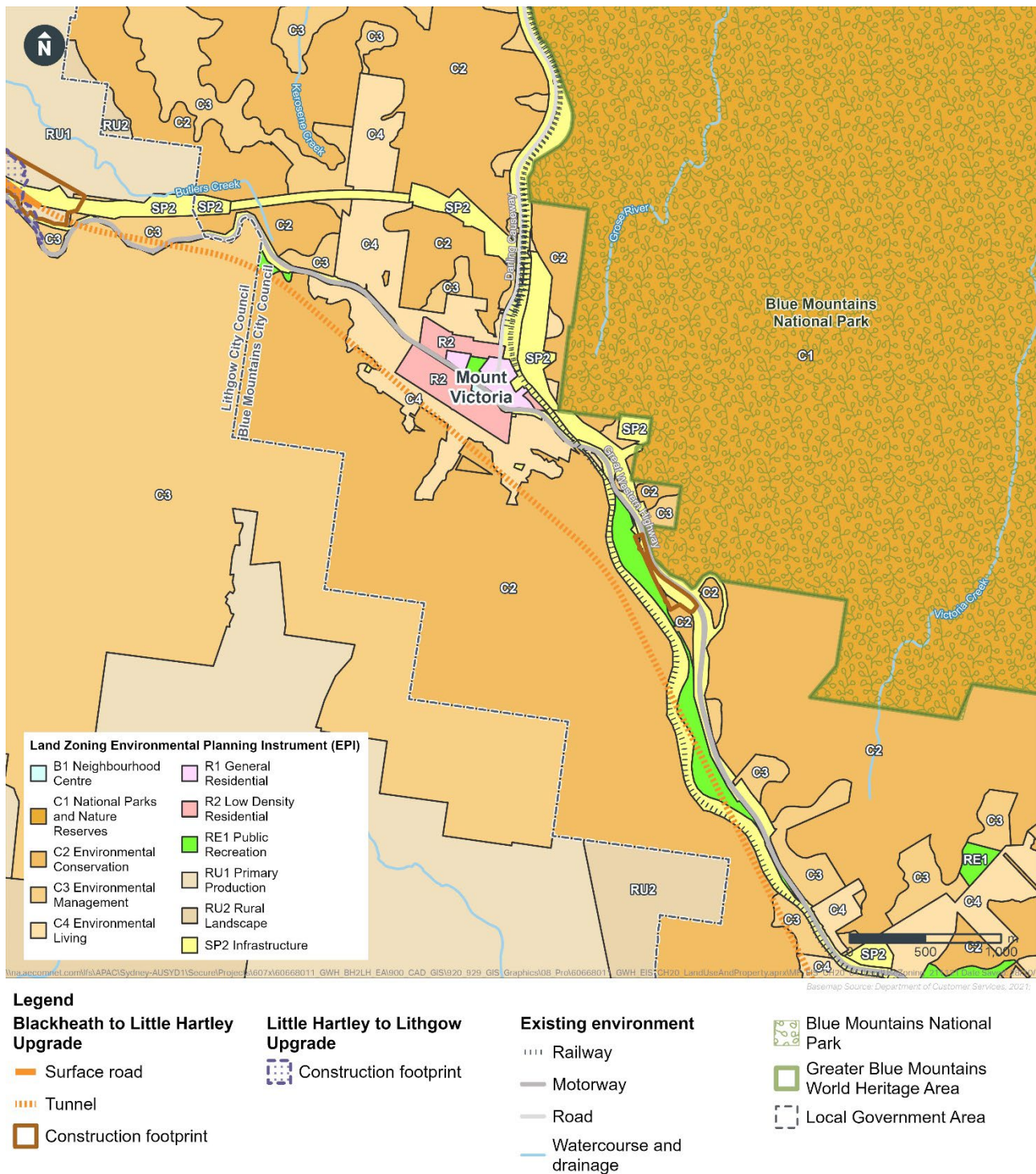


Figure 20-4 Land use zoning between Blackheath and Mount Victoria

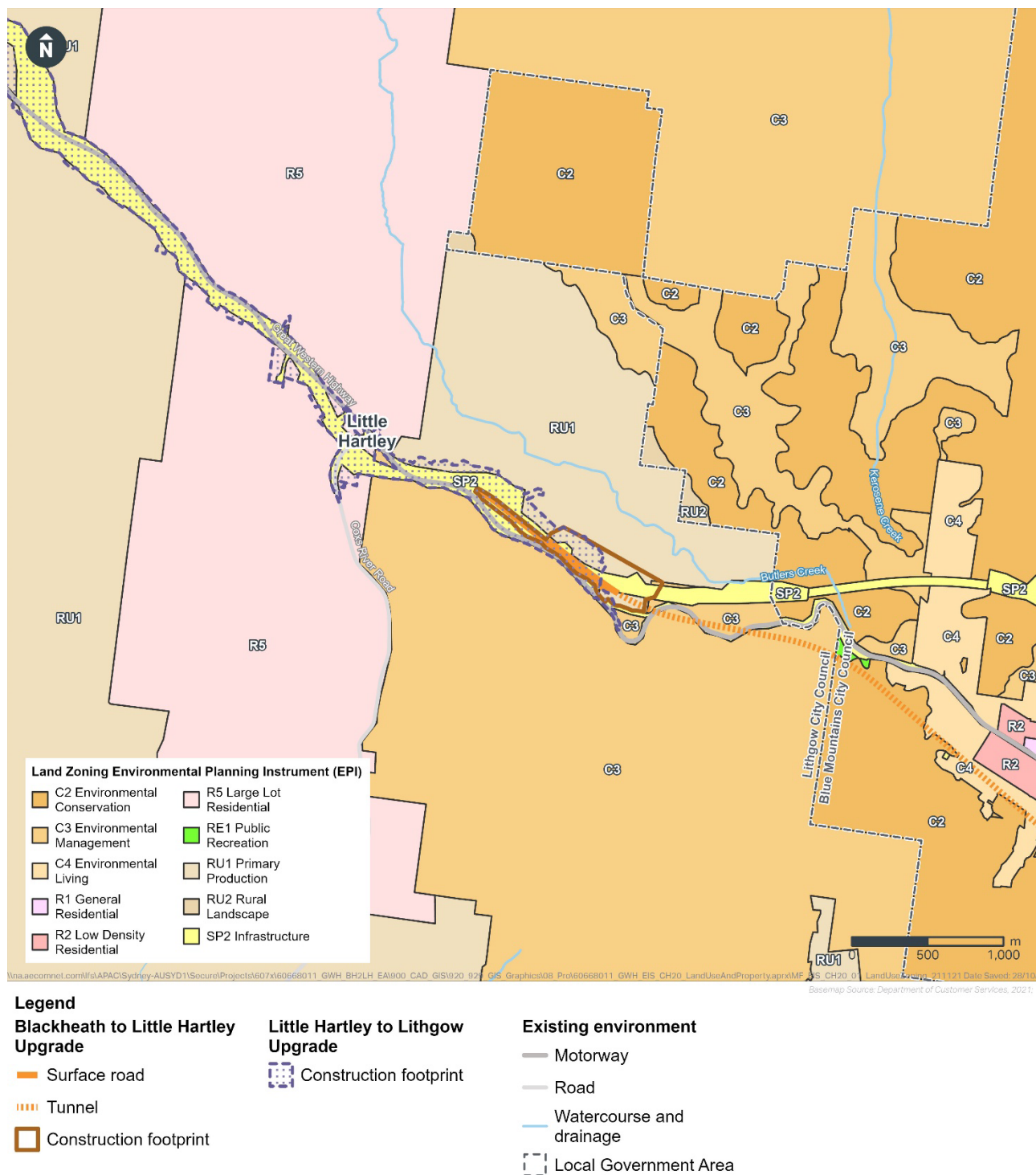


Figure 20-5 Land use zoning between Mount Victoria and Little Hartley

## 20.3 National Park revocation

As discussed above, at Blackheath part of the project and part of the Katoomba to Blackheath Upgrade traverses land previously reserved under the NPW Act as part of the Blue Mountains National Park. This part of the National Park was revoked by Act of Parliament in August 2022, and transfer of this land to Transport for NSW (Transport) is in progress.



This section discusses the potential to impact on the biological, cultural and other values protected by the NPW Act in relation to the revocation process, including but not limited to:

- biodiversity values associated with the Greater Blue Mountains World Heritage Area listing
- cultural heritage values associated with Aboriginal occupation and past recreation and land use
- other values including recreation, public use, and park management assets.

As discussed in Chapter 12 (Biodiversity), the land subject to revocation is currently affected by a high degree of edge effects due to its close proximity to the existing Great Western Highway. Areas of retained native vegetation adjacent the land subject to revocation are known and predicted to support the same native vegetation and threatened ecological communities as those directly impacted by the project. Potential impacts to the NSW reserve system as a result the revocation of National Park land are therefore considered minimal.

Based on the assessments provided in Chapter 12 (Biodiversity), Chapter 16 (Aboriginal cultural heritage) and Chapter 17 (Non-Aboriginal heritage), potential impacts to biodiversity values and cultural heritage values are not anticipated from the project. The revoked land is not publicly accessible due to its location within the Water NSW Blackheath Special Catchment Area so there would be no associated loss of recreation land or public use.

Environmental input at an early stage of design development for the project has led to a design which minimises potential impacts including to the Blue Mountains National Park. Alternative options to avoid National Park would have resulted in substantial property acquisition and longer construction timeframes, inconsistent with the project objectives described in Chapter 3 (Project alternatives and options).

Compensatory lands will be acquired by Transport and transferred to National Parks and Wildlife Services (NPWS) ownership in consultation with NPWS to offset the land revoked due to the project.

## **20.4 Potential impacts – construction**

### **20.4.1 Local businesses**

The potential impact on local businesses as a result of additional construction traffic generated by the project is expected to be relatively minor. Average vehicle travel time in 2026 is estimated to be around three per cent higher due to project construction, compared to a without project scenario. Therefore, freight and commercial vehicle transport costs are not expected to be greatly affected (refer to Section 8.3.1 of Chapter 8 (Transport and traffic)).

The construction sites would be located over one kilometre away from town centres in Blackheath and Mount Victoria. The indicative construction strategy has been developed to minimise the number of heavy vehicles that need to travel through the Blackheath and Mount Victoria townships by focusing spoil haulage and TBM support activities from Little Hartley. Based on the location of construction sites relative to town centres, it is expected that on-street parking supply in town centres would not be substantially affected during construction (refer to Section 4.1.2 of Appendix P (Technical report – Economics and business)). Construction vehicle movements are therefore unlikely to affect access to businesses either by vehicle or active transport.

The potential for business impacts during construction, such as an increase in travel time or increased noise, would be more than offset by the anticipated increase in economic activity related to investment by construction workers in the local area. Transport has developed a Skills, Employment and Industry Development Strategy for the Upgrade Program which will be applied to the project. This strategy will identify measures to provide early notification and information to local business to allow time to prepare for and respond to changes in traffic (see Section 20.6.2).



No businesses would be acquired as part of the project. Potential benefits that would be provided to businesses in the local area as a result of project construction could include:

- accommodation – temporary uplift in local commercial accommodation occupancy during the construction phase
- retail – temporary uplift in revenues of retail business as a result of spending from construction workers during the construction phase of the project (i.e., workforce spending)
- construction – temporary uplift to revenues for local construction related businesses located within the regional area.

### 20.4.2 Regional economy

During construction, there is expected to be an increase in economic activity within the regional area. The capital expenditure required for the project would create increased opportunities for both businesses and workers associated with construction, while also resulting in flow-on impacts to other parts of the local economy, including for local businesses and the local workforce. The Skills, Employment and Industry Development Strategy for the Upgrade Program includes project specific opportunities for upskilling and training of the local workforce (see Section 20.6.2).

Predicted economic impacts during construction as a result of the project's expected capital expenditure including gross output (market value of goods and services produced) and value added (market value of goods and services produced after deducting the cost of goods and services used) are shown in Figure 20-6.

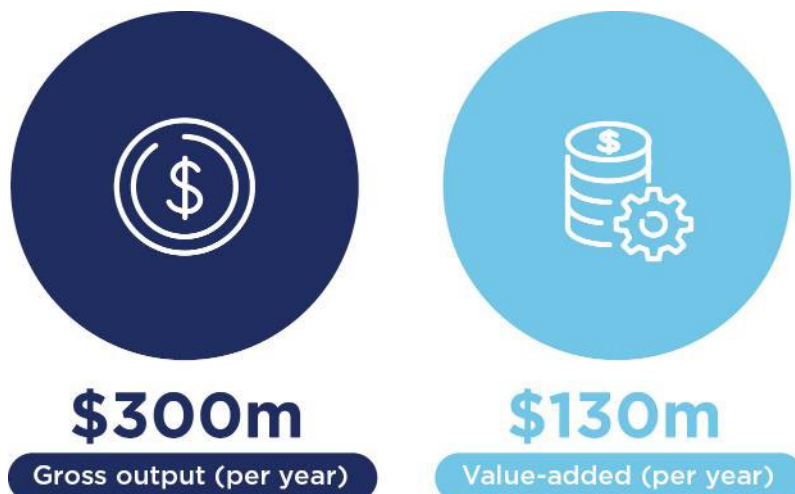


Figure 20-6 Economic impacts during construction (2024 to 2031)

### 20.4.3 Land use

The project has the potential to impact land use where construction work is required. These impacts would be temporary in nature, except for sites that are subsequently used for operational infrastructure (see Section 20.5.3).

By-products of certain land uses such as agriculture and infrastructure developments have the potential to impact the quality of Greater Sydney's drinking water. Potential impacts to water quality are discussed in Chapter 14 (Surface water and flooding).

Table 20-2 outlines the potential land use impacts at each construction site required for the project.

Table 20-2 Potential land use impacts during construction

Construction site	Potential impacts on land use during construction
Blackheath	The Blackheath construction site would be located on land zoned SP2 infrastructure following the revocation of the National Park in August 2022. The use of this construction site would not impact on the existing land use as it would be zoned for infrastructure related uses, as outlined in Section 20.2.3.
Soldiers Pinch	The Soldiers Pinch construction site would temporarily occupy land zoned for infrastructure, public recreation, and environmental conservation. The location and layout of the construction site has been designed to specifically avoid impacts to Browntown oval (refer to Chapter 3 (Project alternatives and options)). Other areas of land zoned as public recreation within the Soldiers Pinch construction site would be required to accommodate access arrangements to the site. The construction site would temporarily require the use of around 0.65 ha of Crown land zoned for public recreation and environmental conservation over the duration of construction works at the Soldiers Pinch construction site.
Little Hartley	The Little Hartley construction site would occupy land zoned for infrastructure, primary production and environmental management. This construction site would temporarily impact around 0.6 hectares of Crown land zoned for primary production and infrastructure as well as other areas of primary production and environmental management for the duration of construction works at the Little Hartley construction site.

#### 20.4.4 Property

##### Property acquisition and leasing

The project has been designed and developed to minimise property acquisitions and has prioritised the use of Transport land. Notwithstanding this, some temporary use and permanent acquisition would be required. All property acquisitions required for the project would be carried out in accordance with the NSW *Land Acquisition (Just Terms Compensation) Act 1991*, and in accordance with the land acquisition reforms announced by the NSW Government in 2016.

There would be no residential property acquisition at Blackheath or Soldiers Pinch. There would be one residential property and land from a second private property acquired at Little Hartley as part of the Little Hartley to Lithgow Upgrade that would also be required for the project.

The water supply pipeline between the Little Hartley construction footprint and Lithgow would be located wholly within the existing and/or new road reserves and the indicative alignment has been designed to avoid impacts on property and land use.

Temporary use of properties would be managed through leasing arrangements or property acquisition should lease arrangements not be practical. 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 respond to any community concerns. Affected landowners will be consulted to determine appropriate measures to maintain property access and the potential need to relocate or alter infrastructure on the property (see Section 20.6.2).

At Blackheath, part of the project and part of the Katoomba to Blackheath Upgrade traverses land previously reserved under the NPW Act as part of the Blue Mountains National Park. This part of the National Park was revoked in August 2022 by Act of Parliament and transfer of this land to Transport is in progress (see Section 20.3 and refer to Appendix B (Statutory compliance)). As a result, the project would not directly impact the Blue Mountains National Park.

Several properties required for the project are subject to unresolved Aboriginal Land Claims. The majority of these relate to substratum acquisition, with one unresolved claim over a partial surface construction lease at Soldiers Pinch (the area shaded green as part of Lot7300/DP1129198 in Figure 20-8) and one unresolved claim over a partial surface construction lease at Little Hartley (Lot7313/DP1162788 shown in Figure 20-9). These land claims under the *Aboriginal Land Rights Act 1983* (NSW) do not necessarily denote Aboriginal cultural or scientific archaeological values. Land Councils are not required to establish cultural association with lands when making land claims under the *Aboriginal Land Rights Act 1983*. The use of this surface land would be for the duration of construction and would not impact the extent of Crown land available for Aboriginal land claims.

The indicative property acquisition and construction leases that would be required to construct and operate the project are summarised in Table 20-3 to Table 20-5 and shown in Figure 20-7 to Figure 20-9. The potential impacts of property acquisition to people are further discussed in Chapter 19 (Social impacts).

### **Blackheath**

Property acquisition at Blackheath relates to the National Park revocation required for both the project and the Katoomba to Blackheath Upgrade (see Section 20.3). The revoked area is around 26 hectares in total. Around 17 hectares of this area lies within the Blackheath construction footprint.

Historically, the land subject to National Parks revocation had been subdivided by Blue Mountains City Council prior to its transfer to the NPWS, which is why there are multiple Lot/DPs presented in Figure 20-7. In addition to the revocation of part of the National Park land, acquisition of one surface property owned by Blue Mountains City Council would be required at Blackheath. This property was inadvertently omitted from the historic land transfer between Blue Mountains City Council and the NPWS and remained in the ownership of Council. This meant that the property was not owned by the NPWS and therefore was not included in the recent revocation process.

Details of the property acquisition required at Blackheath are summarised in Table 20-3.

Table 20-3 Property acquisition at Blackheath

Ownership	Lot/DP	Acquisition type	Construction lease or permanent
NPWS	National Park revocation	Total <sup>1</sup>	Permanent
Blue Mountains City Council	338/8484	Total	Permanent

Table notes:

1. Refers to the nominated revocation area which involves partial acquisition of Lot 3, 261, 262, 263 and 12 towards the southern extent of the Blackheath construction footprint, and total acquisition of the parcels historically owned by council.



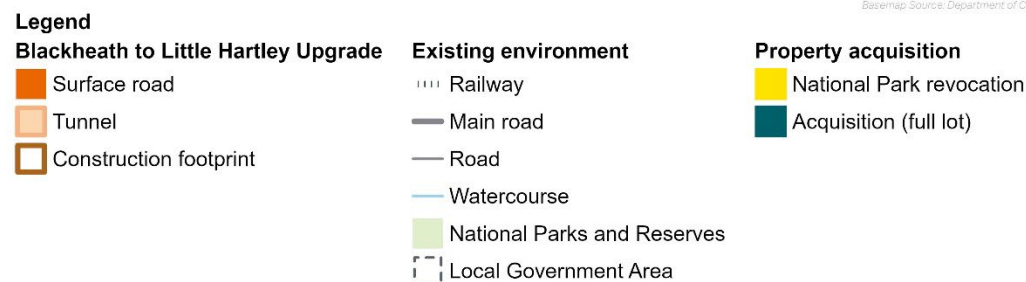
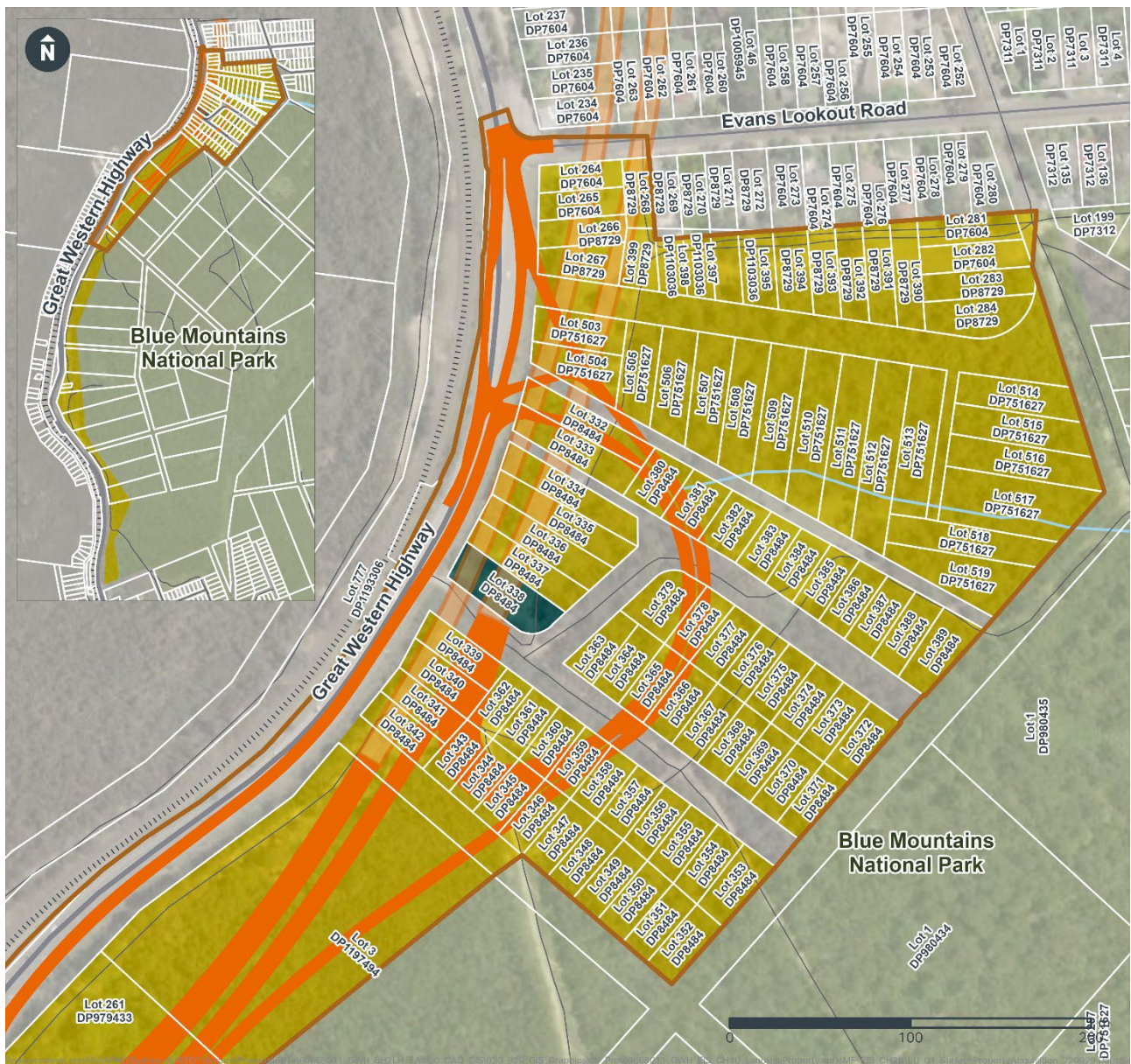


Figure 20-7 Property acquisition requirements at Blackheath

### Soldiers Pinch

The majority of the Soldiers Pinch construction site is part of the Great Western Highway road reserve and would not need to be acquired. One partial construction lease at Soldiers Pinch would be required to accommodate the construction of a mid-point access shaft, around 0.65 hectares in area (see Figure 20-8).

Details of the construction lease required at Soldiers Pinch are summarised in Table 20-4.



Table 20-4 Property acquisition at Soldiers Pinch

Ownership	Lot/DP	Acquisition type	Construction lease or permanent
State of NSW (Crown Land)	7300/1129198 <sup>1</sup>	Partial	Construction lease

Table notes:

1. Lot/DP subject to an Aboriginal Land Claim and Aboriginal Land Use Agreement



Figure 20-8 Construction lease requirements at Soldiers Pinch

## Little Hartley

As discussed in Section 20.2.3, property acquisition at Little Hartley is required for the project and the Little Hartley to Lithgow Upgrade. At Little Hartley, the vast majority of property requirements for both projects are common (overlap) and acquisition requirements have been considered at an Upgrade Program level.

Property requirements at Little Hartley for the Little Hartley to Lithgow Upgrade would affect private property (across multiple Lot/DPs) owned by two landowners. Property requirements for the project would include a construction lease of part of a property owned by Blue Mountains City Council (around 0.6 hectares). Other property affected by the project would already be acquired or subject to construction lease as part of the Little Hartley to Lithgow Upgrade (see Figure 20-9).

Crown Roads are located within the Little Hartley construction footprint adjacent to Lot1/DP587763 (see Figure 20-9). Currently, the project is not required to acquire these crown roads, therefore they are not shaded in Figure 20-9 or included in Table 20-5. Under section 151 of the *Roads Act 1993*, Transport for NSW may, with the consent of the Minister for Roads, Maritime and Freight transfer a specified Crown Road to Council by order published in the Gazette.

The total area of acquisition required at Little Hartley, including properties acquired as part of the Little Hartley to Lithgow Upgrade, is around 34 hectares. Around 20 hectares of this area lies within the Little Hartley construction footprint for the project.

Details of the property acquisition required at Little Hartley are summarised in Table 20-5.

Table 20-5 Property acquisition at Little Hartley

Ownership	Lot/DP	Acquisition type	Acquired by	Construction lease or permanent
Private	1/840442	Partial	Little Hartley to Lithgow Upgrade	Permanent
	1/840442	Partial	Little Hartley to Lithgow Upgrade	Construction lease
Private	1/587763	Partial	Little Hartley to Lithgow Upgrade	Construction lease
Private	1/587763	Partial	Little Hartley to Lithgow Upgrade	Permanent
	4/1130411	Partial	Little Hartley to Lithgow Upgrade	Permanent
	3/1130411	Partial	Little Hartley to Lithgow Upgrade	Permanent
	2/1130411	Partial	Little Hartley to Lithgow Upgrade	Permanent
Private	360/587763	Total	Little Hartley to Lithgow Upgrade	Permanent
State of NSW (Crown Land)	7313/1162788 <sup>1</sup>	Partial	The project	Construction lease

Table notes:

1. Lot/DP subject to an Aboriginal Land Claim





Figure 20-9 Property acquisition and construction lease requirements at Little Hartley

### Acquisition of substratum

The construction and operation of the project would require the acquisition of land below the surface of the ground to accommodate the tunnels (substratum acquisition) as shown in Figure 20-10.

This substratum acquisition would consist of a stratum acquisition envelope around the tunnels, including any associated ground support area that may be required. In some circumstances, the introduction of the tunnels has the potential to limit development above the tunnels, for example an underground carpark. However, this is generally only the case where the tunnel depth is shallow, near tunnel portals. Given the existing land use of the area and limited potential for future development particularly around the tunnel portals, this impact would be unlikely to occur. Around

295 properties, the majority of which are located in Blackheath, would be subject to substratum acquisition for the project.

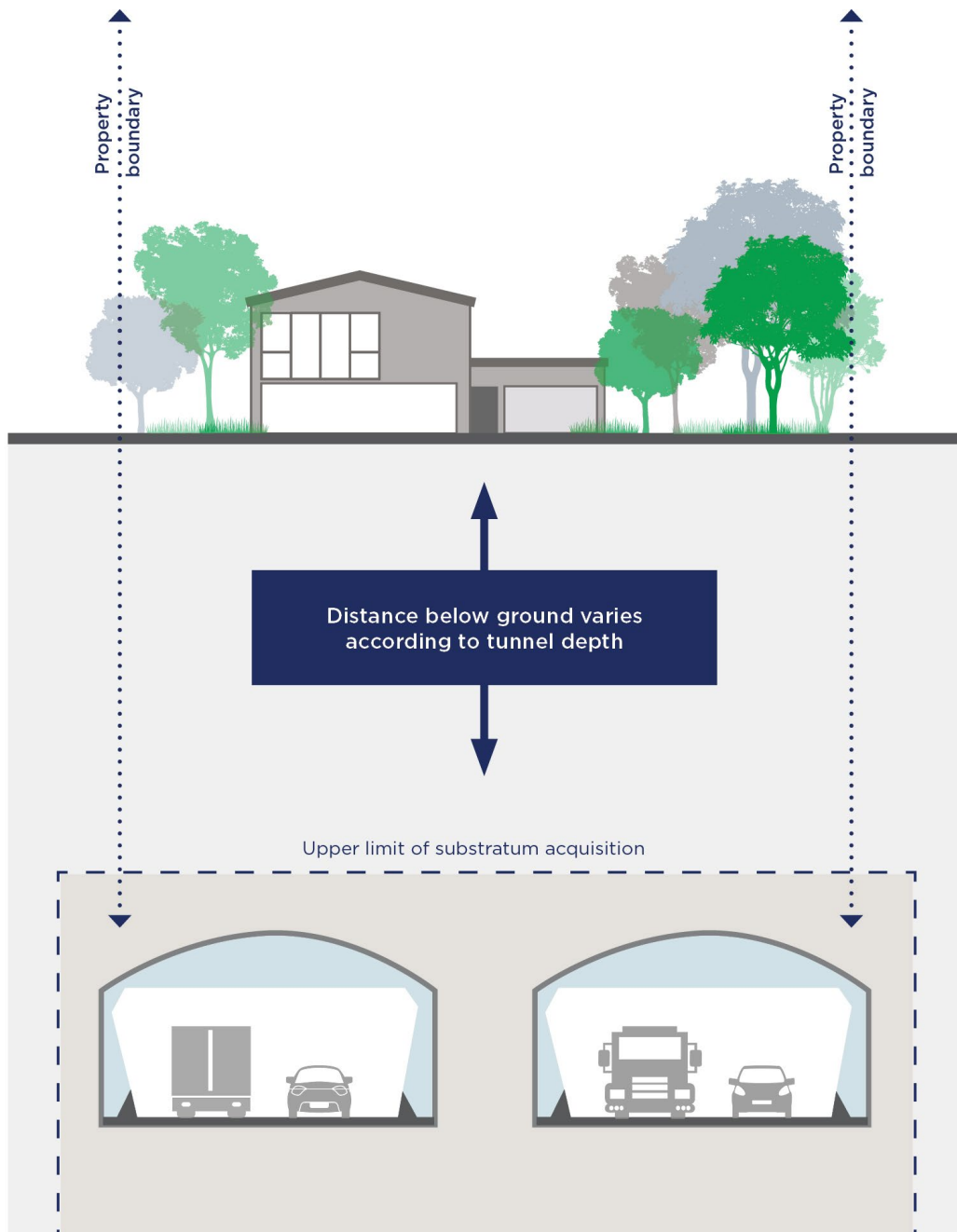


Figure 20-10 Example of substratum acquisition

### Ground movement impacts

Ground movement (or settlement) due to excavation or disturbance below ground may present a risk to the stability of nearby buildings and other structures during construction of the project.

An assessment of potential ground movement impacts associated with the project is provided in Chapter 13 (Groundwater and geology). The assessment identified negligible risk of settlement impacts to buildings. Potential impacts to property and structures as a result of ground movement impacts is therefore considered highly unlikely during both construction and operation of the project. Further discussion regarding ground movement and potential settlement impacts is included in Chapter 13 (Groundwater and geology). Assessment of potential ground movement impacts on heritage items is included in Chapter 17 (Non-Aboriginal heritage).



## Protected and sensitive lands

Potential impacts to protected and environmentally sensitive lands from the project are outlined in Table 20-6.

Table 20-6 Potential impacts of the project on environmentally sensitive land and processes

Environmentally sensitive land and/or process	Where addressed in the EIS
Protected areas (including land and water) managed and/or reserved under the NPW Act	<p>The project would not directly impact on protected areas managed and/or reserved under the NPW Act.</p> <p>Potential indirect impacts include:</p> <ul style="list-style-type: none"> <li>• edge effects (refer to Chapter 12 (Biodiversity))</li> <li>• impacts to groundwater and groundwater dependent ecosystems (refer to Chapter 13 (Groundwater and geology) and Chapter 12 (Biodiversity))</li> <li>• impacts to water quality and streamflow (refer to Chapter 14 (Surface water and flooding)).</li> </ul> <p>The National Park revocation process is discussed in Section 20.3.</p>
Key Fish Habitat as mapped and defined in accordance with the <i>Fisheries Management Act</i> 1994 (FM Act)	<p>The project has the potential to indirectly impact water quality and flows at watercourses mapped as Key Fish Habitat under the FM Act. Potential impacts to water quality are discussed in Chapter 14 (Surface water and flooding), and potential impacts to aquatic ecology are discussed in Chapter 12 (Biodiversity).</p>
Waterfront land as defined in the <i>Water Management Act</i> 2000	<p>The project is not anticipated to impact on any waterfront land. Potential impacts on surface water are discussed in Chapter 14 (Surface water and flooding).</p>
Land or waters identified as Critical Habitat under the FM Act or <i>Environment Protection and Biodiversity Conservation Act</i> 1999 (EPBC Act) or areas of outstanding biodiversity value under the <i>Biodiversity Conservation Act</i> 2016 (BC Act)	<p>Some areas impacted by the project may qualify as Critical Habitat under the FM Act or EPBC Act. Impacts to Critical Habitat are detailed in Appendix H (Technical report – Biodiversity), and potential impacts to threatened fauna are summarised in Chapter 12 (Biodiversity). There are no areas of outstanding biodiversity value or areas of Critical Habitat under the FM Act or EPBC Act within the biodiversity assessment area.</p> <p>The Greater Blue Mountains World Heritage Area has not been declared an area of outstanding biodiversity value. Though the values of the Greater Blue Mountains World Heritage Area relate to high quality vegetation and threatened species, along with Aboriginal cultural heritage values, the project is not anticipated to impact these values (refer to Chapter 12 (Biodiversity) and Chapter 16 (Aboriginal cultural heritage)).</p>
Biodiversity stewardship sites, private conservation lands and other lands identified as offsets	<p>The project does not impact lands identified as offsets. Potential biodiversity impacts are discussed in Chapter 12 (Biodiversity).</p>

Environmentally sensitive land and/or process	Where addressed in the EIS
Schedule 1 Special Areas under the Water NSW Regulation 2020	The project is partially located within the Blue Mountains Special Area at Blackheath. Potential impacts are discussed in Chapter 14 (Surface water and flooding). Access to the Sydney Drinking Water Catchment at Blackheath via B6 Lake Medlow Trail (fire trail accessed via Valley View Road) would be maintained during construction.

#### 20.4.5 Impacts adjacent to National Park

Developments that may impact on land managed by NPWS must assess the impact of the development against the Developments adjacent to National Parks and Wildlife Service lands: Guidelines for consent and planning authorities (the NPWS guidelines) (NPWS, 2020).

Table 20-7 provides a summary of how the projects related to issues to be considered when assessing proposals adjacent to NPWS parks. These potential impacts are relevant to the Blackheath construction site which is located near the Blue Mountains National Park.

Table 20-7 NPWS guidelines for development

Issue for consideration	Project compliance
Erosion and sediment control	Potential impacts from the project on erosion and sedimentation would be negligible (refer to Chapter 14 (Surface water and flooding)).
Stormwater runoff	The project complies with Neutral or Beneficial Effect on Water Quality (NorBE) requirements for discharge into the Sydney Drinking Water Catchment, and potential flooding impacts would be minor and temporary in nature (refer to Chapter 14 (Surface water and flooding)).
Wastewater	The project complies with NorBE requirements for discharge into the Sydney Drinking Water Catchment. Wastewater is discussed in Chapter 21 (Resource use and waste management).
Pests, weeds and edge effects	There is the potential for edge effects including weed spread as a result of project construction. Potential impacts along with mitigation measures are discussed in Chapter 12 (Biodiversity).
Fire and the location of asset protection zones	Fire risk has been assessed for the project and is discussed in Chapter 22 (Hazards and risk). Operational ancillary facilities would be located and designed taking into account Planning for Bush Fire Protection (NSW Rural Fire Service, 2019) and AS3959-2018 guidelines which prescribe minimum setback distances for infrastructure near bushfire prone land.
Boundary encroachments and access through NPWS land	No public access to construction sites would be permitted and access to construction sites would not traverse NPWS land. Construction access and footprints are defined in Chapter 5 (Construction).
Visual, odour, noise, vibration, air quality and amenity impacts	Potential visual, odour, noise, vibration and air quality are further discussed in Chapter 18 (Landscape and visual), Chapter 11 (Noise and vibration) and Chapter 9 (Air quality).

Issue for consideration	Project compliance
Threats to ecological connectivity and groundwater-dependent ecosystems	The project is unlikely to fragment movement corridors for fauna. The project has the potential to indirectly impact groundwater dependent ecosystems. Potential impacts are further discussed in Chapter 12 (Biodiversity) and Chapter 13 (Groundwater and geology).
Cultural heritage	No direct Aboriginal cultural heritage impacts are anticipated as a result of the project. The project may result in potential indirect visual impacts to heritage items from the addition of operational infrastructure at the tunnel portals. These are discussed in Chapter 16 (Aboriginal cultural heritage) and Chapter 17 (Non-Aboriginal heritage).
Access to parks	Access to the Blue Mountains National Park at Blackheath via B6 Lake Medlow Trail (fire trail accessed via Valley View Road) would be maintained during construction.

## 20.5 Potential impacts – operation

### 20.5.1 Local businesses

#### Tourism and accommodation businesses

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 region. It is estimated the project could help to increase tourism expenditure in the region by an average of around \$8 million per year due to improved accessibility and increased attractiveness of tourism destinations within the regional area (refer to Section 4.2.1 of Appendix P (Technical report – Economics and business)).

Accommodation businesses may benefit from an increase in demand due to improvements in amenity associated with decreased traffic on the highway (refer to Section 8.4.1 of Chapter 8 (Transport and traffic)). However, accommodation requirements for employees required to support operation of the project are not expected to have a material impact on accommodation businesses within the regional study area.

#### Retail businesses

During operation, a substantial proportion of vehicles would travel via the project (refer to Section 8.4.1 of Chapter 8 (Transport and traffic)), thereby reducing their opportunity to visit business in bypassed areas.

In Blackheath and Mount Victoria, businesses such as petrol stations, take-away food businesses and other retail stores would be most likely to experience a reduction in business activity due to reliance on passing trade. Little Hartley may be more susceptible to potential impacts due to its smaller population and higher relative reliance on passing trade (refer to Section 4.2.2.2 of Appendix P (Technical report - Economics and business)).

Downturns in passing trade are expected to be short-term, and the long-term impacts on passing trade are generally positive (Parolin 2011; Parolin, 2012) (refer to Section 4.2.2 of Appendix P (Technical report – Economics and business)). Transport will identify opportunities such as the development and implementation of a directional signage strategy for the project, which would encourage visitors to areas that are bypassed including businesses (see Section 20.6.2).

#### Improved productivity

Operation of the project would help address traffic congestion and travel time concerns held by the community by reducing traffic and congestion on the existing highway, taking trucks off the surface roads, and reducing the risk of accidents (refer to Section 8.4.1 of Chapter 8 (Transport and

traffic)). This would also help to improve travel times for both local traffic, and freight traffic using the project, which would provide productivity improvements for business and freight related road users. It is also likely that the project could result in improved access to more productive jobs for local residents, while also improving access to the region for other workers.

### 20.5.2 Regional economy

Once operational, the project is expected to provide an ongoing economic impact on the regional economy through three key drivers outlined in Figure 20-11.



Figure 20-11 Key economic impact drivers during operation of the project

It is estimated that during the first ten years of operations, the project would increase total gross output in the regional area by an average of around \$15 million per year, with total value added in the region increasing by around \$8 million per year. This impact would be largely driven by the productivity uplift associated with business and freight related benefits and increased tourism spend within the regional area. This uplift is expected to be partly offset by a modest decline in passing trade activity, due to a reduction in local through traffic (refer to Appendix P (Technical report – Economics and business)).

The project would also contribute to a total reduction in the current route for high productivity vehicles over 20 metres in length by up to 100 kilometres between Sydney and Central West NSW, improving links between the national high productivity heavy vehicle network and Sydney.

In the first ten years of operation, it is estimated that the project would result in the economic impacts identified in Figure 20-12.

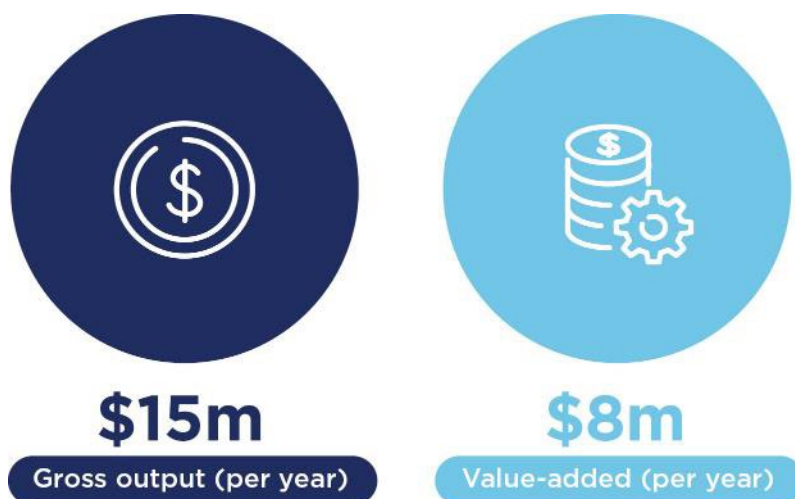


Figure 20-12 Economic impacts during operation (2030 to 2040)

### 20.5.3 Land use

Land use changes as a result of the project would occur largely in response to the physical introduction of permanent project infrastructure at Blackheath and Little Hartley. The location of operational infrastructure has been developed in consideration of existing land uses to minimise permanent impacts and is discussed further in Table 20-8.



Land used for construction of the project and which is not required to operate the project would be rehabilitated and returned to an equivalent state as soon as practicable following the completion of construction.

Table 20-8 Potential land use impacts during operation

Location	Potential impacts on land use during operation
Blackheath	Land occupied by the Blackheath construction site would continue to support operational infrastructure for the project including the tunnel operations facility, ventilation outlet (if required under the ventilation outlet option), operational maintenance parking, new surface roads and sediment and water quality infrastructure.  Operational infrastructure has been designed to be located as close to the tunnel as possible to minimise impacts to land use. The establishment of this infrastructure at this location would be consistent with land use zone objectives as it is zoned for infrastructure related uses.
	There are currently no building height restrictions applicable to land around the Blackheath portal area.
Soldiers Pinch	At the completion of construction, the residual land at Soldiers Pinch construction site would be rehabilitated and returned to an equivalent state. The land would be retained as road reserve and no impacts to land use during operation of the project are therefore anticipated at this location.
Little Hartley	At the completion of construction, part of the Little Hartley construction site (the area subject to construction lease) would be rehabilitated to its original state or as otherwise agreed with the landowner. The remainder of the site would be used to support operational requirements for the project including a water treatment plant, incident response management centre, ventilation outlet (if required under the ventilation outlet option), new surface roads, sediment and water quality basins and an electricity substation.  Operational infrastructure has been designed to be located as close to the tunnel as possible to minimise impacts to land use. The infrastructure at Little Hartley would be located on land previously occupied by the Little Hartley construction site zoned as primary production, environmental management and infrastructure (see Section 20.4.3)  The establishment of the water treatment plant and substation as permanent infrastructure would permanently change parts of the existing land use from primary production and environmental management to permanent project infrastructure. The remaining areas of land occupied by this infrastructure is zoned for infrastructure related purposes and is consistent with these land use zone objectives.
	There are currently no building height restrictions applicable to land around the Little Hartley portal area.

#### 20.5.4 Property

Property access would be maintained along the project alignment during operation.

Where necessary at Little Hartley, alternative access arrangements would be provided by the Little Hartley to Lithgow Upgrade to maintain access in consultation with the affected landowners.

## 20.6 Environmental mitigation measures

### 20.6.1 Performance outcomes

Performance outcomes for the project in relation to business, land use and property are listed in Table 20-9 and identify measurable performance-based standards for environmental management.

Table 20-9 Business, land use and property performance outcomes

SEARs desired performance outcome	Project performance outcome	Timing
The project minimises adverse impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land use activities, dwellings and infrastructure. The project maximises positive impact opportunities	Design and implement the project to provide a net positive property, businesses and land use outcome, including: <ul style="list-style-type: none"> <li>avoiding or minimising the environmental impacts of the project during construction and operation (refer to project objectives in other areas)</li> <li>minimising the construction and operational footprints of the project</li> <li>avoiding or minimising disruptions to local businesses during construction</li> <li>rehabilitating disturbed land that is not required for operational infrastructure to a state comparable with its pre-disturbance condition.</li> </ul>	Design, construction and operation

### 20.6.2 Mitigation measures

Mitigation measures to avoid, minimise or manage potential business, land use and property impacts as a result of the project are detailed in Table 20-10. A full list of mitigation measures for the project is provided in Appendix R (Compilation of environmental mitigation measures).

Table 20-10 Environmental mitigation measures – business, land use and property

ID	Mitigation measure	Timing
BU1	<p>The Skills, Employment and Industry Development Strategy for the Great Western Highway Upgrade Program will be applied to the project, with project-specific measures developed and implemented during construction of the project, including:</p> <ul style="list-style-type: none"> <li>opportunities to promote and deliver upskilling and training for the local workforce</li> <li>a strategy for jobs, diversity and business initiatives to achieve local economic and social outcomes in areas affected by the project</li> <li>a strategy, developed in consultation with the relevant local councils, to provide early notification and information to local business to allow time to prepare for and respond to changes in traffic during construction of the project</li> </ul> <p>Project-specific skills, employment and industry development measures will be identified and implemented taking into account the requirements of and to be complementary with the Social Impact Management Plan (SIMP) for the project (refer to environmental mitigation measure SI1).</p>	Construction

ID	Mitigation measure	Timing
BU2	Access to local businesses will be maintained during construction of the project. If existing access arrangements cannot be maintained, an acceptable alternative access will be provided in consultation with the affected business owner.	Construction
LU1	Land temporarily occupied during construction but not acquired for permanent operational infrastructure will be rehabilitated to a condition comparable to its pre-construction state or as otherwise agreed, in consultation with the relevant landowner.	Construction
LU2	Landowners whose properties will be affected by temporary occupation during construction or partial acquisition will be consulted to determine appropriate measures to maintain property access and the potential need to relocate or alter infrastructure on the property.	Construction