Appendix L

Socio-economic Impact Assessment

Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman

Socio-economic Impact Assessment

Roads and Maritime Services

NSW GOVERNMENT

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Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman

Socio-economic impact assessment

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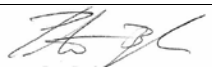
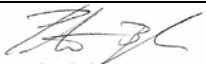
Rev.03	7-Nov-2018	Updated to reflect official naming convention	Peter Boyle	
Rev.04	9-Sep-2019	Updated to incorporate RMS review comments	Peter Boyle	
Rev.05	14-Feb-2020	Updated to reflect construction boundary modification	Peter Boyle	

Executive summary

Roads and Maritime Services (Roads and Maritime) is carrying out an assessment under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the duplication of about eight kilometres of the Barton Highway from about 700 metres south of the NSW/ACT border towards Murrumbateman, about 300 metres north of Kaveneys Road.

AECOM Australia Pty Ltd (AECOM) has been commissioned by Roads and Maritime to carry out a socio-economic impact assessment for the proposal to inform the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Review of Environmental Factors* (the 'Barton Highway Upgrade REF') (Roads and Maritime, 2020).

The objectives of the socio-economic impact assessment were to:

- Determine the potential socio-economic issues of the proposal and communities likely to be most affected by the proposal
- Describe the existing socio-economic environment of the study area to provide a baseline from which the potential impacts of the proposal are to be assessed against
- Identify potential socio-economic impacts of the construction and operation of the proposal, including positive and negative, direct and indirect impacts
- Recommend mitigation measures to minimise the identified potential negative impacts and maximise potential positive impacts.

Overall, this socio-economic impact assessment found that the proposal would result in a range of short term negative and long term positive impacts on the socio-economic environment. These impacts would generally be consistent across the study area during the construction and operation of the proposal, however construction impacts would be focused more around where the construction is being carried out as well near temporary compound areas.

Whilst the construction of the proposal has the potential to benefit the regional economy through employment generation and purchases made by contractors, at a more local level, residential, social infrastructure users, businesses and land owners within and immediately adjacent the construction boundary would experience a degree of disruption and other temporary negative impacts. This would be particularly felt by people located within close proximity to the proposed temporary compound areas and people within close proximity to the alignment, specifically on the western side of the Barton Highway where the new northbound carriageway is to be constructed. These impacts would need to be carefully and proactively managed with any mitigation measures monitored for their effectiveness and outcomes.

The proposal would require the acquisition of land currently used for residential, business and social infrastructure purposes. The proposal would be designed to minimise the need for land acquisition, where practical, and to limit the severance of private properties. Acquisition of land has followed the previously identified road corridor boundary allowed for future development of the Barton Highway to minimise subsequent acquisitions being required.

Upon operation, the proposal is likely to result in an overall major positive impact to the study area and broader region. This would result from an enhanced network capacity and connectivity between the residents living along the construction boundary and Murrumbateman and Yass to the north, and Hall and Canberra to the south. The proposal would particularly support freight movements between Canberra and Melbourne as it connects the Hume Highway to the Federal Highway. At a local level, the duplicated highway would result in an overall positive impact for communities as it strengthens the community values of a safe and secure rural environment with good access to city benefits due to its close proximity to Canberra.

In summary, the implementation of appropriate mitigation measures and a commitment to ongoing community engagement, monitoring and management would create a proposal that positively supports the

communities of Yass and Murrumbateman and more broadly, Canberra to the western and southern parts of NSW through to Melbourne.

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1. Introduction

1.1 Overview

Roads and Maritime Services (Roads and Maritime) is carrying out an assessment under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the duplication of about eight kilometres of the Barton Highway from about 700 metres south of the NSW/ACT border towards Murrumbateman about 300 metres north of Kaveneys Road (the proposal).

AECOM Australia Pty Ltd (AECOM) has been commissioned by Roads and Maritime to carry out a socio-economic impact assessment of the construction and operation of the proposal.

The proposal is one of a series of upgrades to sections of the Barton Highway which would provide a four lane dual carriageway (two lanes in each direction) with a central median between the NSW/ACT border and the existing dual carriageway south of Yass. Further details on the proposal description and objectives are included in Section 1.3 below and Chapter 3 of the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Review of Environmental Factors* (the 'Barton Highway Upgrade REF') (Roads and Maritime, 2020).

1.2 Background

The Barton Highway (HW15) is a rural highway linking the southern and western areas of New South Wales (NSW) to the Australian Capital Territory (ACT). It connects the Hume Highway to the Federal Highway providing a key road link between Canberra and Melbourne. A large volume of traffic uses the Barton Highway with over 10,000 vehicles using the highway each day mainly for commuting to Yass and Canberra, regional freight and passenger movements, and local trips.

About 33 kilometres of the Barton Highway including the section through Murrumbateman consists of a single carriageway with limited overtaking lanes. Traffic growth rates along the Barton Highway have been relatively consistent for the past 25 years, reflecting the steady transformation of the areas surrounding the highway from a rural farming catchment to a commuter area of Canberra. There are distinct weekday morning and afternoon peak periods with the largest peak leaving the ACT on Friday afternoons. There is an additional peak heading into the ACT on Sunday afternoons.

The proposal forms part of the implementation of the *Barton Highway Improvement Strategy 2017* (Australian and NSW Governments, 2017). The safety record of the Barton Highway is poor with 105 recorded crashes between July 2012 to June 2017, which included three fatalities and 89 injury crashes. Only 13 of these crashes were on the dual carriageway (110 km/h posted speed) section, leaving 83 crashes on the single carriageway section. More than half (59 per cent) of crashes were casualty crashes, or around 0.3 casualty crashes per kilometre per year. This is 50 per cent higher than an average rate for class 4R roads across the NSW road network which is close to 0.2 casualty crashes per kilometre per year. The proposal would improve safety, reduce travel times and support future traffic growth projections from planned development in Yass and Murrumbateman.

1.3 The proposal

The proposal would include the following key elements:

- Providing a new two lane northbound carriageway from about 700 m south of the NSW/ACT border towards Murrumbateman, about 300 m north of Kaveneys Road on the western side of the existing Barton Highway
- Modifying the existing Barton Highway to provide a two lane southbound carriageway from about 700 m south of the NSW/ACT border towards Murrumbateman, about 300 m north of Kaveneys Road
- Providing a central median separating the two carriageways
- Modifying impacted intersections and property access roads to provide safe access to the highway

- Providing dedicated U-turn facilities at about one kilometre intervals to manage right turn movements
- Improving existing bus stops with accessible shelters and safe parking areas at Spring Range Road and Nanima Road
- Demolishing a residential property and all farm infrastructure in the construction boundary
- Modifying the heavy vehicle enforcement bay south of Nanima Road by providing new deceleration and acceleration lanes
- Removing the rest area at the NSW/ACT border
- Providing safety barriers where required
- Providing drainage line crossings including creek crossings at Gooromon Ponds and Little Bedulluck Creek
- Relocating and protecting utilities within the construction boundary
- Establishing temporary compound areas and stockpile sites throughout construction
- Additional work including earthwork, improving street lighting, new street furniture, replacing signage, resealing, line marking, and upgrades to kerbs.

As part of the proposal, but subject to a separate assessment and approvals process, a 700 metre tie-in section would be provided from the NSW/ACT border south to the existing dual carriageway in Hall, ACT. Subject to planning approval, construction is expected to start in late 2020 and be completed in 2023.

1.4 Objectives

The objectives of this socio-economic impact assessment include:

- Determine the potential socio-economic issues of the proposal and communities likely to be most affected by the proposal
- Describe the existing socio-economic environment of the study area to provide a baseline from which the potential impacts of the proposal are to be assessed against
- Identify potential socio-economic impacts of the construction and operation of the proposal, including positive and negative, direct and indirect impacts
- Recommend mitigation measures to minimise the identified potential negative impacts and maximise potential positive impacts.

1.5 Study limitations

Limitations of the assessment include:

- Census data used to determine the existing environment was collected by the Australian Bureau of Statistics (ABS) as part of the 2016 Census of Population and Housing. There may be minor discrepancies in the representation of the current characteristics of the local, regional and state demographics as this data was collected in 2016
- The statistical geographic area used to inform the assessment was based on the Yass Valley Local Government Area (LGA) which includes the towns Binalong, Bookham, Bowning, Sutton, Gundaroo, Yass, Murrumbateman, and Wee Jasper. The proposal is located in the south of the Yass Valley LGA and may not affect areas in the east or west. Data gathered for the study area is considered to be representative of the local community, however, the existing environment and baseline conditions summarised in Section 3 are influenced by the demographics of the broader LGA.

2. Methodology

2.1 Overview

This socio-economic impact assessment has been prepared to assess the impact of the proposal in accordance with the Roads and Maritime (2013) *Environmental Impact Assessment Practice Note – Socio-economic assessment* (EIA-N05) (Practice Note) and the Roads and Maritime draft methodology for assessing the significance of socio-economic impacts. The Practice Note guides the assessment level and process for socio-economic impact assessments and outlines the requirements for establishing the socio-economic baseline. A moderate level of assessment was considered appropriate for the scale of the proposal in accordance with the Practice Note. The following methodology has been carried out:

- Defining study area (a description of the study area is provided in Section 2.2)
- Identifying and consulting with local communities and key stakeholders affected by the proposal
- Developing a baseline profile of the existing socio-economic environment for the study area, based on information available from the ABS, relevant local, regional, and State policies and plans
- Assessing potential construction, operation and cumulative impacts of the proposal on socio-economic matters, including an assessing the significance of these impacts (see Section 2.3)
- Identifying measures for managing and monitoring the potential socio-economic impacts of the proposal (see Section 7).

The socio-economic impact assessment is also informed by the outcomes of other technical reports prepared for the proposal, including the assessment of impacts to traffic and access, noise and vibration, property and land use, air quality, and landscape and visual.

2.2 Study area

The study area for the assessment of socio-economic impacts has been selected based on the proposal's area of social influence and the need to consider both local and community impacts and those likely to occur on a broader or more regional scale, such as improved access opportunities created by the proposal. The most significant social impacts, particularly access to community facilities and amenity values, are anticipated to occur in proximity to the construction boundary (ie proposal footprint).

The study area for the socio-economic impact assessment contains:

- The construction boundary (ie the construction impact area) for the proposal (NSW section only)
- A five kilometre area around the construction boundary and continuing north along the Barton Highway to Murrumbateman and ending at Yass.

The study area lies within the Yass Valley LGA geographic boundary and therefore the study area has been profiled by examining Census data collected for the whole of Yass Valley LGA. Yass Valley LGA comprises of the town of Yass and the villages of Binalong, Bookham, Bowning, Gundaroo, Murrumbateman, Sutton and Wee Jasper, however the areas that are most likely to be affected by the proposal, and therefore remain the focus of this assessment, are the village of Murrumbateman and more broadly, the town of Yass, both of which are major population centres.

As part of the broader program of safety upgrades, but subject to a separate planning and approvals process, a 700 metre tie-in section would be provided from the NSW/ACT border south to the existing dual carriageway in Hall, ACT. The impact assessment for this section of the proposal is documented separately. The cumulative impact of the proposal including the ACT section is provided in Section 6.

Demographic data for NSW (State Territory (STE)) has been provided for comparison with the baseline profile for the study area, where relevant. The construction boundary in its regional context is provided in Figure 2-1.

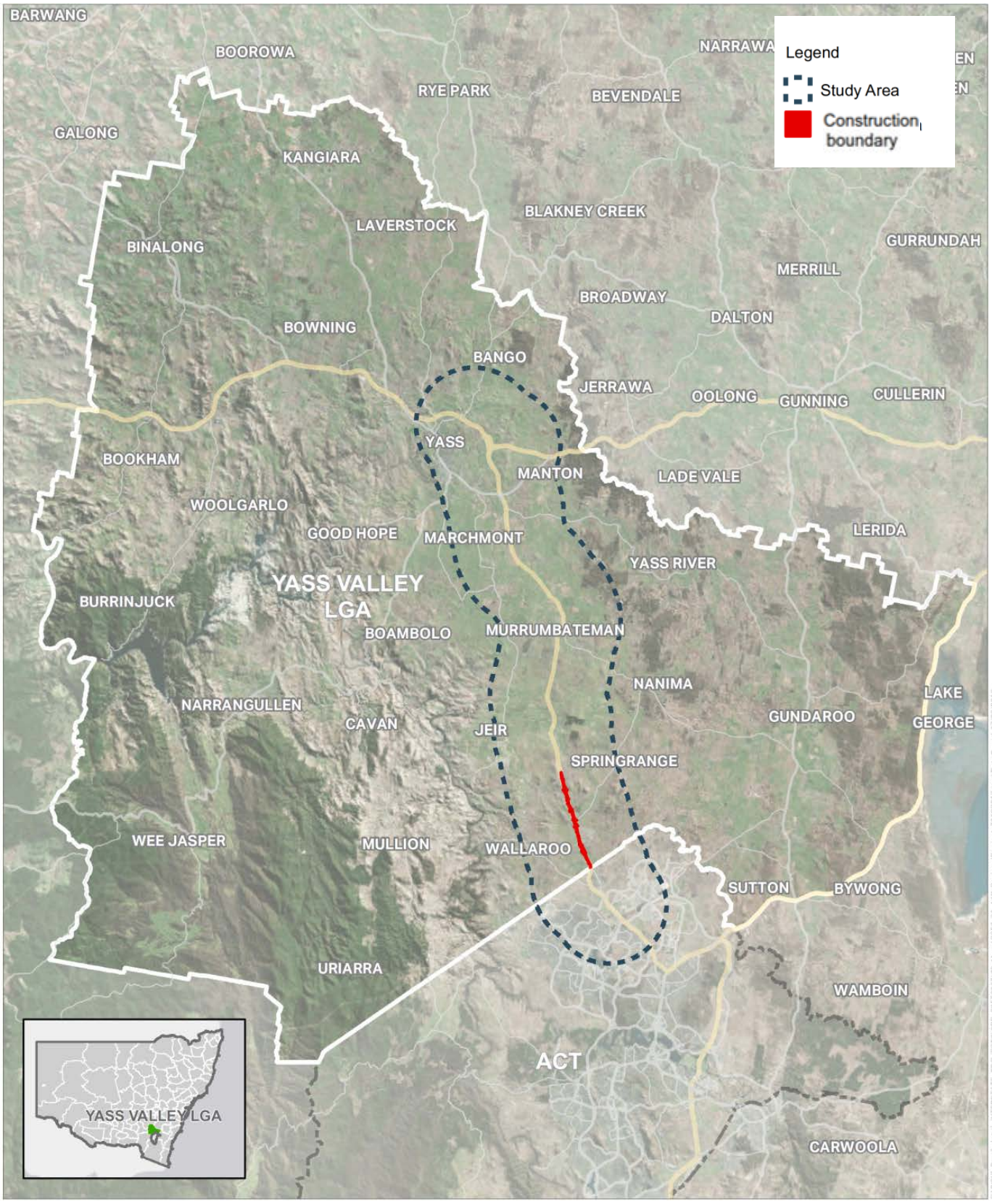


Figure 2-1 Regional context of the proposal

2.3 Assessment of significance

The assessment framework that was used to determine the significance of socio-economic impacts is outlined in Figure 2-2.

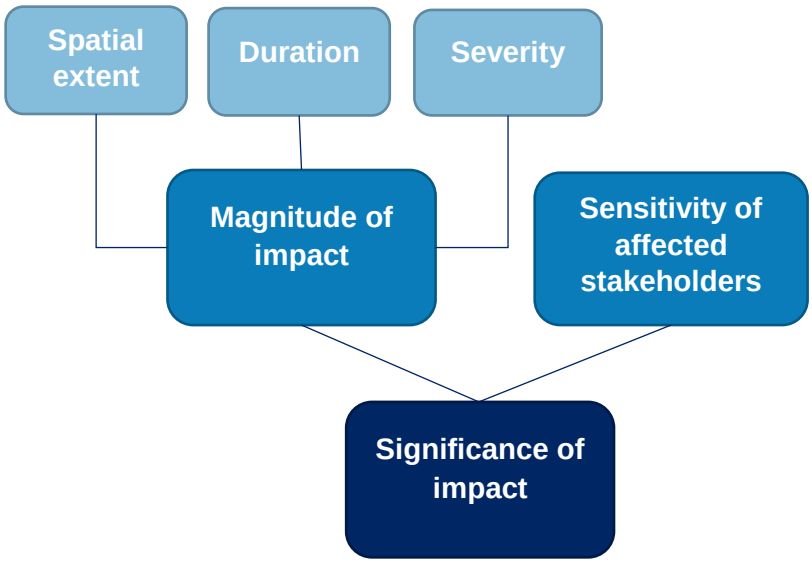


Figure 2-2 Assessment framework for determining significance of social impacts

The significance of each potential social impact was assessed as a function of the impact, based on the spatial extent, duration and severity of that impact, and the sensitivity of potentially affected stakeholders. The criteria were established based on definitions provided in the Social Impact Assessment Guideline for resource projects (NSW Department of Planning and Environment, 2017), as follows:

- Spatial extent: the geographic area affected by the impact, considering the number or proportion of people affected
- Duration: the timeframe over which the impact occurs
- Severity: the scale or degree of change from the existing condition as a result of the impact
- Sensitivity: the susceptibility or vulnerability of people, receivers or receiving environments to adverse changes caused by the impact, or the importance placed on the matter being affected.

Table 2-1 was used to identify the magnitude of an impact, with regard to the spatial extent, duration, and severity of that impact.

Table 2-1 Example of magnitude levels and their constant constituent factors

Magnitude	Example
Negligible	No discernible positive or negative change caused by the impact. Change from the baseline remains within the range commonly experienced by receptors.
Low	A discernible change from baseline conditions. Tendency is that the impact is to a small proportion of receptors over a limited geographical area and mainly within the vicinity of the proposal. The impact may be short term or impacts may extend over the life of the proposal.
Moderate	A clearly noticeable difference from baseline conditions. Tendency is that the impact is to a small to large proportion of receptors and may be over an area beyond the vicinity of the proposal. Duration may be short term to medium or some impacts may extend over the life of the proposal.

Magnitude	Example
High	A change that dominates over existing baseline conditions. The change is widespread or persists over many years or is effectively permanent.

Table 2-2 was used to identify the sensitivity of potentially affect stakeholders, based on the ability of stakeholders to adapt to change, their vulnerability, the level of concern raised in feedback during community and stakeholder consultation or change to community identity, values or goals.

Table 2-2 Sensitivity levels and their constituent factors

Sensitivity	Example
Negligible	No vulnerability and able to absorb or adapt to change. Issues not raised in feedback during community and stakeholder consultation, or would not result in change to community identity, values or goals.
Low	Minimal areas of vulnerabilities and a high ability to absorb or adapt to change. Issues rarely raised in feedback during community and stakeholder consultation, or moderate change to community identity, values, or goals.
Moderate	A number of vulnerabilities but retains some ability to absorb or adapt to change. Issues raised in feedback during community and stakeholder consultation, or moderate change to community identity, values, or goals.
High	Multiple vulnerabilities and/or very little capacity to absorb or adapt to change. Issues raised in feedback from a number of community members and stakeholders during consultation, or significant change to community identity, values, or goals.

The assessment matrix provided in Table 2-3 has been used to determine the significance of each social impact as a function of the magnitude of the impact and the sensitivity of potentially affected stakeholders.

Table 2-3 Significance assessment matrix

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

3. Existing environment

This section provides an overview of the socio-economic characteristics of the study area in terms of demographic profiles, community values, social infrastructure, business and transport services. Sensitive receivers identified in this section are indicative and not exhaustive.

3.1 Socio-economic profile

The socio-economic profile of the study area, as defined in Section 2.2 is informed by statistics sourced from the ABS Census 2016, unless otherwise stated. This forms the socio-economic baseline against which potential impacts are assessed. A detailed set of data tables are provided in Appendix A.

3.1.1 Population and demographics

The following social indicators provide the population and key demographics of people that reside in the Yass Valley LGA and how they compare against the State average for NSW (STE).

- **Population:** The estimated population of Yass Valley LGA was 16,628 in 2016 (ABS, 2017a). Between 2015 and 2016, the population in Yass Valley LGA grew by 1.3 per cent whilst in NSW, population grew by 1.6 per cent in the same period. The four-year growth rate in Yass Valley LGA (for 2012-2016) was 1.3 per cent and lower than the NSW growth rate over the same period (1.9 per cent).

- **Age:** The median age in Yass Valley LGA was 40 in 2011 and 42 in 2016.

  Yass Valley LGA had a higher rate of residents aged 14 years or younger (22.1 per cent) than in NSW (19.3 per cent). Between 2011 and 2016, the proportion of residents 14 years or younger in Yass Valley LGA and NSW decreased by no more than one per cent each.

  In 2011, the Yass Valley LGA had a lower proportion of residents aged 65 years or older (13.4 per cent) than in NSW (14.7 per cent). By 2016, the proportion of residents 65 years or older had risen to 16.2 per cent for Yass Valley LGA and 16.3 per cent for NSW.

- **Indigenous population:** In 2016 2.5 per cent of residents in Yass Valley LGA identified as Indigenous compared to 2.9 per cent of the NSW population.

- **Cultural diversity:** Yass Valley LGA had a smaller proportion of residents born overseas (17.2 per cent) than NSW (34.5 per cent).

- **Language:** A small proportion (5.4 per cent) of residents in Yass Valley LGA speaks a language other than English at home compared with NSW (31.5 per cent). Croatian (0.4 per cent), German (0.4 per cent), Dutch (0.2 per cent), Italian (0.2 per cent) and Mandarin (0.2 per cent) were the highest proportion of languages other than English spoken in the Yass Valley LGA.

- **Need for assistance:** In 2016, 4.3 per cent of residents in the Yass Valley LGA identified as requiring assistance for day to day activities. This was slightly lower than that of NSW (5.4 per cent).

The above indicators suggest that the Yass Valley LGA has experienced steady growth in its population between 2011 and 2016. Yass Valley LGA has a young age profile with higher proportions of residents aged 14 years or younger relative to the NSW average. The study area is not particularly cultural diverse in comparison with NSW more broadly, with a small proportion of residents born overseas or who speak a language other than English at home.

3.1.2 Families and housing

The following indicators provide family and housing characteristics of the Yass Valley LGA and how they compare against NSW:

- **Population mobility:** Residents in Yass Valley LGA are relatively mobile. In 2016, 12.4 per cent of residents lived at a different address in 2015 and 33.5 per cent lived at a different address in 2011.
- **Dwelling structure**: In 2016, Yass Valley LGA had a total of 5,519 private occupied dwellings. Yass Valley LGA had a higher proportion of separate houses (93.9 per cent) and lower proportion of flats/units/apartments (0.5 per cent) than NSW (66.4 per cent and 19.9 per cent, respectively).
- **Household size:** The average household size in Yass Valley LGA in 2016 was 2.7 people, slightly higher than that of NSW (2.6 people).
- **Household composition:** In both Yass Valley LGA and NSW, family households are most common (78.1 per cent and 72 per cent respectively).
- **Family type:** Of the households that identified as family households in Yass Valley LGA and NSW, the majority of these families were couple families with children (47.5 per cent and 45.7 per cent respectively).
- **Housing tenure:** In Yass Valley LGA and NSW, the most common housing tenure was those that owned with a mortgage (44.3 per cent and 32.3 per cent respectively).

The family and housing indicators suggest that residents in Yass Valley LGA are more likely to live in larger family households and live in standalone houses or dwellings.

3.1.3 Socio-Economic Index for Areas (SEIFA)

Socio-Economic Index for Areas (SEIFA) (ABS, 2018) is produced by the ABS as an indicator of relative socio-economic advantage and disadvantage. The SEIFA publication consists of four indexes. The index of relative socio-economic advantage and disadvantage (IRSAD) has been used for this assessment.

IRSAD assesses the economic and social welfare of individuals within an area and scores the area relative to the rest of Australia. An index score of 1,000 represents the median score across Australia. A score higher than 1,000 indicates an area has a relative advantage over the Australian average, whereas a score lower than 1,000 indicates an LGA has a disadvantage relative to the Australian average. A decile ranks areas into 10 groups according to their scores, and assigned to a decile – with 10 representing the most advantaged region, one the most disadvantaged, and five meaning your area shares the same status as half of the population.

IRSAD statistics identify Yass Valley LGA as scoring above 1,000 indicating that it is advantaged in comparison to the Australian average. Yass Valley LGA had a decile of 10 indicating that the areas are in the highest 10 per cent in Australia in terms of socio-economic indicators.

3.1.4 Labour force and household income

The following indicators provide labour force and household income characteristics for residents of the study area and how they compare against NSW STE.

- **Household income:** In 2016, the median household income for Yass Valley LGA was $1,879 per week which is above that of NSW ($1,486 per week).

- **Low and high household income:** Households that have a total income less than $650 per week are considered to be low income households and those that have a total income greater than $3,000 per week are considered to be high income households. Overall, Yass Valley LGA had a lower proportion of low income households (13.9 per cent) compared to NSW (19.7 per cent) and a higher proportion of high income households (25.5 per cent) than NSW (18.7 per cent).

- **Labour force participation:** In 2016, the total labour force of people living in Yass Valley LGA was 8,325. For Yass Valley LGA, full-time employment represented 61.5 per cent of the labour force, whereas part-time employment represented 28.9 per cent. Yass Valley LGA had a similar distribution to NSW with full time employment accounting for 59.2 per cent and part-time employment accounting for 29.7 per cent.

- **Unemployment:** Yass Valley LGA had a lower unemployment rate (2.9 per cent) than NSW (6.3 per cent).

- **Occupation:** Residents in Yass Valley LGA were most commonly employed in professional occupations (20.8 per cent), followed closely by managers (19.7 per cent). In NSW, the most common occupations of residents were also professionals (23.6 per cent) followed clerical and administrative workers (13.8 per cent).

- **Industry of employment:** The most common industries of employment for the labour force of Yass Valley LGA were public administration and safety (18.9 per cent), construction (10.2 per cent) and health care and social assistance (9.8 per cent). In NSW the most common industries of employment were health care and social assistance (12.5 per cent), retail trade (9.7 per cent) and education and training and construction (8.4 per cent).

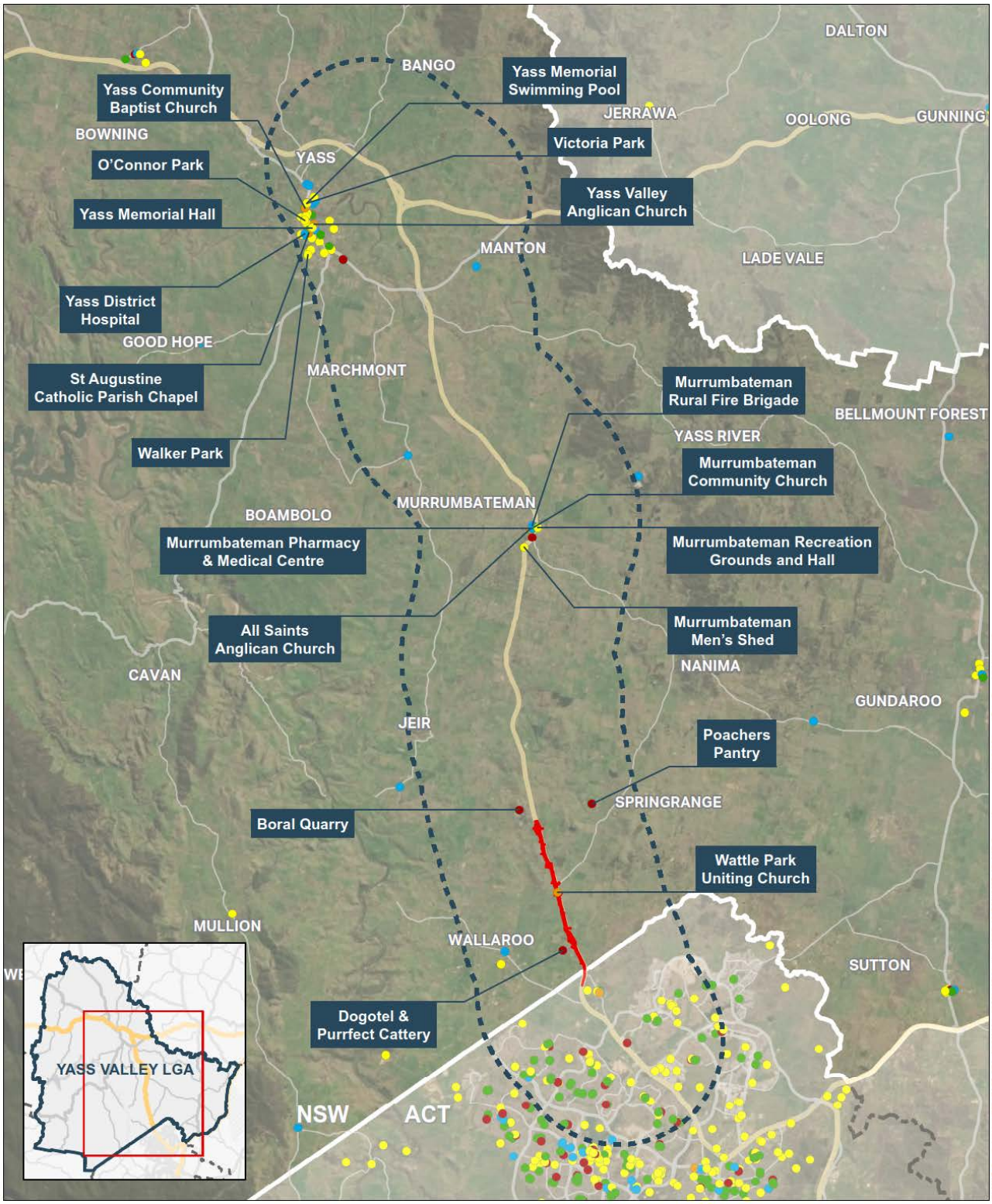
The above indicators suggest that the employment characteristics of Yass Valley LGA were similar to that of NSW with full time employment making up the majority of the labour force and residents most commonly employed in professional occupations. Yass Valley LGA had higher median household income as well as a higher proportion of high income households compared with the NSW State average.

3.2 Social infrastructure

Social infrastructure comprises social services or facilities that are used for the physical, social, cultural or intellectual development or welfare of the community. Social infrastructure often includes educational facilities, childcare centres, hospital and medical facilities, aged care, sporting and recreational facilities, community halls, clubs, and libraries and the services, activities and programs that operate within these facilities. Open spaces, parks and sporting fields that support sport, recreational and leisure uses are also identified as social infrastructure.

Social infrastructure facilities generally operate at a local, district and/or regional level and are defined by the scale of the population catchment they serve. Social infrastructure can often be classified as a sensitive receiver and may be directly affected by a project, particularly if they are located directly adjacent to projects. The proposal is however located within a rural residential area and there are limited social infrastructure facilities located within or directly adjacent to the construction boundary. Wattle Park Uniting Church is the most noteworthy located directly adjacent to the construction boundary at CH17250.

Residents of the study area travel north and/or south of the proposal to meet their needs and for access to a wider range of facilities and infrastructure. Social infrastructure located to the north of the proposal in Murrumbateman and Yass have been identified in the following sections and are shown in Figure 3-1.



SOCIAL INFRASTRUCTURE WITHIN THE STUDY AREA

AECOM

N 0 2 4 km

Legend

- Health, emergency and aged care
- Education
- Sport and recreation
- Cultural
- Business
- Socio-economic study area
- Construction boundary

Figure 3-1 Social infrastructure in the study area

3.2.1 Educational facilities

There are limited educational facilities in the study area. In the village of Murrumbateman, there is an early childhood centre and a preschool. There are no primary or high schools. Consequently, the area is reliant on the larger regional centres including Canberra and Yass, for specialised educational facilities, including Catholic schools and tertiary institutions and students are required to travel via car or bus on the Barton Highway to access their schools.

3.2.2 Health, emergency and aged care

The study area has very limited access to health care, emergency and aged care facilities and therefore requires residents to travel north to Murrumbateman and/or further to larger regional centres including Canberra and Yass. To the north of the proposal, is the Murrumbateman Pharmacy & Medical Centre (about 17 kilometres from the proposal), however the closest hospital is the Yass District Hospital (about 40 kilometres to the north in Yass) or Calvary Public Hospital (about 15 kilometres to the south in Bruce, ACT). Similarly, for emergency services, Murrumbateman Rural Fire Brigade is located within the vicinity of the proposal however for police services, residents are required to travel to Yass or to Canberra. Residents are required to travel via the Barton Highway as there are no alternative routes to reach these destinations from the construction boundary.

3.2.3 Sport, recreational and cultural facilities

The construction boundary has a very limited amount of passive and active open spaces, places of worship, community halls and recreational facilities. Within the construction boundary the only community facility that has been identified is Wattle Park Uniting Church located immediately adjacent to the eastern side of the Barton Highway at CH17250. Several sport, recreational and cultural facilities are located within the study area in the broader regions of Murrumbateman and Yass including:

Sport and recreational facilities

- Walker Park, Victoria Park and O'Connor Park in Yass
- Yass Memorial Swimming Pool
- Yass Memorial Hall
- Murrumbateman Recreation Grounds and Hall
- Murrumbateman Men's Shed.

Cultural facilities

- Yass Community Baptist Church
- Yass Valley Anglican Church
- St Augustine Catholic Parish Chapel
- Murrumbateman Community Church
- All Saints Anglican Church.

3.2.4 Shopping

There are no shopping facilities within the construction boundary. Within the study area the main shopping facilities are located within Murrumbateman and Yass. Murrumbateman and Yass contain small scale

shops, with a focus on local produce and independent boutiques. Murrumbateman is also the focus of the Canberra district cool climate wine region, with more than 20 boutique wineries. According to Tourism Research Australia (2016), based on a four year average from 2013 to 2016, 377,000 people visited Yass Valley LGA and spent about $50 million. Westfield Belconnen to the south is the closest large-scale shopping centre.

3.3 Local businesses

The construction boundary contains a mix of agricultural businesses with land along the route of the Barton Highway being used mainly for grazing and cropping systems.

There are no other local businesses located directly within the construction boundary, however adjacent the construction boundary, the following local business have been identified:

- The Dogotel & Purrrfect Cattery (located off Church Lane, to the west of the construction boundary)
- Poacher's Pantry (located off Nanima Road, to the east of the construction boundary)
- Boral Hall Quarry (located off Kaveneys Road, to the west of the construction boundary).

There are a number of local businesses located within the study area that rely on the Barton Highway (including the highway section subject to the proposal) for access for employees and customers. The majority of these businesses are located north of the construction boundary in Murrumbateman and Yass. Types of local business include:

- Wineries, such as Barton Estate Wines and Kerralee Wines, located on the properties along Barton Highway and in Murrumbateman and Yass
- Agistment and stud farms, such as Capricorn Park Stud
- Shops and cafes
- Petrol stations
- Accommodation including motels and inns.

3.4 Access and connectivity

The main form of access for residents within the study area is through the use of private vehicles along the Barton Highway, which is the primary route between the southern and western areas of NSW and the ACT. The existing highway within the construction boundary currently comprises one traffic lane in each direction. There is one overtaking lane northbound immediately north of Rolfe Road. The single carriageway is restricted to a posted speed limit of 100 kilometres per hour within the construction boundary.

3.4.1 Public transport

There is low public transport use in the study area, with only 1.5 per cent of residents within the Yass Valley LGA travelling to work by public transport (Australian Bureau of Statistics, 2017). A limited number of commuter bus services run between Yass and Canberra on weekdays. Some school bus services also operate on weekdays during school terms.

There are six bus stops along the length of the proposal, including one on Rolfe Road, Kaveneys Road, Briarwood Lane, Nanima Road and two near Spring Range Road. The Briarwood Lane, Kaveneys Road and Nanima Road comprise bus shelters located off Barton Highway, however the bus stops near Spring

Range Road are indicated by a bus stop sign and are located on Barton Highway. There is concern with safety at this bus stop as waiting bus passengers are exposed to vehicles that may inadvertently veer of the highway as they wait at bus stops on the narrow shoulder close to high speed traffic.

3.4.2 Active transport

There is no provision for pedestrian access along the Barton Highway. However it is possible to cycle along the Barton Highway along the limited shoulders. These shoulders provide some separation from high speed traffic on Barton Highway. For a detailed description of the access and connectivity patterns in the construction boundary, see the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Traffic and access impact assessment* (AECOM, 2020a).

3.5 Community values, identity and aspirations

The identification of community values aids in the assessment of potential socio-economic impacts by providing insights into how the community may perceive these impacts, and assists in the assessment of indirect impacts on community identity, social cohesion and sense of place.

The *Yass Valley 2030 Community Strategic Plan* (Yass Valley Council, 2013) identifies values and aspirations for the Yass Valley LGA. A summary of the community identity, values and future aspirations is provided below. It is noted that this Community Strategic Plan refers to each town/village within the Yass Valley LGA and is not specific to the construction boundary.

3.5.1 Community identity

A welcoming rural community who enjoys country living with access to city benefits due to its close proximity to the ACT.

3.5.2 Community values/aspirations

Natural Environment

- Yass Valley's natural environment is clean, healthy and abundant with assets
- Livable climate
- Area is home to diverse flora and fauna with easy access to a range of state and national parks.

Local Economy

- Diverse economy with convenient access to a variety of local industrial and retail businesses
- Strong local support for agri-business
- Local industries (including wineries and tourism) are healthy and sustainable
- Proximity to Canberra is a strong local economic driver.

Community and Culture

- Community is friendly and welcoming, caring and easy-going
- Strong sense of community with a range of active and supportive community groups
- Communities are uncrowded with a peaceful rural lifestyle with easy access to city amenities
- Area is safe and secure
- Strong sense of local history

- Local Aboriginal community is very involved in community life.

Recreation and Open Space

- Wide variety of local club sports and sporting facilities
- Good local recreational options and opportunities through proximity to local waterways, coastal areas, national parks and the snow
- Good local parklands.

Rural and Urban Development

- Large land parcels create a rural atmosphere and sense of open space within close proximity to the city
- Wide streets and no high rise development create a friendly and welcoming town/village centre
- Preserved old commercial and residential buildings – local history and heritage is evident
- Local property and housing is affordable.

Local Infrastructure and Services

- Infrastructure is well maintained
- Good access to transport options connecting local area with Canberra, Sydney and Melbourne
- Communities supported by good educational, medical and aged care services and facilities
- Good waste management and recycling services.

3.6 Community consultation

Consultation with key stakeholders would be conducted prior to, and during the planning of the proposal. Community consultation for the proposal would be carried out in accordance with a community participation plan to be prepared by Roads and Maritime in accordance with Division 2.6 of the EP&A Act.

Section 5 of the Barton Highway Upgrade REF outlines the consultation strategy and presents the feedback provided by government agencies, local councils, businesses, industry groups, residents and the community with regard to socio-economic issues such as safety, property acquisition and amenity impacts (noise, visual).

The proposal was announced in December 2017 with the following activities taking place:

- Updates to the proposal webpage on the Roads and Maritime website and develop a project 1800 phone number and email
- Letters, phone calls and meetings with impacted property owners to discuss the proposal
- Distribution of two project update newsletters in May and October 2018 to more than 6,200 residences in Hall, Murrumbateman, Yass and surrounding areas.

To proactively inform the community and stakeholders about the proposal, from June 2018, community engagement tools and activities included:

- Three community information pop-ups at the Murrumbateman Village (Saturday 28 July 2018), Yass Community Markets (Saturday 18 August 2018), and the Murrumbateman Field Days (Saturday 20 and Sunday 21 October 2018) for the local community to discuss the proposal with the project team. In total, more than 740 community members visited the pop-ups
- Four email distributions (on Monday 23 July, Monday 13 August, Friday 12 October and Wednesday 17 October 2018) to more than 300 stakeholders and community members in the stakeholder database about the pop-ups and October newsletter
- Eight Facebook posts (in July, August and October 2018) informing stakeholders about the pop-ups and the October newsletter

- Newspaper advertising in the Yass Tribune (15 August 2018) and radio advertising on Yass FM 100.3 (from 13 August 2018) about the pop-ups
- Updates to the project webpage on the Roads and Maritime website about the proposal, pop-ups and the newsletters.

Key issues raised by the stakeholders and the community during consultation included:

- Poor driver behavior impacting safety on the Barton Highway
- Proposal funding
- Duplication should start from Yass or Murrumbateman and not the ACT border
- Road alignment including questions about why the duplication is being carried out on the western side of the Barton Highway
- Interest in the provision of U-turn facilities away from the Barton Highway
- Request for an 'off road' cycle pathway to align with the proposed 'cycling triangle' around Murrumbateman Road, Nanima Road and Murrumbateman village
- Concerns about Nanima Road including its pavement condition, use as an alternate route into Canberra by heavy vehicles
- Concerns about noise impact along the Barton Highway during operation
- Suggestion to maintain 'open views' in the vicinity of Little Bedulluck Creek
- Construction timeframes
- Construction impacts
- Property acquisition
- Support for the proposal
- Continued community consultation.

Roads and Maritime will continue to keep the community and key stakeholders informed as the proposal progresses. A variety of community engagement tools and activities will be used including webpage updates, community updates, stakeholder briefings, media releases, newspaper advertisements, Facebook posts, community information pop-up sessions and other consultation tools where relevant and befitting the local community.

The Barton Highway Upgrade REF would be publicly exhibited during the assessment process which would be available on the Roads and Maritime website for the statutory period and open for public comment. This mechanism allows for public concerns to be considered in a systematic and comprehensive manner within the existing legislative framework.

Consultation with residents, businesses and the community would continue throughout the planning, construction and operation of the proposal.

4. Construction impacts

Potential socio-economic impacts, both positive and negative, generated by the construction phase are assessed in the following sections.

4.1 Amenity and community wellbeing impacts

Amenity refers to the quality of a place, its appearance, feel and sound, and the way its community experiences the place. Amenity contributes to a community's identity and its sense of place. Aesthetic qualities are an important part of amenity, but the broader concept of amenity is determined also by the physical design of a place and the human activity that takes place within it. A place that has 'amenity' is regarded as pleasant and attractive as well as convenient and comfortable (Handy, 2002).

Amenity impacts include any factors that affect the ability of a resident or visitor to enjoy their home and daily activities, for example, noise, vibration, changes to views or changes to air quality. Changes in amenity may also conflict with community values, contributing to a loss of or change in a community's sense of place, and subsequently a community's perceived identity. Residents or road users could also experience construction fatigue due to consecutive projects occurring in the same area or due to a lengthy construction phase.

Amenity impacts during construction of the proposal are discussed in detail in Section 6.2 (noise and vibration) and Section 6.12 (air quality), of the Barton Highway Upgrade REF.

With reference to those assessments, the potential impact to residents, businesses and the community during construction are discussed in the following sections.

Noise and vibration

Most of the construction activities would take place from 7am-6pm, Monday to Friday and 8am-1pm Saturday, with no work on Sunday or public holidays. However, certain activities would need to take place outside of these hours due to technical considerations, safety or traffic management considerations.

The *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Noise and vibration impact assessment* (AECOM, 2020b) presents an assessment of potential noise and vibration impacts of the proposal. Potential noise impacts are predicted to be highest during the following site preparation which includes activities such as:

- Site clearing, tree and vegetation removal, mulching for reuse in landscaping
- Construction of temporary drainage and installation of erosion and sedimentation control measures
- Construction of internal haulage and access routes
- Demolition of structures and disposal of debris.

The noise assessment used the definition of a study area from the Road Noise Policy which defines the study area as *'600 metres from the centre line of the outermost traffic lane on each side of the subject road'*. Receivers within the noise assessment study area comprise of 52 rural residential properties and three non-residential receivers.

Some receivers are predicted to exceed the noise management level and a number are identified as being highly noise affected. This is due to the nearby locations of the work to the receivers and the relatively low levels of noise within this rural noise environment. Details of the predicted noise impacts associated with each stage of construction are presented for standards hours and out of hours work in Section 4.4 of the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Noise and vibration impact assessment* (AECOM, 2020b)

These impacts would be temporary for the duration of construction. Community consultation is recommended to be carried out with the affected receptors prior to the commencement of the work. A range of mitigation measures, including the preparation of a construction noise and vibration management plan, would be implemented to manage potential noise impacts on sensitive receptors during construction.

This risk of adverse vibration impacts as a result of vibration intensive activities such as rock breaking or jackhammering as part of demolition and construction work were considered to be low due to the distances from the construction boundary to the receptors. Minimum set back distances would be used to reduce the risk of impacts on human comfort or structural damage to nearby buildings.

As a result, potential noise and vibration impacts during construction work may contribute to a local community perception of reduced amenity, however, these impacts would be limited within the vicinity of the construction boundary, temporary for the duration of construction with a discernible change from baseline conditions, with exceedances in some locations. Therefore, the magnitude of impact is considered to be moderate.

The sensitivity of potentially affected stakeholders is considered to be low as there would be a high ability to absorb change given that construction activities would take place from 7am-6pm and are not likely to occur over a long period of time. Mitigation measures would be also be implemented to reduce impacts to sensitive receptors.

As a result, the significance of the noise impacts is considered to be low to moderate-low.

Further detail is presented in *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Noise and vibration impact assessment* (AECOM, 2020b) and summarised in Section 6.2 of the Barton Highway Upgrade REF.

Air quality

Air quality and amenity impacts anticipated as part of the construction works include:

- Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes
- Elevated particulate concentrations due to dust-generating activities
- Exhaust emissions from diesel powered plant and equipment
- Odour from improperly managed waste sewage at temporary construction compounds.

Dust emissions are likely to be the main contributor to air quality impacts associated with construction, with the greatest source of potential dust emissions expected to be generated from soil disturbance activities (eg bulk excavation, transport of soil). Low numbers of machinery and vehicles associated with the construction works are not anticipated to significantly impact local air quality.

Section 6.12 of the Barton Highway Upgrade REF presents a qualitative assessment of the potential air quality impacts on surrounding receptors from the proposal. Potential dust emissions from the proposal were assessed with a risk rating of ‘low’ based on the potential magnitude of dust emissions including the spatial extent and the proximity of receptors, duration and the severity of the dust emissions, and the sensitivity of nearby receptors.

Implementation of a range of mitigation measures, identified as part of the qualitative assessment, is considered sufficient to reduce the potential impacts to an acceptable level. This includes but is not limited to, the use of water on exposed surfaces to suppress dust and implementing measures to modify or suspend dust-generating activities during periods of high wind speeds. The assessment concluded that residual impacts, once appropriate dust mitigation measures are implemented, were considered to be ‘not significant’.

The spatial extent of the impacts would be mainly within the vicinity of the construction boundary and would be temporary for the duration of the construction work with a minor degree of change. Therefore, it is considered that the magnitude of impact is low.

The sensitivity of stakeholders is considered to be negligible as the ability for stakeholders to adapt would be high and the appropriate mitigation measures would be put in place to minimise the need to adapt to change.

As a result, the significance of the air quality impacts is considered to be negligible.

4.2 Access and connectivity

The *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Traffic and access impact assessment* (AECOM, 2020a) presents an assessment of potential impacts of the proposal on traffic and access.

Construction of the proposal has the potential to result in impacts to the local traffic network associated with the establishment of traffic management measures, the introduction of spoil haulage and other heavy vehicles and physical alterations to local roads. The impact of construction activities on the level of service range from negligible to low.

The following changes in access to residential properties and community facilities may occur during the construction of the proposal:

- Alternative or reduced access to residential properties. This includes temporary lane closures and diversions or restricted access to roads that intersect with the Barton Highway. Access to the highway within the proposal is primarily via nine intersections and 11 property accesses (including Wattle Park Uniting Church); however the proposal could affect a number of existing property access along the Barton Highway, especially to the existing highway
- Relocation of bus stops to accommodate construction activity
- Increased congestion and increased travel times due to reduced speed limits around construction sites and increased truck and construction machinery movements.

Increases in the presence of construction traffic could result in reduced roadside safety. This has the potential to impact on the community's perceived sense of safety and wellbeing. Construction traffic would be required to comply with all speed limits, including construction zone speed limits. A Traffic Management Plan (TMP) would also be prepared as part of the Construction Environmental Management Plan (CEMP) which would consider traffic management arrangements, including speed restrictions on transport corridors, where reasonable and feasible.

Further details on potential impacts to access and connectivity during the construction of the proposal are presented in the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Traffic and access impact assessment* (AECOM, 2020a).

The spatial extent of the impacts would extend beyond the vicinity of the proposal, given the wider community (residents from Murrumbateman, Yass and potentially Canberra) use the highway for access to social infrastructure, including educational, health, emergency, aged care, sport and recreational facilities. The impacts would be temporary for the duration of construction, but would result in a low to moderate degree of change from the existing baseline conditions. Therefore, the magnitude of impact is considered to be low to moderate.

The sensitivity of potentially affected stakeholders is considered to be high, as there would be very limited capacity to adapt to change given the Barton Highway is the only route travelling north and south through the construction boundary to access facilities.

As a result, the significance of access and connectivity impacts is considered to be moderate to high-moderate.

4.3 Economic impacts

Potential economic impacts, both positive and negative, of the construction of the proposal are anticipated to include:

- Increase in business turnover and employment due to construction expenditure
- An increase in construction workforce and employment
- Changes to amenity of local businesses
- Temporary loss of productive agricultural land.

Construction worker expenditure during the 30 month construction period would benefit local services in the vicinity of the highway, such as cafes and takeaways, service stations, trades and services suppliers and potentially some accommodation providers. Some businesses in the broader region would also benefit by the construction of the proposal through purchases made by contractors, such as the hire of equipment and purchase of materials. Employment of specialist construction subcontractors from the local workforce may also be required for the work.

There is the potential for impacts to amenity on local businesses during construction with impacts potentially resulting in loss of trade as customers may shop elsewhere to avoid adverse conditions such as increased dust and noise levels during construction. Further, as the Barton Highway is a key link between Canberra and Melbourne and is used for regional freight, there is potential for delays in delivering freight as a result of increased congestion and increased travel time.

There are no businesses within the construction boundary with store frontages on the Barton Highway however, the Dogotel & Purrfect Cattery, Poacher's Pantry and Boral Hall Quarry are located off the Barton Highway. These businesses would not be affected by property acquisition for the proposal however, Dogotel & Purrfect Cattery and Poacher's Pantry may experience impacts to amenity which in turn may experience negative economic impacts given that these businesses are more sensitive as they require a level of amenity for the enjoyment of customers. It is likely that each of these businesses, including Boral Hall Quarry, would experience access and connectivity impacts with changes in access for staff, deliveries and customers.

Given the context of the construction boundary and the limited number of commercial premises, amenity impacts that affect the ability of customers, employees or business owners to enjoy their workplace and daily activities such as noise, vibration, detrimental changes to views or changes to air quality are considered to be low.

The main land use within the study area is RU1 Primary Production under the *Yass Valley Local Environmental Plan 2013*. Some temporary losses of this productive agricultural land are anticipated where temporary construction compounds are situated outside of the final road boundary. These would be required for ancillary uses, such as the storage of materials and equipment. Potential sites have been identified by Roads and Maritime and are located on land that has been acquired, would be acquired or leased as part of the proposal or is already owned by Roads and Maritime. Land used for construction which lies outside of the road boundary would be rehabilitated and if practicable, be returned to their previous use once the proposal is complete.

Overall, the magnitude of impact of construction on the economy is considered to be low given that impacts would be short-medium term on a local to regional scale, with a minor discernible change from baseline conditions. There would also be benefits through the proposal bringing employment opportunities to the region during construction. The sensitivity of the potentially affected stakeholders is considered to be low to

moderate with some ability to absorb the change. Therefore, the significance of the impacts on the socio-economic environment would be low to moderate-low.

4.4 Impacts to community identity, values and aspirations

Potential impacts to community identity, values and aspirations, both positive and negative, of the proposal during construction are discussed in the following sections.

4.4.1 Decreased access as a result of increased congestion

The Yass Valley LGA identifies as a community that is uncrowded with a peaceful rural lifestyle with easy access to city amenities. There is potential that increased congestion of the Barton Highway as a result of construction activities would lead to limited access to residences, businesses and social infrastructure. Users of the Barton Highway would potentially be subject to increased travel times to access the following:

- Health, emergency and aged care facilities north of the construction boundary in Murrumbateman and Yass such as Murrumbateman Medical Centre, Yass District Hospital or Calvary Public Hospital in Canberra to the south of the construction boundary
- Local sport and recreational facilities to the north of the construction boundary such as Walker Park, Victoria Park and O'Connor Park in Yass, Murrumbateman Recreational Grounds and Hall
- Specialised educational facilities south of the construction boundary in Canberra such as the Australian National University, or University of Canberra and other primary and high schools to the north and south of the construction boundary in Yass and Canberra
- Transport options connecting the local area with Canberra, Sydney and Melbourne. For example, residents living adjacent to the construction boundary are required to travel on the Barton Highway to access Yass Valley Way and Hume Highway to travel to Sydney or Melbourne.

Although unlikely, there is potential that this limited access would also reduce opportunities for social cohesion and participation in community activities within the Yass Valley LGA community.

The Barton Highway is the only road for residents immediately east and west of the construction boundary to access these facilities and although congestion may increase, the TMP would ensure that access is maintained.

4.4.2 Decreased perceived level of safety

The Yass Valley LGA also identifies as a community that is safe and secure. There is potential for the perceived level of safety during construction activities to be impacted as a result of construction vehicle movements and reduced speed limits. This would be mitigated through the TMP and the implementation of traffic management measures such as signage, traffic controllers, demarcation of construction areas. Consultation with the community would also continue throughout the construction phase with avenues for residents to voice their concerns.

Overall, the magnitude of the impact of construction on community identity, values and aspirations is considered to be low given that impacts would generally be short-medium term and confined to the localities nearest to construction work and construction compounds. The TMP would mitigate the impacts to minimise the change from the baseline conditions and assist the affected stakeholders in absorbing the change. Therefore, the sensitivity of stakeholders is considered to be low. The significance of the impacts to community identity, values and aspirations is considered to be low.

5. Operation impacts

5.1 Acquisition of property and changes to land use

The nature of direct property impacts, including details of property acquisitions are provided in Section 6.9 of the Barton Highway Upgrade REF. This section identifies the socio-economic consequence of these direct property acquisitions on residential properties, businesses and social infrastructure.

The proposal would require the acquisition of land currently used for residential, business and social infrastructure purposes. The proposal would be designed to minimise the need for land acquisition, where practical, and to limit the severance of private properties. Acquisition of land has allowed for future development of the Barton Highway to minimise subsequent acquisitions being required.

All acquisition required for the proposal would be carried out in accordance with the *Land Acquisition (Just Terms Compensation) Act* 1991 (NSW), the Land Acquisition Information Guide (NSW Government, 2014) and the land acquisition reforms announced by the NSW Government in 2016.

Property acquisition requirements for the proposal are presented in Section 3.6 of the Barton Highway Upgrade REF.

5.1.1 Residential

A total of 28 residential properties would be subject to acquisition as part of the proposal. All residential properties would be subject to partial acquisition to be zoned for road purposes, except for one property that is subject to full acquisition.

Partial acquisition would typically result in acquisition of a strip of land adjacent to the existing road corridor. The full acquisition would result in the demolition of one rural residence.

Acquisitions would result in a permanent change, with a moderate (partial acquisitions) to high (full acquisition) degree of change from the existing condition over several localised areas. Therefore, it is considered that the magnitude of change is moderate to high.

Impact upon individual residents would be somewhat mitigated by the implementation of a detailed consultation and advice process, as per the abovementioned NSW property acquisition reforms. Residential property acquisitions are generally determined early in the planning process with residents and tenants notified at this stage. Therefore, it is considered that the sensitivity of potentially affected stakeholders is moderate.

Based on the moderate to high magnitude of impact and the moderate sensitivity of affected stakeholders, the significance of impact of residential property acquisition on the socio-economic environment has been assessed as moderate to high-moderate.

5.1.2 Business

The Yass Valley LGA is predominantly rural with large use of agricultural land for activities such as sheep grazing, cropping, viticulture, dairy, wool and egg production. Of the 32 properties subject to partial acquisition, 27 are classified as having agricultural uses. All agricultural businesses would be subject to partial acquisition to be zoned for road purposes.

Acquisition of land used for agricultural uses could result in the loss of viable land, loss of farm infrastructure such as farm dams and farm sheds and loss of access paths between fields which would then result in loss of overall productivity. The extent of property impacts would be refined and confirmed during detailed design in consultation with property owners.

This would result in a permanent, moderate to high degree of change from the existing condition depending on what infrastructure/type of land is acquired (eg prime agricultural land), over a very localised area. Therefore, the magnitude of change is considered to be moderate. The sensitivity of the stakeholders involved is considered to be low to moderate, depending on how reliant the stakeholder is on the agricultural business. The impact upon individual property owners would be somewhat mitigated by the implementation of a detailed consultation and advice process, as per the NSW property acquisition reforms.

Based on the moderate to high magnitude of impact and the moderate sensitivity of affected stakeholders, the significance of impact of agricultural business property acquisition on the socio-economic environment has been assessed as moderate to high-moderate.

5.1.3 Social infrastructure

One property (over two blocks of land) containing social infrastructure is subject to partial acquisition as part of the proposal. It contains the Wattle Park Uniting Church and is to be zoned for road purposes. Partial acquisition would result in acquisition of a strip of land adjacent the existing road corridor on the western side of the property. The church itself would not be impacted however on the western side of the property a number of pine trees are to be removed for safety reasons. These pine trees were planted in celebration of the Church's 50th anniversary, however a representative of the Church indicated that the pine trees are reaching the end of their life, with the Church having to remove two trees recently due to safety concerns. The entrance gates, which have heritage significance, would be protected during work through fencing with a two metre exclusion zone buffer, and reopened on completion with a landscape strategy developed to replant the boundary with pine trees of the same (or similar) species.

The partial acquisition of this property would result in a permanent change with a low degree of change from the existing conditions over a small localised area. Therefore, it is considered that the magnitude of impact is low.

The ability for the stakeholders to absorb or adapt to the proposal is considered to be high and would not result in change to community identity, values or goals. Therefore, the sensitivity of affected stakeholders is considered to be low.

Based on the low magnitude of impact and the low sensitivity of affected stakeholders, the significance of impact of residential property acquisition on the socio-economic environment has been assessed as low.

5.2 Amenity and community wellbeing impacts

The following section outlines the effect of the presence of the proposal upon the amenity and community wellbeing during operation. Amenity impacts during operation of the proposal are discussed in detail in Section 6.12 (air quality), Section 6.2 (noise and vibration) and Section 6.8 (landscape character and visual impact) of the Barton Highway Upgrade REF.

Noise and vibration

The *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Noise and vibration impact assessment* (AECOM, 2020b) presents an assessment of potential operational noise and vibration impacts of the proposal.

During operation of the Barton Highway, the noise modelling predicted that noise exceedances above the assessment criteria would occur at Wattle Park Uniting Church and the associated Sunday School building due to the receivers being located close to the existing highway. Overall the proposal would reduce the noise at these receivers (as northbound traffic would be diverted further to the west in comparison to the

existing situation), however due to the identified exceedances of the Cumulative Noise Limit, these receivers need due consideration of noise mitigation measures.

Although noise levels may increase for receivers on the western side of the Barton Highway as traffic would be brought closer to these receivers, no other exceedances of the applicable noise criteria have been identified for the operational phase of the proposal.

Further detail is presented in *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Noise and vibration impact assessment* (AECOM, 2020b) and summarised in the Barton Highway Upgrade REF (Section 6.2).

Landscape character and visual impact

The operation of the proposal would result in changes to landscape character and visual amenity due to the completion of the new northbound carriageway, removal of trees and subsequent landscaping and other urban design features. The *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Landscape character and visual impact assessment* (AECOM, 2020c) presents an assessment of potential landscape character and visual impacts associated with the operation of the proposal.

A total of four Landscape Character Zones (LCZs) have the potential to be affected by the surface components of the proposal. The assessment found that, upon operation of the proposal, two LCZ would be subject to moderate impacts.

Table 5-1 Landscape Character Zone (LCZ) subject to Moderate impact

Impact	LCZ	Proposal effects	Sensitive receivers
Moderate	LCZ 2: Rolling hills with sporadic vegetation	Increase in highway footprint with tall cuttings comprising uncharacteristic landform elements and loss of Box-Gum Woodland and paddock trees	Residential receivers located on surrounding higher vantage points
Moderate	LCZ 3: Floodplain	Loss of a 220 metre discontinuous length of culturally important pines.	Residential receivers at CH18500 to CH20500

Seven representative locations were assessed for visual impacts. The proposal would result in minor alterations to existing views for a number of residential properties, mainly due to the removal of trees. There are no major built components proposed as part of the proposal. Table 5-2 identifies the locations that would be subject to high-moderate visual impacts as identified in the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Landscape character and visual impact assessment* (AECOM, 2020c).

Table 5-2 Receptors identified as having High to Moderate impacts

Significance of impact	Receptors	Proposal effects	Sensitive receivers
	Victoria Street, ACT	Removal of woodland within the Travelling Stock Reserve	Road users of the Barton Highway
	Dellwood homestead	Demolition and removal of Dellwood homestead and outbuildings	Residents within the localities of Melba and Wallaroo

Significance of impact	Receptors	Proposal effects	Sensitive receivers
	Wattle Park Uniting Church	Removal of pine trees along the frontage of Wattle Park Uniting Church	Residents in close proximity of the Wattle Park Uniting Church Visitors to Wattle Park Uniting Church
	Spring Range Road	Loss of 150 metres of culturally important shelterbelt trees	Road users of the Barton Highway Residents in proximity to Spring Range Road intersection
High to Moderate	Enforcement bay, Gooromon Ponds	Building a crossing over Gooromon Ponds	Residents in close proximity to the Gooromon Ponds (near Nanima Road and Rolfe Road)
	Anchow Hill Lane intersection	Disconnecting Anchow Hill Lane from the highway, substantial change in grade for the northbound carriageway, constructing a connecting lane between Anchow Hill Lane and Briarwood Lane	The Barton Highway off Kaveneys Road The Highway as accessed from Boundary Lane and Tallawong Close
	Homes on Anchow Hill Lane	Substantial change in grade for northbound carriageway	The Barton Highway off Kaveneys Road The Highway as accessed from Boundary Lane and Tallawong Close

Overall, the impact on views would be medium to long term and would affect road users travelling in the area as well as a number of residents living on either side of the proposal and the change from the baseline would be moderate. Therefore the magnitude of the impact is considered to be moderate. The sensitivity of stakeholders is considered to be moderate with some ability to absorb the changes. Therefore, the significance of the impact is considered to be moderate.

Air quality

Chapter 6.12 of the Barton Highway Upgrade REF outlines the impacts on air quality during the operation of the proposal. It was considered that impacts would be minimal as the proposal would not result in a change of land use of the existing Barton Highway, with the exception of the partial acquisition of properties (outlined in Section 5.1) east and west of the existing highway. This is likely to be offset by the improved traffic flows and reduced vehicle braking as a result of the proposal.

During operation, changes to air quality would result in no discernible positive or negative effects to human health or local amenity. Therefore, air quality impacts on amenity and community wellbeing impacts are considered to be negligible.

5.3 Access and connectivity

The *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Traffic and access impact assessment* (AECOM, 2020b) identified changes to the efficiency of the Barton Highway, intersection performance and travel times that would occur across the study area, upon operation. It assessed the impacts of an operational proposal scenario at in 2017, 2027 and at ten years after in 2037. The predicted travel time savings in northbound and southbound directions as a result of the proposal were determined and the results provided for average daily travel of all vehicles for two distinct travel routes:

- Vehicles travelling between Murrumbateman and ACT
- Vehicles travelling between the Hume Highway and ACT.

There would be small savings in travel times in each direction. The most noticeable changes would be for travel between Murrumbateman and ACT (almost seven per cent by 2037). Savings would be greater in peak periods.

Traffic modelling of the key intersections within the construction boundary indicated that there would be noticeable improvements in intersection level of service in the morning peak as a result of the proposal, however fewer changes would be evident in the afternoon peak.

While generally there would be reduced travel times for traffic travelling through the construction boundary, there would be some increased travel times for local traffic due to changes at intersections and property access. Existing levels of accessibility would be maintained for all properties, although some properties would experience modified access to and from the Barton Highway following the completion of construction. All intersections have been designed to considerably improve the safety of the highway for road users in line with the proposal objectives. This has included changes to traffic movements to reduce the number of occasions where traffic is required to cross the road corridor (eg to make a right turn), reducing the potential for interactions with oncoming traffic. The number of intersections with the highway has also been reduced to minimise the occurrence of slow moving traffic joining the highway.

Except in the case of Kaveneys Road, road users wishing to turn right from intersections along the highway would be required to turn left onto the highway and then perform a U-turn at the nearest U-turn facility. The proposal includes U-turn facilities at Church Lane, Spring Range Road, Nanima Road, Rolfe Road and Kaveneys Road to provide safe turning access and would be designed to cater for heavy vehicle movements. At Kaveneys Road a right turn is provided with an associated acceleration lane.

The socio-economic benefits of efficient road networks for road users include improved accessibility to social infrastructure, security, reliability and improved travel time and a safer environment for road users.

Overall, the positive effects of the proposal during operation would be long-term and have the capacity to affect a large number of people and businesses both locally between ACT, Murrumbateman and Yass but also regionally to the southern and western areas of NSW and further south to Melbourne. The change from the baseline conditions is moderate. The sensitivity of stakeholders is assessed as negligible to low, with the exception of those needing to turn right onto the highway from the intersections, there is no vulnerability to affected stakeholders and a high ability to absorb change. Therefore, the significance of the impact is considered to be moderate-low.

5.4 Economic impacts

The Barton Highway plays a significant role in the National Land Transport Network connecting the Hume Highway near Yass and the surrounding rural and residential areas to the ACT and Canberra. The National Land Transport Network is based on national and inter-regional transport corridors including connections through urban areas, links to port and airports, rail, road and intermodal connections that together are of critical importance to the national and regional economic growth, development and connectivity.

This proposal is part of the broader Barton Highway Upgrade described in Section 6.13 of the Barton Highway REF and would therefore contribute to the overall economic benefits of the Barton Highway Upgrade . These are discussed in the following sections.

Increased quality of service

It is likely that the proposal would result in increased quality of service as a result of safer road conditions and reduced travel times. As outlined in Section 5.3, it is anticipated that more trips could be made on the network in a shorter time upon operation of the proposal. Therefore businesses which rely on the Barton Highway, such as bus companies like QCity Transborder Express, and freight and delivery/postal companies would benefit from the proposal. For example, with eased congestion delivery companies would be more likely to consistently deliver on schedule resulting in returned business from customers.

Improved freight and efficiency costs

Similar to the above, businesses would benefit from the proposal through improved freight and efficiency costs. Eased congestion and improved traffic flows would allow freight to be transported more efficiently, saving on overall costs such as fuel and labour. For example, the amount of times a driver transporting goods on the Barton Highway would need to brake, remain idle and then accelerate would be reduced, saving on the amount of fuel that is consumed. Further, it would take the driver less time to reach the destination therefore saving on labour costs.

Employment connectivity

The Barton Highway caters for commuter traffic where residents of Yass Valley LGA travel to employment in Canberra. The proposal would ease congestion on the Barton Highway and improve commutes to work. With less time spent on the commute to work there would be potential for productivity at work to increase and the area becoming a more desirable a place to live.

Overall, during operation the proposal would support efficient and safe connections along the highway to meet travel demand and provide access to increasingly important interstate freight networks. The benefits of the proposal, as part of the broader Barton Highway Safety Upgrades, would include the likely improvement of the local economy through safe and easier access to businesses and a boost in freight productivity. The effects would be medium-long term and would benefit a large number of people and businesses both locally and regionally

5.5 Impacts to community identity, values and aspirations

Potential impacts to community identity, values and aspirations of the proposal are discussed in the sections below.

Improved access as a result of decreased congestion

As previously stated, the Yass Valley LGA identify as a community that is uncrowded with a peaceful rural lifestyle with easy access to city amenities. The proposal would strengthen this identity as it would increase access to the city amenities through eased congestion and decreased travel times on the Barton Highway. As a result, the following impacts related to connectivity and access would be anticipated:

- Increased connectivity between the rural residential communities of Murrumbateman and Yass, including residents living either side of the existing Barton Highway, with the social infrastructure outlined in Section 3.2. The community would also gain greater access to employment opportunities
- Increased ability to foster the strong sense of community through community connectivity and social cohesion between towns and villages
- Improved connection to transport options connecting the local area with Canberra, Sydney and Melbourne.

Safer environment

According to the *Barton Highway Improvement Strategy 2017* (NSW and Australian Government, 2017), a high proportion (5 of 7) of fatal crashes on the Barton Highway involved vehicles crossing into or across opposing travel lanes. Upon completion of the proposal, this portion of the Barton Highway would be safer for road users as it would be duplicated and would ultimately provide wider lanes, shoulders, clear zones, better delineation and overall adequate overtaking opportunities for moving people and freight.

Overall, it is considered that the effect of the proposal during its operation would improve the community identity and values. The effect would be medium-long term and would benefit the local community.

6. Cumulative impacts

Cumulative impacts occur when two or more projects are carried out concurrently and in close proximity to one another. The impacts may be caused by both construction and operational activities and can result in a greater impact to the surrounding area than would be expected if each project was carried out in isolation.

A review of the current proposed and approved developments listed for the Yass Valley LGA on the NSW Department of Planning and Environment (DPE) Major Projects website, the Yass Valley Council website and the ACT Government Development Application finder in ACTmapi identified a number of major developments that may be relevant to the proposal to assess cumulative impacts on the community. Table 6-1 lists these developments and identifies the relative locations and anticipated timeframes, where available.

Table 6-1 Review of major projects

Project	Project status	Location	Anticipated timeframe
Springdale Solar Farm	EIS Exhibition	Near Springrange, about 15 kilometres east of the construction boundary	Subject to approval, construction to begin 2019/2020
Yass Valley Wind Farm	Assessment	Yass Valley, about 60 kilometres northwest from the construction boundary	Unknown
Bango Wind Farm	Determination	Near Kangiara, about 70 kilometres north of the construction boundary	Subject to approval, construction to begin 2019
Rye Park Wind Farm	Determination	Rye Park, about 75 kilometres north of the construction boundary	Unknown
Conroy's Gap Wind Farm (MOD 1, MOD 2, MOD 3)	Determination	Near Burrinjuck Dam, about 40 kilometres northwest of the construction boundary	Unknown
Gravel Road Re-sheeting Program	Scheduled to begin 2018/2019	Various locations within Yass Valley LGA	Unknown
Urban Roads Reseal Program	Scheduled to begin 2018/2019	Various locations within Yass Valley LGA	Unknown
Timber Bridge Renewal Program	Underway	Various locations within Yass Valley LGA, ranging from about 30 to 80 kilometres away from the proposal	Unknown
Rural Reseal Program	Scheduled to begin 2018/2019	Various locations within Yass Valley LGA	Unknown
Rural Roads Rehabilitation	Scheduled to begin 2018/2019	Various locations within Yass Valley LGA	Unknown
Victoria Park Amenities Upgrade	Scheduled to begin 2018/2019	Yass Valley, about 40 kilometres north of the construction boundary	Unknown

Project	Project status	Location	Anticipated timeframe
Binalong Rec Ground Amenities Upgrade	Underway	Binalong, about 75 kilometres northwest of the construction boundary	Unknown
Sutton Rec Ground Amenities Construction	Underway	Sutton, about 20 kilometres east of the construction boundary	Unknown
Yass to Murrumbateman Water Pipeline	Underway	Murrumbateman to Yass, about 20 to 40 kilometres north of the construction boundary	Unknown
Sewer Main Replacement	Scheduled to begin 2018/2019	Unknown	Unknown

As part of the Barton Highway Upgrade, but subject to a separate planning and approvals process, a 700 metre tie-in section would be provided from the NSW/ACT border south to the existing dual carriageway in Hall, ACT. The impact assessment for this section of modification is documented separately as part of a works approval to be determined by the National Capital Authority. Pending planning approvals, this tie-in section of the proposal would be carried out concurrently with the NSW section of the proposal and likely by the same contractor. It is likely that the socio-economic impacts for this section of works are likely to be comparable with the impacts as described in Section 4 but would cover a larger work area extending into the ACT. No additional accesses would be impacted by this section of work and the amenity impacts would be managed in accordance with the mitigation measures as described in Section 7. The cumulative impacts are therefore considered to be minimal.

Cumulative impacts to local and regional communities and businesses are likely to result from the broader Barton Highway Upgrade as this proposal relates to Package one of four packages of works. A number of works including safety barrier installations, tree removal and intersection modifications are planned as part of the Package four works. At this stage however, further potential duplication of the Barton Highway as part of the broader Barton Highway Upgrade remains in the planning phase and is subject to funding availability. Should this receive funding there may be cumulative impacts.

Cumulative impacts are likely to intensify the impacts identified in Section 4 above, particularly with regard to access and connectivity. Construction fatigue is likely to arise for users of the Barton Highway due to the broader Barton Highway Upgrade. The Barton Highway Upgrade started in November 2017 with Package four work including safety barrier installation. Completion of the full Barton Highway Upgrade including full duplication has not been scheduled as it is subject to funding and planning approvals. Upon completion of the full Barton Highway Upgrade, the cumulative impact on the community would be positive.

Residents and businesses located in areas of overlap with other local projects, such as the Yass to Murrumbateman Water Pipeline, rural reseal program and timber bridge renewal program, are likely to experience extended periods of access and connectivity impacts. Given the distance of the proposal from Murrumbateman (about ten kilometres) and Yass (about 31 kilometres), it is unlikely that residents would experience extended periods of amenity impacts such as noise, increases in dust levels or changes in visual amenity.

Based on the distance and direction from the proposal, a number of the projects listed above, such as various wind farm projects and amenities upgrades, are unlikely to contribute to the cumulative impacts to local and regional communities.

7. Safeguards and management measures

Safeguards and management measures during construction and operation relevant to socio-economic impacts are outlined in Table 7-1. These would be implemented to minimise potential impacts on the community with a particular focus on keeping the community informed.

Initial consultation is being conducted with a range of stakeholders including the local community, public authorities, and special interest groups as described in Section 3.6 of this report and Section 5 of the Barton Highway Upgrade REF. Issues raised would be taken into consideration and incorporated into planning and design where feasible.

A Project Environmental Management Plan (PEMP) and a CEMP would be prepared to describe the safeguards and management measures identified to minimise adverse environmental impacts, including socio-economic impacts.

Impacts resulting in changes to amenity would be managed in line with mitigation measures identified for other impact assessments, including noise and vibration, air quality and landscape and visual impacts. Relevant plans that would be prepared that would contain mitigation measures applicable to amenity impacts include the Noise and Vibration Management Plan (NVMP), Landscape Strategy and the Urban Design Framework.

Mitigation measures specific to access and connectivity can be found in the traffic and transport section of the Barton Highway Upgrade REF and the *Barton Highway Upgrade: Duplication of the Barton Highway from the ACT border towards Murrumbateman Traffic and access impact assessment* (AECOM, 2020a). A TMP would be prepared and implemented as part of the CEMP.

Table 7-1 Safeguards and management measures

Impact	No.	Management measure	Timing
General	SE1	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): • Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions • Contact name and number for complaints The CP will be prepared in accordance with the *Community Involvement and Communications Resource Manual* (RTA, 2008)	Detailed design/ pre-construction
General	SE2	All complaints are to be recorded on a complaints register and attended to promptly	Construction
General	SE3	Contact details for a 24-hour construction response line, proposal info line and email address would be provided for ongoing stakeholder contact throughout the construction phase	Detailed design / pre-construction/ construction
Economic	SE4	Goods and services would be purchased locally helping to ensure the local community benefits from the construction of the proposal as best practicable	Pre-construction and construction

8. Conclusion

Overall, this socio-economic assessment found that the proposal would result in a range of short term negative and long term positive impacts on the socio-economic environment. These impacts would be generally be consistent across the study area during the construction and operation of the proposal, however construction impacts would be focused more around where the construction is being carried out as well near temporary compound areas.

Whilst the construction of the proposal has the potential to benefit the regional economy through employment generation and purchases made by contractors, at a more local level, residential, social infrastructure users, businesses and land owners within and immediately adjacent the construction boundary would experience a degree of disruption and other temporary negative impacts. This would be particularly felt by people located within close proximity to the proposed temporary compound areas within close proximity to the alignment, specifically on the western side of the Barton Highway where the road is to be duplicated. These impacts would need to be carefully and proactively managed with any mitigation measures monitored for their effectiveness and outcomes.

The proposal would require the acquisition of land currently used for residential and social infrastructure purposes. The proposal would be designed to minimise the need for land acquisition, where practical, and to limit the severance of private properties. Acquisition of land has allowed for future development of the Barton Highway to minimise subsequent acquisitions being required.

Upon operation, the proposal is likely to result in an overall major positive impact to the study area and broader region. This would result from an enhanced network capacity and connectivity between the residents living along the construction boundary and Murrumbateman and Yass to the north and Hall and the ACT to the south. The proposal would particularly support freight movements between Canberra and Melbourne as it connects the Hume Highway to the Federal Highway. At a local level, the duplicated highway would result in an overall positive impact for communities as it strengthens the community values of a safe and secure rural environment with good access to city benefits due to its close proximity to the ACT. It would also ease congestion, improve travel times and support future traffic growth projections from planned development in both Yass and Murrumbateman.

In summary, the implementation of appropriate mitigation measures and a commitment to ongoing community engagement, monitoring and management would create a proposal that positively supports the communities of Yass and Murrumbateman and more broadly, Canberra to the western and southern parts of NSW through to Melbourne.

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Appendix A

Socio-economic Statistics

Appendix A Socio-economic Statistics

Population and demographics

Table 9-1 Estimated resident population 2012, 2013, 2014, 2015 and 2016

Area	Total Population					Population Growth	
	2012	2013	2014	2015	2016	4-year growth	1-year growth
Yass Valley LGA	15,826	16,040	16,234	16,418	16,628	1.27%	1.28%
NSW STE	7,207,183	7,407,063	7,513,418	7,617,684	7,739,274	1.85%	1.60%

Source: ABS (2017a), Catalogue Number 1410.0 – Data by Region, 2012-2017

Table 9-2 Age Profile of residents, 2011 and 2016

Area	Median Age	Total population	Population aged <14 years	%aged, 14 years	Population aged 65+	% aged 65+
2011						
Yass Valley LGA	40	15,020	3,319	22.1%	2,006	13.4%
NSW STE	38	6,917,658	1,332,512	19.3%	1,018,180	14.7%
2016						
Yass Valley LGA	42	16,142	3,401	21.1%	2,622	16.2%
NSW STE	38	7,480,228	1,386,328	18.5%	1,217,646	16.3%

Source: ABS (2013), 2011 Census QuickStats and ABS (2017), 2016 Census QuickStats

Table 9-3 Cultural diversity, 2016

Area	Aboriginal and Torres Strait Islander Population	Overseas born population	Population that speaks a language other than English at home	Total Population 2016
Yass Valley LGA	2.5%	17.2%	5.4%	16,142
NSW STE	2.9%	34.5%	31.5%	7,480,228

Source: ABS (2017), 2016 Census QuickStats

Table 9-4 Need for assistance, 2016

Area	Has need for assistance	Does not have need for assistance	Need for assistance not stated	Total Population 2016
Yass Valley LGA	4.3%	88.6%	7.2%	16,142
NSW STE	5.4%	87.7%	6.9%	7,480,228

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles.

Families and housing

Table 9-5 Population mobility, 2016

Area	Population living at other address	
	1-year ago	5-years ago
Yass Valley LGA	12.4%	33.5%
NSW STE	14.5%	39.0%

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles.

Table 9-6 Dwelling structure, 2016

Area	Separate House	Semi-detached House	Flat, Unit or Apartment	Other Dwelling	Not stated	Total Occupied Dwellings
Yass Valley LGA	93.9%	4%	0.5%	0.7%	0.9%	5,519
NSW STE	66.4%	12.2%	19.9%	0.9%	0.5%	2,604,314

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles.

Table 9-7 Household composition, 2016

Area	Family households	Non-family households	Total households	Average household size
Yass Valley LGA	78.1%	21.9%	5,519	2.7
NSW STE	72%	28%	2,604,314	2.6

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles.

Table 9-8 Family type, 2016

Area	Couple with no children	Couple family with children	One parent family with children	Other family	Total families
Yass Valley LGA	40.9%	47.5%	10.8%	0.9%	4,390

Area	Couple with no children	Couple family with children	One parent family with children	Other family	Total families
NSW STE	36.6%	45.7%	16.0%	1.7%	1,940,226

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles.

Table 9-9 Housing tenure, 2016

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type	Not stated	Total occupied private dwellings	Median mortgage repayment ($/month)	Median rental cost ($/week)
Yass Valley LGA	34.4%	44.3%	18.3%	1.1%	2%	5,519	$2,000	$300
NSW STE	32.2%	32.3%	31.8%	0.9%	2.8%	2,604,314	$1,986	$380

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles

Socio-Economic Index For Areas

Table 9-10 Socio-economic index for areas (SEIFA), 2016

Area	Index of Relative Socio-Economic Disadvantage		Index of Economic Resources	
	Score	Decile	Score	Decile
Yass Valley LGA	1062	10	1092	10

Source: ABS (2018), Census of Housing and Population, Socio-economic Index for Areas

Labour Force and Household Income

Table 9-11 Household incomes, 2016

Area	Low household income (less than $650 per week)	High household income (more than $3,000 per week)
Yass Valley LGA	13.9%	25.5%
NSW STE	19.7%	18.7%

Source: ABS (2017), 2016 Census QuickStats

Table 9-12 Workforce participation, 2016

Area	Employed				Unemployed Score		Total Labour force
	Full time	Part-time	Away from work	Hours not stated			
Yass Valley LGA	61.5%	28.9%	4.4%	2.2%	242	2.9%	8,325
NSW STE	59.2%	29.7%	3.0%	1.9%	225,546	6.3%	3,605,886

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles

Table 9-13 Resident labour force employment by industry, 2016

Industry	Yass Valley LGA	NSW STE
Agriculture, Forestry and Fishing	7.6%	2.1%
Mining	0.2%	0.9%
Manufacturing	2.3%	5.8%
Electricity, Gas, Water and Waste Services	1.5%	0.9%
Construction	10.2%	8.4%
Wholesale Trade	1.4%	3.1%
Retail Trade	6.6%	9.7%
Accommodation and Food Service	6.7%	7.1%
Transport, Postal and Warehousing	2.6%	4.7%
Information Media and Telecommunications	1.3%	2.2%
Financial and Insurance Services	1.4%	4.9%
Rental, Hiring and Real Estate Services	1.3%	1.8%
Professional, Scientific and Technical Services	8.0%	8.1%
Administrative and Support Services	2.6%	3.5%
Public Administration and Safety	18.9%	6.0%
Education and Training	8.6%	8.4%
Health Care and Social Assistance	9.8%	12.5%
Arts and Recreation Services	1.5%	1.5%
Other Services	3.6%	3.7%
Inadequately Described/Not Stated	3.7%	4.7%

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles

Table 9-14 Resident labour force employment by occupation, 2016

Occupation	Yass Valley LGA	NSW STE
Managers	19.7%	13.5%
Professionals	20.8%	23.6%
Technicians and trades workers	13.0%	12.7%
Community and personal service workers	10.7%	10.4%
Clerical and administrative works	14.9%	13.8%
Sales workers	6.5%	9.2%
Machinery operators and drivers	4.4%	6.1%
Labourers	8.0%	8.8%
Inadequately Described/Not Stated	2.1%	1.8%

Source: ABS (2017), 2016 Census of Population and Housing, General Community Profiles