

Appendix M

Socio-economic impact assessment



Transport for NSW

Townson Road Upgrade between Richmond Road and Jersey Road – Stage 1 Socio-economic Impact Assessment

January 2021

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Appendix A – Demographic indicators

1. Introduction

1.1 Overview

Transport for NSW (TfNSW) is proposing to construct a four-lane divided road along Townson Road/Burdekin Road corridor linking Richmond Road, Marsden Park in the west and Burdekin Road, Schofields in the east. The length of the overall program of work is about 3.6 kilometres.

The overall program of work consists of two stages:

- Stage 1 (the proposal) involves an upgrade of about 1.6 kilometres of road extending from Richmond Road to south of Jersey Road (see Figure 1-1)
- Stage 2 is about two kilometres in length involving the construction of a new road between the Stage 1 tie-in and Burdekin Road.

Stage 2 is subject to a separate planning approval.

Staged delivery of the proposal would involve:

- Interim phase- two lanes plus earthworks (Figure 1-2)
- Ultimate phase- completion of remainder of the works for a four-lane dual carriageway.

The proposal is located within the Marsden Park Industrial and West Schofields precincts of the North West Growth Area, about 37 kilometres north-west of the Sydney central business district and three kilometres west of Schofields

Transport for NSW is the proponent of the proposal, and an environmental assessment in the form of a review of environmental factors (REF) is being prepared in accordance with the requirements of Division 5.1 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

This report assesses and documents the potential flooding and hydrology impacts of the proposal.

1.2 Proposal outline

The key features of the proposal are shown in Figure 1-1 and include:

- Widening and upgrading about 1.6 kilometres of Townson Road, between Richmond Road and Durham Road/Jersey Road, to provide:
 - Two traffic lanes, about 3.5 metres wide in each direction
 - A new section of Townson Road about 250 metres long, to the east of the existing alignment, between Meadow Road and Durham Road/Jersey Road
 - A temporary connection road extending from the tie-in stub to Durham Road/Jersey Road to maintain access and connectivity until Stage 2 is operational
 - A new southbound sliplane at Richmond Road intersection from Townson Road.
- Providing a wide central median along the length of the proposal narrowing at intersections to allow for turning lanes
- Constructing two bridges, each about 36 metres long, to reduce flooding afflux with one bridge over Bells Creek and another bridge about 50 metres east of Bells Creek

- Providing two new signalised intersection allowing all turning movements to and from Townson Road/Victory Road/a new road, and formalised pedestrian crossings at each leg of the signalised intersection
- Constructing stubs for Victory Road north and the new road to the north and south of the Townson Road intersection, with a traffic lane in each direction about 3.5 metres wide and a footway on either side, about 1.2 metres wide
- Providing a shared path about three metres wide for pedestrians and cyclists on the southern side of Townson Road along the length of the proposal and a pedestrian crossing across the new southbound sliplane from Townson Road to Richmond Road
- Providing a footpath about 1.2 metres wide on the northern side of Townson Road along the length of the proposal and at the intersections.

This interim phase allows the surrounding developments to progress and allows utilities to be relocated to their ultimate location. It is anticipated that construction of the interim phase would commence in early 2022 and would be open to traffic in 2023. Completion of the ultimate phase of the proposal would take place around five years after completion of the interim phase.

1.3 Scope of this assessment

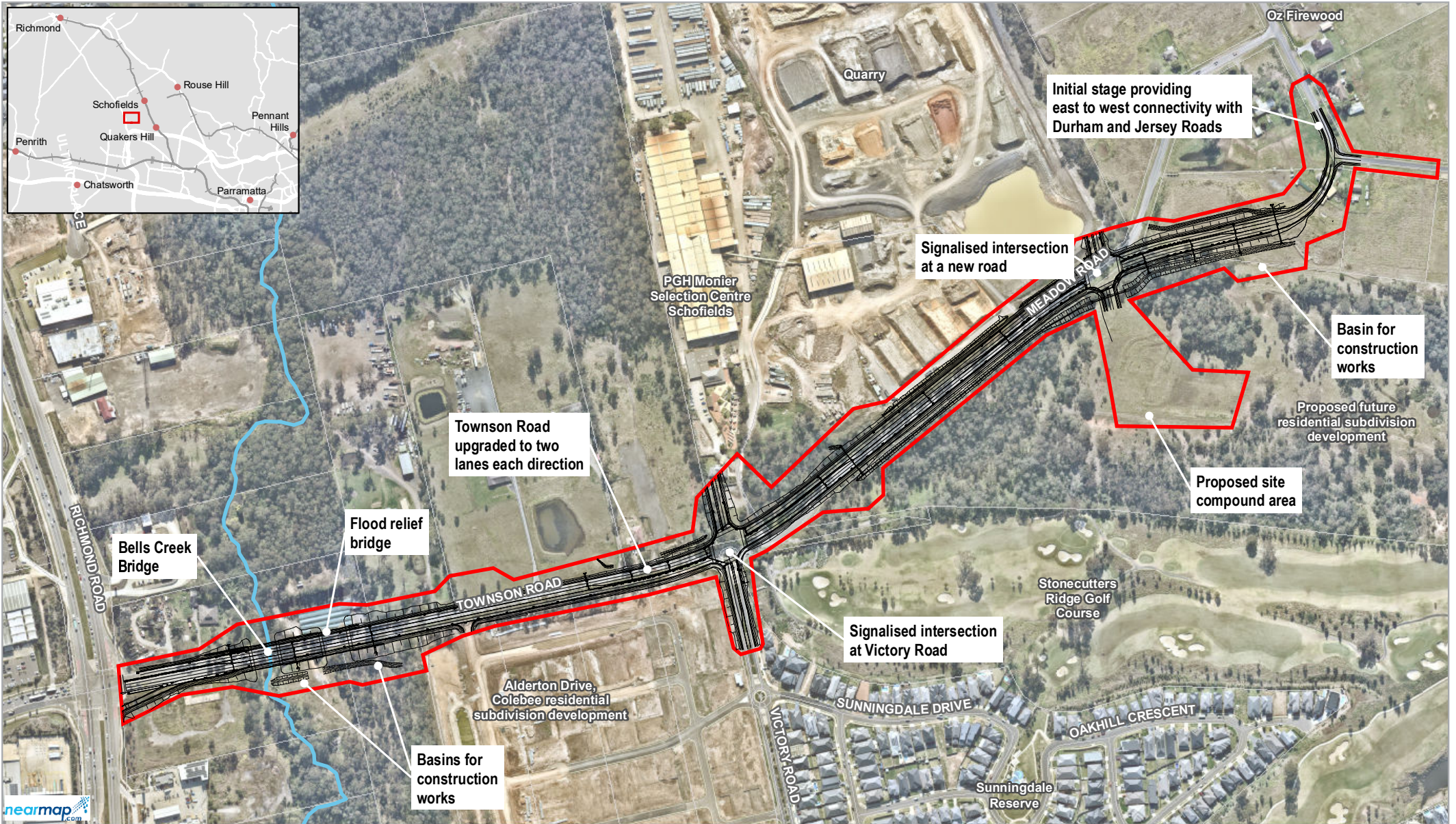
This Socio-economic impact assessment (SEIA) presents the findings of the SEIA for the proposal. This report supports the REF for the proposal: The scope of assessment included:

- An analysis of the existing socio-economic profile of the local area and communities that would be impacted, as well as the regional context
- Outcomes from consultation with residents, businesses and key stakeholders
- Identification of potential socio-economic benefits and impacts from the proposal
- Mitigation strategies for each identified impact.

1.4 Report structure

The report is comprised of the following sections:

- **Section 2 – Methodology:** a brief summary of the methods and guidance used for the assessment of the proposal
- **Section 3 – Legislative and policy context:** summarises the existing socio-economic environment
- **Section 4 – Existing environment:** an overview of the demographic and community characteristics in the study area
- **Section 5 – Stakeholder consultation:** summarises the outcomes of consultation relevant to this assessment
- **Section 6 – Assessment of impacts:** potential socio-economic impacts that may result from construction and operation of the proposal
- **Section 7 – Mitigation and management measures:** mitigation and management measures to minimise and manage the socio-economic impacts arising from the construction and operation of the proposal
- **Section 8 – Conclusion:** presents a summary of the socio-economic assessment findings and sets out the principal conclusions for the study.

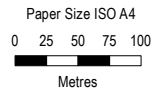


LEGEND

— The proposal *Subject to detailed design

▭ Construction

▭ Cadastre



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56

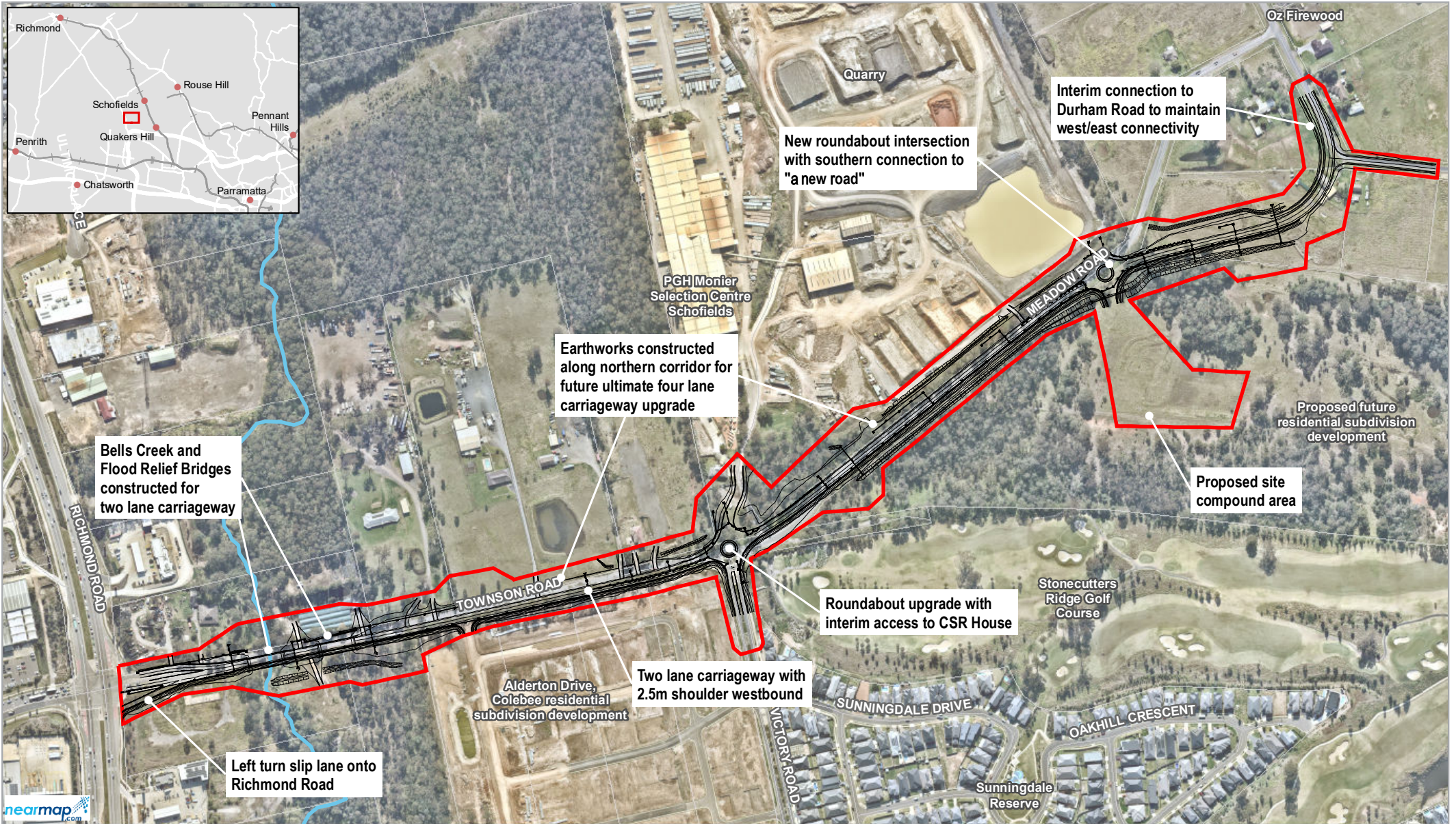


Transport for NSW
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 Between Richmond Road and
 Jersey Road




The Ultimate Phase
 of the Proposal

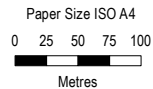
Project No. 21-12511195
 Revision No. -
 Date 6/11/2020

FIGURE 1-1



LEGEND

-  The proposal *Subject to detailed design
-  Construction footprint
-  Cadastre



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



Transport for NSW
Townson Road Upgrade Stage 1
Between Richmond Road and
Jersey Road

Interim phase
of the proposal

Project No. 21-12511195
 Revision No. -
 Date 4/12/2020

FIGURE 1-2

2. Methodology

2.1 Approach to this assessment

This SEIA has been prepared in accordance with a moderate assessment under the *Environmental Impact Assessment Practice Note Socio-economic assessment* (Transport for NSW, 2020). It has also given consideration to the *Social Impact Assessment Guidelines for State significant mining, petroleum production, and extractive industry development* (NSW Department of Planning and Environment, 2017) and the social impact assessment principles and methods endorsed by the International Association for Impact Assessment (Vanclay, 2003 and Vanclay F, et al, 2015).

2.2 Steps to prepare this SEIA

2.2.1 Reviewing proposal description

A review of the proposal's description was undertaken to determine the scope and extent of the potential socio-economic impacts. The review included understanding the proposal design and activities that would occur during construction and operation and the potential for cumulative impacts. This informed the understanding of potential changes to local amenity, access and connectivity, community infrastructure facilities and community values.

2.2.2 Determining the study area

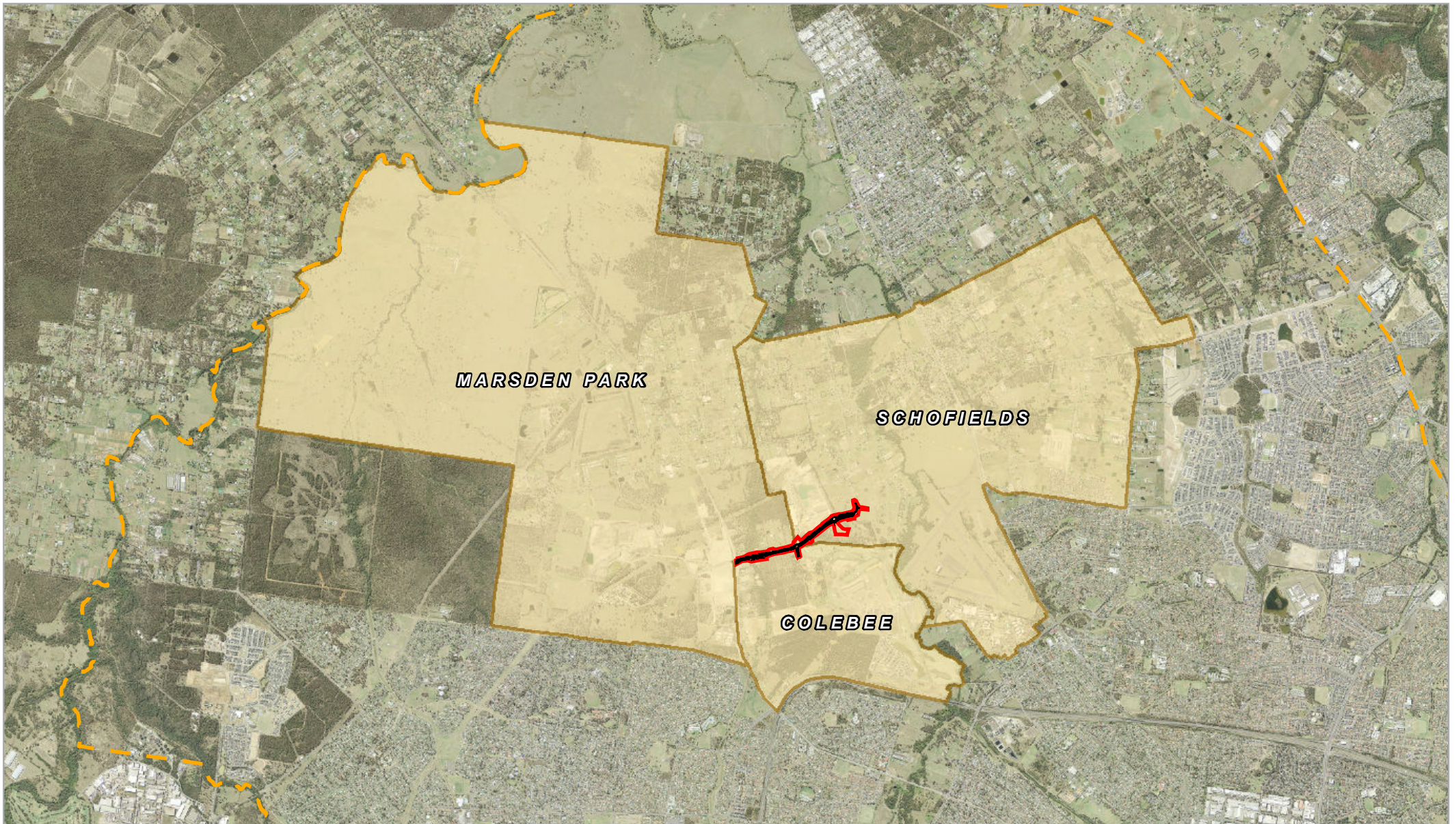
The proposal site and its surround were analysed to identify the study area. The communities that live and work in this area and those who visit this area are considered most likely to be impacted by the proposal.

It is acknowledged that socio-economic impacts are not contained within statistical or geographical boundaries, because people can travel across different geographic areas as part of their day-to-day lives. As a result, a wider area that may be influenced by the proposal has also been considered. The study area, as shown in Figure 2-1 is described below:

The regional study area, which comprises the Blacktown Local Government Area (LGA), provides an overview of the broader population that may be influenced by the proposal.

The local study area, which comprises the following statistical areas intersected by the proposal:

- Schofields
- Colebee
- Marsden Park.



LEGEND

- The proposal **Subject to detailed design*
- Local study area
- District study area
- Construction footprint

Paper Size ISO A4
 0 0.5 1
 Kilometres



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



Transport for NSW
Townson Road Upgrade Stage 1
Between Richmond Road and
Jersey Road

Project No. 21-12511195
 Revision No. -
 Date 5/11/2020

Study Area

FIGURE 2-1

2.2.3 Preparing the socio-economic baseline

The baseline is required to understand the existing socio-economic conditions of the study area that may be potentially affected by the proposal. This baseline provides the basis for predicting and assessing the likely socio-economic impacts of the proposal. The baseline is described with reference to:

- An overview of the regional study area, including description of the existing amenity, main economic centres, population characteristics, access and connectivity
- A description of the local study area, including an overview of the existing amenity and characteristics, local access and connectivity, economic and business centres and land use
- The demographic profile of the local study area, compared to the regional study area including population, age profile, cultural diversity, employment, levels of social and economic disadvantage and need for assistance with core daily activities
- Community values, which are tangible and intangible characteristics and aspects of a community such as amenity and character, lifestyle, access, connectivity, community cohesion and community safety
- Community infrastructure facilities, including both physical and non-physical infrastructure (such as services, programs and networks) that help individuals and communities meet their social needs and enhance community wellbeing, or have been identified as having social value or importance
- Community infrastructure facilities within 600 metres of the proposal have been identified using online searches and are limited to those identified on Google maps. The following community infrastructure facilities have been included: education and child care facilities, aged care, health centres and services, disability services, youth and community spaces, religious facilities, indoor and outdoor sport and recreations, and passive open space such as parks and gardens. This SEIA has assessed the potential socio-economic impacts to staff and users of community infrastructure only.

Information for the socio-economic baseline was sourced from:

- Australian Bureau of Statistics Census 2016 (ABS 2016 Census)
- Relevant council and state government community plans, strategies and studies
- GIS and Google maps
- Information from relevant websites, as referenced.

2.2.4 Stakeholder consultation

Stakeholder and community inputs were gathered from the outcomes described in the meeting minutes and notes of consultation undertaken for the proposal as part of the Stakeholder Engagement scope and specific to this SEIA. Specific SEIA consultation activities involved consulting with representatives from:

- Blacktown City Council via a meeting on 2 December 2019
- NSW Ambulance via a meeting on 14 January 2020
- NSW Fire and Rescue via email on 15 January 2020
- NSW Police were unable to be reached for consultation.

The purpose of the SEIA specific consultation was to discuss and confirm our understanding of:

- Community values and character
- Potential sensitive receivers
- User groups and uses of identified social infrastructure
- Other relevant community facilities or services
- Potential proposal impacts, benefits and mitigation measures.

The outcomes of consultation undertaken for the proposal can be found in chapter 5 of the REF.

2.2.5 Impact identification assessment

This SEIA identifies and assess the potential socio-economic benefits and impacts of the Townson-Burdekin Road upgrade proposal. Potential impacts have been identified and described based on an initial scoping of potential socio-economic issues, results of stakeholder consultation, and a review of other technical studies and chapters prepared for the REF.

- Technical Working Paper D – Urban Design and Visual Impacts
- Technical Working Paper E – Transport and Traffic
- Technical Working Paper F – Noise and Vibration
- Technical Working Paper J – Biodiversity Report
- Technical Working Paper L – Statement of Heritage Impact.

Socio-economic impacts as a result of construction and operation of the proposal have been assessed. In addition, cumulative impacts have been assessed, taking into account other projects that have been approved but where construction has not yet commenced, projects that have commenced construction, and projects that have been recently completed in the surrounding area.

The socio-economic impacts have been categorised based on the *Environmental Impact Assessment Practice Note Socio-economic assessment (Transport for NSW, 2020)*. For this SEIA, the matters to be considered according to the Practice Note have been grouped into categories to ensure they are relevant to the nature of the proposal. The social impact categories are outlined in Table 2-1.

Table 2-1 Social impact categories

Social impact category	Matters to be considered
Property and land use	Changes that relate to the partial or complete acquisition of residential land. This can impact people's way of life due to relocation or changes to property.
Amenity and character	Changes to the acoustic, air quality or visual environment as a result of the proposal. Changes to amenity can impact people's way of life, and what people value about their community. This has considered the social impacts on residents and general community members.
Access and connectivity	Changes to how people move about an area for personal or business purposes. Changes to access can impact people's way of life, access to and use of community services, facilities and social networks, community cohesion and perceptions about safety.
Economy, businesses and employment	High-level benefits and impacts on the local and regional economy, including business development and employment opportunities. Social implications of impacts to businesses resulting from changes to access and amenity. This includes how business owners, employees and customers are affected by these changes. Social implications of changes to job availability and employment resulting from impacts on businesses.

The assessment of impacts considers the level of sensitivity of receptors and the magnitude of the proposed changes based on the information available at the time, research undertaken to prepare this SEIA, other technical studies and review of consultation outcomes undertaken by Roads and Maritime.

For negative impacts, sensitivity refers to the qualities of the receptor that influence its vulnerability to change and capacity to adapt. In this context, the receptor may include the environmental characteristics, communities, businesses, business clusters, social infrastructure or residences. Table 2-2 describes the levels of sensitivity for negative impacts.

Table 2-2 Level of sensitivity

Sensitivity	Example
Negligible	No vulnerability and able to absorb or adapt to change
Low	Minimal areas of vulnerability and a high ability to absorb or adapt to change
Moderate	A number of vulnerabilities but retains some ability to absorb or adapt to change
High	Multiple vulnerabilities and/or very little capacity to absorb or adapt to change

Magnitude refers to the scale, duration, intensity and scope of the proposal including how it would be constructed and operated. Qualities of magnitude include, but are not limited to:

- Scale and intensity (the types of works, operational uses and built form etc)
- Spatial extent (e.g. the geographical area affected, which may be local, suburb, regional, State, International or to community groups etc)
- Duration (short, medium or long-term, hours of works, frequency, reversibility etc).

The levels of magnitude are set out in Table 2-3.

Table 2-3 Level of magnitude

Magnitude	Example
Negligible	No discernible positive or negative changes caused by the impact. Change from the baseline remains within the range commonly experienced by receptors.
Low	A discernible change from baseline conditions. The tendency is that the impact is on 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 some impacts may extend over the life of the proposal.
Moderate	A clearly noticeable difference from baseline conditions. The tendency is that the impact is on a small to large proportion of receptors and may be over an area beyond the vicinity of the proposal. The duration may be short to medium term or some impacts may extend over the life of the proposal.
High	A change that dominates over existing baseline conditions. The change is widespread or persists over many years or is effectively permanent.

Table 2-4 is used to assess the level of significance of the potential impacts. This is done by combining the level of sensitivity and magnitude.

Table 2-4 Assessing the level of significance

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
	Low	Moderate	Moderate-Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Source: Environmental Impact Assessment Practice Note Socio-economic assessment (Transport for NSW, 2020).

Positive impacts are discussed but not given a level of significance.

The level of impact within this SEIA has considered the implementation of recommended mitigation and management measures as outlined in section 7 and those identified in other relevant Technical Working Papers prepared for the REF as described in section 2.2.5.

2.2.6 Developing impact mitigation and management measures

Specific mitigation and management measures developed to avoid or minimise the socio-economic impacts are identified in section 7. These were formulated based on the findings of the socio-economic baseline study, results of stakeholder consultation, and the outcomes of the impact assessment.

Other technical studies from the REF have been considered with regard to the effect or specific mitigation measures identified in those studies which contribute to mitigating potential socio-economic impacts identified in this report. These measures can be found in the technical components of the REF outlined in section 2.2.5.

3. Legislative and policy context

A number of legislative and policy documents were reviewed to identify their relevance to this SEIA. The following sections summarise the relevant Commonwealth legislation, NSW legislation, and local government policies.

3.1 Commonwealth legislation

Table 3-1 outlines the Commonwealth legislation and policies relevant to this SEIA.

Table 3-1 Commonwealth legislation and policies

Legislation or policy	Relevance to this SEIA
<i>Disability Discrimination Act 1992</i> (Commonwealth)	The <i>Disability Discrimination Act 1992</i> (Commonwealth) is designed to protect people with disability from discrimination. This SEIA considers changes to the existing environment that may affect accessibility. It also highlights any impacts that may affect vulnerable groups, including those who experience disability.

3.2 NSW legislation and policies

Table 3-2 outlines NSW legislation and policies relevant to this SEIA.

Table 3-2 NSW legislation and policies

Legislation or policy	Relevance to this SEIA
Greater Sydney Region Plan: A Metropolis of Three Cities (Greater Sydney Commission, 2018)	<p>Blacktown LGA is located in the Greater Parramatta and the Olympic Peninsula (GPOP) Economic Corridor, within the Central River City of the Greater Sydney Region. The GPOP Economic Corridor includes a high concentration of jobs with good road and public transport connectivity, allowing high levels of interaction between businesses and people.</p> <p>Blacktown LGA is identified as a key strategic centre. Strategic centres are expected to accommodate high levels of private sector investment, enabling them to grow and evolve. This makes Blacktown LGA an increasingly important part of the region’s infrastructure.</p> <p>This SEIA assesses the potential socio-economic impacts as a result of the proposal including changes to the amenity and character of the area, in the context of the broader changes in the region in line with Blacktown’s role as a strategic centre.</p>
Central City District Plan - Connecting Communities (Greater Sydney Commission, 2018)	<p>The proposal is located in the Central City District of the Greater Sydney Region. The Central District Plan identifies Blacktown as a Health and Education Precinct with a significant and diverse array of economic activities and assets.</p> <p>The plan states that Blacktown is strategically located at the interface between the Central River City and Western Parkland City and contributes significantly to the economies of both cities through its industrial precincts, health and education activities, diverse recreational facilities and emerging centres such as Marsden Park.</p> <p>The plan identifies key directions to guide the planning of the Central City, including the provision of both physical connectivity and open space connectivity. This includes improving existing road and open space networks, as well as investing in new opportunities to improve connectivity for local residents.</p> <p>This SEIA will consider changes to community connectivity and accessibility as a result of the proposal.</p>

Legislation or policy	Relevance to this SEIA
<p>Future Transport Strategy 2056 (TfNSW, 2018)</p>	<p>The strategy highlights the importance of Sydney’s transport network in supporting a productive economy and liveable communities. The strategy’s vision identifies six outcomes, the most relevant to this SEIA being:</p> <ul style="list-style-type: none"> • Successful places – active or public transport facilitates easy access to public spaces and facilities, encouraging physical activity and social interactions • A strong economy – the transport network will support the efficient movement of people to job centres, where people can access jobs and services within 30 minutes by public or active transport • Accessible services – the transport network will be fully accessible, enabling barrier-free travel for all. <p>This SEIA will consider how the proposal contributes to or impacts these factors.</p>
<p>North West Growth Centre Road Network Strategy</p>	<p>To support the forecast growth in the North West Growth Area, the NSW Government is proposing a new road network as part of its North West Growth Centre Road Network Strategy. The Strategy has identified the need for five grade-separated crossings of the Richmond rail line.</p> <p>As one of these five crossings, the upgrade of Townson-Burdekin Road is a key part of this Strategy and will increase and improve connectivity between Richmond Road and Windsor Road while supporting residential and employment growth. This would increase connectivity and accessibility to key employment centres and facilitate movement through the North West Growth Area.</p> <p>This SEIA will consider how the proposal contributes to improved connectivity for residents and workers in the local area.</p>

3.3 Blacktown City Council policies

Table 3-3 outlines Blacktown City Council policies that are particularly relevant to this SEIA.

Table 3-3 Blacktown City Council policies

Policy	Relevance to this SEIA
Our Blacktown 2036 – Community Strategic Plan (2018)	<p><i>Our Blacktown 2036</i> provides an overview of Blacktown City Council’s values, aspirations, and strategic directions for the LGA. <i>Our Blacktown 2036</i> is structured around six directions with several accompanying focus areas. The most relevant of these directions to this SEIA is related to creating a growing city supported by accessible infrastructure. Focus areas under this strategic direction include providing transport networks that connect the City for vehicle and non-vehicle users and improving road safety.</p> <p>This SEIA will assess how the proposal contributes to or impacts relevant values of Blacktown communities.</p>
Blacktown City Social Profile (2016)	<p>The <i>Blacktown City Social Profile</i> is a snapshot of the City’s social situation and identifies the needs, aspirations and values of the community. It was informed through consultation with 2,155 residents and 107 community groups in 2016.</p> <p>The Social Profile notes that the Blacktown community is experiencing rapid population growth, particularly from the development of the North West Growth Area. It highlights that Blacktown City is valued as a friendly place, with a strong community spirit and many natural and green spaces.</p> <p>The Blacktown community identified transportation as a major challenge, with most residents concerned about increased congestion on the City’s roads making pedestrian and cycle mobility difficult and therefore increasing people’s reliance on motor vehicle use. Residents also cited concerns about the lack of employment and recreation opportunities located near where people live.</p> <p>This SEIA assesses how the proposal affects relevant values and concerns of Blacktown communities.</p>

4. Existing environment

This section provides an overview of the demographic and community characteristics in the study area. This includes community infrastructure and businesses that may be directly or indirectly impacted by the proposal.

Local communities' values are also discussed to provide an understanding of what communities perceive as important contributors to their quality of life and wellbeing. These can include physical elements such as the public domain and the desire to spend time within it, parks, transport connectivity and journey times, and intangible qualities such as sense of place, community cohesion, and attachment to place.

4.1 Regional study area

Blacktown LGA is located in western Sydney and is approximately 35 kilometres from the Sydney CBD. As discussed in section 3, the LGA is experiencing rapid growth particularly from the development of the North West Growth Area (Blacktown City Council, 2016). In 2016, the population of the LGA was 349,050 people, and is predicted to grow by 49 per cent to 521,450 people by 2036 (NSW Department of Planning and Environment, 2016).

The North West Growth Area Transport Strategy (TfNSW, 2014) and particularly the recently completed Sydney Metro Northwest are key catalysts for the development and growth of the North West Growth Area and Blacktown LGA.

Blacktown LGA has the largest urban Aboriginal and Torres Strait Islander population in NSW, accounting for 2.7 per cent of the population (Blacktown City Council, 2017). The LGA also has high rates of cultural and linguistic diversity, with almost half of the LGA's residents born in another country (45.9 per cent), and 41 per cent of people speak another language other than English (ABS, 2016) based on *Blacktown City Social Profile 2016*, and is continuing to grow (Blacktown City Council, 2017).

Blacktown LGA has a SEIFA Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) ranking of decile 8, indicating a relative lack of disadvantage and greater advantage within Australia¹. However, low-income households earning less than \$650 per week accounted for 14 per cent of the LGA's households. As noted in the Social Profile (Blacktown City Council, 2016), there were inequalities in people's access to housing, food, education and employment in the LGA, and places where social disadvantage has remained unchanged for decades.

Of the 105,349 workers in the LGA, 44 per cent also live in the area (Economy.id, 2016). The highest portion of workers travelling to work from outside the LGA came from Penrith (13.6 per cent of workers). Most workers travelling to Blacktown LGA drive a car (72.8 per cent) or are passenger in a car (5.6 per cent) (Economy.id, 2016). This heavy reliance on private vehicles to travel to work is due in large part to the nature of the local public transport network as discussed in the *Blacktown Social Profile 2016*. This indicates that many workers depend on the road network to travel to and from work in the LGA.

Rail infrastructure that services the LGA includes the new Sydney Metro, which currently operates between Tallawong and Chatswood. Once complete, the Sydney Metro will run from Tallawong in Sydney's North West to Sydenham in Sydney's West (Sydney Metro, n.d). This would connect residents living in the North West of Sydney to major employment centres in Sydney's northern suburbs and CBD.

¹ IRSAD divides a population into ten equal groups, called a decile. The lowest scoring 10 per cent of these groups are given a decile number of 1, which indicates the highest level of disadvantage, and the highest scoring 10 per cent of areas are given a decile of 10, which indicates the highest level of advantage.

There are a several commercial centres throughout the LGA, and a number of these are located close to the proposal including Blacktown CBD, Rouse Hill Town Centre (both approximately nine kilometres from the site), and Marsden Park Industrial Centre (approximately 100 metres from the western end of the site and discussed further in section 4.2.1). These centres all provide retail, commercial, community and industrial uses and associated employment.

As discussed in section 3.3 transport is an existing challenge for the LGA. Residents have a heavy reliance on private vehicles and spend a large amount of time travelling each day (Blacktown City Council, 2016). Patronage at all train stations in the LGA except Schofields train station has also decreased between 2004 and 2014 (Blacktown City Council, 2016). The LGA is connected to other parts of Sydney by the M7 Motorway, which connects to the north-east and south, and the M4 Western Motorway, which connects to the east and west. Richmond Road is another key north-south connection.

There are also a number of active transport routes through the LGA, most of which are located in and around the Blacktown CBD and some further north between Schofields Road and the M7 (NSW Roads and Maritime Services, 2018). These routes include a mix of low and medium difficulty on road paths, and off-road paths. Off road paths include bicycle paths, shared paths and separated paths.

4.1.1 Community values

Community values refer to tangible and intangible characteristics and aspects of a community such as amenity and character, lifestyle, access, connectivity, community cohesion and community safety. A project may impact on these aspects of a community through changes in noise and air quality levels, visual amenity, traffic and access, barriers to movement across the community, and use and enjoyment of community spaces. Community values relevant to this SEIA have been identified based on a review of relevant Council documents, as outlined in section 3. As Council policies generally relate to the whole of LGA, the following sections report on community values at the LGA level.

Social cohesion

According to the Social Profile (Blacktown City Council, 2016) Blacktown residents value the diversity of the community, with some residents noting Blacktown LGA is a destination of choice for new migrants. Although some residents did note they sometimes experienced discrimination, others also noted their strong feelings of belonging in the community.

Character and amenity

According to the Social Profile (Blacktown City Council, 2016) residents in the North-West Precinct of the LGA, which includes Marsden Park, Colebee and Schofields value the quiet, peaceful and rural feel of the area.

Blacktown communities are committed to the protection, conservation and enhancement of its environment (Blacktown City Council, 2017) and value the sporting, recreational and social activities provided in the city (Blacktown City Council, 2016).

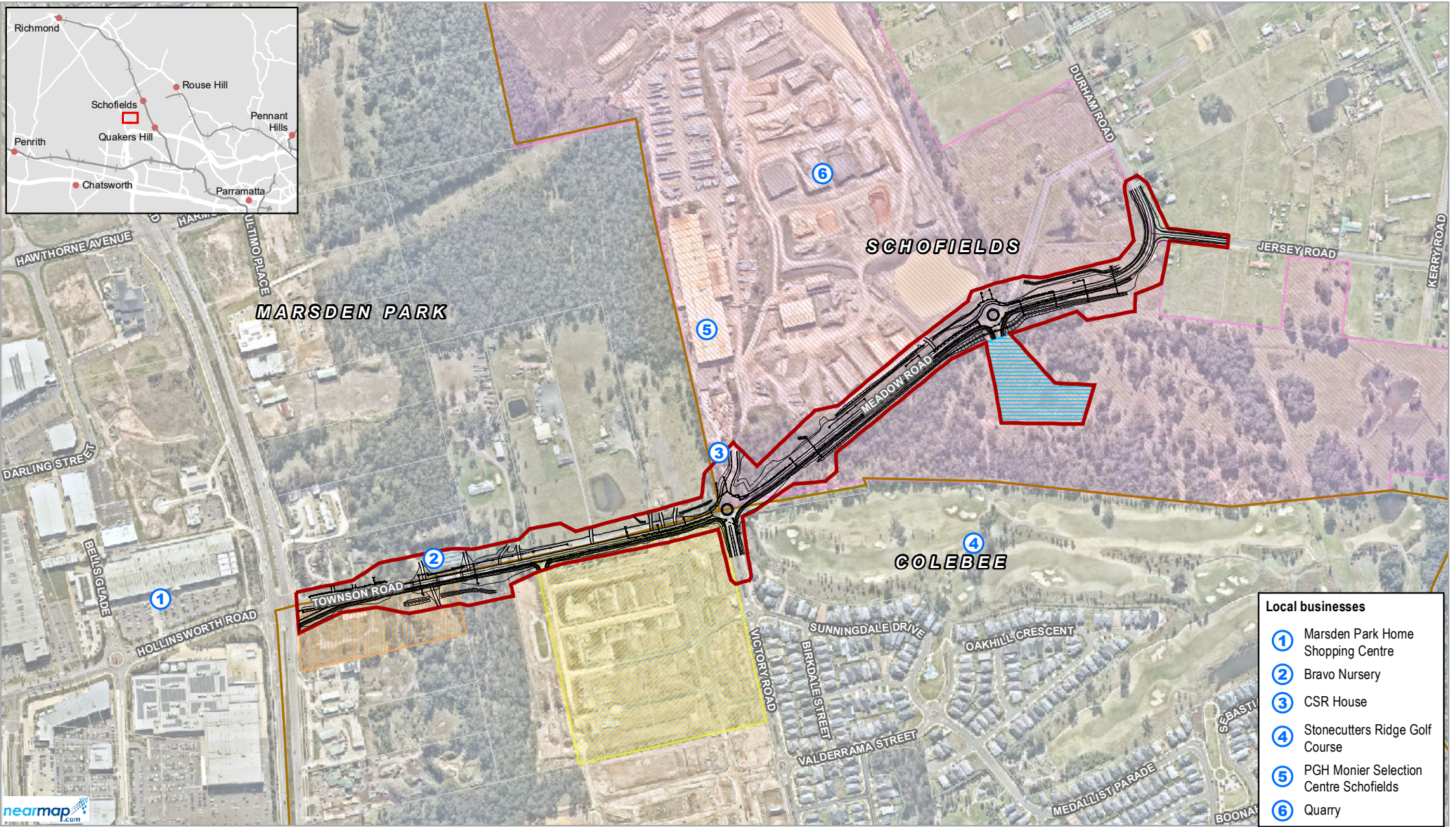
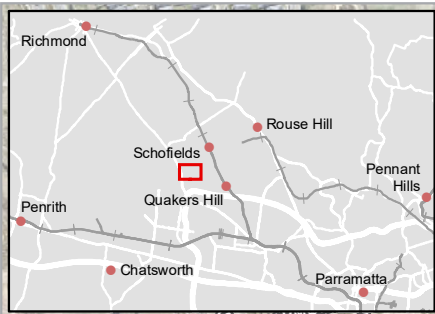
Access and connectivity

A key finding of the *Blacktown Social Profile 2016* was the important role the M7 and other key transport routes play in connecting Blacktown to other parts of Sydney. Whilst well serviced by road infrastructure and the new Sydney Metro, transportation is still a challenge in the LGA (discussed in section 3.3).

Through consultation for the Social Profile (Blacktown City Council, 2017) participants expressed the need for improved road safety, more cycle and pedestrian paths and transport networks that connect the LGA for vehicle and non-vehicles users (Blacktown City Council, 2017). Public transport was also an issue for residents; some viewed it as good where others were concerned about the lack of reliable, accessible and affordable public transport (Blacktown City Council, 2017).

4.2 Local study area

Located in the North West Growth Area, the suburbs of Marsden Park, Colebee and Schofields have all been undergoing development and population growth in recent years, which will continue in the coming years. There are several development sites located in the local study area and along the proposed road alignment that will contribute to the growth and change of these suburbs as new residents move into the area. These sites are discussed in the relevant sections below. Figure 4-1 identifies local businesses and future development within the local study area.



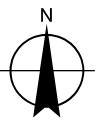
Local businesses	
①	Marsden Park Home Shopping Centre
②	Bravo Nursery
③	CSR House
④	Stonecutters Ridge Golf Course
⑤	PGH Monier Selection Centre Schofields
⑥	Quarry

- LEGEND**
- The proposal *Subject to detailed design
 - Construction footprint
 - Construction compound

- Suburb
- Cadastre
- Future property development**
- CSR development
- Kennards development
- Luxeland development

Paper Size ISO A4
 0 40 80 120 160
 Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



Transport for NSW
Townson Road Upgrade Stage 1
Between Richmond Road and
Jersey Road

Project No. 21-1251195
 Revision No. -
 Date 5/11/2020

Site context

FIGURE 4.1

Data source: Aerial Imagery - Nearmap 2020 (image date 03/08/2020, image extracted 28/09/2020). Created by: eibbertson

4.2.1 Marsden Park

The suburb of Marsden Park is located in the north of Blacktown LGA, approximately 16 kilometres north of Blacktown CBD. In 2016, the suburb had a population of 1,008 people. As mentioned in section 3.2, Marsden Park has been identified as an emerging centre. The suburb is currently undergoing rezoning, with plans for the development of low density residential lots, community infrastructure and businesses across the suburb (DPIE, 2018). As a result of new residential development, the population of Marsden Park is expected to increase to 32,521 people by 2036 (Forecast.id, 2016).

Character and land use

Marsden Park is characterised by a mix of large areas of undeveloped agricultural land, suburban residential areas, and commercial areas. This includes the Marsden Park Industrial Precinct (discussed below). Other features of Marsden Park include Bells Creek, which is a riparian corridor running north-south through the suburb. Townson Road is located along the south western border of Marsden Park, which is an area made up of mostly large rural residential lots, with mature trees and thick vegetation throughout, giving the area a natural and rural character.

Access and connectivity

Richmond Road is the major road that runs through Marsden Park, connecting the suburb to the Blacktown CBD and its surrounding suburbs including Colebee (see section 4.2.2). Richmond Road connects to the western edge of the proposal, at the intersection with Townson Road. It is considered a congestion hotspot by the community (Blacktown City Council, 2016), which was confirmed by Council during consultation to inform this SEIA (refer to section 5). Council indicated that Richmond is consistently congested during peak hour periods, both in the morning and afternoon peak periods.

Marsden Park is serviced by public bus routes 742, 751 and 757. The 742 route begins at Rouse Hill Station, travelling through Riverstone and Schofields, before heading along Meadow Road and Townson Road to the Marsden Park Industrial Precinct. The 751 and 757 both travel through the Richmond Road and Townson Road intersection.

The difficulties associated with the City's transport network (discussed in section 3.3) limit cyclist connectivity, with communities identifying improvements to local pedestrian and cycle paths as an important issue (section 4.1). There is a shared off-road path located along Richmond Road in Marsden Park which connects active transport users to the southern and northern parts of the LGA. On-road active transport routes are limited, with one high difficulty path identified by Roads and Maritime along Richmond Road (NSW Roads and Maritime Services, 2018).

Economy and business

Marsden Park Industrial Precinct is the main commercial hub in Marsden Park, and includes a mix of employment generating uses such as general and light industrial and commercial uses (DPIE, 2011). Marsden Park Home is located within Marsden Park Industrial Precinct and includes large scale retail stores (eg IKEA, Costco) and fast food stores (refer to Figure 4-1).

Bravo Nursery a family run business, located on Townson Road in Marsden Park. The nursery is located on a property which also includes a residential dwelling. According to Transport for NSW consultation, the dwelling is occupied by the owner of the entire property, who leases the nursery portion of the property to the owner of Bravo Nursery. As discussed in chapter 3 (section 3.6) of the REF, the portion of the property on which Bravo Nursery is located will be subject to partial acquisition during construction.

TfNSW consultation with Bravo Nursery indicates the business has been operating for 13 years and employs six people. It primarily provides retail services (90 per cent) and some wholesale services (10 per cent), and the plants sold are grown on site. The nursery is open seven days a week (except major public holidays), and is busiest on weekends, and before and after office hours during the week. Approximately 60 per cent of customers approach the business from the east, and 40 per cent from the west.

The top occupations of Marsden Park residents were clerical and administrative (18.3 per cent), technicians and trades workers (16.6 per cent) and machinery operators and drivers (13.3 per cent).

Demographic profile

Overall, compared to Blacktown LGA, Marsden Park has an older age profile (40 years compared to 33 years). There is also a much higher proportion of lone person households (31 per cent) when compared to the LGA (15 per cent). Marsden Park also displays a relatively high level of socio-economic disadvantage. In particular, the community of Marsden Park is characterised by:

- A median age of 40, which is older than the LGA (33 years old)
- A lower proportion of the population who are under 18 years of age (19.3 per cent) than the LGA (26.9 per cent)
- A higher proportion of older people, 65 years and older (21 per cent) than the LGA (10.3 per cent)
- A higher proportion of Aboriginal and Torres Strait Islanders (3.6 per cent) than the LGA (2.8 per cent)
- A lower proportion of the population who speak a language other than English at home (22.5 per cent) than the LGA (41 per cent)
- A lower rate of unemployment (4.1 per cent) compared to the LGA (7.3 per cent)
- A lower proportion of couple families with children (46 per cent) than the LGA (55 per cent)
- A slightly higher proportion of the population who require assistance with daily activities (6 per cent) compared to the LGA 5 per cent)
- The same proportion of the population who drive a car to work (63 per cent) as the LGA
- A higher proportion of households earning less than \$650 per week (23 per cent) compared to the LGA (14 per cent)
- A higher proportion of lone person households (31 per cent) compared to the LGA (15 per cent)
- A SEIFA Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) ranking of decile 4, indicating a relative disadvantage and a lack of advantage in general within Australia.

Appendix A provides a summary of demographic indicators for Marsden Park.

4.2.2 Colebee

The suburb of Colebee is located to the south-east of Marsden Park, approximately nine kilometres north of the Blacktown CBD. In 2016 the suburb had a population of 1,931 people and was one of several areas identified as having a growing population in the *Blacktown Social Profile 2016*. In line with the broader growth and change of the region (discussed in section 4), much of the suburb has been rezoned to allow for the development of mostly low density residential dwellings.

This includes land located on the southern side of Townson Road, which is owned by Luxeland Development. Called 'Sandstone Ridge', the development will include 240 low density residential dwellings to be built by early 2021 according to Transport for NSW consultation with the developer in October 2019 (TfNSW, personal communication, 2019). Sandstone Ridge will also include a recreation park (DIHE Sandstone Ridge Pty Ltd, 2019). The population of Colebee is expected to increase to 4,143 residents by 2036 (Forecast. id, 2016).

Land use

Colebee is characterised by low density residential lots, areas of bushland, and areas of vacant land. Eastern Creek runs north to south along the eastern border of the suburb, and Bells Creek (discussed in section 4.2.1) runs north to south at the western end of the suburb. There is an area of bushland located in the south-western corner of the suburb which is listed on the state heritage register. The Colebee and Nurragingy Land Grant site was the first land grant ever given to Aboriginal people in Australia (NSW Office of Environment and Heritage, 2011).

Other key features of the suburb include Stonecutters Ridge Neighbourhood Centre and Stonecutters Ridge Golf Club. The golf course follows the creek line and is located at the western end of Townson Road at the roundabout with Meadow Road.

Access and connectivity

Richmond Road and Westlink M7 are the two major roads in Colebee which connect the suburb to the rest of the LGA. Richmond Road is located along the western border of the suburb, and as discussed in section 4.2.1 experiences heavy congestion. The Westlink M7 runs along the southern border of the suburb and provides residents with access to other parts of Sydney. As discussed in section 4.1.1 the M7 in addition to other key transport routes through the LGA play an important role connecting Blacktown to other parts of Sydney (Blacktown City Council, 2016).

As discussed in section 4.2.1 bus routes 742, 751 and 757 service Colebee. There are some off-road bicycle paths throughout Colebee. This includes an unbroken shared off-road cycle path that begins in the east of the suburb at Valderrama Street and continues south through the suburb and over the Westlink M7 to connect to a number of other off-road bicycle paths (NSW Roads and Maritime Services, 2018). As discussed in section 4.2.1 there is also a shared off-road cycle path that runs north-south along Richmond Road.

Economy and business

Greenway Village is the main shopping centre in Colebee. Located on Richmond Road, the centre includes a Woolworths, medical centre, several retail stores and a large ground level car park for customers. Another cluster of businesses are located further north along Richmond Road near the corner of Townson Road. These include two petrol stations, take away food stores, a café and a gym. Transport for NSW consultation with local stakeholders in 2019 indicates the vacant land located on the corner of Richmond Road and Townson Road is intended to be developed into a Kennards Hire business and a fast food and takeaway business. The timing of this development is not yet known.

The top occupations of Colebee residents were: professionals (30.1 per cent), clerical and administrative (17 per cent) and managers (16.1 per cent).

Demographic profile

Colebee has a high IRSAD ranking decile of 10, which means residents demonstrate high levels of socio-economic advantage compared to the rest of Australia. The suburb is mostly made up of family households with young children. In particular, the community of Colebee is characterised by:

- A median age of 32, younger than the LGA (33 years old)
- A higher proportion of the population who are under 18 years of age (29.8 per cent) compared to the LGA (26.9 per cent)
- A lower proportion of older people, 65 years and older (4.6 per cent) than the LGA (10.3 per cent)
- A lower proportion of Aboriginal and Torres Strait Islanders (0.7 per cent) than the LGA (2.8 per cent)
- A higher proportion of the population who speak a language other than English at home (45.4 per cent) than the LGA (41 per cent)
- A lower rate of unemployment (4.3 per cent) compared to the LGA (7.3 per cent)
- A higher proportion of couple families with children (68 per cent) than the LGA (55 per cent)
- A lower proportion of the population who require assistance with daily activities (2 per cent) compared to the LGA (5 per cent)
- A higher proportion of the population who drive a car to work (71 per cent) than the LGA (63 per cent)
- A lower proportion of households earning less than \$650 per week (4 per cent) compared to the LGA (14 per cent)
- A lower proportion of lone person households (5 per cent) compared to the LGA (15 per cent)
- A SEIFA IRSAD ranking of decile 10, indicating a relative lack of disadvantage and greater advantage within Australia.

Appendix A provides a summary of demographic indicators for Colebee.

4.2.3 Schofields

Schofields is located in the centre of the LGA, to the east of Colebee and Marsden Park. In 2016, the population of the suburb was 4,983 people. Similar to Marsden Park and Colebee, Schofields is undergoing significant residential and commercial development to support growth of the Sydney's North West Growth Area.

This includes land owned by CSR on the northern and southern side of Meadow Road, which is located in Schofields. In total, the development will deliver 1,536 lots by 2028, with construction to begin in 2022 according to Transport for NSW consultation with the developer in August 2019 (TfNSW, personal communication, 2019).

Land use

Land use in Schofields can be characterised by a mix of large rural residential properties in the western section of the suburb, and suburban residential areas in the eastern part of the suburb.

This results in the western portion of Schofields having a strong rural feel and the eastern areas having a suburban character.

The proposal is located in the western part of Schofields along Meadow Road, where a quarry is also located. CSR owns both the quarry and most of the land along Meadow Road which will be developed into low-density dwellings between approximately 2024 and 2028 (TfNSW personal communication, 2019), which is likely to change the character of this part of Schofields.

Key features of the suburb include Eastern Creek, which runs north-south through the centre of the suburb, and Western Sydney University Nirimba Campus, which is located in the south-east corner of the suburb.

Access and connectivity

The main roads in Schofields are Railway Terrace which runs north to south, and Schofields Road which runs east to west. Railway Terrace links up to the Westlink M7 in the south, while Schofields Road connects to the commercial centres of Rouse Hill to the east and Marsden Park to the west.

Schofields train station is located in the centre of the suburb on Railway Terrace. The T1 North Shore and Western Line connects Schofields to Richmond and the Sydney CBD, and the T5 Cumberland Line connects to the suburbs of Liverpool and Campbelltown. There is a bus interchange located at Schofield's Station where bus routes 734, and 751 stop and at Rouse Hill Station where bus routes 742 and 751 stop.

As discussed in sections 4.2.1, bus routes 734, 742 and 751 route travel through Schofields.

Economy and business

The closest major retail centre to Schofields is Marsden Park in the west and Rouse Hill to the east, which are both connected by Schofields Road. A Woolworths is located next Schofields train station on Railway Terrace.

There are two businesses in Schofields that are in close proximity to the proposal. CSR Quarry make bricks and pavers, while OZ Firewood is located on Durham Road.

The top occupations of employment for Schofield residents are: professionals (21.4 per cent), clerical and administrative workers (16.6 per cent) and technicians and trades (15.1 per cent).

Demographic profile

Over half of households in Schofields are family households, and almost a third of the population are under 18 years old. Schofields has a high IRSAD decile of 9, meaning there are high rates of socio-economic advantage. In particular, residents of Schofields are characterised by:

- A median age of 32 which is slightly younger than the LGA (33 years old)
- A higher proportion of the population who are under 18 years of age (28 per cent) compared to the LGA (26.9 per cent)
- A lower proportion of older people, 65 years and older (7.7 per cent) than the LGA (10.3 per cent)
- A slightly lower proportion of Aboriginal and Torres Strait Islanders (2 per cent) than the LGA (2.8 per cent)
- A lower proportion of the population who speak a language other than English at home (28.2 per cent) compared to the LGA (41 per cent)
- A lower rate of unemployment (5.1 per cent) compared to the LGA (7.3 per cent)

- A higher proportion of couple families with children (57 per cent) than the LGA (55 per cent)
- A lower proportion of the population who require assistance with daily activities (3 per cent) compared to the LGA (5 per cent)
- The same proportion of the population who drive a car to work (63 per cent) as the LGA
- A lower proportion of households earning less than \$650 per week (9 per cent) compared to the LGA (14 per cent)
- A lower proportion of lone person households (13 per cent) compared to the LGA (15 per cent)
- A SEIFA IRSAD ranking of decile 9, indicating a relative lack of disadvantage and greater advantage within Australia.

5. Stakeholder consultation

This SEIA has been informed by consultation undertaken by Transport for NSW to inform the REF, and SEIA-specific consultation. Chapter 5 of the REF provides a summary of the Transport for NSW consultations. Outcomes of these consultations which are relevant to this SEIA have been referenced throughout the relevant sections of this report.

SEIA-specific consultation was undertaken with Blacktown City Council, NSW Ambulance and NSW Fire and Rescue to confirm the social baseline including community values and character, and to discuss the potential socio-economic impacts of the proposal. The sections below provide a summary of key outcomes relevant to this SEIA.

5.1 Blacktown City Council

- The proposal area has a rural character, and the surrounding areas are currently undergoing significant change. It is likely the resident profile will change due to development.
- Some families in the area have been living there for several years. Change may be difficult for some residents, however Council does not expect a proposal of this nature raising significant community concern.
- There is a lack of transport infrastructure including roads and public transport in Marsden Park. Some developers have provided a shuttle bus to connect new residents to public transport.
- Richmond Road currently experiences heavy congestion, especially during the morning and afternoon peak periods. Additional residential development in the region is expected to worsen congestion, however there are plans to increase the capacity of Richmond Road in the future.
- There are several Development Applications with Council for new childcare facilities to be located at Marsden Park Home. The number of community facilities in the region are likely to increase in the future as residential developments increase.
- There is potential that new residents moving into developments will not be aware of the proposal, which has the potential to effect local amenity and character. There is potential for these residents to be concerned about the proposal.

5.2 NSW Ambulance

- NSW Ambulance currently do not experience a high level of demand and responses to emergencies in the communities surrounding the proposal site.
- Construction activities are not expected to lead to increased demand on ambulance services.
- Once complete, the Townson-Burdekin Road Upgrade (Stage 1 and Stage 2) is expected to be positive overall for the area and will support NSW Ambulance response times.
- Ongoing communication with NSW Ambulance and the community about the proposal and changes to the transport network is important to support NSW Ambulance response times to emergencies during construction.

5.3 Fire and Rescue NSW

- It is unlikely that construction activities would lead to increased demand on fire and rescue services provided appropriate traffic control systems are in place.
- Operation of Townson-Burdekin Road Upgrade (Stage 1 and Stage 2) is likely to reduce the travel distance from the Schofields Fire and Rescue Station to the Richmond Road and Townson Road intersection by around 2.5 kilometres.
- Operation of Townson-Burdekin Road Upgrade (Stage 1 and Stage 2) will improve response times from the Schofields Fire and Rescue Station to the existing developed areas around Colebee and Marsden Park Home, as well as those future development areas in the West Schofields Precinct.

6. Assessment of impacts

This section describes and assesses the potential socio-economic impacts that may result from construction and operation of the proposal. Impacts have been identified through a review of various sources of information as described in section 2.2.5. Socio-economic impacts resulting from changes to local economy, business and employment, amenity and character, access and connectivity, property and land use due to the proposals construction and operation have been assessed in accordance with the impact assessment methodology in section 2.2.5.

6.1 Construction impacts

6.1.1 Property and land use

This section describes the potential social impacts arising from residential and commercial property acquisition. Table 6-1 provides details about proposed land requirements for the proposal.

Table 6-1 Proposed land requirements

Description	Current owner	Lot / DP	Land use zone
46 Durham Road	Private property	Lot 28 / DP 12076	SP2/RU4
9 Townson Road	Private property/commercial	Lot 43 / DP 1175138	B5/E2/RU4
35 Townson Road	Private property	Lot 8 / DP 17048	RU4
51 Townson Road	Private property	Lot 9 / DP 17048	RU4
55 Townson Road	Private property	Lot 10 / DP 17048	RU4
63 Townson Road	Private property	Lot 11 / DP 17048	RU4
6 Townson Road	Commercial property	Lot 44 / DP 1175138	B5/E2
75 Townson Road	Commercial property	Lot 3 / DP 232574	RU4
Townson Road	Luxeland Development	Lot 356 / DP 1253165	SP2/E2/R2/RE1

In addition, a strip of land would be temporarily acquired from a private property. This is to enable the construction of the new section of Townson Road between Meadow Road and Durham Road/Jersey Road to maintain west to east connectivity. This land would be returned to the landowner following completion of the Stage 2 proposal. Table 6-2 provides details about proposed temporary property acquisition for the proposal.

Table 6-2 Proposed temporary property acquisition

Description	Full/partial acquisition	Current owner	Lot and DP	Land use zone (LEP)
5 Meadow Road	Partial	Private property	Lot 29 / DP 112076	RU4

Full acquisition of residential properties

As discussed in chapter 3 of the REF, the proposal would require the full acquisition of the rural residential property located in Schofields at 46 Durham Road, Schofields.

The involuntary nature of acquisition of residential properties under the *Land Acquisition (Just Terms Compensation) Act 1991* and subsequent relocation of residents is likely to result in lifestyle disruption for residents of this property. Moving would generate demands on time and would be an inconvenience to residents and homeowners. Impacts to residents will depend on individual circumstances.

Residents may not be able to relocate to a property in the same neighbourhood (i.e. the same street, or nearby streets), and therefore may experience a loss of social ties, and may need to travel further to access employment, services and facilities. A review of rental vacancy rates and properties for sale and rent in the local study area (i.e. the suburbs of Marsden Park, Schofields and Colebee) indicated that there were 2013 properties for sale and 545 properties for rent, all of which are single detached dwellings. There are only three similar rural residential properties for sale in the local study area. The rental vacancy rate for the local study area in February 2020 was highest in Schofields (16.6 per cent) followed by Marsden Park (7.7 per cent) and Colebee (2.6 per cent). Based on this, there is potential for these residents to move to an alternate property in the area, particularly in Schofields which is the same suburb as the property being acquired and which has the highest rental vacancy rate. However, this would depend on their individual circumstances.

This relocation process, and the potential loss of social ties, may result in stress and worry for some individuals. Generally, people who have lived at the same residence for a long time would have stronger links and attachment to the area.

Most residents are considered to have a low level of sensitivity, as they are likely to have minimal areas of vulnerability and a high ability to absorb or adapt to change. While the impact would only be experienced by residents of one household, the magnitude of the impact for these residents would be moderate as it would be clearly noticeable over the medium term, particularly if the residents have strong attachment to their property, and if they are unable to remain living in the local area. The significance would therefore be moderate-low for the affected residents. Consultation is being carried out directly with residents of the affected property to understand if they have any particular vulnerabilities. Vulnerable residents would have a higher sensitivity, which could increase the significance rating for this impact.

Partial acquisition of residential properties

As discussed in chapter 3 of the REF, the proposal would involve the partial acquisition of five residential properties along Townson Road (one of these properties is a mixed use residential/commercial property). The land that would be required would primarily be strip acquisition and would involve the removal of land currently used to separate properties from the street, in addition to a small portion of yards and property frontages. The majority of land acquired during construction would be reinstated during operation.

The loss of a small portion of each property would decrease the amount of private open space within these properties, and slightly reduce the distance between the road and people's front gardens and homes. Most residents are expected to have a low level of sensitivity, as they are likely to have minimal areas of vulnerabilities and a high ability to adapt and absorb to these changes. The magnitude of the change would be low, as it would affect a small number of people in a limited area. Therefore, the significance rating would be low.

Partial acquisition of commercial properties

As discussed in chapter 3 of the REF, the proposal would involve the partial acquisition of two commercial properties and one mixed use (residential/commercial). These comprise the Kennards property, CSR Brickworks and the Bravo Nursery. Impacts to the Bravo Nursery are discussed below.

The Kennards property and CSR Brickworks are intended to be developed in the future (see section 4.2.2 and section 4.2.3). The land that would be required from the Kennards property and CSR Brickworks would primarily include strip acquisition. This acquisition is needed to accommodate the upgrade of Townson Road and during the interim phase includes access provision to maintain existing commercial operations in the short term. The ultimate phase of the proposal provides intersections stubs to accommodate the planned future development of these sites.

Land leased temporarily during construction would be reinstated during operation and is not expected to affect operations at CSR Brickworks or the existing Kennards property.

As described in section 4.2.2, the Luxeland development is intended to be completed by early 2021 and is intended for residential development. The land that would be required from this development site would primarily be strip acquisition. This acquisition is needed to accommodate the widening of Townson Road. The ultimate phase of the proposal includes intersections stubs to provide access into the planned future development at this site.

Partial acquisition of Bravo Nursery property

Partial acquisition of the Bravo Nursery property (the mixed use residential/commercial property at 9 Townson Road) is required to accommodate the new bridges and flood relief drainage for the proposal. The acquisition comprises a strip on the north side of Townson Road impacting predominantly the greenhouses within the commercial part of the property.

Acquisition of the strip of land from the nursery would impact the driveways of the property in the short term. The interim phase would therefore adjust the existing driveways to provide continued access to the property. The interim phase has also been designed to accommodate the continued short term operation of Bravo Nursery, prior to completion of the ultimate phase of the proposal. The design of the interim phase would provide a bund between the two access driveways and two large culverts under the driveways. This would provide the necessary flood management for the area while maintaining short-term operation of the business.

On completion of the ultimate phase of the proposal, the flood relief bridge would be extended to the north into the nursery property, requiring removal of the principle nursery structures, which would result in the nursery ceasing operation in its current location. This is required for the widening of the bridges to accommodate the two additional carriageways and the final drainage design of the proposal.

The Bravo Nursery business would therefore need to relocate to an alternate property to accommodate the ultimate phase works. A review of commercial properties for sale and rent in the local study area (i.e. the suburbs of Marsden Park, Schofields and Colebee) indicated that there were 34 properties for sale, the majority of which were development sites or vacant land for sale. There were 89 properties for lease, 57 of which were factory and industrial sites, and 16 properties were development sites or vacant land for lease. Based on this, the business may be able to relocate to an alternate property in the area, depending on a range of factors such as suitability of the site and location. The relocation process may lead to increased workload and stress on the business owner and employees.

The business owner and nursery employees are expected to have a moderate level of sensitivity, as they may have some ability to adapt and absorb to change, particularly as consultation would continue with the business owners about the impacts to the nursery. The magnitude of the impact if the business relocated locally is expected to be moderate, therefore the level of significance would be moderate.

If the business relocated outside of the local area, there is potential for some customers to be deterred from travelling further, and the business could lose income. This could place stress on the business owner and employees. The magnitude of relocating outside of the local area is expected to be high, therefore the significance would be high-moderate.

Consultation would continue with the business owner during detailed design. This process may increase workload and stress for the business owner and employees in the short term.

6.1.2 Amenity and character

This section discusses the potential impacts that may occur due to changes to amenity in the local study area, which may affect the quality of life for residents and businesses in these areas. Changes to amenity relate to changes in noise and vibration levels, visual amenity and air quality.

Noise and vibration

As noted in Technical Working Paper F – Noise and vibration, existing noise levels in the local area are influenced by road traffic along Townson Road, Meadow Road and Richmond Road. Some residential properties are currently located along or close to the proposed road corridor, and as discussed in section 4.2.2 there will be more residential properties built south of Townson Road by the time construction of the proposal occurs in 2022.

There would be two construction phases, one associated with the interim phase works and one associated with the ultimate phase works. As noted in Technical Working Paper F – Noise and vibration, for the interim construction works, 43 buildings within the study area have been identified to (seven existing and 36 future) fall within the 20 metre safe working distance for vibratory rolling works. For the ultimate phase of the proposal 38 buildings within the study area fall within a 20 metre safe working distance for vibratory rolling works. These buildings include one residential property at 63 Townson Road, 36 new residential properties that will be built in the Luxeland Development (see section 4.2.2) and the Kennards site. Where vibration may be perceptible it is likely to last for short durations when equipment such as rock breakers are operating nearby.

Most residents are expected to have a low level of sensitivity, as they are likely to have minimal areas of vulnerabilities and a high ability to adapt and absorb to these changes. The magnitude of the change would be low, as it would affect a small number of people in a limited area and would be temporary across the two phases of construction. Therefore, the significance rating would be low.

During construction of the interim phase, Townson Road will be closed for six months and all traffic will be diverted along Alderton Drive and Victory Road. As noted in Technical Working Paper F – Noise and vibration, there will be no noticeable increase in noise for residents along Alderton Drive or Victory Road from heavy vehicles as speed will be limited to 40 kilometres per hour along these roads. During construction of the ultimate phase of the proposal, minimal road closure would be needed.

Daytime noise may be a nuisance to some residents in properties located along Townson Road, Meadow Road, Sunningdale Drive, Victory Road, Kerry Road and Durham Road. Construction related traffic has the potential to temporarily increase road traffic noise, in particular in residential areas adjacent to haulage routes and the construction compound, which would be located at the western end of Meadow Road.

This could potentially lead to some people spending less time outdoors in front yards, backyards or on balconies, and closing windows whilst indoors. It also has the potential to disturb or interfere with day-to-day activities such as conversations, reading, listening to the radio and watching television. However, construction noise would be sporadic and would move along the road corridor, so not all residents would be affected at all times.

Most residents are expected to have a low level of sensitivity, as they are likely to have minimal areas of vulnerability and a high ability to absorb or adapt to these changes. The magnitude of the impact is expected to be low because only a small proportion of residents would be impacted temporarily. The level of significance would therefore be moderate-low.

Vulnerable residents may be particularly sensitive to increased noise and vibration levels. As discussed in section 4.2.1, Marsden Park has a higher proportion of low-income households and residents over 65 years when compared to the LGA. Vulnerable residents may have less capacity to absorb or adapt to changes, therefore they may have a moderate to high level of sensitivity. The significance rating for vulnerable residents would therefore be moderate-low.

Most construction work would be carried out during standard daytime hours, however there may be some evening and night time works required. This work would be temporary and intermittent in nature. As noted in Technical Working Paper F – Noise and vibration, 73 residential receivers are predicted to exceed the sleep disturbance criteria during the construction of the Victory Road intersection. The majority of which would be located in the Luxeland Development.

Disturbance to people's night-time peacefulness, relaxation or sleep can lead to tiredness which can affect people's moods, ability to concentrate on work and other activities, increase irritation and therefore potentially add to strain on personal relationships. A Construction Noise and Vibration Management Plan would identify noise sensitive locations and management measures and practices to minimise noise impacts.

Most residents are likely to have a moderate level of sensitivity to night time noise. The magnitude of the impacts would be low given they would be managed through a Construction Noise and Vibration Management Plan and would be temporary and intermittent. The significance rating would therefore be moderate-low. Vulnerable residents would have a moderate to high level of sensitivity, therefore the significance would be moderate - low.

Air quality

As noted in the Air Quality assessment, there would be no discernible change in air quality along the road corridor during construction. Dust associated with construction activities is expected to be temporary and would generally occur during dry weather with the wind blowing towards a receptor when dust is being generated. While the Construction Management Plan would ensure dust levels are managed to acceptable standards, nuisance dust may affect residents in properties close to construction activities.

There would be two constructions phases, one associated with the interim phase works and one associated with the ultimate phase works. During these periods nuisance dust may lead to some residents altering their way of life, such as closing windows of houses or vehicles, or spending limited time in front yards, backyards or on balconies. People may also need to spend more time cleaning indoor or outdoor surfaces due to settling dust. Most residents are expected to have a low level of sensitivity, as they are likely to have minimal areas of vulnerability and a

high ability to absorb or adapt to change. The magnitude of the impact expected to be low, therefore the significance would therefore be low.

People who may be more sensitive to dust include vulnerable groups such as older people, children and people with medical conditions such as asthma. Vulnerable people are expected to have a moderate to high level of sensitivity, as they are likely to have multiple vulnerabilities and little to no capacity to absorb or adapt to change. The magnitude of the impact would be low and therefore the level of significance would be moderate or moderate-low.

Visual and landscape

Technical Working Paper D – Urban Design and Visual Impacts found that construction activities would result in visual changes primarily along Townson Road and Meadow Road resulting from construction vehicles, machinery, construction workers and a construction compound. Construction dust and the removal of some vegetation along Townson Road and Meadow Road would also change the visual landscape.

As noted in section 4.1.1, the local study area and its surrounds has a rural character that is currently undergoing significant change. The visual changes during construction are expected to temporarily change the local character and amenity, which may affect how local residents feel about the area.

Construction activities would be visible from residential properties along Townson Road, some residential properties along Victory Road and several properties adjacent to the Durham Road and Meadow Road intersection. This may reduce resident's enjoyment of outdoor areas and the views from some windows facing front yards and gardens. The two construction phases have the potential to extend the duration of the impact for some residents.

Most residents are expected to have a low level of sensitivity, as they are likely to have minimal vulnerabilities and a high ability to absorb or adapt to change. The magnitude would be low, as the impact is on a small proportion of residents and most visual changes would be temporary across the two stages of construction.

6.1.3 Access and connectivity

This section discusses potential changes to access and connectivity resulting from construction activities for residents, commuters and general community members travelling through the local study area. Changes that would affect local businesses are discussed in section 6.1.5.

Construction activities would result in adjustments to property access arrangements for some residential properties along Townson Road. This includes closure of Townson Road for six months during construction of the proposal. During construction of the ultimate phase of the proposal, minimal road closure would be needed. Transport for NSW would maintain property access for all affected residents during construction, therefore no social impact is expected to result from changes to private property access.

Roads and traffic

As noted in the Technical Working Paper E –Transport and Traffic, it is estimated that light vehicle movements are in the order of 12 vehicles per day across the proposal. For heavy vehicles, it is assumed that five to ten vehicles will access and egress the site per hour. Therefore, light and heavy vehicle traffic generation during construction will be low and would fall within typical daily fluctuations with no expected adverse impacts to the operation of the adjoining network. Residents may notice additional heavy vehicles on local roads, particularly Alderton Drive and Victory Road, however access and connectivity are not expected to be affected, therefore, no social impacts are expected to occur.

Public transport

As discussed in section 4.2.1, bus routes 734, 742, 751 and 757 travel through the local study area. Technical Working Paper E – Transport and Traffic found that bus route 742 is likely to be impacted while Townson Road is closed for six months during construction of the interim phase. During construction of the ultimate phase of the proposal, minimal road closure would be needed. During this time, bus services will be required to use the diversion via Alderton Drive and Victory Road to access Townson Road. This may result in a small increase in travel time of approximately three minutes which would slightly increase bus passengers travel time.

The Hollingsworth Road and Townson Road bus stop would be temporarily relocated approximately 70 metres from its current location along Richmond Road to accommodate the diverted bus route. The increased walking distance for bus passengers is expected to result in a negligible increase in travel time, however some bus passengers may feel this is an inconvenience. Bus passengers with mobility issues who need to walk further may be more vulnerable to this change.

Most bus passengers are expected to have a moderate level of sensitivity, as they may have a number of vulnerabilities associated with increased travel time, and some ability to absorb or adapt to changes. The changes would affect bus passengers for six months; therefore, the magnitude would be low. Vulnerable bus passengers would have a moderate to high sensitivity. The level of significance for general bus passengers would be moderate-low, and for vulnerable bus passengers would be moderate to moderate-low.

Bus routes 751 and 757 are not likely to experience disruption or delays to the timetable. Therefore, it is not expected to be any impact to bus passengers because of construction activities. There would be no impacts to train services because of construction activities.

Active transport

As discussed in section 4.2.1 there are no active transport routes along Townson Road. Therefore, there are not expected to be any impacts to pedestrians or cyclists during construction.

Parking

Construction workers may be travelling during peak periods to travel to their designated work area. It is expected that about 80 personnel per day would likely access the proposal. Technical Working Paper E – Transport and Traffic states that parking for construction workers will be restricted to designated compounds and areas for construction workers only and would have minimal impact to on-street parking and traffic flow on the existing road network. Therefore, no social impact is expected to result from construction workers parking near the proposal during construction.

6.1.4 Economy, business and employment

Economic and employment opportunities

As discussed in chapter 3 (section 3.3) of the REF, it is estimated that the construction of the proposal would result in up to 80 jobs during peak periods resulting in direct employment opportunities for skilled workers from the region including roles such as engineers, designers and construction workers.

Construction of the proposal may provide opportunities for local businesses to supply goods and services to the construction workforce. Construction workers may create some demand for local food and beverage, as well as retail and recreation services close to the proposal. Businesses that are likely to benefit include takeaway food and beverage stores located on the eastern side of Richmond Road close to the Richmond Road and Townson Road intersection.

Amenity changes

Construction activities may result in noise and visual changes, which may decrease the amenity of Stonecutters Ridge Golf Club.

According to Technical Working Paper F – Noise and Vibration, increased noise from construction activities may affect users of the golf course. Visual impacts associated with construction activities as discussed in section 6.1.2 may require the removal of some vegetation along Meadow Road and may reduce visual amenity for users of the golf course. As discussed in section 6.1.2 there would be no discernible change in air quality along the road corridor during construction.

Reduced noise and visual amenity could potentially affect user's enjoyment of the golf course particularly when people are using areas of the facility, which are closer to construction activities. It is unlikely that most users of the golf course would be deterred from using the golf course, particularly as most users may only spend a small amount of time in the areas closest to the construction activities. Most users of the Stonecutters Ridge Golf Club are expected to have a low level of sensitivity, as they are likely to have minimal areas of vulnerability and a high ability to absorb or adapt to change. The magnitude of the impact is expected to be low, as these changes would be temporary and only affect some users of the golf course. The significance level would therefore be low.

Changes to access

During the time Townson Road is closed, employees of local businesses on Townson Road would be required to use Alderton Drive and Victory Road as temporary alternate routes. This may result in an approximately three minute increase in travel time for these employees, which may be an inconvenience. No social impact is expected to result from this change.

6.1.5 Assessment of construction impacts

The assessment of potential socio-economic impacts presented in Table 6-3 is based on the methodology provided in section 2, and considers the implementation of mitigation measures.

Table 6-3 Assessment of socio-economic impacts during construction

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
Property and land use						
Full acquisition of the property at 46 Durham Road, Schofields	<p>Acquisition and relocation processes would generate demand on time for residents and their families.</p> <p>People may also not be able to relocate to a similar property in the same neighbourhood, depending on their individual circumstances. However, there are similar properties available in the local study area for sale and rent, with a higher vacancy rate in Schofields, therefore there is potential for the affected residents to relocate locally. If relocating out of the area, residents may experience a loss of the social ties, and may need to travel further to access employment, services and facilities.</p>	Negative Direct Long term	Residents of property being acquired	Low	Moderate	Moderate-low
Partial acquisition of four existing residential properties and the residential property which comprises a mixed use residential/commercial property	Partial acquisition may reduce resident's enjoyment of these spaces, decrease a residents pride in their properties, and loss of privacy during construction.	Negative Direct Temporary	Residents of properties being partially acquired	Low	Low	Low
Partial acquisition of Bravo Nursery property due to the ultimate phase would result in relocation of the business.	Relocation of the business locally may increase workload and potentially lead to stress for business owner and employees.	Negative Direct Short term	Business owner and employees	Moderate	Moderate	Moderate
	Relocation of the business outside the local area may deter customers and lead to a loss of business income. This may place stress on the business owner and employees.	Negative Direct Long term	Business owner	Moderate	High	High-Moderate

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
Amenity and character						
Increased noise and vibration levels because of construction activities during the daytime at properties adjacent to the proposal.	43 buildings during the interim phase and 38 buildings during the construction of the ultimate phase within the study area fall within a 20 metre safe working distance for vibratory rolling works. These buildings include up to seven existing and 36 new residential properties that will be built in the Luxeland Development (see section 4.2.2) and the Kennards site. Where vibration may be perceptible is it likely to last for short durations when equipment such as rock breakers are operating nearby.	Negative Direct Temporary	Local residents	Low	Low	Low
	Increased noise during the day may be a nuisance to some residents, and may lead to some people changing their behaviours, including spending less time in outdoor areas, closing windows whilst indoors.	Negative Direct Temporary	Local residents	Low	Low	Low
	There is potential for some residents, including vulnerable residents to be more sensitive to an increase in noise and less likely to be able to absorb or adapt to amenity changes.	Negative Direct Temporary	Vulnerable residents	Moderate-high	Low	Moderate-low
Increased noise levels as a result of construction activities during night time	73 residential receivers are predicted to exceed the sleep disturbance criteria during the construction of the Victory Road intersection. The majority of which would be located in the Luxeland Development. A Construction Noise and Vibration Management Plan would identify noise sensitive locations and management measures and practices to minimise noise impacts.	Negative Direct Temporary	Residents	Moderate	Low	Moderate-low

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
	Vulnerable residents may particularly be sensitive to increased noise levels as a result of construction activities during night time.	Negative Direct Temporary	Vulnerable residents	Moderate-low	Low	Moderate-low
Dust generated from construction activities may impact air quality on nearby residential areas.	Increase in dust can lead to some residents altering their way of life, including spending less time outdoors, and spending more time cleaning.	Negative Direct Temporary	Local residents	Low	Low	Low
	People who may be more sensitive to dust include vulnerable groups such as older people, children and people with medical conditions such as asthma.	Negative Direct Temporary	Vulnerable groups	Moderate to High	Low	Moderate – Moderate-low
Changes to visual surrounds because of construction activities.	Residents of properties along Townson Road, some properties along Victory Road and properties adjacent to the Durham Road and Meadow Road intersection would be able to view construction of the proposal. This may lead to some residents reducing use or enjoyment of outdoor areas, including balconies, or reducing time or enjoyment looking out of windows.	Negative Direct Temporary	Local residents	Low	Low	Low
Access and connectivity						
Delays to bus route 742 due to construction activities and lane closures.	Bus route 742 is likely to be impacted while Townson Road is closed for six months during construction of the interim phase. During this time, bus services will be required to use the diversion via Alderton Drive and Victory Road to access Townson Road. This may result in a small increase in travel time of approximately three minutes which would slightly increase bus passengers travel time.	Negative Direct Temporary	Bus passengers	Moderate	Low	Moderate-low

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
	<p>The Hollingsworth Road and Townson Road bus stop would also be temporarily relocated approximately 70 metres from its current location along Richmond Road.</p> <p>The increased walking distance for bus passengers is expected to result in a negligible increase in travel time, however some bus passengers may feel this is an inconvenience.</p>					
	Vulnerable bus passengers may be particularly sensitive to changes.	Negative Direct Temporary	Vulnerable bus passengers	Moderate-high	Low	Moderate – moderate-low
Economy, business and employment						
Increased construction workforce may increase patronage of local businesses and services.	Potential increase in patronage of businesses and services in close proximity to construction works (local food and beverage, retail and recreation services).	Positive Indirect Temporary	Business owners	N/A	N/A	N/A
Reduced amenity for businesses in the local study area due to increased noise and reduced visual amenity.	Construction activities resulting in decreased amenity due to increased noise and a change in the visual landscape may be a nuisance to users of the Stonecutters Ridge Golf Club.	Positive Direct Temporary	Users of the Stonecutters Ridge Golf Club.	Low	Low	Low

6.2 Operation impacts

6.2.1 Property and land use

Social impacts as a result of property and land acquisition required for the proposal are assessed in section 6.1.1.

6.2.2 Amenity and character

Noise and vibration

As noted in Technical Working Paper F – Noise and vibration, the increased capacity of Townson Road would increase traffic related noise. This would be noticeable at some residences located along Townson Road, Sunningdale Drive, Victory Road, Durham Road, Meadow Road, Jersey Road and Valderrama Street.

Increased noise levels could potentially lead to some people spending less time outdoors in backyards or on balconies, or closing windows while indoors. However, Technical Working Paper F – Noise and vibration has identified a number of properties that qualify for mitigation consideration, which would be finalised at detailed design. Even with mitigation measures, noise impacts may still be a nuisance to residents especially in outdoor areas on their properties.

There is potential for some residents, including vulnerable residents to be more sensitive to an increase in noise and less likely to be able to absorb or adapt to amenity changes. Most residents are expected to have a low level of sensitivity and the magnitude of the impact is expected to be low, given the small number of people that would be impacted. Therefore, the level of significance would be low. Residents or landowners who have additional vulnerabilities, such as aged residents and young children would have a moderate to high sensitivity to these changes. Therefore, the level of significance would be moderate–low.

Air quality

As noted in the air quality assessment, increased traffic on Townson Road would slightly reduce air quality for residences along Townson Road, Meadow Road and Jersey Road. The decrease in air quality would generally not be noticeable to people. However, some vulnerable residents, including young children, aged residents, or people with asthma may be more sensitive to reduced air quality.

Most residents are expected to have a low level of sensitivity and the magnitude of the impact is expected to be negligible as changes would not be noticeable. Therefore, the level of significance would be negligible. Residents or landowners who have additional vulnerabilities including young children, aged residents, or people with asthma may be more sensitive to a decrease in air quality and would have a moderate to high sensitivity to these changes. The level of significance would therefore remain negligible.

Visual and landscape

As noted in Technical Working Paper D – Urban Design and Visual Landscape, changes to the visual environment of the Townson Road corridor would include the presence of new road infrastructure within a widened corridor, a footpath, shared path and the removal of some vegetation along the road corridor.

This is likely to change the overall visual environment for the residents of properties along Townson Road, Victory Road and those adjacent to the Meadow Road and Durham Road intersection. As the existing visual amenity and character along the proposal is already dominated by the existing road corridor, these changes may be a minor change in the visual environment for residents along Townson Road and Victory Road. However, visual changes

would be greater for residents living near the Durham Road and Meadow Road intersection where the new road alignment would be constructed. Visual impacts would also be greater for those residents who value the rural character of the area as discussed in section 4.1.1, visual impacts on these residents would be higher.

As noted in Technical Working Paper D – Urban Design and Visual Landscape, urban design treatments have been designed to respond to the major landscape character and visual impacts. These treatments include preserving or reinstating roadside vegetation which is consistent with tall tree species and other vegetation that is found in the area.

Most residents are likely to adapt to these visual changes over time as replanted vegetation grows. Most residents are expected to have a low level of sensitivity as they are likely to have minimal areas of vulnerability and a high ability to absorb or adapt to visual changes. The magnitude of the impact would be low as there would be a discernible change from the baseline. The significance level would therefore be low.

Some residents may take longer to adjust to the new visual surroundings than others. This would depend on individual circumstances, including any additional vulnerabilities that may make it harder for them to absorb or adapt to changes in the visual environment.

Residents who value the existing rural character of area (section 4.1.1) may have a moderate-low level of sensitivity to the changes to the character of the area, as they may have less ability to absorb or adapt. The magnitude for these residents would be moderate-low. The level of significance would therefore be moderate-low.

6.2.3 Access and connectivity

Road and traffic

According to Technical Working Paper E – Transport and Traffic, during operation of the proposal there will be negligible impacts to travel times for road users along Townson Road, including local residents and commuters. No social impacts are expected to occur.

The proposal would result in changes to the intersection at Townson Road and Victory Road, upgrading it from a roundabout to a signalised intersection, resulting in the removal of U-turn movements. This may improve safety for pedestrians and may remove perceived barriers for pedestrians crossing the road. This would particularly benefit vulnerable groups, including those who rely on active travel and people with mobility difficulties.

Public transport

According to Technical Paper E – Transport and Traffic there would be no improved travel times for bus passengers during operation of the proposal. Other bus routes servicing the local area do not travel along the proposed road corridor along Meadow Road and Townson Road. Therefore, the proposal would not impact future bus movements through the local area.

Active transport

The proposal would include a new pedestrian path on the eastern side of Townson Road and a shared path on the western side of Townson Road. The proposal would also include two new signalised intersections, one at the Victory Road and Townson Road intersection, and another at a new currently un-named road. The shared path on the western side of Townson Road would connect to the shared path along Richmond Road.

The pedestrian footpath, shared path and new signalised intersections may increase safety and connectivity for pedestrians and cyclists and may improve opportunities for active transport in the local area.

6.2.4 Economy, business and employment

Amenity and character

As discussed in section 6.2.2, the increased capacity of Townson Road would increase traffic related noise along Townson Road, and may be a nuisance to users of Stonecutters Ridge Golf Club. Increased noise levels could potentially affect people's enjoyment of the golf course and may decrease enjoyment of these areas closer to the road but is unlikely to deter anyone from using the golf course. Most users of the Stonecutters Ridge Golf Club are expected to have a low sensitivity level and the magnitude is expected to be low given the small increase in noise and vibration. Therefore, the level of significance is low.

Access and connectivity

It is expected that the road height during operation of the proposal would be higher than the existing road level. Access is expected to be maintained to all properties along Townson Road.

As discussed in section 6.2.2 operation of the proposal may improve safety for road users along Townson Road, including local residents and commuters. Stonecutters Ridge Golf Club may benefit slightly from the proposal due to safer journeys for customers, employees and deliveries.

If Kennards seek additional access to their property to accommodate future land development, Transport for NSW has agreed in principle to provide access to and from Richmond Road via an extended service road at the corner of Richmond Road and Townson Road. No new access is permitted to the subject land off Townson Road when the road is upgraded and widened. The additional access provided to the site from Richmond Road may be a benefit for the future development.

6.2.5 Assessment of operation impacts

The assessment of potential socio-economic impacts presented in Table 6-4 is based on the methodology provided in section 2, and considers the implementation of mitigation measures.

Table 6-4 Assessment of socio-economic impacts during operation

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
Amenity and character						
Increase in traffic related noise during operation of the proposal.	Increased noise may be noticeable to residents and could potentially lead to some people spending less time outdoors in backyards or on balconies, or closing windows while indoors.	Negative Direct Long term	Local residents	Low	Low	Low
	There is potential for some residents, including vulnerable residents to be more sensitive to an increase in noise and less likely to be able to absorb or adapt to amenity changes.	Negative Direct Long term	Vulnerable groups	Moderate-high	Low	Moderate-low
Reduced air quality for residents near the proposal during operation.	Reduced air quality during operation of the proposal may impacts residents living along Townson Road, Meadow Road and Jersey Road. A decrease in air quality is generally not noticeable to most people and is not expected to deter people from daily activities.	Negative Direct Long term	Local residents	Low	Negligible	Negligible
	Vulnerable residents may be more sensitive to air quality changes. This may include young children, aged residents, or people with asthma.	Negative Direct Long term	Vulnerable groups	Moderate-high	Negligible	Negligible
Changes to visual landscape due to a widened road corridor, new carriageway and the removal of vegetation.	Changes to the visual environment of the Townson Road corridor would include the presence of new road infrastructure within a widened corridor, a footpath, shared path and the removal of some vegetation along the road corridor. This is likely to change the overall visual environment for the residents of properties along Townson Road, Victory Road and those adjacent to the Meadow Road and Durham Road intersection.	Negative Direct Long term	Local residents	Low	Low	Low

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
	Residents who value the existing rural character of area, or live near the Meadow Road and Durham Road intersection would be more sensitive to changes to their visual environment due to the operation of a new road and the impact on the existing rural character of the area.	Negative Direct Long term	Residents living along and/or near the Meadow Road and Durham Road intersection and who value the existing rural character of area	Moderate-low	Moderate-low	Moderate-low
Access and connectivity						
Improved safety for pedestrian due to signalised crossing and signalised intersections.	The proposal would result in changes to the intersection at Townson Road and Victory Road, upgrading it from a roundabout to a signalised intersection, resulting in the removal of U-turn movements. This may improve safety for pedestrians and may remove perceived barriers for pedestrians crossing the road. This would particularly benefit vulnerable groups, including those who rely on active travel and people with mobility difficulties.	Positive Direct Long term	Pedestrians and vulnerable groups	N/A	N/A	N/A
Improved accessibility for active transport users due to new-shared path.	This would improve connectivity for pedestrians and cyclists. The pedestrian footpath, shared path and new signalised intersections are expected to increase safety and connectivity for pedestrians and cyclists and improve opportunities for active transport in the local area.	Positive Direct and indirect Long term	Active transport users	N/A	N/A	N/A
Economy, business and employment						
Increased traffic related noise along Townson Road due to increased capacity of the proposal.	Increased noise levels could potentially affect people's enjoyment of the golf course and may decrease these areas closer to the road but is unlikely to deter anyone from using the golf course.	Negative Direct Long term	Users of Stonecutters Ridge Golf Club	Low	Low	Low

Change as a result of the proposal	Summary of potential impact	Nature, type and duration of impact	Affected stakeholder	Sensitivity	Magnitude	Significance of impact
Slight improvement to safety for road users of Townson Road.	The Stonecutters Golf Course may benefit slightly from the proposal due to safer journeys for customers, employees and deliveries.	Positive Direct Long term	Users of Stonecutters Ridge Golf Club	N/A	N/A	N/A
Potential for increased access to future development at Kennards site	Additional access from Richmond Road may benefit the future developer.	Positive Indirect Long term	Owner of Kennards site	N/A	N/A	N/A

6.3 Cumulative impacts

This section assesses the potential cumulative impacts associated with the construction and operation of this proposal, with other projects in close proximity. A description of these projects is provided in Table 6-5.

Table 6-5 Other major projects

Project name	Description
Commercial development	The project involves building one take away food and drink premise and one Kennard's hire facility at 6 Townson Road on the corner of Richmond Road and Townson Road. Construction dates are not yet known.
Luxeland	The project involves the development of 240 low density residential dwellings. Construction for the project began in 2019. Completion of the project is likely to be staggered, with 115 lots due for completion by May 2020 and another 125 lots by the end of 2020 or early 2021.
Alltove development	The project involves building 2,200 dwellings, this includes a mixture of houses, townhouses and apartments. To date, 381 houses and 142 townhouses have been completed. It is expected that 90 townhouses will be built in 2022, an additional 74 townhouses by 2026 and 1,500 apartments between 2027 and 2035.
CSR site	It is understood that there is a proposed residential development at the proposed construction compound site. The details of this are unknown at this stage.

6.3.1 Assessment of cumulative impacts during construction

Table 6-6 assesses the potential cumulative impacts associated with the construction of the proposal with other projects in proximity.

Table 6-6 Assessment of cumulative impacts during construction

Change as a result of the proposal	Other projects	Summary of potential impact
Amenity and character		
Increased duration of noise for residents living along or close to the proposal	Luxeland	There would be increased noise and vibration for the residential properties along or adjacent to the proposal. This could potentially lead to some people spending less time outdoors in front yards, backyards or on balconies, and closing windows whilst indoors. It also has the potential to disturb or interfere with day-to-day activities such as conversations, reading, listening to the radio and watching television. However, construction noise and vibration would be sporadic and would move along the road corridor, so not all residents would be affected at all times.

Change as a result of the proposal	Other projects	Summary of potential impact
Reduced air quality for residents living along or close to the proposal	Luxeland	There here would be an increase in dust for residents of properties along or adjacent to the proposal. Dust associated with construction activities is expected to be temporary and would generally occur during dry weather with the wind blowing towards a receptor when dust is being generated. While the relevant Construction Management Plan would ensure dust levels are managed to acceptable standards, nuisance dust may affect residents in properties close to construction activities.
Construction fatigue		
Cumulative and consecutive construction activities occurring infrequently where the proposal overlaps with Luxeland Development, affecting residents along Townson Road, Victory Road, Meadow Road, Durham Road, Kerry Road and Jersey Road	Luxeland	Construction fatigue may occur for residents leading to annoyance, inconvenience, diminished sense of pride, reduced capacity to participate in work and community activities, affecting personal relationships and reducing social interactions.
Economy, business and employment		
Further increased construction job opportunities available to residents within the regional study area.	Luxeland Alltove development	Further job and income generating opportunities available to residents within the regional study area and Greater Sydney.
Economic activity generated by concurrent construction projects in the region	Luxeland Alltove development	Construction workers may create some demand for local food and beverage, as well as retail and recreation services close to the proposal. This would directly benefit these businesses and make a small contribution to the regional economy.

6.3.2 Assessment of cumulative impacts during operation

No cumulative social impacts were identified during operation.

7. Recommended mitigation and management measures

To avoid, minimise and manage the socio-economic impacts arising from the construction and operation of the proposal as assessed in section 6, a number of mitigation and management measures have been developed as part of this technical working paper (see Table 7-1), in addition to other technical working paper prepared for the REF. These are presented in below, and where relevant reference to other technical working papers are provided.

Table 7-1 Recommended mitigation measures

Impact	Recommendation	Refer to technical paper for additional recommended mitigation measures
Changes to businesses and employment	<p>Engagement with affected business owners will be undertaken to:</p> <ul style="list-style-type: none"> • Manage or maintain access • Discuss property acquisition • Understand and address specific business impacts. <p>Ongoing consultation with businesses will occur throughout the proposal, to ensure that employees or businesses are given notice of any construction activities that may impact their business.</p>	
<p>Amenity change (noise, vibration, dust, visual) and access changes due to construction</p> <p>Access changes to the road network due to construction which may result in increased travel times, disrupting activities for businesses and employees.</p>	<p>The construction contractor will develop a stakeholder engagement and community consultation strategy to include:</p> <ul style="list-style-type: none"> • Communication with residents along the proposal corridor to provide an overview of the proposal, the likely nature, extent and duration of amenity and access changes as a result of construction. Particular attention will be given to ensuring vulnerable groups are appropriately targeted, including culturally and linguistically diverse communities. • Communication with general community members about road and pedestrian access changes, such as roadside signage and web-based information. • Protocols for responding to construction fatigue experienced by residents, businesses and general community members. Provide methods through which community members can contact the project team to raise any concerns regarding amenity and access changes. 	<p>Technical paper E – Transport and Traffic</p> <p>Technical paper F – Noise and Vibration</p>

Impact	Recommendation	Refer to technical paper for additional recommended mitigation measures
Property and land acquisition	Consultation will be carried out with each landowner and resident throughout the acquisition process, in accordance with Blackdown City Council policy and the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> . This would include assigning a manager for each household to be able to directly contact throughout the course of the process.	

8. Conclusion

This report has assessed the potential positive and negative social impacts resulting from the construction and operation of the proposal, as well as cumulative impacts from other developments in the surrounding area. Overall, the proposal would facilitate the growth and development of the North West Growth Area to improve connectivity, road safety, and active transport. During construction, positive social impacts of the proposal mainly relate to increased construction jobs for the workforce in the regional study area, and some increased expenditure at local businesses from the construction. Construction activities would also result in short term or temporary social impacts for local residents and the community members. These are outlined below:

- Full acquisition of one rural residential property at 46 Durham Road may result in stress and worry for the household as a result of relocation. While there are some similar properties in the local area, if the household relocates out of the area, they may lose social ties and need to travel further for daily activities.
- Partial acquisition of land at the Bravo Nursery property would result in the nursery ceasing operation in its current location during the ultimate phase of the proposal. This would result in the business relocating to another location in the local area, which could increase workload and lead to stress for the business owner and employees; or the business may need to relocate outside the local area, which could potentially deter customers and lead to a loss of business income.
- Amenity changes due to increased noise, vibration or dust for some residential properties adjacent to the to the construction areas along Townson Road, Meadow Road, Sunningdale Drive, Victory Road, Kerry Road and Durham Road. This may cause nuisance, interrupt daily activities and affect people's enjoyment and pride in their local area.
- Amenity changes may reduce users' enjoyment of Stonecutters Ridge Golf Club however this is not expected to deter most users. Increased noise levels could potentially lead to some people spending less time outdoors in backyards or on balconies, or closing windows while indoors. A number of properties may exceed the sleep disturbance criteria during some works, which would be temporary and intermittent.

Operation of the proposal would also result in social impacts for local residents and community members. These are outlined below:

- Amenity changes due to increased noise and vibration and changes to the visual landscape for some residential properties along Townson Road, Sunningdale Drive, Victory Road, Durham Road, Meadow Road, Jersey Road and Valderrama Street. This may cause nuisance, interrupt daily activities and affect people's enjoyment and pride in their local area.
- The new pedestrian footpath, shared path and new signalised intersections may increase safety and connectivity for pedestrians and cyclists and may improve opportunities for active transport in the local area.
- Amenity changes due to increased noise along Townson Road may be a nuisance to users of Stonecutters Ridge Golf Club. Increased noise levels could potentially affect people's enjoyment of the golf course and may decrease enjoyment of these areas closer to the road but is unlikely to deter anyone from using the golf course.

Generally, these impacts would be greater on vulnerable groups in the local study area, who may have less capacity to adapt to changes.

In addition to the general environmental management measures recommended in other Technical Working Papers it is recommended that a stakeholder engagement and community consultation strategy is implemented to assist with management of socio-economic impacts. In particular, communication with affected property owners, residents and the general community prior to and during construction about the proposal is expected to help the community and residents understand and adapt to potential impacts.

Consecutive and cumulative construction of the proposal and other major projects may lead to further reduced amenity, increased travel times, and construction fatigue for some residents and business owners and employees. A construction fatigue protocol which provides methods for community members to raise issues with projects is expected to help manage this.

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Appendices

Appendix A – Demographic indicators

Demographic indicator	Colebee	Marsden park	Schofields	Blacktown LGA	NSW
Total population	1,931	1,008	4,983	336,962	7,480,228
Age profile					
Median age	32	40	32	33	38
Under 18 years	29.8%	19.3%	28.0%	26.9%	22.1%
Cultural diversity					
Aboriginal and Torres Strait Islander	0.7%	3.6%	2.0%	2.8%	2.9%
Language spoken at home other than English	45.4%	22.5%	28.2%	41.0%	25.2%
People that spoke another language, and English not well or not at all	4.1%	1.9%	3.4%	5.0%	4.5%
Education and employment					
Completed Year 12 or equivalent	71.4%	31.5%	56.6%	57.6%	53.9%
Unemployment	4.3%	4.1%	5.1%	5.1%	6.3%
Top occupations of employment	Professionals 30.1%	Clerical and administrative workers 18.3%	Professionals 21.4%	Professionals 19%	Professionals 23.6%
	Clerical and administrative 17%	Technicians and trades workers 16.6%	Clerical and administrative workers 16.6%	Clerical and administrative workers 16.4%	Clerical and administrative workers 13.8%
	Managers 16.1%	Machinery operators and drivers 13.3%	Technicians and trades 15.1%	Technicians and trades workers 12.7%	Managers 13.5%
Households					
Average number of people per household	3.4	2.5	3.1	3.2	2.6
Couples with children	68%	46%	57%	55%	46%
One parent families	6%	14%	14%	18%	16%
Lone person households	5%	31%	13%	15%	24%
Low income households (earning less than \$650 per week)	4%	23%	9%	14%	18%
Households without motor vehicles	0%	0%	3%	7%	9%

Demographic indicator	Colebee	Marsden park	Schofields	Blacktown LGA	NSW
Average number of people per household	3.4	2.5	3.1	3.2	2.6
Need for assistance					
Need for assistance	2%	6%	3%	5%	5%
Journey to work					
Train	18%	9%	16%	16%	11%
Bus	2%	1%	2%	4%	4%
Car as driver	71%	63%	63%	63%	59%
Car as passenger	6%	4%	5%	6%	5%
Cycling	0%	0%	0%	0%	0%
Walked only	1%	4%	1%	1%	4%

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