

Integrated Access and Movement Study

City of Canterbury Bankstown
Final Report



Prepared by: GTA Consultants (NSW) Pty Ltd for City of Canterbury Bankstown Council
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Executive Summary

EXECUTIVE SUMMARY

Scope and Background

Recent amendments to the *Environmental Planning and Assessment Act 1979* (the Act) require the CCB to review its current Local Environmental Plan and prepare a comprehensive Canterbury Bankstown Local Environmental Plan (LEP) as soon as practicable, to address the requirements in the South District Plan. The Act also requires Council to undertake the review in a strategic manner, by developing a Local Strategic Planning Statement that will set out the community's 20-year vision for land-use in the local area and how change will be managed into the future. The Local Strategic Planning Statement provides a land-use framework supporting the Community Strategic Plan, *CBCity 2028*.

In this regard, the "Integrated Access and Movement Study" has been undertaken to:

- Provide an understanding of the existing movement and transport context in Canterbury Bankstown LGA and the connecting area.
- Provide strategies and actions to achieve an integrated, place-based traffic and transport outcome for the local area, with a key focus on sustainable and active transport.
- Provide an understanding of the impacts of the projected population increase on the movement network and provide recommendations for infrastructure to accommodate future demand.
- Improve traffic and transport outcomes for key Strategic, Local and Neighbourhood centres and the local network.
- Ensure alignment of local strategy and actions with NSW Government plans and strategies, such as Greater Sydney Region Plan, South District Plan and Sydney Metro.
- Work with relevant stakeholders and the general community to determine local needs and improvements.

Existing Conditions

The City of Canterbury-Bankstown is in the inner south west of Sydney and extends up to 25 kilometres from the Sydney CBD. It is bounded by Cumberland, Strathfield and Burwood Councils to the north, Inner West in the east, Bayside, Georges River and Sutherland Shire in the south, and Liverpool City and Fairfield City in the west.

Based on the census 2016(JTW), 71% of trips were undertaken by car (car – as driver/ car – as passenger/ taxi), 24% by public transport (train/ bus) and 3% by active transport (walk/ bicycle). Analysis of the 2016 car ownership data highlights that the City of Canterbury-Bankstown and Greater Sydney have a similar car ownership profile, with 89% of households owning at least one car, whilst 11% of households have none.

As evidence shows, 29% of resident workers live and work in the City of Canterbury-Bankstown, whilst 66% of resident workers work outside the LGA. In terms of travel destination, Canterbury Bankstown LGA is the primary destination for workers, followed by the Sydney CBD. The council areas of Inner West, City of Parramatta and Cumberland are other popular travel destinations.

Summary of Issues and Opportunities

The key issues and opportunities have been identified for the LGA which are summarised as follows:

Reduce car use

In Canterbury Bankstown, the road network is already congested along major corridors in peak periods and more car-based travel is not a desirable outcome. Whilst it is important to manage car ownership to ensure that Canterbury Bankstown is as

sustainable, liveable and equitable as it can be, it is also important to not disconnect people by taking away their only or primary means of access. The ability to reduce the mode share for car trips is both related to managing demand and modifying travel behaviour.

Increase active transport use

The proportion of walking and cycling trips in Canterbury Bankstown is quite low, partly as a consequence of a lack of dedicated cycling facilities and major roads creating barriers for easy walking and cycling as well as lack of seamless bike plan for the whole LGA. The terrain, topography and safety also play a role in why people do not walk and cycle more. More dedicated and wider facilities will help support more walking and cycling in the area.

Mass Transit (Metro/ Rail)

The Sydenham to Bankstown rail line is being converted to a Metro line. There will be more job opportunities with faster, more frequent and direct access to key employment centres, as well as better access to education, with fast, more frequent and direct connections. Any new lines and stations should be able to support a number of key outcomes such as:

- Improved accessibility to one of the three cities or strategic centres.
- A reduction in travel times between key destinations and improved accessibility and frequency and reliability.
- Productivity drivers such as supporting existing and future growth areas, contribution to economic development and opportunity to facilitate employment growth.
- Support for urban renewal, future housing needs and the creation of safe and successful places.
- Transport service and infrastructure improvements to provide train crowding relief, improve sustainable travel choices and increase network efficiency.

Intermediate Transit (Bus/ On Demand Buses/ Light Rail)

Buses provide an intermediate service role within Canterbury Bankstown, both supporting the mass transit network and providing public transport accessibility to areas not served by mass transit.

Any new intermediate links, including buses, On Demand buses and light rail, should be based on:

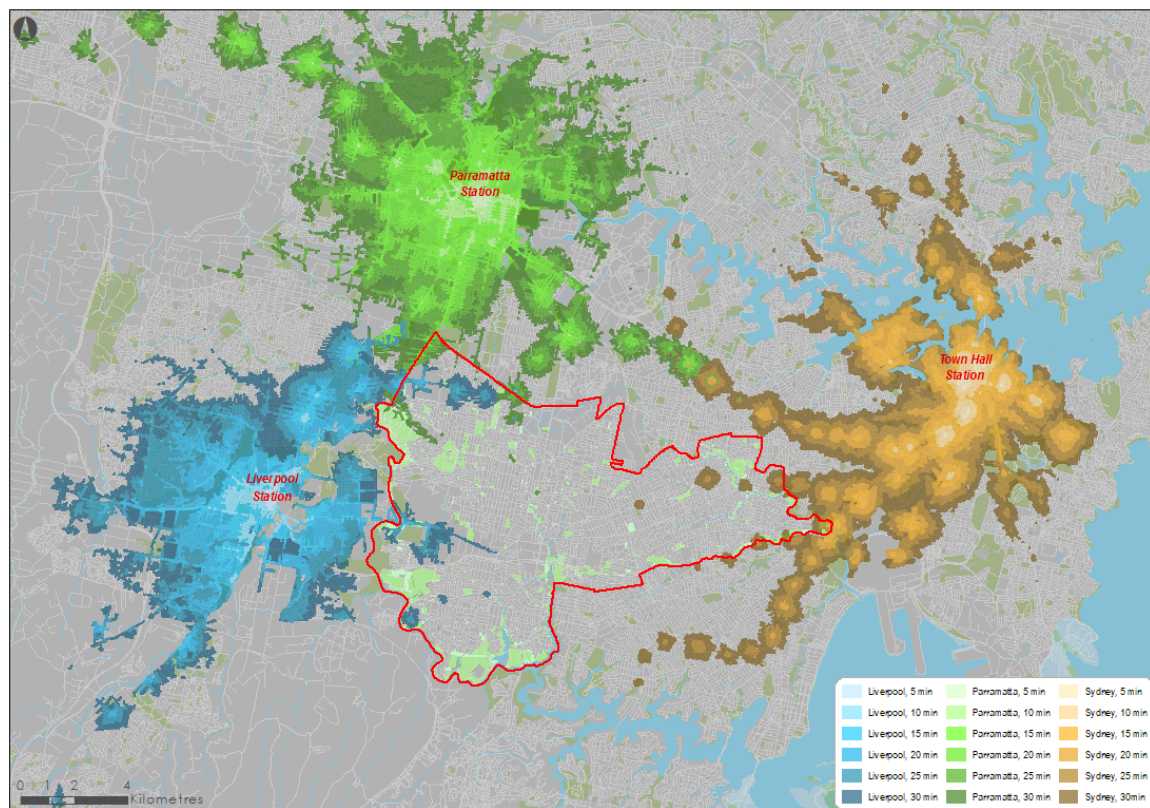
- High frequency – high-frequency public transport services across the day with potential turn-up-and-go services.
- Capacity – these modes have medium to high capacity to meet demand with frequent stops along corridors.
- Land use – high frequency and high capacity services have the ability to support medium and high-density land use.

Increase local trips

It was found that Canterbury Bankstown has a very low level of 'trip containment'; i.e. the proportion of residents working in the area. This means that the transport network must accommodate a high proportion of people leaving Canterbury Bankstown every day for work, adding additional pressure on the transport network. The creation of more employment opportunities within the LGA would encourage people to work locally and improve the level of self-containment which has been already planned for the LGA. To encourage more people to walk and cycle, the local conditions will need to be continually improved.

Figure ES1 shows lack of accessibility of the three major cities to Canterbury-Bankstown LGA by public transport. The Sydney CBD is the only major centre accessible from the Canterbury-Bankstown LGA, however, only from Campsie and suburbs east of Campsie.

Figure ES1: 30-minute public transport accessibility from the Three Cities



Mode Share

In order to facilitate mode shift, changing travel behaviour plays a vital role. With consideration of committed and planned projects as well as future transport trends, a range of mode share targets are proposed as aspirational targets for the Canterbury-Bankstown LGA. It should be noted these targets include the opening of the Sydney Metro City and Southwest and with consideration of a 5 per cent reduction of private motorised journey to work in Canterbury-Bankstown LGA between 2011 and 2016. In this regard, Canterbury-Bankstown is expected to increase a mode share change for train and metro to 30 per cent, cycling to 4 per cent, pedestrian 7 per cent, bus 10 per cent and decrease using car to 30 per cent.

Future Transport Network Improvements

Future Mass Transit Network

Figure ES2 presents a summary of the overall transport network for Canterbury Bankstown in 2036. The Metro line conversion from Bankstown to the Sydney CBD will provide faster, more frequent public transport services both along the line and into the Sydney CBD. The line conversion from rail to Metro will act as a catalyst to modify and improve bus access to key Metro stations, as well as improving walking and cycling links in and around each station.

A potential metro line extension from Bankstown to Liverpool would further improve access within Canterbury Bankstown, with a likely station at Bankstown Airport, and would provide a direct public transport connection to Liverpool. As identified in the *Future Transport Strategy 2056* by Transport for NSW, there is a longer term opportunity for a Parramatta to Kogarah/Hurstville Metro / mass transit link. This would provide a missing direct connection north to the Parramatta Central River City and continues to develop a grid based public transport network on a north-south orientation.

Future Intermediate Transit Network

At the intermediate level, to better connect centres by higher frequency public transport, improvements are proposed to strengthen the north-south axis from Chullora to Bankstown to Padstow (potentially a high frequency bus corridor similar to the Northern Beaches B-Line or later a light rail service connecting through to Sydney Olympic Park).

Another potential north-south link is through Campsie in the eastern part of the LGA. There is strong potential to increase the priority of public transport from Burwood to Campsie and south to Kingsgrove and Hurstville to create a secondary public transport spine.

Future Road Network

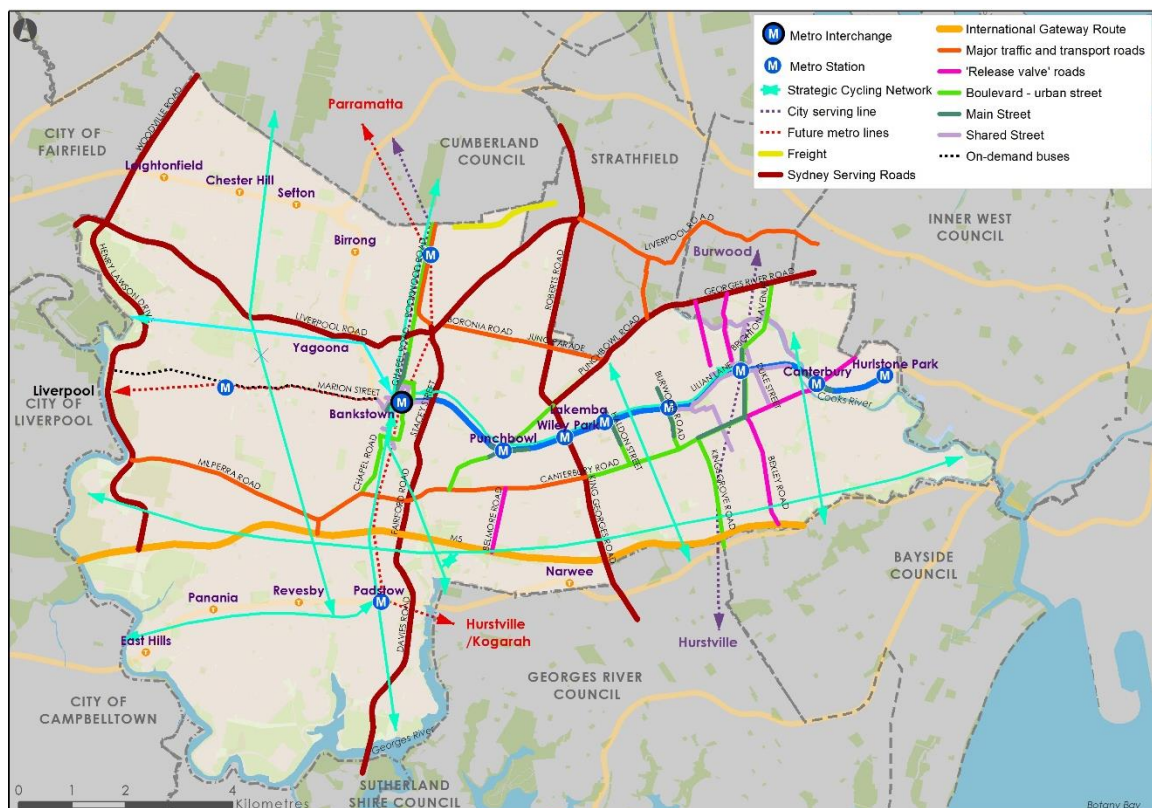
In terms of the road network, Figure ES2 presents a future functional hierarchy, based on the Movement and Place framework, which seeks to better balance priorities. The M5 Motorway continues playing an international gateway role, with the next tier fulfilling a 'city-serving' role, connecting Canterbury Bankstown to centres.

Lower order road tiers seek to direct traffic on to higher order roads and create a higher 'place' function, such as on sections of Canterbury Road, which includes boulevards (or urban streets), main streets and shared streets. These lower order roads support town centres becoming more pedestrian friendly and include kerb bulbs at intersections for traffic calming and increased space for amenity/trees. Urban streets could include bus-only lanes with fully accessible bus stops.

Future Active Transport

The remainder of the overall transport network would be supported by active transport, through walking and cycling. It is proposed to create a cycling network connecting key centres in the Canterbury Bankstown LGA and to regional centres outside the LGA.

Figure ES2: Canterbury Bankstown Transport Strategy Summary Map



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1. INTRODUCTION

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1.1. Introduction and Background

GTA Consultants (GTA) has been commissioned by the City of Canterbury Bankstown (CCB) to prepare an Integrated Access and Movement Study (IAMS).

Recent amendments to the *Environmental Planning and Assessment Act 1979* (the Act) require the CCB to review its current Local Environmental Plan and prepare a comprehensive Canterbury Bankstown Local Environmental Plan (LEP) as soon as practicable, to address the requirements in the South District Plan. The Act also requires Council to undertake the review in a strategic manner, by developing a Local Strategic Planning Statement that will set out the community's 20-year vision for land-use in the local area and how change will be managed into the future. The Local Strategic Planning Statement provides a land-use framework supporting the Community Strategic Plan, *CBCity 2028*.

1.2. Scope

This Integrated Access and Movement Study informs the Local Strategic Planning Statement by providing an overview of the existing transport situation, relevant transport opportunities and constraints, and provides recommendations for supporting the growth and development of Canterbury Bankstown into the future.

1.3. Study Area

Figure 1.1 illustrates the study area for this report, which is the entire City of Canterbury Bankstown Council LGA. It includes major roads on the boundaries and train stations such as Bankstown, Campsie and Revesby.

Figure 1.1: Canterbury Bankstown Current Transport Network



2. POLICY CONTEXT

2

2.1. Policies and Strategic Context

2.1.1. Introduction

This section of the report summarises the major planning policies and strategies that influence the development of an IAMS for the City of Canterbury Bankstown.

2.1.2. A Metropolis of Three Cities -The Greater Sydney Region Plan

A Metropolis of Three Cities -The Greater Sydney Region Plan by the Greater Sydney Commission establishes a 40-year strategic land use plan for Sydney. The plan was developed concurrently with *Future Transport Strategy 2056* prepared by Transport for NSW, which aims to deliver better connectivity and accessibility for the residents of Greater Sydney. The land use vision for Greater Sydney is a metropolis of three cities; the Eastern Harbour City (Sydney CBD), the Central River City (Greater Parramatta) and the Western Parkland City (around the new Western Sydney Airport).

Consistent with *Future Transport Strategy 2056*, one of the key elements of the plan is the vision of a 30-minute city which aims to provide transport infrastructure and services that enable people to reach their nearest Metropolitan or Strategic Centre within 30 minutes, seven days a week.

The plan identifies Bankstown and Campsie as strategic centres. Expectations for strategic centres include:

- High level of private sector investment.
- Flexibility, so that the private sector can choose where and when to invest.
- Co-location of a wide mix of land uses, including residential uses.
- High levels of amenity and walkability and being cycle friendly.
- Areas identified for commercial uses, and where appropriate, commercial cores.

2.1.3. The South District Plan

The *South District Plan* was also produced by the Greater Sydney Commission. It presents a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It contains the planning priorities and actions for implementing the *Metropolis of Three Cities*, at a district level and is a bridge between regional and local planning.

The plan introduces several priorities of relevance including:

- Planning Priority E1 Planning for a city supported by infrastructure:
 - Prioritise infrastructure investments to support the vision of *A Metropolis of Three Cities*.
 - Sequence growth across the three cities to promote north-south and east-west connections.
 - Align forecast growth with infrastructure provision.
 - Sequence infrastructure provision using a place-based approach.
- Planning Priority E2 Working through collaboration:
 - Identify, prioritise and deliver Collaboration Areas which are a new way for stakeholders to work together to deliver coordinated planning in locations that have great potential to grow their vibrancy, diversity and productivity, with improved employment and education opportunities, enhanced liveability and sustainability.
- Planning Priority S8 Jobs and skills for the city
 - Growing and investing in health and education precincts and Bankstown Airport trade gateway as economic catalysts for the District.

- Council has identified 'connectivity' and 'people and place' as key priorities for the Collaboration Area Place Strategy, to be finalised in 2019 by the Greater Sydney Commission. These priorities include focusing on connectivity to the Three Cities, freight and logistics and ensuring Bankstown City and the surrounding employment lands are places for people.
- Bankstown City Centre and Bankstown Airport-Milperra have been identified as Collaboration Areas by the Greater Sydney Commission. The City Centre will emerge as a Health and Education Precinct, whilst Bankstown Airport-Milperra will grow as a strategic hub for freight, logistics, aviation and manufacturing.
- A review of the Canterbury Road Corridor is currently underway.
- Planning Priority E10 Delivering integrated land use and transport planning and a 30-minute city:
 - Integrate land use and transport plans to deliver the 30-minute city.
 - Investigate, plan and protect future transport and infrastructure corridors.
 - Investigate and plan for the land use implications of potential long-term regional transport connections.
- Planning Priority E19 Reducing carbon emissions and managing energy, water and waste efficiently:
 - Support initiatives that contribute to the aspirational objective of achieving net-zero emissions by 2050, especially through the establishment of low-carbon precincts in Planned Precincts, Collaboration Areas, State Significant Precincts and Urban Transformation projects.

2.1.4. Future Transport 2056 Strategy

The *Future Transport Strategy 2056* (Future Transport) is a 40-year strategy for Sydney and regional NSW prepared by Transport for NSW. The plan includes several initiatives related to the City of Canterbury Bankstown including:

- New infrastructure:
 - A 30km extension of metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations and south west to Bankstown. Sydney Metro City & Southwest and Metro West Parramatta Light Rail Long Term Future Mass Transit Link from Macquarie Park to Hurstville via Rhodes.
 - New rapid bus link from Parramatta to Bankstown to Hurstville/ Kogarah.
 - A mass transit / train link from Greater Parramatta to Kogarah via Bankstown.
 - Extension of Sydney Metro City and Southwest from Bankstown to Liverpool.
 - Train improvements on T1, T2, T4, T5, and T8 lines, including implementation of modern Train Control and Signalling technology across the network (Digital Systems currently in planning) roll out of Advanced Train Control System to improve safety, capacity and reliability; upgrade of junctions to segment different lines on the network; additional tracks on some sections of existing corridors to boost capacity.
 - F6 Extension – Kogarah to Loftus: The F6 will provide better access for people and goods travelling between southern Sydney, the Illawarra and other parts of Greater Sydney and ease congestion on the local road network.
- Sydney-wide projects/ programs:
 - Increase in service frequencies on selected train lines and bus services to address capacity constraints or as part of new infrastructure (e.g., Sydney Metro).
 - Cycling and pedestrian infrastructure.
 - Bus Priority Infrastructure program.

- Projects to help ease congestion at pinch points include widening small sections of road or intersection, lengthening and adding turning lanes, replacing heavily used roundabouts with traffic signals, and monitoring traffic to provide real-time information to motorists to help them make informed travel decisions.
- Investigating and analysing future transport demands, developing multi-modal corridor plans and identifying and preserving corridors for future transport links and providing greater east-west and north-south connections.

Additionally, the strategy introduces a long-term corridor plan (20+ years) for Sydney, including:

- A future strategic road corridor linking NorthConnex near the M2 with Greater Parramatta and the F6 in southern Sydney. Improve the safety, efficiency and reliability of north-south freight movements through the Central City, particularly for trucks travelling between freight precincts near Chullora and regions to the north and south of Greater Sydney. This benefit will be achieved by reducing the reliance of freight traffic on the congested A3 and improve the vibrancy and liveability of centres on the A3, including Beverley Hills and Roselands, by reducing congestion and providing a new link for major through movements.

2.1.5. State Infrastructure Strategy 2018-2038

The *State Infrastructure Strategy* by Infrastructure NSW sets out the government's priorities for the next 20 years. Combined with the *Future Transport* and the *Metropolis of Three Cities*, it brings together infrastructure investment and land-use planning for the cities and regions. The most relevant element of the strategy is to:

- Link integrated strategic land use and infrastructure planning:
 - Infrastructure NSW recommends that Transport for NSW develop business cases by the end of 2019 for investment in on-road rapid transit links for buses and high efficiency vehicles between Greater Parramatta and surrounding strategic centres such as Bankstown, Hurstville, Kogarah and Macquarie Park (Planning: 0-5 years; Investment: 5-10 years).
 - Subject to the outcomes of the pilot growth infrastructure compact, prepare place-based strategic business cases for future updates to District Plans and Regional Plans.
 - NSW Government agencies to integrate Growth Areas, Planned Precincts and growth infrastructure compacts (subject to the outcomes of the pilot growth infrastructure compact) into asset management plans and capital infrastructure plans from 2019-20.
 - The plan has emphasised on infrastructure Australia's infrastructure priority list including Bankstown to Liverpool Metro Extension – passenger rail link north of the M5 between Bankstown and Liverpool.
- Geographic infrastructure directions:
 - Infrastructure response to improve north-south transport connections, for example Greater Parramatta to Epping and Greater Parramatta to Kogarah via Bankstown for Central River City.
- Transport:
 - Infrastructure NSW recommends that Transport for NSW develop business cases by the end of 2019 for the progressive upgrade of key north-south arterials between the M2 and the M5 to Smart road facilities to improve connectivity, safety and reliability. On-road rapid transit that connects strategic centres such as Bankstown, Hurstville, Kogarah, Epping and Macquarie Park to Greater Parramatta should be a short- to medium-term priority, ahead of any investment in rail-based mass transit.
 - Increasing connectivity to the major centres and labour markets of Blacktown, Norwest, Epping, Macquarie park, Sydney Olympic Park and Bankstown that are located in a radial pattern around Parramatta.

- Develop business cases by the end of 2019 for investment in on-road rapid transit links for buses and high efficiency vehicles between Greater Parramatta and surrounding strategic centres such as Bankstown, Hurstville, Kogarah and Macquarie Park.

2.1.6. Community Strategic Plan – CBCity 2028

Developed by the City of Canterbury Bankstown, this plan identifies themes, goals and strategies that will provide direction for the delivery of outcomes to 2030 based on community engagement. The plan identifies seven Destinations, each with a range of goals. Goals relevant for the IAMS can be found in two Destinations 'Moving and Integrated' and 'Liveable and Distinctive'; they include:

- Deliver improved and affordable public transport options catering to a variety of users.
- Create transport corridors that improve travel times and encourage public transport use.
- Advocate and plan for car and bicycle share schemes.
- Provide bicycle and pedestrian routes.
- Build and maintain local roads, car parks and traffic management devices.
- Promote and undertake road safety initiatives.
- Plan for safe, attractive transport hubs that support all modes of transport.
- Enable more journeys to be made without a car.
- Make town centres liveable and distinctive – promote a village feel.
- Manage local planning and promote attractive, sustainable and affordable design.

The document also identifies seven City Transformations, one for each of the seven Destinations. Relevant for the IAMS are the following Transformations:

- Moving and Integrated: 'The Bankstown transport hub and underground station connects movement for health, education and employment to Sydney's three cities.'
- Liveable and Distinctive: 'Our town centres are transformed through the Complete Streets approach.'

2.2. Vision and Objectives

2.2.1. Vision

A motivated and active City that nurtures healthy minds and bodies.

2.2.2. Objectives

Based on the Community Strategic Plan – CBCity 2028, the overarching objectives for the Integrated Access and Movement Study in the Canterbury Bankstown are proposed as follows:

1. A sustainable Canterbury Bankstown
 - The area is well serviced by public transport and transport services, and active transport is supported.
 - Selected areas in centres are designated and designed as car-free areas.
 - Centres are designed for shared movement of vehicles, bicycles and pedestrians, as appropriate.
 - Active transport is supported and encouraged by a network of well designed, connected and maintained cycle ways and footpaths.
2. A liveable Canterbury Bankstown

- All areas have good access to a range of public transport options, including train and metro stations and buses.
- The local character of the area's suburbs and local centres, which is characterised by a friendly village atmosphere, Federation and art deco homes and buildings, local and natural heritage, natural environment, open spaces and walkability, is preserved and enhanced.
- 3. A Canterbury Bankstown that is safe and healthy
 - There are good transport options for children to and from school, particularly public transport options.
 - Sports fields are well serviced by public transport, especially for Saturday sports.
- 4. A Canterbury Bankstown that is accessible and equitable for all.
 - Movement within and into/out of the LGA is unconstrained.
 - Transport and land-use planning are integrated.
 - Through-traffic is reduced, managed or eliminated, especially in areas where the road network is constrained.
 - There are good transport options for the area's ageing population, particularly to local centres and key services and facilities.
- 5. A prosperous Canterbury Bankstown
 - Planning for population growth, new investment and infrastructure especially in Bankstown CBD are coordinated and mutually agreed between State Government and Council.
 - Employment centres outside of the Canterbury Bankstown LGA are accessible by public transport.
 - Service hubs within the LGA are well connected by public transport, including shopping centres, town centres, Bankstown Hospital and job centres such as Sydney CBD, Parramatta and Liverpool.

3. LAND USE AND TRANSPORT OPPORTUNITIES AND CONSTRAINTS

3

3.1. Land Use

3.1.1. Overview

The City of Canterbury-Bankstown is in the inner south west of Sydney and extends up to 25 kilometres from the Sydney CBD. It is bounded by Cumberland, Strathfield and Burwood Councils to the north, Inner West in the east, Bayside, Georges River and Sutherland Shire in the south, and Liverpool City and Fairfield City in the west. The City of Canterbury-Bankstown includes the suburbs of Ashbury (part), Bankstown, Bankstown Aerodrome, Bass Hill, Belfield (part), Belmore, Beverly Hills (part), Birrong, Campsie, Canterbury, Chester Hill (part), Chullora, Clemton Park, Condell Park, Croydon Park (part), Earlwood, East Hills, Georges Hall, Greenacre (part), Hurlstone Park (part), Kingsgrove (part), Lakemba, Lansdowne, Milperra, Mount Lewis, Narwee (part), Padstow, Padstow Heights, Panania, Picnic Point, Potts Hill, Punchbowl, Regents Park (part), Revesby, Revesby Heights, Riverwood (part), Roselands, Sefton, Villawood (part), Wiley Park and Yagoona.

The City of Canterbury-Bankstown is a predominately residential area, but also has significant commercial and industrial areas. It encompasses a total area of 110 square kilometres, including many parks, reserves and river foreshore. It has a population of approximately 360,000 (2016 Census data).

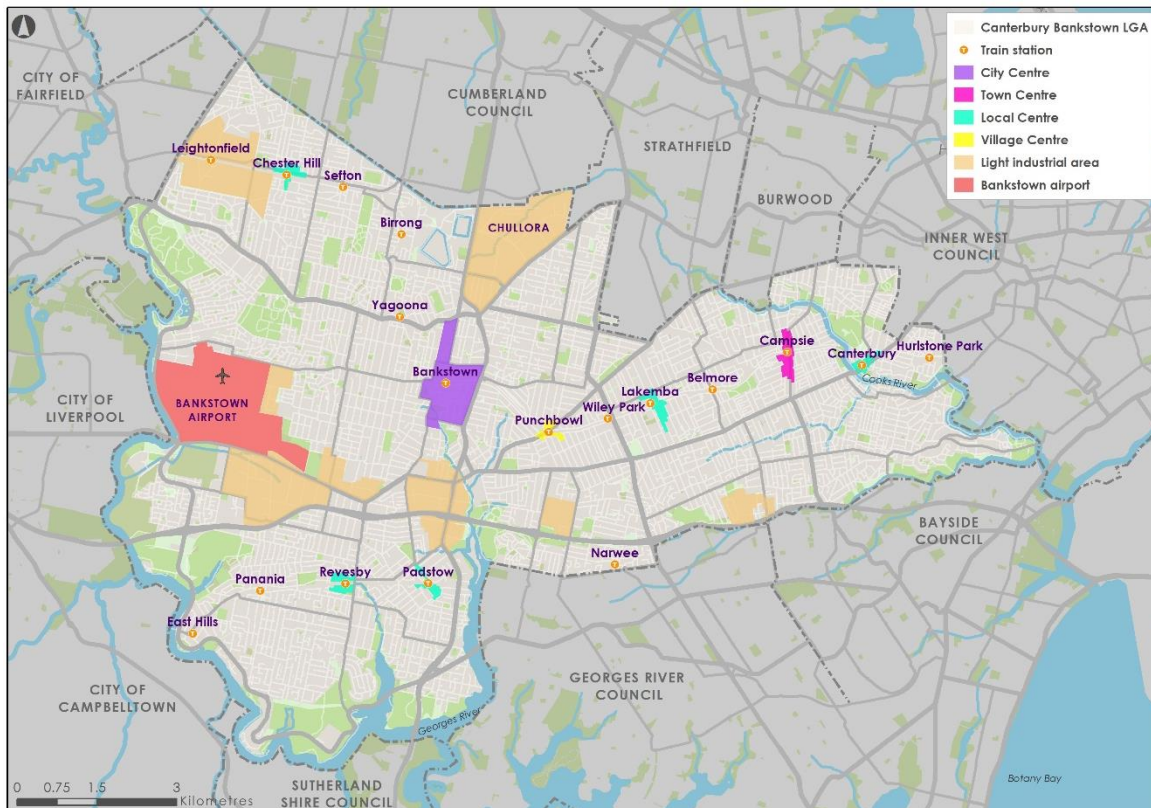
Major features of the LGA include the Bankstown City Centre, Bankstown Central Shopping Centre, Campsie Town Centre, Roselands Shopping Centre, two Campuses of TAFE NSW at Bankstown and Padstow, Western Sydney University, major regional parks including Georges River National Park, Mirambeena Regional Park, Wolli Creek Regional Prk, the Cooks River, the Duck River system, Potts Hill Reservoirs, Dunc Grey Velodrome, Bankstown Paceway, Canterbury Park Racecourse, Bankstown Arts Centre, two hospitals at Bankstown and Campsie, a network of major roads, and the Bankstown and East Hills Railway Lines.

3.1.2. Centres

There are 11 main centres within the City of Canterbury-Bankstown LGA. These include the city centre of Bankstown, and the town centre of Campsie and local centres of Canterbury, Belmore, Lakemba, Padstow, Revesby, Chester Hill, Earlwood, Greenacre and Yagoona. All town centres are shown in Figure 3.1 with a brief description of each area provided below.¹

¹ Source: http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/SSC10180

Figure 3.1: Canterbury-Bankstown - Main strategic and local centres in 2019



Bankstown CBD

The Bankstown CBD has retail, commercial, educational, recreational and service facilities, including the Bankstown Central Shopping Centre, six schools including two government, three Catholic and one independent, Bankstown City Gardens, Bankstown Library and Knowledge Centre, Bankstown RSL Club and Bankstown Sports Club. The CBD is separated by the railway line, with Bankstown Station accessible from both the northern and southern sides. The suburb of Bankstown has a population of approximately 32,000 people, with a mix of Australian (37.1%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Vietnam (14.1%), Lebanon (6.2%) and China (5.3%).

Campsie

Campsie town centre consists mostly of retail, commercial, educational, recreational and service facilities, including the Campsie Central Shopping Centre, Campsie Public School and Campsie RSL Club. The suburb of Campsie has a population of approximately 25,000 people, with a mix of Australian (28.4%) and non-Australian born residents. The most common countries of birth for those not born in Australia include China (22.0%), Nepal (7.2%) and Vietnam (4.0%).

Canterbury

Canterbury has mostly retail, commercial, recreational and service facilities, including Canterbury Plaza and the Canterbury Theatre Guild. The railway line and Canterbury Station run / sit alongside the local centre. The suburb of Canterbury has a population of approximately 7,000 people, with a mix of Australian (43.6%) and non-Australian born residents. The most common countries of birth for those not born in Australia include China (9.3%), Vietnam (3.8%) and Greece (3.5%).

Lakemba

The Lakemba local centre has retail, commercial, educational, recreational and service facilities, including the Lakemba Club, Lakemba Library and Knowledge Centre, Holy Spirit Catholic College and Canterbury City Community Centre.

The railway line runs through the local centre, with Lakemba Station accessible from both the northern and southern sides. The suburb of Lakemba has a population of approximately 17,000 people, with a mix of Australian (31.5%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Bangladesh (15.4%), Pakistan (6.6%) and Myanmar (4.7%).

Padstow

Padstow consists of retail, commercial, recreational and service facilities, including Woolworths, Padstow Library and Knowledge Centre, Padstow RSL Club, Padstow Bowling & Recreation Club and Carl Little Reserve. Educational facilities are located within close proximity to the local centre and include Padstow Park Public School and TAFE NSW. Further retail and commercial facilities are also located to the north-east of the town Centre, south of a large industrial area at the north end of Padstow. The suburb of Padstow has a population of approximately 13,000 people, with a mix of Australian (57.3%) and non-Australian born residents. The most common countries of birth for those not born in Australia include China (7.7%), Vietnam (3.8%) and Lebanon (2.4%).

Chester Hill

Chester Hill local centre has retail, commercial and service facilities, including Chester Square and The Chester Hill Neighbourhood Centre. The Chester Hill Library and Knowledge Centre and the Chester Hill RSL and Bowling Club are located just south of the local centre. The railway line and Chester Hill Station run / sit adjacent to local centre. The suburb of Chester Hill has a population of approximately 13,000 people, with a mix of Australian (50.7%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Vietnam (9.9%), Lebanon (7.1%) and China (4.1%).

Revesby

Revesby local centre consists mostly of retail, commercial, recreational and service facilities, including Woolworths, Revesby Village Centre, Revesby Workers Club and YMCA Bankstown. The suburb of Revesby has a population of approximately 14,000 people, with a mix of Australian (58.2%) and non-Australian born residents. The most common countries of birth for those not born in Australia include China (5.7%), Vietnam (4.7%) and Lebanon (3.3%).

Belmore

Belmore local centre consists mostly of retail, commercial, recreational and service facilities, including Belmore Sportsground and Canterbury Leagues. It is also in close proximity to Canterbury Hospital. The suburb of Belmore has a population of approximately 13,000 people, with a mix of Australian (43.7%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Greece (6.2%), China (5.2%) and Lebanon (4.2%).

Earlwood

Earlwood local centre consists mostly of retail, commercial, recreational and service facilities, including Our Lady of Lourdes Catholic Church and School, Earlwood Library and Knowledge Centre and Earlwood Public School. The suburb of Belmore has a population of approximately 19,000 people, with a mix of Australian (58.8%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Greece (7.7%), China (2.9%) and Italy (2.5%).

Yagoona

Yagoona local centre consists mostly of retail, commercial, recreational and service facilities, including the Yagoona Community Centre, Yagoona Public School, Al Sadiq College and Gazard Park. The suburb of Belmore has a population of approximately 19,000 people, with a mix of Australian (50.5%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Vietnam (11.6%), Lebanon (8.3%) and China (2.2%).

Greenacre

Greenacre local centre consists mostly of retail, commercial, recreational and service facilities, including Greenacre Library and Knowledge Centre and Greenacre Baby Health Centre. The suburb of Greenacre, together with Mt Lewis, has a population of approximately 25,000 people, with a mix of Australian (53.3%) and non-Australian born residents. The most common countries of birth for those not born in Australia include Lebanon (14.3%), Vietnam (2.1%) and South Korea (1.7%).

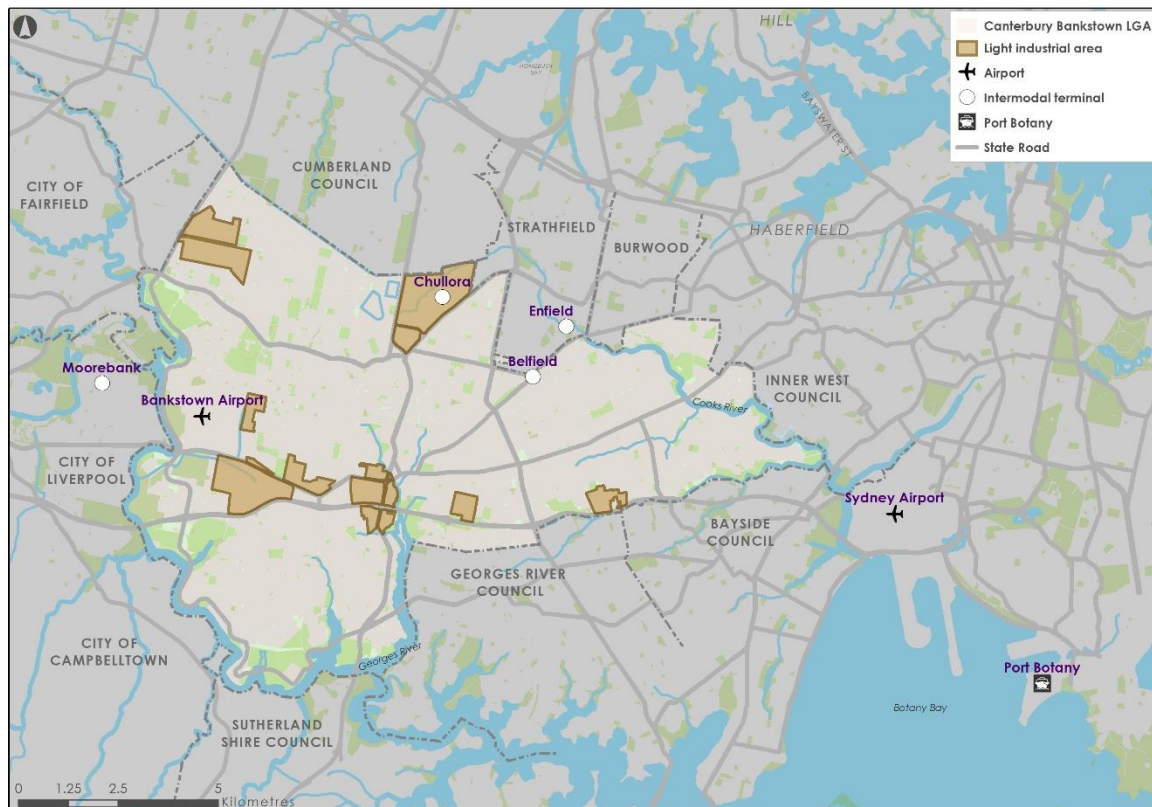
3.1.3. Major Industrial Areas

A number of major industrial areas are located within the Canterbury-Bankstown LGA. These areas are subject to various operations such as light industrial activity, manufacturing, warehousing, freight, logistics, and office space; and are shown in Figure 3.2. This figure also identifies three major industrial hubs that are located outside the Canterbury-Bankstown LGA. Whilst these hubs are not within the immediate area, they have a major impact on heavy vehicle movements through the LGA. The three hubs include:

1. Port Botany
2. Sydney Airport
3. Moorebank Metropolitan Intermodal Freight Hub.

Additional intermodal terminals within and outside the Canterbury-Bankstown LGA include Chullora, Enfield and Belfield.

Figure 3.2: City of Canterbury-Bankstown Major Industrial Areas



3.1.4. Bankstown Airport

Bankstown Airport is located alongside the western boundary of the Canterbury-Bankstown LGA. It is one of two Sydney Metro Airports, and is situated approximately 7km west of the Bankstown CBD, and 26km south-west of the Sydney CBD. Bankstown Airport is considered a trade gateway, as it is largely used for the following:

- general aviation
- parcel freight
- recreational flying.

It also plays an important role in flight training and for emergency services.

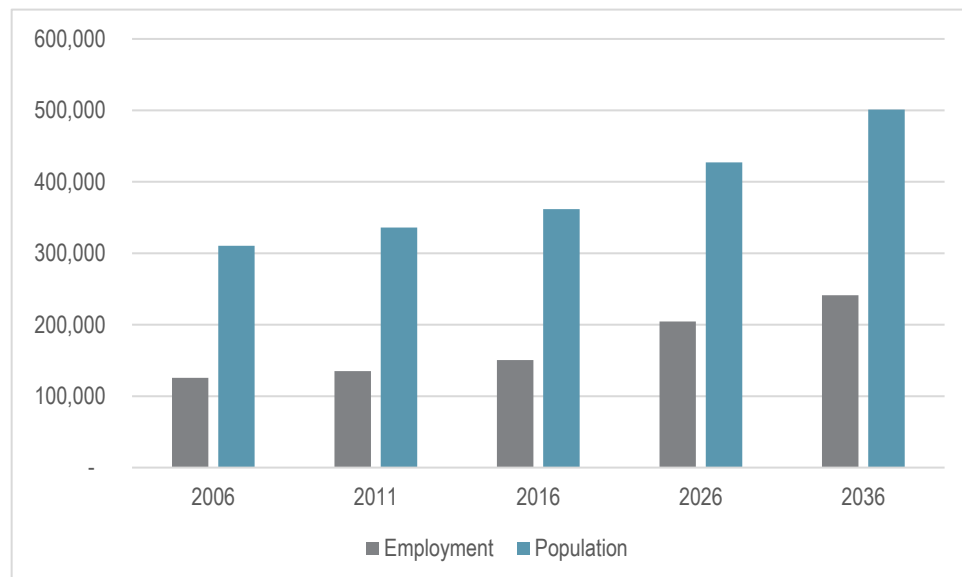
Adjoining the Bankstown airport site sits the Milperra industrial area, a significant centre for economic activity within the district. Development opportunities have been identified adjacent to the Milperra industrial area, i.e. at the Bankstown Airport South West Precinct Site, as detailed in the Greater Sydney Commission's *South District Plan (2018)* and the Sydney Metro Airport's *Bankstown Airport Master Plan 2019 Preliminary Draft (2019)*.²

3.2. Population, Employment and Demographics

3.2.1. Population and Employment Growth

Figure 3.3 provides a summary of growth in population and employment from 2006 to 2016 and projections through to 2036 for the City of Canterbury-Bankstown. The population of the area is forecast to grow from approximately 360,000 in 2016 to 499,000 in 2036. By 2036, the population is expected to reach close to 500,000. The number of employed persons in the workforce (by place of usual residence), has steadily increased between 2006 and 2016, and projections have this number reach to 155,000 jobs by 2036.

Figure 3.3: Population and employment growth



Sources: Population - <https://profile.id.com.au/canterbury-bankstown/population-estimate> | <https://opendata.transport.nsw.gov.au/dataset/population-projections>
Employment - <https://profile.id.com.au/canterbury-bankstown/employment-status> | <https://opendata.transport.nsw.gov.au/dataset/workforce-projections>

² Sources: <https://www.sydneymetroairports.com.au/> | https://gsc-public-1.s3-ap-southeast-2.amazonaws.com/south-district-plan-0618_1.pdf
https://www.sydneymetroairports.com.au/wp-content/uploads/2018/10/181018_Bankstown-Airport-Masterplan_PDMP.pdf

3.2.2. Distribution of Population and Employment Growth

Figure 3.4 shows the LGA's current population and Figure 3.5 shows the population growth currently expected over the next 20 years by travel zones³ for the Canterbury-Bankstown LGA. It can be seen that the population is forecast to increase by over 3,000 people between 2016 and 2036 in 14 Travel Zones, including:

- Bankstown Square
- Bankstown Station
- Bankstown Girls High School
- Campsie (Beamish Street and Ninth Avenue)
- Canterbury (Wonga Street and Wairoa Street)
- Canterbury Memorial Hospital
- Canterbury Station
- Canterbury
- Campsie Industrial Area
- Punchbowl (Scott Street and South Terrace)
- Punchbowl Station
- Canterbury Park Racecourse
- Hurlstone Memorial Reserve
- Hurlstone Park Station.

Other travel zones are only expected to have a minimal or moderate population increase.

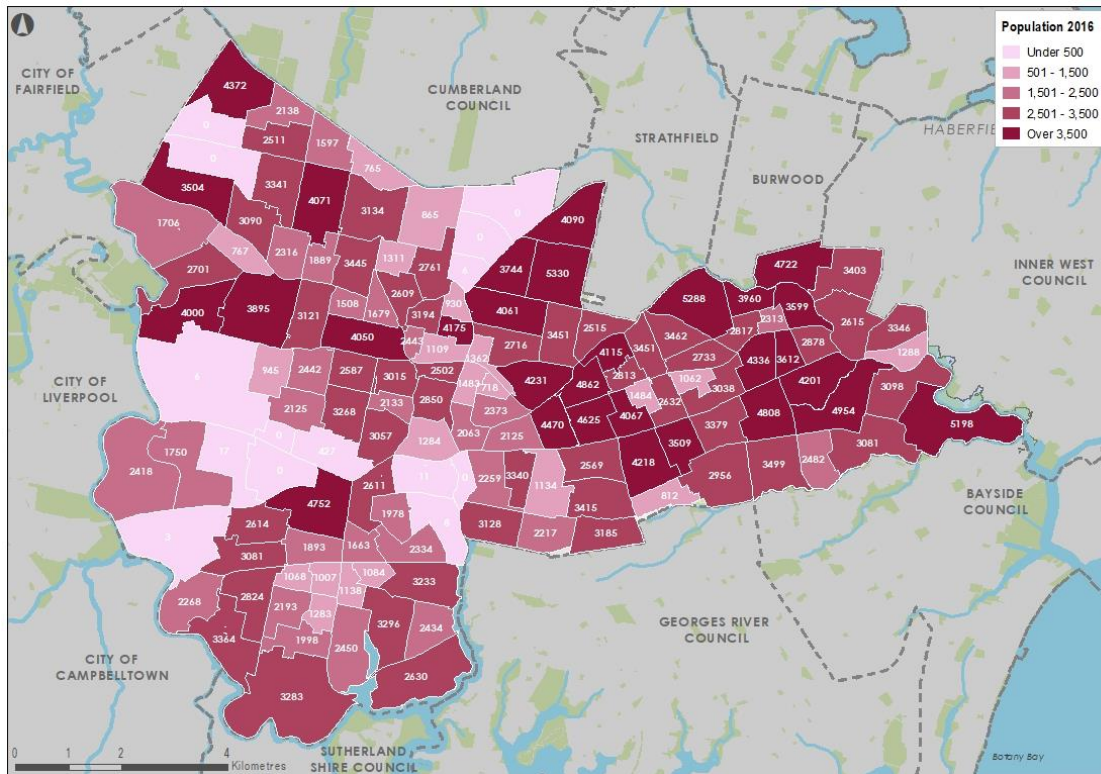
Figure 3.6 shows current employment in the LGA and Figure 3.7 shows forecast employment changes, which is similar to expected population growth. There are increases of approximately more than 1,500 employees in the Bankstown Station Travel Zone by 2036. The other highest employment growth is forecast to happen in the vicinity of the Bankstown CBD, in the Bankstown Square, Bankstown Home Central and Bankstown Oxford Avenue and Brandon Avenue Travel Zones as well as Canterbury Memorial Hospital Travel Zone.

The Local Strategic Planning Statement will focus residential growth around key centres (80%) and employment growth in the Chapel Road Spine (Bankstown to Chullora) and Eastern Lifestyle Precinct (Campsie to Kingsgrove).

³ Travel Zones (TZs) are the spatial base of the Transport Data Centre's (TDC) data collection, transport modelling and analysis.

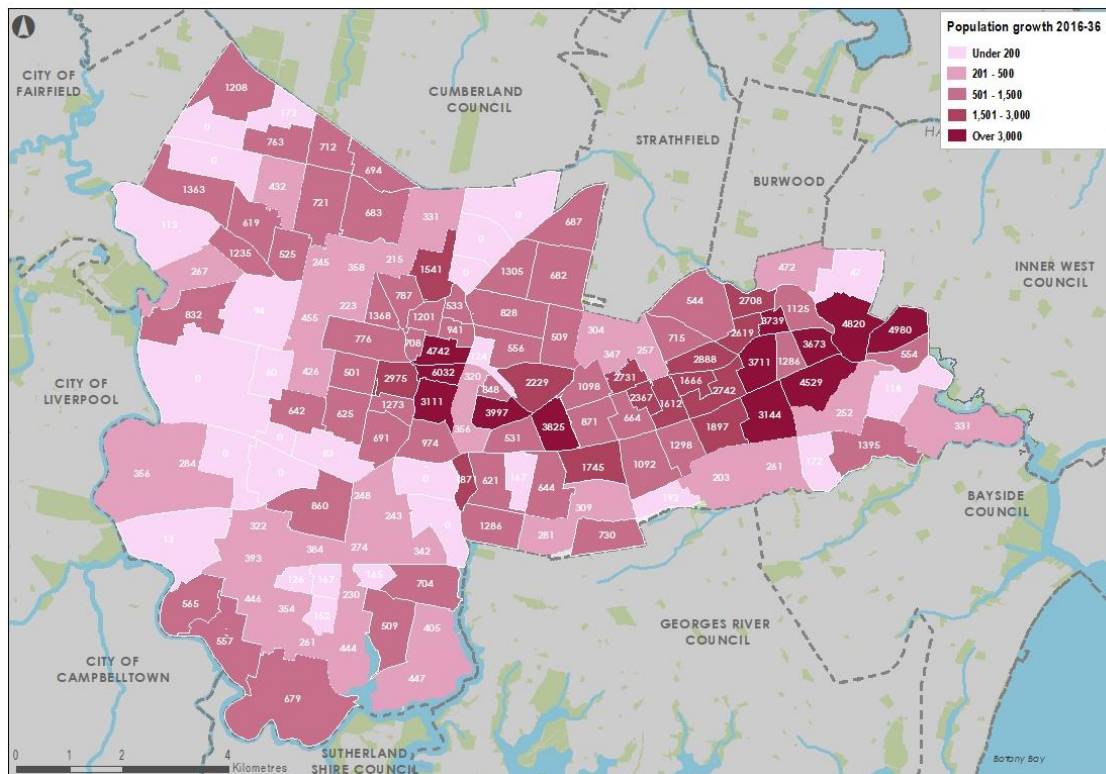
LAND USE AND TRANSPORT OPPORTUNITIES AND CONSTRAINTS

Figure 3.4: Current Population 2016



Source: Australian Bureau of Statistics, Regional Population Growth, Australia

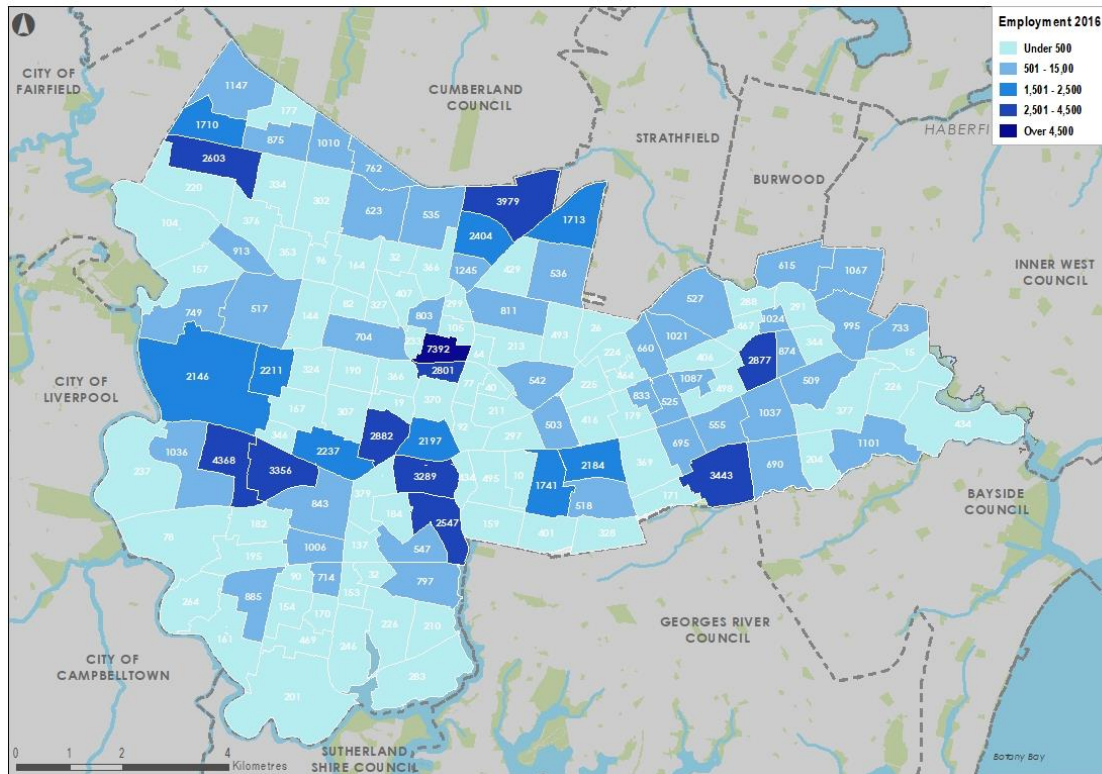
Figure 3.5: Forecast Population Growth (2016 to 2036)



Source: Australian Bureau of Statistics, Regional Population Growth, Australia

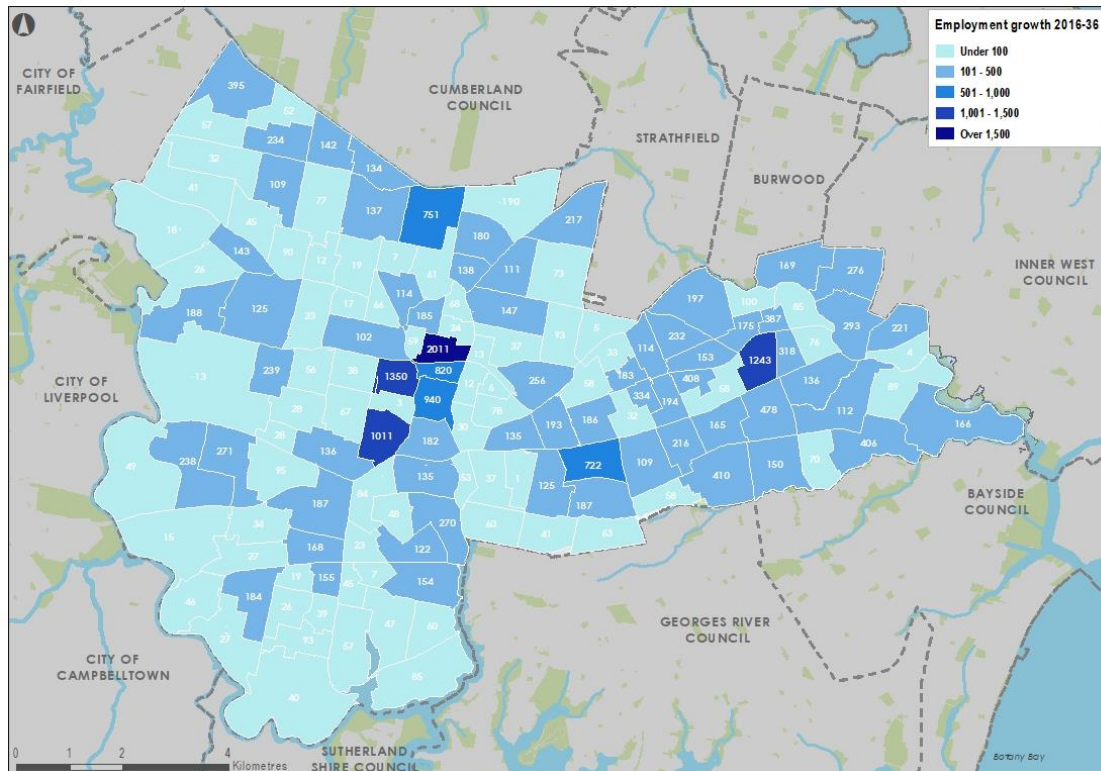
LAND USE AND TRANSPORT OPPORTUNITIES AND CONSTRAINTS

Figure 3.6: Current employment 2016



Source: Australian Bureau of Statistics, Regional Population Growth, Australia

Figure 3.7: Forecast Employment Growth (2016 to 2036)



Source: Australian Bureau of Statistics

3.3. Demographic Trends

3.3.1. Age Breakdown

Figure 3.8 shows the age distribution for the City of Canterbury-Bankstown in 2016, compared to Greater Sydney. As illustrated in this figure, Canterbury-Bankstown has a greater number of people in the younger age groups (<20) and older age groups (>74), however, it has fewer people in the age groups in between, i.e. from 20 to 74 years old.

The major differences between the age structure of the City of Canterbury-Bankstown and Greater Sydney were:

- A larger percentage of persons aged 0 to 4 (7.2% compared to 6.4%)
- A larger percentage of persons aged 5 to 9 (7.0% compared to 6.4%).

Analysis of these differences suggest the LGA may be a popular location for families with children. Evidence of this can be found by looking at the proportion of households with children in 2016, which was 53% of the total households in this area. Of the 53%, 24% of households had young children and 8% of households had mixed-age children.

Figure 3.8: Age structure – five year age groups, 2016



Source: <https://profile.id.com.au/canterbury-bankstown/five-year-age-groups>

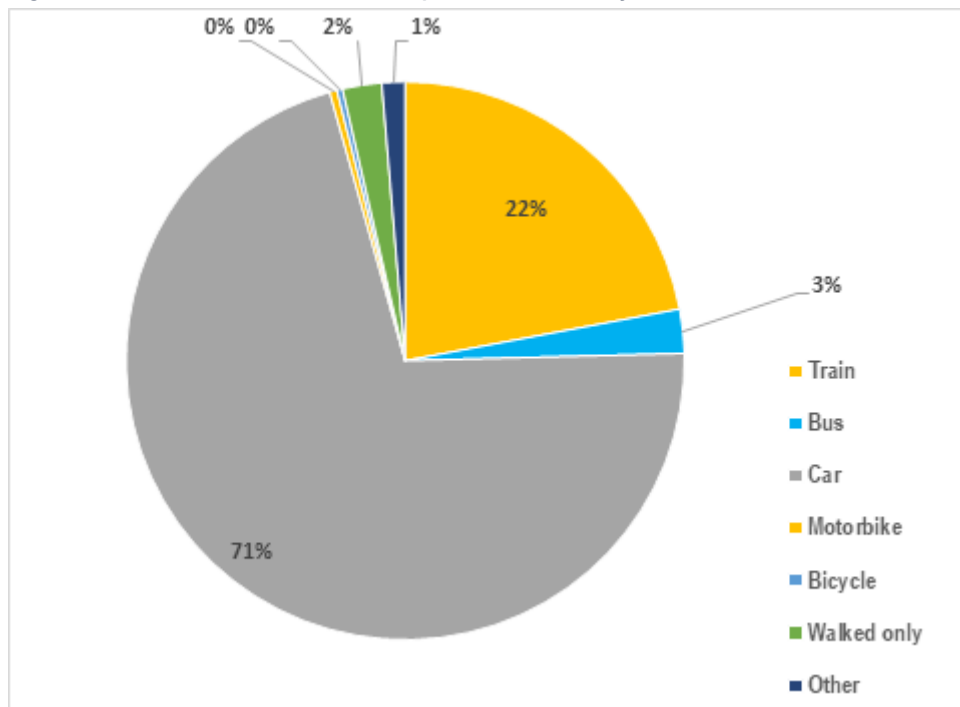
3.4. Travel Patterns and Demand

3.4.1. Travel Modes to Work

Figure 3.9 shows commuting statistics for the City of Canterbury-Bankstown in 2016. As evident in this figure, 71% of trips were undertaken by car (car – as driver/ car – as passenger/taxi), 24% by public transport (train/ bus) and 3% by active transport (walk/ bicycle).

Of particular note is the low use of buses which was 3% and cycling which was less than 1%. As a note, these numbers refer to commuter trips only and as such the mode share may differ for other trip purposes, e.g. social or recreational.

Figure 3.9: Mode Share for Commuter Trips in the Canterbury-Bankstown LGA

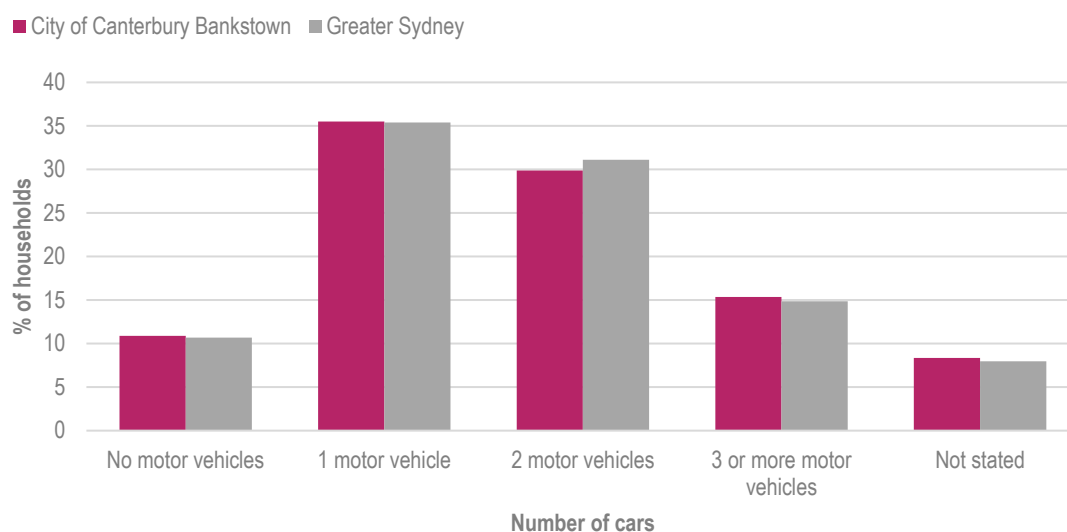


Source: <https://profile.id.com.au/canterbury-bankstown/travel-to-work>

3.4.2. Car Ownership

Analysis of the 2016 car ownership data highlights that the City of Canterbury-Bankstown and Greater Sydney have a similar car ownership profile, with 89% of households owning at least one car in both locations, whilst 11% of households have none. Of those that owned at least one vehicle, there are minor differences between the City of Canterbury-Bankstown and Greater Sydney. These differences are less than 2% in all categories, i.e. proportion of households owning one, two or three or more motor vehicles. Overall, 36% of the households in the City of Canterbury-Bankstown owned one car; 30% owned two cars; and 15% owned three cars or more.

Figure 3.10: Car ownership 2016



Source: <https://profile.id.com.au/canterbury-bankstown/car-ownership>

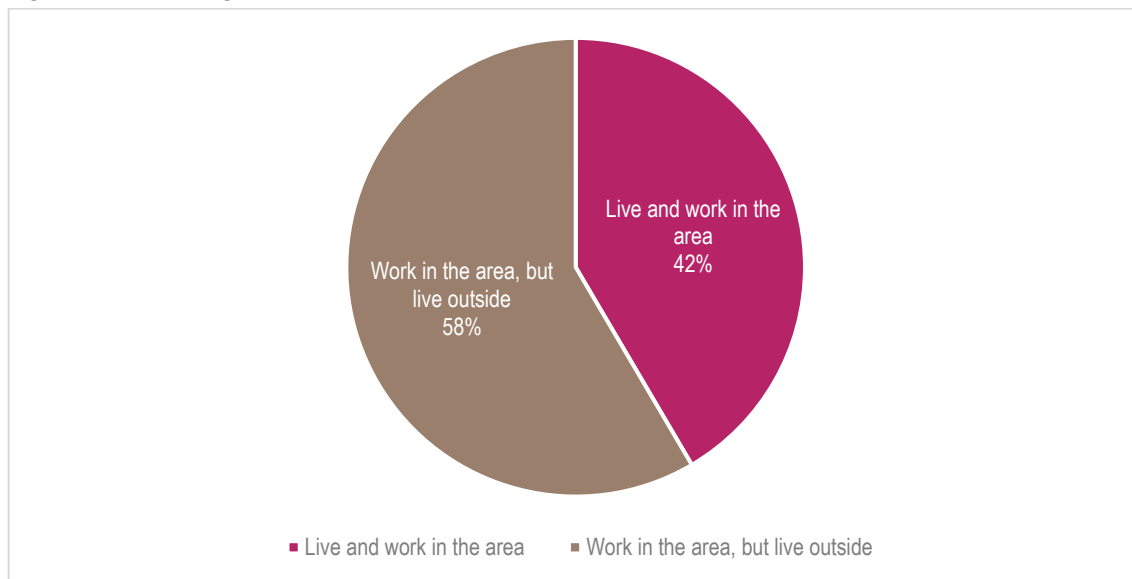
3.4.3. Trip Containment

The proportion of individuals living and working in the same labour market region is referred to as the level of self-containment and is seen as a positive.

Trip containment has important environmental consequences in its capacity to increase the likelihood of transport to work via methods other than private cars, given distances between home and work are probably shorter. Despite the shorter distances, car use may be the only viable commuting option unless appropriate public transport is available between nearby areas, rather than focussed on the city centre.

Figure 3.11 shows that 42% of workers live and work in the City of Canterbury-Bankstown while approximately 58% of workers live outside the area. As a comparison, Greater Sydney has 43% trip containment at a Statistical Area Level 4 (SA4) (SA4s are geographical sub-regions and have been designed for the output of a variety of regional data).⁴

Figure 3.11: Percentage of residential location of local workers, 2016



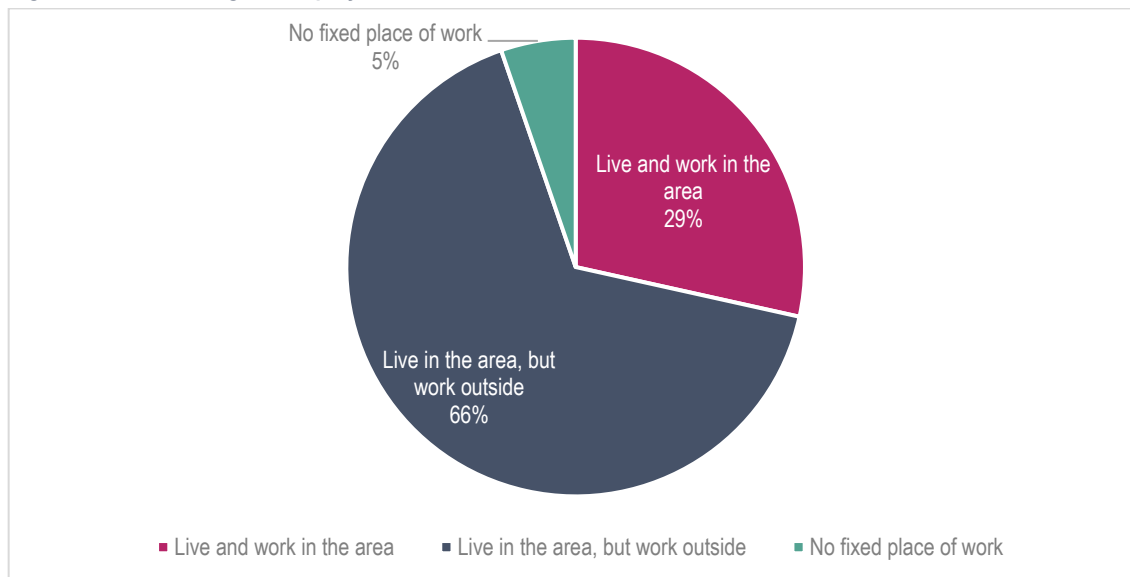
Source: <https://profile.id.com.au/canterbury-bankstown/workers>

As a comparison, Figure 3.12 shows the employment location of local residents. As evident in this figure, 29% of resident workers live and work in the City of Canterbury-Bankstown, whilst 66% of resident workers work outside the LGA.

⁴

<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0.55.001-2016-Main%20Features-Feature%20Article:%20Journey%20to%20Work%20in%20Australia-40>

Figure 3.12: Percentage of employment location of resident workers, 2016

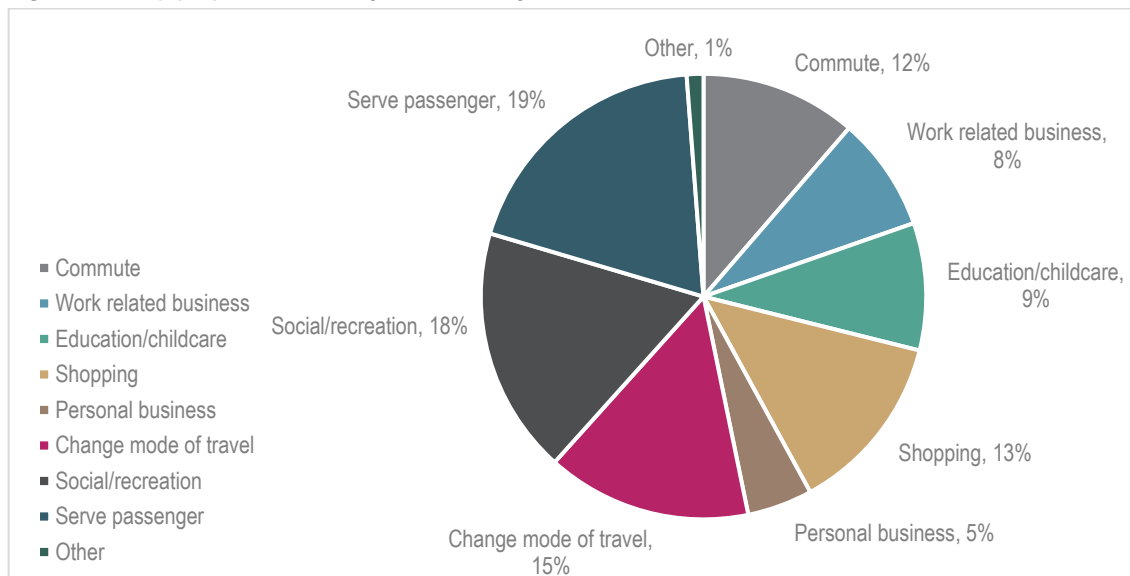


Source: <https://profile.id.com.au/canterbury-bankstown/residents>

3.4.4. Travel Purpose

Trip purposes for residents in the City of Canterbury-Bankstown are shown in Figure 3.13 for 2017/2018. The highest percentage was 19% for people whose travel purpose was to serve a passenger/s (e.g. picking up or dropping off a person). Social/recreational trips were also high (18%), followed by travelling in order to change to a different mode (15%). Commuting only comprises 12% of trips in Canterbury Bankstown, however it is reasonable to assume that many of the people travelling in order to change travel mode may also be commuters.

Figure 3.13: Trip purpose for the City of Canterbury-Bankstown



Source: <https://www.transport.nsw.gov.au/performance-and-analytics/passenger-travel/surveys/household-travel-survey-hts/household-travel>

3.4.5. Travel Destination

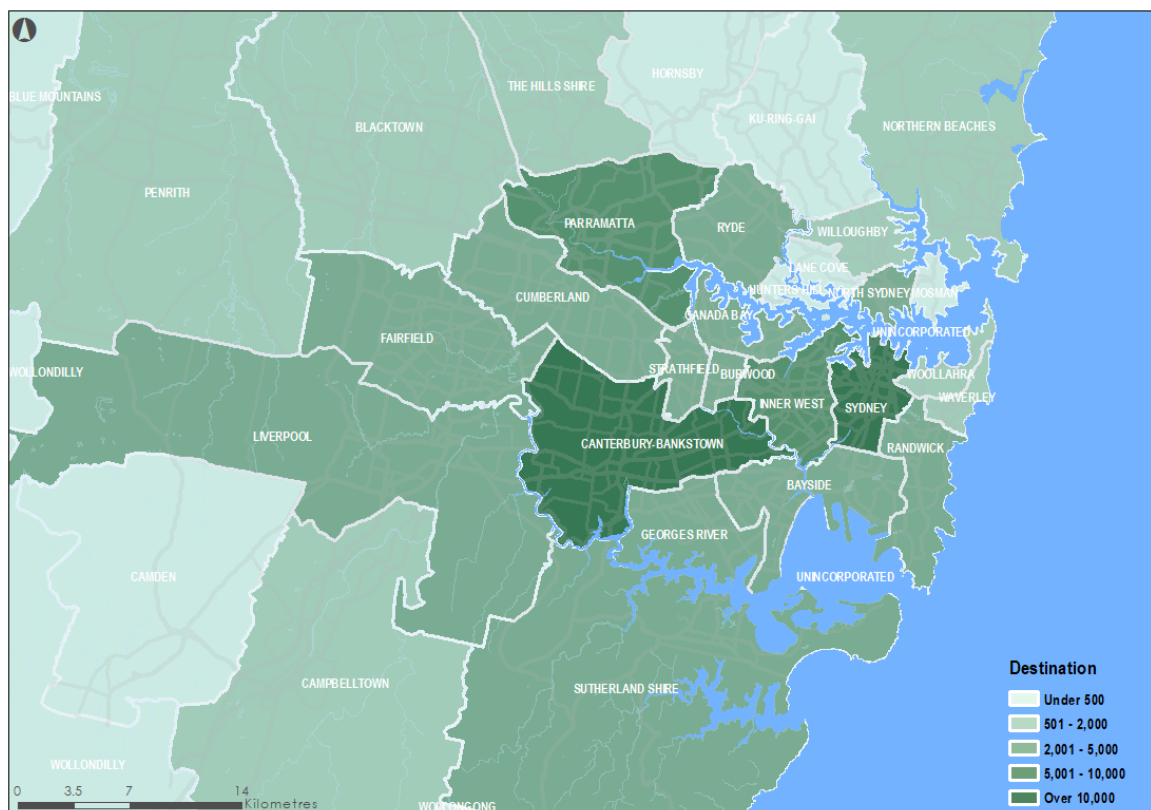
Figure 3.14 shows the travel destinations for Canterbury Bankstown residents across multiple trip purposes. Canterbury Bankstown LGA is the primary destination with 39,338 trips, followed by the Sydney CBD with 25,642 trips. The council areas of Inner West, City of Parramatta and Cumberland are other popular travel destinations. Based on investigations and trip purpose for the LGA, the following locations inside and outside of Canterbury-Bankstown are considered key destinations and trip generators.

Within the Canterbury-Bankstown LGA, Bankstown CBD is the most important trip destination for residents. This includes trip generators such as the Bankstown Library and Knowledge Centre, Bankstown Central (shopping centre), and the Bankstown Arts Centre. Other major Town Centres including Campsie and Canterbury also represent key destinations for within the LGA, in particular for shopping trips.

Outside the LGA, the City of Sydney is the second most important trip destination for Canterbury-Bankstown residents. This includes travelling to work as well as recreational, shopping trips and special events like Christmas or Vivid Sydney.

The City of Parramatta is the third destination for Canterbury Bankstown residents. This is more attractive for the recreational trip purposes. Sydney Olympic Park and Parramatta Park have been identified as a trip attractor within the City of Parramatta.

Figure 3.14: Trip destination for Canterbury-Bankstown



Source: Australia Bureau of Statistics.

4. EXISTING TRAVEL NETWORKS

4

4.1. Active Transport Network

4.1.1. Walking

Most streets within the City of Canterbury-Bankstown have a sealed footpath on at least one side, whilst few streets have no footpaths. In general, pedestrian access to all key destinations is easy and logical. Key intersections have signalised pedestrian crossings, while other intersections have zebra crossings or refuge islands. Overall, walking accessibility within the LGA is good, however, some blocks have limited permeability and require detours. Some blocks within the industrial areas exceed block sizes of 350m which results in poorer permeability.

Along some main road corridors such as Canterbury Road, Milperra Road and the Hume Highway, distances between facilitated pedestrian crossings are long (i.e. above 400m). This makes the road corridors act as barriers rather than providing activation and amenity.

The City of Canterbury-Bankstown has high quality walkways along the shoreline of the Cooks River and Georges River, which are primarily used for recreational walking. This includes the 13km recreational Two Valley Trail Walk. Most green spaces within the LGA have pedestrian access.

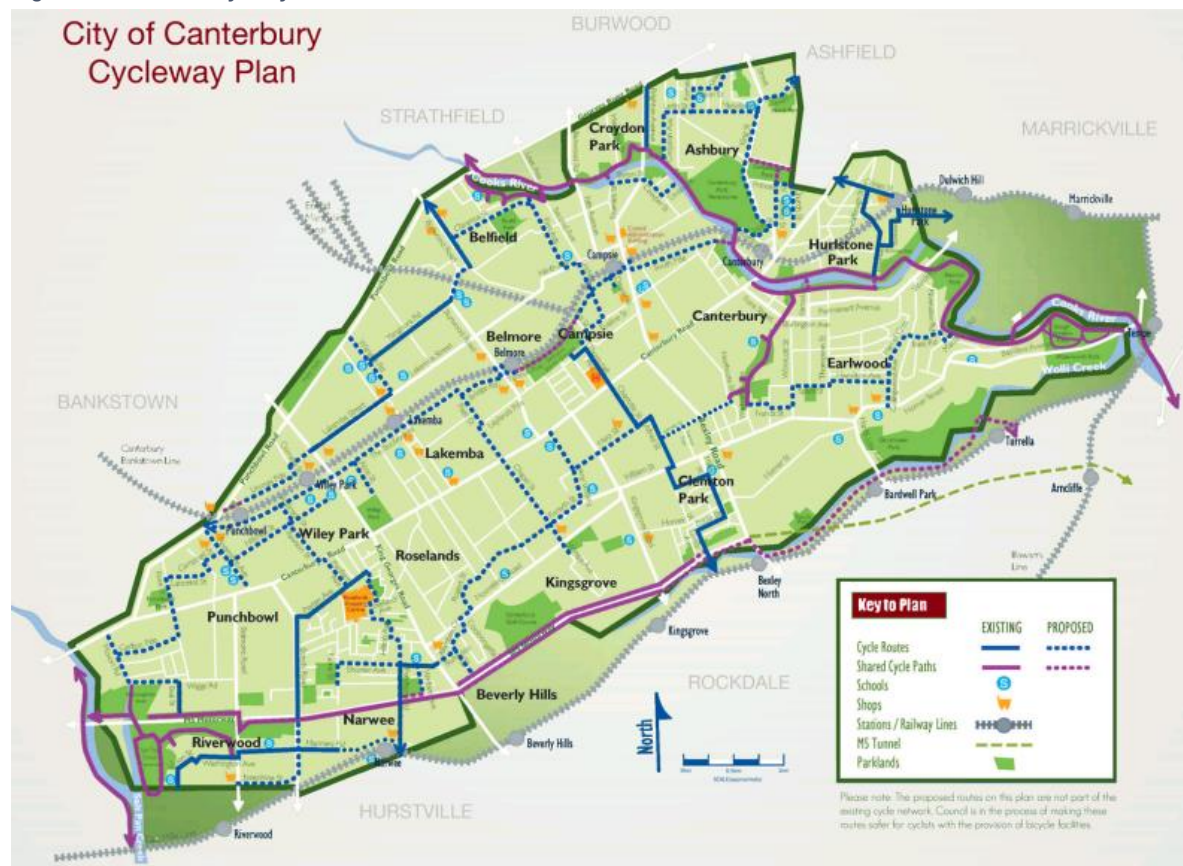
4.1.2. Cycling

The City of Canterbury-Bankstown does not currently have a formal cycleway plan. However, some separate information is available for the two former areas of Canterbury and Bankstown (developed prior to the 2016 amalgamation), as detailed below.

Canterbury

The former City of Canterbury had a cycling plan known as the *Canterbury Bike Plan (2000)*. A map of the bicycle network as per this plan is shown in Figure 4.1 and illustrates existing and proposed cycle routes and shared cycle paths.

Figure 4.1: Canterbury Bicycle Network



As shown in Figure 4.1, there are two primary cycle routes along shared paths in this area, one on the northern side of the LGA boundary, along the Cooks River, primarily for recreational use as opposed to supporting a commuter function; and one on the southern side of the LGA, along the M5 Motorway. In addition, a range of on-street cycle routes exist (including the Campsie to Clemton Park route); however, the proposed bicycle network plan is not extensive.

It is noted that the *Canterbury Bike Plan (2000)*, was reviewed in 2016 to assist and guide further development of the bicycle network and facilities through the Canterbury LGA, as well as maximise integration with other transport modes and connections to surrounding LGA's. This review identified that only a few additional facilities have been implemented since the preparation of the 2000 bicycle network plan. As such, there are still many gaps in the existing network. Additional findings from this review include the following for the former City of Canterbury LGA:

- The on-road bicycle network is fragmented with a few sign-posted, local road routes.
- A number of high-volume roads create barriers for safe cycling routes.
- A number of the on-road facilities include combined parking / bike lanes or narrow bike lanes adjacent to parked cars.
- Some provision for bikes at intersections and dedicated bicycle lanterns at signalised intersections were observed.
- There are some good off-road shared paths (i.e. with the Cooks River Path and the M5 Path, as mentioned above).
- The condition of line marking varied from excellent and clear to fading and almost completely dissipated.
- The road surface varied from smooth and ideal to rough to the degree of causing safety concerns.
- The road network consists of various width carriageways.
- Car parking configurations range from parallel to 90-degree space, both of which have safety concerns.
- Bicycle signage and wayfinding is limited.

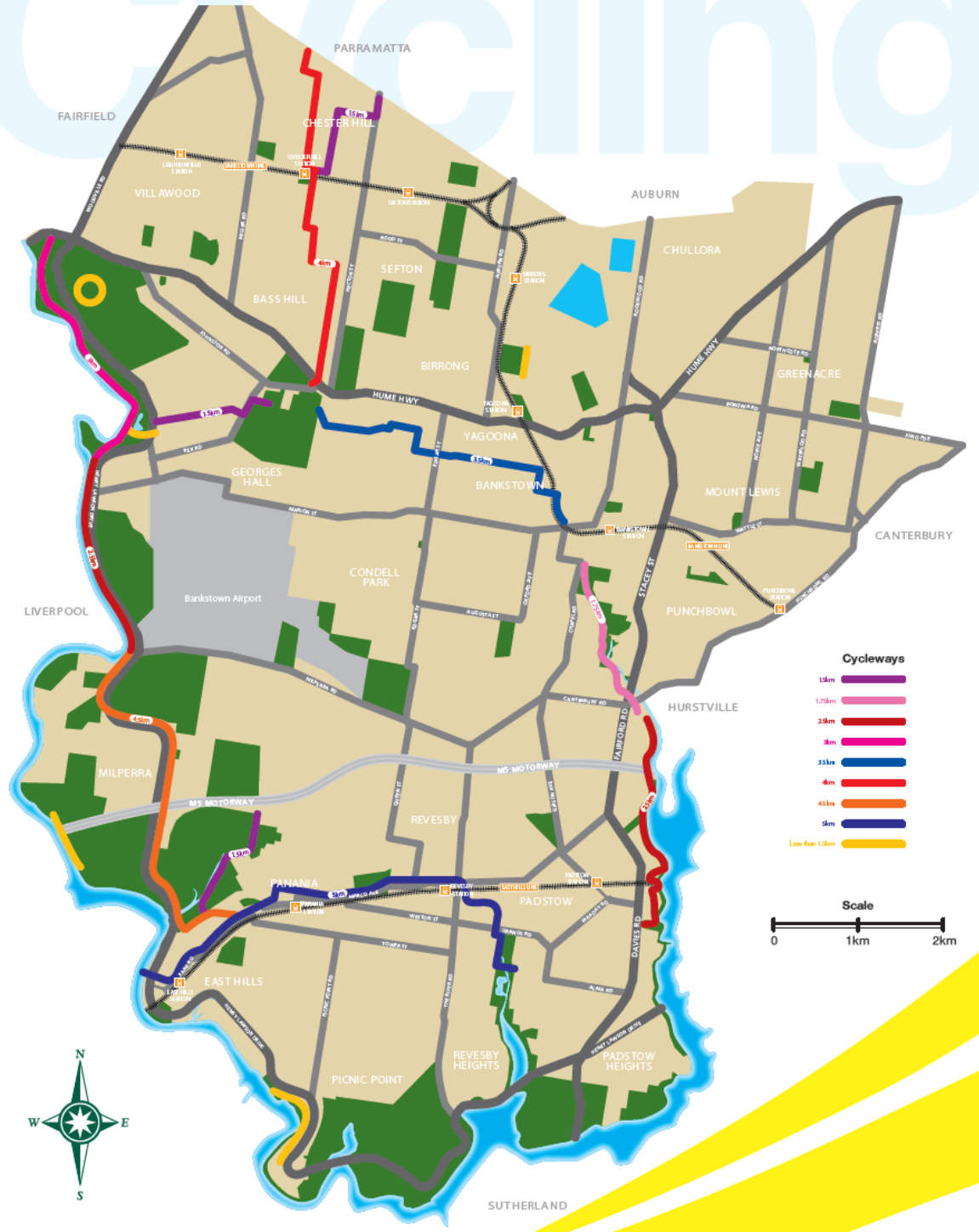
Bankstown

Whilst the former City of Bankstown did not have a formalised cycling plan, i.e. a plan that identifies a dedicated bicycle network and a strategy to maintain and extend it, there was a Cycleway Brochure. This document identifies existing cycleways, categorised by distance, however, it does not identify the type of cycling facility provided.

A map of the bicycle network from the Bankstown Cycleway Brochure is shown in Figure 4.2. As evident, the existing cycleways provide some north-south and east-west cycle access within the area, noting that there is a degree of disconnection between some routes, i.e. not all adjacent cycleways join together. Whilst it is not identified in this network, the shared cycle path along the M5 Motorway continues from the Canterbury area through the Bankstown area.

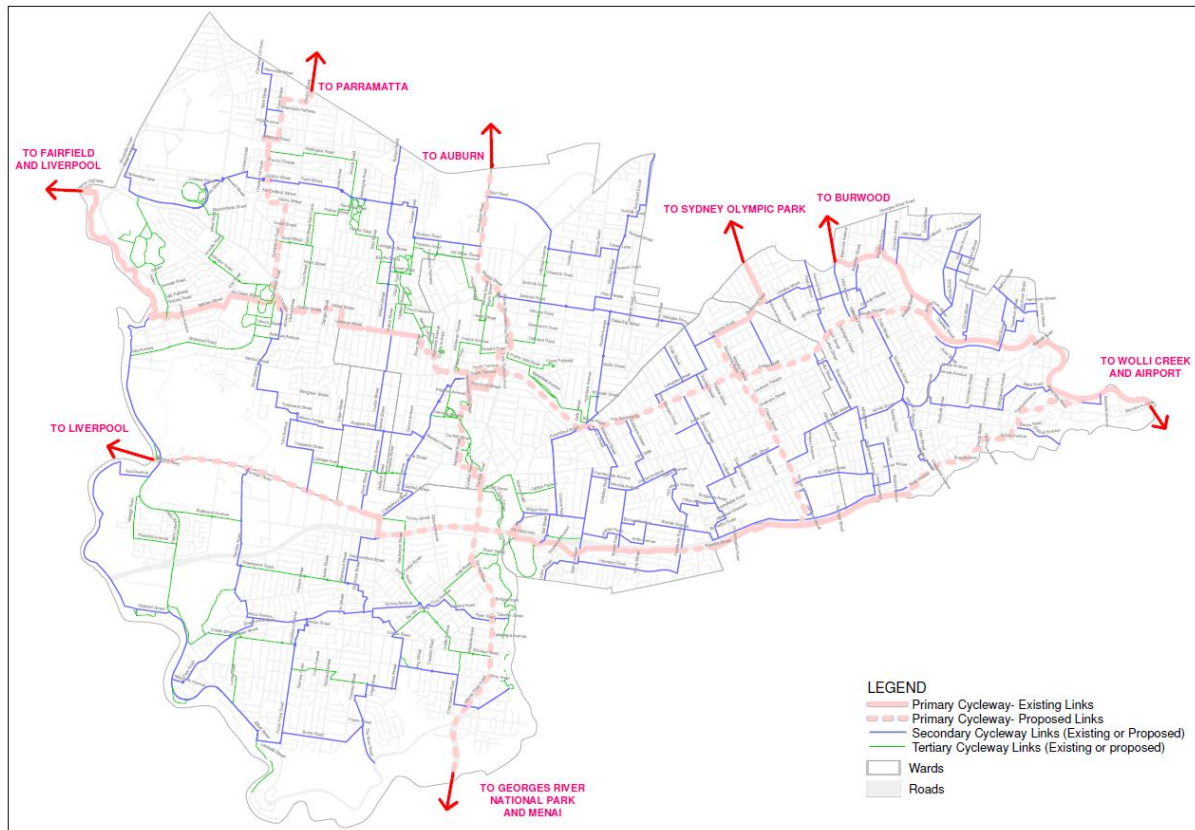
Figure 4.2: Bankstown Bicycle Network

Cycling around the Bankstown Local Government Area



An LGA wide bicycle network map, as provided by the Canterbury-Bankstown Council, is shown in Figure 4.3. A notable addition to this map, are the proposed links into locations outside the LGA, previously unidentified in the former City of Bankstown LGA.

Figure 4.3: City of Canterbury-Bankstown Bicycle Network



Source: City of Canterbury-Bankstown Council

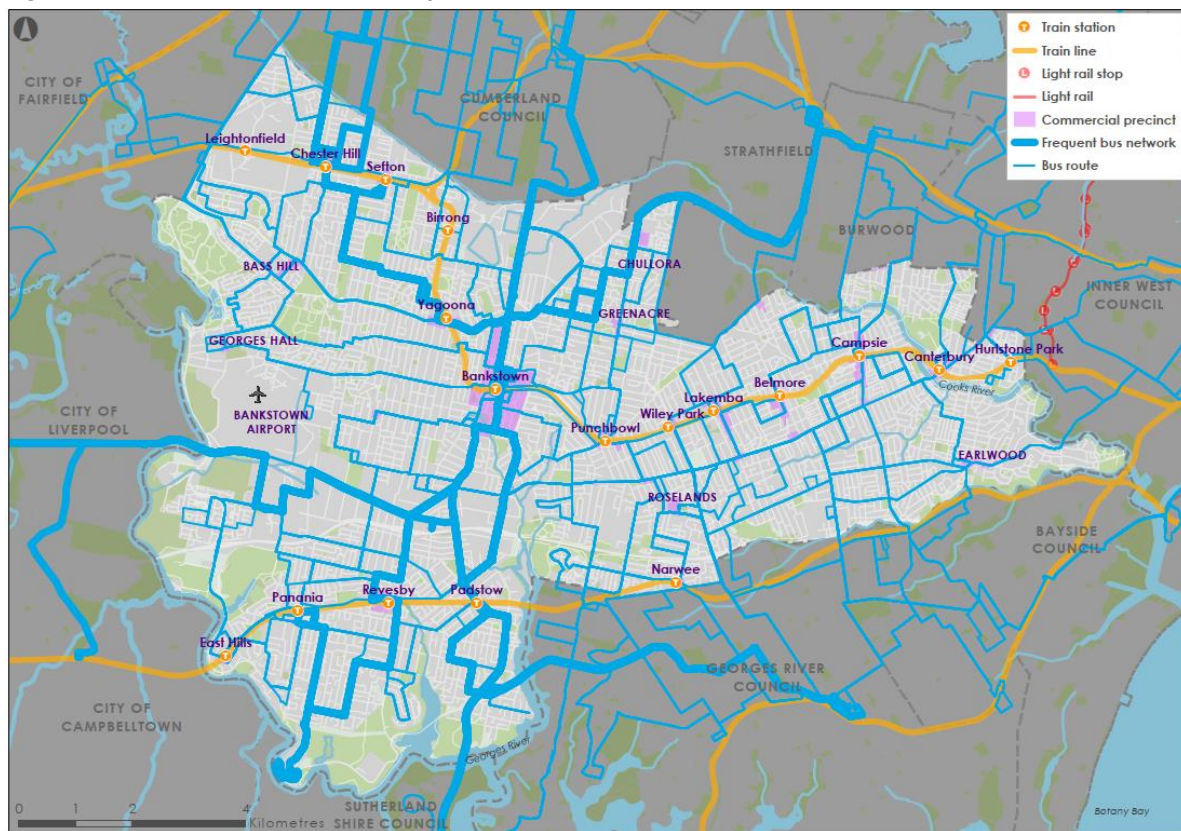
4.2. Public Transport Network

4.2.1. Bus Network

The City of Canterbury Bankstown is served by a bus network with routes running in both north-south and east-west directions across the LGA. Most of the strategic and local centres within the LGA are served by bus which includes connections to major hubs outside the LGA such as Sydney Airport, Burwood, Liverpool, Parramatta, Sydney CBD and Sutherland. The bus network predominantly provides east-west connections rather than north-south connections within the LGA. A number of night-ride bus services operate within the LGA, including Routes N20, N30, N40 and N50.

Bankstown to Panania via Revesby (923), Burwood to Liverpool via Bankstown Metro Bus (M90), Parramatta to Hurstville via Chester Hill, Bankstown and Padstow (M91) and Parramatta to Sutherland via Padstow and Bankstown Metrobus (M92) form the frequent bus network (running at least every 15 minutes) within the LGA as shown in Figure 4.4. Based on the analysis of data from General Transit Feed Specification (GTFS) buses travelling along some routes including Jacobs Street, Macauley Avenue, Chertsey Avenue and Canterbury Road (between Gibson Avenue and The River Road) are subject to delays in the AM and PM peaks. Route M90 is also subjected to delays between Davidson Street and the Hume Highway south of Rockwood.

Figure 4.4: Bus network within Canterbury Bankstown LGA



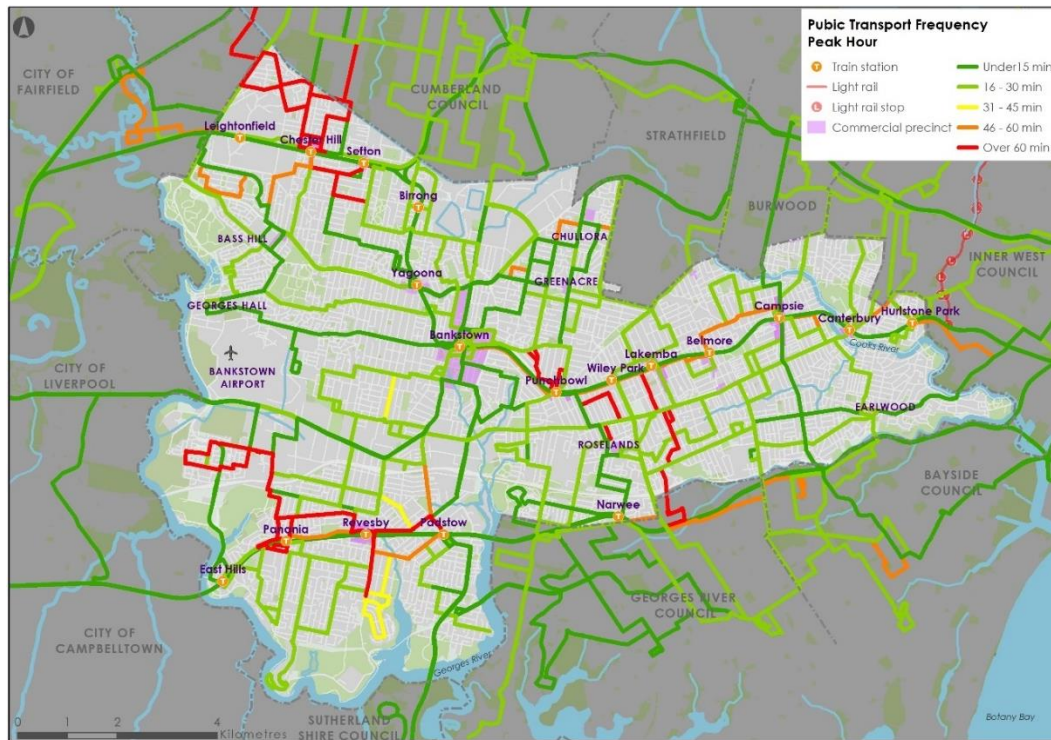
Source: Data extracted from <https://transportnsw.info/travel-info/ways-to-get-around/bus/bus-operator-maps>

Figure 4.5 shows the headway⁵ of train and bus services in peak hours for whole the LGA (the time between services). As it can be seen, some parts of the LGA are covered by high frequency bus and train services operating at less than every 15 minutes, especially in the Bankstown CBD. The majority of the bus routes provide services between 16 and 45 minutes.

Figure 4.6 illustrates the headway of public transport services within Canterbury Bankstown LGA for off-peak hours. The map indicates only train services operate in the LGA with frequent services equal and less than 15 minutes and all bus routes operate with a headway of more than 15 minute off peak hours. The majority of the bus services operate in the LGA with headways over 30 minutes.

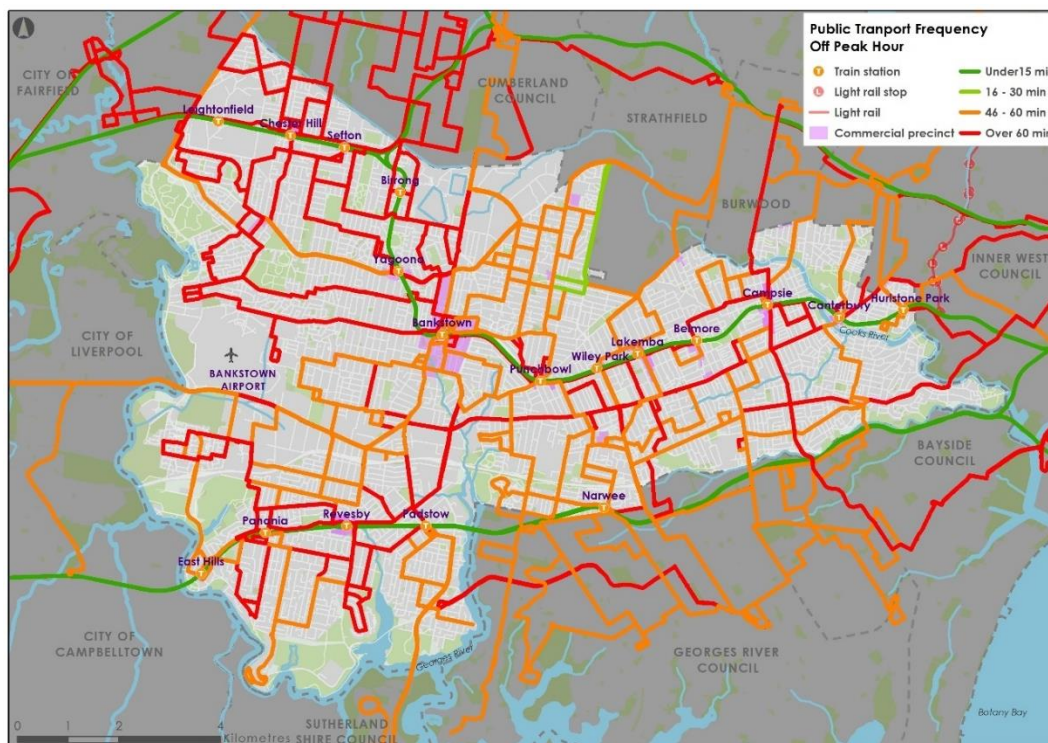
⁵ Headway is a measurement of the distance or time between vehicles in a transit system. The minimum headway is the shortest such distance or time achievable by a system without a reduction in the speed of vehicles. A shorter headway signifies closer spacing between the vehicles. E.g. A headway of 10 minutes means a frequency of six buses per hour.

Figure 4.5: Public transport service headways - Peak hour (AM & PM)



Source: Data extracted from <https://transportnsw.info/travel-info/ways-to-get-around/bus/bus-operator-maps>

Figure 4.6: Public transport service headways - Off peak



Source: Data extracted from <https://transportnsw.info/travel-info/ways-to-get-around/bus/bus-operator-maps>

4.2.2. Rail

The City of Canterbury Bankstown is serviced by the T3 Bankstown Line with stations within the LGA located at Hurlstone Park, Canterbury, Campsie, Belmore, Lakemba, Wiley Park, Punchbowl, Bankstown, Yagoona, Birrong, Sefton, Chester Hill and Leightonfield. The T3 service provides connections from the LGA to Liverpool, Lidcombe and the Sydney CBD. Services at all train stations generally run at 15-minute intervals, with express services from some stations in the AM and PM peak.

A second train line servicing Canterbury-Bankstown is the T8 Airport and South Line with stations located at Narwee, Padstow, Revesby, Panania and East Hills. The T8 line provides connections from the LGA to Sydney Airport and the Sydney CBD. Services at all train stations generally run at 15-minute intervals, with express services from some stations in the AM and PM peak. Table 4.1 tabulates the train lines frequency services and Figure 4.7 shows the location of the train lines and stations within the LGA.

Figure 4.7: Train stations



Table 4.1: Train lines and stops within Canterbury Bankstown LGA

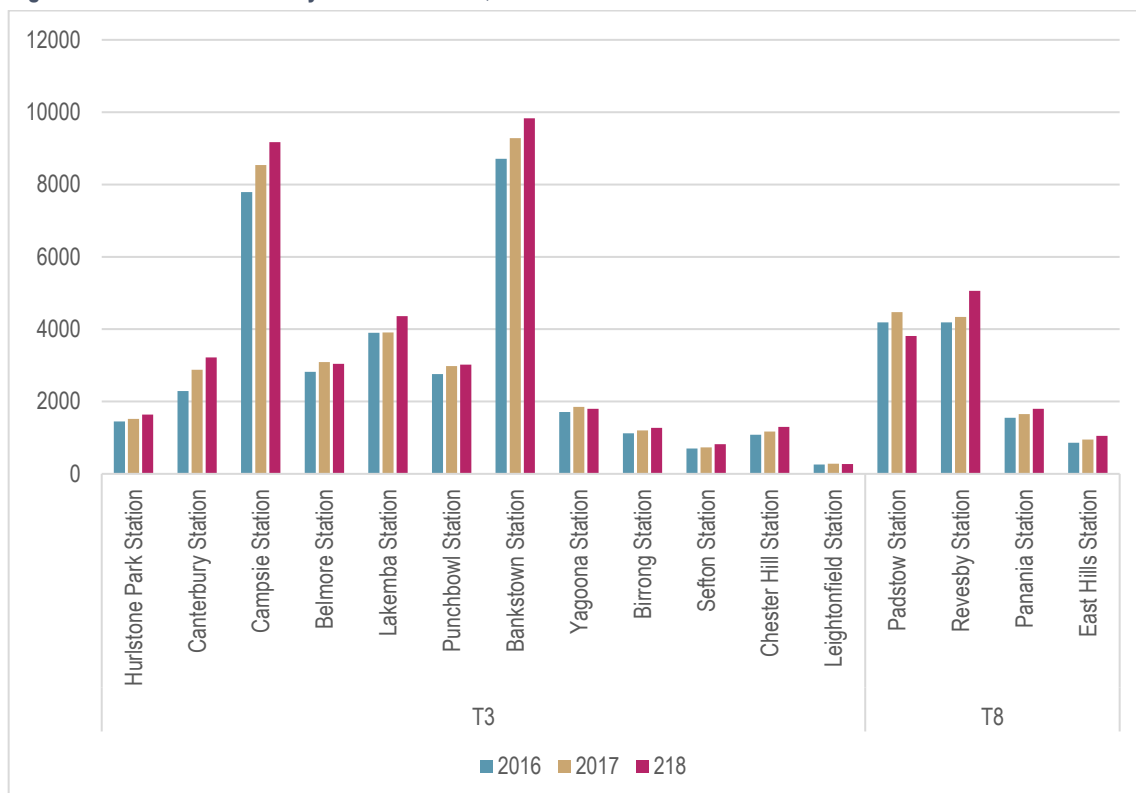
Train Line	Station	Frequency Peak Periods (when? AM?)
T3- Bankstown Line	Hurlstone Park Station	Every 7 to 15 minutes
	Canterbury Station	
	Campsie Station	
	Belmore Station	
	Lakemba Station	
	Punchbowl Station	
	Bankstown Station	

Train Line	Station	Frequency Peak Periods (when? AM?)
	Yagoona Station	
	Birrong Station	
	Sefton Station	
	Chester Hill Station	
	Leightonfield Station	
T8- Airport and South Line	Padstow Station	Every 8 to 15 minutes
	Revesby Station	
	Panania Station	
	East Hills Station	

4.2.3. Public Transport Patronage

Figure 4.8 shows train station entries for the study area, based on Opal data for three days in August 2016, May 2017 and May 2018. It can be seen that Campsie Station and Bankstown Station have the highest number of daily boarding rail passengers. All stations passengers' entries have increased since 2016 except Padstow Station and Leightonfield Station which decreased in 2018 compared to 2017.

Figure 4.8: Train stations daily entries for 2016, 2017 and 2018



Source: Opal Data

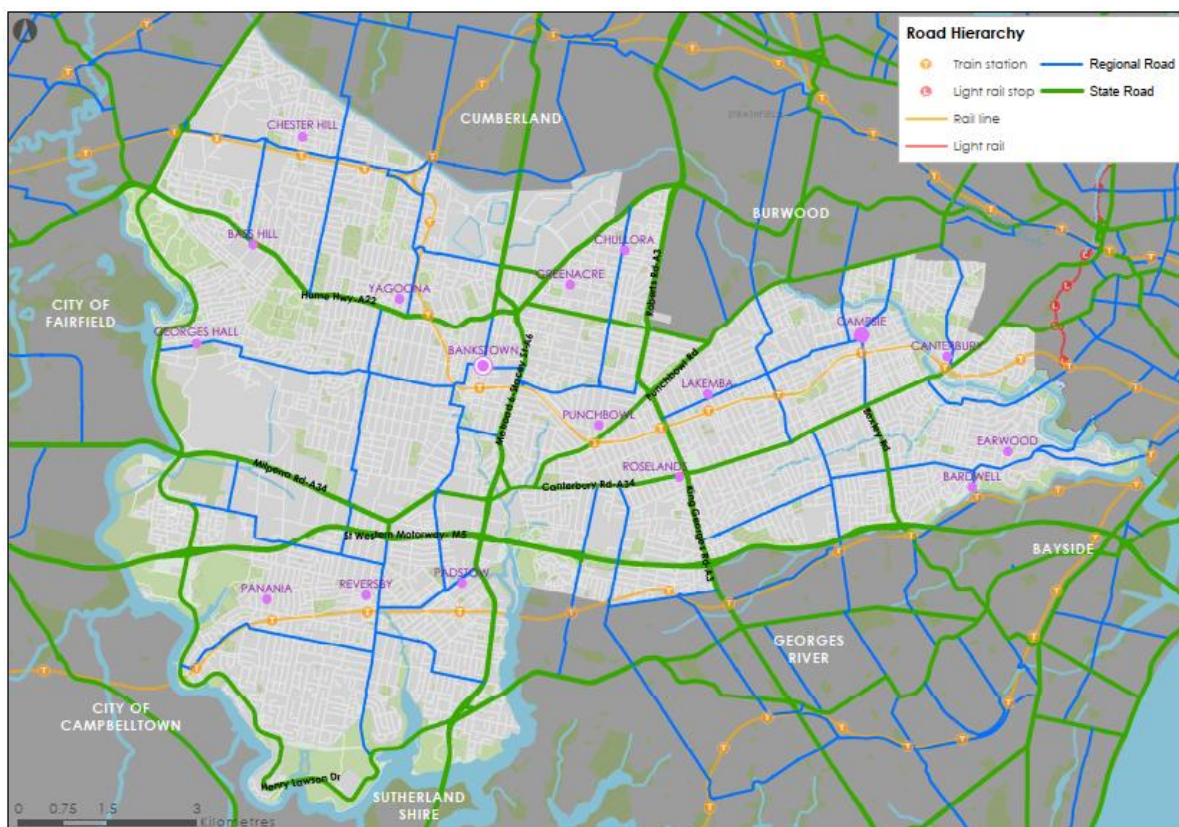
4.3. Road Network

4.3.1. Road Network Characteristics

The road network within the LGA consists of State Roads, Regional Roads and Local Roads. State Roads are managed and funded by RMS while Regional and Local Roads are generally managed and funded by councils. However, due to their network significance RMS provides financial assistance to councils for the management of their Regional Roads.

The State Network is the main arterial network which connects strategic centres and supports high volumes of traffic. Regional Roads are sub-arterial roads that perform an intermediate function between the main arterial network of State Roads and council controlled Local Roads. The existing State and regional road network surrounding and within the LGA is shown in Figure 4.9.

Figure 4.9: Road Hierarchy



In the east-west direction, the A22 Hume Highway, A34 Milperra Road/ Canterbury Road and M5 South-West Motorway are key state corridors providing connections between Western Sydney and Inner Sydney/ Sydney CBD. The M5 is a toll road whereas all other roads are un-tolled.

In the north-south direction A6 Metroad/ Stacey Street, Henry Lawson Drive and A3 Roberts Road/ King Georges Road are key corridors on the centre of the LGA. Key roads are described in Table 4.2.

Table 4.2: Key State and Regional Roads

Road Name	Road Classification	Key Function
Hume Highway- A22	State	A Primary arterial is road a vital link for road freight to transport goods to and from the Sydney and Melbourne as well as serving Albury-Wodonga and Canberra.
Stacey Street/Fairford Road Corridor	State	A Primary arterial road and freight route connecting Cumberland Highway at Carlingford and Princes Highway at Heathcote, via Lidcombe and Bankstown. The A6 provides a link from the northern and western suburbs to the inner western suburbs, Bankstown and the Princes Highway. Some stretches such as Silverwater Road, Alfords Point Road, New Illawarra Road and Heathcote Road have very few junctions.
Milperra Road/ Canterbury Road-A34	State	Milperra Road/Canterbury Road is an arterial road and freight link between Sydney's south west and inner west.
South Western Motorway- M5	State	A primary route linking Liverpool to the Sydney CBD. Several major roads connect to the motorway, including the F5 Freeway, the M5 East Freeway, and the West link M7. =The M5 Motorway is owned by Interlink Roads.
Punchbowl Road	State	A state road that connects The Boulevarde to Canterbury Road.
Robert Street/ King Georges Road-A3	State	<p>The A3 is a major metropolitan arterial route in Sydney. It is a major connector between most of the major radial routes emanating from central Sydney, and a major link between the northern and southern parts of the Sydney tolled orbital freeway.</p> <ul style="list-style-type: none"> Robert Street is part of A3 connects Cumberland LGA to the Canterbury Bankston LGA King Georges Road is a major arterial road in Sydney running through the local government areas of the Georges River Council and Canterbury-Bankstown Council.
Bexley Road	State	A primary road connects Milperra Road /Canterbury Road-A34 and St Western Motorway-M5.
Henry Lawson Drive	State	A state road that links Hume Highway and Woodville Road to Forest Road.
Woodville Road	State	A state road connects Hume Highway and Henry Lawson Drive to Western Motorway- M4 and Parramatta.

Canterbury Road Corridor

The Canterbury Road Corridor is well connected, serviced land with embedded infrastructure, gentle topography in a key central Sydney location. It is close to the City, airport, Port Botany, the Inner West and South and Liverpool. The road is parallel to the T3 Bankstown Line rail corridor, about 600 to 900m to the north) and the T3 Airport Line about 2.5kms to the south.

Canterbury Road is a strategically important transport corridor for the City of Canterbury-Bankstown and the wider region. It is one of the major arterial corridors of the South District of Sydney with a significant volume of daily traffic (41,000 based on 2019 average daily traffic count). As a classified arterial road, Canterbury Road serves as a major road transport link from Sydney's Inner West to the outer Western Suburbs. It intersects with Bexley Road in Campsie and King Georges Road (averaging 40,000 vehicles per day) in Wiley Park, both classified roads with large volumes of north-south traffic.

The Canterbury Road Corridor and centres along the T3 Bankstown Line form the economic backbone of the region, with a concentration of commercial, industrial and retail activities. Although lacking east-west permeability, streets north of Canterbury Road provide a network of connections to railway stations and as such much of Canterbury Road is within a reasonable walking distance of mass rapid transit.

There is an absence of facilities such as community centres and libraries and a significant undersupply of open space distributed along the Corridor and in the adjacent neighbourhood. Figure 4.10 shows Canterbury Road Corridor.

Figure 4.10: The Canterbury Road Corridor



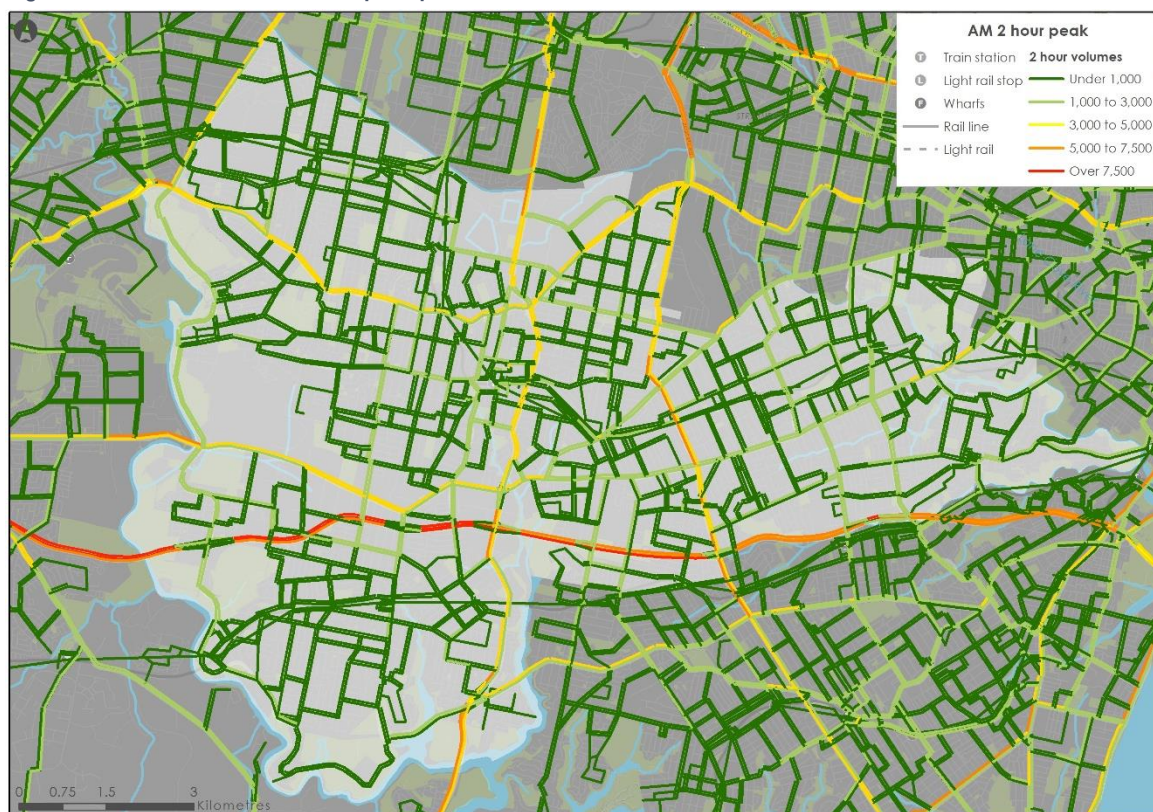
Source: Canterbury Road Review, Canterbury- Bankstown Council- 2017

4.3.2. Road Network Performance

The road network within the Canterbury Bankstown LGA is characterised by the State and Regional roads. These roads carry volumes in excess of 5,000 vehicles in the AM and PM peak (2-hour) periods and are prone to congestion as a result of issues with both mid-block capacity and intersection capacity. Delays and congestion along the M5- Motorway are not uncommon, noting that it is a key regional route and freight route.

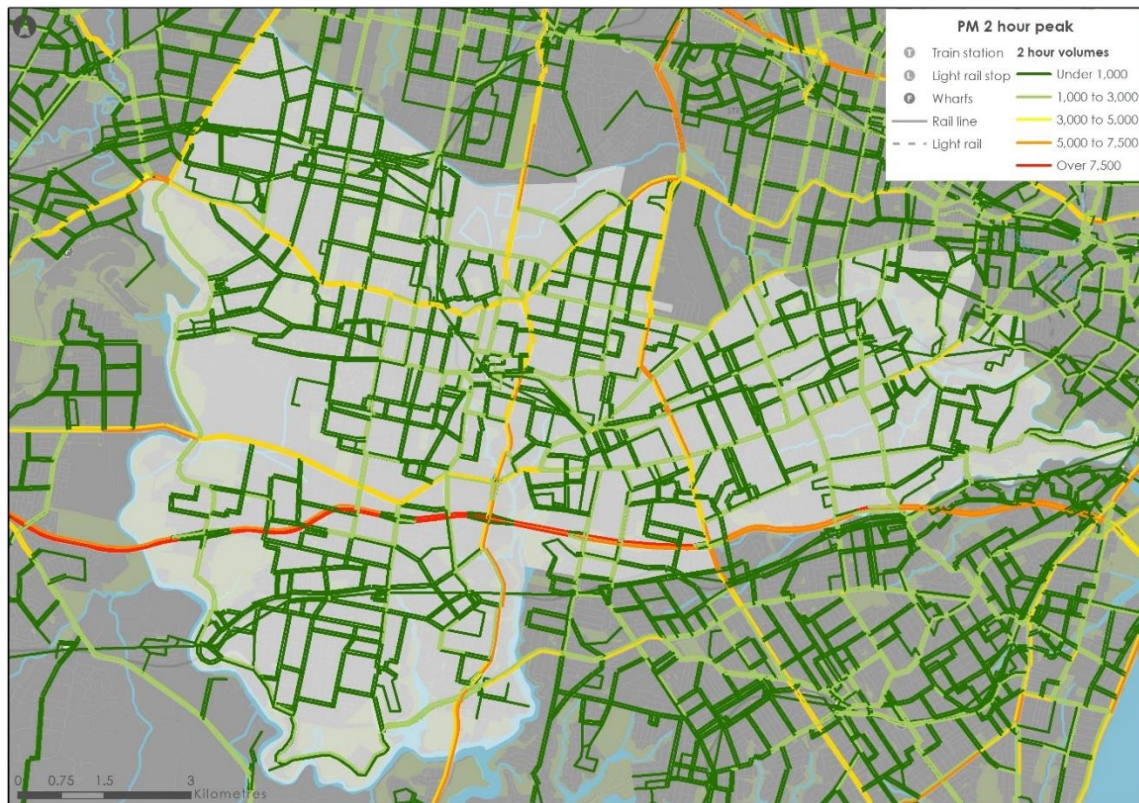
The volume of traffic along roads within the LGA are shown in Figure 4.11 for the AM two hour peak period and Figure 4.12 for the PM two hour peak period.

Figure 4.11: 2016 AM 2-hour peak period road volumes



Source: RMS STFM plots 2016.

Figure 4.12: 2016 PM 2-hour peak period road volumes



Source: RMS STFM plots 2016.

Volumes along key roads within the LGA are presented in Figure 4.11 and Figure 4.12 with a summary of volume-capacity (V/C) ratios for a number of those roads in Table 4.3. The V/C ratio reflects the traffic throughput per lane of road. A V/C ratio of 1 indicates the road or lane is at capacity.

Table 4.3: 2016 Volume-capacity ratios throughout City of Canterbury Bankstown

Location	Direction of travel (N/S/E/W)	V/C Ratio (2016)	
		AM	PM
Sth Western Motorway-M5 from Lundy Ave to Cooloongatta Road	Eastbound	0.8-1.0	0.8-1.0
	Westbound	0.8-1.0	0.6-0.8
Sth Western Motorway-M5 from Belmore Road to Salt Pan Creek	Eastbound	0.8-1.0	0.2-0.4
	Westbound	0.8-1.0	0.6-0.8
Sth Western Motorway-M5 from Gibson Avenue to The River Rd	Eastbound	0.8-1.0	0.8-1.0
	Westbound	0.8-1.0	0.6-0.8
Beamish Street from Evaline Street to Claremont Street	Northbound	Over 1.0	0.8-1.0
	Southbound	Over 1.0	Over 1.0
Henry Lawson Drive from Milperra Rd to Rabaul Rd	Northbound	0.8-1.0	0.8-1.0
	Southbound	0.8-1.0	0.8-1.0
Henry Lawson Drive from Rabaul Rd to Denman Rd	Northbound	0.6-0.8	0.8-1.0
	Southbound	0.6-0.8	0.6-0.8

Location	Direction of travel (N/S/E/W)	V/C Ratio (2016)	
		AM	PM
Punchbowl from Cosgrove Rd to Juno Parade	Northbound	0.6-0.8	0.6-0.8
	Southbound	0.6-0.8	Over 1.0
Punchbowl from Richard St to The Boulevard	Eastbound	0.6-0.8	0.6-0.8
	Westbound	0.6-0.8	Over 1.0
Richard Rd from Chapel Rd to Jacobs St	Eastbound	0.2-0.4	Over 1.0
	Westbound	0.2-0.4	0.4-0.6

4.4. Freight

Canterbury-Bankstown has a number of significant industrial areas with a high proportion of freight movements as shown in Figure 4.13. The movement of freight throughout the Canterbury-Bankstown LGA is focused along higher order roads such as the Hume Highway, M5 Motorway and Canterbury Road (in the east/ west directions); and Henry Lawson Drive/ Woodville Road, Stacey Street and King Georges Road (in the north/ south directions). Access to specific areas varies throughout the LGA. These freight routes form part of the 25/ 26 metre-long B-double truck route within the restricted vehicle access networks, as shown in Figure 4.14.

Canterbury Road currently carries a large amount of freight movements, this is likely to drivers trying to avoid the toll fees on the M5 Motorway.

Figure 4.13: Industrial areas within Canterbury-Bankstown LGA

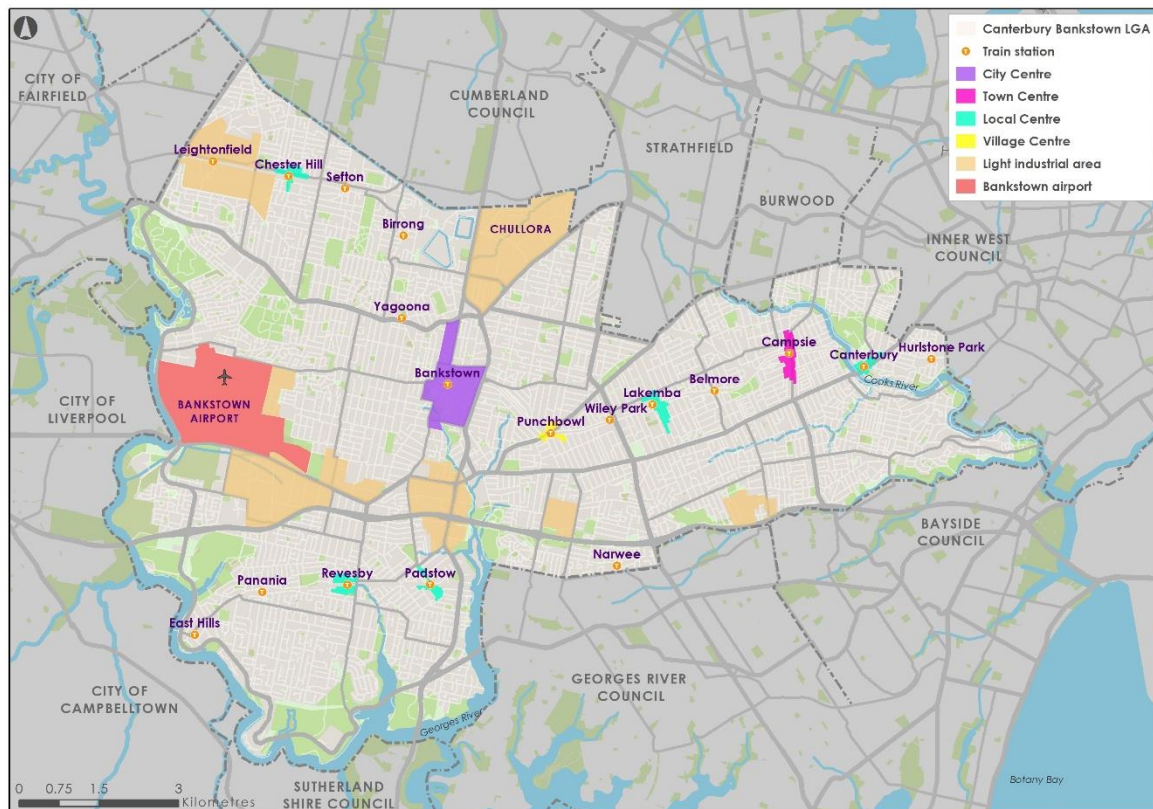
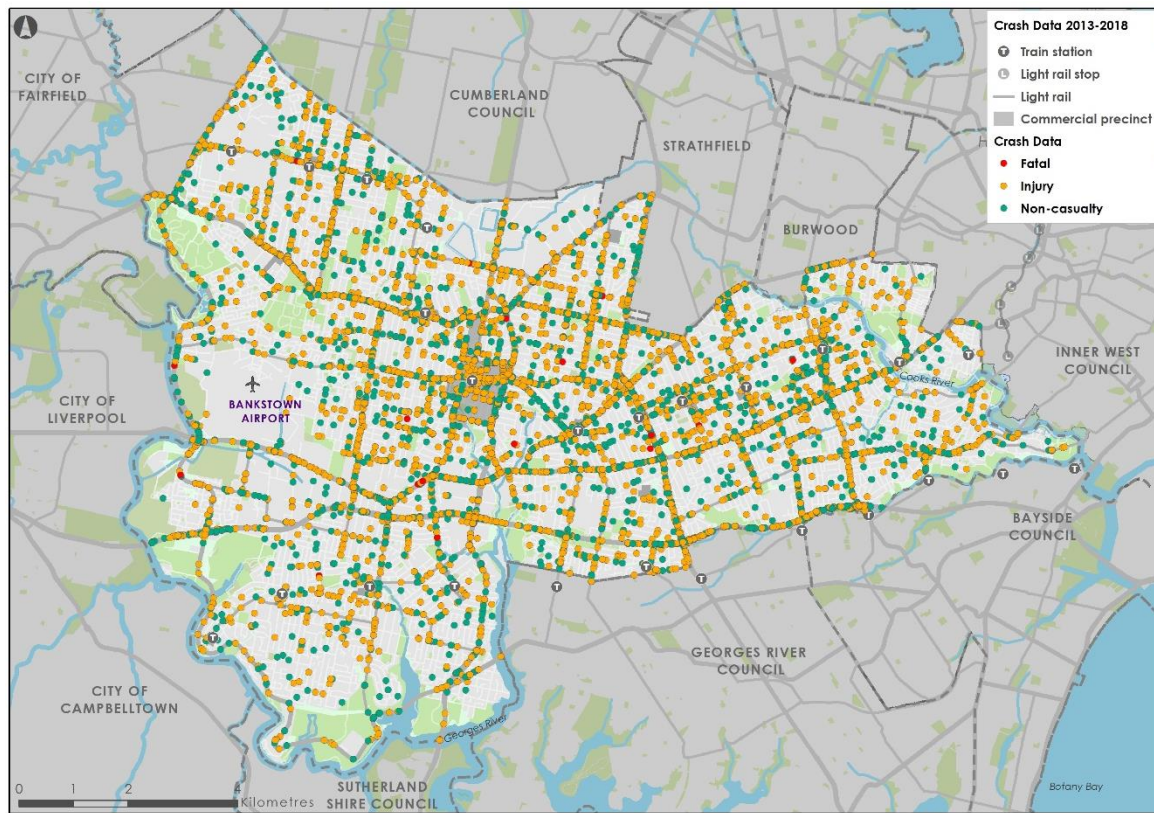


Figure 4.15: Five-year history crash map



Source: Data from RMS.

Table 4.4 shows a summary of crashes and casualties from 2013 to 2018. In terms of severity of crashes, 3,081 crashes resulted in no injuries while of the remaining 5,519 crashes, 1,456 resulted in serious injury and 35 incurred fatalities.

Approximately 7 per cent of crashes within the study area involved cyclists and pedestrians.

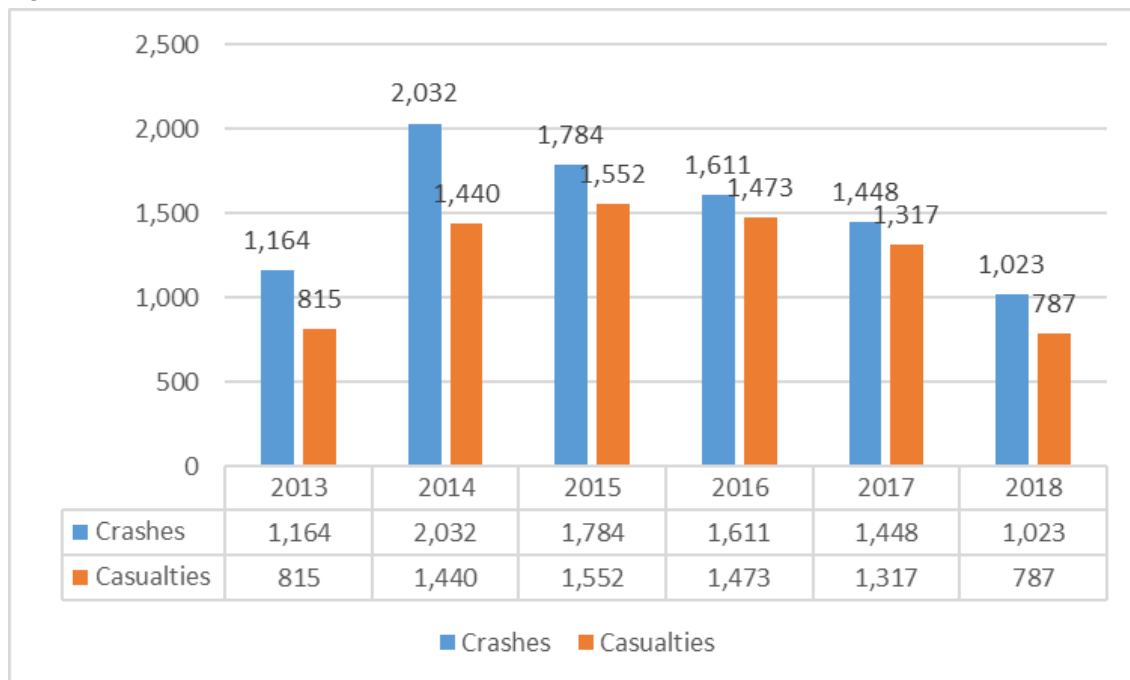
Table 4.4: Summary of Crashes and Casualties from 2013 to 2018

CASUALTIES			CRASHES		
Killed		36 (<0.1%)	Fatal		35 (<0.1%)
Injured	Serious Injured	1,595 (23%)	Injury	Serious Injury	1,456 (17%)
	Moderate Injured	2,430 (34%)		Moderate Injury	1,866 (22%)
	Minor/Other Injury	3,006 (43%)		Minor/Other Injury	2,162 (25%)
	Unrestrained	84 (<0.1%)			
			Non-casualty		3,081 (36%)
Total		7,151	Total		8,600

Source: Data from RMS.

Figure 4.16 illustrates the trends of crashes and casualties from 2013 to 2018. Overall, it can be seen number of crashes decreased from 1,164 in 2013 to 1,023 in 2018, although it has increased from 2013 to 2015 from 815 to 1,552. Casualties show a similar trend throughout the period.

Figure 4.16: Trends of crashes and casualties from 2013 to 2018



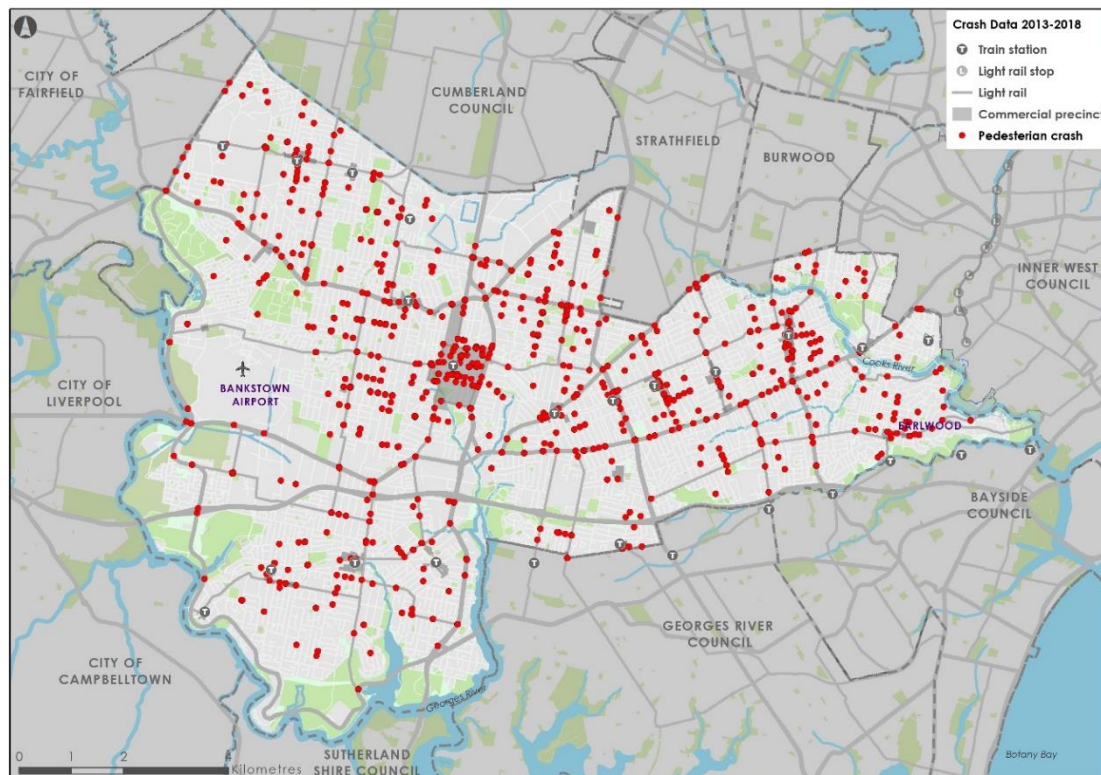
Source: Data from RMS.

4.5.1. Pedestrian Crashes

Figure 4.17 shows the distribution of pedestrian crashes within the Canterbury Bankstown LGA. As expected, the pedestrian crash density close to town centers is high as the volume of traffic and number of pedestrians is higher than other types of areas. Several roads, including Canterbury Road and Hume Highway, are areas of high risk for pedestrian crashes.

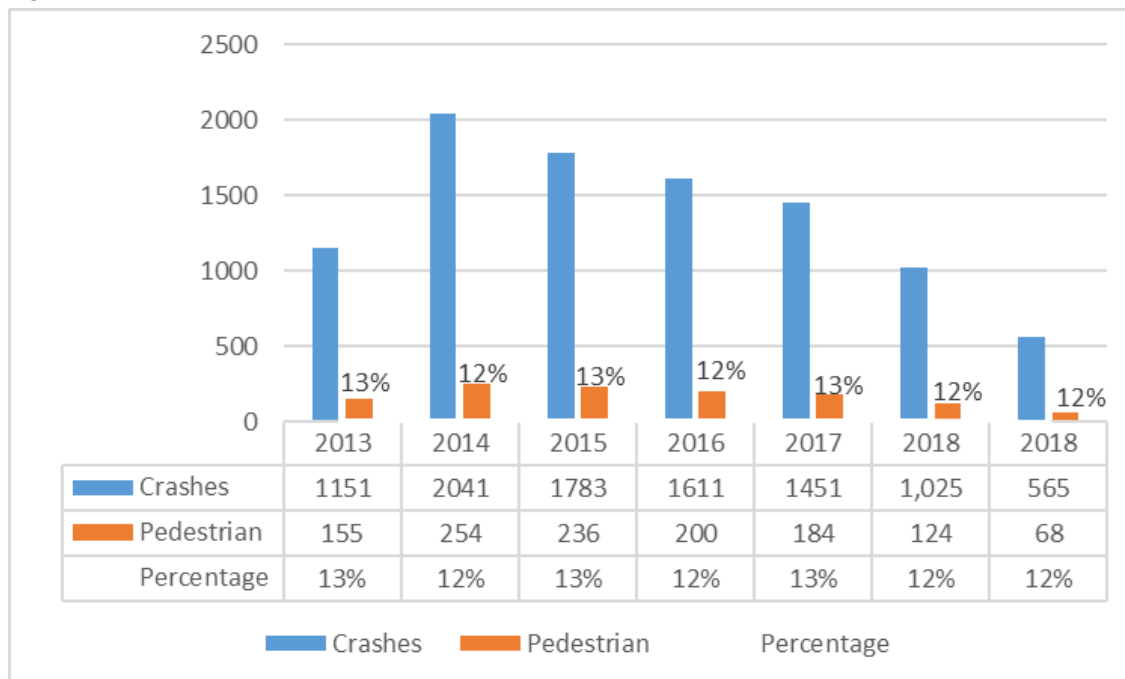
Figure 4.18 illustrates trend of pedestrian crashes from 2013 to end of 2018. The chart indicates that generally pedestrian crashes have declined since 2013 despite the percentage of pedestrian crashes staying the same (12%) in comparison with total crashes.

Figure 4.17: Pedestrian Crash Map



Source: Data from RMS.

Figure 4.18: Trends of Crashes with Pedestrian Involvement from 2013 to 2018



Source: Data from RMS.

4.6. Parking

On-street parking within the City of Canterbury Bankstown typically includes:

- Parking within town and local centres which are mostly characterised by short to medium stay restricted parking (usually between one-hour parking and four-hour parking).
- Unrestricted parking outside of town and local centres which is mostly used by residents.

Short and medium stay parking restrictions in and around town and local centres within the City of Canterbury Bankstown are located on higher order roads such as Beamish Street, Punchbowl Road and Canterbury Road. These restrictions are also carried over onto minor roads, approximately 100 to 200 metres from intersections with major roads. On-street parking restrictions are generally in effect between 8:30am to 6:00pm on weekdays and 8:30am to 12:00pm Saturdays, subject to clearway restrictions.

All of Council operated off-street parking is free and around half of it has no time restriction.

Off-street parking within the LGA is provided around clusters of commercial and retail uses such as supermarkets, dining and specialty retail within town and local centres. These car parking spaces are provided either at the rear of the developments in the form of at-grade car parks or basement parking as part of larger shopping centre developments.

Canterbury-Bankstown Council operates a range of larger off-street car parks in the Bankstown CBD with a total of 1,650 parking spaces, with just under 50% of those being unrestricted.

Off-street parking set in basement car parks for specific large developments such as the Broadway Plaza in Punchbowl and Campsie Centre consist of three hours free parking with paid parking thereafter. This is generally used to deter long term parking thereby encouraging higher turnover.

Commuter parking is provided at all train stations within the LGA except Chester Hill Station.

4.7. Bankstown Airport

Since the privatisation of the Bankstown Airport in 2003, the following Master Plans have been prepared:

- 2004/05 Bankstown Airport Master Plan
- 2014 Bankstown Airport Master Plan
- 2019 Bankstown Airport Master Plan – preliminary draft.

The 2014 Master Plan is the current Master Plan, however, it is due to be replaced by the 2019 Master Plan once completed. Please note that the following information has been obtained from the 2019 Master Plan preliminary draft document, unless otherwise stated, and as such details may be subject to change throughout the Master Plan development process.

4.7.1. General Information

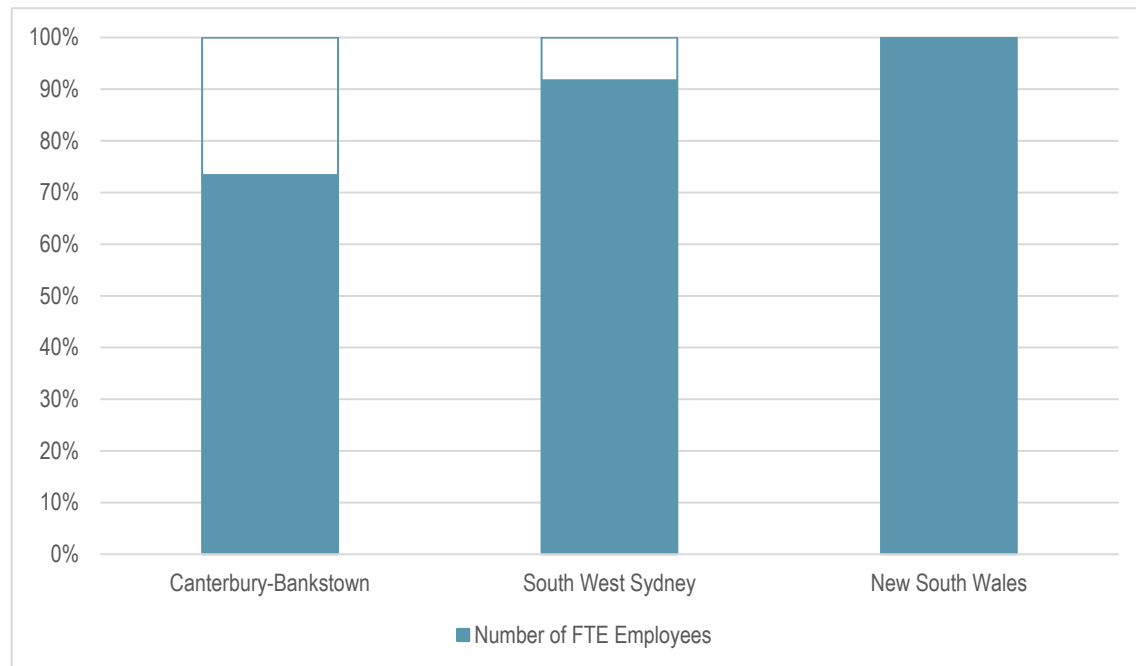
Bankstown Airport is a Commonwealth-owned facility leased by First State Superannuation and operated/ managed by Bankstown Airport Limited (BAL). As identified in Section 3.1.4, Bankstown Airport is largely used for general aviation, parcel freight, recreational flying, flight training and emergency services. BAL seeks to expand airport activities, including:

- Aviation activities, i.e. expanding and introducing new emergency services, flight training, aircraft maintenance and specialist aviation activities
- Non-aviation activities, i.e. developing the South West Precinct (commercial precinct adjacent the Milperra industrial area).

4.7.2. Employment

Bankstown Airport accommodates over 6,000 jobs, more than 4,400 of which are local Full Time Equivalent employees. Figure 4.19 shows the proportion of Bankstown Airport employees located within the Canterbury-Bankstown LGA, South West Sydney area and New South Wales. This makes Bankstown Airport one of the key employers in the LGA.

Figure 4.19: Number of Bankstown Airport FTE Employees Located within the Local Area, Regional Area and State



Bankstown Airport houses more than 160 businesses within its 313-hectare site, across a variety of enterprises. A large proportion of employment exists within manufacturing, aircraft repairs, construction education and pilot education. A small proportion of employment exists in retail trade, business services and public administration.

4.7.3. Operations

Bankstown Airport operates 24/7 and accommodates an average of 700 aircraft movements per day and 247,500 movements per year, across three parallel runways and almost 12 kms of taxiways; noting that it has no Regular Public Transport (RPT) services. A passenger terminal is available should limited RPT be reinstated in the future.

Given the continuous hours of operation, Bankstown Airport is not under a general curfew in terms of flight hours. However, some activities, such as circuit training, are subject to time restrictions. There are also additional mitigation procedures in place to assist in reducing the impact of aircraft noise. Runway utilisation, flight paths, departure and arrival conditions vary depending on the type of aircraft.

4.7.4. Accessibility

The 2019 Master Plan incorporates a Ground Transport Plan that is anticipated to play an important role in improving travel to, from and within the airport. An overview of the regional road network and local road network surrounding the Bankstown Airport is outlined below.

The Bankstown Airport relies on the surrounding road network for access to and from the area, as there is limited access via public and active transport, noting that approximately 96% of trips to the Airport are by car. Major roads located within close proximity to the Airport include the Hume Highway (A22), South Western Motorway (M5), Milperra Road (A36), Henry Lawson Drive, and Fairfield Road/ Stacey Street/ Rookwood Road (A6).

Primary access to Bankstown Airport provided from the south via Milperra Road and Nancy Ellis Leebold Drive, both of which form part of the 25/26m B-double truck route within the restricted vehicle access network, previously shown in Figure 4.14. Additional primary roads servicing the Bankstown Airport include Edgar Street and the 'Northern Route', which includes Marion Street, Owen Road, Birdwood Road and Haig Avenue.

Incorporated into the 2019 Master Plan preliminary draft, are Five- and Twenty-Year Development Programs, which include the following Road and Transport Improvements:

Five-Year Development Plan

- New internal collector road connecting Milperra Road/ Murray Jones Drive intersection and Tower Road, to provide access to the proposed South-West Precinct (under construction).
- Intersection upgrades and widening of roads surrounding Bankstown Airport (subject to approvals and commercial demand).
- Improved way finding signage directing traffic into and around Bankstown Airport (approved).

Twenty-Year Development Plan

- Metro South-West Rail Extension
- Formalisation of a ring road around Bankstown Airport (subject to demand).

It is noted that the Airport and surrounding road network are anticipated to experience an increased traffic demand as a result of local development and the expansion of the greater Western Sydney area.

4.7.5. Development Plans

Future development plans for the Bankstown Airport include specific airfield infrastructure include runway pavement, lightning upgrades, runway threshold upgrade, Runway End Safety Areas (RESA), upgrades associated with the NSW Police Air Wing facility (major development, as detailed below), taxiway improvements, helicopter operational arrangements, RPT services and a potential future runway extension.

Major Development Plans (MDPs) have been, or are in the process of being prepared, for the following developments:

- Bankstown Airport Polair Base,
- Bankstown Airport South West Precinct Site Works and Warehouse.

The Bankstown Airport Polair development refers to the 'consolidation of existing NSW Police Force Aviation Support Branch (NSW Police Air Wing) operations into a new purpose-built integrated facility in the north-western portion of the airport'.

The Bankstown Airport South West Precinct Site Works and Warehouse development refers to the 'undertaking of site works and development of a warehouse within the south-western part of the Airport'. The MDP for this development is currently being prepared as a preliminary draft, and would facilitate the development of a major industrial, logistics and innovation precinct, inclusive of retail gateways. This MDP also aligns with the 2019 Masterplan.

The South West District Plan (*Greater Sydney Commission, 2018*), also identifies that the Bankstown Airport has development opportunities, with one of the Planning Priorities including the aim to grow and invest in Bankstown Airport trade gateway as an economic catalyst for the South District. Under this priority, 130 hectares of land adjacent to the Milperra industrial area, i.e. the Bankstown Airport South West Precinct (as referenced above), are identified for future development for non-aviation uses. The aim of this precinct is to develop an industrial economic and employment hub.

4.8. Summary of Findings

A summary of current conditions is presented below. These are intended to form the development of the Integrated Access and Movement Strategy document.

Area/ Mode	Finding
General	<p>Main transport corridors are predominantly east-west, with a lack of north-south connections</p> <p>Large industrial areas with impacts partly encroaching into residential areas</p> <p>High percentage of car-based trips (approximately 65% of trips)</p> <p>Approximately 30% of people live and work in the Canterbury Bankstown LGA.</p> <p>A low (3%) proportion of trips are made by walking and cycling.</p>
Walking	<p>Overall, pedestrian accessibility within the LGA is good, however, some blocks have limited permeability and require detours.</p> <p>Limited occurrence of and long distances (>400m) between crossing facilities along main road corridors (Canterbury Road, Milperra Road, Hume Highway)</p>
Cycling	<p>Lack of a bicycle network, particularly pronounced in western parts of the LGA</p> <p>While there are several shared paths in the LGA, there are limited dedicated cycling facilities.</p>
Bus	<p>Limited high frequency bus routes, which are prone to delays and unreliability in peak periods</p> <p>Limited high frequency bus network outside of the Bankstown CBD, particularly pronounced in eastern parts of the LGA</p> <p>Lack of fast and reliable connections to key centres such as Parramatta, Liverpool and Hurstville/ Kogarah.</p>
Rail	<p>Very limited north-south rail connections</p> <p>Poor rail/ mass transit coverage west of Bankstown</p> <p>Lack of direct or frequent connections to key centres such as Parramatta and Hurstville/ Kogarah.</p>
Road	<p>Major road corridors are being required to move high volumes of traffic, with much traffic travelling through the LGA rather than to or from the LGA</p> <p>Traffic congestion occurring across the LGA – often due to drivers trying to avoid congested major roads</p> <p>Major roads surrounding the LGA are approaching capacity (V.C of 1.0) as well as some key roads approaching critical flows (V/C above 0.8)</p> <p>High traffic volumes along key regional roads</p> <p>High traffic volumes through local centres</p> <p>The M5 Motorway acts as a barrier to north-south movement.</p>
Freight	<p>Some toll avoidance traffic on more local streets</p> <p>Several metropolitan freight routes on the major roads including Canterbury Road and Punchbowl Road which also serve residents in the LGA, resulting in some conflict between users and results in delays to freight operations</p>
Parking	<p>The majority of car parking is free and readily available in many town centres, attracting long term parking</p> <p>A number of shopping centres and supermarkets only charge for parking after a certain period</p>

5. ISSUES AND OPPORTUNITIES

05

5.1. Future Issues and Opportunities

This section documents issues and opportunities that have been identified across the LGA by different travel modes. For each mode, GTA has undertaken a review of existing conditions, reports and strategies to identify issues and any opportunities to improve them. This has included data reviews from a variety of public, Council and State Government sources, report reviews that have been provided and/or undertaken by Council or the State Government, meetings held with key stakeholders involved in the study and using our knowledge both of the area and professional experience in identifying realistic potential improvements in the LGA.

The issues and opportunities are intended to have enough detail to be tangible, but still at a level of resolution applicable for a strategic document to guide further studies, objectives, actions and solutions.

5.1.1. Walking

Table 5.1: Issues and opportunities related to walking across Canterbury Bankstown LGA

Issue	Opportunity
Long distances between pedestrian crossings along key roads	Provision of additional pedestrian links to achieve better connectivity
Canterbury Road currently functions as a busy arterial road, which is a key barrier to walking and reduces the amenity throughout this corridor.	Review function of Canterbury Road and adjust traffic signal timings as required Provide pedestrian amenities
Lack of connected pedestrian network and facilities around train stations	Opportunities to connecting pedestrian and cyclist network around train station through State projects
High risk safety issues for pedestrian around the town centres	Review crossing facilities and give priority to pedestrians
High number of pedestrian related accidents relative to the reduction in overall crashes	Review RMS Active Transport Map for walking catchments to include all town centres that are currently excluded from this map Audit and upgrade of existing pedestrian facilities
Limited facilitated pedestrian crossings along key road corridors including Canterbury Road, Hume Highway and Milperra Road.	Investigate opportunities for additional pedestrian crossings
Limited pedestrian waiting areas at key intersections	Investigate options to widen storage areas at intersections
Narrow footpath along in some areas within LGA	Investigate options to widen footpaths

5.1.2. Cycling

Table 5.2: Issues and opportunities related to cycling across Canterbury Bankstown LGA

Issue	Opportunity
Limited and disconnected bicycle network, particularly pronounced in western parts of the LGA	Prepare connected and integrated bike plan for whole LGA to connect with regional bike network
Bankstown CBD lacks cycling facilities and connections	Introduce links between Bankstown CBD and the regional bike network Review DCP to enforce minimum requirements for bicycle parking rates and end of trip facilities in the private domains and for new developments
Inadequate bicycle parking	Provide more bicycle parking
Major roads are key road corridors not suitable for cycling due to a combination of limited road corridor width, high traffic volumes, existing bus corridors and high parking demand	Identify secondary road network for suitable cycle routes
Shared paths in green spaces/ parks have conflict potential due to narrowness	Widen shared paths or separate pedestrian and cycling spaces.
Lack of dedicated cycle facilities in the LGA	Potential to introduce dedicated cycle facilities in the LGA
Lack of connections of key centres	Connecting key centres in the Canterbury Bankstown LGA by cycling.
Key intersections have no bike crossing facilities	Install bike lanterns at key intersections
Canterbury Road, M5 and other major roads acts as significant barriers	Investigate additional cycle crossings of major roads
Limited wayfinding and network publication	Create an overall network that links into neighbouring LGAs and is clearly displayed across the LGA including wayfinding and signage

5.1.3. Bus

Table 5.3: Issues and opportunities related to bus network across Canterbury Bankstown LGA

Issue	Opportunity
Limited high frequency bus routes, which are prone to delays and unreliability in peak periods in the south-west of the LGA	<ul style="list-style-type: none"> Potential reprioritisation of travel modes such as extending the hours of the bus lane or clearway Rapid/high frequent bus service from Bankstown Airport, Condell Park/Georges Hall to Bankstown and Bankstown to Chullora
Limited high frequency bus routes, which are prone to delays and unreliability in off peak-hour all around the LGA	Potential stop relocation or extending no-stopping zones at intersections. and rationalising the bus network through Bankstown City Centre.

Issue	Opportunity
Limited high frequency bus network outside of the Bankstown CBD, particularly pronounced in eastern parts of the LGA	Potential for increasing bus service frequencies outside of Bankstown
Lack of direct and frequent connections to key centres outside the LGA such as Parramatta, Liverpool and Hurstville/Kogarah.	Potential metro line extension from <ul style="list-style-type: none"> • Bankstown to Liverpool • Parramatta to Bankstown to Hurstville/Kogarah Rapid Bus Link • Longer term opportunity for a Parramatta to Kogarah Mass Transit Link
Lack of connections between strategic and local centres	<ul style="list-style-type: none"> • Better connecting centres by higher frequency public transport • Investigate providing an interchange at Campsie
A large number of bus services in the east-north of the LGA provide local and regional connectivity generally in the north-south direction including train stations along the T2 Airport Line and T3 Bankstown Line.	The T3 Bankstown Line provides an east-west train service between Liverpool and the Sydney CBD with an uplift in patronage expected with conversion to the Sydney Metro.
Unreliable timetable and delays for bus services in Bankstown CBD	Potential for additional dedicated bus lanes and rationalising of the bus network through Bankstown City Centre.

5.1.4. Rail

Table 5.4: Issues and opportunities related to rail network & services across Canterbury Bankstown LGA

Issue	Opportunity
Lack of north-south rail connections	Investigate north-south mass transit connections, in particular to Parramatta and Kogarah
Lack of fast connection to Sydney CBD and Liverpool CBD	The T3 Bankstown Line provides an east-west train service between Bankstown and the Sydney CBD. An uplift in patronage is expected with conversion to Sydney Metro and an extension of the Metro to Liverpool.

5.1.5. Road

Table 5.5: Issues and opportunities related to road network across Canterbury Bankstown LGA

Issue	Opportunity
High traffic volumes along key regional roads	Investigate smart signalised intersections and the use of clearway-like parking restrictions to increase road capacity within the existing road corridor
High traffic volumes through local centres	Review wayfinding to redirect/ minimise through traffic out of local centres
High speed limit along major roads	Investigate reducing speed limits on certain roads and within local centres
Canterbury Road currently experiences significant levels of traffic congestion (particularly during peak morning and evening periods), leading to longer travel times along the corridor.	Reducing the number of right turn bays from Canterbury Road into side streets to reduce delays and improve the overall flow of traffic Increasing the 'place' function on some road corridors (including Canterbury Road and the Hume Highway)

Issue	Opportunity
Most of the intersections on Canterbury Road operate with a poor level of service in peak hours.	Review traffic signal operations at key intersections
Roads located adjacent to Canterbury Hospital are at or near capacity.	Investigate high frequent bus services to the hospital Identify the parking restriction along the roads
High crash history records around local centres and major corridors	Investigate high risk locations for safety improvements
Henry Lawson Drive is identified as a significant road barrier with a lack of pedestrian crossings.	Investigate mid-block signalised pedestrian crossing within the standard intervals

5.1.6. Freight

Table 5.6: Issues and opportunities related to freight across Canterbury Bankstown LGA

Issue	Opportunity
Heavy vehicle traffic along key roads and through local centres servicing industrial areas	Review B-Double routes throughout the LGA Investigate options to attract more heavy vehicles onto M5 Motorway
There are industrial and commercial land uses within the LGA that needs wider road for heavy to medium freight performance	Potential for investigate on a centralised freight hub/delivery point within Canterbury Bankstown and/or with neighbouring LGAs to reduce heavy vehicle traffic in local streets.

5.1.7. Parking

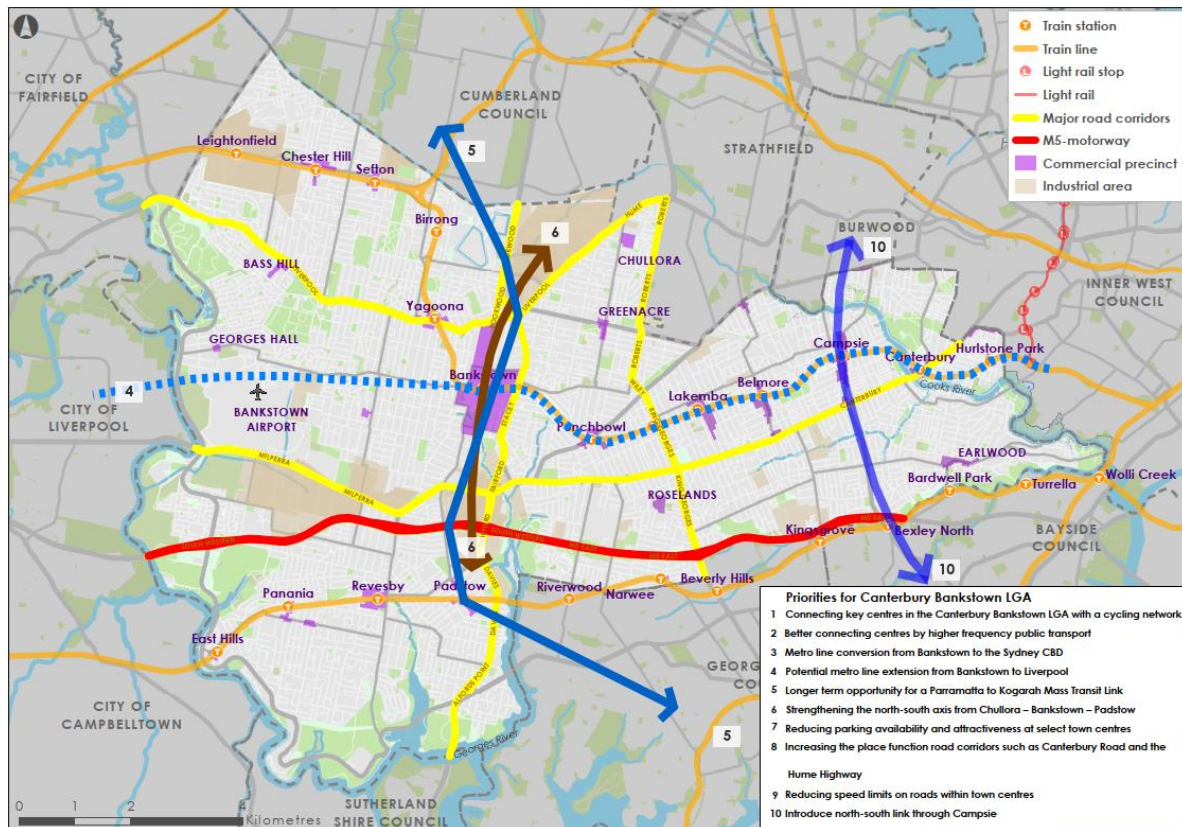
Table 5.7: Issues and opportunities related to parking across Canterbury Bankstown LGA

Issue	Opportunity
Car parking free and readily available in many town centres, attracting long stay commuter parking.	Reduce unrestricted parking provision in town centres and manage the potential overspill into residential areas Use Smart Parking technology to use existing parking spaces more efficiently
On-street car parking reduces the capacity of main roads and performance of key intersections	Investigate extension of clearway-like parking restrictions Introduce more 'no parking' restrictions on the approach to intersections.
Current car parking rate requirements for development are high but do not consider location of development in relation to public transport.	Opportunity for review of car parking rates within DCP for redevelopments based on proximity to public transport (e.g. train stations).
No car sharing available in Canterbury Bankstown. Car sharing could reduce the overall need for car parking.	Consider car sharing and dedicated car sharing parking spaces.

5.2. Summary of Priorities

A summary of priorities is presented below.

Figure 5.1: Preliminary Canterbury Bankstown Local Movement Strategy Priorities



6. FUTURE DEMOGRAPHIC AND TRAVEL PATTERN CHANGES

06

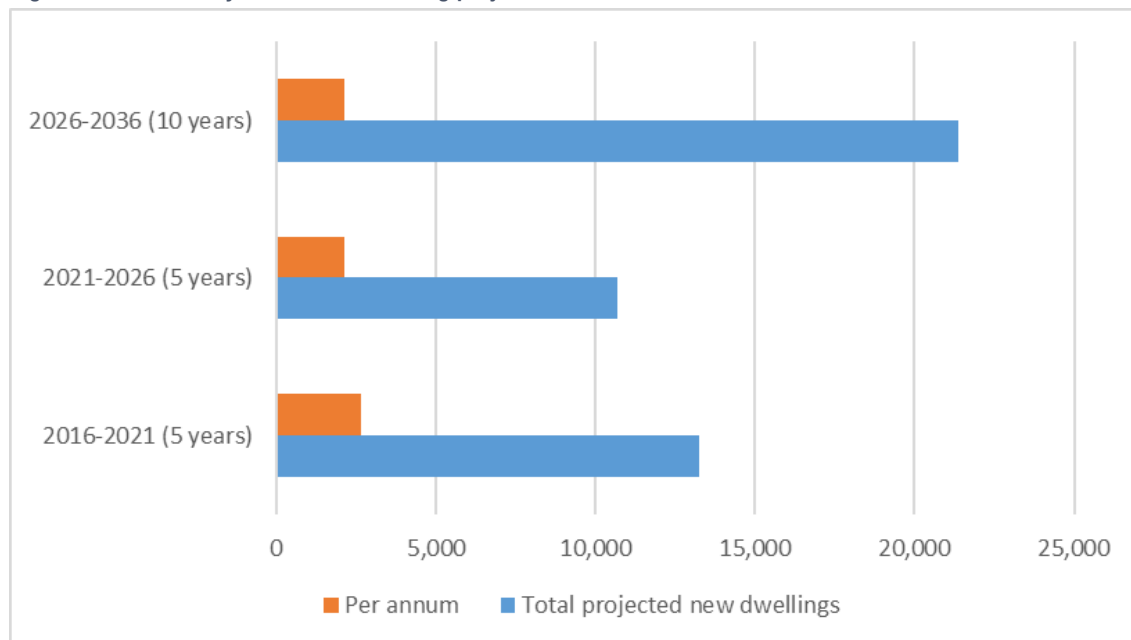
6.1. Future Dwelling and Employment

Current and forecasted population and employment have been provided for the LGA based on Travel Zones in 2026 and 2036 earlier in this report. The dwelling and employment forecast has been carried out by HillPDA Consulting and is summarised in the Summary Housing Strategy Report and Summary Employment Lands Study, both also informing documents of the LSPS.

Canterbury-Bankstown is expected to contribute approximately 50,000 new dwellings by 2036 to align more closely with the South District Plan and create flexibility for additional take up. The city will focus new housing in established centres, in order to protect and enhance high amenity, low density suburban areas, offer more housing choice close to public transport and encourage vibrant centres across our City.

In summary, the memo outlines an overall increase in dwellings of approximately 50,000 for the whole LGA by 2036 as shown in Figure 6.1.

Figure 6.1: Canterbury Bankstown dwelling projections



Source: HillPDA (2019).

6.1.1. Employment Projections

The employment lands study by HillPDA Consulting outlines employment projections by location and job industry. Overall, a significant increase in jobs is expected across the LGA. The largest increases are projected for commercial/ office jobs in the Bankstown CBD and Campsie, expected to grow to 25,000 jobs and 7,500 jobs respectively. For detailed information, please refer to HillPDA Consulting Employment Lands Study Summary Report.

7. FUTURE TRANSPORT AND LAND USE CHANGES

07

7.1. Committed and Planned Transport Projects

The list of committed and future key projects within and around the study area is provided below. It can be seen that, aside from the Sydney Metro conversion of the Bankstown Line, the majority of the committed projects relate to road improvements. However, the majority of the planned projects relate to public transport improvements.

Table 7.1: Committed key transport projects

Project	Proponent	Description	Timing
M5 Upgrade	Transport for NSW	Duplicating the M5 East from King Georges Road Interchange Upgrade at Beverly Hills to a new interchange at St Peters.	2020
Intersection improvements on Stacey Street and Fairford Road, Bankstown	RMS	Roads and Maritime is investing approximately \$30 million to upgrade Stacey Street and Fairford Road in Bankstown. The improvements will add additional lanes in both directions as well as provide improvements to two key intersections. These upgrades will improve traffic flow and journey reliability to better connect motorists to southern Sydney, the Sydney CBD and Sydney's west. When work is complete people will spend less time in traffic and more time with their family and friends.	2020
Sydney Metro City and South West	Sydney Metro	Sydney Metro City and South West will upgrade the T3 Bankstown Line between Sydenham and Bankstown, including making all 11 stations fully accessible with lifts, for the first time at Punchbowl, Wiley Park, Canterbury, Hurlstone Park and Dulwich Hill. The project also includes upgrades to tracks, stations and signals, and opportunities for station improvements like a new public plaza at Campsie and a new concourse across Dulwich Hill Station connecting metro and light rail. Sydney Metro trains will operate every four minutes in the peak in each direction. This project is being supported by an active transport strategy to access all the stations.	2024
Bankstown Complete Streets	Council	The Bankstown Complete Streets Project developed a holistic approach for the streets in the Bankstown CBD, bringing together traffic planning and public space planning in order to provide better and more integrated outcomes for the City.	Prior to 2026
Intersection improvements on Canterbury Road and King Georges Road, Wiley Park	RMS	The NSW Government is funding this work as part of its \$300 million Urban Roads Pinch Point Program, which aims to reduce congestion and improve travel times on Sydney's busiest corridors. The proposed improvements include widening Canterbury Road on both the eastern and western approaches to provide additional right turn lanes to King Georges Road.	Prior to 2026

Table 7.2: Planned future transport projects

Project	Proponent	Description	Timing
Parramatta to Bankstown and Hurstville/ Kogarah rapid bus link	Transport for NSW	New rapid bus link from Parramatta to Bankstown and Hurstville/ Kogarah	2026 to 2036
Parramatta Light Rail extension	Transport for NSW	Potential extensions of Parramatta Light Rail to be considered. Improve the vibrancy and liveability of suburbs in and around Greater Parramatta by supporting the renewal of these areas with a high-quality on-street public transport mode.	2026 to 2036
Bankstown to Liverpool Metro Extension	Sydney Metro	Passenger rail link north of the M5 between Bankstown and Liverpool	Prior to 2036
Parramatta to Kogarah mass transit/train link	Sydney Metro	A mass transit/train link from Greater Parramatta to Kogarah via Bankstown.	Prior to 2036
Central City strategic road corridor (NorthConnex to Southern Sydney)	Transport for NSW	A future strategic road corridor linking NorthConnex near the M2 with Greater Parramatta and the F6 in southern Sydney.	Post 2036
Train/ mass transit link Macquarie Park to Hurstville via Rhodes	Sydney Metro/ Transport for NSW	A potential mass transit/train link from Hurstville (or Kogarah) to Burwood and Strathfield and then potentially on to Rhodes and Macquarie Park.	Post 2036

7.2. Land Use Changes

Over the coming 20 years, Bankstown is planned to host the highest number of jobs within the South District and Canterbury and Campsie would be the main employment hubs. These new jobs will be located within the close proximity of high frequency public transport and major land uses to facilitate access to shopping and other services.

7.2.1. Committed Changes

The two committed key land use changes are:

- **Western Sydney University campus in Bankstown CBD:** new jobs and educational opportunities within the heart of the community accommodating up to 7,000 students
- **Bankstown Health and Education precinct:** A health and education precinct will emerge from the co-location of health and education facilities in the centre, as well as improved transport connections from Sydney Metro City & Southwest.

7.2.2. Potential Changes

Other potential key land use changes in the LGA include:

- **Bankstown City Centre:** will be the economic heart of the City, with 25,000 jobs and 25,000 students by 2036
- **Bankstown Aviation and Technology Hub:** to create a true aviation and technology hub
- **Chapel Road Corridor:** linking the City Centre north to Chullora and south to Padstow will be the heart of the health and education precinct, with a TAFE Campus and a Western Sydney University campus
- **Bankstown-Lidcombe Hospital will be redeveloped:** to deliver comprehensive healthcare for south-western Sydney
- **Campsie and the Eastern Lifestyle Precinct:** supported by an economic spine from Kingsgrove to Campsie via the Canterbury Hospital
- **Chullora Business Park:** a significant increase in the range of services to attract high profile businesses
- **Standalone shopping centres at Chullora Marketplace and Roselands:** to facilitate private sector growth
- **A network of village centres including** Bass Hill, Belmore, Canterbury, Yagoona, Punchbowl, Padstow, Panania, Revesby, Lakemba, Greenacre, Earlwood, Chester Hill, Wiley Park and Clemton Park; as well as **small centres including** Bankstown Aerodrome, Georges Hall, Sefton, Milperra, East Hills, Picnic Point, Revesby Heights, Padstow Heights, Birrong, Riverwood, Narwee, Beverly Hills, Kingsgrove, Hurlstone Park, Ashbury, Croydon Park, Belfield and Condell Park.

7.2.3. Housing for Employment Growth

Maintaining and adding to the mix of housing in and around centres is essential to the long-term economic life of centres and offers opportunities for renewal and reinvestment in public spaces, and local infrastructure. This mix should include:

- Key worker housing close to Bankstown and Campsie to support the health, education and employment functions of these centres.
- Executive housing close to Chullora, Bankstown, Campsie to support growth in knowledge-intensive employment.
- Student housing in Bankstown City Centre to support the growing higher education roles of Bankstown and Bankstown Aviation and Technology Hub.
- Visitor and tourist accommodation to support the employment precincts, hospitals, arts and cultural sectors and visitation to the local area.

8. FUTURE TRANSPORT TRENDS

08

8.1. Emerging Transport Trends

8.1.1. Overview

New transport technologies such as autonomous vehicles (AVs), new micromobility devices and drones are developing rapidly and have the potential to transform our cities and lives in the decades to come. Being informed about these trends could assist decision makers to prepare for upcoming rapid changes in the transport and built environments. In addition, analysing the possible trends could help to take advantage of the positive impacts and mitigate any adverse effects from the new technologies.

Given this context, GTA has been tasked with providing an analysis of the emerging transport trends for Canterbury Bankstown LGA. To assist with this analysis, GTA uses its internal assessment tool which has been developed based on the *Future Transport Technology Road Map 2016*, which is the state government road map for emerging transport trends. This section provides a brief review of the road map and the result of GTA tool analysis for the Canterbury Bankstown LGA. At the end of the section, possible emerging trends, the preliminary outcomes and required actions for the LGA will be introduced.

8.1.2. Introduction

Initial research indicates that the evolution of transport technologies will likely generate a broad spectrum of human responses. Transport for NSW has developed four different scenarios, which are not mutually exclusive. Rather, they represent 'use-cases' that are likely to co-exist. While these scenarios are the most likely to eventuate, others cannot be ruled out. It also remains unclear which, if any, scenario will become the dominant paradigm for future mobility. Consequently, strategies are needed that accommodate this end-state uncertainty and enable multiple potential outcomes.

Scenario 1: My (autonomous) car is (still) king: Individual point-to-point trips in personally owned units

- Customers have access to more personal point to point transport options using connected and automated vehicles that are increasingly customised to their needs (e.g. cars, pods).

Scenario 2: We're all in this together: Aggregated demand, shared-use and network optimisation

- Customers access a broad range of automated (shared and personal) on-demand and mass transport modes with dynamic demand management and integrated payments.

Scenario 3: Super-commuting with public, active and shared transport: A lifestyle based on mass transit, flexible and active transport

- Customers use an extended public transport, active and flexible shared-service network. Autonomous vehicles are for specific high productivity uses only.

Scenario 4: Why travel so much: Technology reduces demand for mobility

- Customers choose where they wish to work, shop, learn, socialise and be entertained. Technology enables travel to be minimised as services are 'delivered' in or near the home.

Transport for NSW Scenario Summaries

Scenario 1: My (autonomous) car is (still) king

In this scenario, most Australians retain a strong attachment to their own cars. Driving continues to offer maximum flexibility and convenience, and the level of vehicle ownership is maintained or increases as fully-automated vehicle technology in electric-powered vehicles becomes affordable and attainable. Strong competition dramatically lowers their costs, aided by new business models that allow people to offset purchase costs by making their vehicle available when not in use. As a substitute for cars, some customers embrace point-to-point options such as powered bikes.

Scenario 2: We're all in this together

In this scenario, technology disrupts the model of individual vehicle ownership with a strong shift towards shared mobility-on-demand services, combined with autonomous vehicle technologies. Customers access a mix of different transport options including cars, mass transit and personal mobility devices such as powered bikes and pods, depending on cost, convenience and their particular needs and preference. In urban areas, public transport remains the backbone, though people increasingly use shared car fleet services for short first- and last-mile trips to and from transport hubs, substantially reducing the demand for feeder bus services. Meanwhile, in rural and regional areas, more flexible mobility options gradually replace fixed route bus services, providing a more personalised service.

Scenario 3: Super-commuting with public, active and shared transport

In this scenario, both in cities and regional centres, dramatic improvements are made in public transport coverage, efficiency and service provision, with sustained levels of superior customer experience, all delivered through a wave of next-generation technology investments.

The public transport network is underpinned by data and analytics to the point where daily dynamic timetabling is possible, with adjustments made to accommodate real-time fluctuations in demand caused by weather and events. This flexibility allows operators to create additional capacity to respond to demand. In addition, services run more frequently and reliably due to the investment in connected and automated technology across the mass transit fleet, including heavy rail, light rail, metro and bus services.

Scenario 4: Why travel so much

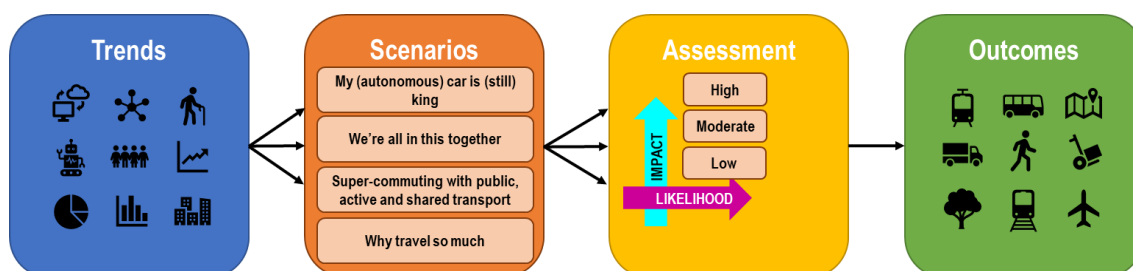
The final scenario is based on a society where personalised services delivered door-to-door have improved dramatically and become significantly more affordable, reducing the need for people to travel as much in the first place. The spread of cloud computing and digital presence technologies has given people more flexibility than ever to choose where they work, learn and play.

8.1.3. Assessment Approach

Technology has an ever-growing pace in developing tools which are shaping future of transport and mobility. Local governments might prepare to address emerging demands and use this opportunity to increase life quality of the communities within the suburbs. In this respect, GTA has innovated a decision-making support tool. This tool includes a list of future trends in transport and mobility. The trend list was prioritised according to the Canterbury-Bankstown LGA context and with considering all stakeholder meetings and workshops.

In addition, GTA considered Transport for NSW's "Future Transport Technology Road Map 2016" as a road map and categorise all assessment process based on the four scenarios which are most probable about emerging technologies in NSW. Then based on the scenarios preliminary outcomes developed to address the scenarios by proposing strategies and action plans for future public and active transports and freight.

Figure 8.1: GTA Assessment tool for future trends



8.1.4. Preliminary Assessment of TfNSW Scenarios

An assessment of the scenarios based on the trends has been undertaken with a potential future scenario included for Canterbury Bankstown. The below table compares a future 2036 Canterbury Bankstown scenario to the other four TfNSW scenarios. The high, moderate and low classifications used below show the possibility of the characteristic materialising in general in urban parts of NSW and in the LGA (last column) with consideration of the LGA's context and future plans.

Table 8.1: GTA preliminary assessment of Transport for NSW scenarios

Key Characteristic	Scenario 1: My (autonomous) car is (still) king	Scenario 2: We're all in this together	Scenario 3: Super-commuting with public, active and shared transport	Scenario 4: Why travel so much	Canterbury Bankstown (2036)
Decentralised Development (across Sydney's three cities)	Low	Moderate	Low	High	High
Connected and Automated Vehicles (CAVs)	High	High	Moderate	High	Moderate
Intelligent Transport Systems (Smart Motorways)	High	High	High	High	High
Shared Mobility (Car sharing)	High	High	Low	High	High
On-demand transport (buses)	Low	High	High	Moderate	Moderate
Smart Parking Management	High	High	High	Low	Moderate
Mass Transit (New Metro Lines)	Low	Low	High	Moderate	High
Reclaiming public spaces	Low	High	High	High	High
Road Pricing	High	High	Low	High	Moderate
Improvement of urban freight logistics	High	High	High	High	High
Automated drones/deliveries	High	High	Low	High	Moderate
Electric vehicles	High	High	High	Moderate	High
Ageing Population	Moderate	Moderate	Moderate	Moderate	Moderate
TOD (development around major public transport nodes)	Low	Moderate	High	High	High
Flexible Work Arrangements and Tele-working	Low	High	Low	High	High

8.1.5. Preliminary Outcomes for Canterbury Bankstown

Table 8.2 shows the likelihood or possibility of each of the key characteristics materialising in the LGA, the impact of each characteristic and what outcomes may occur in the LGA as a result. The identified preliminary outcomes do not happen without intervention and there are aspects over which Council can play an active role in facilitating as part of this IAMS. There are also other actions identified that fall within other state agencies' responsibility.

Table 8.2: Preliminary Outcomes for Canterbury Bankstown

Key Characteristic	Possibility for Canterbury Bankstown (2036)	Preliminary Outcomes for Canterbury-Bankstown LGA	Potential Actions for Council or other agencies
Decentralised Development (across Sydney's three cities)	High	<ul style="list-style-type: none"> Increased travel demand to Parramatta, Liverpool and Hurstville Better accessibility to Bankstown and Campsie as city centre and town centre 	State Government to lead investigations, planning, design and construction of frequent and mass public transport infrastructure to improve travel accessibility and reliability to the three cities from Campsie and Bankstown
Connected and Automated Vehicles (CAVs)	Moderate	<ul style="list-style-type: none"> Low mix of CAVs / non-CAVs, some increase in discretionary trips, additional vehicle circulation Less available road space for vehicles 	Investigate driverless vehicle trials for Bankstown Airport with support from state government Investigate driverless vehicle trials for Bankstown Hospital with support from state government
Intelligent Transport Systems (Smart Motorways)	High	<ul style="list-style-type: none"> Increased throughput of motorways as attracting more car trips needs connected and smart infrastructure 	Roads and Maritime Services to investigate smart motorways for the M5 to manage traffic flows and improve road capacity and safety as well as deliver other important outcomes for road users such as better travel reliability and real-time traveller information for future
Shared Mobility (Car sharing)	High	<ul style="list-style-type: none"> More car sharing Fewer privately owned cars Later and lower take up of driver's licences 	Allow shared parking provision to offset minimum parking requirements in the DCP
On-demand transport (buses)	Moderate	<ul style="list-style-type: none"> Increases access to local services and centres especially, at uncovered bus services area 	Council to collaborate with TfNSW to investigate the feasibility of covering areas with less public transport access with on demand transport
Smart Parking Management	Moderate	<ul style="list-style-type: none"> Less need for off-street and on-street parking Better utilisation of car parks, reduction in vehicle circulation 	Reduce Council parking provision Reduce and remove minimum parking provision in the DCP
Mass Transit (High priority bus lanes and new metro lines)	High	<ul style="list-style-type: none"> Increased public transport capacity and bus, cycle and walking networks are re-orientated towards new stations Kerbside lanes used for higher priority use Reallocation of road space and kerbside parking restrictions Increase in bicycle use, reduction of car ownership 	State Government to lead investigations, planning, design and construction of frequent and mass public transport infrastructure to improve travel accessibility and reliability to the three cities from Campsie and Bankstown Council to support this work by reprioritising road space to higher occupancy vehicles
Reclaiming public spaces	High	<ul style="list-style-type: none"> More local trips by walking and cycling Increase in shorter, more local trips Opportunity for more outdoor spaces, cafes etc 	Redesigning more streets as slow movement streets and places in line with the Movement and Place framework Increase provision of active transport facilities

Key Characteristic	Possibility for Canterbury Bankstown (2036)	Preliminary Outcomes for Canterbury-Bankstown LGA	Potential Actions for Council or other agencies
Road Pricing	Moderate	<ul style="list-style-type: none"> Depending on the type of pricing, it could: <ul style="list-style-type: none"> ○ Increase use of non-toll roads ○ Decrease overall car usage 	State Government to investigate on road user charges concept or GPS-based road pricing for Greater Sydney to reduce vehicle travel demand in the future
Improvement of urban freight logistics	High	<ul style="list-style-type: none"> A slight shift of freight to off-peak periods Increase consolidation and reduce freight trips 	State Government to investigate management of urban freight logistic for Canterbury Bankstown LGA
Automated drones/deliveries	Moderate	<ul style="list-style-type: none"> Potentially small parcel delivery occurs by drone 	State Government to investigate the legal changes required to trial and implement the use of automated drones (e.g. by Bankstown Airport) for last mile delivery
Electric vehicles	High	<ul style="list-style-type: none"> More vehicle charging stations required (either private or public stations) Standards and legal infrastructure considerations during LEP and DCP reviews 	Increase electric vehicle charging stations at Council-owned facilities Review LEP and DCP to consider required infrastructure for electric vehicles
Ageing Population	Moderate	<ul style="list-style-type: none"> Investment on more accessible and walkable streets Increase short trips Increasing opportunity for on-demand trips 	Redesigning more streets as slow movement streets and places in line with the Movement and Place framework On-demand transport investigations by the State Government.
TOD (development around major public transport nodes)	High	<ul style="list-style-type: none"> Development concentrated around nodes reduces car dependence and overall car trips Network redundancy more prevalent Fewer requirements for parking 	Remove or reduce minimum parking requirements rate in areas in close proximity to public transport, in dense commercial centres and in medium to high density residential areas. Up-zone areas close to frequent public transport and dense commercial centres
Flexible Work Arrangements and Tele-working	High	<ul style="list-style-type: none"> Increase in non-work and non-peak hour trips Work from home, reduce commuting trips Modified working hours shift the peak over a longer period Increased access to local shops Possible decline in public transport patronage 	State Government to roll-out further variations in public transport fares by peak times as well as time-of-day pricing for road use.

8.2. Implications

8.2.1. Key Issues

Reduce car use

In Canterbury Bankstown, the road network is already congested along major corridors in peak periods and more car-based travel is not a desirable outcome. Whilst it is important to manage car ownership to ensure that Canterbury Bankstown is as sustainable, liveable and equitable as it can be, it is also important to not disconnect people by taking away their only or primary means of access. The ability to reduce the mode share for car trips is both related to managing demand and modifying travel behaviour.

Increase active transport use

The proportion of walking and cycling trips in Canterbury Bankstown is quite low, partly as a consequence of a lack of dedicated cycling facilities and major roads creating barriers for easy walking and cycling as well as lack of seamless bike plan for the whole LGA. The terrain, topography and safety also play a role in why people do not walk and cycle more. More dedicated and wider facilities will help support more walking and cycling in the area.

Mass Transit (Metro/ Rail)

The Sydenham to Bankstown rail line is being converted to a Metro line. There will be more job opportunities with faster, more frequent and direct access to key employment centres, including North Sydney, Chatswood, Macquarie Park and the north west, as well as better access to education, with fast, more frequent and direct connections.

Metro extensions and new lines are proposed in and through Canterbury Bankstown. Any new lines and stations should be able to support a number of key outcomes such as:

- Improved accessibility to one of the three cities or strategic centres.
- Customer benefits such as a reduction in travel times between key destinations and improved accessibility and frequency and reliability.
- Productivity drivers such as supporting existing and future growth areas, contribution to economic development and opportunity to facilitate employment growth.
- Support for urban renewal, future housing needs and the creation of safe and successful places.
- Transport service and infrastructure improvements to provide train crowding relief, improve sustainable travel choices and increase network efficiency.

Intermediate Transit (Bus/ On Demand Buses/ Light Rail)

Buses provide an intermediate service role within Canterbury Bankstown, both supporting the mass transit network and providing public transport accessibility to areas not served by mass transit.

Any new intermediate links, including buses, On Demand buses and light rail, should be based on:

- High frequency – high-frequency public transport services across the day with potential turn-up-and-go services.
- Capacity – these modes have medium to high capacity to meet demand with frequent stops along corridors.
- Land use – high frequency and high capacity services have the ability to support medium and high-density land use.

Increase local trips

It was also found that Canterbury Bankstown has a very low level of 'trip containment'; i.e. the proportion of residents working in the area. This means that the transport network must accommodate a high proportion of people leaving Canterbury Bankstown every day for work, adding additional pressure on the transport network. The creation of more employment opportunities within the LGA would encourage people to work locally and improve the level of self-containment which has been already planned for the LGA. To encourage more people to walk and cycle, the local conditions will need to be continually improved. When travelling locally to school, shops or public transport services, walking or cycling should be the first option that comes to mind.

9. 30 MINUTE TRANSPORT ACCESSIBILITY

09

9.1. Introduction

9.1.1. The 30-minute city

The vision for Greater Sydney is one where people can conveniently access jobs and services. This means people can reach their nearest metropolitan and strategic centres within 30 minutes, seven days a week by public transport. Crucial to this is improved public transport services and infrastructure to ensure people can move efficiently around the city.

The following three cities will be fully functioning cities connected by major transport & infrastructure projects by the year 2056 as shown in Figure 9.1:

- The Eastern Harbour City (focused around the Sydney CBD, North Sydney, Chatswood, Macquarie Park, Sydney Airport & Port Botany).
- The Central River City (focused around the Parramatta CBD, Sydney Olympic Park, Norwest, Rhodes & the Parramatta River).
- The Western Parklands City (focused around the Badgerys Creek Aerotropolis future development, Liverpool, Penrith and Campbelltown/Macarthur).

Figure 9.1 shows the vision for a metropolis of three cities and their connections in 2056. The Sydney CBD, Parramatta CBD and Liverpool are main cities that need to be accessible from the Canterbury-Bankstown LGA by public transport within 30-minutes.

This section summarises the current 30-minute accessibility of the main employment and population hubs and centres in Canterbury-Bankstown to and from the three cities and the Liverpool CBD.

Figure 9.1: Vision of a Metropolis of Three Cities



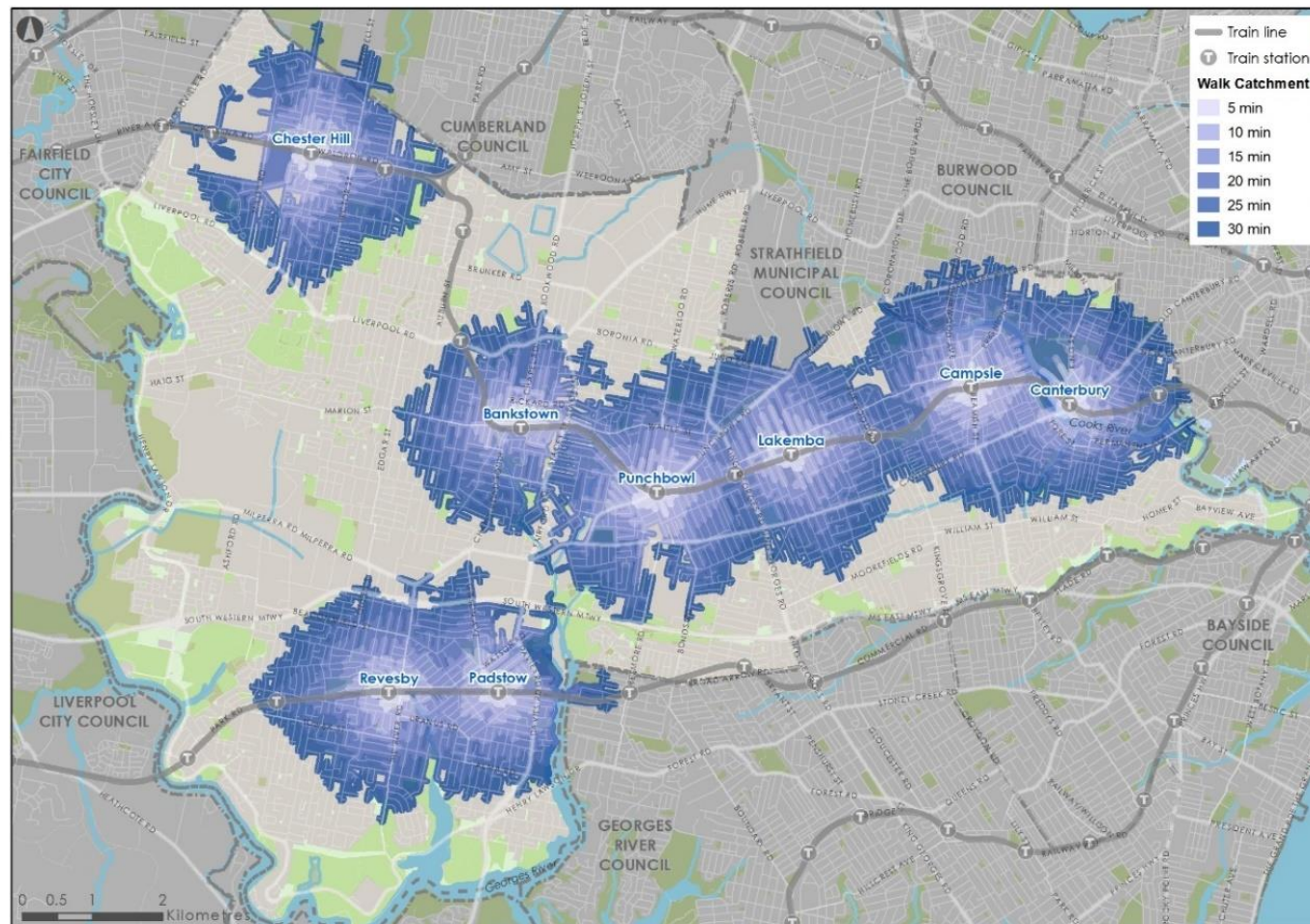
Source: A Metropolis of Three Cities, Greater Sydney Commission (2018).

9.2. Walking

Figure 9.2 shows 30 minute walking accessibility from the main eight centres including two strategic centres, Bankstown and Campsie and six main centres such as Canterbury, Lakemba, Punchbowl, and Chester Hill, Padstow and Revesby. It is shown that considerable parts of the study area, especially residential areas west of Bankstown, are not within a 30 minute walking catchment of a main centre.

30 MINUTE TRANSPORT ACCESSIBILITY

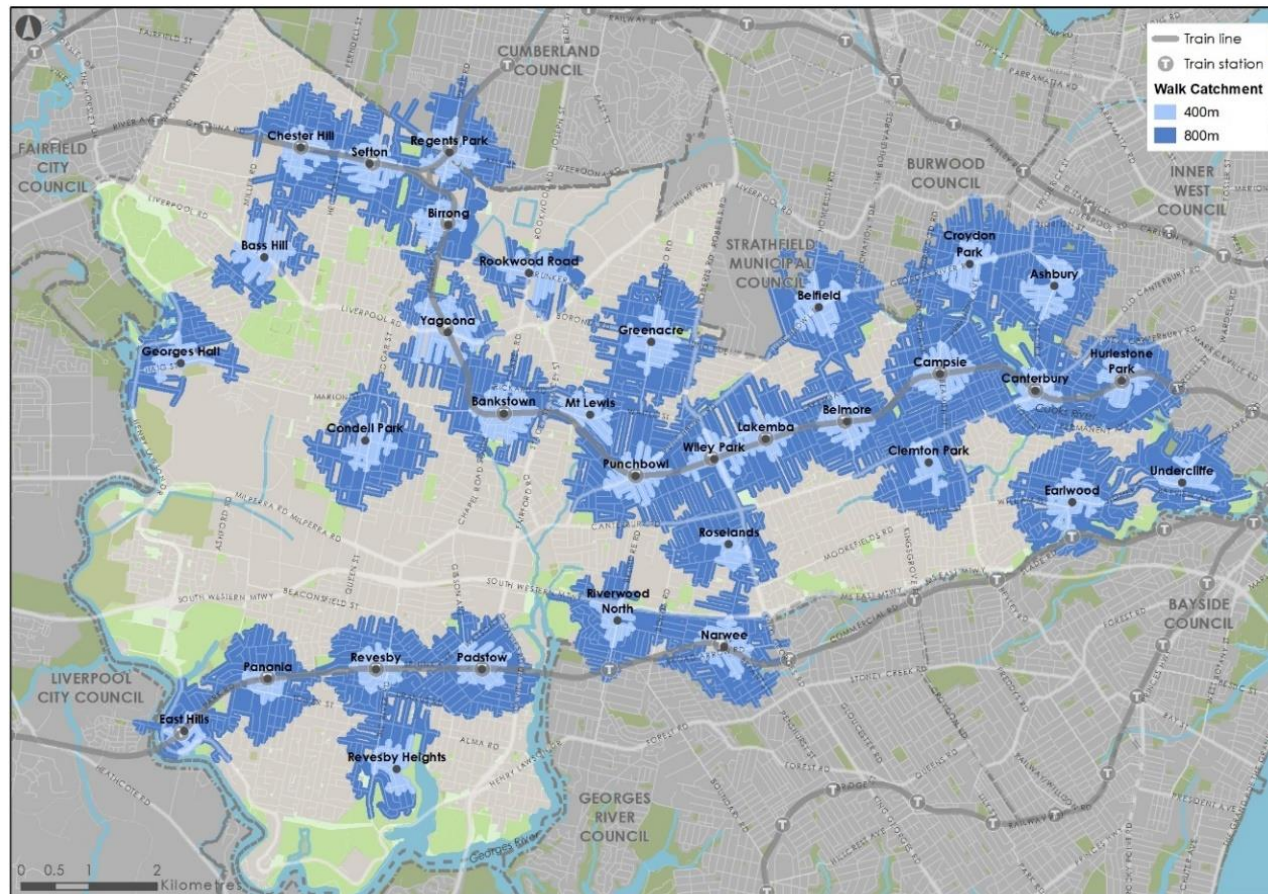
Figure 9.2: Current 30-minute walking catchment from eight main town Centres



30 MINUTE TRANSPORT ACCESSIBILITY

Figure 9.3 illustrates the 400m and 800m walking catchments from all centres in the LGA, including small town centres and neighbourhood centres. Overall, the LGA is well served for walking accessibility within 400m and 800m catchments, especially along the two train lines. However, large parts of the suburbs west of Bankstown are not within 800m of any centre.

Figure 9.3: 400m and 800m catchments from town centres

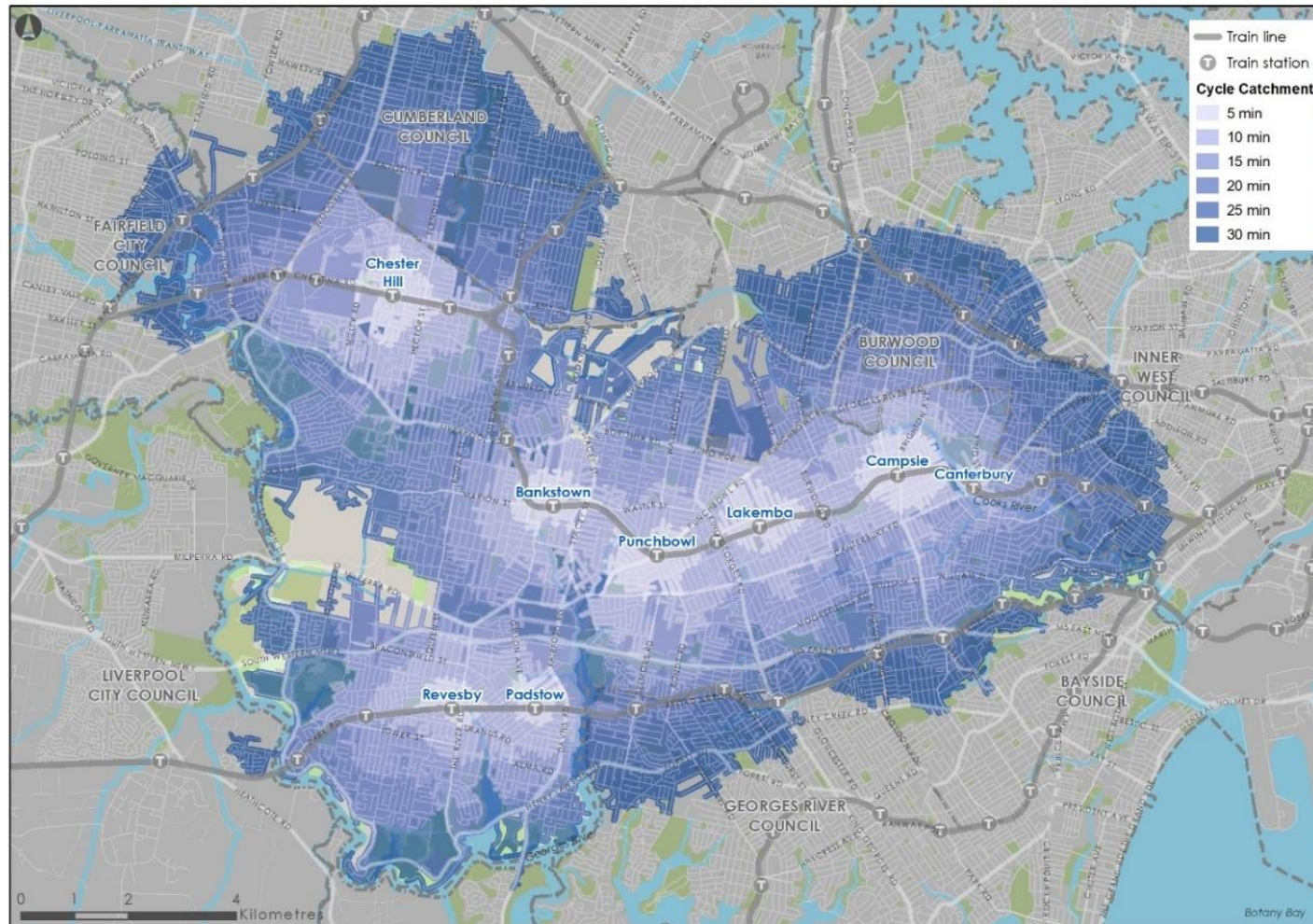


9.3. Cycling

The cycling catchment within the LGA is extensive, with almost all parts of the LGA accessible by bicycle within 30 minutes from all main centres. Figure 9.4 shows that parts neighbouring councils including Cumberland and Burwood Councils are also within the 30 minutes cycling catchments of the LGA's main centres which provide further opportunities for travel, retail and employment. For example, a 30 minute cycling from Chester Hill enables users to travel as far as Cumberland and Fairfield City.

30 MINUTE TRANSPORT ACCESSIBILITY

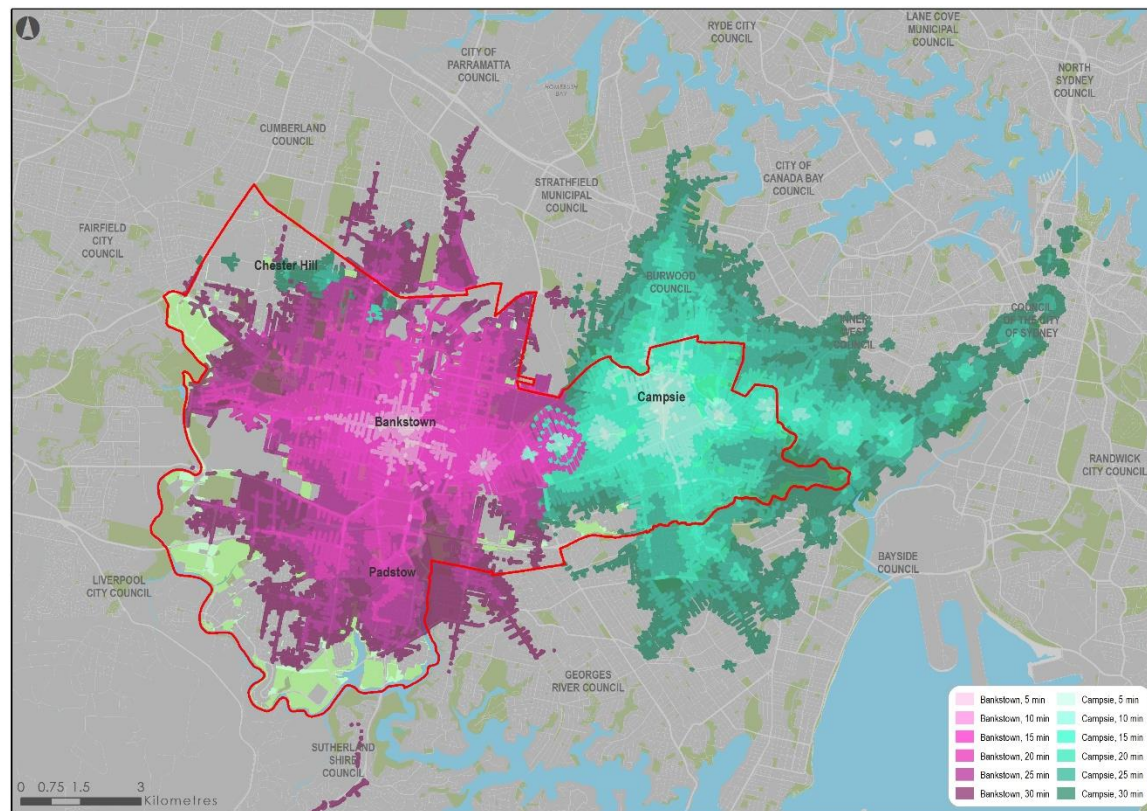
Figure 9.4: 30-minute cycling catchment from main centres



9.4. Public Transport Network

Figure 9.5 shows public transport accessibility from selected centres in Canterbury-Bankstown (including Chester Hill, Bankstown, Campsie and Padstow) within a spectrum of five to thirty minutes. It can be seen that only some of neighbouring LGAs like Inner West, Burwood, Bayside and Canada Bay are easily accessible. The neighbouring LGA of Liverpool and the Liverpool CBD, despite the geographic proximity, are not within a 30 minutes catchment of any suburb within Canterbury Bankstown, showing a major gap in the connectivity of the LGA.

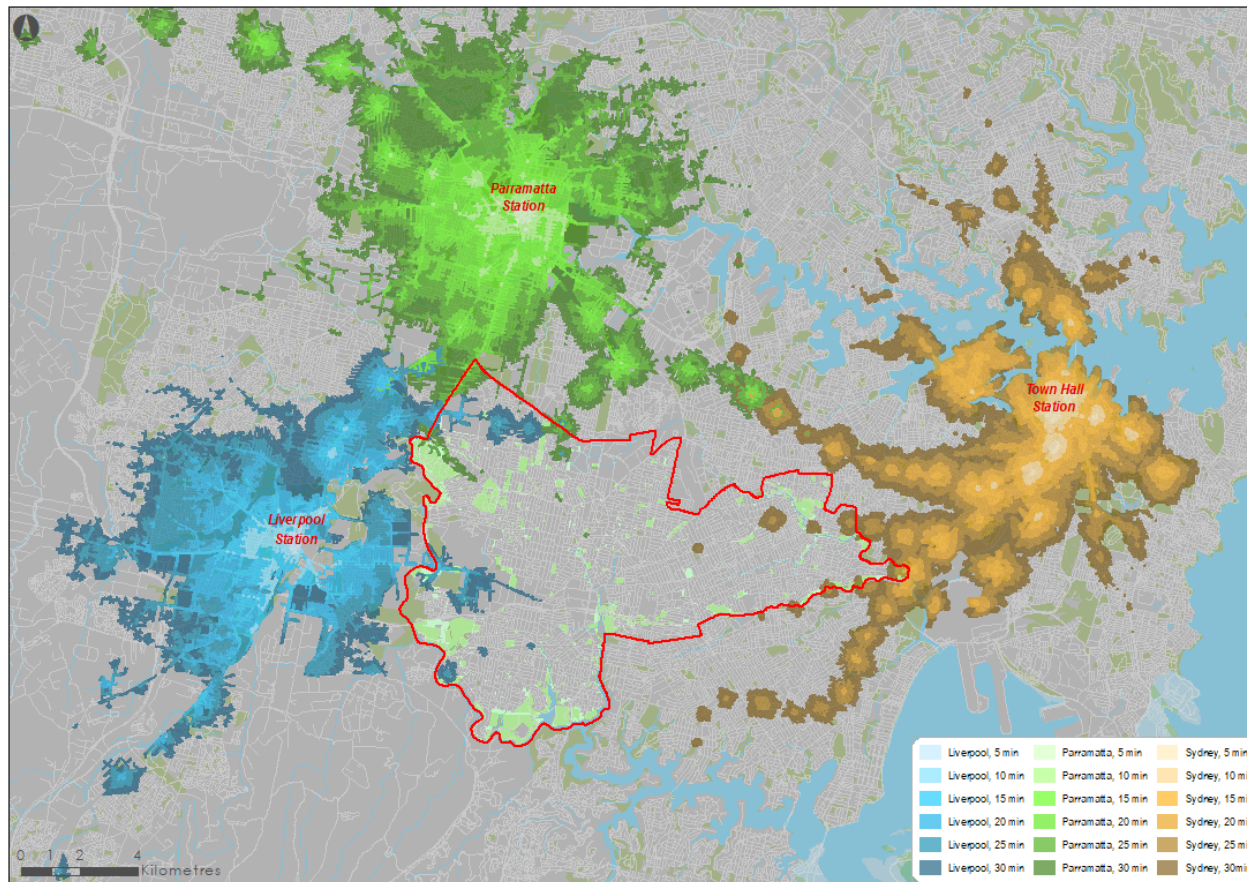
Figure 9.5: 30-minute public transport accessibility from Bankstown and Campsie



30 MINUTE TRANSPORT ACCESSIBILITY

Figure 9.6 shows lack of accessibility of the three major cities to Canterbury-Bankstown LGA by public transport. The Sydney CBD is the only major centre accessible from the Canterbury-Bankstown LGA, however, only from Campsie and suburbs east of Campsie.

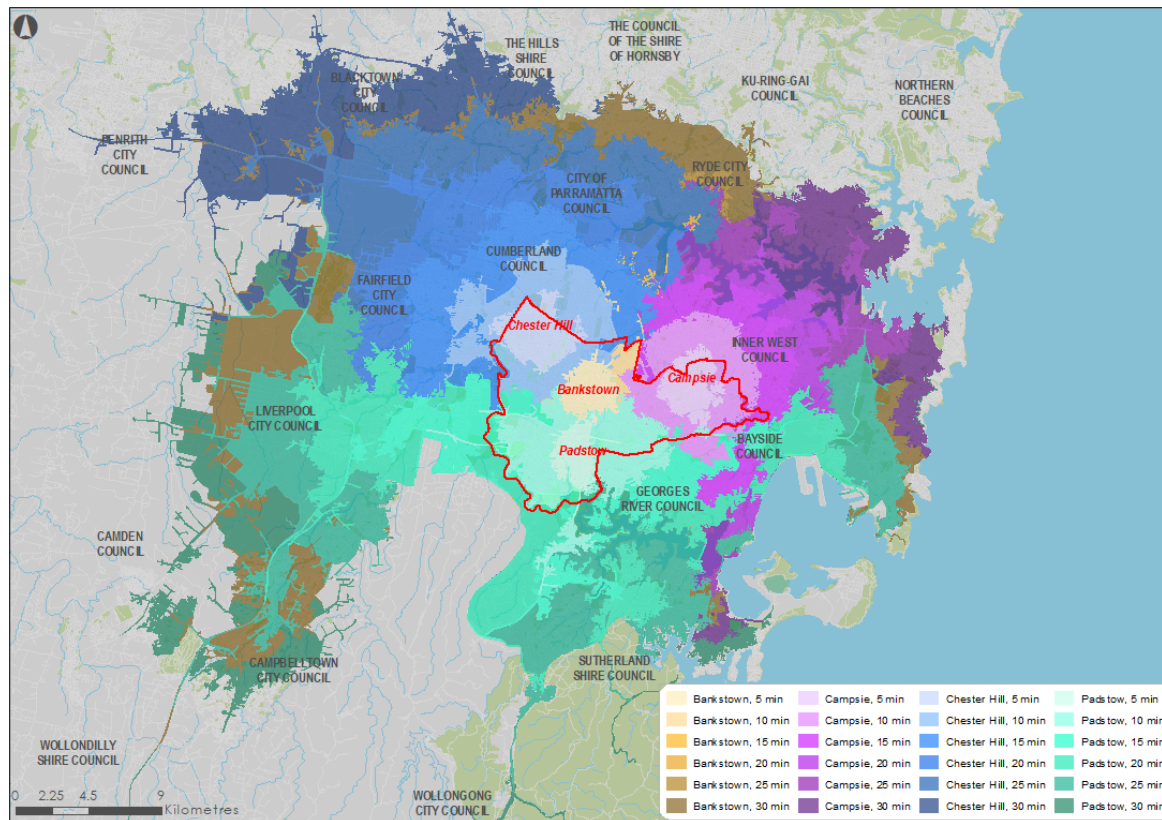
Figure 9.6: 30-minute public transport accessibility from the Three Cities



9.5. Driving

Figure 9.7 shows driving accessibility within 30 minutes from Chester Hill, Bankstown, Campsie and Padstow centres. It shows that the LGA is well accessible. The majority of the road network within the LGA provides good connections between all centres, largely within 15 minutes.

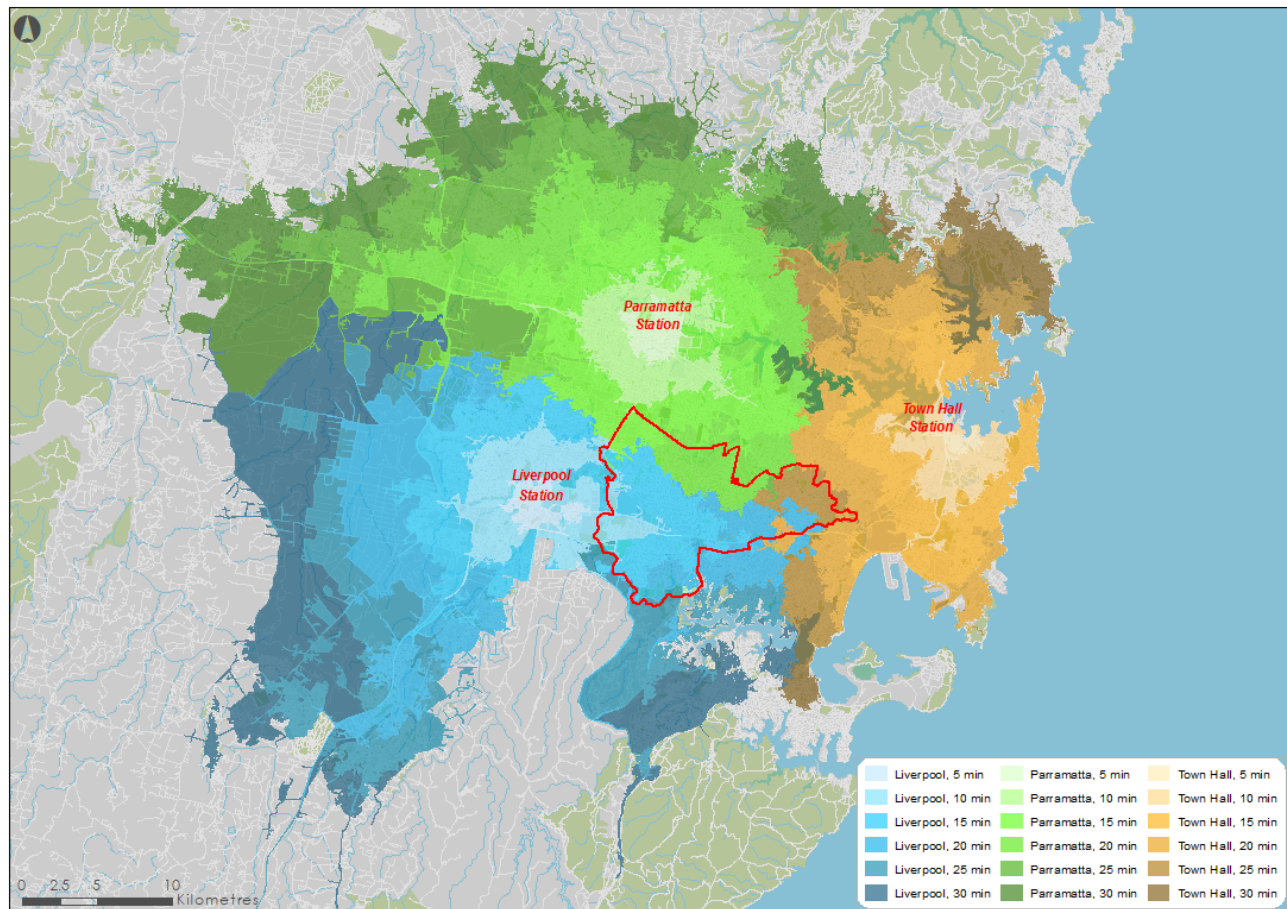
Figure 9.7: 30-minute driving accessibility from main centres



30 MINUTE TRANSPORT ACCESSIBILITY

Figure 9.8 illustrates 30 minutes driving catchments from the Sydney CBD, Paramatta CBD and Liverpool CBD. The map shows high accessibility to and from the Liverpool CBD which is in stark contrast to its accessibility by public transport. The Parramatta CBD is only accessible by car from the most northern suburbs of the LGA and the Sydney CBD from the eastern side of the LGA. Overall, the entire Canterbury-Bankstown LGA is within a 30 minute catchment of at least one of the three city centres.

Figure 9.8: 30-minute driving accessibility from three Cities



10.MOVEMENT AND PLACE

10

10.1. Overview of Movement and Place

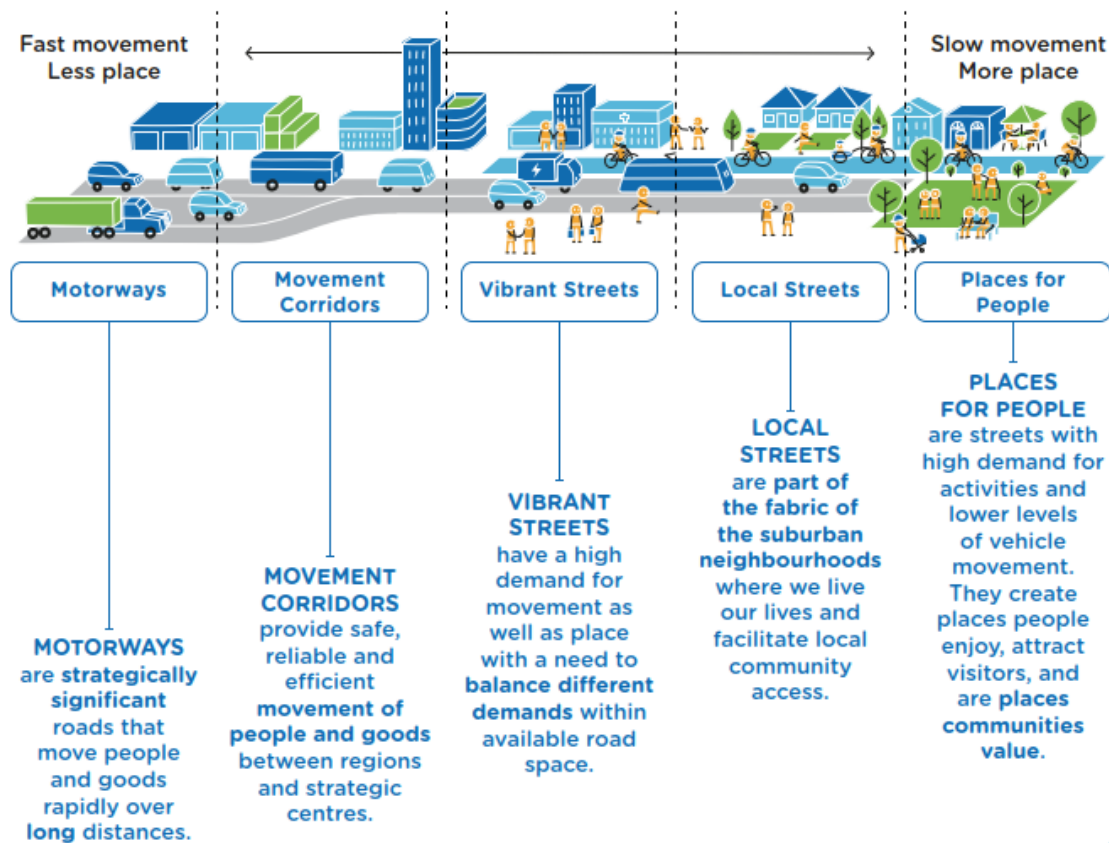
The Movement and Place Framework underpins the Future Transport Strategy 2056 and aims to allocate road space in a way that improves the liveability of places.

That is, it seeks to define streets and places that are geared for slow movement, pedestrian activity and the enjoyment of a place, and on the opposite end of the spectrum it defines roads and corridors that are designed for maximising the flow of vehicles and goods.

The framework defines the future function of the road network and can be applied to the Canterbury-Bankstown LGA based on the LGA's land use and transport objectives and desired outcomes.

Figure 10.1 describes the definitions of motorways, movement corridors, vibrant streets, local streets and place for people within the framework and each of these will be found in different parts of the LGA. The application of these principles to the LGA will need to be informed by the broader community for different street environments. Similarly, there is the need to prioritise different customer groups, depending on which street environment they are travelling in.

Figure 10.1: Movement and Place street type definitions



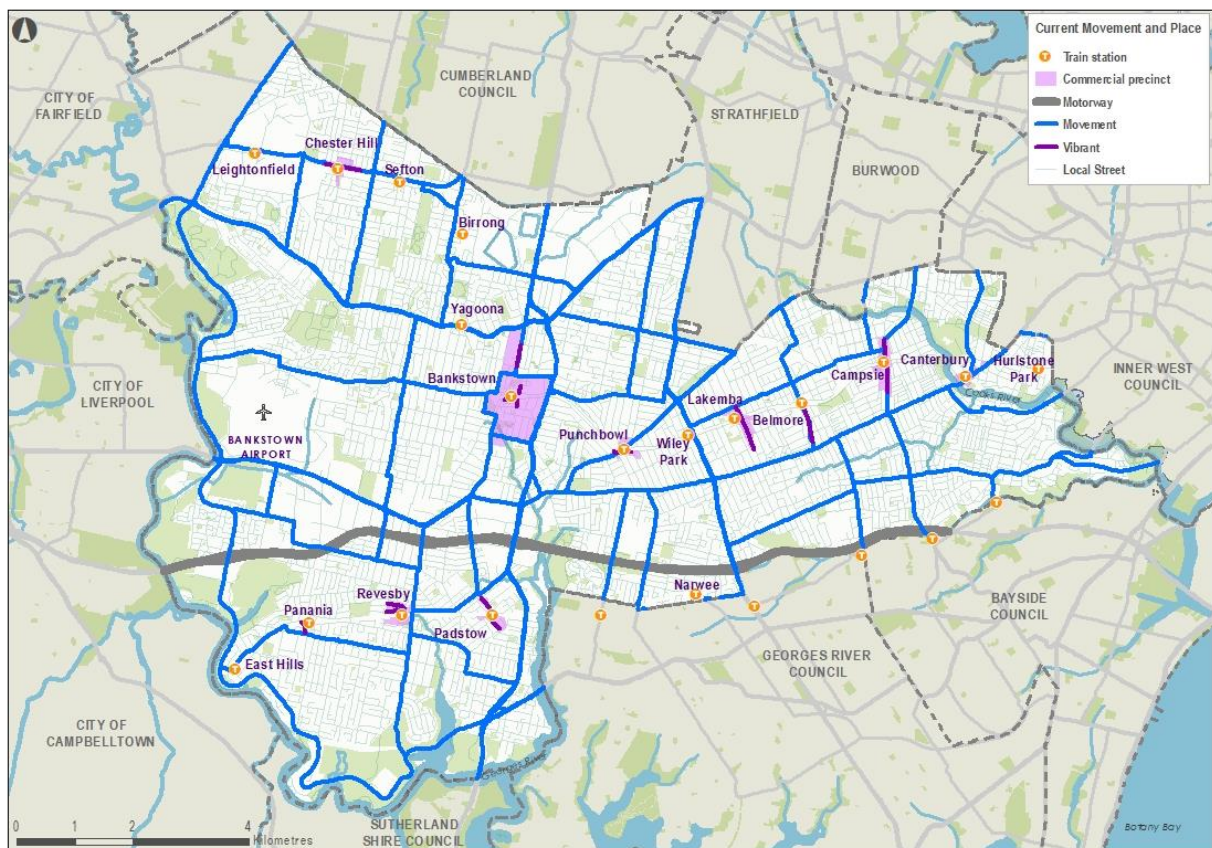
Source: Future Transport Strategy 2056, Transport for NSW (2018)

The framework allows to identify which types of functions should be prioritised in each area. The potential for conflict between movement and place is most challenging where both movement and place are seen as important (i.e. in the “Vibrant street” category) where a lateral approach to planning and a holistic definition of success is most important. Examples of this challenge within the LGA include where Canterbury Road travels through town centres such as Canterbury. It is worth noting that the framework and its associated guidelines and tools are still in development, with initial guidelines expected to be released by the end of 2019. Once finalised, the framework will assist LGAs in classifying and redesigning roads and streets for the different functions anticipated by the framework.

10.2. Current Movement and Place in Canterbury-Bankstown

Figure 10.2 illustrates an indicative current Movement and Place classification for the road network of the LGA. As the map indicates, street sections within and close to the key centres are classified as Vibrant Streets and most of the other state and regional roads categorised as Movement Streets/ Corridors.

Figure 10.2: Current movement and place road network



10.3. Future Classifications

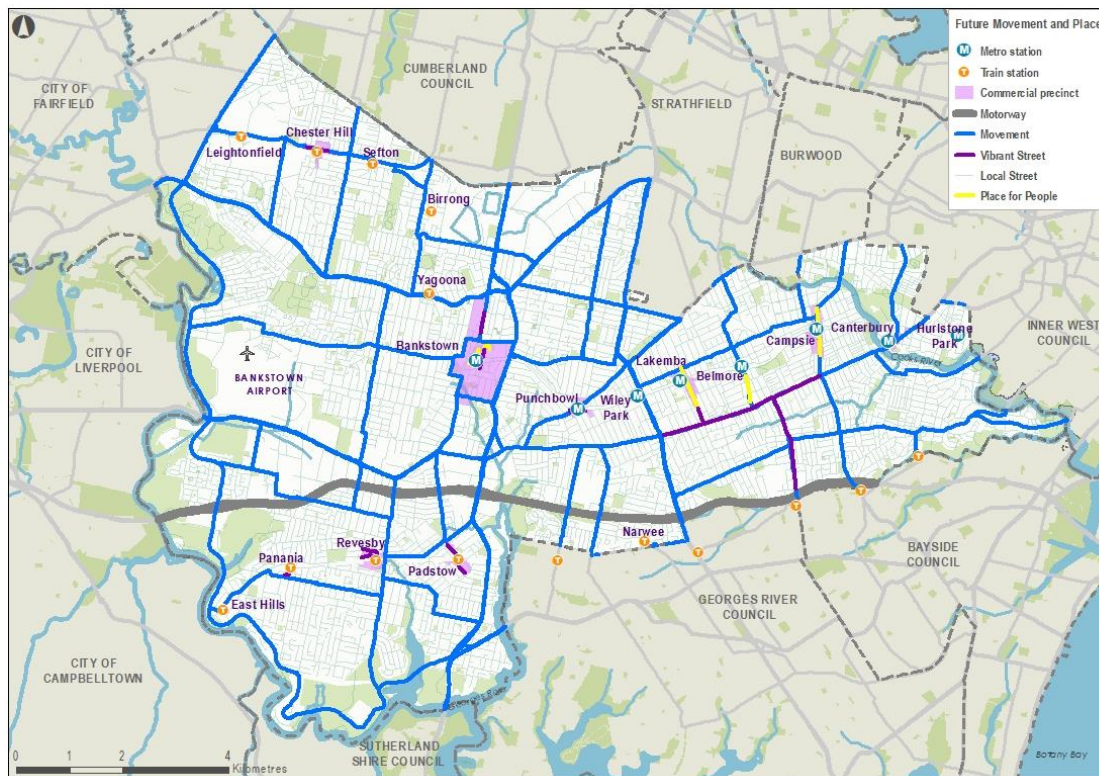
The Movement and Place framework encourages to transform streets within and around town centres into Places for People. Consequently, it is proposed to change roads in selected centres from a Vibrant Street to Place for People. In addition, some town centres are located along major road corridors, namely Canterbury Road and Kingsgrove Road. These centres are currently lacking amenity and pedestrian facilities. It is proposed to change selected sections along these roads from Movement Streets to Vibrant Streets, accompanied by infrastructural upgrades including pedestrian facilities and amenities. This will improve the overall attractiveness of these centres. Table 10.1 shows the proposed changes.

Table 10.1: Differences between current and proposed road network performance

Road	Suburb(s)	Current performance	Proposed performance
Haldon Street from Lakemba Street to Grace Avenue	Lakemba	Vibrant	Place
Burwood Road from Bridge Road to Wilson Avenue	Belmore	Vibrant	Place
Beamish Street from Brighton Avenue to Claremont Street	Campsie	Vibrant	Place
Canterbury Road from King Georges Road to Bexley Road	Wiley Park, Lakemba, Roselands, Belmore, Campsie	Movement	Vibrant
Kingsgrove Road from Canterbury Road to Homer Street	Kingsgrove	Movement	Vibrant
The Mall from the Appian Way and Jacobs Street	Bankstown	Local	Place
Bankstown City Plaza	Bankstown	Vibrant	Place
Fetherstone Street from North Terrace to The Mall	Bankstown	Local	Place

Figure 10.3 indicates the proposed movement and place classifications for Canterbury Bankstown in 2036. It can be seen that centres such as Bankstown, Campsie, Belmore and Lakemba have been classified as Places for People. Street sections of Punchbowl, Canterbury Road, Padstow, Revesby, Panania and Chester Hill have been classified as Vibrant Streets. This will be supported by a network of Local Streets.

Figure 10.3: Proposed movement and place road network



11. MODE SHARE

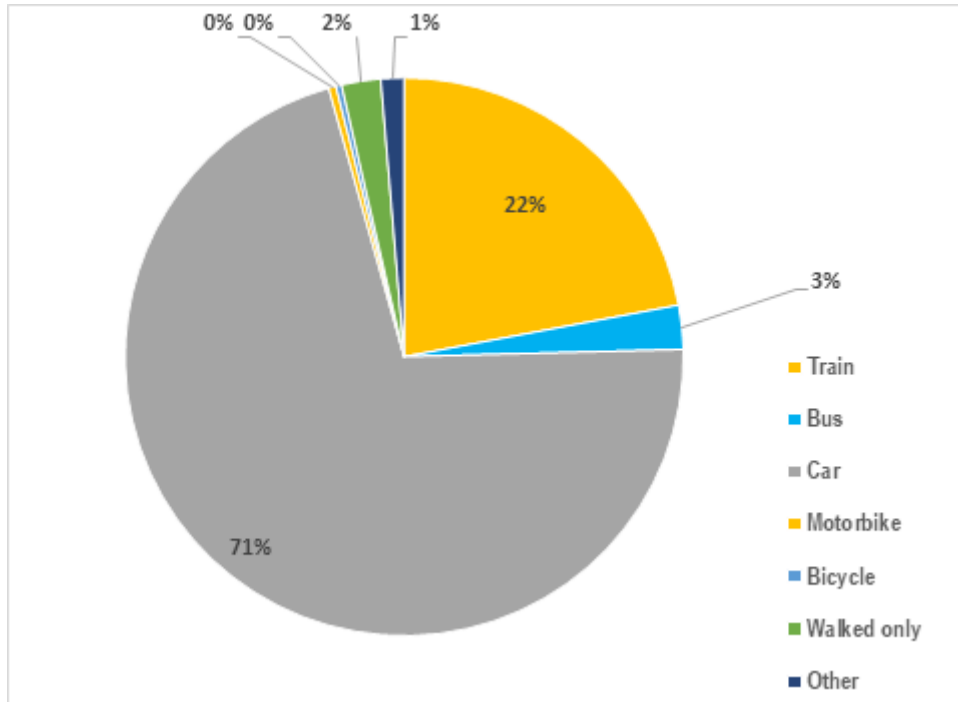
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11.1. Existing Mode Share

Figure 3.9 shows the Journey to Work (JTW) mode share for the Canterbury-Bankstown LGA in 2016. As evident in this figure, 71% of trips were undertaken by car (car – as driver/ car – as passenger/ taxi), 24% by public transport (train/bus) and 3% by active transport (walk/bicycle).

Of particular note is the low use of buses which was 3% and cycling which was less than 1%. As a note, these numbers refer to commuter trips only and as such the mode share may differ for other trip purposes, e.g. social or recreational.

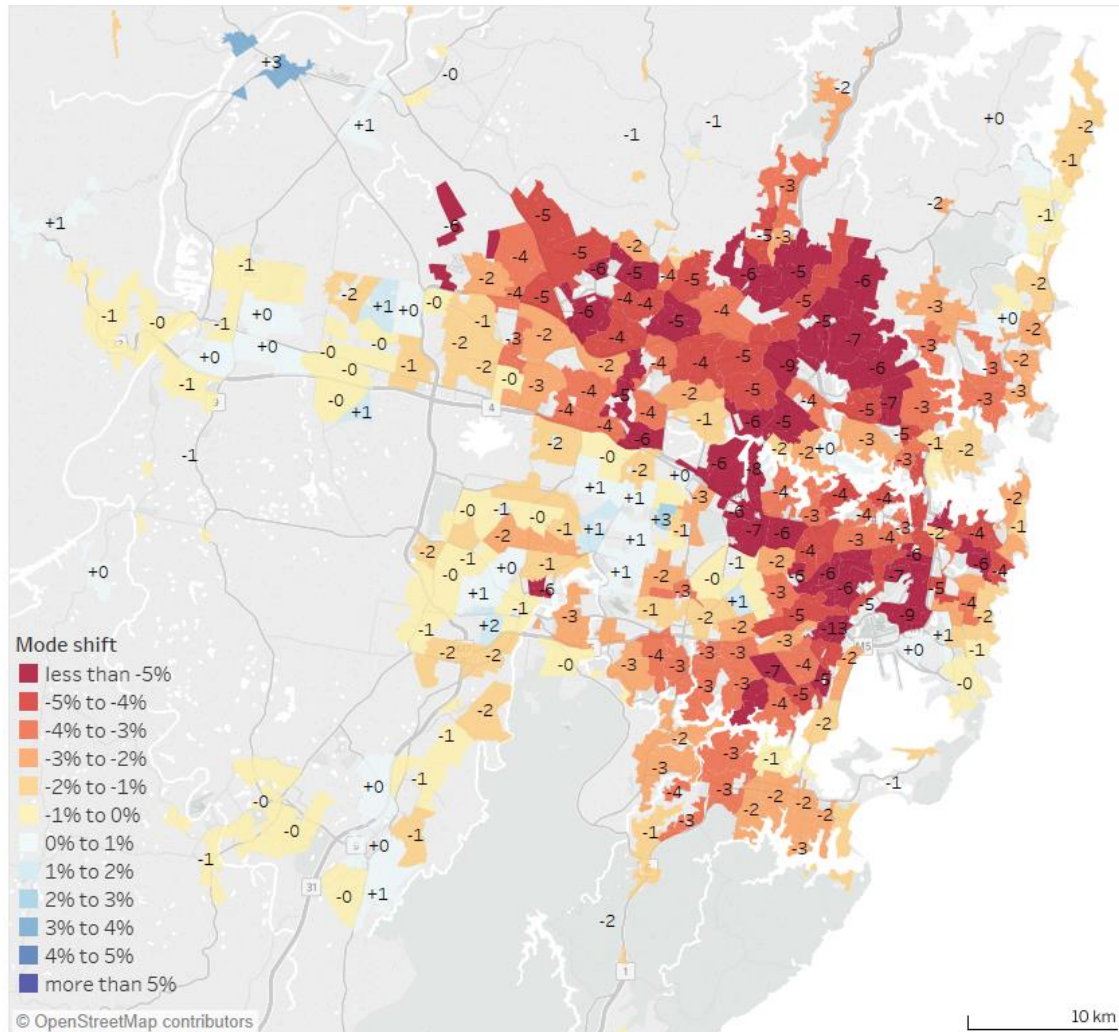
Figure 11.1: Mode Share for Commuter Trips in the Canterbury-Bankstown LGA



Source: <https://profile.id.com.au/canterbury-bankstown/travel-to-work>

The journey to work mode share for private vehicle has changed in Sydney between 2011 and 2016 as shown in Figure 11.2. Most areas in the Canterbury-Bankstown LGA have seen a reduction in car mode share of around 5% over this period. When looking at potential future mode shares, this trend in declining car mode share has been acknowledged and taken into account when developing aspirational mode shares.

Figure 11.2: Journey to work mode shift to/from private vehicles between 2011 and 2016



Source: <https://chartingtransport.com>

11.2. Future Mode Share

11.2.1. Introduction

This section reviews cities from different countries around the world in order to use as benchmarks to choose aspirational mode shifts for the Canterbury-Bankstown LGA. These cities vary in terms of size and populations, but in selecting the cities, consideration has been given to the changes they experienced in terms of mode share or innovations considered for their visions to increase public and active transport mode split. For example, despite that Berlin is the capital of Germany and might seem irrelevant to the LGA, the strategies Berlin is considering to produce electric cars for all new cars could be a good example for aspirational mode share in freight system. In another example, Lewisham has a plan to enhance its public transport services operating more reliable, faster and safer.

11.2.2. Aspirational future (2036) mode share for Canterbury-Bankstown LGA

In order to facilitate mode shift, mainly from car to public and active transport, not only providing more public and active transport facilities are important, but also changing travel behaviour plays a vital role.

With consideration of all committed and planned projects as well as future transport trends and based on analysing some case studies which are provided in the following, a range of mode share targets are proposed as aspirational targets for the Canterbury-Bankstown LGA. It should be noted that these targets are including the opening of the Sydney Metro City and Southwest and with consideration of a 5 per cent reduction of private motorised journey to work in Canterbury-Bankstown LGA between 2011 and 2016. In this regard, Canterbury-Bankstown is expected to increase a mode share change for train and metro to 30 per cent, cycling to 4 per cent, pedestrian 7 per cent, bus 10 per cent and decrease using car to 30 per cent.

Cycling and Walking

The City of Canterbury Bankstown is investing in an integrated Active Transport Action Plan that will identify gaps in the current network and propose investment in future walking and cycling infrastructure and initiatives. An aspirational target of 11% for 2036 appears reasonable.

Car

The City of Canterbury Bankstown has experienced a drop in car mode share by 5 per cent points from 2011 to 2016. It should be possible to continue this trend, mainly due to investment into public transport in the LGA, reducing the car mode share by 8-10 per cent points every five years, resulting in a car mode share of 30 per cent by 2036.

Bus

Based on gap analysis for bus network around the LGA and proposing strategies to address the gaps as well as improving the network to connect Metro stations to town centres, around 8 per cent share mode point is considered as an aspirational target by 2036.

Train and Metro

The Sydney Metro City and Southeast line to Bankstown is expected to be operational by 2024 and will provide more frequent, high quality metro services. A potential extension of the line to Liverpool is currently investigated. This would provide a missing link in the public transport accessibility of Canterbury-Bankstown. As a consequence, the mode share for train and metro is expected to increase to 30 per cent by 2036.

Table 11.1: Proposed aspirational mode share for 2036 (Canterbury-Bankstown LGA)

Sydney		
City	Canterbury-Bankstown LGA	
Population	400,000	
Size	110 km ²	
Mode share	2016 (JTW)	2036
Cycling	0.3%	4%
Ped	2%	7%
Car	71%	30%
Bus	3%	10%
Train and Metro	22%	30%
Other	1%	19%

11.2.3. Case studies

London -UK

London's aspirational mode split target is to achieve around 80% of all trips undertaken by sustainable modes such as walking, cycling, and public transport. Each Borough has individual mode share targets based on its specific opportunities and constraints as well as existing transport infrastructure, demographic profile and land use. The general principles for London include:

- London's streets will be healthy, and more Londoners will travel actively
- 70 % of residents doing at least 20mins of active travel every day
- 71% of residents live within 400m of the strategic cycle network
- London's streets will be used more efficiently and have less traffic on them (annual vehicle km)
- London's streets will be clean and green
- The public transport network will meet the needs of a growing London
- Journeys by public transport will be pleasant, fast and reliable.

Lewisham

Lewisham is a borough in South London and forms part of Inner London. The principal settlement of the borough is the suburb of Lewisham.

Lewisham has a population comparable to Canterbury-Bankstown but is around 30 per cent in aerial size. The current mode share in Lewisham has a significantly higher reliance on public and active transport, around two-thirds of all trips are undertaken using a sustainable mode. Lewisham is planning to further increase reliance on public and active transport in the future. The borough shows an aspirational mode share target and could provide a good example for Canterbury-Bankstown when it comes to public transport mode share as both areas will have a network of trains, buses and metro services.

Lewisham also can be a successful example of walking mode share point as walking covers about one-third of the mode share. Due to characteristic similarity between Lewisham and Canterbury Bankstown, with improving walking facilities and connected pedestrian links, the LGA can increase walk reliance travels.



Lewisham			
Population	0.3 m		
Size	35.15 km2		

Mode share	2016	2041
Cycling	3%	80 per cent of trips in London in 2041 will be made on foot, by bike, or using public transport
Ped	33%	
Car/ Motorcycle	34%	
Bus/Tram	18%	
Rail	9%	
Underground	3%	

Newham

The Borough of Newham is a London Borough, located approximately 10km east of the City of London and north of the River Thames. The borough was formed by amalgamating the Boroughs of East Ham and West Ham.

One of the reasons for choosing Newham as a case study was that the area is amalgamated of two different parts with different plans and documents which is similar to Canterbury Bankstown Council. Newham has been chosen as an example due to its public transport mode share of about 42 per cent. Newham enjoys reliable public transport as well as proper walking facilities which encourages people to walk for short trips.



Newham			
Population	0.3 m		
Size	36 km2		

Mode share	2015	2041
Cycling	2%	80 per cent of trips in London in 2041 will be made on foot, by bike, or using public transport
Pedestrian	24%	
Car	32%	
Public Transport	42%	

Germany

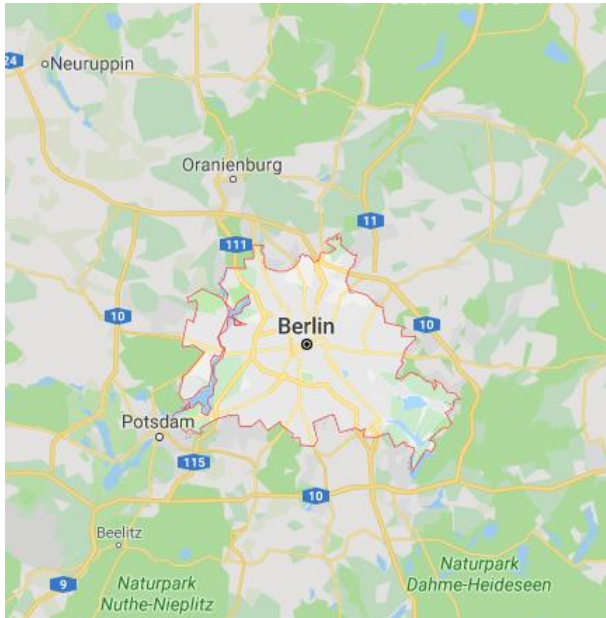
Berlin is capital city of Germany and has been chosen as a case study due to both its current mode share split and its innovations for using electric cars. As aspirational mode share for Canterbury Bankstown should be considered new transport trends and technologies using examples like Berlin as a successfully case study can be worthen to use. For instance, by 2030 all new cars made in Germany will be electric and Berlin already has a large number of operational charging points, wirelessly charged electric buses, and has developed an Action Plan for Electromobility 2020. Canterbury Bankstown can get advantage of this example to consider possibility of emerging technologies and being prepared for facing with them.

Leeson learned from Berlin mode split changes from 1998 to 2015 and their vision for 2030 can be summarised on following points:

- **Modal mode split:** With 70 per cent of trips made by public or active transport, Berlin has developed a system that facilitates efficient and sustainable urban mobility, as demonstrated by its low congestion and traffic fatality rates.
- **Successful modal shifts:** Berlin has induced a 20 per cent decrease in car travel and a 25 per cent increase in active transport since 1998, through measures such as the introduction of a low-emission zone and investment in the cycling infrastructure.
- **Excellent safety and reliability:** Heavy investment in infrastructure and public transport have made Berlin's transport system one of the safest and most reliable.
- **Visionary 2030 transportation strategy:** Berlin has an ambitious and comprehensive plan focused on anticipating future needs of residents, aiming to meet their needs while improving the quality of life for citizens and making the city more sustainable.

MODE SHARE

- The approval of self-driving vehicles law in 2017 will clear the way for the development and testing of autonomous vehicles and make road traffic safer and more efficient.



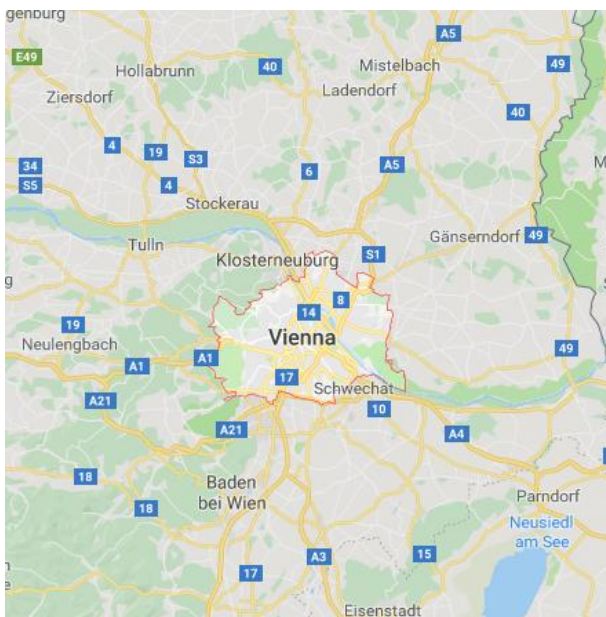
Berlin			
Population	3.52 m		
Size	892 km2		

Mode share	1998	2015
Cycling	10%	13%
Pedestrian	25%	30%
Car	38%	30%
Public transport	27%	27%

Austria

Vienna is a growing city and has seen an overall 10 per cent increase in population (and population density) between 2005 and 2013. Between 2001 and 2013, the data shows a significant drop in car usage (from 35 per cent to 29 per cent) whilst the public transport mode share increased by a similar margin. The high walking mode share of 27 per cent remained consistent and cycling increased from 3 per cent to 6 per cent.

Vienna is chosen as a reference city due to its growing population, similar Canterbury-Bankstown which is expected to have a significant increase in population and employment by 2036.



Vienna			
Population	1.868 m		
Size	414 km2		

Mode share	2001	2006	2013
Cycling	3%	6%	6%
Pedestrian	27%	28%	27%
PT	34%	37%	39%
Other	1%	0	0
Car	35%	29%	29%

12.ACTIONS

12

12.1. Objectives and Principles

12.1.1. Transport Strategy Summary

Figure 12.1 presents a summary of the overall transport network for Canterbury Bankstown in 2036. The Metro line conversion from Bankstown to the Sydney CBD will provide faster, more frequent public transport services both along the line and into the Sydney CBD. The line conversion from rail to Metro will act as a catalyst to modify and improve bus access to key Metro stations, as well as improving walking and cycling links in and around each station.

A potential metro line extension from Bankstown to Liverpool would further improve access within Canterbury Bankstown, with a likely station at Bankstown Airport, and would provide a direct public transport connection to Liverpool to the west of the LGA.

As identified throughout the strategy, there are a lack of north-south public transport connections. As identified in the *Future Transport Strategy 2056* by Transport for NSW, there is a longer term opportunity for a Parramatta to Kogarah/Hurstville Metro / mass transit link. This would provide a missing direct connection north to the Parramatta Central River City identified in the *Metropolis of Three Cities* by the Greater Sydney Commission and continues to develop a grid based public transport network on a north-south orientation.

At the intermediate level, in order to better connect centres by higher frequency public transport, improvements are proposed to strengthen the north-south axis from Chullora to Bankstown to Padstow (potentially a high frequency bus corridor similar to the Northern Beaches B-Line or later a light rail service connecting through to Carter Street and Sydney Olympic Park). This would connect key land use centres and areas that are expected to change and grow over the next 20 years. It could be used to transform the Bankstown CBD to have more streets with public transport and active transport use.

Another potential north-south link is through Campsie in the eastern part of the LGA. There is strong potential to increase the priority of public transport from Burwood to Campsie and south to Kingsgrove and Hurstville to create a secondary public transport spine, which could connect to Sydney Metro West to the north of the LGA, with a new Metro station at Campsie, and south to a rail station / longer term Metro station at Hurstville. Campsie is a major bus and rail interchange, where activity is expected to increase with a new Metro station, which could be used to upgrade the streetscape to be more pedestrian orientated.

Major road corridors are required to move high volumes of traffic, with much of the traffic travelling through the LGA rather than to or from the LGA, with high traffic volumes along key regional roads and through local centres. With the opportunity to widen road corridors decreasing due to urban development, other ways of facilitating road based travel need to be looked at.

In terms of the road network, Figure 12.1 presents a functional hierarchy for the future. The functional hierarchy shown is based on the Transport for NSW Movement and Place framework, which seeks to better balance which type of functions should be prioritised in each area. The M5 Motorway continues playing an international gateway role with longer road movements, with the next tier of roads fulfilling a 'city-serving' role, connecting Canterbury Bankstown to surrounding LGAs and Sydney's Three Cities.

Lower order road tiers seek to direct traffic on to higher order roads and create a higher 'place' function, such as on sections of Canterbury Road, which includes boulevards (or urban streets), main streets and shared streets. These lower order roads would support town centres becoming more pedestrian friendly and include kerb bulbs at intersections for traffic calming and increased space for amenity/trees. Urban streets could include bus-only lanes with fully accessible bus stops

The remainder of the overall transport network would be supported by active transport, through walking and cycling. It is proposed to create a cycling network connecting key centres in the Canterbury Bankstown LGA and to regional centres outside the LGA.

12.2. Public Transport

Mass Transit (Metro/ Rail)

The Sydenham to Bankstown rail line is being converted to a Metro line. There will be more job opportunities with faster, more frequent and direct access to key employment centres, including North Sydney, Chatswood, Macquarie Park and the north west, as well as better access to education, with fast, more frequent and direct connections.

Several Metro extensions and new lines are proposed in and through Canterbury Bankstown. Any new lines and stations should be able to support a number of key outcomes such as:

- Improved accessibility to one of the three cities or strategic centres
- Customer benefits such as reduction in travel times between key destinations and improved accessibility and frequency and reliability
- Productivity drivers such as supporting existing and future growth areas, contribution to economic development and opportunity to facilitate employment growth
- Support for urban renewal, future housing needs and the creation of safe and successful places
- Transport service and infrastructure improvements to provide train crowding relief, improve sustainable travel choices and increase network efficiency.

Intermediate Transit (Bus / On Demand Buses / Light Rail)

Buses provide an intermediate service role within Canterbury Bankstown, both supporting the mass transit network and providing public transport accessibility to areas not served by mass transit.

Any new intermediate links, including buses, On Demand buses and light rail, should be based on:

- High frequency – high frequency public transport services across the day with potential turn-up-and-go services.
- Capacity – these modes have medium to high capacity to meet demand with frequent stops along corridors.
- Land use – high frequency and high capacity services have the ability support medium and high density land use.
- Design – Infrastructure integrated with the urban context and public realm to minimise impacts and create attractive centres

12.2.1. Future Intermediate Public Transport

In conjunction with the Sydney Metro conversion of the Bankstown line, an opportunity exists to improve the intermediate level public transport network. This is typically with high frequency bus routes and potentially light rail.

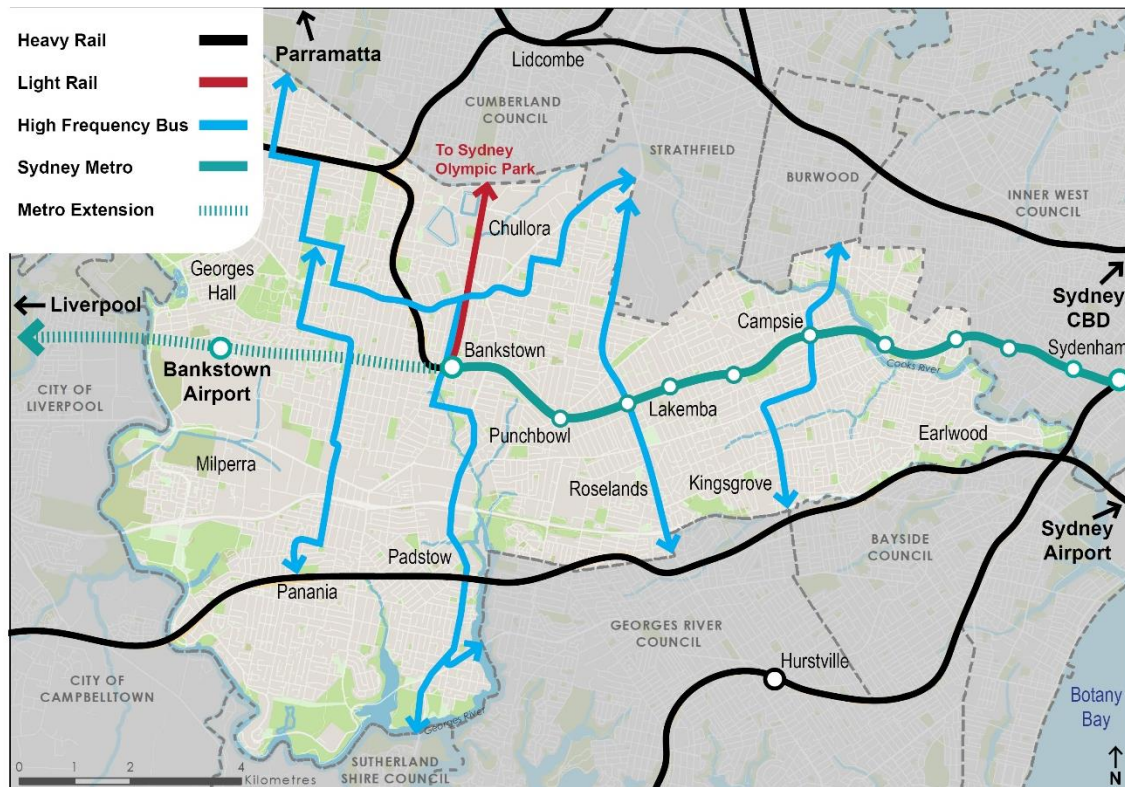
High frequency bus routes are proposed to connect the following major activity centres:

- Between Parramatta and Bankstown via Chester Hill
- Between Panania on the T8 Line and Parramatta via Chester Hill
- Between Sutherland and Hurstville with Bankstown via Padstow
- Between Hurstville and Strathfield via Roselands along King Georges Road
- Between Bankstown and Strathfield via Chullora
- Between Sydney Airport and Burwood via Rookwood, Bexley and Campsie.

The Parramatta light rail line to Sydney Olympic Park and the Carter Street precinct could be extended south to connect with the Metro line at Bankstown via Chullora. It would be planned as an intermediate public transport capacity corridor that would encourage higher density residential and business precincts along the route.

A future strategic public transport network for the Canterbury – Bankstown study area is shown in Figure 12.2.

Figure 12.2: Proposed Strategic Public Transport Network



12.3. Active Transport

Walking and cycling trips for short trips are important, to save valuable road space for higher priority vehicles, to encourage more active transport and reduce travel emissions. Key outcomes for Canterbury Bankstown include:

- Providing safe walking and cycling facilities by investing in new facilities - to support walking and cycling as a day-to-day mode choice for short trips it is important to provide new facilities that make active transport more accessible and safer. Where possible, walking and cycling should have their own spaces that are not shared with other transport modes. In areas of high pedestrian and bicycle volumes, street configurations should be amended to reflect this.
- Provision of a legible, connected and accessible cycle network through completing missing links - the current bicycle network in Canterbury Bankstown lacks continuous cycle routes across the LGA. Providing a network of priority links will help to make cycling safer, more accessible and a more attractive mode choice for journeys within the LGA. The key routes would be supported by a secondary network of local routes and links to encourage cycling for local trips. A wayfinding system should be developed to make the bicycle route network legible and easy to navigate.
- More efficiently integrated transport modes at public transport interchanges - walking and cycling connections to public transport will encourage greater public transport use. Direct, flat (where possible), open, aesthetically pleasing and safe connections influence the attractiveness of using public transport. Older public transport stations and stops often do not provide direct and well signed pedestrian and cyclist access routes. This means areas within a five to 10 minute walk to stations and major bus stops should progressively develop a good coverage of high quality footpath and cycleway facilities.

12.3.1. Future Active Transport

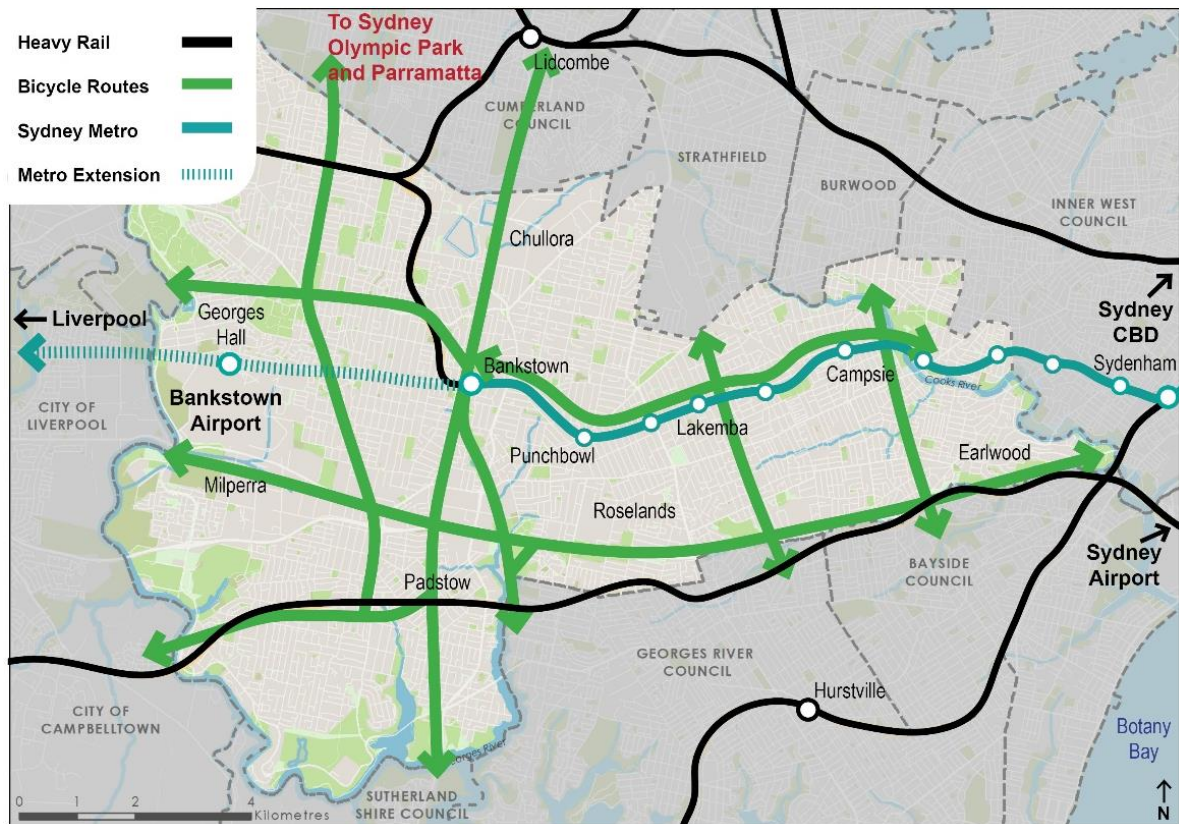
In its current state, the bicycle network in the Canterbury Bankstown LGA has a good range of recreational cycleways, in particular along the rivers and through green spaces, but very limited cross-LGA connections that provide safe and continuous cycling opportunities. The 2016 Canterbury bike plan identifies a number of potential cycling routes, some of which are currently in a planning process. Bankstown does not have a formal bike plan, but previous studies identified a lack of connectivity between the Bankstown CBD and neighbouring suburbs.

One key focus for future cycling routes is the provision of safe and continuous cross-LGA routes that improve the connectivity of Canterbury Bankstown to the regional cycling network. These routes would follow existing key corridors such as the M5 Motorway (where a cycle route already exists in the shoulder lane) and the Sydenham to Bankstown rail corridor (soon to be Metro). These would be complimented by north-south routes that service local centres such as Lakemba, Padstow and Campsie.

A second focus is to improve connections within the Bankstown CBD, in particular along the urbanised industrial ribbon between the Bankstown CBD and Chullora. The growing importance of Bankstown as a regional centre will attract a higher active transport mode share in the future which can be facilitated by more and higher quality cycling infrastructure.

In addition to cycling routes and infrastructure, major opportunities for the pedestrian network include more frequent facilitated pedestrian crossings along main roads including Canterbury Road, Milperra Road and King Georges Road.

Figure 12.3 Proposed Strategic Cycling Network



12.4. Road Network

Roads have a critical role, supporting efficient, reliable and fast on-road connectivity to and between metropolitan centres. Roads support multiple transport modes, including on-road public transport, on-demand services, private vehicles, walking, cycling and freight.

The higher-order road network facilitates the movement of public transport, freight and private vehicles. High-capacity bus services are currently the most efficient form of on-road public transport.

Emerging forms of mobility will rely on the road network, with roads remaining as fundamental infrastructure for the movement of people and goods.

While some public transport services use the road network, the road network also has an important function in carrying through-traffic and keeping it out of centres.

