RD great places TDEP GTAconsultants

BANKSTOWN

COMPLETE STREETS

A SMART WAY TO MAKE GREAT STREETS

ISSUES AND OPPORTUNITIES REPORT / **JUNE 2018**

> Our streets are where the world lives, works, moves and connects; they are dominant components of public space, generators of urban economies and social activities, and they should serve the people of our cities, not cars.

– Ford Motor Company, 2018

1

BANKSTOWN + THE FUTURE OF ITS STREETS

Introducing Bankstown
The streets and public domain of Bankstown
The diverse people of Central Bankstown
Bankstown's transport policy background
Draft Community Strategic Plan
Bankstown is changing
Bankstown's challenge for the future

8–35

2

TRANSPORT ANALYSIS

Current and forecast mode of choice
Rail and bus service
Cycling
Walking network
Pedestrian waiting times
Street types
Traffic speeds
Car crashes and accidents
Parking

36–59

3

STREET DESIGN ANALYSIS

How people use streets and space
Utility of street space
Street-by-street qualitative analysis
Characteristics of good and limited quality streets
Street fundamentals
Patronage, quality and patronage composite

60–97

HOW CAN BANKSTOWN'S STREETS BE GREAT?



How can we best manage parking in the centre?



How can Bankstown grow as a destination?

How can our streets be safer?



How can our streets be more social?



How can our kids walk safely to school?

How can we promote healthy lifestyles?



How can we enhance the image of Bankstown?

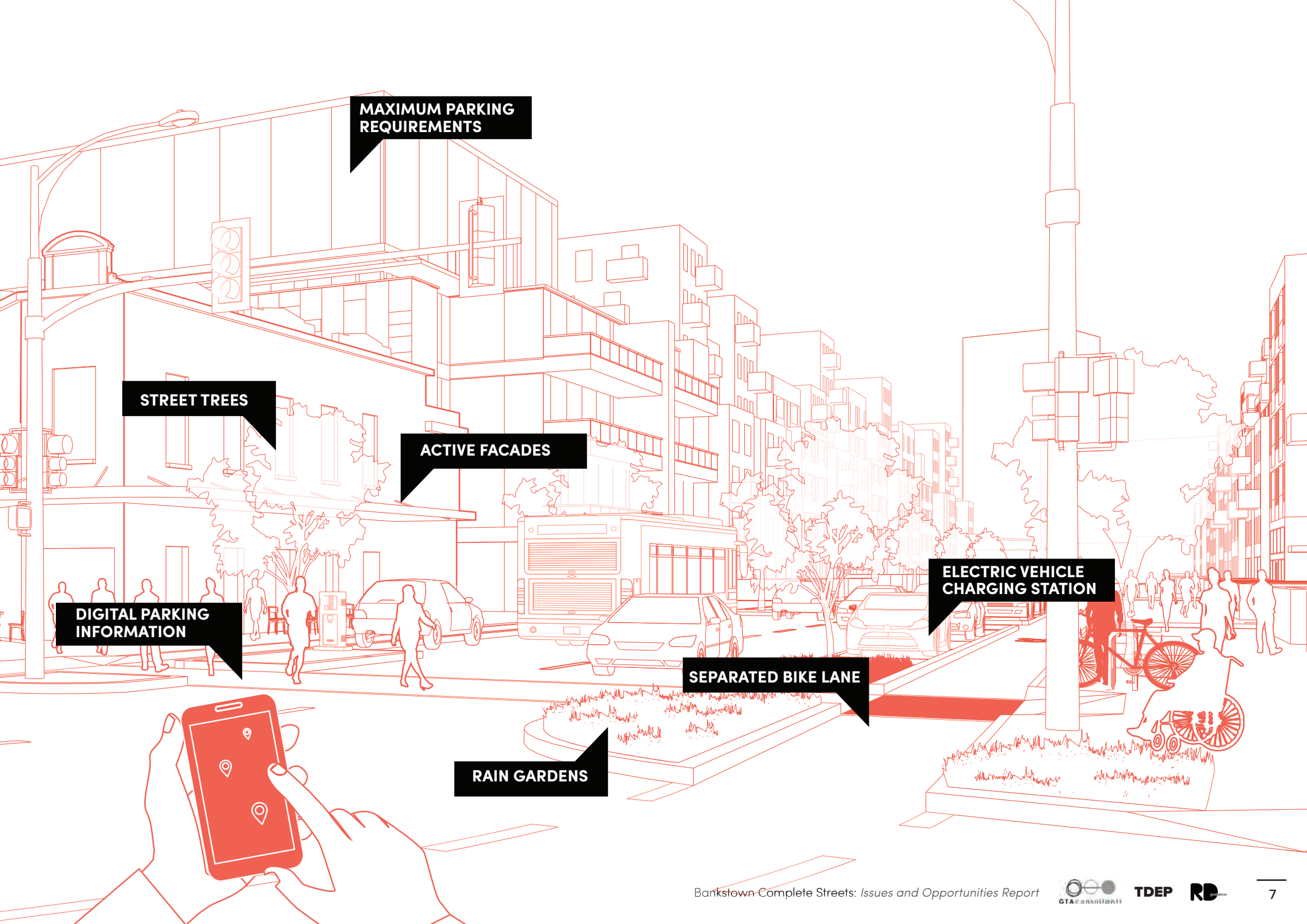


How can our streets be greener and cooler?

INTRODUCING COMPLETE STREETS

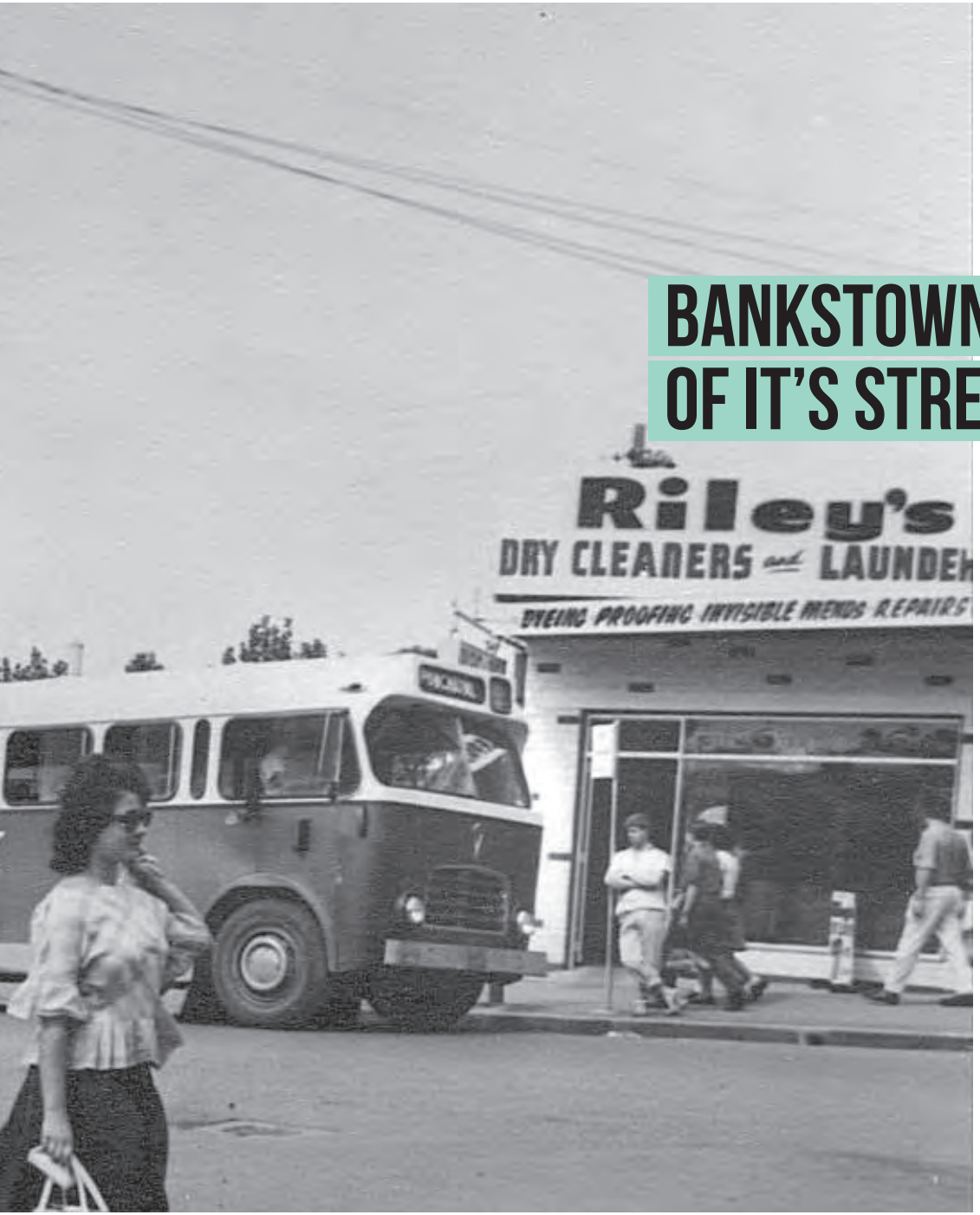
A SMART WAY TO MAKE GREAT STREETS FOR THE FUTURE




MAXIMUM PARKING REQUIREMENTS
STREET TREES
ACTIVE FACADES
DIGITAL PARKING INFORMATION
ELECTRIC VEHICLE CHARGING STATION
SEPARATED BIKE LANE
RAIN GARDENS

PART ONE.





BANKSTOWN + THE FUTURE OF IT'S STREETS

Bankstown's CBD is clustered around the railway station, which links the Centre to Greater Sydney. Today, this portal welcomes visitors, residents and workers, to a place that is culturally diverse, with a substantial Lebanese, Chinese and Vietnamese community as well as a number of great attractors such as eateries, civic spaces and shopping destinations.

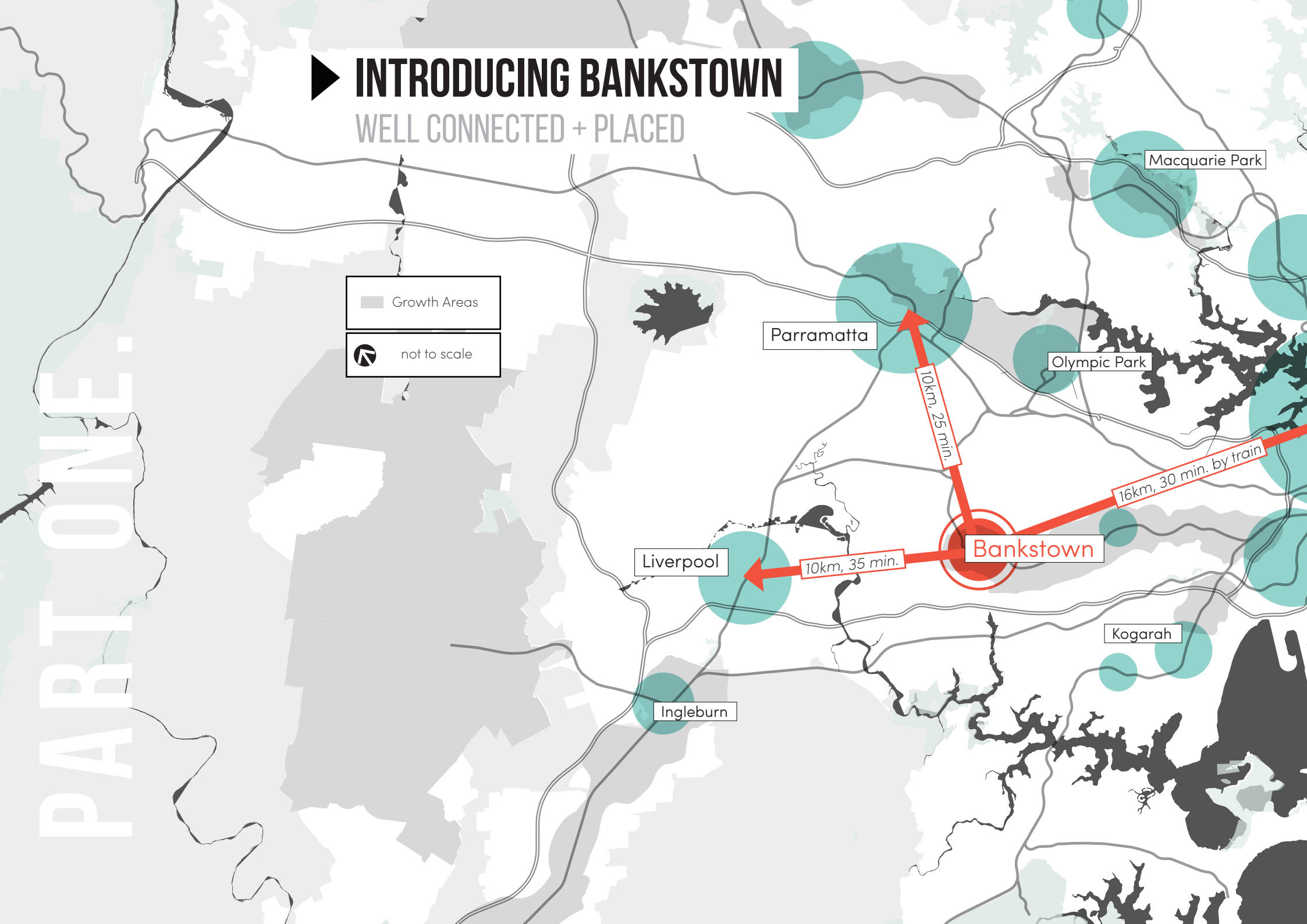
The city currently faces anticipated growth as part of the State's Sydenham to Bankstown Urban Renewal Corridor Strategy, and a key challenge for Bankstown is how to celebrate existing identity and support future growth at the same time. The opportunity exists to balance these demands and move towards a balanced transport system which focuses on people movement and solidifies Bankstown as a premiere, unique, people-focused destination.

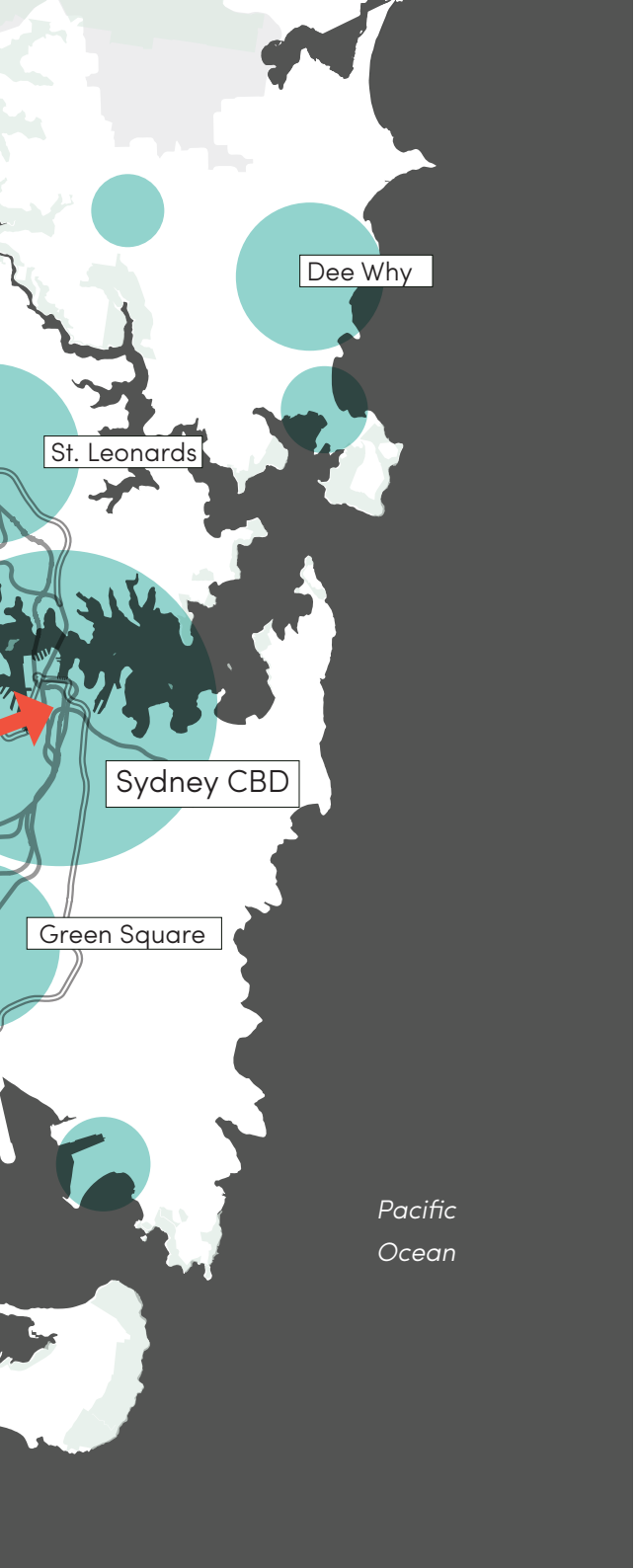
This chapter outlines the policy background and influences that have led Council towards its current approach of addressing transport and streetscapes in an integrated and balanced manner.

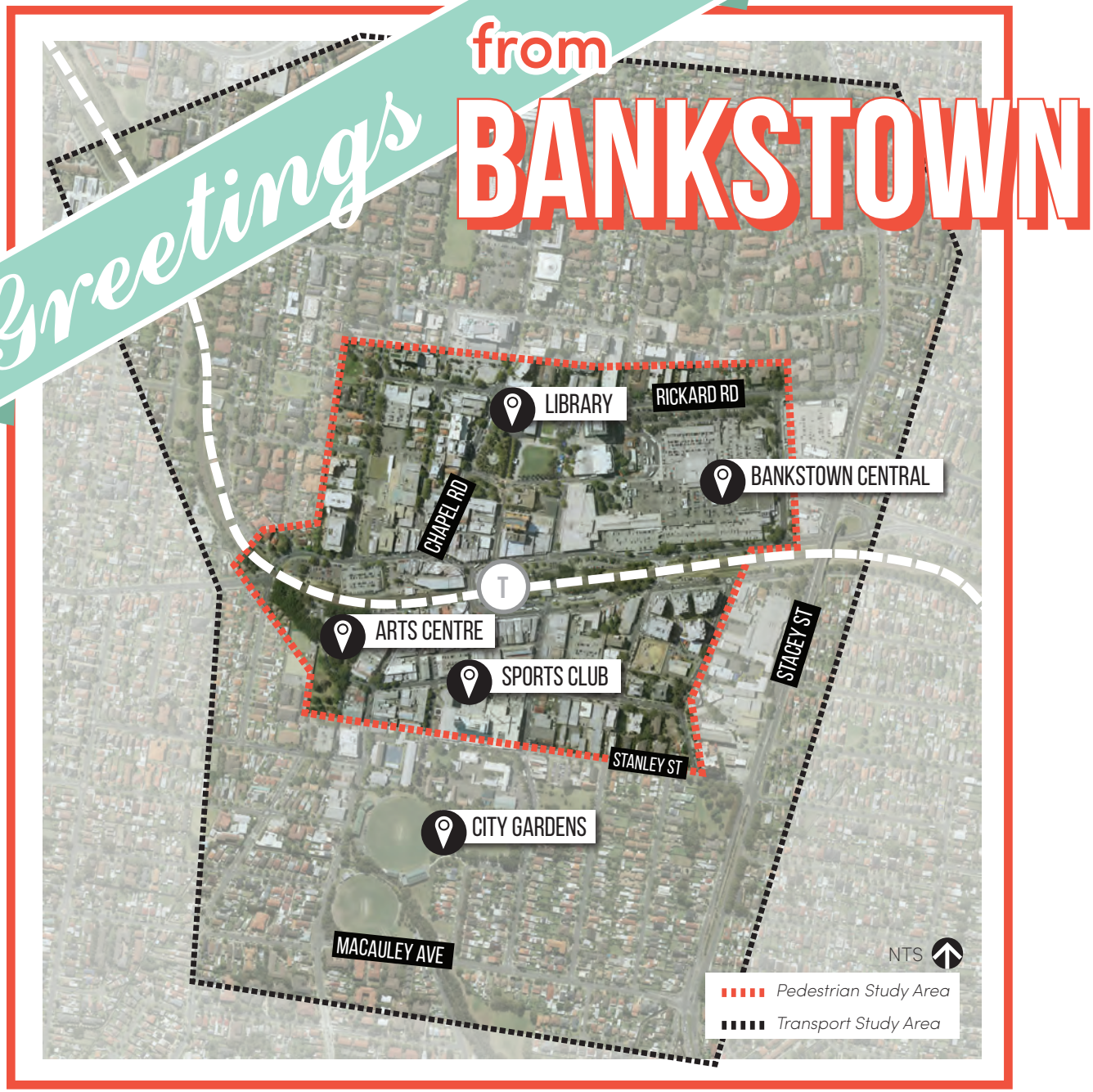
INTRODUCING BANKSTOWN

WELL CONNECTED + PLACED

PART ONE.




Dee Why
St. Leonards
Sydney CBD
Green Square
Pacific
Ocean

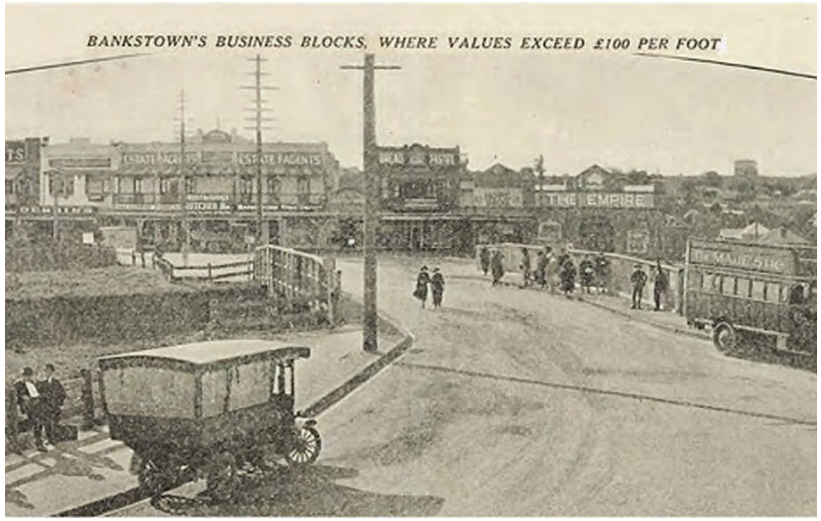

Greetings
from
BANKSTOWN
LIBRARY
RICKARD RD
BANKSTOWN CENTRAL
CHAPEL RD
T
ARTS CENTRE
SPORTS CLUB
STACEY ST
STANLEY ST
CITY GARDENS
MACAULEY AVE
NTS
Pedestrian Study Area
Transport Study Area

PART ONE.

THE STREETS OF BANKSTOWN

THEN + NOW

1909



1909



1930s



1960s



1920s



1980s



Saigon Place

Saigon Place and its surroundings is just one example of the fascinating evolution of Bankstown's streets. Originally car-dominated in the 1970s (with around 20,000 vehicles a day), it was then pedestrianised and landscaped as part of the 'Old Town Centre' Plaza masterplan in the late 70s. Two decades later, North and South Terrace were introduced as one-way streets, and a further upgrade in 2008 facilitated the conversion of the overpass as a bus route, and the balanced modal configuration seen in Saigon Place today.



TODAY



City Plaza



Paul Keating Park



Restwell St.



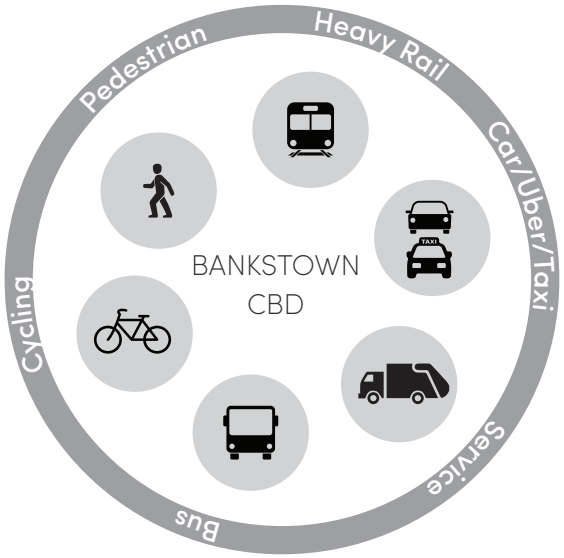
South Terrace

PART ONE.

THE PUBLIC DOMAIN TODAY

Complex Modal and People Systems

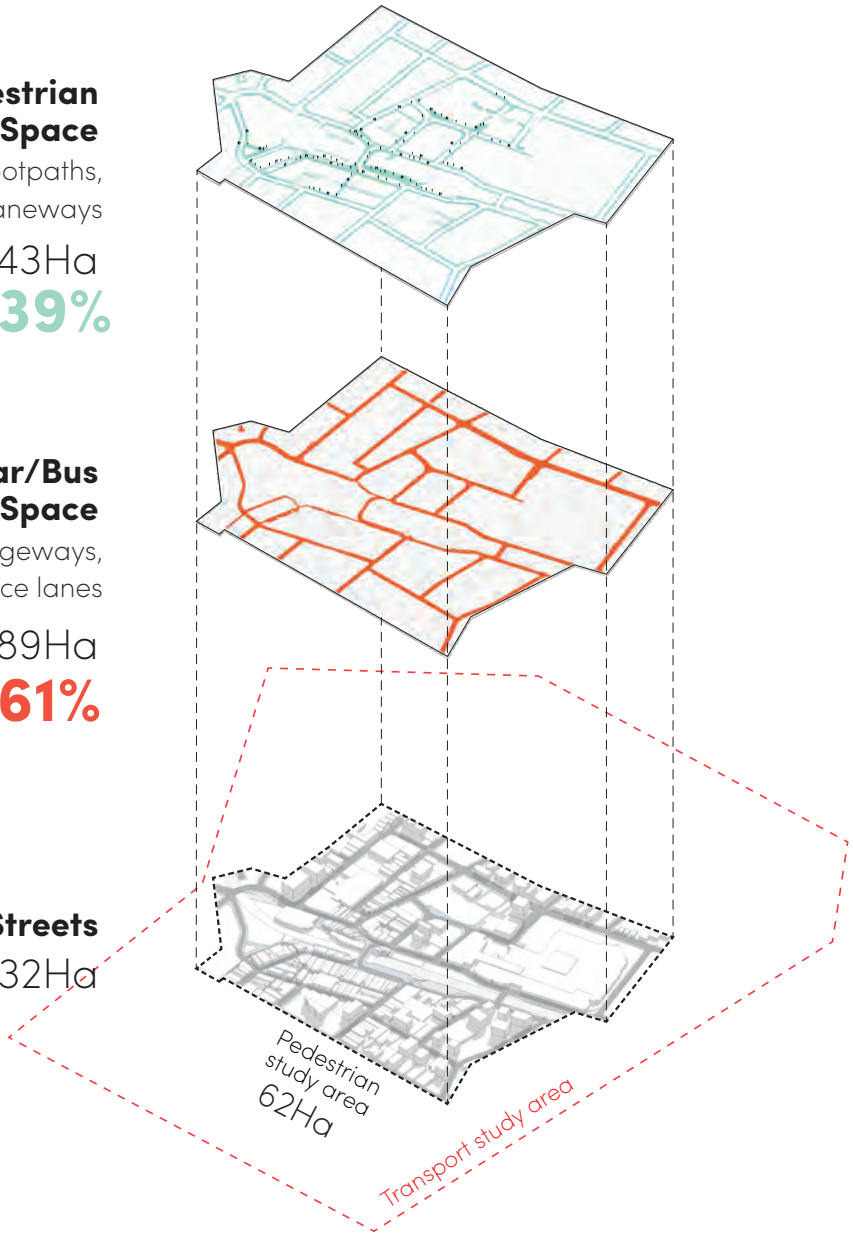
The Bankstown CBD public domain area is a true workhorse, handling 6 modes over 22.87Ha, or 37% of the total CBD area. This figure swells to 25.83Ha (41.6% of total area) if public parking station surface area is included. Of all public land, 10.66Ha (40%) is dedicated to places for people (sidewalks, parks) while 12.75Ha (60%) is dedicated to car or buses. 2.42Ha is dedicated to rail.



Pedestrian Space
Footpaths, Laneways
6.43Ha
39%

Car/Bus Space
Carriageways, service lanes
9.89Ha
61%

CBD Streets
16.32Ha





Footpaths

6.33Ha **10.2%of CBD**

includes through paths and verges where people walk, adjacent to shops and amenity zone with cafe seating, bins and lighting.



Laneways + Arcades

0.10Ha **0.2% of CBD**

includes people-friendly through-site links



Parks

2.77Ha **4.5%of CBD**

includes usable green space



Social Spaces/Plazas

0.25Ha **0.4% of CBD**

includes smaller break-out spaces and designated seating areas



Carriageways

8.62Ha
13.9% of CBD

includes traffic lanes and on-street parking



Service Lanes

0.75Ha
1.2% of CBD

includes vehicle-focused rear lanes



Public Parking Station

2.96Ha (ground plane)
4.8% of CBD

includes structured and surface



Private Parking Station

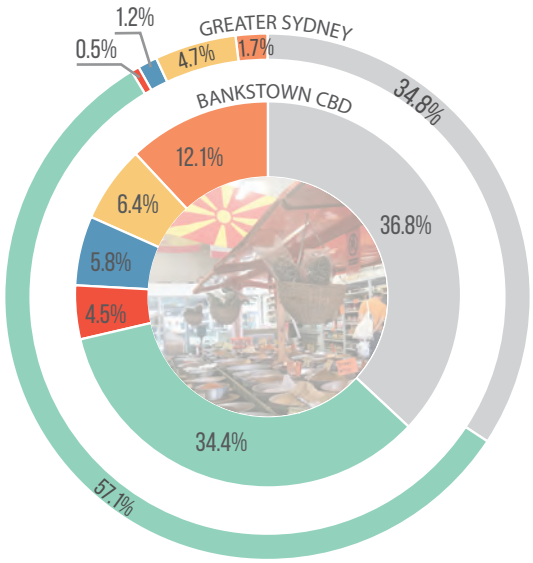
5.45Ha (ground plane)
8.8% of CBD

includes structured and surface

PART ONE.

THE DIVERSE PEOPLE OF CENTRAL BANKSTOWN

Birth Place Ranking



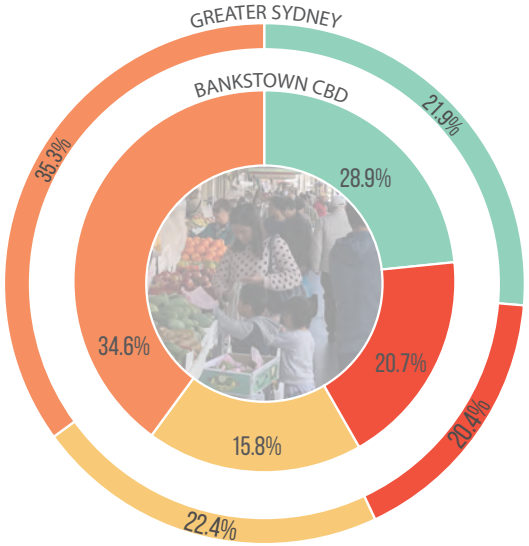
Total Overseas

55.8% vs 36.7%

Bankstown Greater Sydney

- Vietnam
- China
- Lebanon
- Pakistan
- Australia
- Other Countries

Household Composition



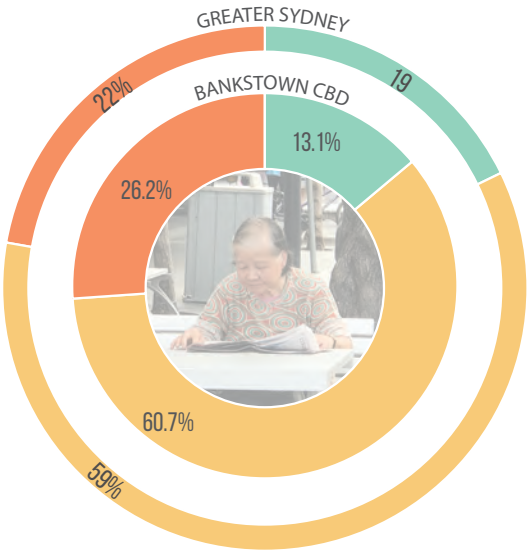
Single

20.7% vs 20.4%

Bankstown Greater Sydney

- Couple with children
- Couple without children
- Single
- Other Households

Population Age



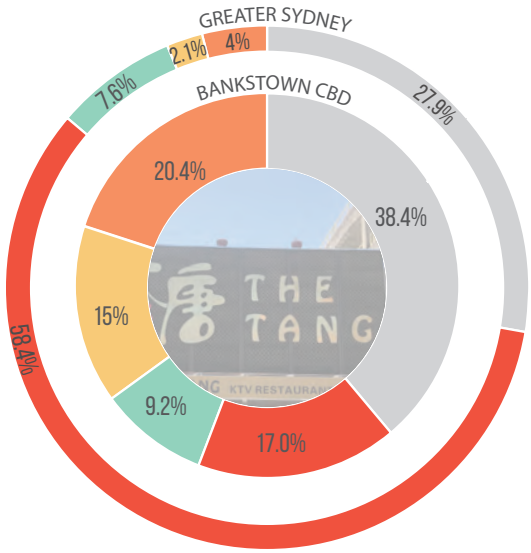
Adult

60.7% vs 59%

Bankstown Greater Sydney

- Children (0-17 Years)
- Adult (18-59 Years)
- Retirement Age (60+ Years)

Language Spoken at Home



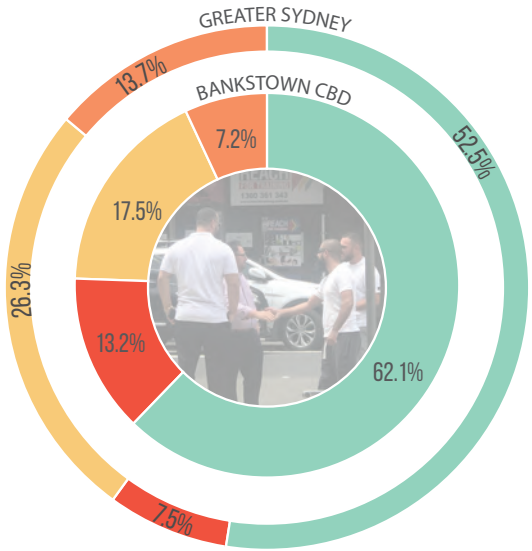
Non-English

73.9% vs 35.8%

Bankstown Greater Sydney

- Arabic
- Vietnamese
- Chinese (Mandarin and Cantonese)
- English only
- Other Languages

Occupation



Professionals

17.5% vs 26.3%

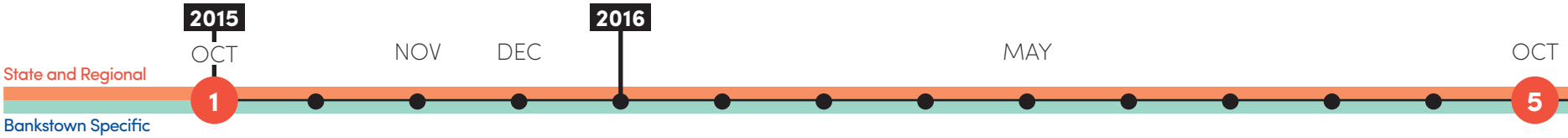
Bankstown Greater Sydney

- Manager
- Professionals
- Labourers
- Other Occupations

PART ONE.

BANKSTOWN TRANSPORT POLICY BACKGROUND

TOWARDS PRIORITISING PEOPLE



1

'Draft Sydenham to Bankstown Urban Renewal Corridor Strategy'
DPE

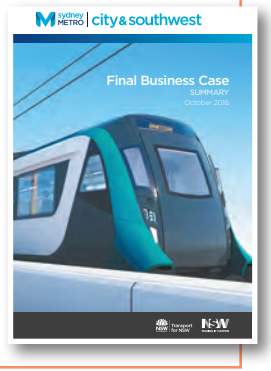
Justified by the major infrastructure investment of Sydney Metro, this Strategy provides a framework for the renewal of areas around new metro stations between Sydenham to Bankstown. In order to gather community and stakeholder feedback, the Draft Strategy was exhibited between Oct 2015 and Feb 2016 along with surveys and expert background reports.



5

Sydney Metro City and Southwest Business Case
NSW Government

Sydney Metro City & Southwest will extend Sydney Metro beyond Chatswood to Bankstown. The Business Case was prepared to enable an informed decision on the timing, scope, funding and delivery strategy for the Project, and to demonstrate how the Metro can increase the capacity of Sydney's wider rail network and contribute to the economic success of NSW and Australia.



6

'Better Placed'
Government Architect NSW



Better Placed is an integrated design policy for the built environment of New South Wales. It guides best practice design processes and aligns with a clear set of objectives which can be applied to cities and towns, public realm, buildings and open space.

Design objectives for NSW:

1. *Better fit*
2. *Better performance*
3. *Better for community*
4. *Better for people*
5. *Better working*
6. *Better value*
7. *Better look and feel*

"...maximising opportunities for walking, safe cycling and social interaction is a priority. "

SOUTH DISTRICT PLAN, GREATER SYDNEY COMMISSION



8

Revised 'Draft Sydenham to Bankstown Urban Renewal Corridor Strategy' *DPE*

In light of feedback received, the revised draft Strategy was released to provide a framework for land use and built form controls. Specifically in the Bankstown Station Precinct, this will support the provision of 6,000 additional dwellings by 2036.

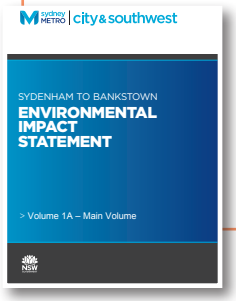
The vision for the Precinct:

- *Bankstown will continue to provide shops, jobs and community services for the wider corridor*
- *A new station square will be the heart of the Precinct enhancing pedestrian activity and providing new north-south connections*
- *New development around the station will provide a visual marker*
- *Bankstown CBD will be renewed and modernised as it redevelops*

10

'Sydenham to Bankstown Environmental Impact Statement' (EIS) *NSW Government*

Whilst planning approval for the Chatswood to Sydenham Metro project was granted in January 2017, this EIS considers the potential impacts of the Sydenham to Bankstown upgrade. This would involve upgrading 10 stations and a 13 kilometre long section of the Sydney Trains T3 Bankstown Line, to improve accessibility for customers and meet the standards required for metro operations.

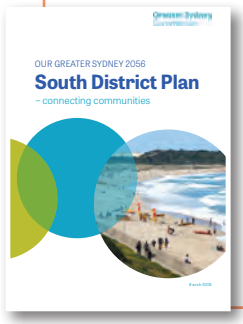


12

'South District Plan' *Greater Sydney Commission*

The South District includes Bankstown, which is identified as a potential Collaboration Area. The district plan champions a place-based planning approach to streets, promoting the idea of 'streets as places' and prioritising walkable streets that provide direct, accessible and safe pedestrian and cycling connections from homes to schools, daily needs and recreation facilities.

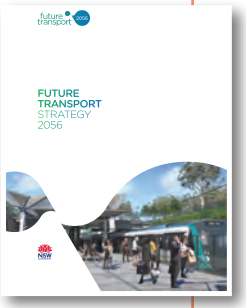
Actions for Bankstown:



- *Improve and integrate the transport interchange and city centre*
- *Encourage new uses to activate streets and grow the night-time economy*
- *Enhance the quality of Paul Keating Park*

13

'Future Transport Strategy 2056' *NSW Government*



This strategy plans for a world class, safe, efficient and reliable transport system over the next 40 years, as NSW is set to grow to over 11 million people. The Strategy is underpinned by the 'Movement and Place Framework' which aims to allocate road space in a way that improves liveability.

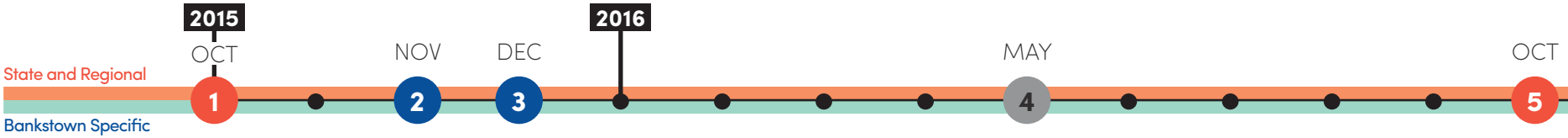
Outcomes for Greater Sydney:

- *walking or cycling as the most convenient option for short trips around centres*
- *streets that balance the need for convenient access while enhancing the attractiveness of our places*
- *Fast and convenient interchanging, with walking times of no longer than five minutes between services*

PART ONE.

BANKSTOWN TRANSPORT POLICY BACKGROUND

TOWARDS PRIORITISING PEOPLE



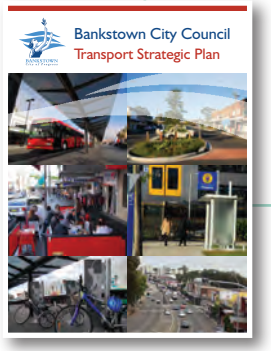
2

'Draft Transport Strategic Plan'
prepared by Council

This strategic document promotes the move towards a balanced transport system which focuses on people movement in order to achieve the vision: ***'a connected city which provides accessible modes of transport and supports all transport users in commuting safely'.***

Goals:

1. *Reduce the need for travel*
2. *Shift to healthier and environmentally friendly travel modes*
3. *Improve the efficiency of the transport system*



3

'Centre Transport Action Plans'
prepared by Council

This document was prepared to provide practical measures to enhance the transport system for current users as well as supporting the forecast growth in the centres. Along with the Draft Transport Strategic Plan, it informed Local Area Plans which Council adopted.

The Action Plans were guided by the Movement/Activity concept, which acknowledges that streets have dual functions, and moves beyond a conventional road hierarchy to instead give equal importance to street and public domain. The document also outlined guiding modal principles in support of a balanced transport system, putting people on foot first.



4

City of Canterbury Bankstown
proclaimed by the NSW Government

The new City of Canterbury Bankstown replaced the former Bankstown and Canterbury Councils, becoming the largest Council in NSW, by population, with 350,000 residents.

CANTERBURY BANKSTOWN

"We want to reclaim streets as not solely the domain of people driving cars but also of people on foot and by bike, and as public spaces for social and commercial interaction."

BANKSTOWN DRAFT TRANSPORT STRATEGIC PLAN



7

'Future Visions for Bankstown Metro' *released by Council*

In response to State's draft plans, this document states the aspirations for Bankstown's metro station as a 'key district centre' focused on retaining existing identity and integrating the city centre.

Principles:

1. *Bankstown should have a distinct urban quality as the key district centre*
2. *Future plans need to overcome the segregation created by the rail line*
3. *All streets should have active ground floors and a vibrant mix of uses*
4. *Exhibit design excellence to create an attractive, safe and memorable place*



9

City of Canterbury Bankstown Council Election

On 9 September 2017, fifteen councillors were elected, three in each of the five Wards: Bankstown, Bass Hill, Canterbury, Revesby and Roselands.

Councillor Khal Asfour was elected as mayor on 26 September 2017.

11

Responses to Metro EIS and Urban Renewal Strategy

Council's overall position is the Draft Renewal Corridor Strategy and Metro proposal for Bankstown cannot be supported. Council identifies the need for the DP&E to undertake more detailed analysis to retaining existing identity and the need for NSW Government to investigate undergrounding the Metro line.





12

'Complete Streets' Project Commences

Project initiated to coalesce transport and place strategies undertaken by Council and State Government, in order to achieve a public domain master plan focused on people.

Complete Streets will build on the unique place qualities, the needs and desires of the community and future trends to create an equitable, efficient and enjoyable mobility network.

PART ONE.

DRAFT COMMUNITY STRATEGIC PLAN

PRIORITISING PEOPLE

'2028 CBCity' is the Community Strategic Plan for the City of Canterbury Bankstown. It draws from engagement with over 10,000 community members, and sets out the vision for the future of the City and the pathways to guide that transformation. Council released the draft document for public comment in March 2018.

A thriving, dynamic, and real city

The vision for Canterbury-Bankstown is for a thriving, dynamic city of people who are interested and interesting –unapologetically themselves. Seven 'destinations' help to lead the City towards this vision.

A number of 'city transformations' provide pathways and success indicators for implementing each of the seven destinations. Many of these relate to transport, streets and public domain, and align with the Complete Streets approach. They can be can be used to guide decision-making in the planning and design of great streets and places.

The '7 Destinations' of CBCity 2028



SAFE + STRONG



CLEAN + GREEN



PROSPEROUS + INNOVATIVE



MOVING + INTEGRATED



HEALTHY + ACTIVE



LIVEABLE + DISTINCTIVE



LEADING + ENGAGED

Pathways to city transformation

***Pathways** from the CSP (relating to transport, streets and public domain)*

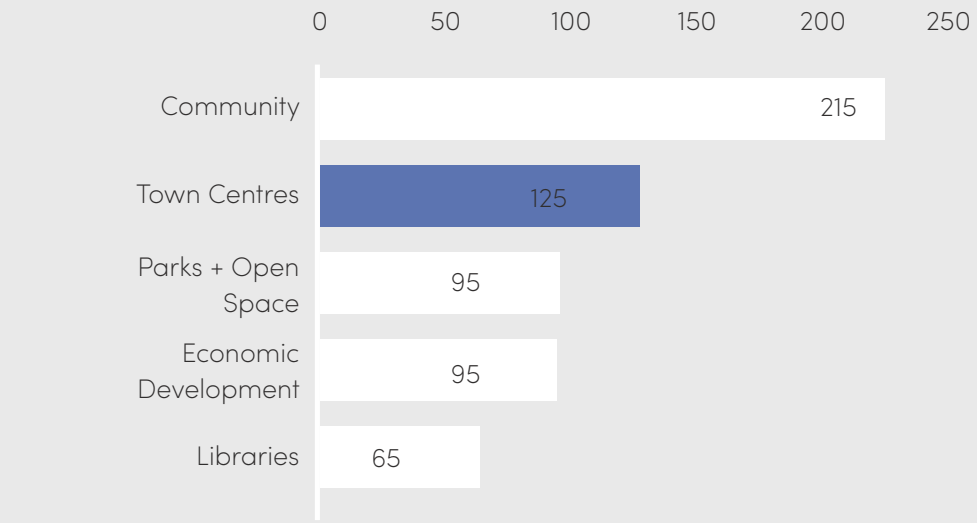
- **Facilitate improved movement around the City for all users**
- **Provide convenient, equitable and accessible parking**
- **Promote accessible parks and open space catering to all ages and cultures**
- **Reduce our carbon footprint**
- **Plan for an attractive, sustainable, affordable built environment**

***Success indicators** from the CSP (relating to transport, streets and public domain)*

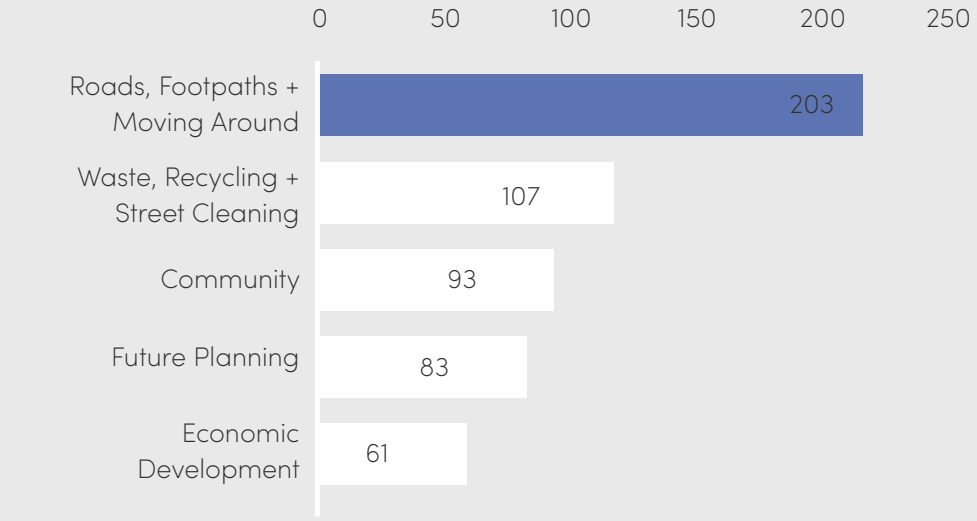
- 20% increase in the length of walkways and cycling tracks
- Decrease City–wide travel times north/south and east/west
- SMART parking available in town centres
- Increased number of people within a 400m walk of quality open space
- 10% increase in the tree canopy
- Increased art in the public domain

Feedback from comprehensive community consultation undertaken in the preparation of the Community Strategic Plan.

What Do You Love? (Top 5 Responses)

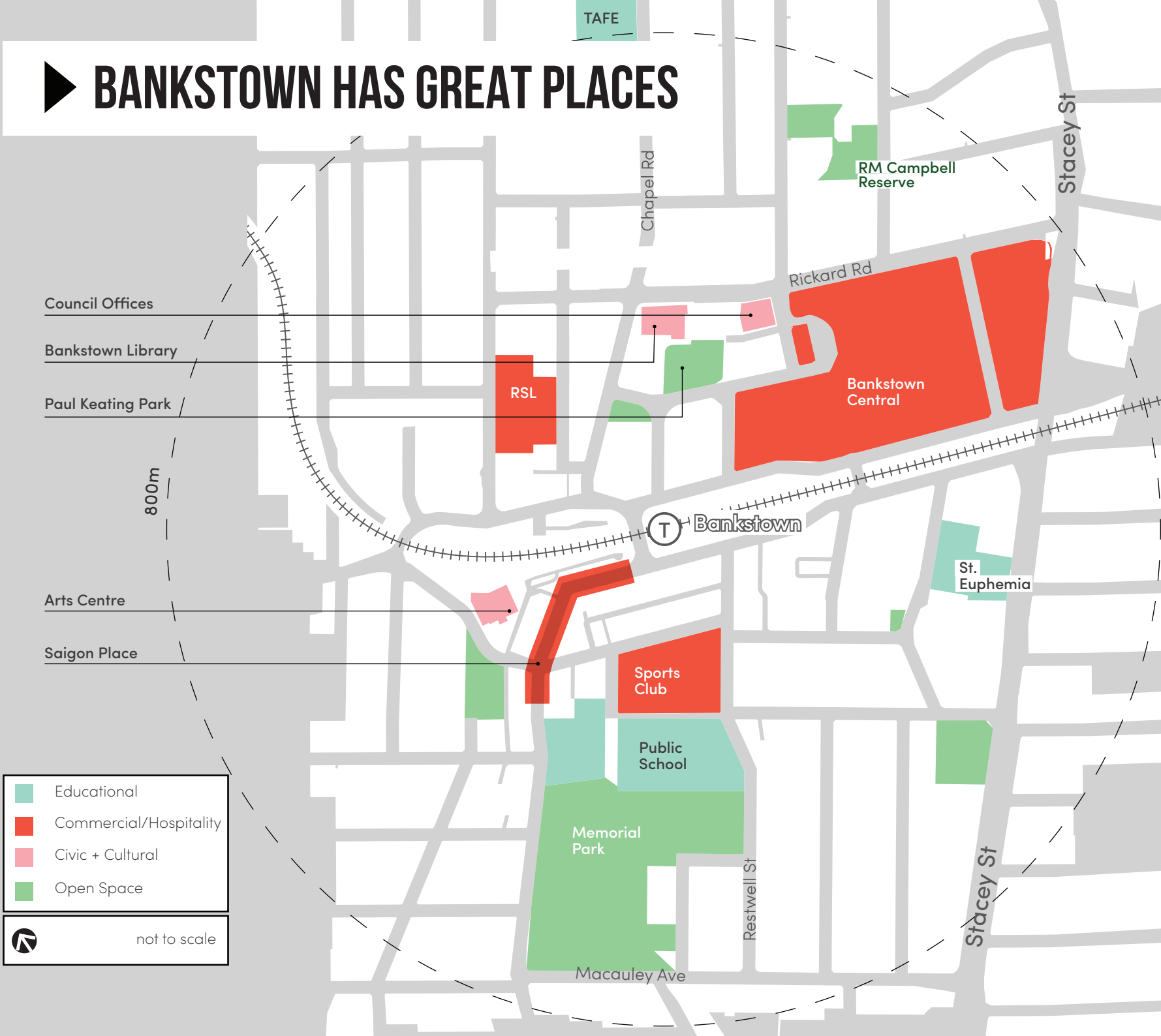


What Would You Change? (Top 5 Responses)



PART ONE.

BANKSTOWN HAS GREAT PLACES



AMENITY IN CLOSE PROXIMITY

Great Eat Streets

- Saigon Place
- City Plaza
- Chapel Road







Civic Attractors

- Bankstown Library
- City Hall
- Polish Club
- Paul Keating Park
- Arts Centre
- Schools



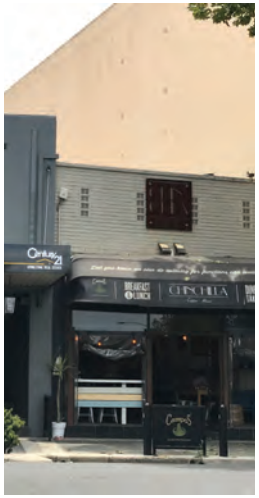




Local Services + Complementary Uses

- Fresh food
- Retail, pubs
- Health providers
- Doctor's Offices
- Supermarkets
- Post Office

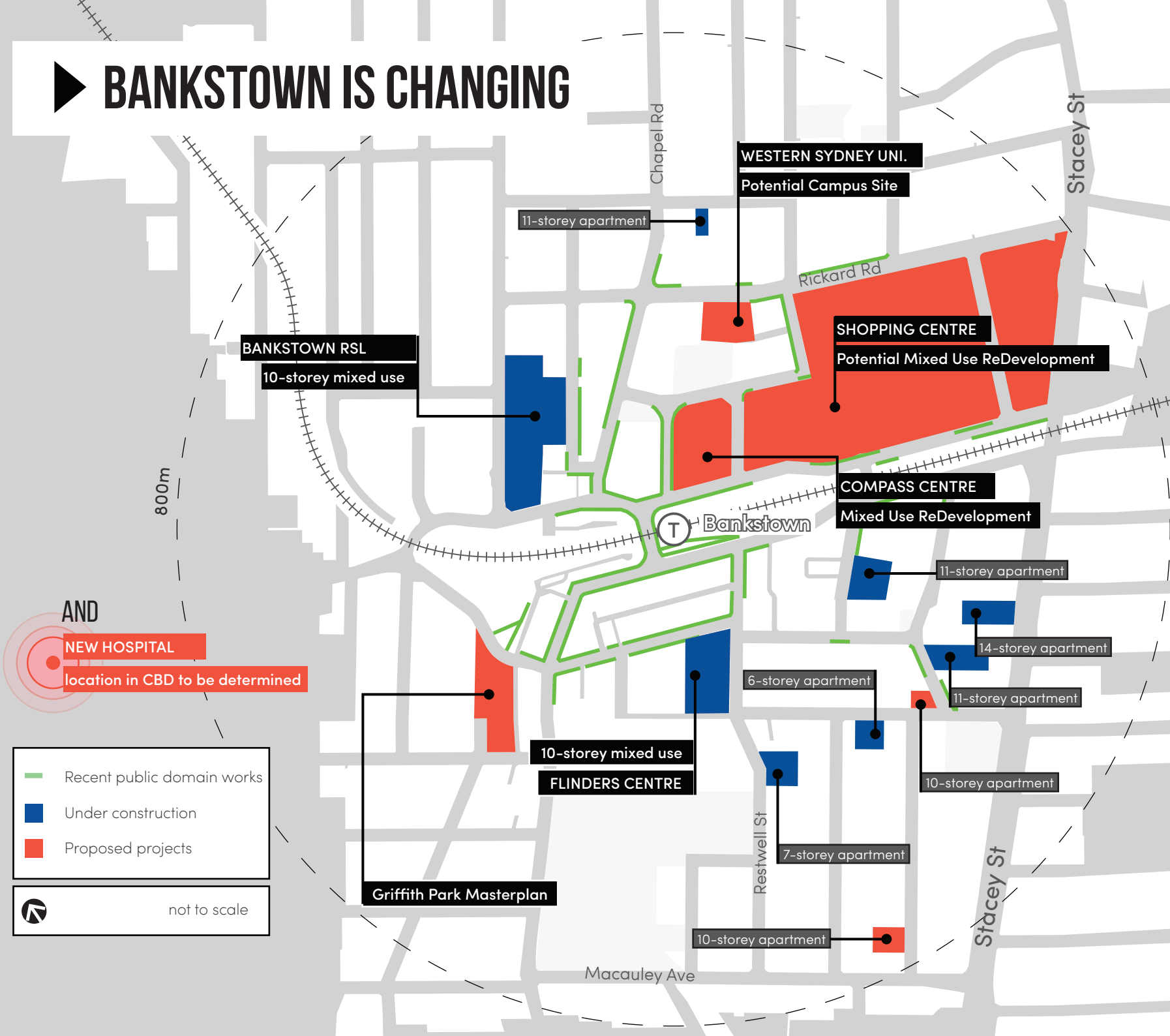






PART ONE.

BANKSTOWN IS CHANGING



WHAT IS CHANGING NOW

Public domain improvements

Council has undertaken an ongoing programme of public domain improvements to major streets in the past 15 years. This has focused on pavements street trees and furniture.

31% centre streets subject to recent upgrades





Under construction projects

Currently approved development sites which will implement street improvements to their curtilage as part of their approvals. This includes the new RSL and Flinders Centre.



Bankstown RSL (rendering)


Flinders Centre (rendering)

Proposed projects

There is an array of proposals in the CBD, including a redevelopment of the Compass Centre, Bankstown Central and a new satellite campus site for Western Sydney Uni.


Site of proposed new Western Sydney Uni.


Potential Compass Centre (rendering)

PART ONE.

BANKSTOWN IS CHANGING

SYDENHAM TO BANKSTOWN URBAN RENEWAL CORRIDOR AND SYDNEY METRO

More Residents, Jobs and Trains

The State Government is planning to increase housing and jobs along the Sydenham to Bankstown corridor, and this renewal would be supported with a higher frequency Metro train service.

In addition to increased population and jobs, Metro proposes changes to the interchange function including:

- Introduction of a secondary concourse to the East,
- Modificaiton of southern and northern plazas to create new station entries;
- No change to arrangements of bus stops, new service potential;
- Creation of 70 additional spaces for bicycle parking (32 today), half north/south of Station;
- Extension of kiss and ride bays on North Terrace to 13 (4 today);
- Ten existing taxi spaces retained; Loss of 12 car parking spaces.

\+ **19,900** new **residents** by 2036 *Source: idProfile*



↑ 100%

\+ **5,500** new **dwellings** by 2036



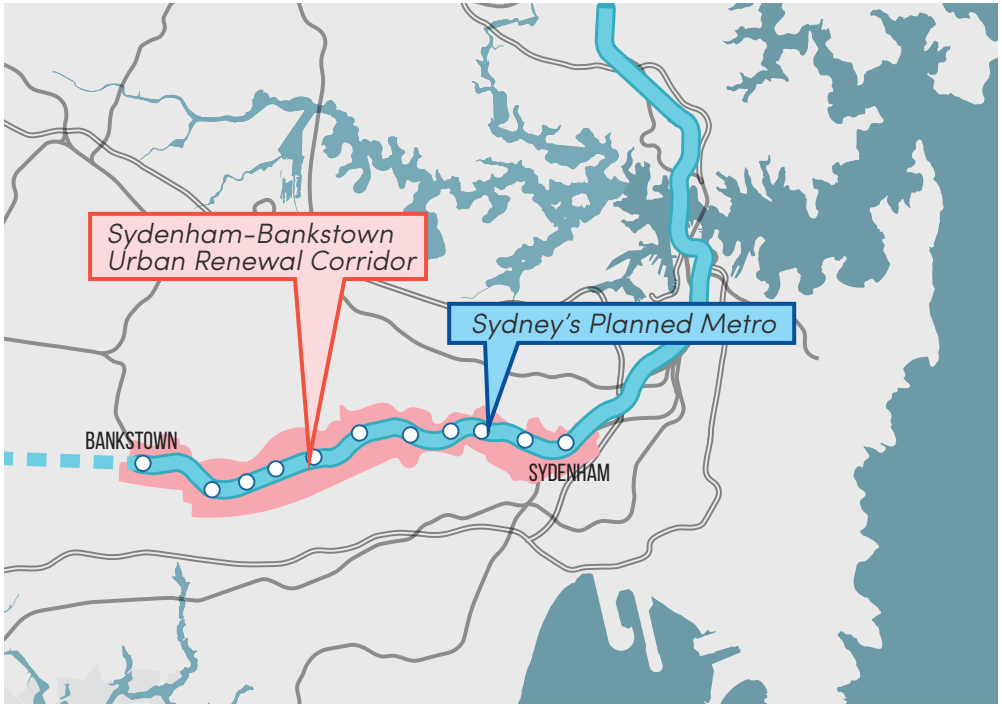
↑ 100%

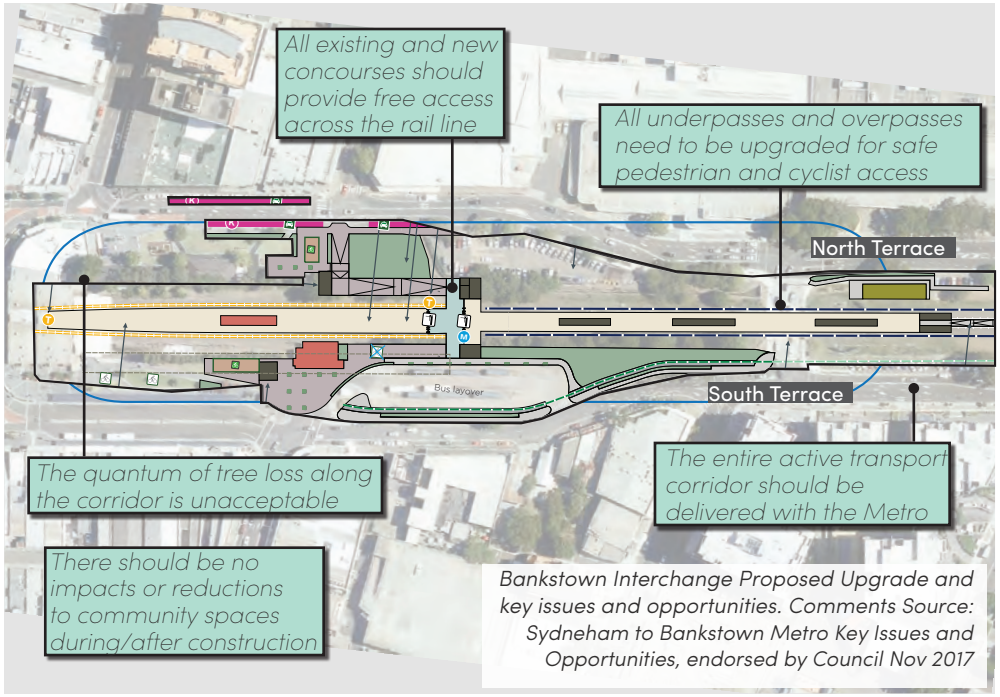
\+ **4,900-12,900** new **jobs** by 2036



↑ 100%

**Source (Employment): Greater Sydney 2056: South District Plan (GSC, 2018. p66);*





Bankstown Interchange Proposed Upgrade and key issues and opportunities. Comments Source: Sydneham to Bankstown Metro Key Issues and Opportunities, endorsed by Council Nov 2017

Key Observations

- An increase of residents and jobs will place increased constraints on transport modes in the CBD. With finite land available, a 'smart' approach to prioritising the transport modes and allocating space to them will be required.
- A large portion of the CBD will be rezoned to allow for increased building heights.
- 18,000 passengers in 2016, forecasted 30% increase with Metro (source: Sydenham to Bankstown EIS, Table 11.3, data provided by TfNSW)
- There will be significant future changes in the modes with which people access the station, with car useage dropping considerably
- Bankstown has been identified as a Collaboration Area and Council, DPE, GSC, TfNSW and GA are working together on a longer term plan for the station. However, this is beyond the scope and timeframe of the Complete Streets project.

Issues + Opportunities

- Significant changes with Metro, additional bus and pedestrian priority around station is a possibility, associated with less parking
- Possible additional North-South link
- Possible bus terminal reconfiguration
- Some difference but generally similar distribution of future land use (800m from station), with significant increase in population and jobs in the next 10/20 years.
- WSU campus will bring 1000s of people to the CBD, thus generating both pedestrian and vehicle traffic
- Whilst there will be an overall 100% intensification of population, jobs, transport, there is fixed amount of public domain. As such, existing space within streets will need to be made much better of use of in order to handle a doubling of activity.

PART ONE.

BANKSTOWN'S CHALLENGE FOR THE FUTURE

ACCOMMODATE GROWTH, UTILISE FINITE SPACE, BOOST DESTINATION APPEAL

Bankstown Today



62Ha CBD Area

12,100 Jobs (CBD + environs)*

21,300 Residents (CBD + environs)**

Destination Bankstown 2036



62Ha CBD Area

17,000 – 25,000 Jobs (CBD + environs)*

39,200 Residents (CBD + environs)**

**Source (Employment): Greater Sydney 2056: South District Plan (GSC, 2018. p66);*
***Source (Population): Pofile.Id. & Forecast.Id. for Bankstown CBD (.id Community, 2018)*



CHALLENGE STATEMENT

Growth **puts a strain** on existing streets, open spaces, social systems and community infrastructure

OPPORTUNITY STATEMENT

How can the streets and public domain **work best for everyone** so Bankstown can accommodate growth and **become an even greater place**

PART ONE.

THE DUAL CHALLENGE + OPPORTUNITY:
THERE ARE '2 BANKSTOWNS'

1
Quirky Village

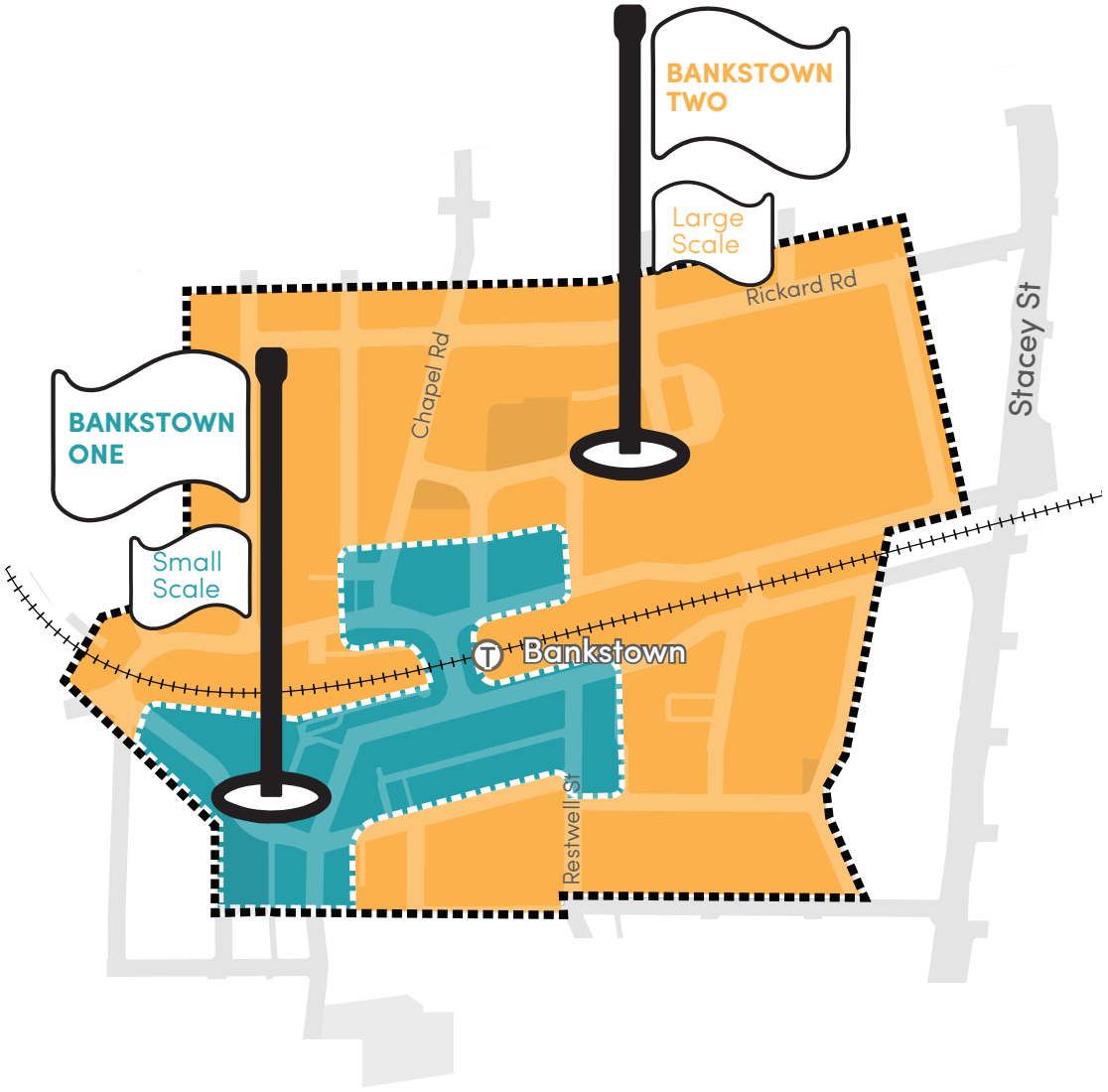






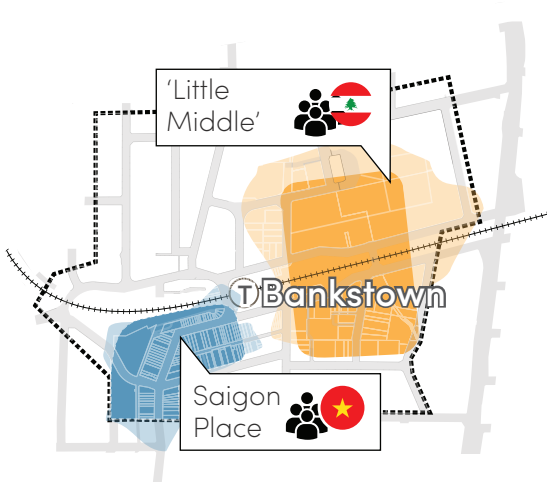


2
Big Boxes and Grand Civic Gestures



BENEFITS OF '2 BANKSTOWNS': **UNIQUE IDENTITY**

01 Strong, Unique Identities



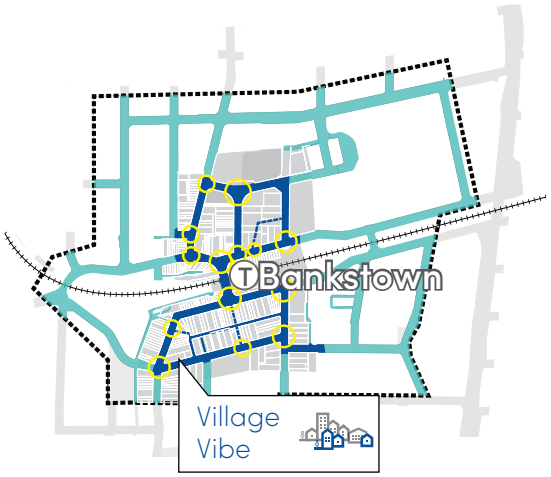
Vietnamese community congregates in the streets and spaces of Saigon Place



Arabic community, many from Lebanon, congregate in Bankstown Central and Paul Keating Park



02 Quirky Streets + Village Vibe



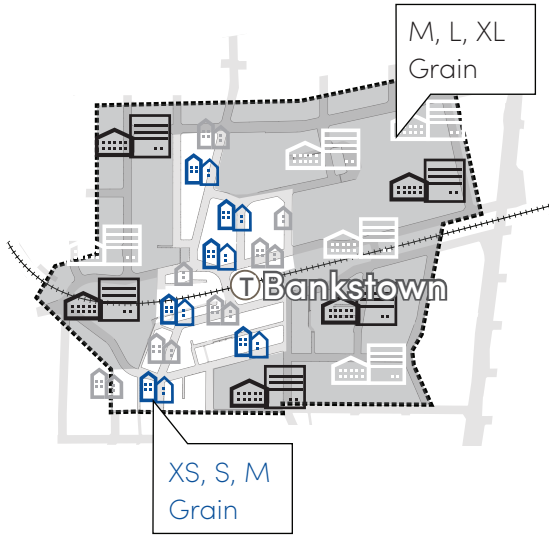
42 blocks / 1 km²

20 blocks / 1 km²

Characteristic Quirky Block, Saigon Place



03 Flexible for big + small uses



Small is great for socialising



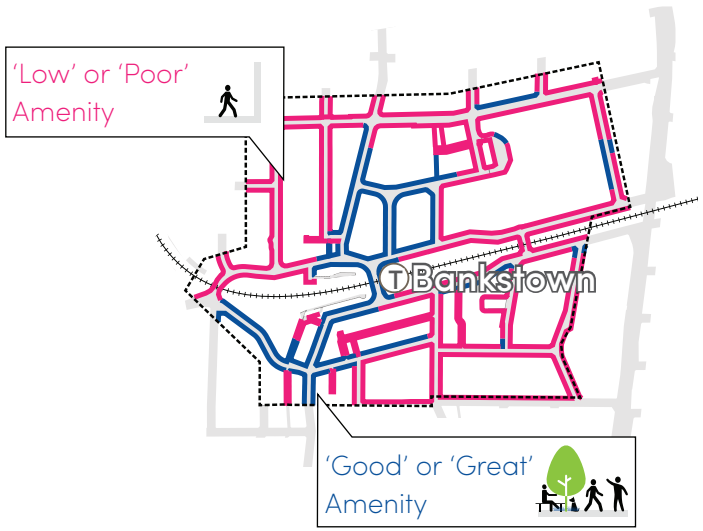
Big is great for events and more jobs



PART ONE.

CHALLENGES OF '2 BANKSTOWNS':
LOW PLACE EQUITY

01 Unequal pedestrian amenity



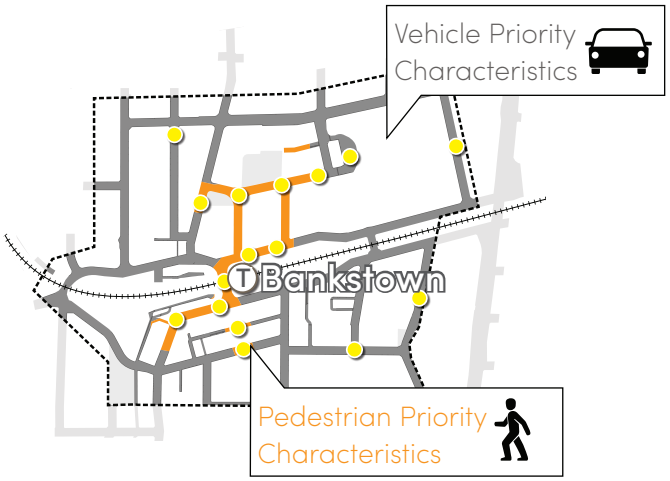
Characteristic Low Amenity, Appian Way



Characteristic Great Amenity, Saigon Pl



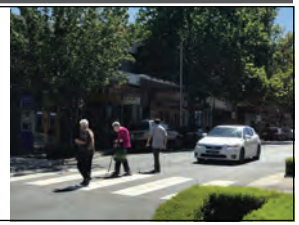
02 Unequal pedestrian priority



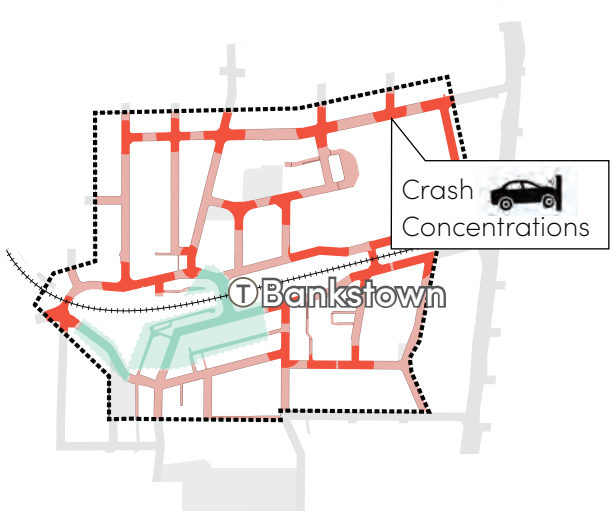
● Zebra crossing or <30 sec.wait to cross

At intersections

16 ped. priority crossings
52 vehicle priority crossings



03 Unequal safety and comfort



Safety zone (few or 0 crashes)

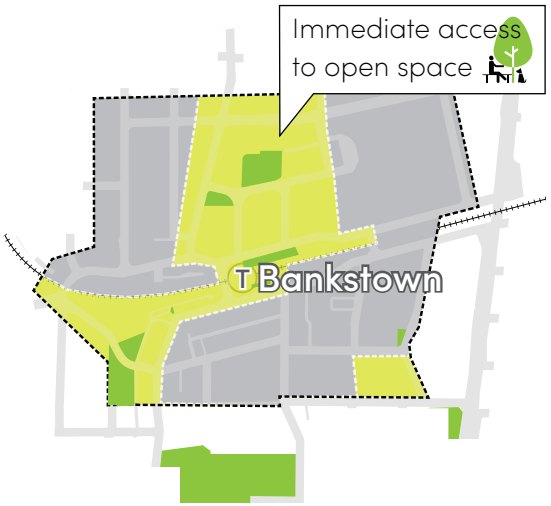
Compare + Contrast

13x higher crash rate on Rickard Rd:

.41 crashes/ linear meter (60km/hr speed, 381 accidents total)

.03 crashes / linear meter in Saigon Place (10km/hr speed, 7 accidents total)

04 Unequal open space provision



Lower open space amenity

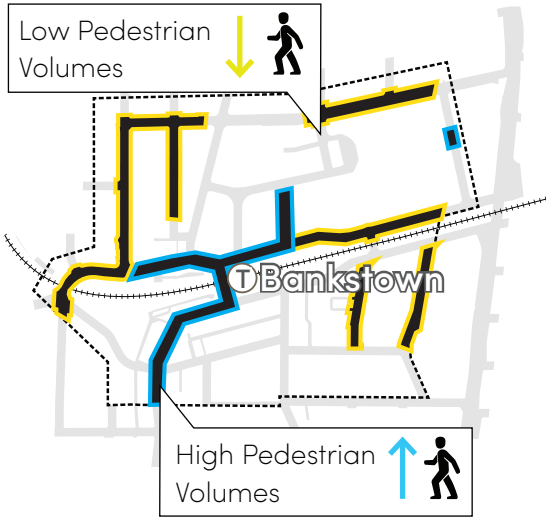
Paul Keating Park (north of train line)



Griffith Park (south of train line)



05 Unequal pedestrian patronage



Characteristic High Ped. Volumes, Saigon Pl (approx. 13,000 daily walkers)



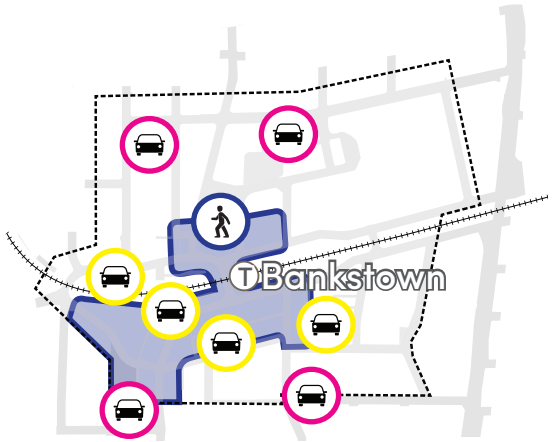
Characteristic Low Ped. Volumes, Rickard Rd (approx. 1,500 daily walkers)



PART ONE.

CHALLENGES OF '2 BANKSTOWNS':
TRANSPORT INTEGRATION

01 Carparks dominate the village centre



Bankstown Village

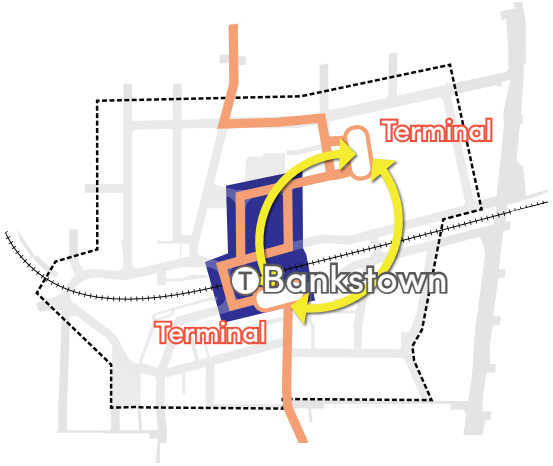
Carparks, periphery

Carparks in the Village

Car parking stations take up

2.5Ha (15%)
of land in the 'Village'

02 2 large bus interchanges force buses to navigate quirky geometry



Major bus route

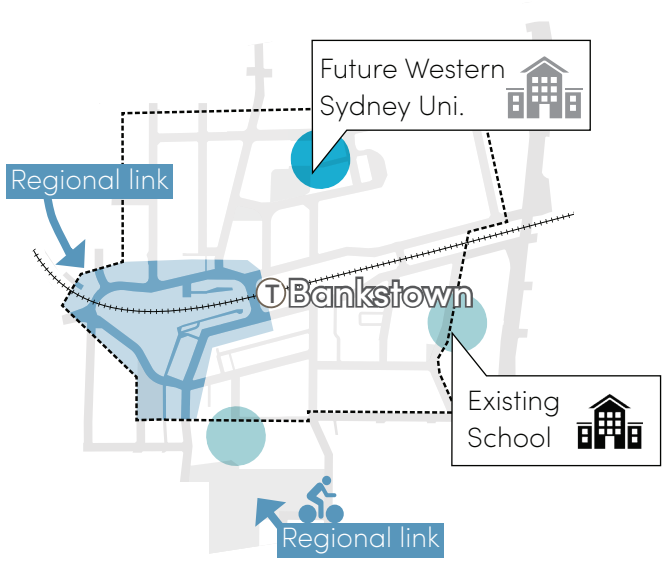
Bus route - quirky street conflict zone

Every bus that goes to 1 terminal goes to the other, and then back

At peak hour

1 bus/minute
across the City Plaza bridge

03 Limited cycling infrastructure

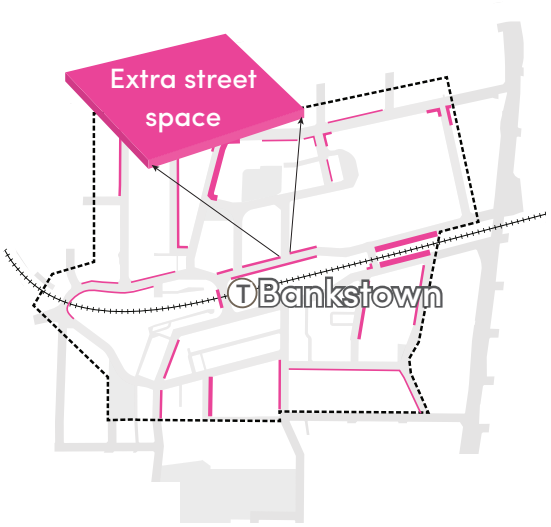


Gap in regional cycle network

No bikes allowed

0 dedicated cycle lanes in the CBD

04 Underutilised street space



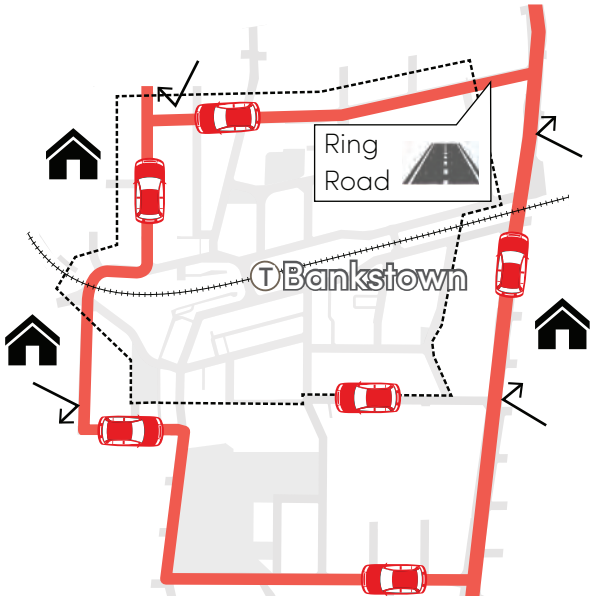
Surplus street space
(if lane widths were minimised, with no change to traffic or parking)

What This Space Could Be Instead:
Plazas, parklets, tree plantings, seating

Benchmarked against best practice

there is
.78ha underutilised space
in the CBD

05 Harsh edge barriers for connectivity



In the CBD...

65% of all accidents in the CBD
occur on the ring road

OPPORTUNITIES OF '2 BANKSTOWNS'

1 Rearrange and reprioritise the transport modes for improved integration

Potential

- MULTI-MODAL STRATEGY TO INCREASE MODE SHARE
- PRIORITISE PEDESTRIANS IN CBD
- SUPPORT PROJECTED GROWTH
- PARKING MANAGEMENT STRATEGY

2 Celebrate the place's unique identity and diverse people identities of the centre

Potential

- 'LITTLE LEBANON' CULTURAL CENTRE
- ENHANCE WHAT MAKES BANKSTOWN GREAT
- CONTINUED DESTINATION FOR FIRST GENERATION IMMIGRANTS

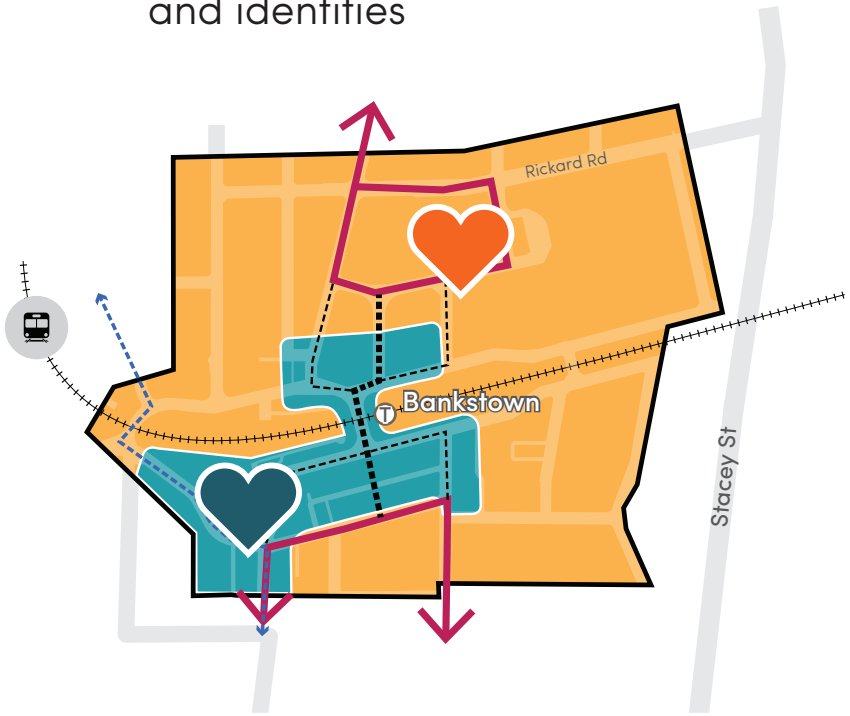
3 Claim space for equity, improved quality, and social exchange

Potential

- PROMOTE BANKSTOWN AS A DESTINATION FOR PEOPLE
- MORE EQUITABLE SPATIAL SPLIT FOR MODES
- SUPPORT FOR NIGHT-TIME ECONOMY
- IMPROVE QUALITY OF PUBLIC REALM

A

SHORT TERM: Celebrate the 2 Bankstowns for their eccentricities and identities



Primary features:

1. 2 identity-focused community centres for Arabic and Vietnamese
2. 2 bus interchanges integrated in the streets
3. Pedestrian or shared centre around train station
4. Cycling facilitated where existing demand
5. Ring-road promoted for movement, as boulevard

Primary risks:

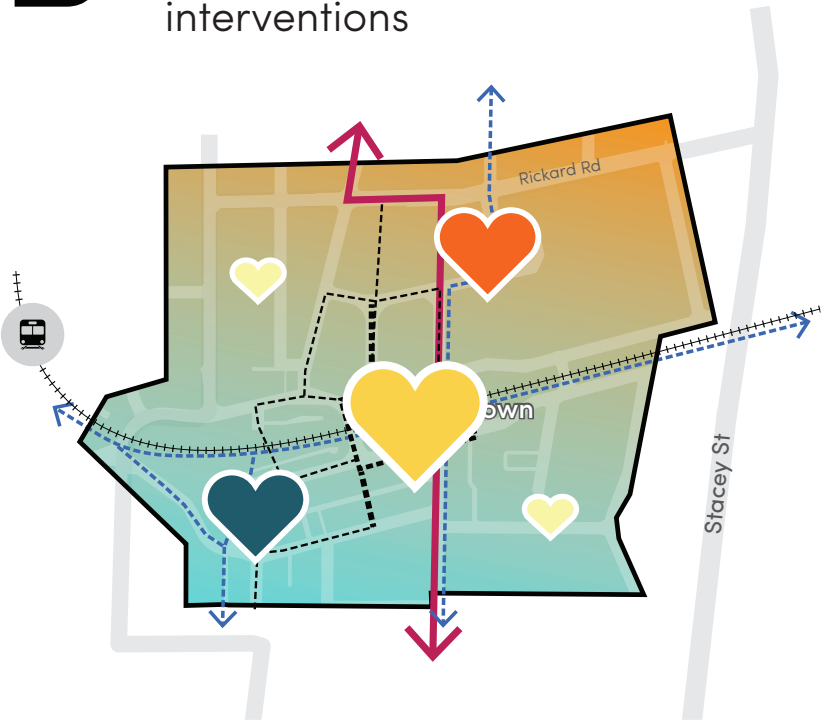
1. Maintain limited connectivity
2. Walking distance between bus interchanges and rail line

Primary rewards:

1. Lower cost
2. Improved, celebrated identity
3. Pedestrians prioritised

B

LONG TERM: Unite the 2 Bankstowns through a series of interventions



Primary features:

1. Maintained and solidified identity
2. 1 'Main Street' or Civic Space to unite the centre - 'interchange as place'
3. Increased pedestrian and bus connections across rail line.
4. 1 Bus line across rail line
5. Cycling facilitated to connect primary destinations
6. Parking stations located on periphery

Primary risks:

1. Higher Cost
2. Possible loss of unique identity

Primary rewards:

1. Integration of bus and train
2. Pedestrians prioritised
3. Leverage metro infrastructure

PART TWO.





TRANSPORT ANALYSIS

This section outlines key findings from surveys of each transport option in and around the CBD. This includes surveys of cars, cyclists, pedestrians, parking and public transport. This provides an understanding of how, when and where people move around Bankstown so optimisation of each transport system can occur in conjunction with future public domain improvements.

At present the train station, taxi rank and bus stops do not provide a memorable experience nor represent Bankstown's unique identity. The rail infrastructure itself is a major barrier between north-south movements. In addition, the existing network of one-way streets lacks legibility and distorts street-based retail. The centre's two bus interchanges further exacerbate pedestrian connectivity and create unnecessary bus traffic between each interchange.

In improving the functionality of individual services, future work will create an improved place-based mobility network. It will incorporate car share and anticipate emerging technologies, such as mobility-on-demand.

PART TWO.

CURRENT + FORECAST MODE OF CHOICE

Travel now...

- High reliance on the private car (higher for workers than residents) impacts congestion
- Overall low share of bus and walking, compared to other LGA
- Train predominantly used by residents of Bankstown working in the CBD rather than travelling to other destinations
- 9,618 people work in the Bankstown surrounding sub-catchment of which 86% work in the CBD**
- 12% of residents live and work the Bankstown surrounding sub-catchment area, 56% still drive to work and 31% walk to work**
- The working population of Bankstown relies heavily on car travel to and from work
- Walking rates in Bankstown SA3 (12%) are 5% lower than the Greater Sydney Average (17%)*
- Vehicle trips in Bankstown SA3 (74%) are 5% higher than the GS average (69%)*

and in the future...

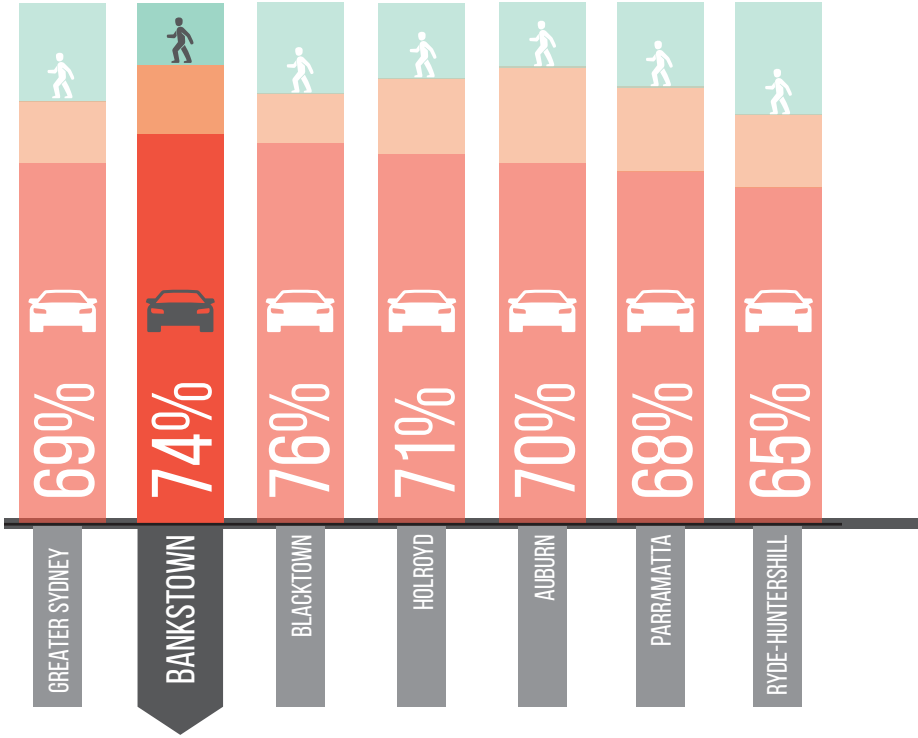
- Future mode share targets for CBD: 28% public transport (+10pp) and 5% cycling.
- Opportunity for mode share shift in the future, that needs support from public domain/urban design improvements and from transport policies/investments.
- Focus can be on people working and/or living in the CBD

Source: Journey to Work Data (Bureau of Transport Statistics, 2011)

How do people...

Travel by Mode for Bankstown Residents*

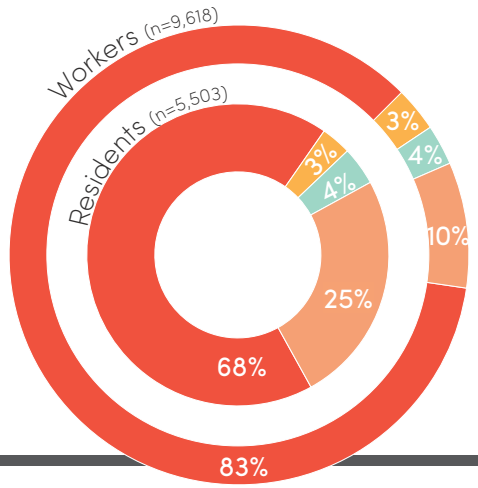
Source: Household Transit Surveys (Transport for NSW, 2016)



**Note: This represents the total trips made by residents by mode within the area of Bankstown as defined by Transport for NSW (Bankstown Statistical Area 3). Greater Sydney figures represent an average across the overall Sydney Greater Capital City Statistical Area (Transport for NSW, 2016)*

Bankstown Workers v. Residents Commuting**

Source: Journey to Work Data (Bureau of Transport Statistics, 2011);



- Private Vehicle
- Public Transport (bus + train)
- Walk Only
- Other

***Note: This represents Bankstown CBD and the surrounding sub- catchments as defined by The Bureau of Transport Statistics (Banksotwn Sub-precinct TZ 2301, 2302, 2304, 2305, 2307, 2308 & 2311)*

Travel to Bankstown station (now + future)

Source: Transport for NSW and extrapolated data, copied from Sydney Metro City and Southwest Sydenham to Bankstown Upgrade EIS (AECOM, 2016).

PART TWO.

RAIL SERVICE



Space (CBD)

Rail Infrastructure: **2.42 Ha**

Daily User Count

Rail: **18,000 passengers**

(source: TfNSW)

- Pedestrian Study Area
- Transport Study Area
- Train Line
- Station

not to scale

User Hierarchy at Metro Stations



Trip Characteristics to Key Destinations

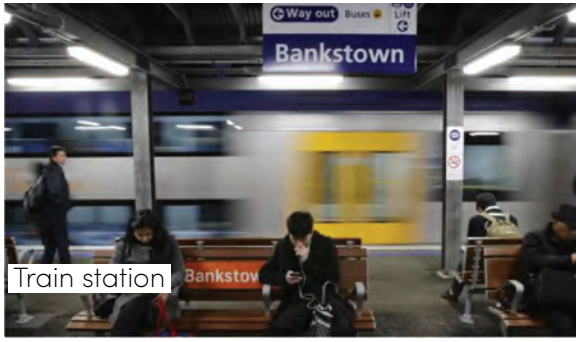
Destination	Interchanges required	Current Indicative Travel Time During Peak Period (incl. interchange)
Central	0	30 to 40 minutes
Canterbury	0	15 minutes
Strathfield	1 @ Lidcombe	23 to 29 minutes
Parramatta	1 @ Lidcombe	28 to 35 minutes
Liverpool	0	26 to 29 minutes
Chatswood	1 @ Central	55 to 65 minutes
Epping	2 @ Lidcombe & Strathfield	49 to 68 minutes

DID YOU KNOW...

The new Sydney Metro will improve travel times by up to **7 minutes** to Central and up to **1 hour** per week.



Station Platform



Train station

Source: Sydenham to Bankstown EIS (NSW Government, 2017)

Key Observations

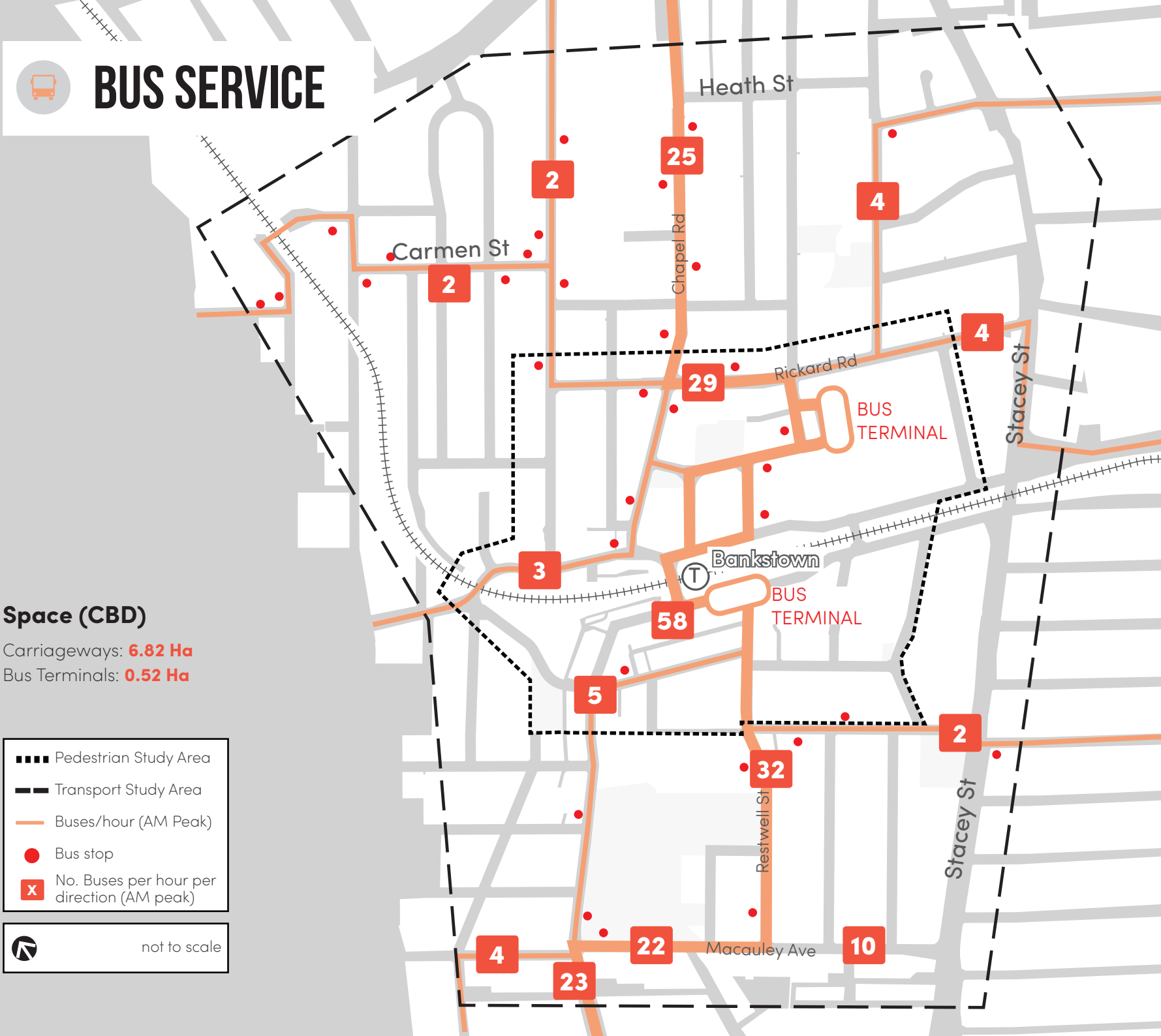
- Rail service frequency through Bankstown is typically between 4 and 15 minutes during peak and shoulder periods which provide direct links to the Sydney CBD
- The rail corridor acts as a significant barrier through the Bankstown CBD
- Some key destinations such as Parramatta require a train interchange
- Bankstown is to be the terminus for the Sydney South West Metro which is to commence operations in 2024
- Commuter parking is shown to be retained in close proximity to the station which is contrary to Council's proposed hierarchy
- Council has proposed two alternative concept options to improve the permeability of the station precinct and provide an enhanced north-south link across the rail corridor
- To have a bus layover area at the bottom of the south side of the new concourse would be a poor design outcome

Issues + Opportunities

- The Sydney metro station is to be located at the eastern extent of the existing platform and a new concourse is to be constructed
- 30% more passengers are expected once the Metro is in operation (source: Metro EIS). Shift in access mode share is included as a target
- The Bankstown Line is set for considerable disruption over the coming years as the line is retrofitted for operations associated with the South West Metro. Bankstown Station will be the terminus station of the metro, the station will be upgraded to accommodate the new metro
- Once the project is operational, Sydney Trains services would no longer operate between Sydenham and Bankstown stations. Customers would be able to interchange with Sydney Trains services at Sydenham and Bankstown stations
- Sydney Trains services to and from Bankstown to Liverpool and Lidcombe stations would not be affected

PART TWO.

BUS SERVICE



Space (CBD)

Carriageways: **6.82 Ha**
Bus Terminals: **0.52 Ha**

- Pedestrian Study Area
- Transport Study Area
- Buses/hour (AM Peak)
- Bus stop
- X — No. Buses per hour per direction (AM peak)

not to scale



Bankstown City Plaza bus only overpass


Bankstown Central bus interchange

Key Observations

- Bankstown has two primary bus interchanges; one adjacent to the railway station and one at Bankstown Central shopping centre
- Key bus corridor within Bankstown CBD is: Chapel Road, Restwell St and the circuit between the two terminals
- All routes serve both terminal (due to bus contract areas?), which create additional traffic in the core centre and time delays
- Majority of bus services stop at both interchanges, connected via a bus-only overpass at Bankstown Station.
- On-demand bus service trial to Bankstown Hospital
- The is potential future improvement in services expected with arrival of Metro and to support growth in Bankstown (Metro EIS + URS)
- Bankstown is the boundary between two different bus operators, this can lead to inefficiencies and poor coordination of services
- Buses can easily impede on other vehicles, with pedestrian pinch points in high activity pedestrian areas.

Issues + Opportunities

- 30% more passengers and 40% more pedestrian (incl bus users) are expected (Metro EIS). Shift in access mode share is included as a target
- Opportunity for the implementation of bus-only corridors on key bus route, along with improved pedestrian amenity
- Possible optimisation of bus operation between terminals
- With all bus routes serving the two terminals, operational deficiencies and additional traffic and nuisance affect the CBD area. This will get worse with expected increase in services with population growth and Metro's arrival
- Bus layover areas are inefficient use of prime CBD space and impact amenity and pedestrian safety (approx. 9 spaces south, 10 spaces north)
- On-demand service could be extended to other key generators outside Bankstown CBD
- Layover areas are highly inefficient use of prime CBD land

BUS SERVICE

Existing Bus Services

Within Bankstown City Centre, bus services are run by different operators (TrasndevNSW: 15 routes; Punchbowl Bus Co: 6 routes and STA: 1 route) and are concentrated on Chapel Road and Rickard Road and in the North part of the City and on Restwell Street and Macauley Avenue on the South part of the City. The frequency of services for the main key streets in Bankstown can be seen below.

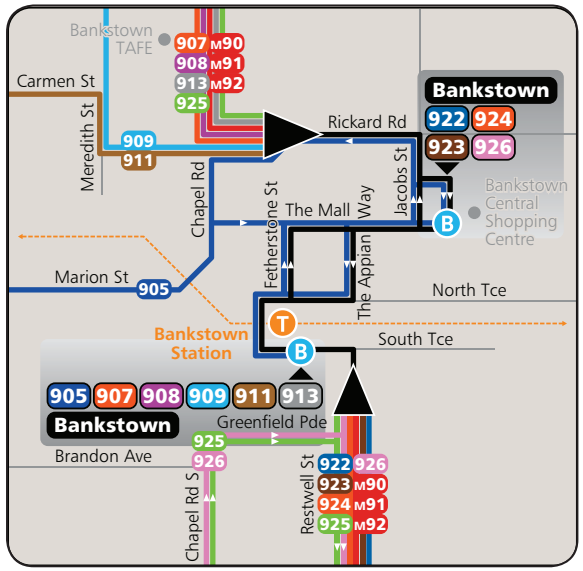

South bus interchange

Bus Routes Per Terminal

Terminal	Operator	Routes / Destination	Frequency (bus/hour/direction)
South Terminal (Station)	Transdev	905 Fairfield, 907 Parramatta, 908 Merrylands, 909 Parramatta , 911 Auburn, 913 Strathfield	21 buses per hour per direction
	Punchbowl	939 Greenacre, 940 Hurstville, 941 Hurstville, 946 Roselands	
North Terminal (Centro)	Transdev	922 East Hills, 923 Panania, 924 East Hills, 926 Revesby, 962 Miranda	15 buses per hour per direction
	Punchbowl	944 Mortdale, 945 Hurstville	
	STA	487 Canterbury	
Through Routes	Transdev	925 East Hills to Lidcombe, M90 Burwood to Liverpool, M91 Hurstville to Parramatta, M92 Sutherland to Parramatta	22 buses per hour per direction

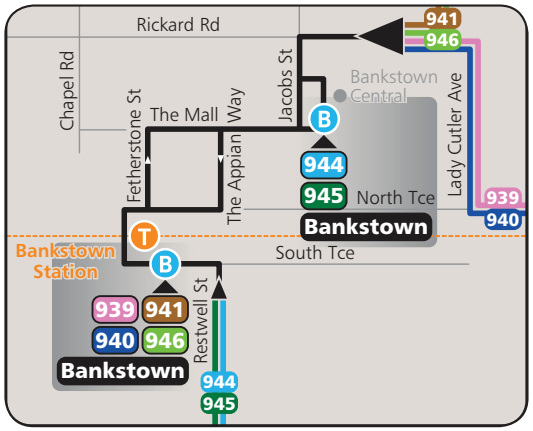
Source: TransportNSW Info (transportnsw.info, accessed 2018); TransDevNSW (transdevnsw.com.au, Accessed 2018); Punchbowl Bus Co. (punchbowlbus.com.au, accessed 2018)

Transdev Bus Network Map



Source: http://www.transdevnsw.com.au/uploads/16447_Region_13_Network_Map_NOV16.pdf (accessed 2018)

Punchbowl Bus Co Network Map



Source: http://www.punchbowlbus.com.au/pdf/networkmap.pdf (accessed 2018)

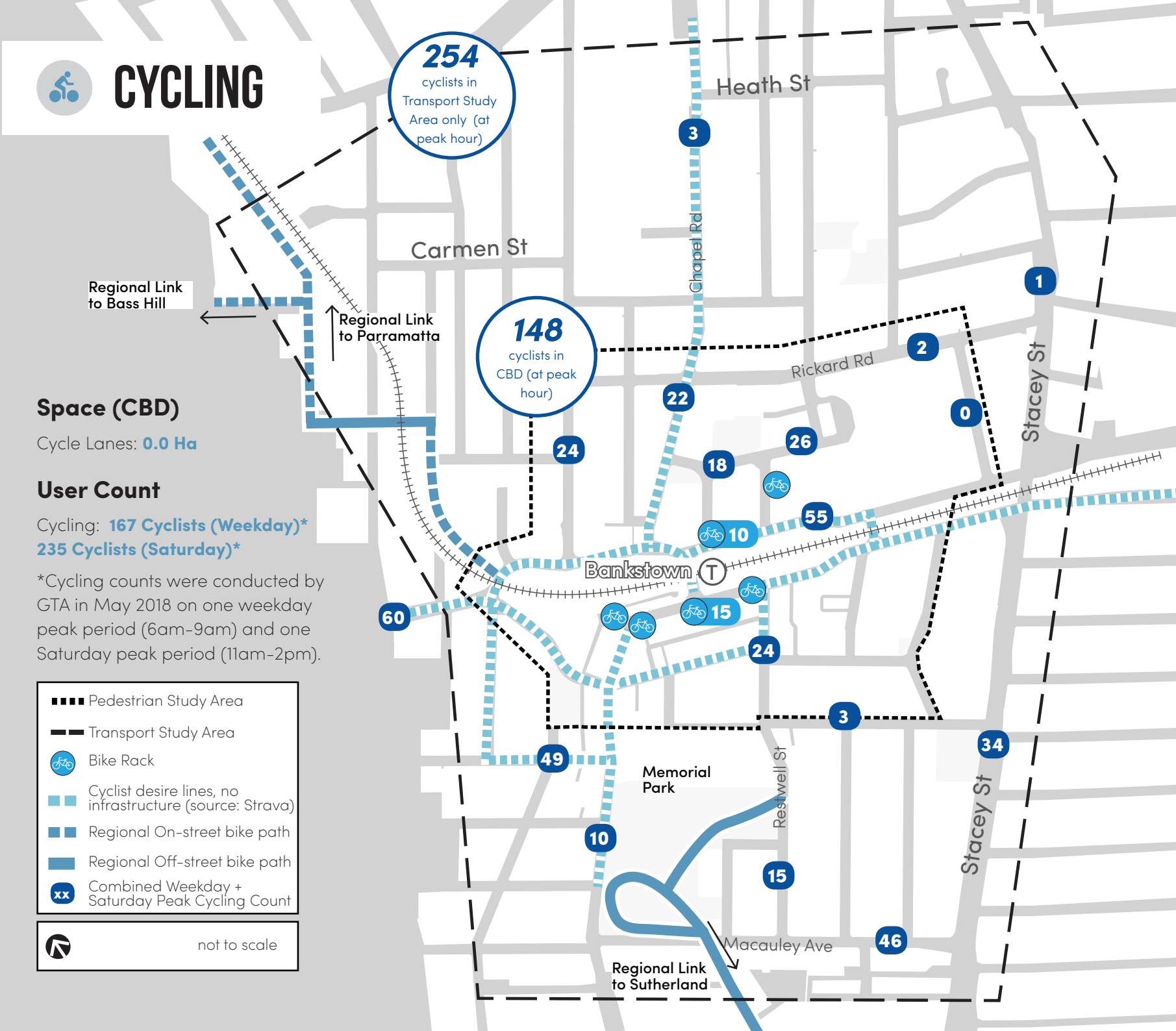

Bankstown Central Seating


South bus interchange


Bankstown Central

PART TWO.

CYCLING



Space (CBD)

Cycle Lanes: **0.0 Ha**

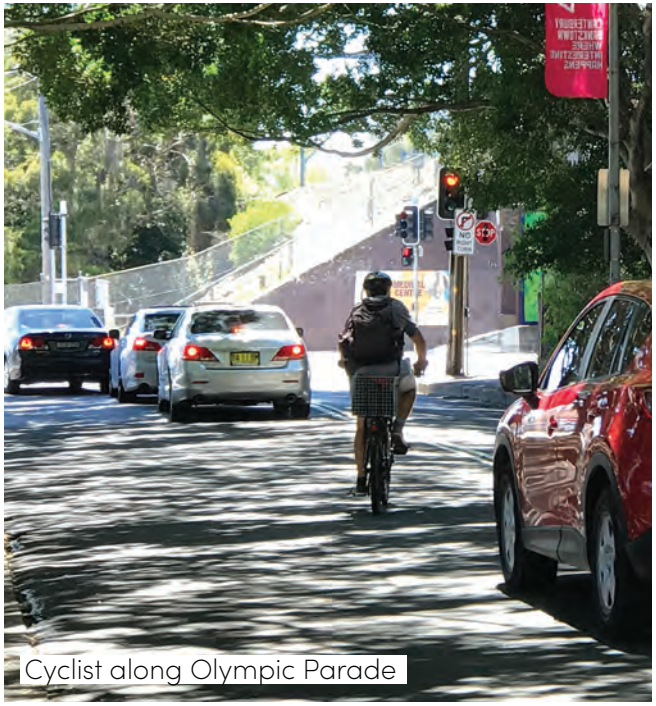
User Count

Cycling: **167 Cyclists (Weekday)***
235 Cyclists (Saturday)*

*Cycling counts were conducted by GTA in May 2018 on one weekday peak period (6am-9am) and one Saturday peak period (11am-2pm).

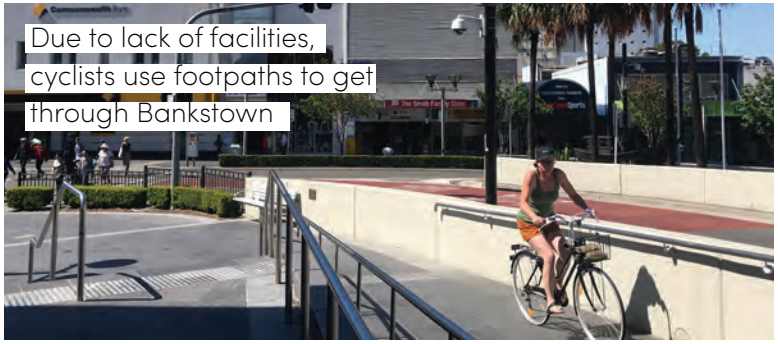
- Pedestrian Study Area
- Transport Study Area
- Bike Rack
- Cyclist desire lines, no infrastructure (source: Strava)
- Regional On-street bike path
- Regional Off-street bike path
- xx Combined Weekday + Saturday Peak Cycling Count

not to scale



Cyclist along Olympic Parade





Due to lack of facilities, cyclists use footpaths to get through Bankstown

DID YOU KNOW...

Cycling offers more than a **$21 net benefit** to the Australian economy every time a person cycles 20 minutes to work and back.

Source: *Policy Statement by Deputy Prime Minister Anthony Albanese,* 2013

Key Observations

- Limited dedicated cycling routes in Bankstown. Only one route along Salt Pan Creek, no specific route and infrastructure within the CBD
- The Metro Project includes the introduction of a shared bicycle/ pedestrian path along the existing rail corridor between Bankstown and Sydenham to support local movements between centres, however there has been no commitment or funding for the delivery of the full path
- Key cyclist desire lines on Olympic Parade, Marion Street, William Street, Greenfield Parade and South Terrace
- Very low observation of students cycling to school
- Passing cycling traffic is strongly associated with business prosperity, and numerous studies have demonstrated positive outcomes for adjacent businesses when parking is foregone for bike lanes (Bankstown Transport Action Plan, 2015)
- Council's previous documents are pro-cycling infrastructure, preferring cycling infrastructure over street parking

Issues + Opportunities

- Safety concerns for cyclists who are forced to share the road with cars, particularly along CBD edge roads such as Rickard Road
- Low confidence cyclists generally need protected infrastructure to feel safe
- Opportunity for extension of the bicycle network, with creation of off-road paths or on-road cycle markings in mixed traffic areas along key desire lines
- Provide north-south link by closing the gap between Macauley Avenue and Marion Street
- Increase and improvement of bicycle parking at key generators.
- Low supply of bicycle parking, particularly away from the Station.
- To encourage cycling, cycle lanes can be installed in place of parking on key corridors. Traffic calming (40 km/h areas) initiatives can further encourage cycling

PART TWO.

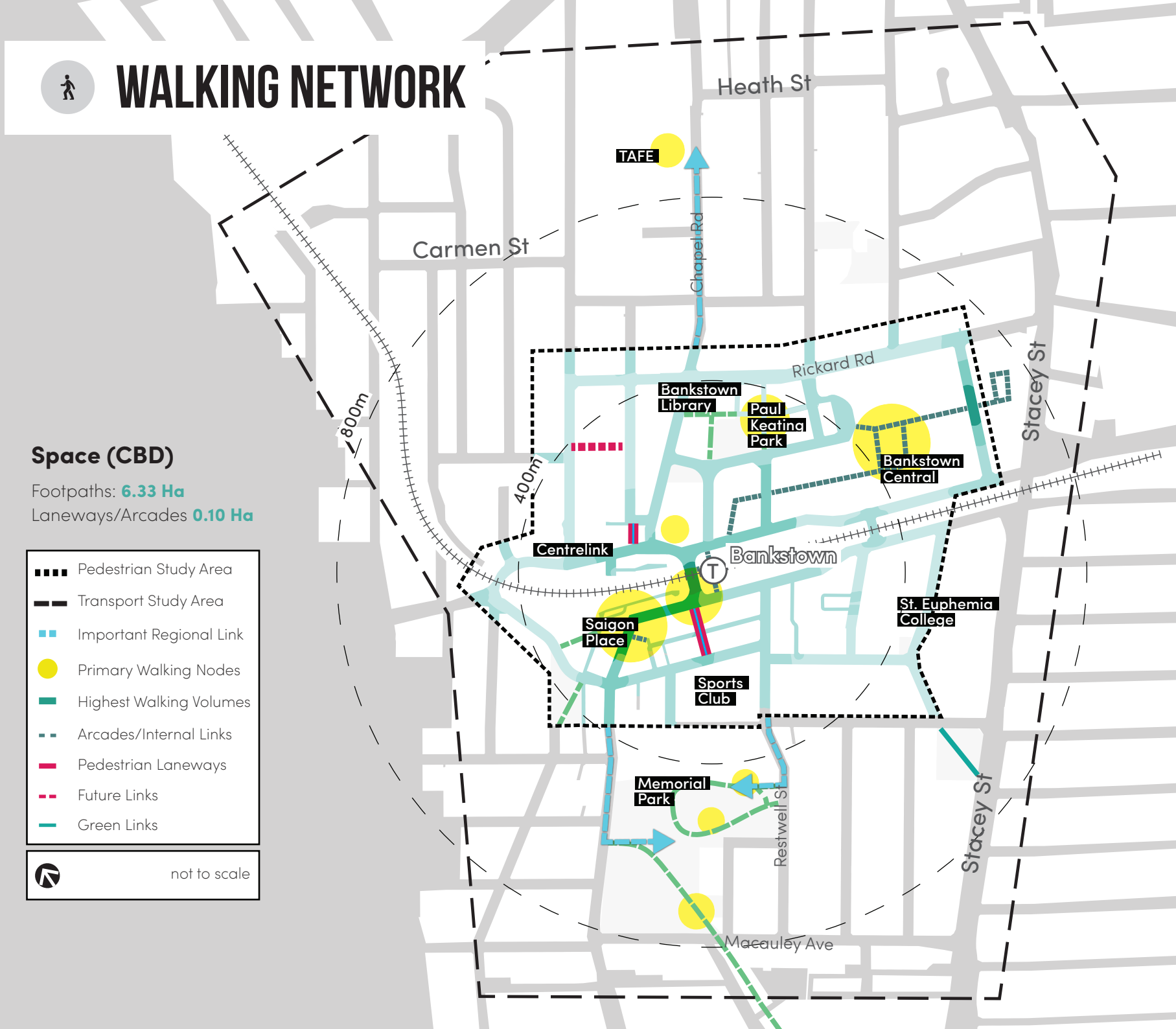
WALKING NETWORK

Space (CBD)

Footpaths: **6.33 Ha**
Laneways/Arcades **0.10 Ha**

- Pedestrian Study Area
- Transport Study Area
- Important Regional Link
- Primary Walking Nodes
- Highest Walking Volumes
- Arcades/Internal Links
- Pedestrian Laneways
- Future Links
- Green Links

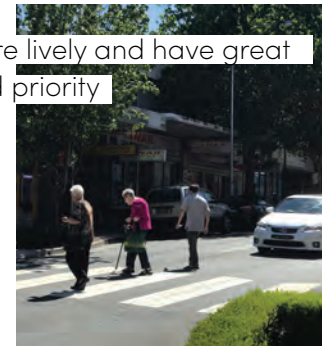
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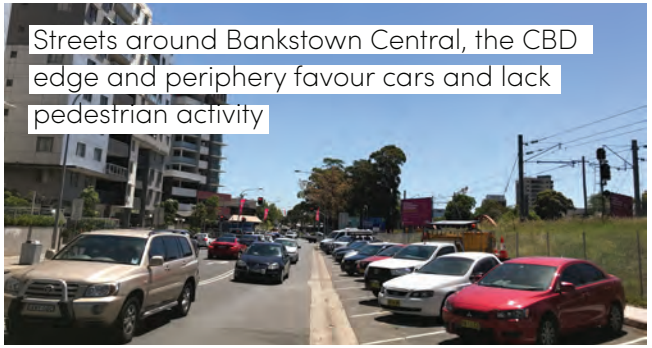


The CBD Core streets are lively and have great pedestrian amenity and priority





CBD connectivity to regional destinations such as Memorial Park and TAFE could be improved



Streets around Bankstown Central, the CBD edge and periphery favour cars and lack pedestrian activity

DID YOU KNOW...

Walk Score is a global online tool that measures the walkability of an area based on the proximity to a range of amenities (www.walkscore.com). Bankstown CBD achieves a Walk Score of 83-97 out of 100.

Key Observations

- Varying pedestrian amenity: South side of train station around Saigon Place generally more pedestrian friendly than North side, with active streets next to Bankstown Plaza versus bulky facades/low activation around Bankstown Central.
- Lack of pedestrian connections across railway and through larger blocks to the CBD and periphery
- Wayfinding to regional locations such as Yagoona Station, Punchbowl Station, TAFE and Memorial Park could be improved.
- Pedestrians generally prioritised in central CBD streets whereas cars are prioritised on the CBD's edges and peripheral zones.
- Many observed instances of pedestrian jaywalking due to insufficient pedestrian amenity that responds to key desire lines between destinations.

Issues + Opportunities

- Connect the significant pedestrian nodes with improved amenity and identity markers - from Memorial Park and Salt Pan Creek to Saigon Place and the Station and then north to TAFE
- With potential improved Metro station comes opportunity for improved pedestrian plaza and environment
- Identify regional east-west links to enhance and balance north-south connectivity, potentially along rail line and under Stacey Street.
- Improve pedestrian amenity along desire lines
- Opportunities for new or improved shared zones/footpath widening/ pedestrian streets to be identified

PART TWO.

WHERE PEOPLE ARE WALKING



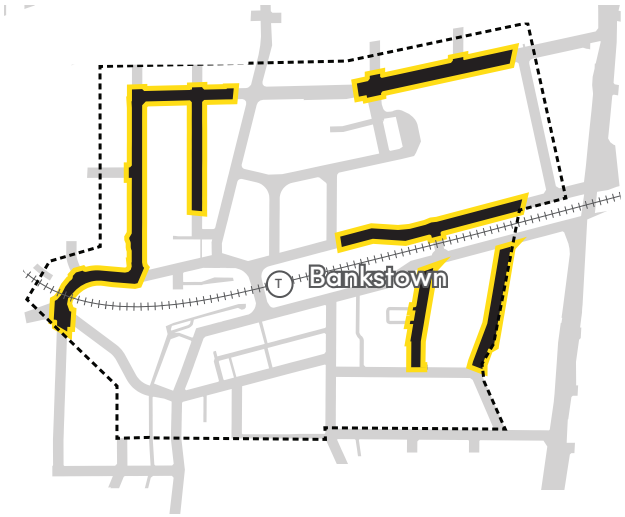
Daily Pedestrian Volume

- over 14,000 people
- 12,000 - 14,000 people
- 10,000 - 12,000 people
- 8,000 - 10,000 people
- 6,000 - 8,000 people
- 4,000 - 6,000 people
- 2,000 - 4,000 people
- 0 - 2,000 people
- Majority of pedestrians activity crossing road
- Pedestrian count location

not to scale

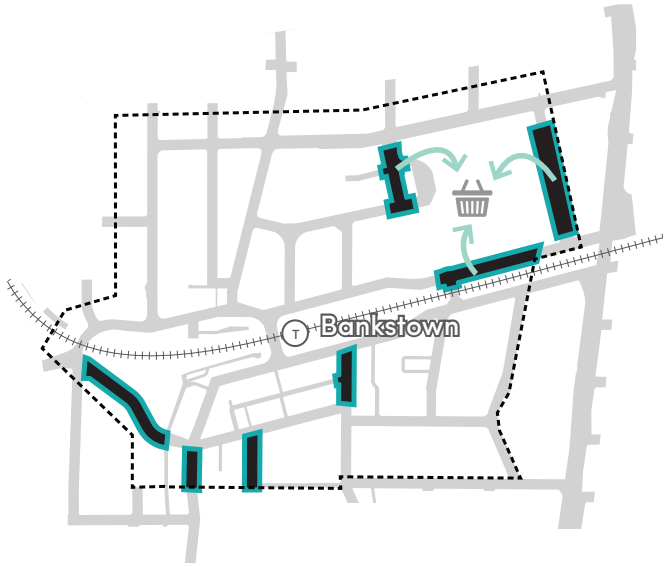
Pedestrian movement observed in 34 locations from 6am until 10pm. Average across four days - 17th Feb, 21st Feb, 24th Feb, 1st Mar.

Where are people not walking?



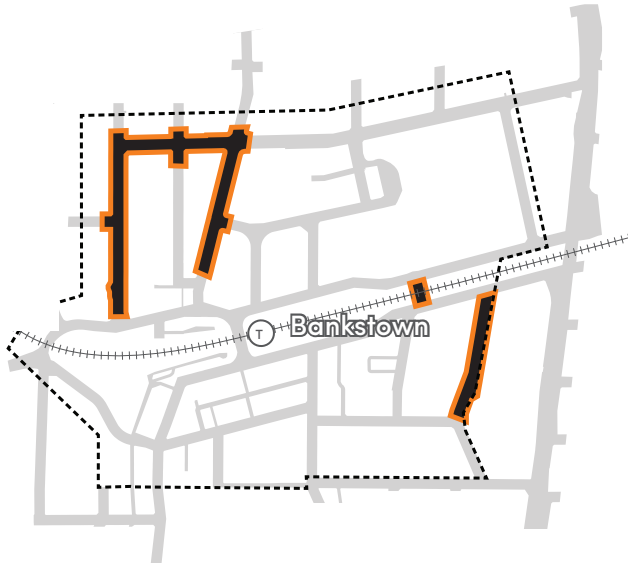
Less than 100 people walking an hour - weekdays and weekends (<1600 pedestrians observed from 6am to 10pm)

Where does weekend activity increase the most?



Streets where more pedestrian movement was recorded on weekends compared to weekdays

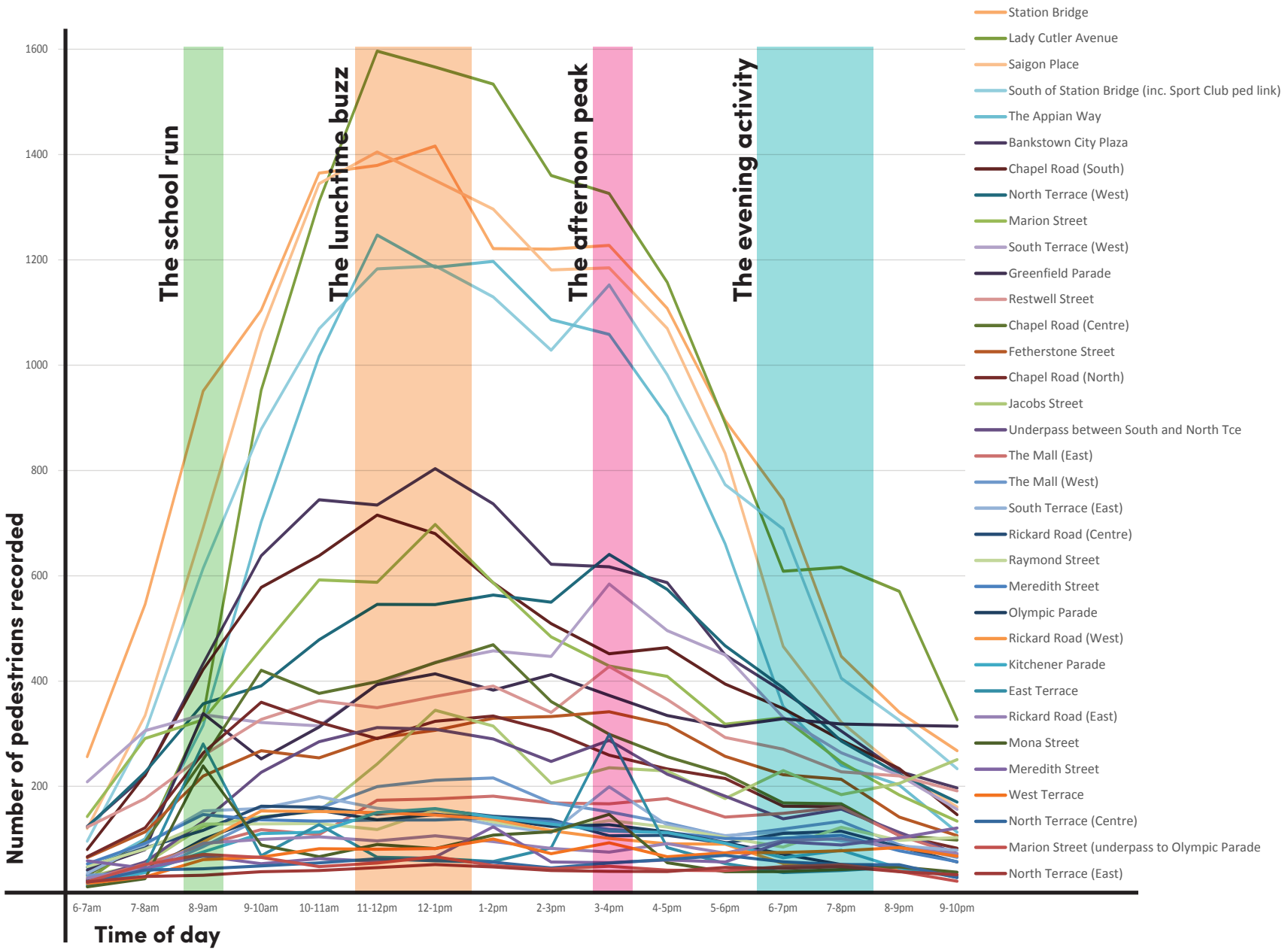
Where does weekend activity decrease the most?



Streets where more than double pedestrian movement was recorded on weekdays compared to weekends

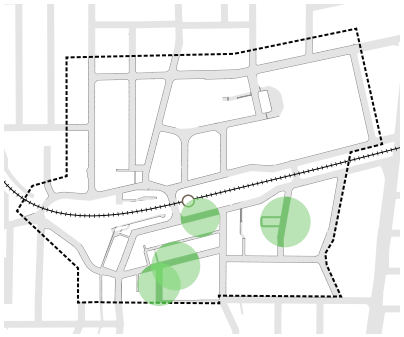
PART TWO.

WHEN PEOPLE ARE WALKING



Peaks in pedestrian activity

8-9AM WEEKDAY



The school run

- Mona Street
- East Terrace
- Greenfield Parade
- South Terrace (Western End)

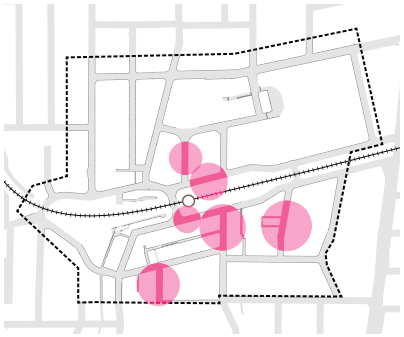
11AM-1PM



The lunchtime buzz

- Lady Cutler Ave (Bankstown Central pedestrian crossing)
- Station Bridge
- Saigon Place
- Pedestrian link to Sports Club
- Appian Way
- Bankstown City Plaza
- Chapel Road (south end)
- Marion Street (near carpark)

3-4PM



The afternoon peak

- North Terrace (Western end)
- South Terrace
- Restwell Street
- Fetherstone Street
- East Terrace
- Mona Street

6-8PM



The evening activity

- Lady Cutler Ave (Bankstown Central pedestrian crossing)
- Marion Street (near carpark)
- Greenfield Parade
- Jacobs Street
- Underpass between South/North Terrace
- The Mall
- Meredith Street

WEEKEND



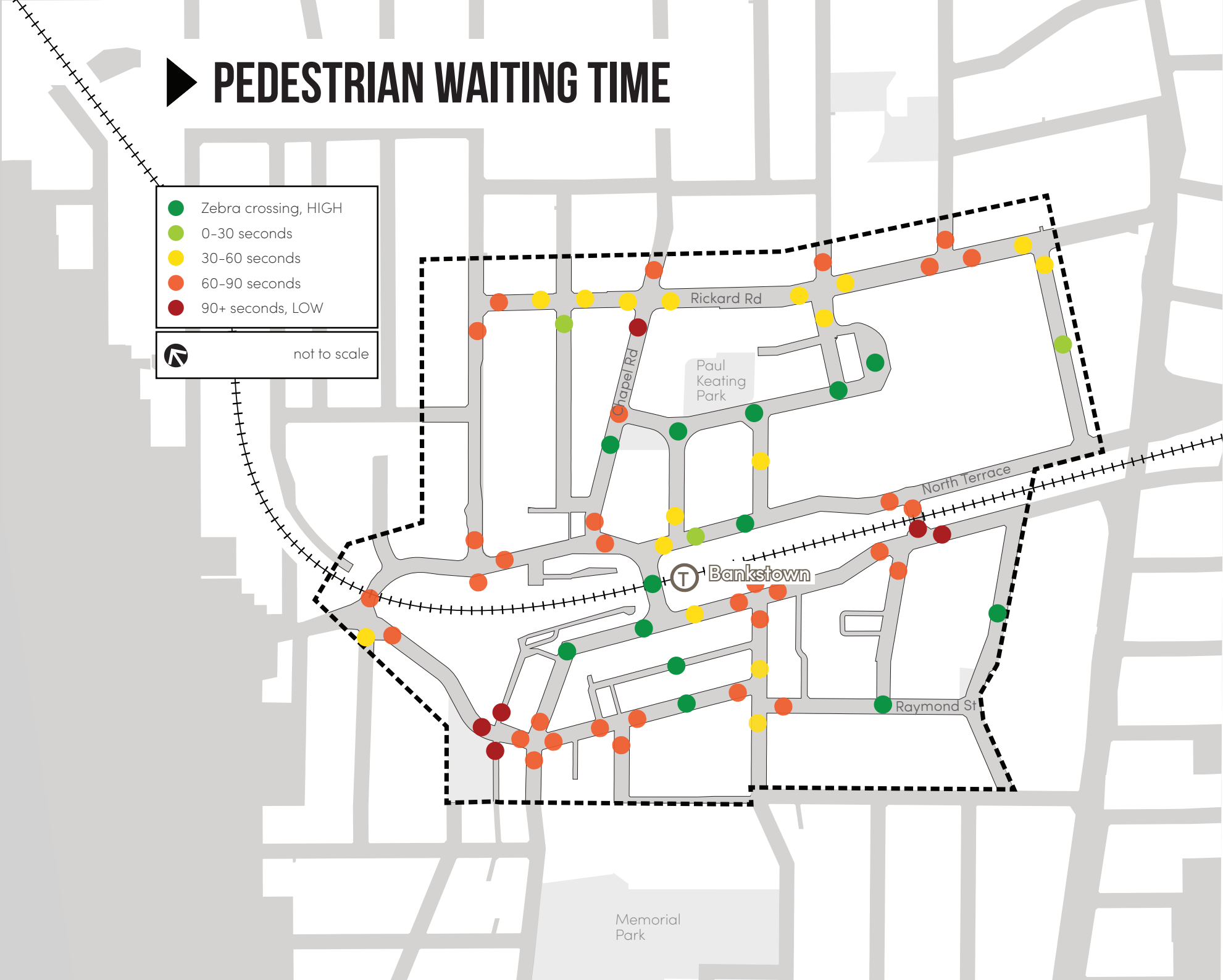
The weekend hotspots

- Chapel Road (south end)
- North Terrace (Eastern end)
- Restwell Street
- Jacobs Street
- Olympic Parade
- Lady Cutler Ave (Bankstown Central pedestrian crossing)

More activity recorded on these streets on weekends than weekdays

PART TWO.

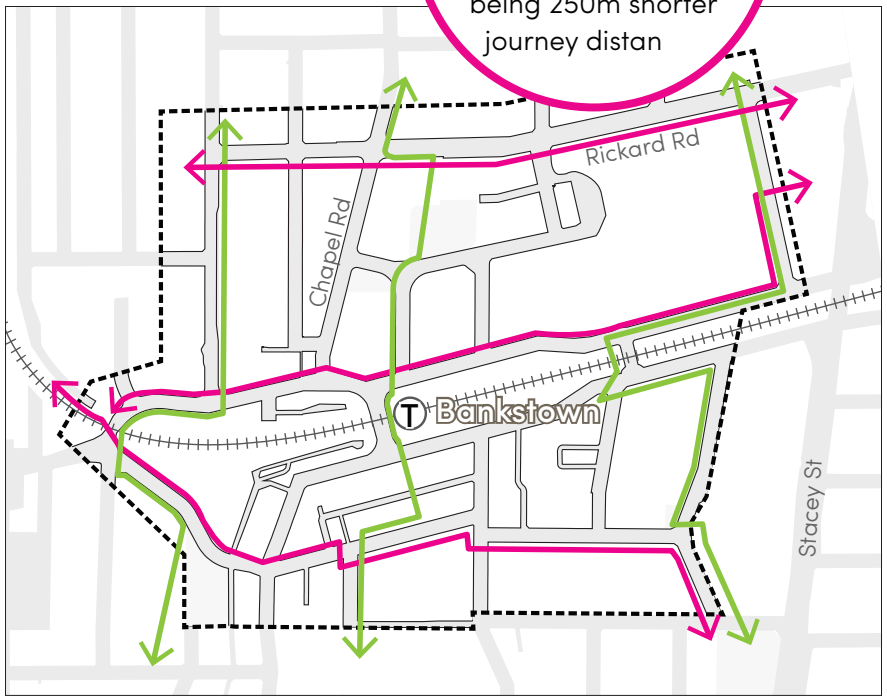
PEDESTRIAN WAITING TIME



Key Fact

It takes the same amount of time to walk from the north to south ends of the CBD as it does east - west, despit being 250m shorter journey distan

Tested Journeys



Walk Time

Typical Walking time, east-west: **12'36'' -** 1km
Typical Walking time, north-south: **12'40'' -** 750m
Typical Walking time, to the train: **7'55''**

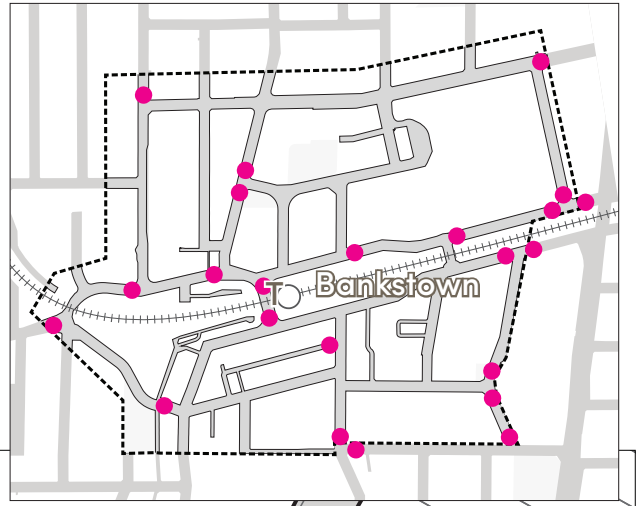
Waiting Time

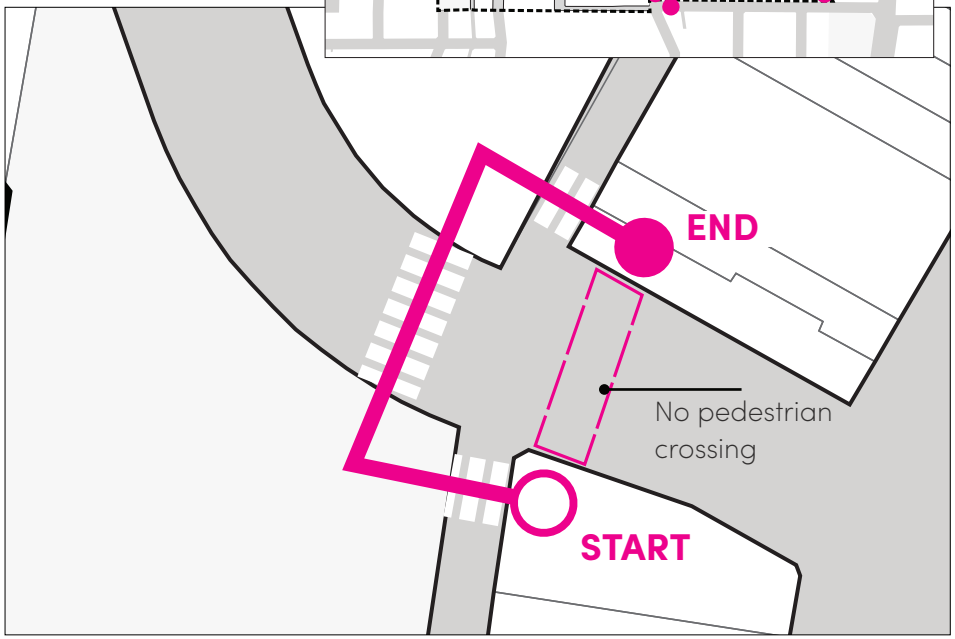
Rickard Road Journey (longest wait time): **32%**
Library to High School Journey (shortest wait time): **19%**
Market St, Sydney: **50% ;** Strøget,Copenhagen: **0-3%**

'Incomplete' Intersections

Intersections without crossings on all legs

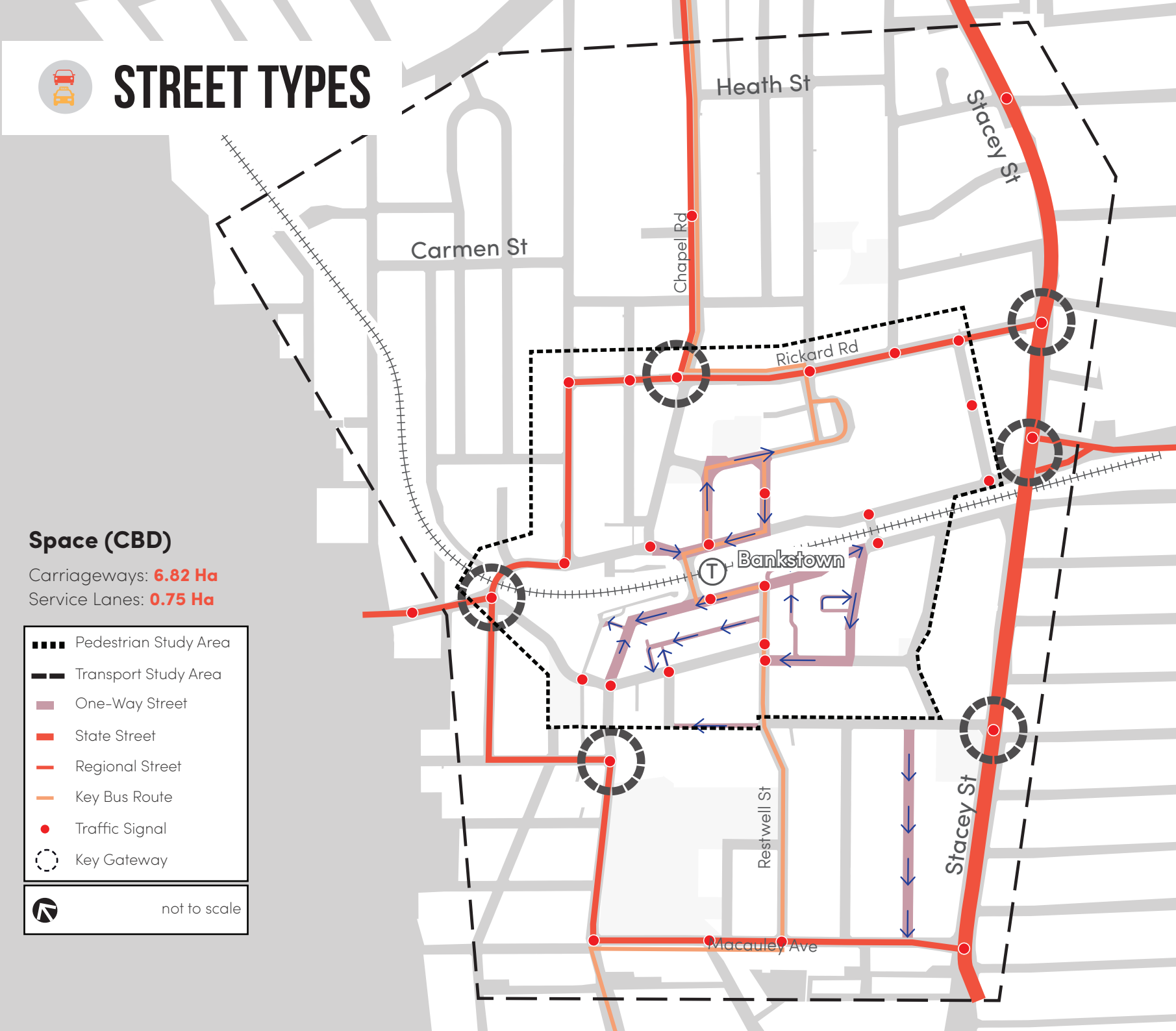
Locations where there is a lack of provision for pedestrian crossings increases walking journey time, increases the number of illegal crossings, and critically, reduces pedestrian safety.





PART TWO.

STREET TYPES



Space (CBD)

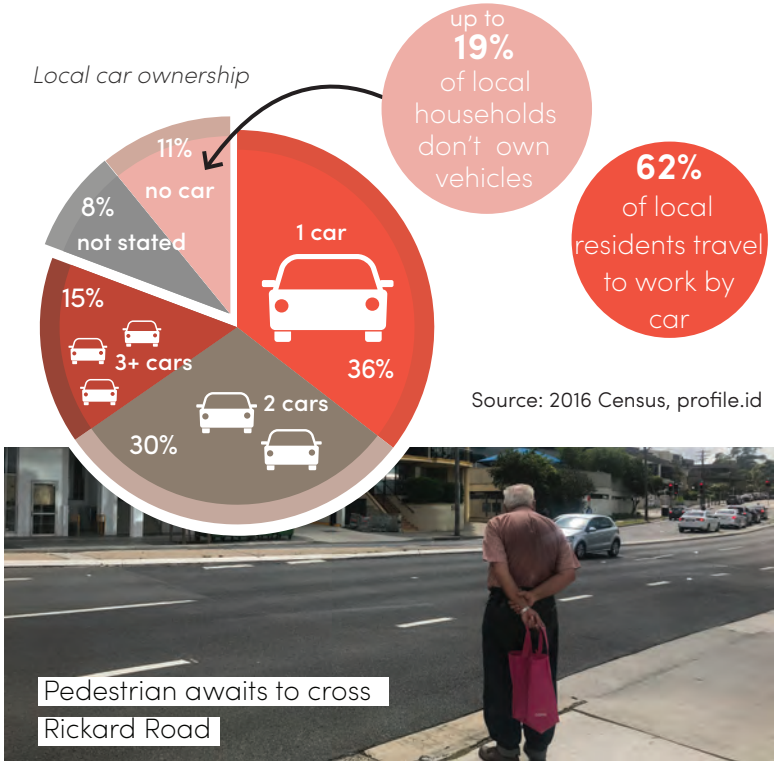
Carriageways: **6.82 Ha**
Service Lanes: **0.75 Ha**

- Pedestrian Study Area
- Transport Study Area
- One-Way Street
- State Street
- Regional Street
- Key Bus Route
- Traffic Signal
- Key Gateway

not to scale



Because the Bankstown CBD only features local streets, many are narrow or 1-way and are pedestrian oriented.



Key Observations

- Key roads for movements: state and regional road + key bus route
- Traffic signals only on those key movement road and within the core CBD area
- Observations of cars driving the wrong way down one-way streets.

State Roads:

- Stacey Street (not within Pedestrian Study Area)

Regional Roads:

- Rickard Road, Macauley Avenue, Meredith Street, Greenwood Avenue, Marion Street, Brandon Avenue and Chapel Road

Local Roads:

- All other roads within the CBD and greater Transport Study Area are local roads

Issues + Opportunities

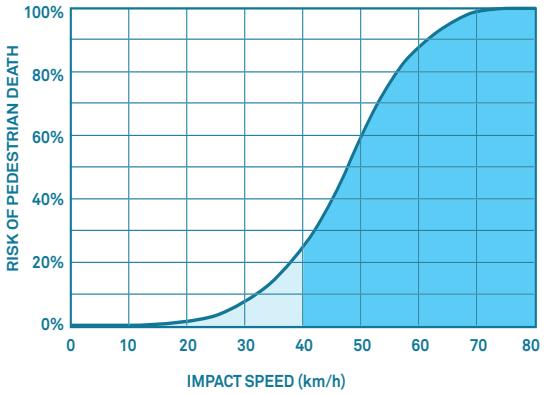
- State and regional roads define a clear edge to central Bankstown, providing an opportunity for a people focused place approach within the CBD core.
- Optimisation of walk allowance times at signalised intersections to give more priority to pedestrian.
- Potential for conversion of one-way streets to two-way streets.

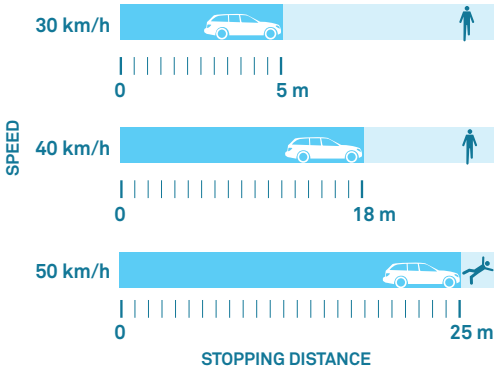
PART TWO.

TRAFFIC SPEEDS



Benefit of Lower Urban Speeds for Pedestrians





Speed is the single most important factor in the safety of a street, and is directly proportional to the stopping distance required and risk of pedestrian fatality in cases of conflict.

Source: Global Street Design Guide (NACTO, page 10)



Speed and safety signage in the CBD





Whilst signage acknowledges pedestrian activity, sometimes the streetscape does not encourage it

Key Observations

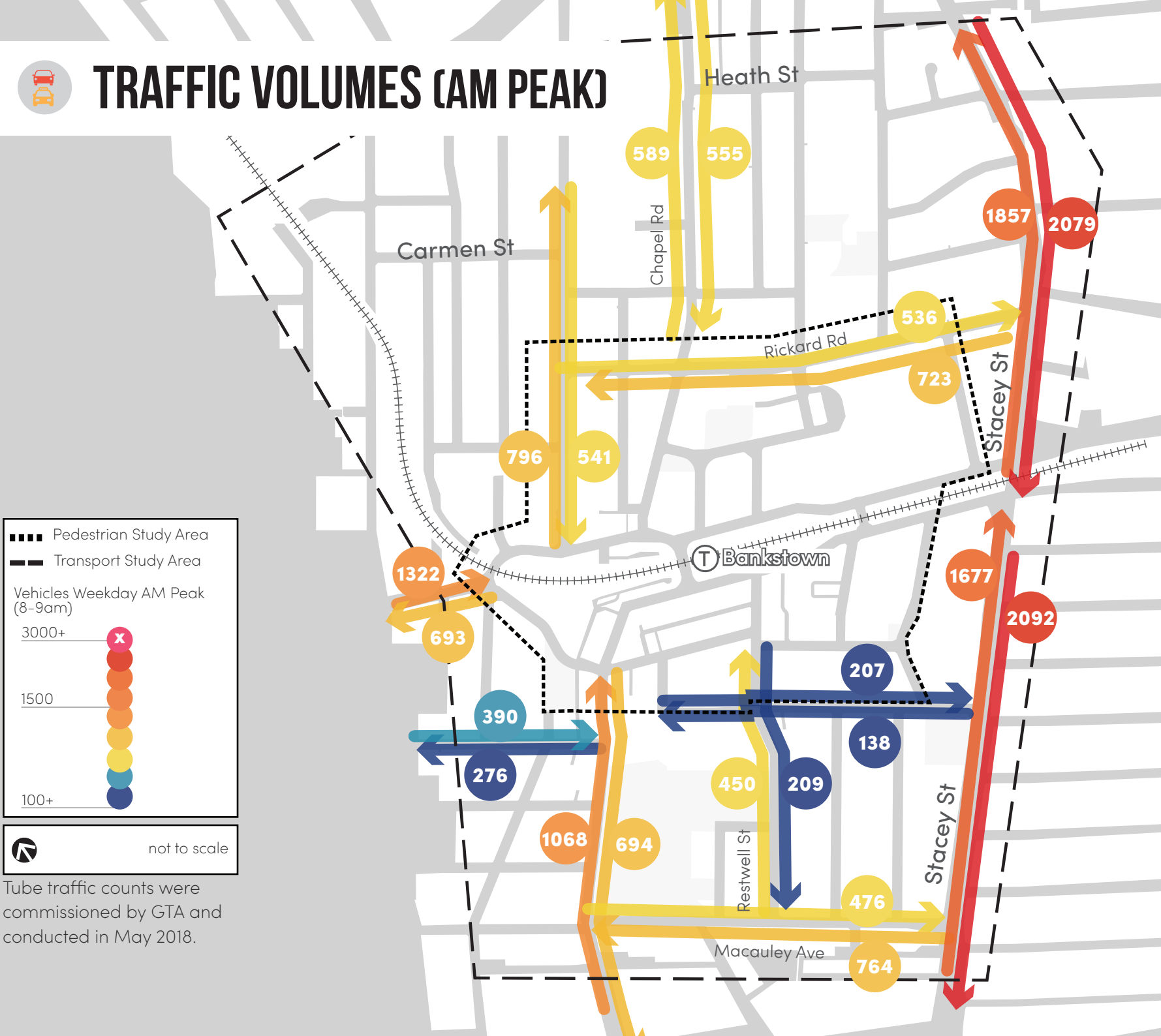
- Council does not have authority to establish speed limits
- The core CBD area is subject to a 40km/h high pedestrian activity zone, which is complemented by a combination of 50km/h and 60km/h zones on the perimeter
- A shared zone is signposted on the north side of the CBD but is not compliant with shared zone guidance, which have a legislated speed limit of 10km/h
- A number of school zones are in place on the southern side of the CBD
- There is evidence suggesting 30km/h is more appropriate for built up areas with higher levels of pedestrian and cyclist activity, such speed limits are not yet commonly supported by Roads and Maritime Services.

Issues + Opportunities

- Improve pedestrian and cycling amenity
- Discussion regarding trial of 30km/h speed limit in core CBD
- Explore implementation of shared zones (subject to agreement with RMS) in appropriate areas with high levels of pedestrian activity, where quality of life takes precedence over ease of movement.
- Investigate the creation of new green corridors, which incorporate Water Sensitive Urban Design, trees and landscape elements into streets. Green corridors can create shade, enhance aesthetic appeal, manage stormwater, connect open spaces, and critically, calm traffic
- Studies have proven that higher speeds on local roads (40km/h and above) are generally associated with increased minimum stopping distances proving a higher danger to pedestrians, particularly in areas where pedestrian activity is high (source: Global Street Design Guide, 10)

PART TWO.

TRAFFIC VOLUMES (AM PEAK)



Pedestrian Study Area

Transport Study Area

Vehicles Weekday AM Peak (8-9am)

3000+

1500

100+

not to scale

Tube traffic counts were commissioned by GTA and conducted in May 2018.



Source: http://www.ozroads.com.au/NSW (accessed 2018)



Source: https://www.dailytelegraph.com.au (accessed 2018)

Key Observations

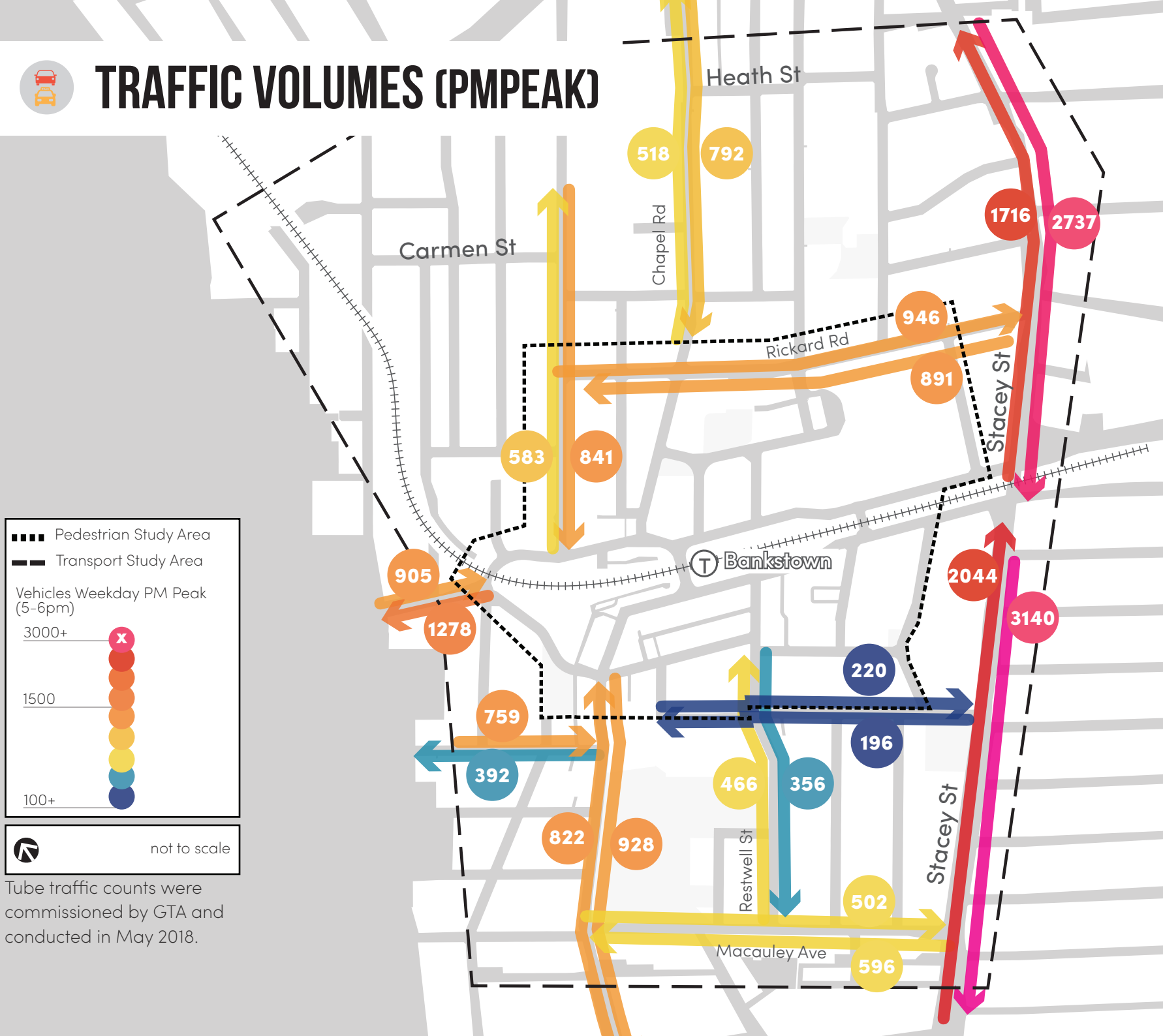
- Mid-block traffic volumes on Stacey Street are approximatively 3,500 vehicles per hour (2-ways). Stacey Street operates at or over capacity at peak hours.
- Mid-block traffic volumes on the ring road are ranging from 700 to 1,500 vehicles per hour (2-ways) during the morning peak hour
- Traffic accessing the ring road and Bankstown CBD from the West via Marion Street and from the South via Chapel Road are significantly high, around 900-1,300 veh/hour (1-way) in the morning peak. Those streets are at or over capacity during the peak hour.
- Majority of traffic flows north and south
- Bankstown is an employment and retail destination for morning peak hour traffic with approximately 6,800 vehicles entering the CBD

Issues + Opportunities

- Key road corridors and major intersections in the study area are currently operating at or close to capacity.
- The road network will not be able to support the additional traffic generated by new development in Bankstown CBD unless there is a real travel behaviour changes towards more sustainable modes of transport
- The ring road is key to support through traffic (neither origin or destination within the CBD) and avoid undesirable traffic to enter the CBD. Opportunities for improvements to the road capacity and intersection performances will be investigated.

PART TWO.

TRAFFIC VOLUMES (PMPEAK)



Pedestrian Study Area

Transport Study Area

Vehicles Weekday PM Peak (5-6pm)

3000+

1500

100+

not to scale

Tube traffic counts were commissioned by GTA and conducted in May 2018.



Traffic on Stacey Street northbound towards Hume Hwy

Source: https://www.dailytelegraph.com.au (accessed 2018)



Heavy congestion at Stacey St & Rickard Rd

Source: https://www.dailytelegraph.com.au (accessed 2018)

Key Observations

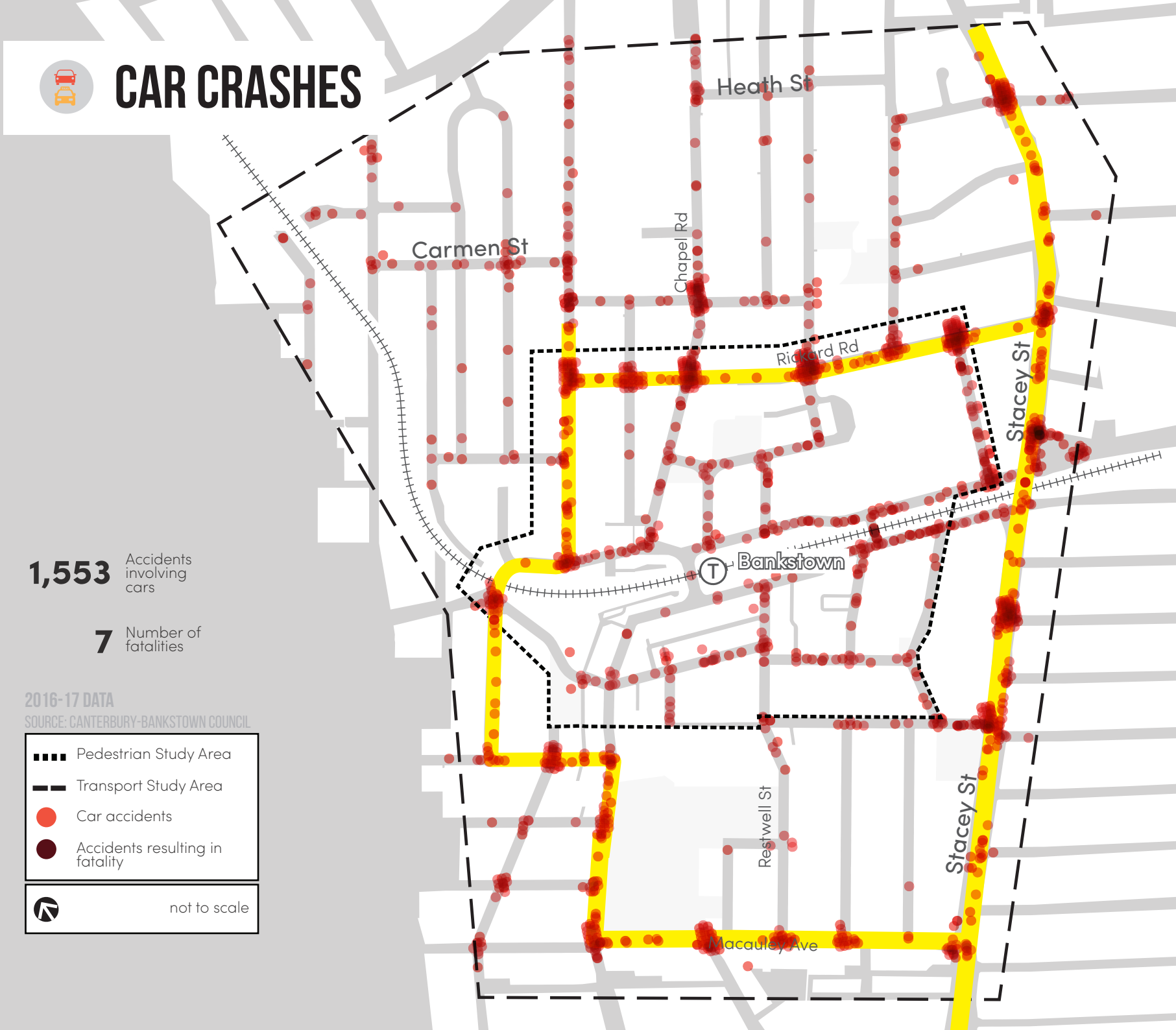
- Mid-block traffic volumes on Stacey Street are approximatively 3,500 vehicles per hour (2-ways). Stacey Street operates at or over capacity at peak hours.
- Majority of traffic flows north and south
- In afternoon peak hour traffic approximately 5,600 to 6,000 vehicles enter the CBD
- Bankstown is still a destination both during morning and afternoon peak hours
- Similar to morning peak hour, Stacey Street, Marion Street, Chapel Road and Rickard Road experience the highest volumes of vehicle traffic

Issues + Opportunities

- Key road corridors and major intersections in the study area are currently operating at or close to capacity.
- The road network will not be able to support the additional traffic generated by new development in Bankstown CBD unless there is a real travel behaviour changes towards more sustainable modes of transport
- The ring road is key to support through traffic (neither origin or destination within the CBD) and avoid undesirable traffic to enter the CBD. Opportunities for improvements to the road capacity and intersection performances will be investigated.

PART TWO.

CAR CRASHES



1,553 Accidents involving cars

7 Number of fatalities

2016-17 DATA

SOURCE: CANTERBURY-BANKSTOWN COUNCIL

- Pedestrian Study Area
- Transport Study Area
- Car accidents
- Accidents resulting in fatality

not to scale



The ring road around the CBD core experiences a dramatically higher number of crashes per linear metre than the streets within the CBD





High pedestrian activity increases drivers' awareness

Key Observations

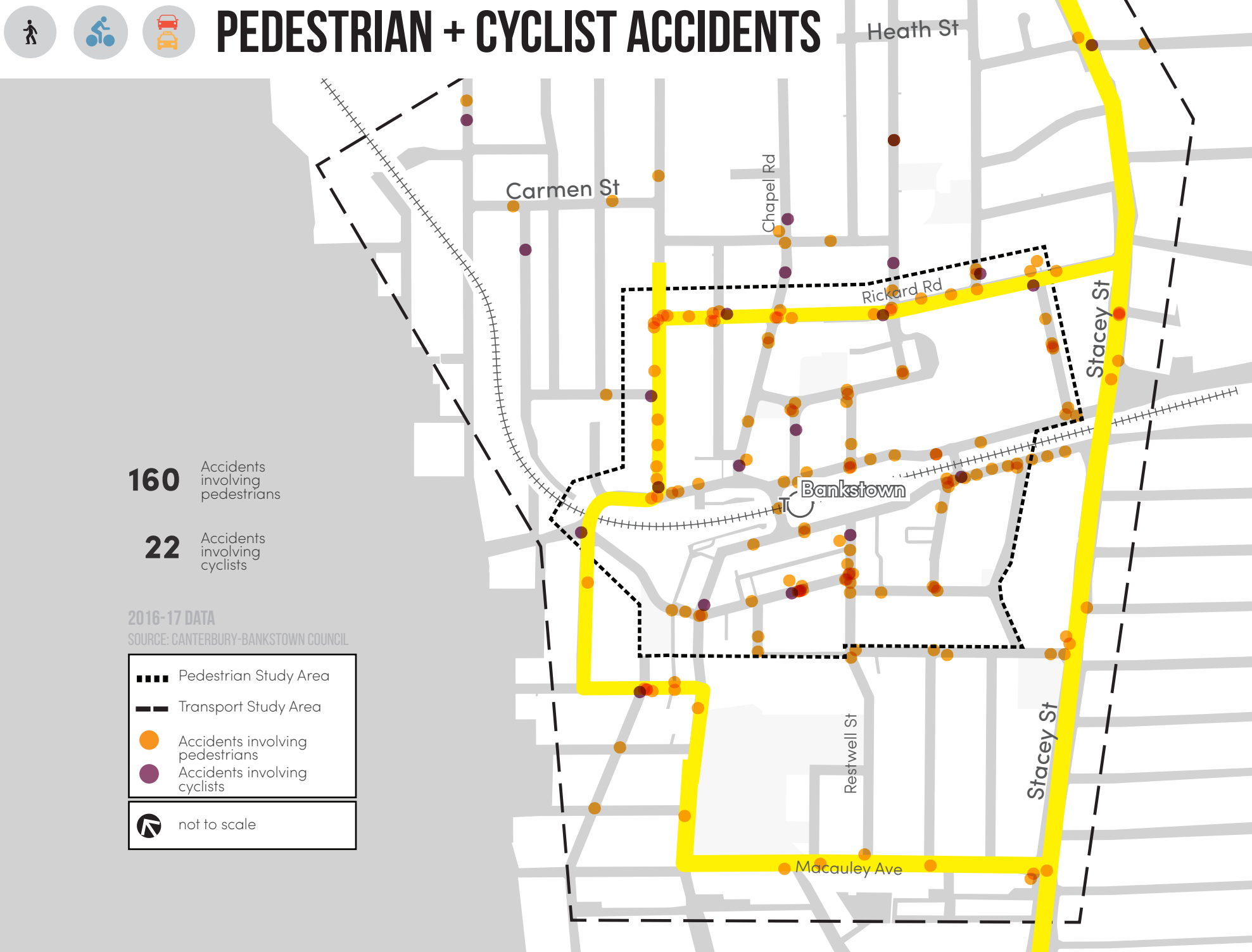
- Car crashes congregate at intersections
- Car crashes congregate along movement corridors where existing car traffic is high. This includes Rickard Road, Stacey Street and South Terrace in the CBD.
- Higher proportion of crashes occurs on the ring road encircling the CBD.
- Car crashes are virtually non-existent around Bankstown Station. The streets here primarily one-way, feature 10km/h speeds and have high pedestrian activity, likely making drivers more aware of their surroundings and more careful.

Issues + Opportunities

- The propensity of crashes on the CBD's main ring road presents challenges to cross-flow pedestrian and cycling connectivity.
- Improving pedestrian and cycling amenity and priority to the ring road can improve 'edge friction' which can slow cars down.
- If not mitigated, future increased development in the CBD will increase concerns over traffic safety. A future focus on shifting modal behaviours away from cars will be critical to ensure car crashes and congestion does not increase.
- Slowing traffic speeds is one way to mitigate car crashes from occurring. Designing carriageway widths to the enforced speed is critical.

PART TWO.

PEDESTRIAN + CYCLIST ACCIDENTS



160 Accidents involving pedestrians

22 Accidents involving cyclists

2016-17 DATA

SOURCE: CANTERBURY-BANKSTOWN COUNCIL

- Pedestrian Study Area
- Transport Study Area
- Accidents involving pedestrians
- Accidents involving cyclists

not to scale











Key Observations

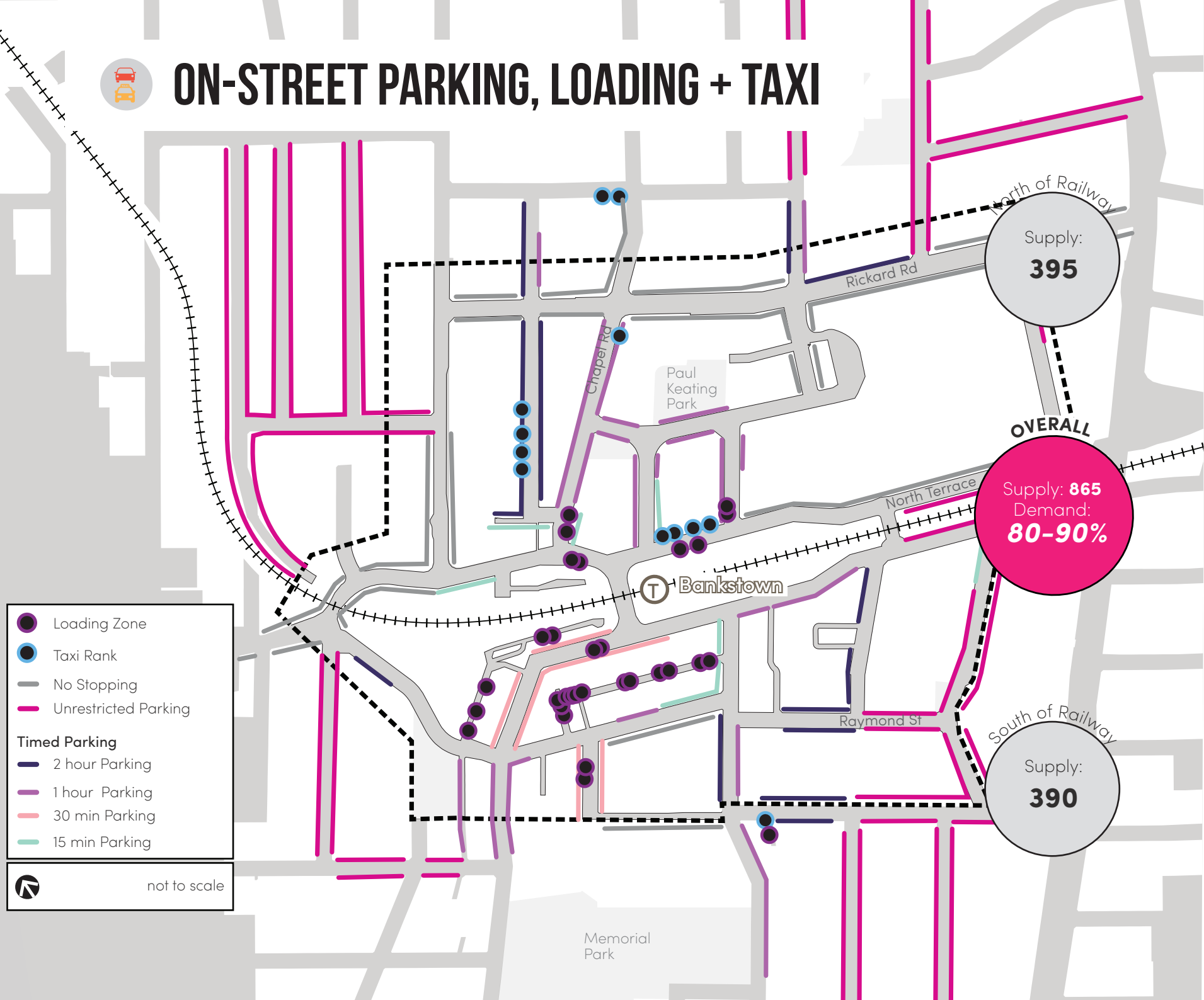
- In 2016-17 there was 182 car accidents related to pedestrian and cyclists. Of those, 160 were pedestrian related and 22 were cyclist related.
- Pedestrian accidents occur most frequently along movement corridors of Rickard Road and South Terrace, as well as the intersection of Greenfield Parade and Raymond Street, where a staggered intersection likely presents challenges for car drivers' ability to see pedestrians.
- Meredith Street has a notable concentration of pedestrian related car accidents, presenting an access barrier to the CBD for the large residential population just west of the street.
- Pedestrian and cyclist accidents drops off considerably around Saigon Place and City Plaza, likely due to the slow traffic and design speeds and overall high pedestrian counts in the area.

Issues + Opportunities

- The ring road around the CBD presents challenges to meaningfully connect the residential areas around the CBD with the CBD itself.
- Accidents primarily occur at intersections where there isn't sufficient priority given to pedestrians, likely resulting in jaywalking and accidents.
- Locating pedestrian desire lines and providing safe crossings is critical to avoid unsafe behaviour such as jaywalking across busy streets.
- Design features found in Saigon Place and City Plaza could be replicated elsewhere to promote pedestrian and cyclist safety. Design features include: narrow carriageways, on-street parking, increased greenery and mid-block pedestrian crossings.

PART TWO.

ON-STREET PARKING, LOADING + TAXI



On-street parking	Number of spaces	South	North
Drop off / Pick up (≤ 15min)	45	30	15
Timed parking (≤ 1 hour)	255	140	115
Timed parking (≥ 1 hour)	185	120	65
Unrestricted parking	300	100	200
Taxi rank	20	-	-
Loading zone	15	-	-
Other uses (trucks, police, etc.)	15	-	-
Disabled (estimate)	30	-	-
Total	**865**	**390**	**395**





DID YOU KNOW...

Every **1** GoGet car on the street

Replaces **10** **private cars**

Car-sharing services present an opportunity to manage car volumes in Bankstown CBD.

Source: goGet

Key Observations

- No parking restrictions are on large sections of Rickard Road, North Terrace, South Terrace, Greenfield Parade, Marion Street and Lady Cutler Avenue.
- Unrestricted parking encroaches close to the CBD to the north west and south east areas of Bankstown.
- Different types of restricted parking in most of the CBD, with 30min limit in the vicinity of Saigon Place.
- No parking during peak periods on Meredith Street and sections of both Greenwood Avenue and Stanley Street.
- Approx 865 on-street parking spaces, with occupancy levels of 80-90%.
- Some double parking observed, especially in Saigon Place
- The primary Taxi rank is located on North Terrace, capacity for 10 taxis
- 15 loading zone spaces, mainly in proximity of the Chapel Road corridor
- On-street loading zones are in a much greater concentration on the southern side of the rail corridor, with high demand exceeding supply
- Travel times to Sydney CBD doubles between peak and off peak periods

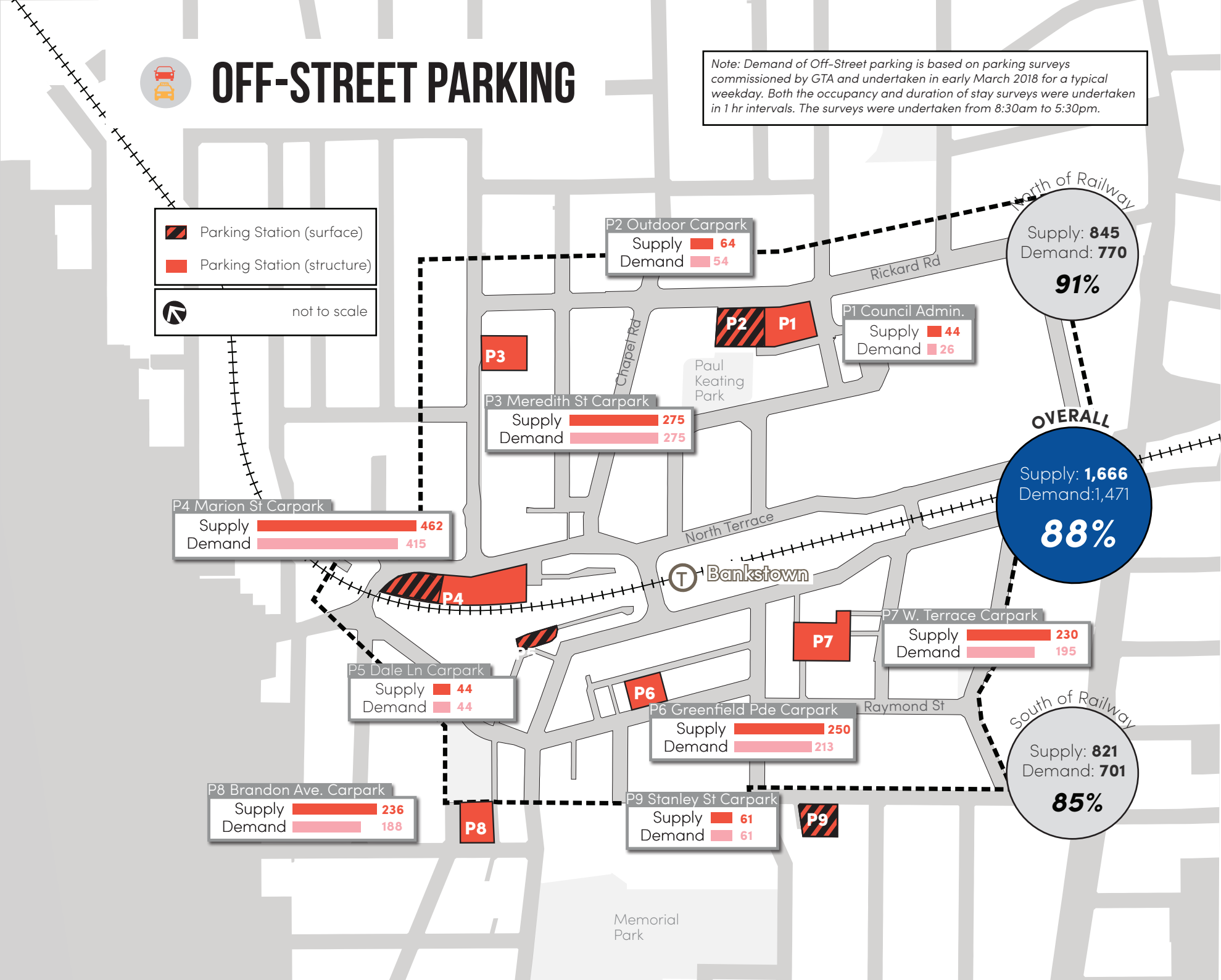
Issues + Opportunities

- GoGet and Car Next Door are not operational in Bankstown
- Utilise GoGet and dedicate on-street spaces to reduce parking demand
- Opportunity to implement measures to enforce time limits to encourage greater turnover including stricter enforcement and/or areas of paid parking
- Other possibilities to assess: more timed restricted parking, extension of no parking on main roads (Chapel Road, ring road), removal of parking for implementation of bicycle lanes (or widening of pedestrian footpath).
- Parking enforcement should be considered in the future
- Improved taxi zones on south of the train line as there currently are none
- Possible investigation of placement of loading zones
- Uber movement data shows travel times of approx. 40 min to Sydney CBD and 30 min to Parramatta, Sydney Airport & Campbelltown

PART TWO.

OFF-STREET PARKING

Note: Demand of Off-Street parking is based on parking surveys commissioned by GTA and undertaken in early March 2018 for a typical weekday. Both the occupancy and duration of stay surveys were undertaken in 1 hr intervals. The surveys were undertaken from 8:30am to 5:30pm.



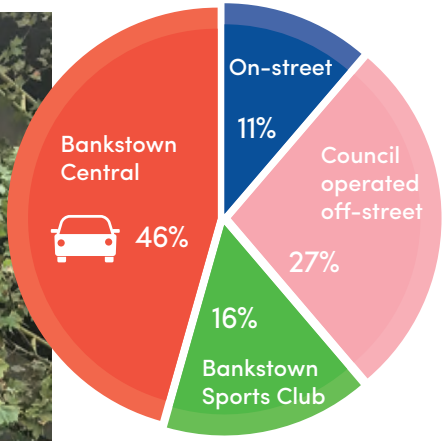
Council operated off-street parking	Number of spaces	South	North
Timed parking (≤ 2 hours)	309	154	155
3-4 hours	554	260	294
Unrestricted parking	746	398	348
Other	13	9	4
Total	**1,666***	**821**	**845***

**Note: Above table does not include P1, as time restrictions are not yet known.*









need source from GTA

DID YOU KNOW...

Bankstown's carparks generated **$59K revenue** in 2016/7 but in the same period generated **$1.56M expenses**

Source: City of Canterbury Bankstown Annual Report 2016-17, Special schedule 1

Key Observations

- Public off-street parking: 1,666 car spaces, 88% occupancy, approximatively half distributed between North and South (higher demand North) during weekdays
- Higher demand exists North of the rail line (91%) compared to south of the rail line (85%) during weekdays
- Additional 5,000 private off-street parking within two (2) major complexes, including the Sports Club (with over 1,200 car spaces) and Centro Shopping Centre (with over 3,500 spaces)
- The Bankstown CBD has approximately 4,700 off-street privately managed parking spaces
- Around 50% of all Council operated off-street parking spaces have no time restriction attached.
- Parking occupancies of greater than 80% were observed for Council managed parking which is indicative of parking approaching its theoretical capacity

Issues + Opportunities

- Existing off-street parking will probably be maintained, however various strategies could be implemented to better manage and optimise car usage in the City Centre, including time limits, location of carparks, pricing and smart technologies
- Parking management to better distribute supply and demand across the rail line
- A large proportion of unrestricted parking spaces are occupied all-day, suggesting a significant proportion of commuter parking in the Bankstown CBD
- Off-street parking complexes are an inefficient use of prime CBD land
- All Council-managed parking is free and exploring a paid parking strategy is one of the most significant opportunities to change the function of the Bankstown CBD.

PART THREE.





STREET DESIGN ANALYSIS

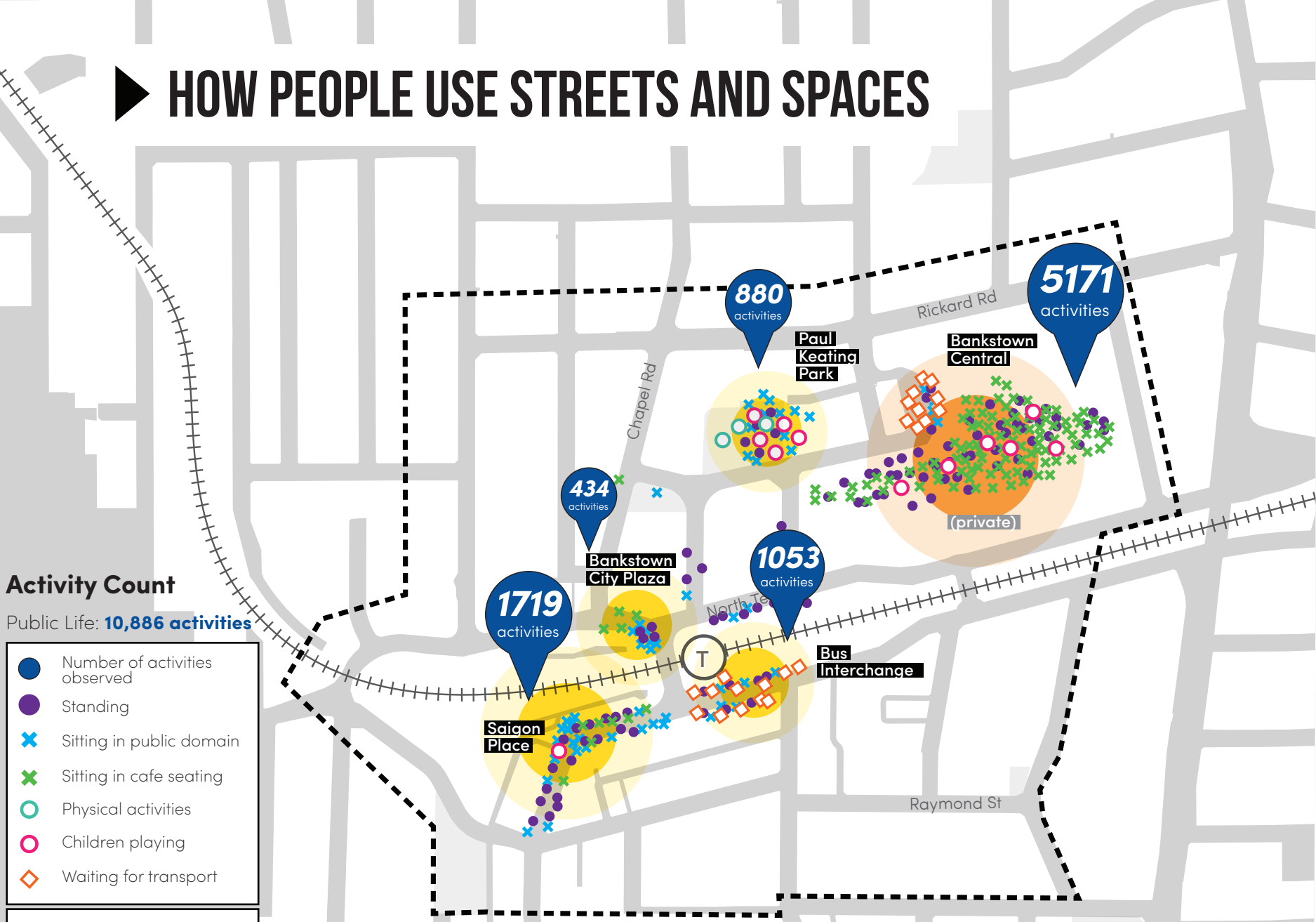
This section looks in detail at how people are using the CBD streets and how the design of the streets influences pedestrian activity.

With a Walkscore of 97 - Walker's Paradise, central Bankstown benefits from an emerging place framework which is very walkable. Destinations include Saigon Place, Paul Keating Park, Bankstown Arts Centre and Bankstown City Gardens.

In the CBD's central core, many qualitative and quantitative walkability characteristics define street character. A short walk from the train station presents a different reality, one where amenity and pedestrian priority fade in favour of auto-focused movements. The opportunity, then, is to understand those characteristics that work well in Bankstown today and how they can be appropriately replicated elsewhere to create a more equitable sense of place in Bankstown's public realm. This involves an understanding of how the centre's 'big' and 'small' uses can coexist and complement each other for the future.

PART THREE.

HOW PEOPLE USE STREETS AND SPACES



Activity Count

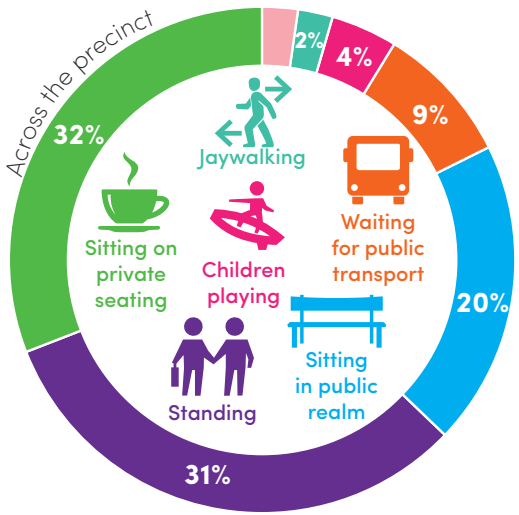
Public Life: **10,886 activities**

- Number of activities observed
- Standing
- Sitting in public domain
- Sitting in cafe seating
- Physical activities
- Children playing
- Waiting for transport

not to scale

Activities observed in 15 locations on the hour, every hour, from 6am until 10pm. Average across four days - 17th Feb, 21st Feb, 22nd Feb, 24th Feb.

What are people doing?

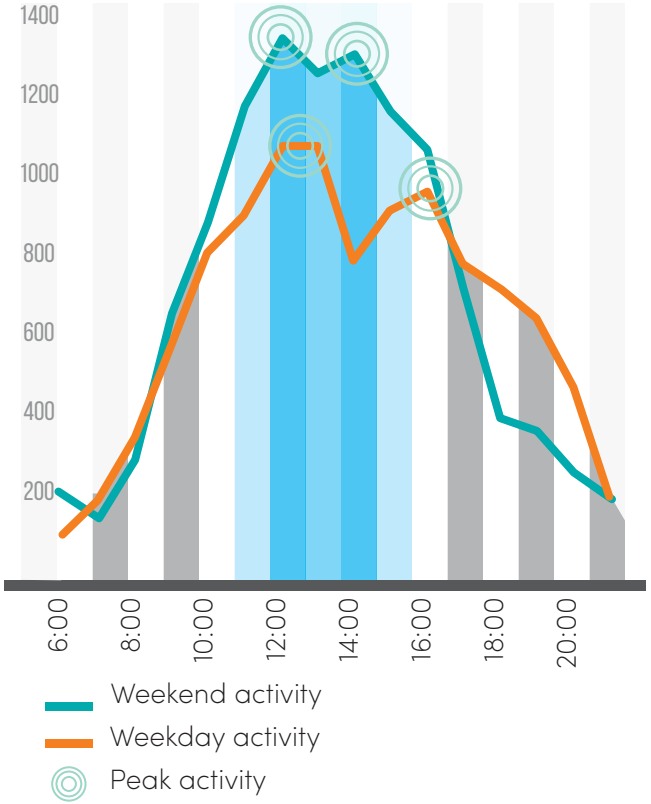


Others include:



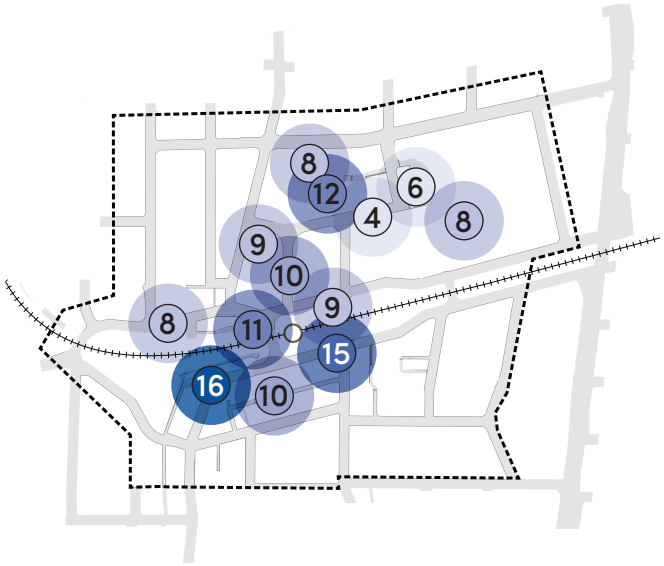
Predominant activity in Bankstown includes sitting at private cafe seating (influenced by high numbers in Bankstown Central), standing (usually accompanied by social exchange), and sitting in the public realm, which includes sitting on benches, walls, milk crates and the ground.

When is activity taking place?



Overall, more public life activity is observed in Bankstown on the weekend, which is mainly influenced by a spike around midday (attributed to lunchtime activity). However, greater levels of activity were observed on weekdays going into the evening.

How diverse is the activity?



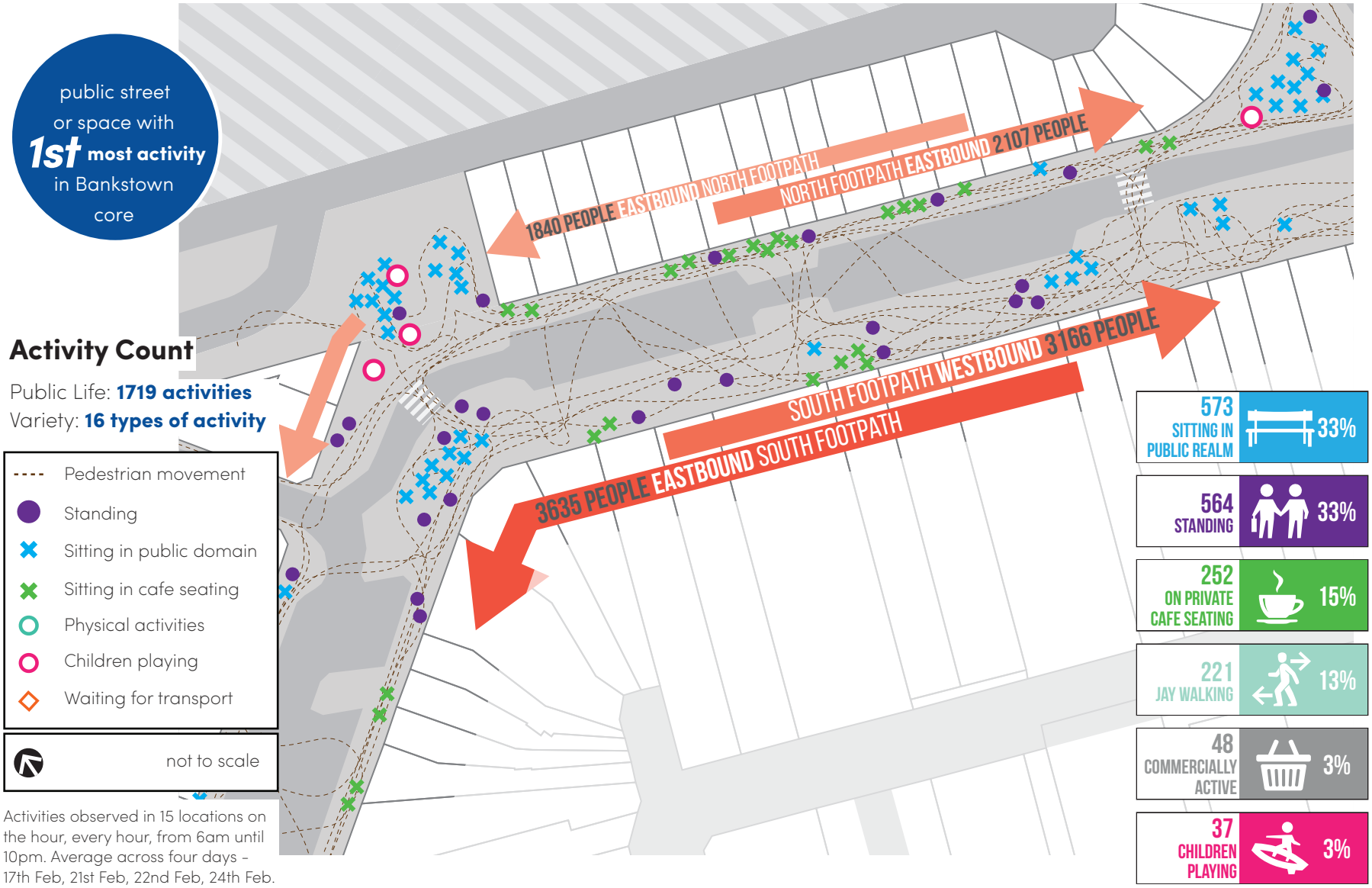
Number of different activity types observed

- High diversity (16-13 activities)
- Medium diversity (12-9 activities)
- Low diversity (8-4 activities)

Saigon Place was observed not only as the public place with the most activity, but also with the greatest diversity of activity types. In contrast, The Mall next to the cinema displayed the lowest diversity, which suggests public streets support a greater variety of activity than private malls.

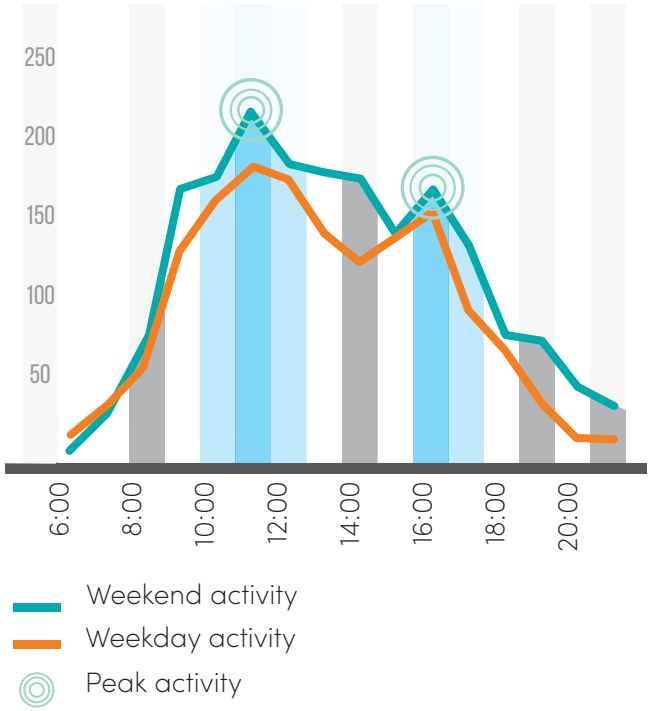
PART THREE.

SAIGON PLACE: BANKSTOWN'S MOST ACTIVE STREET

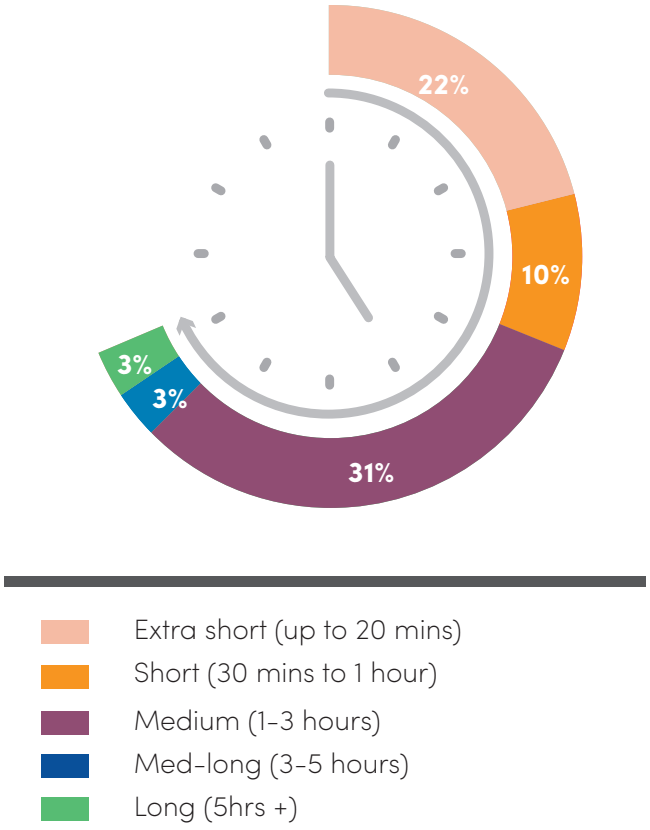


Activities observed in 15 locations on the hour, every hour, from 6am until 10pm. Average across four days - 17th Feb, 21st Feb, 22nd Feb, 24th Feb.

When do people go there?



How long do people stay there?



What would encourage people to stay for longer?

#1 **19%** Parking

#2 **17%** More shops

#3 **17%** Late hours + nightlife

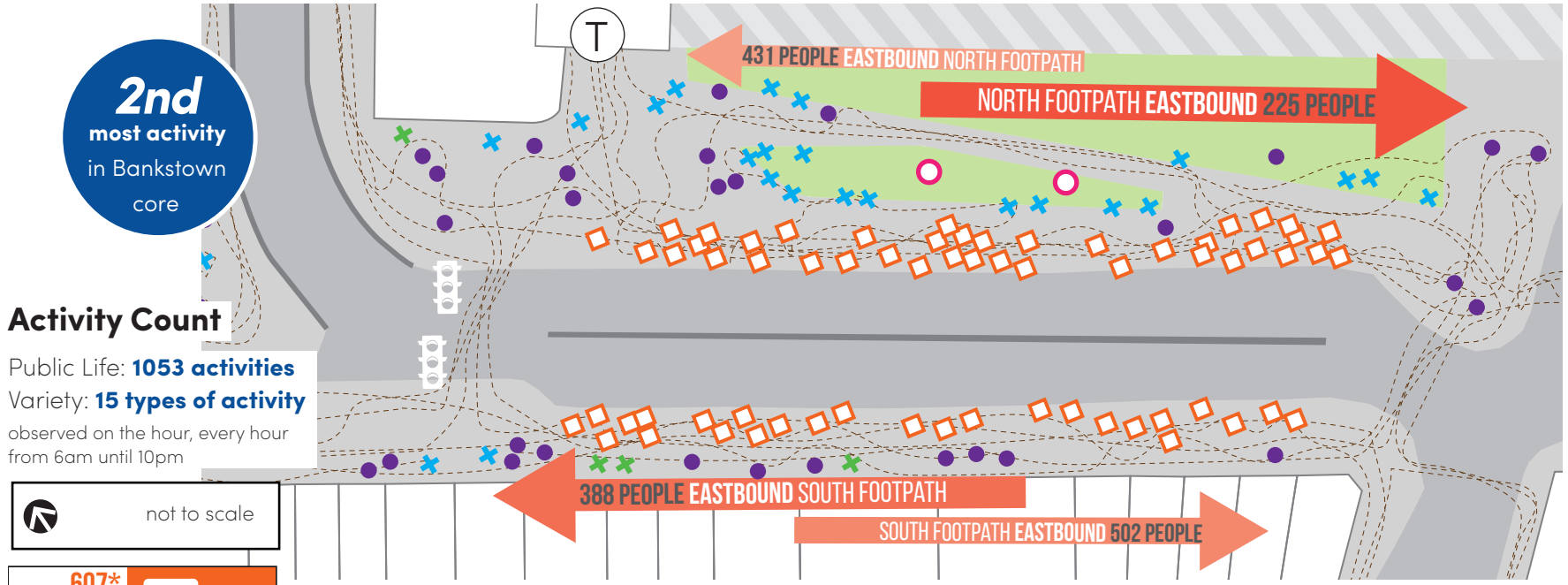
#4 **7%** Activities + Facilities

#5 **7%** Food + Cafes

Responses from interviews as part of the public life survey undertaken across four days - 17th Feb, 21st Feb, 22nd Feb, 24th Feb. There were 58 respondents in Saigon Place.

PART THREE.

SOUTH TERRACE: BUSY BUT CONSTRAINED INTERCHANGE



2nd most activity in Bankstown core

Activity Count

Public Life: **1053 activities**
Variety: **15 types of activity**
observed on the hour, every hour from 6am until 10pm

not to scale

607* WAITING FOR PUBLIC TRANSPORT	57%
213 STANDING	20%
186 SITTING IN PUBLIC REALM	18%
28 ON PRIVATE CAFE SEATING	3%
9 CHILDREN PLAYING	1%

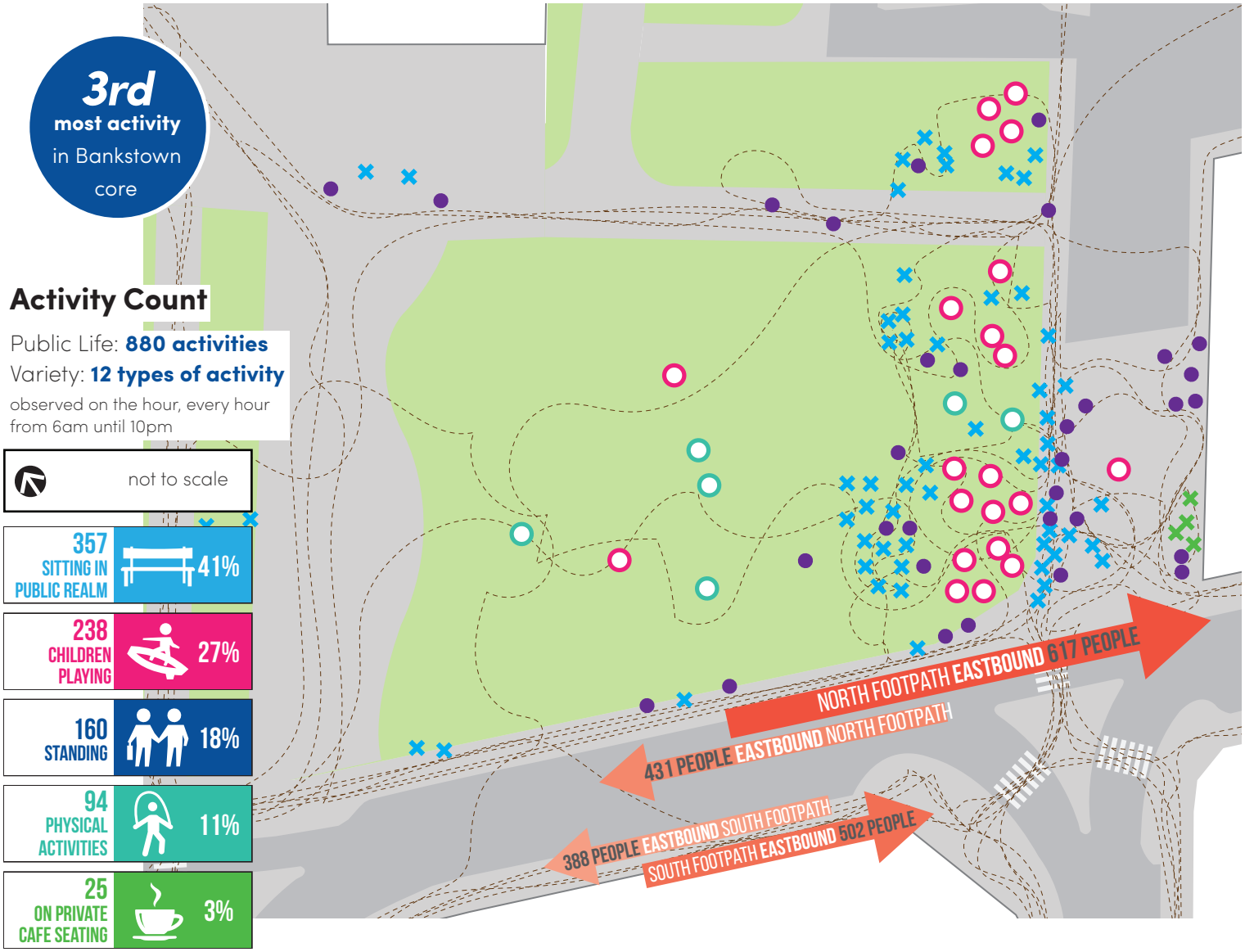
* 259 of these people were waiting for train replacement

What would encourage people to stay for longer?

#1 **23%** More shops
#2 **16%** Food + Cafes
#3 **7%** Lively + diverse atmosphere
#4 **5%** Parking
#5 **3%** Late hours + nightlife

Responses from interviews as part of the public life survey undertaken across four days - 17th Feb, 21st Feb, 22nd Feb, 24th Feb. There were 96 respondents outside Bankstown Station.

PAUL KEATING PARK: PLAYFUL AND INFORMAL



What would encourage people to stay for longer?

#1 **22%** More shops

#2 **7%** Food + Cafes

#3 **4%** Lively + diverse atmosphere

#4 **4%** Parking

#5 **3%** Activities + Facilities

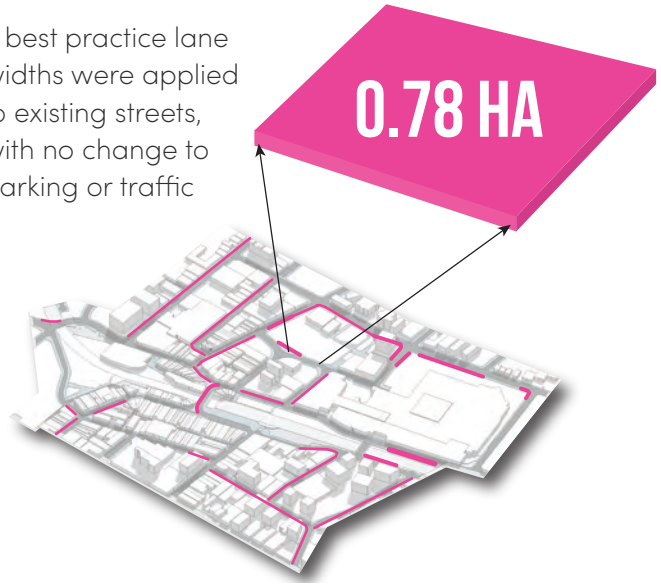
Responses from interviews as part of the public life survey undertaken across four days - 17th Feb, 21st Feb, 22nd Feb, 24th Feb. There were 201 respondents in Paul Keating Park.

PART TWO.

UTILITY OF STREET SPACE

Surplus Areas

If best practice lane widths were applied to existing streets, with no change to parking or traffic

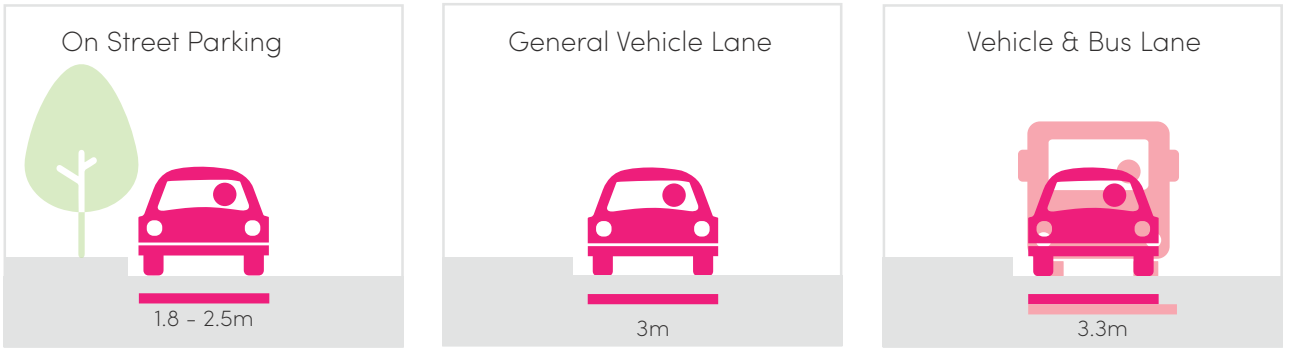


What This Space Could Be Instead:

Wider footpaths, plazas, parklets, tree plantings, seating



Best Practice Lane Widths



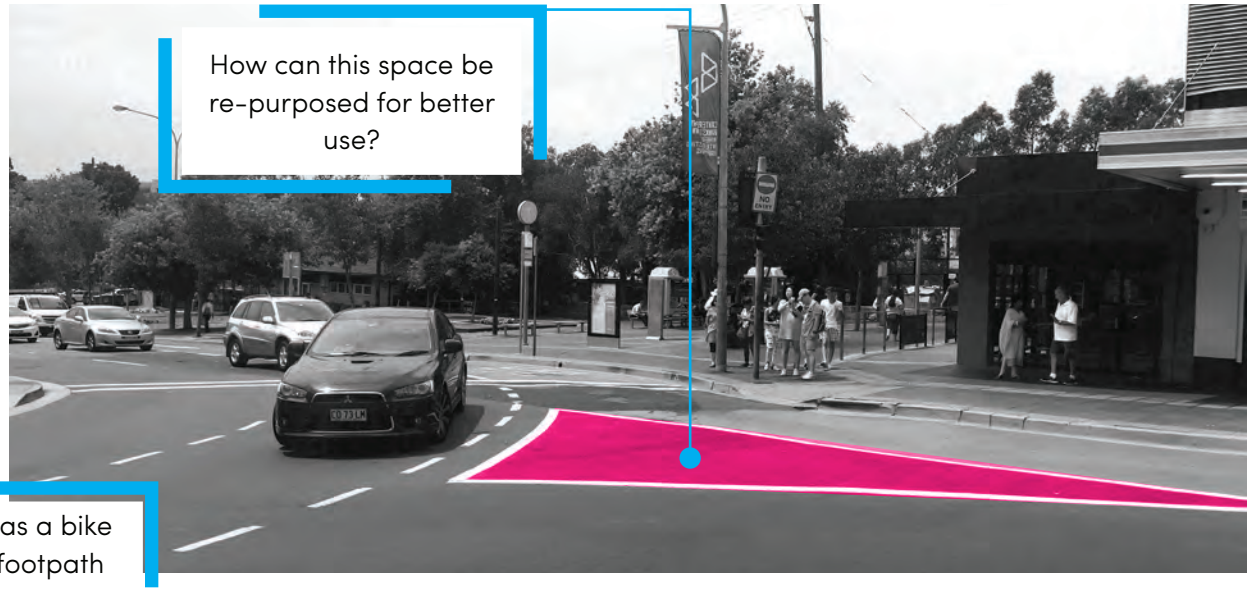
Source: National Association of City Transport Officials (2016) 'Global Street Design Guide'



Eliminate slip lanes

Reduce lane width to 3m for cars, 3.3m for buses





How can this space be re-purposed for better use?

Improve utility as a bike lane or wider footpath

PART THREE.

STREET BY STREET QUALITATIVE REPORT CARD

Pedestrian Fundamentals

A number of critical elements influence the pedestrian experience in Bankstown.

When these critical influences are synthesised they can provide a holistic understanding of the total environment that is being provided currently in Bankstown.

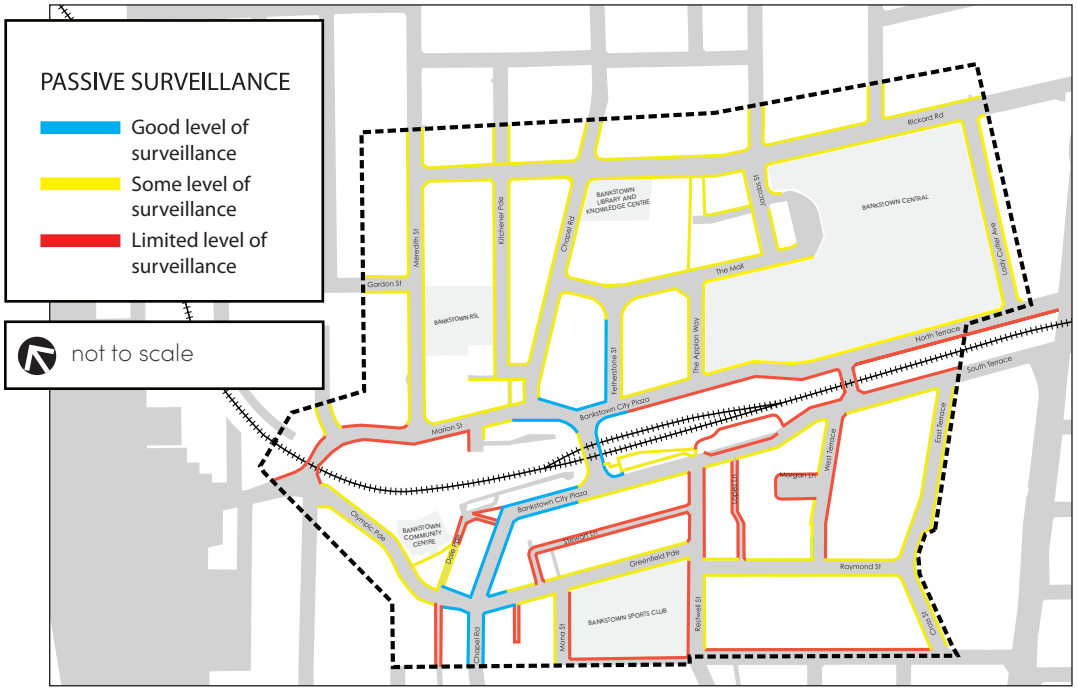
Combinations of these factors enable a series of key fundamentals to be evaluated. The optimum city environment would consider all of these fundamentals. The fundamentals and methodology for their evaluation are drawn from a number of sources including:

- **Cities for People** *Jan Gehl*
- **Pedestrians First** *Institute for Transportation and Development Policy New York*
- **Street Guidelines** *US National Association of City Transportation Officials (NACTO)*

The fundamentals and the elements that influence theminclude:

CONNECTIVITY	•walkways •intersections
INTERRUPTIONS	•cross walks & intersections •driveways
EASE OF MOVEMENT	•cross walks & intersections •driveways
ACTIVATION	•frontage quality •kersbide use •public art
COMFORT	•trees & open space •shelter •seating
SAFETY	•lighting •surveillence
ACCESSIBILITY	•universal access
PUBLIC DOMAIN	•furniture •signage and wayfinding •pavement upgrades

THE REPORT CARD



- The streets rated 'good' display all or most of the fundamentals, and provide the best street life experiences available within Bankstown currently
- The streets rated 'some' display some of the fundamentals, and provide a street experience that has potential to be better
- The streets rated 'limited' may display one of the fundamentals - even at a high level - but do not provide a composite environment and experience that currently meets the aspirations for Bankstown
- For the streets in the Some / Limited categories the objective is to prioritise improvements that can progressively develop the street fundamentals



GOOD FUNDAMENTALS
minimal enhancement necessary

6% of Bankstown's streets



SOME FUNDAMENTALS
targeted enhancement desirable

22% of Bankstown's streets

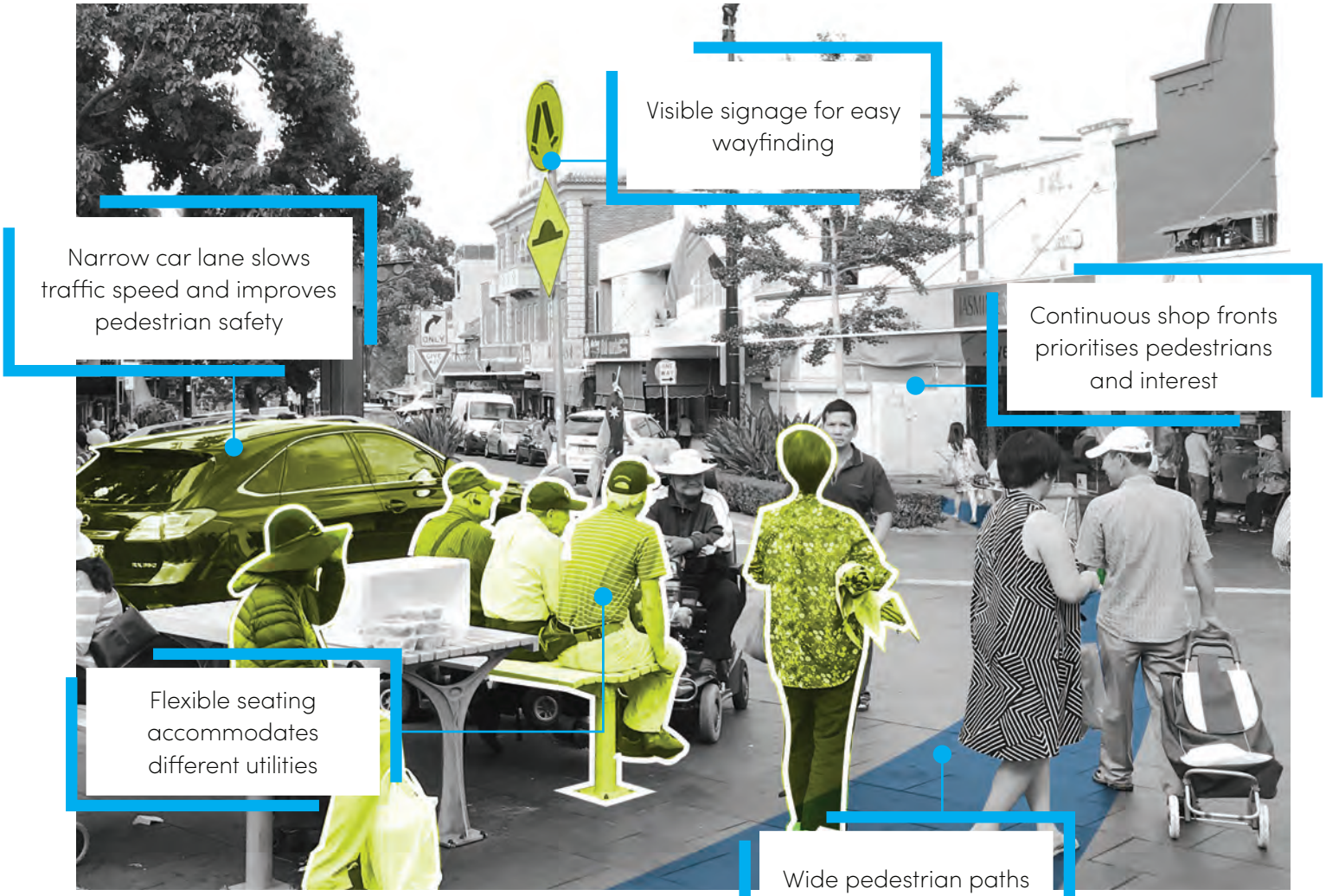


LIMITED FUNDAMENTALS
major enhancement desirable

72% of Bankstown's streets

PART THREE.

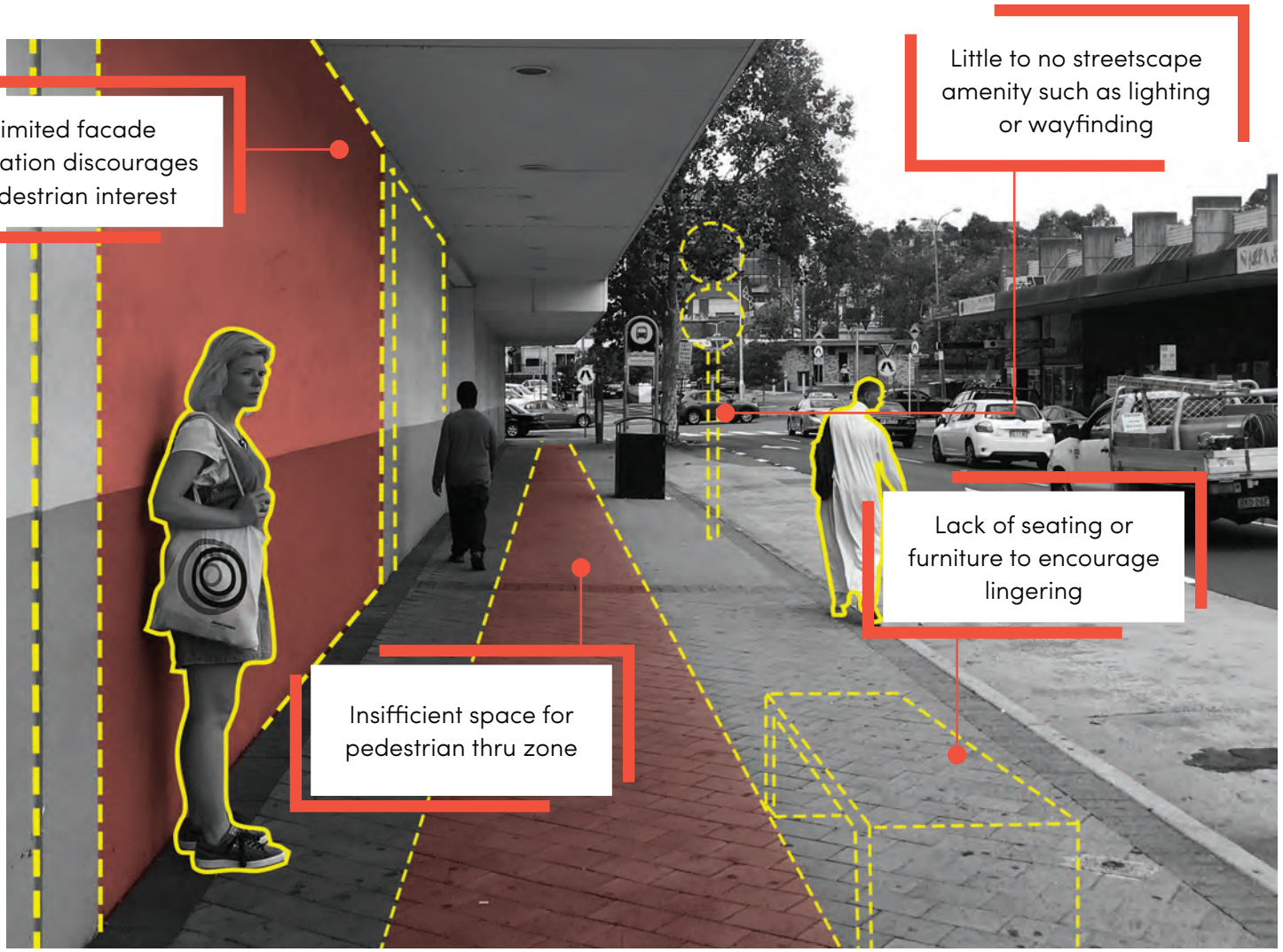
CHARACTERISTIC GOOD QUALITY STREET



SAIGON PLACE

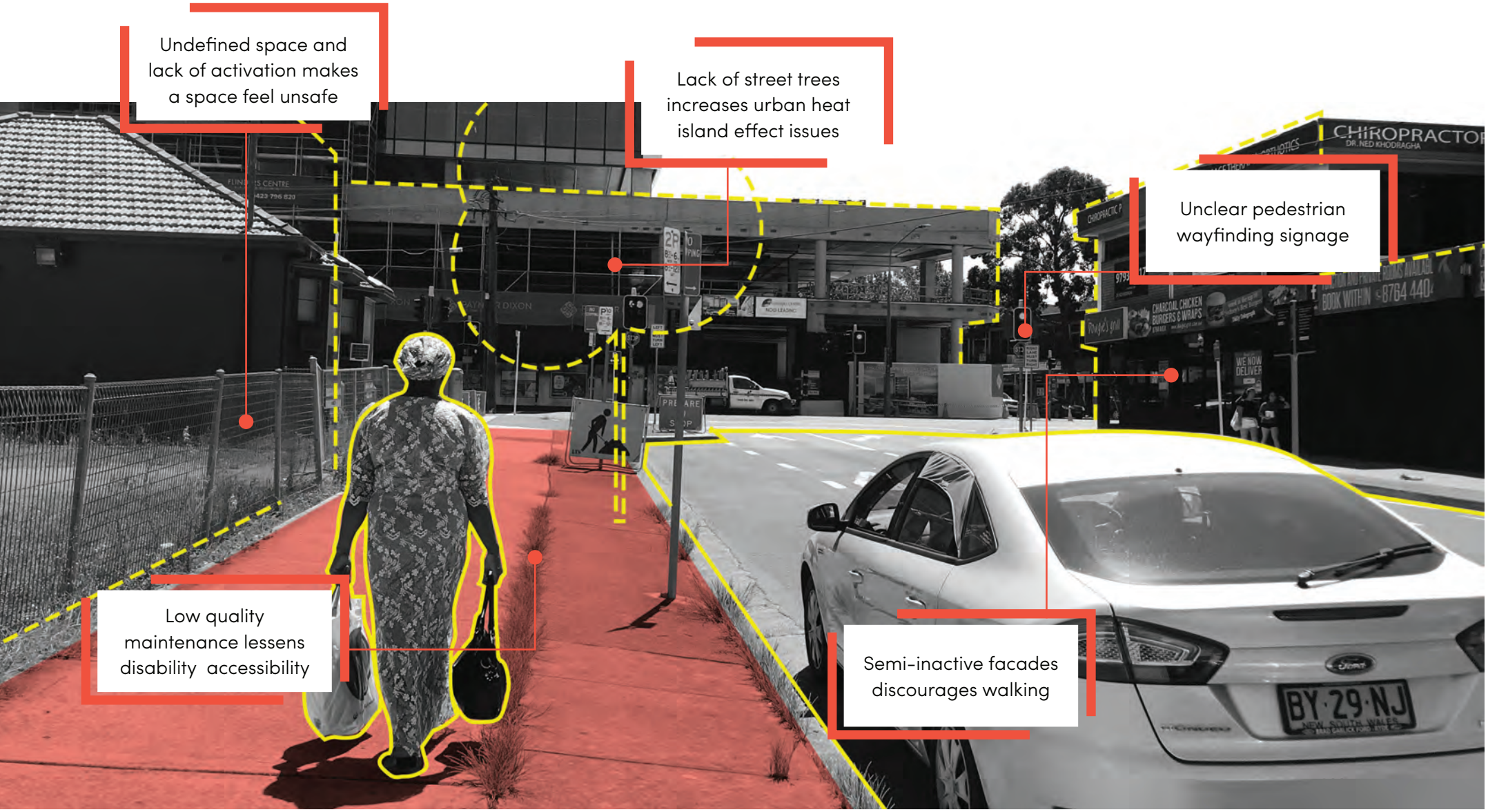

Street trees provide shade and comfort
Awnings provide shelter from the sun and weather
Permeable ground floor connects shops with public realm
Active ground floor provides interest and 'eyes on the street'
Legible for pedestrian and wheelchair thru traffic
Seating provides opportunity for lingering and socialising
OPEN 7 DAYS
02 8764 1562

CHARACTERISTIC LIMITED QUALITY STREET





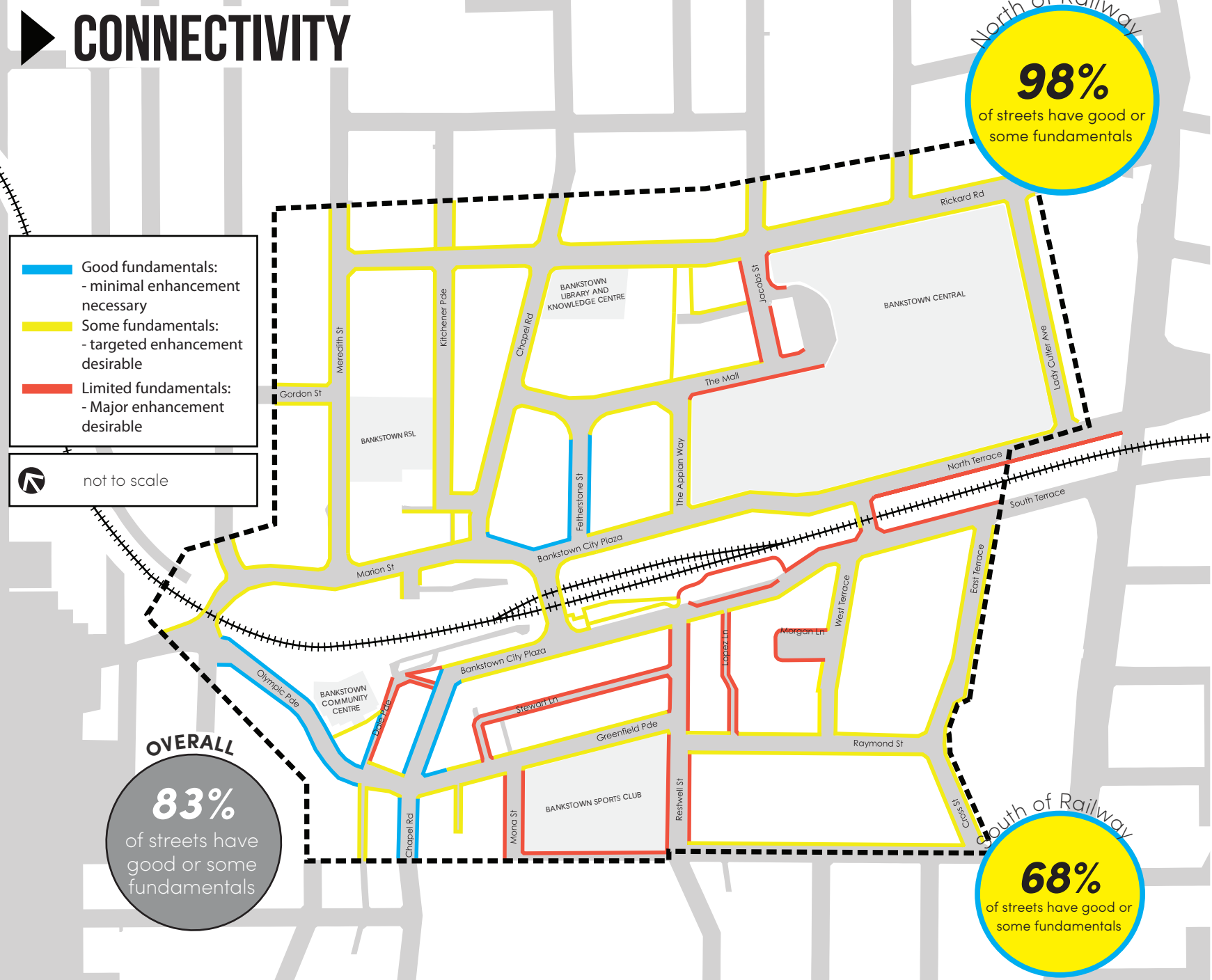
APPIAN WAY



RAYMOND STREET

PART THREE.

CONNECTIVITY



Connectivity refers to the ability to move from one point to another including continuity across intersections and permeability of the movement network by way of streets and other through site links. It does not consider the quality of the access experience provided.



Through link from Bankstown City Plaza South



Pedestrian link from South to North Terrace


Cycle access from Bungalow Crescent

DID YOU KNOW...

There are **36** blocks per km^2 on average in Bankstown

(the higher the block density, the greater the connectivity)


Lady Cutler Avenue and North Terrace intersection

Key Observations

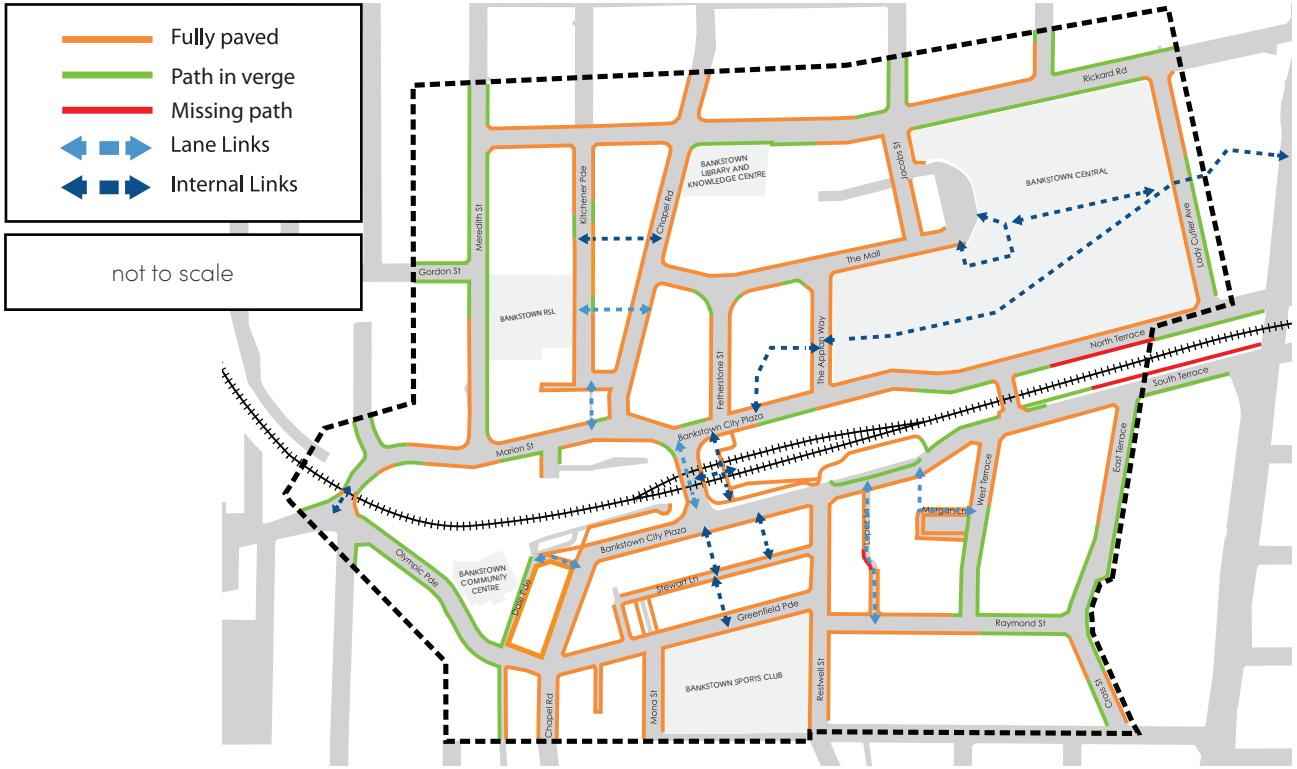
- Block density is a measure of the city structure's pedestrian permeability - as defined by "Pedestrians First" it is a measure of city blocks per kilometer squared - the higher number - the more permeable
- By this measure, overall block density in Bankstown is comparable to walkable global cities, despite the localised impact of Bankstown Central
- However the impact of Bankstown Central on all factors that contribute to better street quality is significant and it is a barrier in the CBD
- Through site links through private retail sites provide important links to the railway transport hub
- The railway line limits north south pedestrian access to the railway / Featherstone St axis
- E-W pedestrian movement corridors occur to Rickard Rd and South Tce
- There are no N-S or E-W bike access corridors to the CBD
- Laneways are underutilised for pedestrian access

Issues + Opportunities

- Pursue opportunities to improve the permeability of the Bankstown Central site through public road structure (as a first option) and /or open through site links (as a secondary option)
- Open through link sites can be further activated through pavement upgrades and lighting improvements.
- Private through site links to be managed to maximise access after hours
- Public domain improvements and wayfinding for underutilised lanes can enhance pedestrian permeability
- Future Metro provides opportunities to improve the north-south connection between two CBD zones separated by heavy rail.

PART THREE.

PEDESTRIAN ELEMENT: **WALKWAYS**




Existing narrow path along South Terrace



Substation inhibiting pedestrian traffic

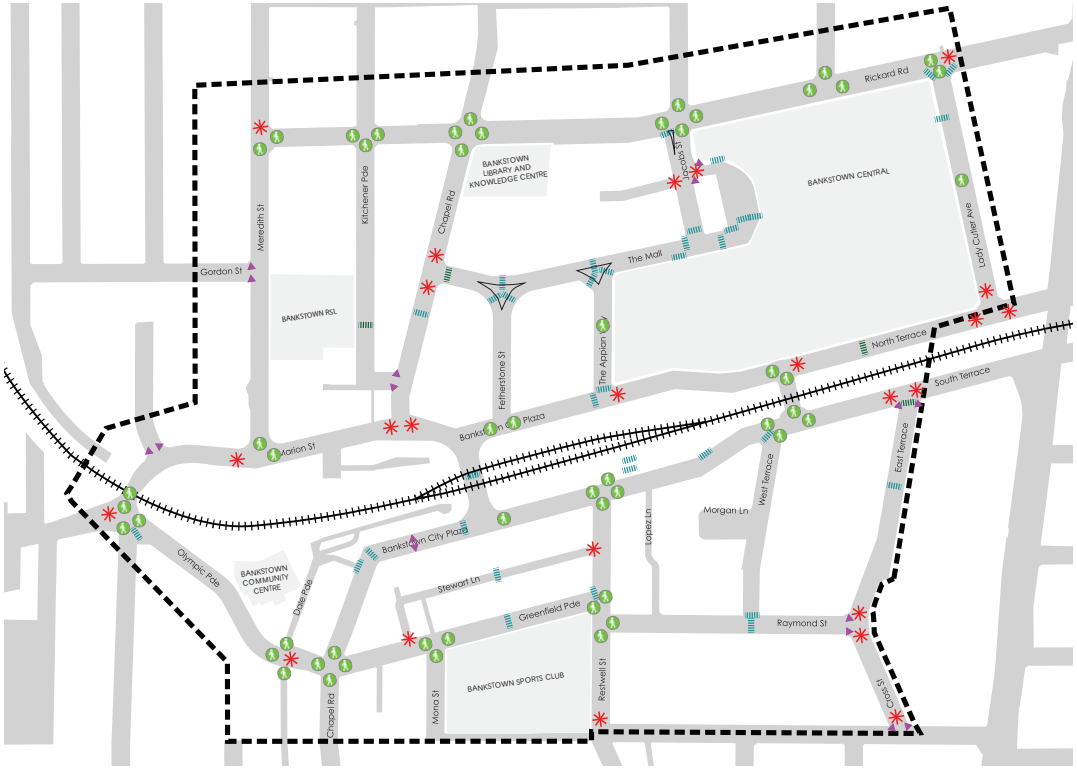
The quality of pedestrian experience is fundamentally affected by availability of a walkway, its width and quality of finish, and the degree to which movement is interrupted

Key Observations

- Pathways available to most verges
- Pedestrian through movement zone is of varied width
- Driveways to properties and carparking along centre streets cause frequent disruptions for pedestrian activity
- Services infrastructure and tree pits located in middle of pedestrian through zones disrupt amenity and accessibility

- Seek to consolidate carpark entries to outer ring road to create consolidated pedestrian focused CBD core
- Avoid driveways to key pedestrian linkage corridors

PEDESTRIAN ELEMENT: **CROSSWALKS AND INTERSECTIONS**



Crossings can influence the quality of pedestrian experience by adding time to journeys and increasing safety risk

Key Observations

- There are around 28 intersections in the core CBD zone and most focus on catering for vehicular movement at the expense of pedestrian flow and amenity
- Island refuges at The Mall at Fetherstone St and Appian Way interrupt pedestrian flow although major effort has been made to enhance landscape amenity

Issues + Opportunities

- Consider options for the roads requiring extra heavy vehicle access and tighten arrangement and geometry of intersections to enhance pedestrian movement space and reduce crossing distances
- Upgrade intersections on heavy pedestrian movement corridors to raised zebra crossings to improve safety and pedestrian priority
- Review and address gaps in crossing provision

Signals
Warranted
Refuge
Pram ramps
No crossing

not to scale



Pedestrian crossing to refuge - Raymond St

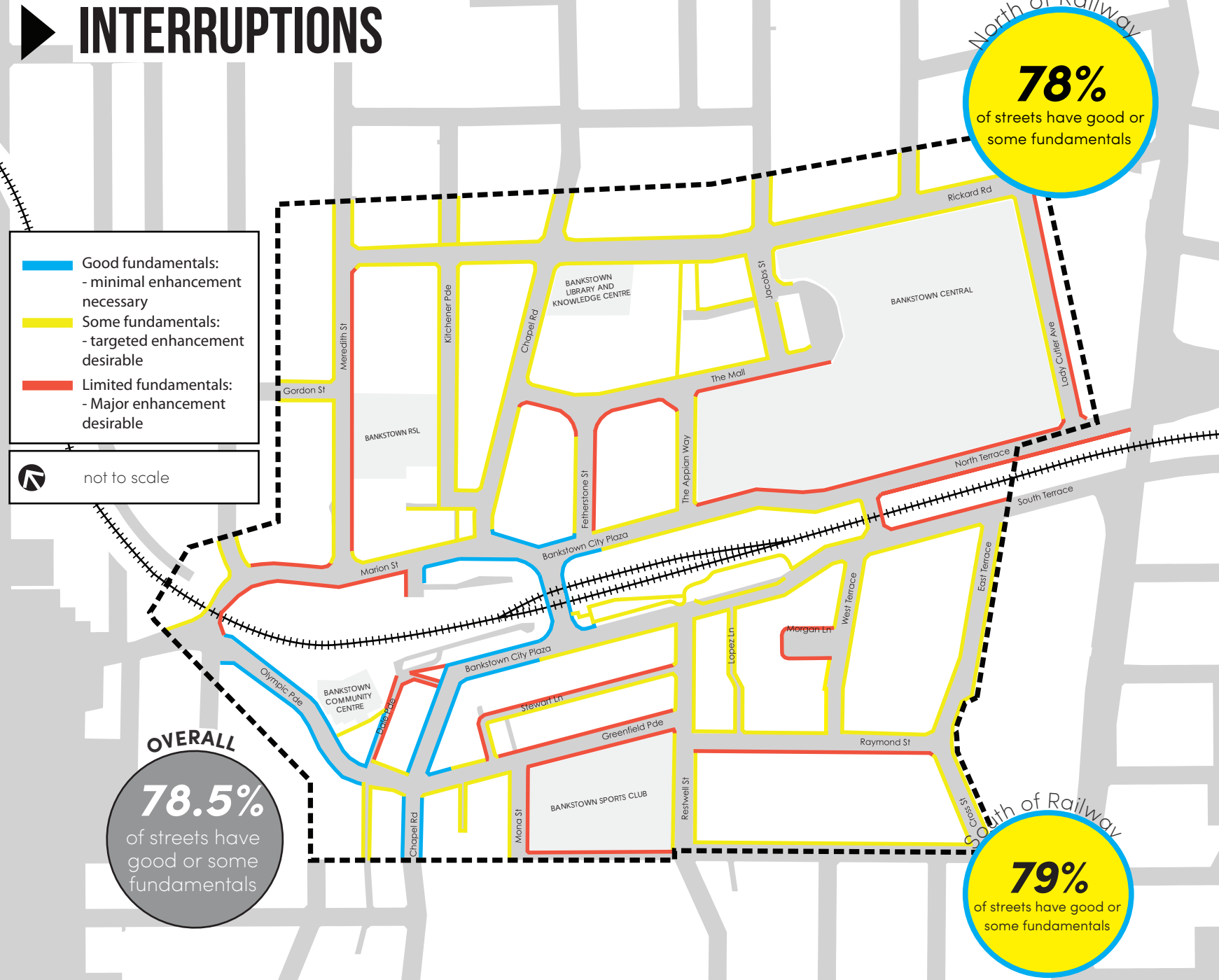


Intersection geometry favours vehicular movement and results in large crossing distances for pedestrians

Missing pedestrian crossing at roundabout at Chapel Rd North

PART THREE.

INTERRUPTIONS




Several crossings at intersection - Restwell St


Zebra crossing at driveway - Meredith St


Carpark entrance along Marion St



Long stretches of driveways create dangerous crossings

Interruptions are breaks to the flow of pedestrian movement within a block or at an intersection. To key pedestrian movement corridors enhancements should seek to reduce density and width of driveway crossings and reduce waiting time at crossing points.


Pedestrians are interrupted with two staged crossings

Key Observations

- "Pedestrians First" defines a target driveway density for good city amenity of < 2 interruptions per 100m - generally the CBD has a high (75%) proportion of streets that meet this target
- However when considering the width of the driveway the city is impacted by a large number of wide driveways for carpark and heavy vehicle access
- There is a high density (>2 per 100m) of driveways in main streets such as Kitchener Parade, Fetherstone Street and East Terrace, which frequently interrupt pedestrian movement and erode the amenity of the street
- Laneways have typically high density of driveways limiting pedestrian potential other than as shared zone
- The width of driveway, frequency of use, and nature of vehicle use are major factors influencing pedestrian flow, safety and amenity

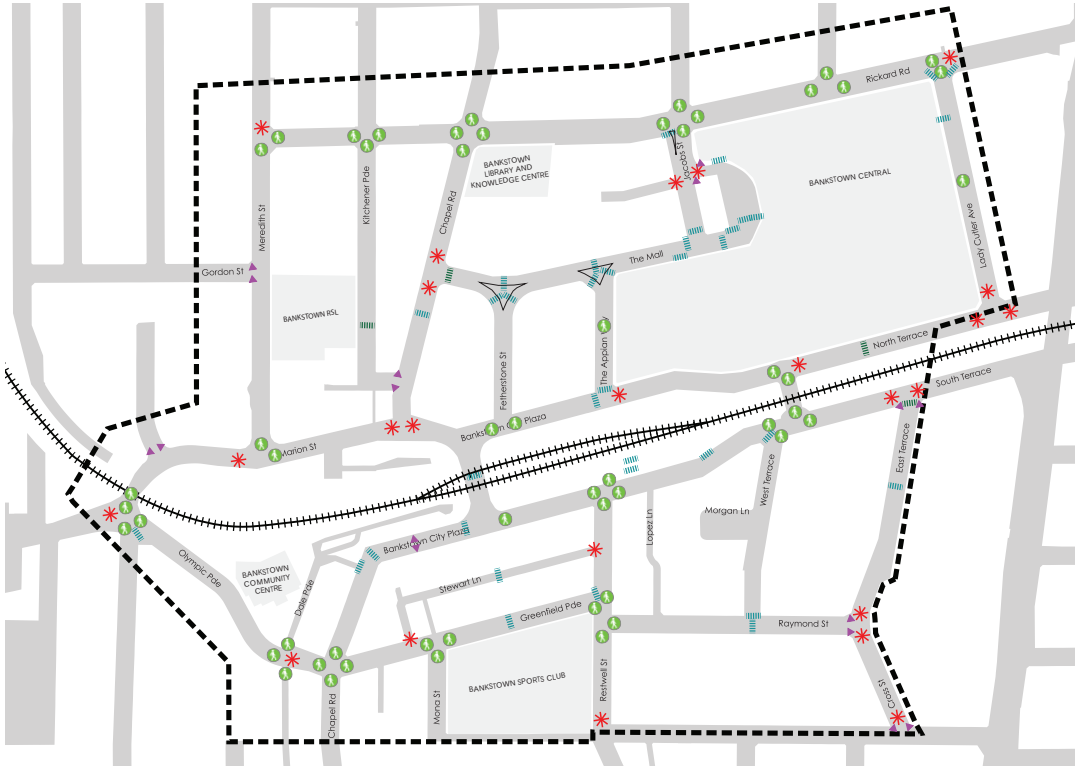
Issues + Opportunities

- Create a vehicular bypass and carparking access loop that can focus vehicular traffic towards carparking access, and minimise impact of carparking access and circulation on pedestrian priority streets and the pedestrian core around the railway station
- Rationalise bus circulation to minimise impact on pedestrian priority streets and the pedestrian core around the railway station
- Driveway access and total driveway length on pedestrian priority and cycle priority streets should be minimised

PART THREE.

PEDESTRIAN ELEMENT:

CROSSWALKS AND INTERSECTIONS



Crossings can influence the fluency of pedestrian journeys

Key Observations

- Missing crossings at some intersections interrupt pedestrian flow and cause pedestrian' s jaywalking
- Long waiting time at crossing causes queuing up at footpaths

Issues + Opportunities

- Additional crossings are required on key pedestrian routes to reduce interruption of pedestrian's journeys
- Upgrade intersections on heavy pedestrian movement corridors to raised zebra crossings to improve safety and pedestrian priority
- Reduce waiting time on significant signalised crossings with heavy pedestrian movement



Missing pedestrian crossing on western bound of the intersection of Marion St & Meredith St

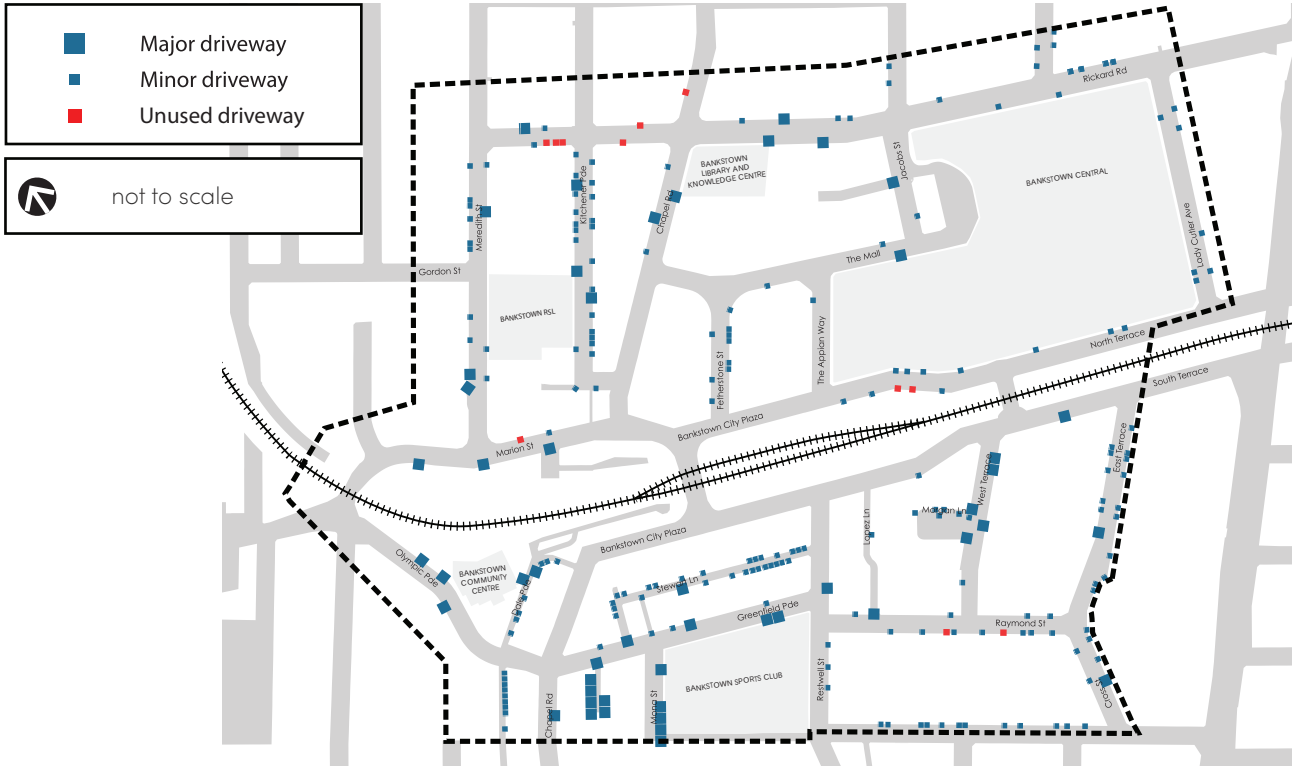

Pedestrian queuing at signalised crossing in front of entries of Bankstown Central at Lady Cutler Ave



No pedestrian crossings at the intersection of North Terrance & Lady Cutler Ave

PART THREE.

PEDESTRIAN ELEMENT: **DRIVEWAYS**



Driveways are a major source of pedestrian interruptions and break up the continuity of footpath materials

Driveways decrease pedestrian priority and become obstacle for elderly, people with children and people with disabilities

Key Observations

- Most streets are impacted at some level by driveways
- Wide driveways or/and driveways with high frequency are key interruptions for pedestrians such as at exits and entries to Bankstown Central
- Highest concentration of driveways in back of house areas along Stewart Lane which currently has limited use by pedestrians

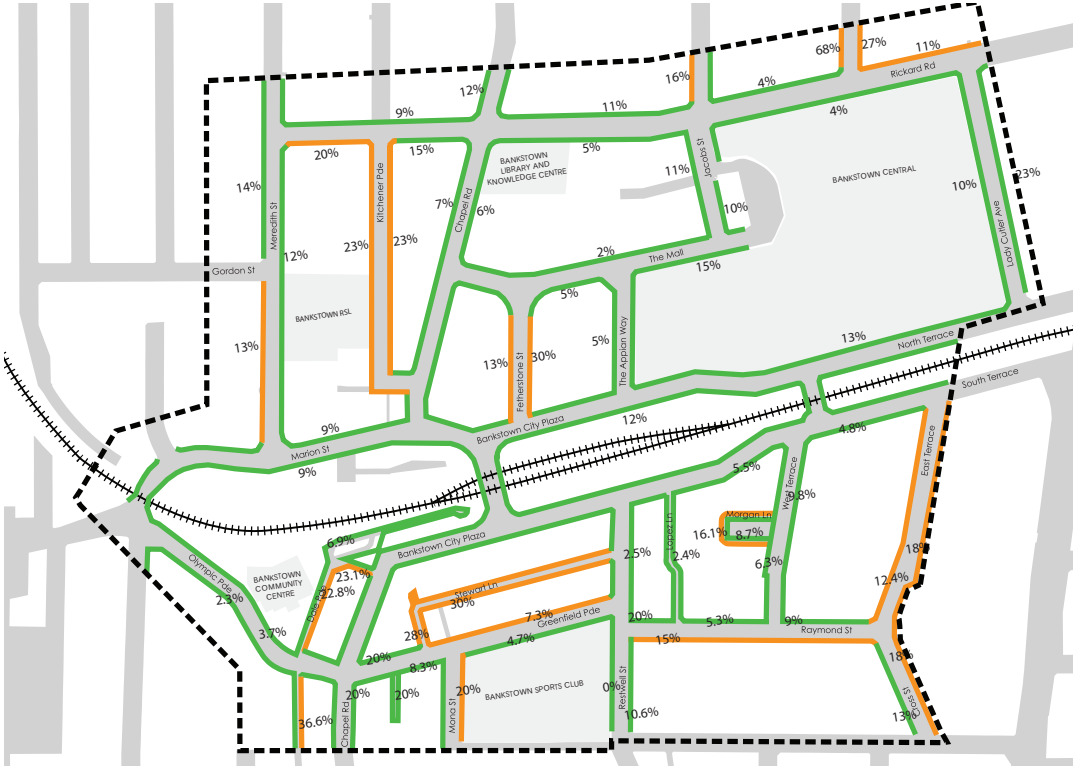
Issues + Opportunities

- Incorporate planning of interruptions into building controls to locate vehicular entrances to secondary streets and consolidate into as few driveways as possible
- Consider the role of laneways and whether they should be single use or multi- purpose


Bankstown Central Carpark Entry at North Terrace


Maron St Carpark Entry


Extended driveway along Meredith St



Frontage with 2 or less driveways per 100m

Frontage with 2 or more driveways per 100m

20% Driveway percentage per 100m

not to scale

58%
of streets include </10% of their length as driveways


High driveway density along Kitchener Parade


Continuous driveways along West Terrace - Bankstown South

Streets within Bankstown CBD core adjoining station provide less frequency and length of driveways which create less interruption by vehicles


Large driveways along residential carpark entrances

Greatest % length of continuous driveways appear to occur in residential areas or streets with a residential frontage and around Bankstown Central

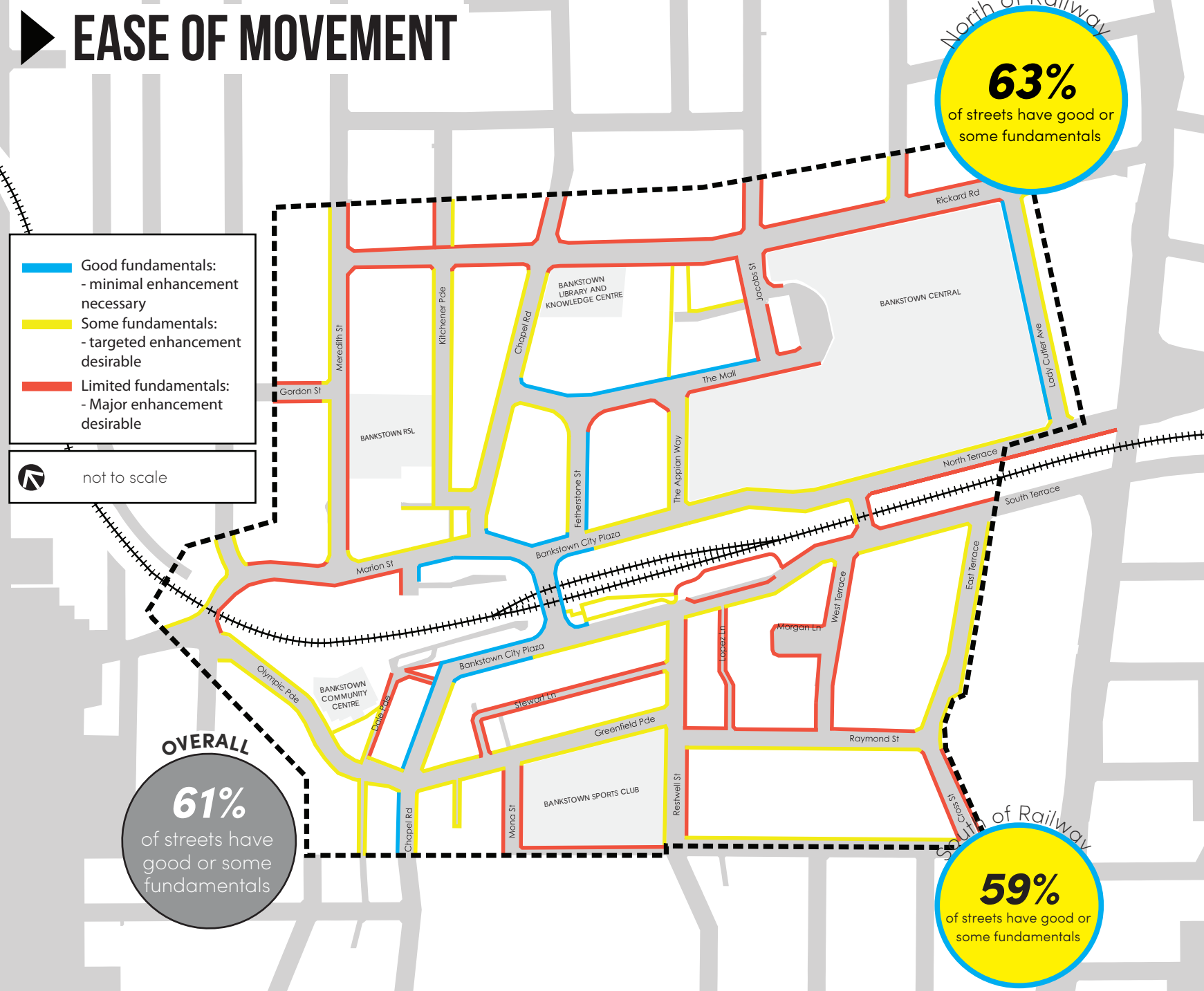
75%
of streets have <2 interruptions per 100m

(this is defined as 'Pedestrians First'


High driveway density along Stewart Ln which is back of house area and does not cause interruption to pedestrian

PART THREE.

EASE OF MOVEMENT




Pedestrian through zone with more than 2.4m width along Fethersotne St


Internal link through Compass Centre


Internal link through Compass Centre

Ease of movement relates to the capacity of the available footpath walkway (the through zone) to cater for volume of pedestrian traffic that is normal and desirable in a CBD precinct.


Through site laneway

Key Observations

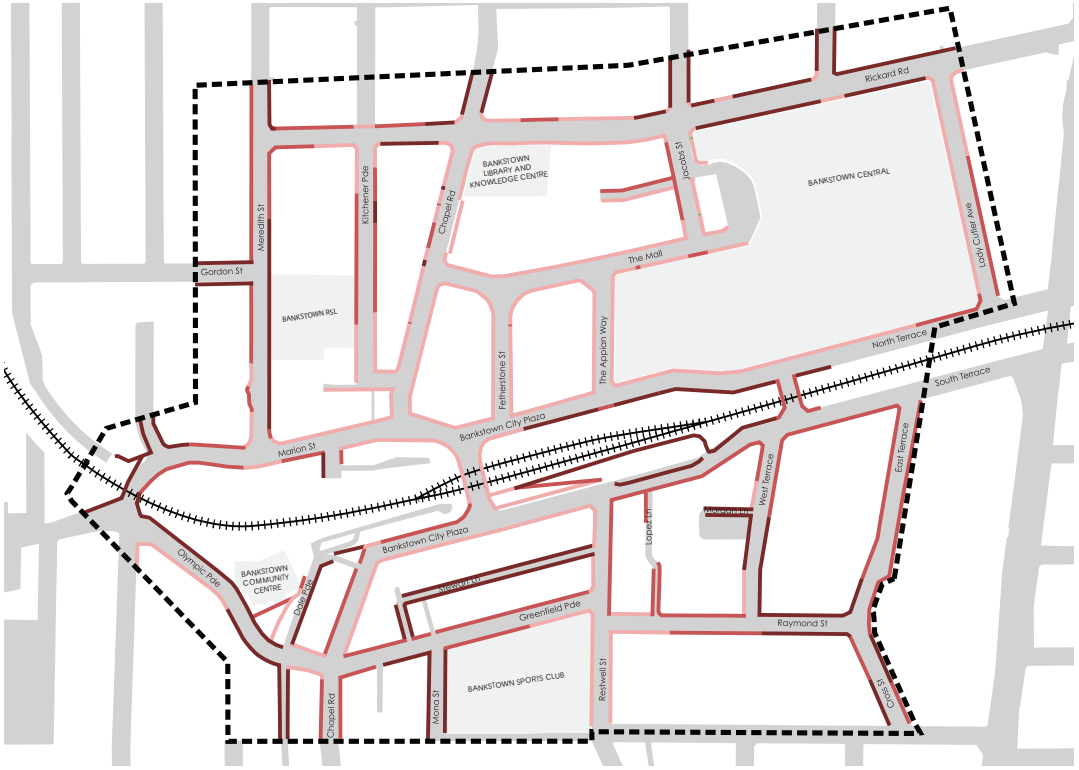
- CBD core at north and south of railway station caters for a positive level of ease of movement
- Through site links are currently critical at supplementing safe and pleasant for on street pedestrian movement
- Internal through site links are primarily privately managed and may be of limited after hours use

Issues + Opportunities

- Private development provides opportunities to employ building setbacks to enhance and improve through zone width to locations challenged by existing trees
- Improved amenity and footpath capacity to streets can reduce the reliance on private through site links

PART THREE.

PEDESTRIAN ELEMENT: **THROUGH ZONES**



38%
of streets have a verge through zone of 2.4m or greater

Opportunities exist to co-ordinate trees street furniture and on street trading to ensure that placement doesn't interrupt pedestrian movement



Optimum pedestrian through zone with street furniture placement concentrated - Bankstown City Plaza

DEFINITION: 'THE PEDESTRIAN THROUGH ZONE'
(AS DEFINED BY THE NACTO STREET GUIDELINES)

The walkable zone between any building frontage uses and the furniture and kerbside step out zone. The guidelines define a target for urban centres of 2.4m or more



Footpath along Rickard Rd challenged by street tree planting



Through zone along Bankstown City Plaza - Saigon Pl



Existing large street tree pit with narrow pedestrian through zone along Chapel Rd



Street furniture inhibiting through zone

Key Observations

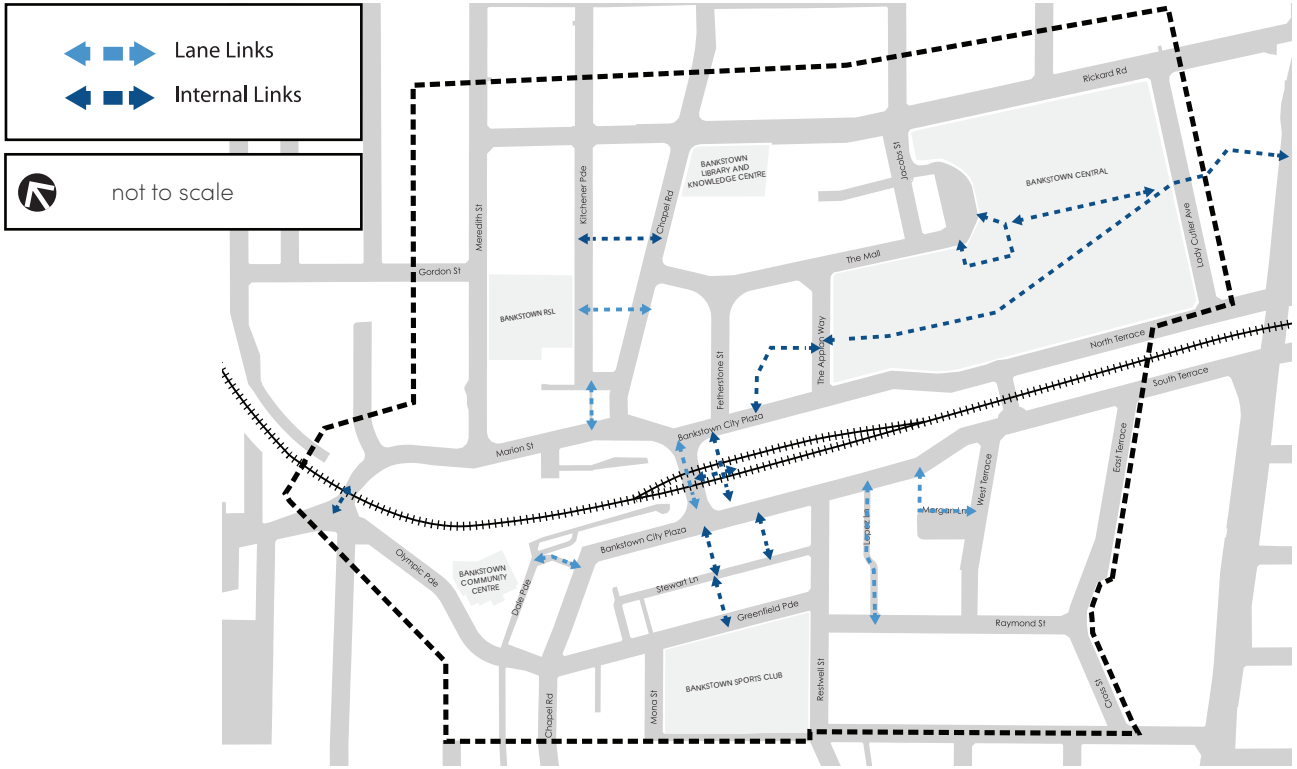
- At the simple level of availability of a walkway, the CBD is very well served. However when overlaying the available pedestrian through zone only 38% of streets provide a through zone of 2.4m width or more
- On the north side of the Railway line there is a core zone of footpaths that cater for through access (2.4m+) but lack amenity overall due to lack of active frontages, trees, awnings, difficulty of intersections crossings and quality of pavements
- In providing the optimum conditions for street tree growth (as Bankstown has been attempting to do) the walkable through zone on the typical 3.6m verge is often compromised
- To widen through zone in the vicinity many of the existing tree locations would require a further building setback as tree position is fixed

Issues + Opportunities

- Prioritise improvement of through zone provision to key pedestrian links
- Continue to improve through zone provision to all CBD streets
- Ensure through zone capacity is provided to open and enclosed through site links to private lands
- Investigate strategies to improve through access around tree pits and guards to street trees
- Progressively improve other aspects of street amenity to streets meeting the 2.4m through zone target.

PART THREE.

PEDESTRIAN ELEMENT: **THROUGH SITE LINKS**



Key Observations

- Internalised through site links currently play a very important role as east-west and north-south links within the large blocks (e.g. Bankstown Central)
- Laneways appear incidental and provide little to no direction or signage for wayfinding

Issues + Opportunities

- Laneways provide opportunities for greater promotion of public art
- The promotion of existing and potential laneways and through site links provides the opportunity of greater legibility and movement through the CBD

Through site links is critical to provide a supplement to on street pedestrian movement



The current internal through site link within Bankstown Central with heavy pedestrian movement acts as an important west-east pedestrian link within the massive block



Internal link from Chapel Rd


Dale Parade laneway



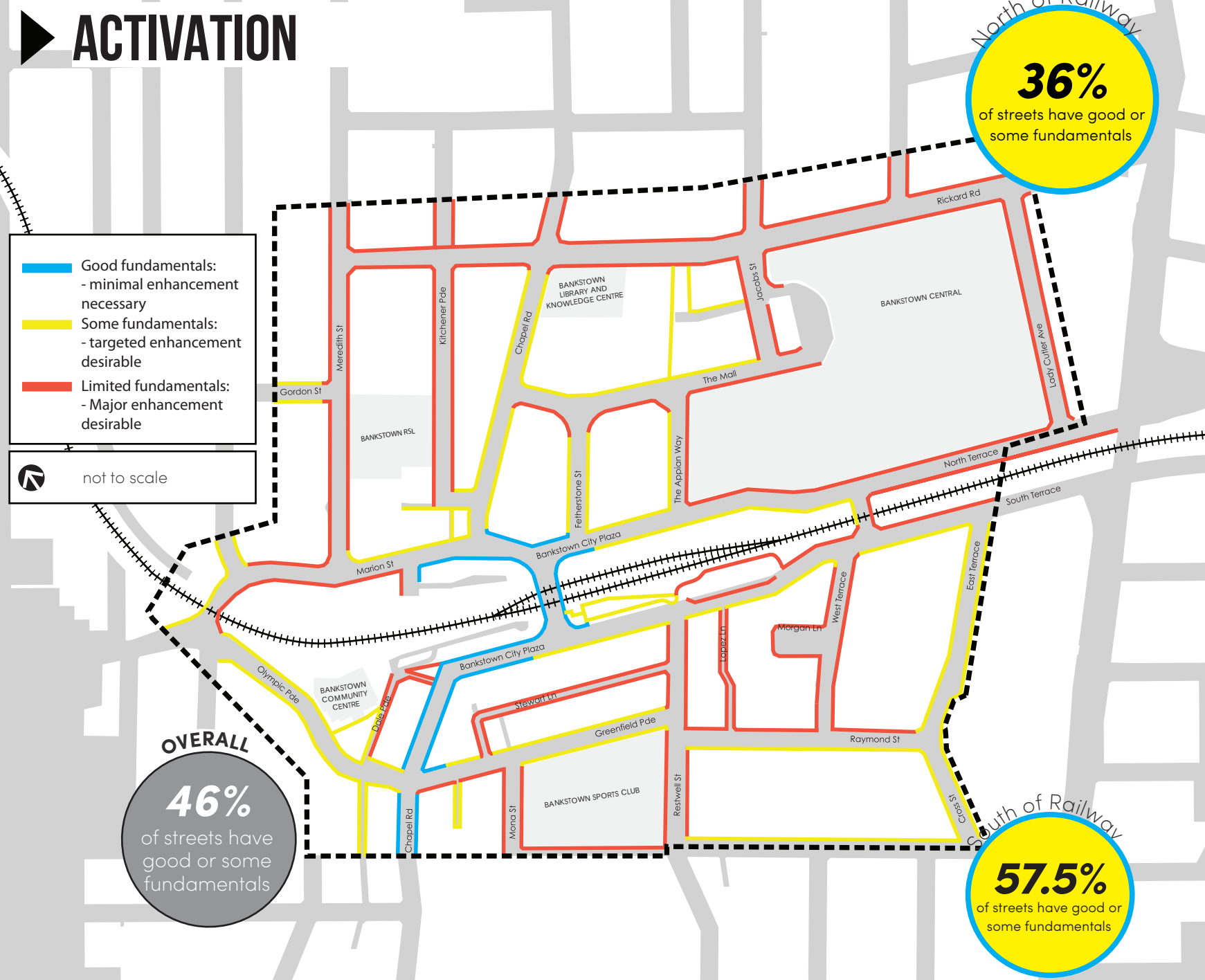




The Bankstown Workers lane is an important internal north-south link connecting Greenfield Parade to the rail station
The space has major potential for enhancement including public art, lighting and frontage activation

PART THREE.

ACTIVATION



Activation is the level of physical and visual interaction that is available between a building frontage and the adjoining public domain. Optimal activation may provide uses and activities such as al fresco seating within the road verge.





Active street life in the public domain - examples

Key Observations

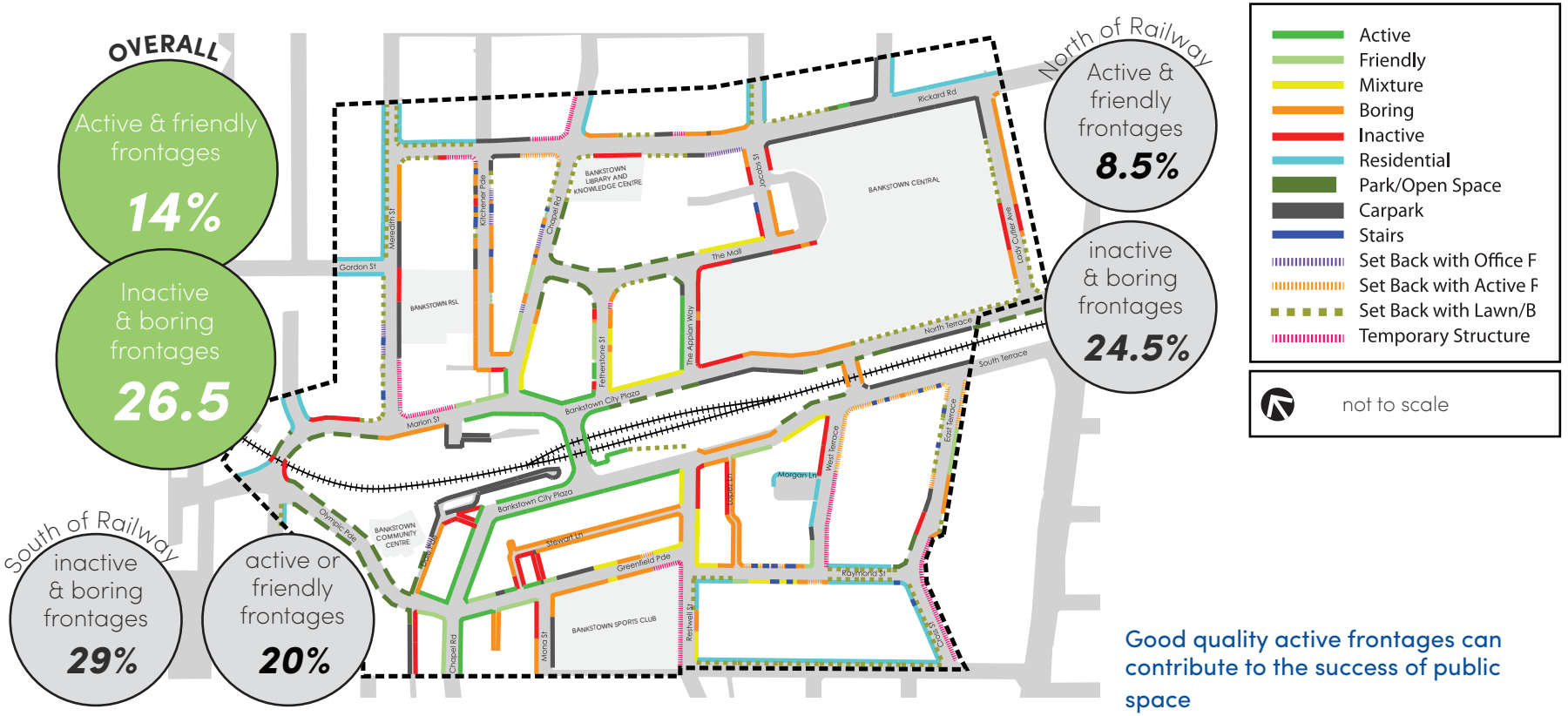
- The southern zone has more than double the amount of active or friendly building frontage as the north
- This influences movement in the north to be primarily point to point or through movement with limited stopping and lingering other than in open spaces
- Cultural groups currently tend to function within fixed zones within the CBD. Of these the "Little Saigon" precinct is currently the most active and vibrant
- Although there is not not a high proportion of frontage steps or walled setback edges where they occur they significantly affect the visual character of the street
- Limited outdoor dinning activity due to limited path width, traffic noise, lack of shade etc.
- Limited public art to the street environment

Issues + Opportunities

- Identify core zones within an overall structure plan to promote activation that can support and interact with pedestrian movement corridors
- Recognise the nature and potential opportunity presented by the role and presence of different cultural groups and reflect this in town centre structure planning
- Consider the night time patterns of movement from transport facilities and how to support and enhance these with activation
- Seek to link and consolidate existing activation zones
- Seek to improve the amenity and function of existing activation zones
- Liaison with business owners to promote effective night trading and related night economy
- Seek to limit stepped property frontages adjoining the street
- Seek to eliminate walled setback frontages adjoining the street
- Encourage outdoor dinning activities by improving public domain amenity

PART THREE.

PEDESTRIAN ELEMENT: **FRONTAGE QUALITY**



Good quality active frontages can contribute to the success of public space

Key Observations

- Good mix of street frontages occur along Bankstown City Plaza Chapel road. and North Terrace West
- Frontage with significantly poor activation to Bankstown Central
- Frontages formed by steps such as Meredith Street South and East Terrace do not contribute to street
- Frontage paved areas on higher levels and wider setbacks to public footpaths can create ambiguity between public vs private space

Issues + Opportunities

- Improve continuity / links between areas of active frontage to consolidate benefits
- Some areas of Active - Friendly frontage are compromised - eg South terrace by bus stands - seek to enable frontages to function optimally
- Improve the other fundamentals of existing areas of Active - Friendly frontage to provide more holistically attractive street places



Mixed frontages along Chapel Rd South

Frontage Activity Levels - Jan Gehl *Cities for People*



Active
Small units, many doors (15-20 Doors per 100m)
Large variation in function
No blind and few passive units
Lots of character in facade relief
Primarily vertical facade articulation
Good details and materials



Friendly
Relatively small units 10-14 doors per 100m)
Some variation in function
Few blind and passive units
Facade relief
Many details



Mixture
Large and small units (6-10 doors per 100m)
Modest variation in function
Some blind and passive units
Modest facade relief
Few details

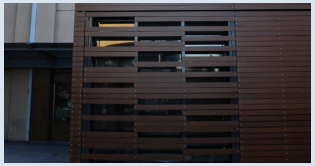


Boring
Large units, few doors (2-5 doors per 100m)
Almost no variation in function
Many blind or uninteresting units
Few or no details



Inactive
Large units, few or no doors (0-2 doors per 100m)
No visible variation in function
Blind or passive units
Uniforms facades, no details, nothing to look at

Jan Gehl, *Cities for People* (2010: 240-241)



Pop-up Structures
Second skin to facades further inhibits activation, creating impermeable and uniform barrier to frontages.



Frontage along the Appian Way West



Mixed use frontages - Saigon Pl



Underutilised frontages along South Terrace


Blank wallls along the Appian Way East

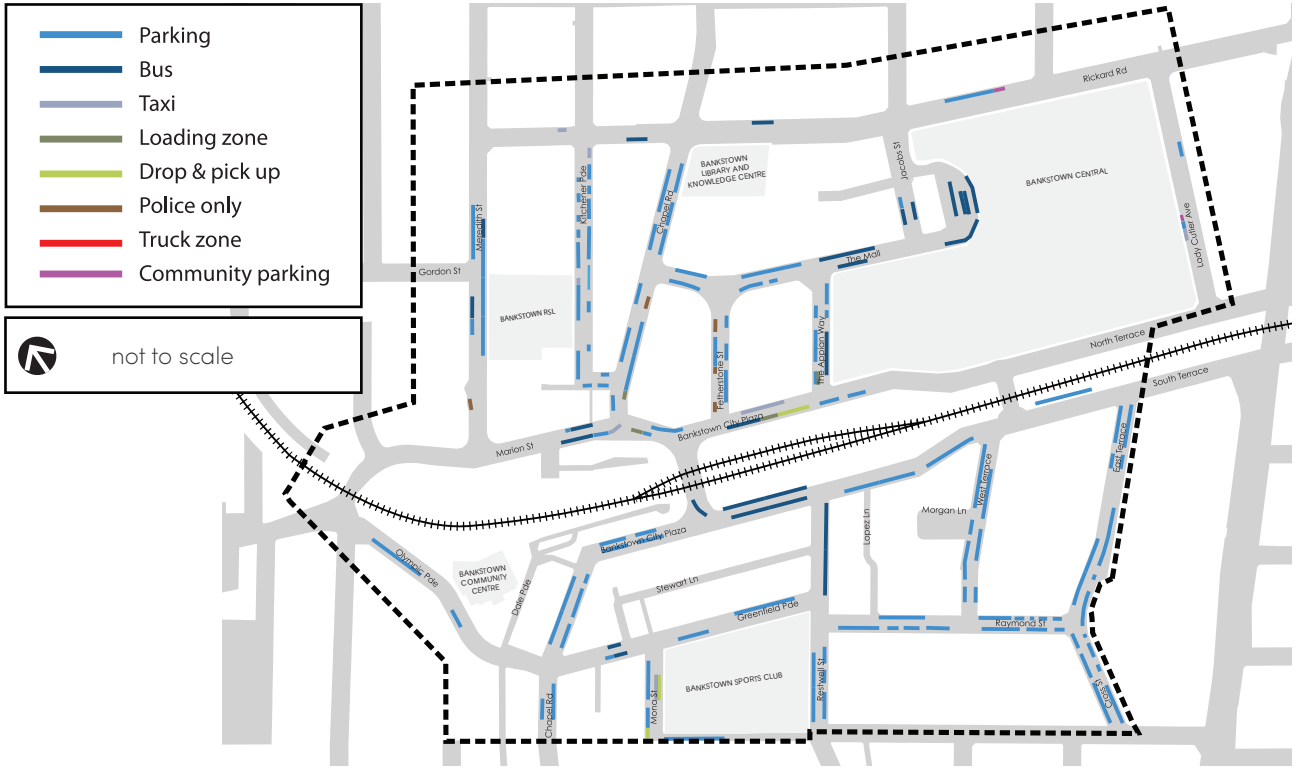

Stairs disrupting frontage activation



Positive activated frontages in Bankstown City Plaza

PART THREE.

PEDESTRIAN ELEMENT: **KERBSIDE LANE USE**



Kerbside use influences the pedestrian experience and can encourage street activity

Key Observations

- On street parking is available to most street corridors to some degree
- Bus layovers and bus stops dominate a significant portion of kerbside lane use which discourage frontage activation
- On street parking can buffer footpath pedestrian activity from traffic

Issues + Opportunities

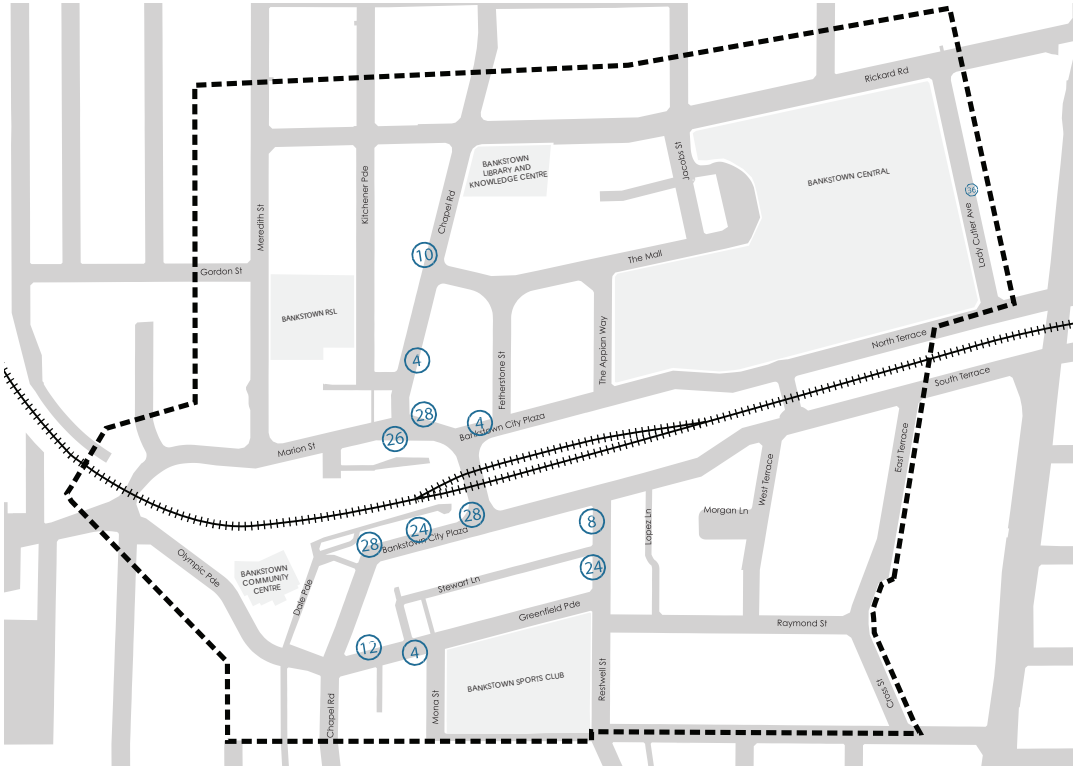
- Strategies to manage on street parking to activate streets and business
- Reduce impact of bus stops and layover


On street parking along Bankstown City Plaza


Bus interchange along South Terrace


Loading zone on Fetherstone St

PEDESTRIAN ELEMENT: **ALFRESCO SEATING**



A culture of outdoor dining can enrich public street life, become an attraction to the town and generate subsequent economic benefits

Key Observations

- Outdoor dining mainly distributed around station where favors pedestrian, has a wider footpath and better amenity of streetscape
- Generally there is lack of outdoor serving areas due to insufficient space after pedestrian through zone is catered for
- The high noise of traffic in the streets also doest not invite outdoor dining activities

Issues + Opportunities

- Invite street life by allowing more areas of outdoor dining/ seating, improving streets amenity and promoting pedestrian priority
- Encourage more business within the CBD to use outdoor space in busy areas
- Adopt traffic management to reduce traffic impact to the public street activation

(5) Alfresco seating

not to scale


Greenfield Parade cafe seating

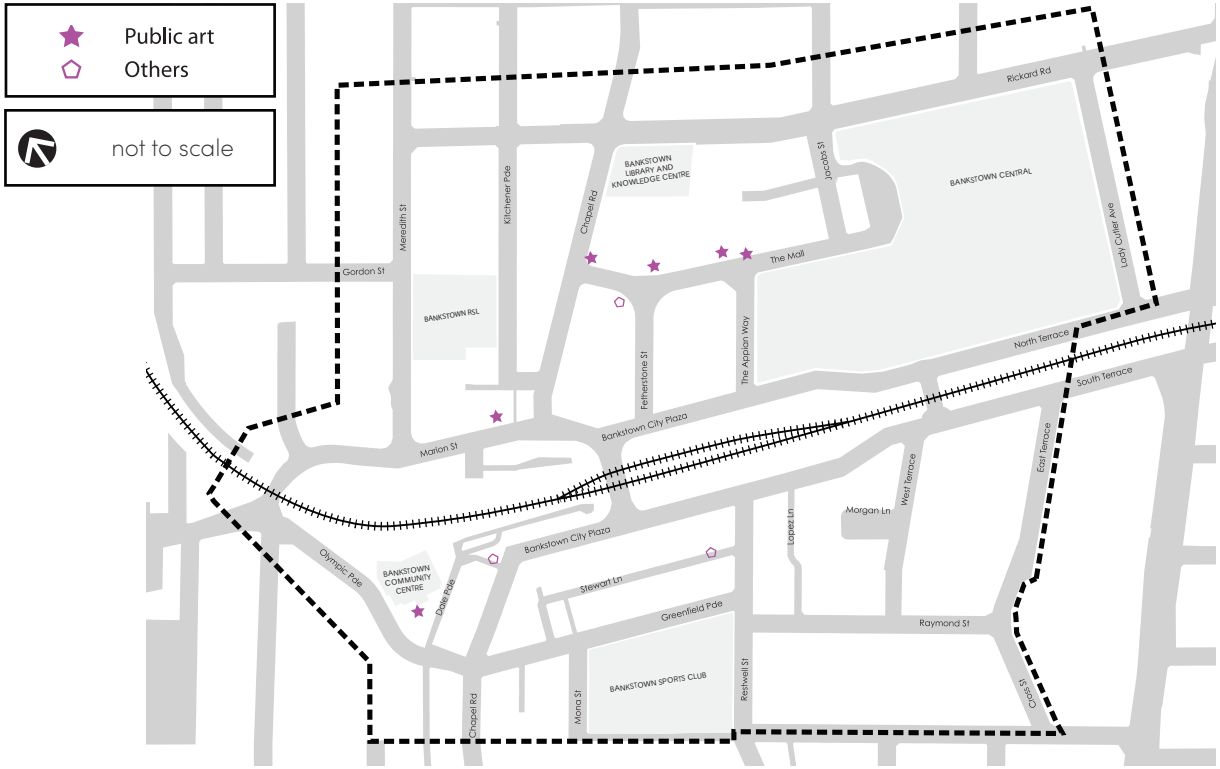

Bankstown City Plaza cafe seating


Bankstown City Plaza cafe seating


Restwell St cafe seating

PART THREE.

PEDESTRIAN ELEMENT: **PUBLIC ART**





Artworks outside Bankstown Arts Centre


Laneway mural in Stewart Lane



Public art can enhance the vibrancy and cultural relevance of public domain

Key Observations

- limited public arts presence within the study area with a focus on statuary and wall murals
- Some statuary has been 'retro fitted' to spaces and lacks integration and interaction with pedestrian movement and activity

Issues + Opportunities

- Use public art planning and implementation to reflect Bankstown's cultural character
- Plan artwork elements as integrated elements within holistic street upgrade design
- Inactive spaces with bare facades provide opportunities for activation through public art
- explore opportunities for temporary art in the street environment


Public Sculpture - Paul Keating Park


Laneway mural off Marion St

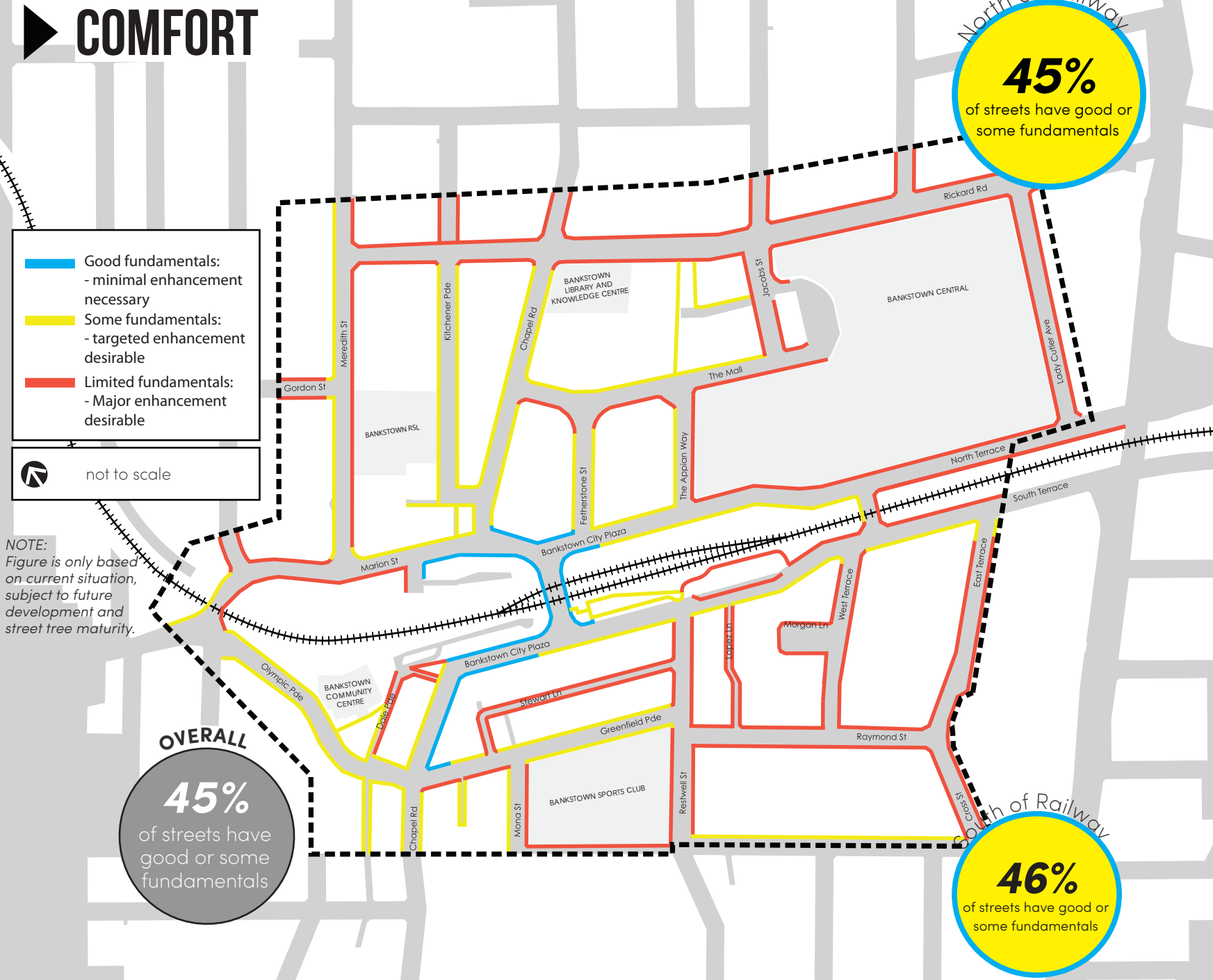

Public Sculpture - Paul Keating Park



Laneway mural Dale Parade

PART THREE.

COMFORT





Outdoor pergolas Bankstown City Plaza

Comfort is the composite of the width of pedestrian movement zone and the availability of shelter and shade through tree canopy and awnings.


Large canopy cover along Olympic Parade



Continued awning cover along Fetherstone St


Combination of pergolas and street trees - Bankstown City Plaza North

Key Observations

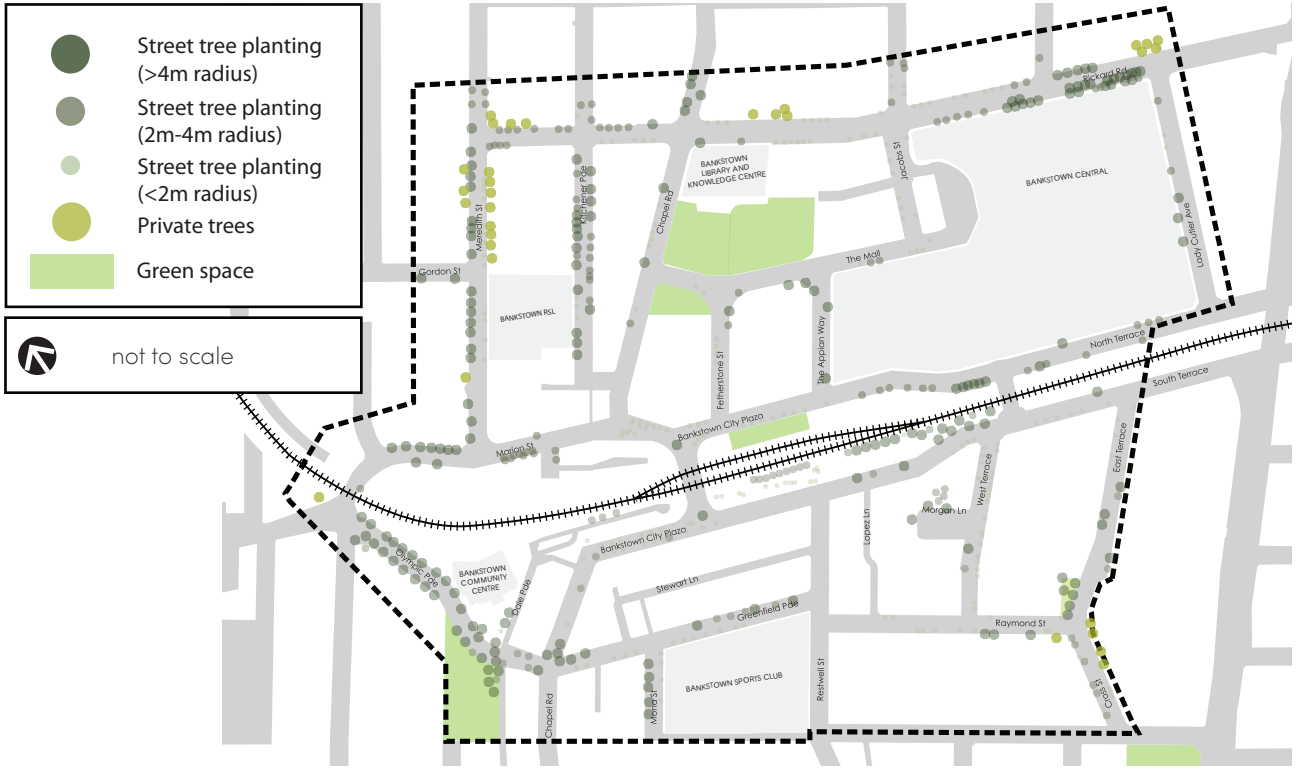
- Generally, level of comfort in north zone is higher than south zone
- Fulfill multiple access functions but with a focus on vehicular movement – creates a high level of compromise on many street corridors
- Lack of an outer vehicle loop that can provide vehicular access to off street parking means that a major function of the core streets is providing parking access (and thus reducing pedestrian amenity potential)
- Buses have a significant impact on street amenity in Bankstown through their movement routes, physical and visual presence in road and at bus stops and layover areas.
- Reasonable extent of awning coverage in the streets adjoining the railway station

Issues + Opportunities

- Develop more continuous corridors of awning protection to key pedestrian routes
- Develop more continuous corridors of tree canopy to key pedestrian and cycle routes and to major vehicular routes (not necessarily continuous avenue - nodal trees can be just as effective when integrated with awnings)
- Use nodal tree planting in visually important locations to provide visual continuity of tree character
- Desirable to consolidate bus routes to enable limitation of impact of noise fumes and dust and visual presence on pedestrian focused CBD core

PART THREE.

PEDESTRIAN ELEMENT: **TREES AND OPEN SPACE**



Street trees improve the quality of space with positive change to climate with canopy cover in exposed areas

Key Observations

- Kitchener Pde and Olympic Pde provide good street tree canopy
- Many streets lack street tree amenity due to the existing over head power cables
- Limited streets with an established tree identity and character (exceptions include Olympic Pde and Kitchener Pde)
- Effective tree character does not require continuous avenue (eg Chapel Road South - very effective nodal trees)
- Trees in private frontages often contribute crucial shade to street environment (eg Rickard Rd)

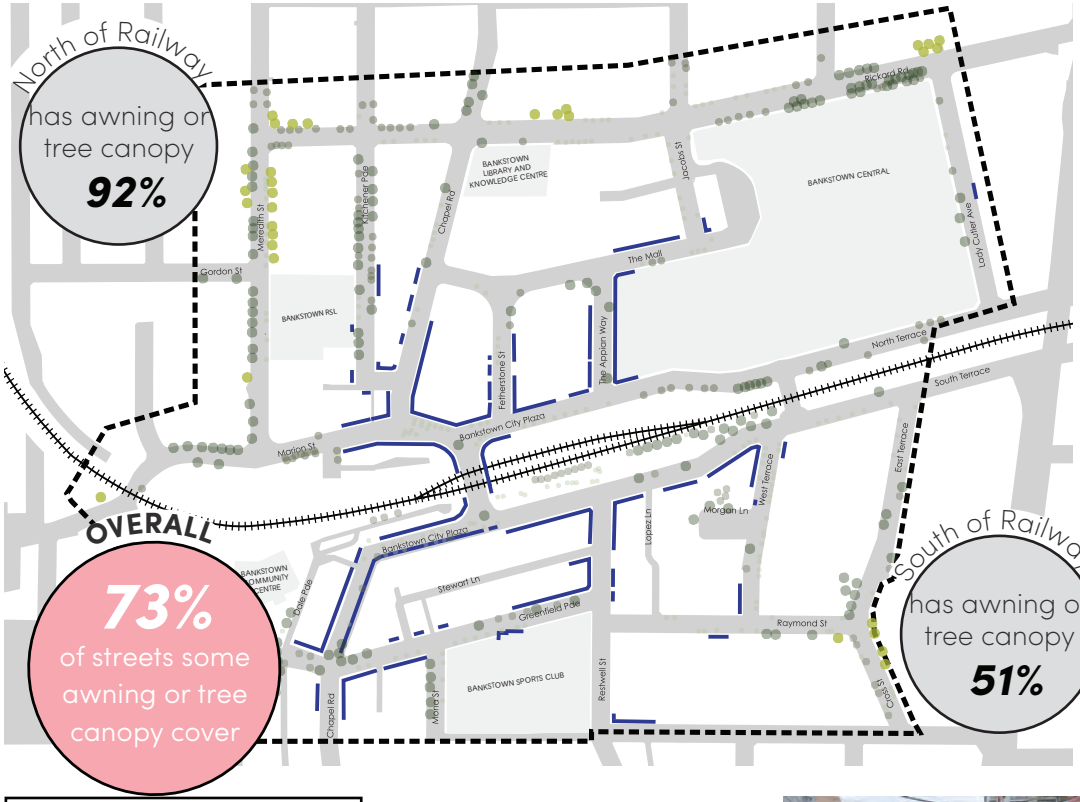
Issues + Opportunities

- Develop more continuous corridors of tree canopy to key pedestrian, cycle and major vehicular routes (not necessarily continuous avenue - nodal trees can be just as effective when integrated with awnings)
- Use nodal tree planting in visually important locations to provide visual continuity of tree character
- Improve management of pocket parks and low use areas


Canopy cover -Kitchener Parade


Canopy cover - the mall

PEDESTRIAN ELEMENT: **SHELTER**



Shade and shelter encourage greater street activity and duration of stay

Key Observations

- Continuous awnings are provided along Bankstown City Plaza and Saigon Place
- There are limited continuous "covered corridors" N-S or E-W for pedestrians

Issues + Opportunities

- Develop more continuous corridors of awning protection to key pedestrian routes



Areas without shade or shelter generally have low pedestrian activity


Awning cover along Chapel Rd West



Continuous Awning cover along Bankstown City Plaza South

PART THREE.

PEDESTRIAN ELEMENT: PUBLIC **SEATING**




Public seating in Depot Place


Seatings that are most used adjoin the key pedestrian corridors and facilitate "people watching people"

Wall seating in Bankstown City Plaza South

Seating should be integrated with and complement pedestrian movement and activity

Key Observations

- A diversity of public and private seating, sitting walls and edges appear in all areas with good canopy or awning cover
- Lingering and 'breakout spaces' occur in areas and plazas with large setbacks, stepped levels and active frontages
- Pocket parks or small green spaces are under-utilised as retreat areas
- inconsistency of seating styles

Issues + Opportunities

- integrate fixed seating to key pedestrian routes
- Upgrade pocket parks or small green spaces to introduce public seatings
- Co-ordinate the palette of public seating



Public seating at Fetherstone St


Public seatings at small gathering space at Bankstown City Plaza


Public seatings at small gathering space at Saigon Place

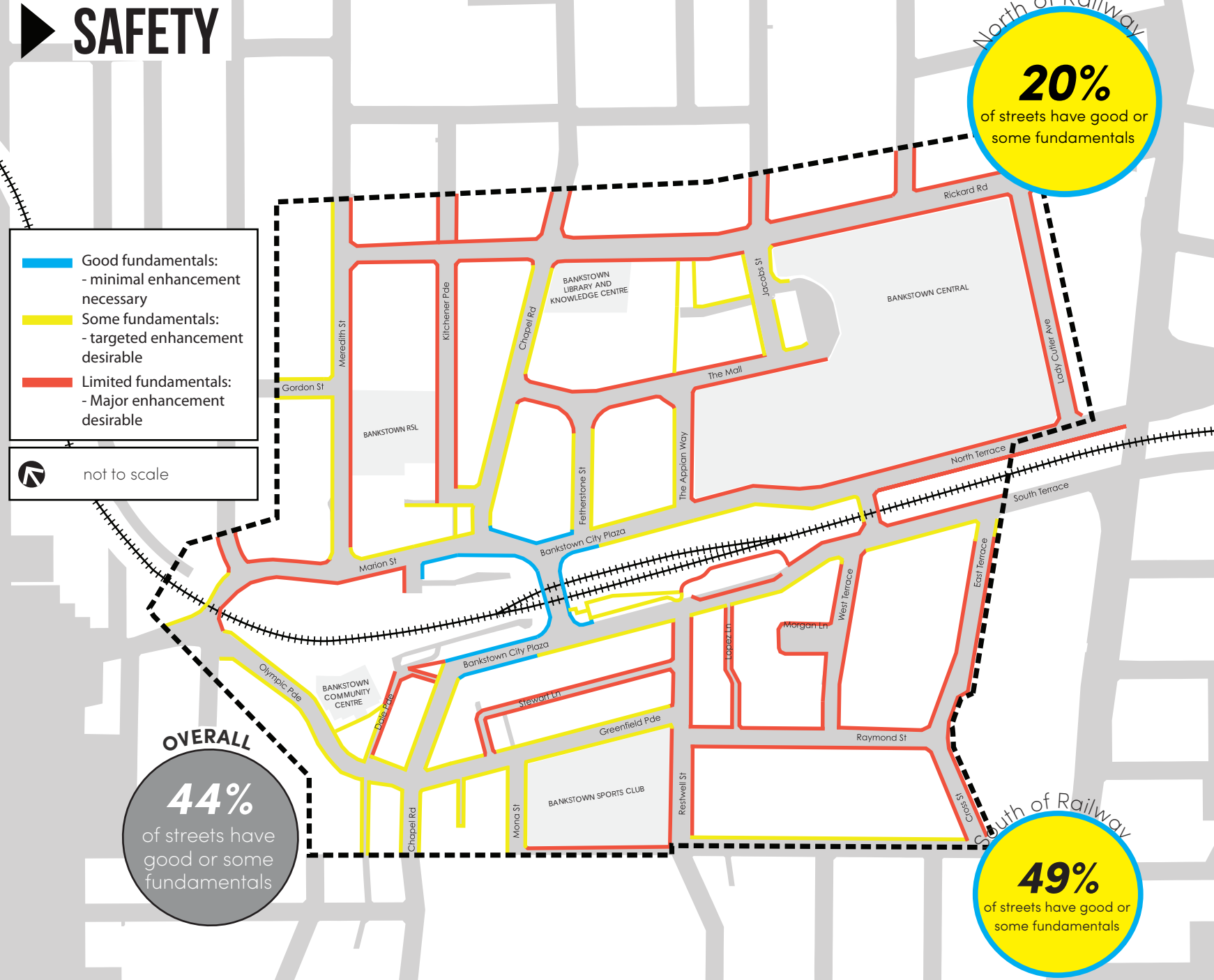

Public seatings at The Mall



Public seatings at small gathering space near train station at North Terrace

PART THREE.

SAFETY



Safety is the composite of passive surveillance provided by building frontage uses and street use (lower speed streets offer more potential for passive surveillance) with level of lighting. It is particularly focused on the night uses and movement in the CBD.





Some level sense of safety to Chapel Rd



limited level sense of safety to Stewart Ln


limited level sense of safety to The Appian Way East

Key Observations

- Streets with active frontages and pedestrian level lightings provide a higher sense of safety
- Lack of pedestrian focused lighting and boring or inactive frontages contribute to the large extent of areas with an "unsafe" night character
- Streets and lanes with inactive frontage and high driveway densities decrease pedestrian's sense of safety significantly

Issues + Opportunities

- To key pedestrian routes as a priority ensure that key fundamentals for safety of activity and lighting are addressed as far as possible
- To the southern residential zone improve street lighting levels as a priority
- Progressively enhance pedestrian level lighting to all CBD streets recognising that infill development will broaden the spread of residential population

PART THREE.

PEDESTRIAN ELEMENT: **LIGHTING**



Effective pedestrian focused lighting enhances safety and amenity of street areas and enhances night time character and wayfinding

Key Observations

- Limited extent of pedestrian focused lighting within the CBD
- No continuous N-S or E-W corridors lit to pedestrian level (except Featherstone Street-Paul Keating Park)
- Lighting is poor at most carpark entry driveways
- There is a diversity of lighting fabric - street lighting, plaza lighting and bollard lighting



Plaza lights at Bankstown City Plaza



There is a diversity of lighting fabric - street lighting, plaza lighting and bollard lighting



Typical street lights

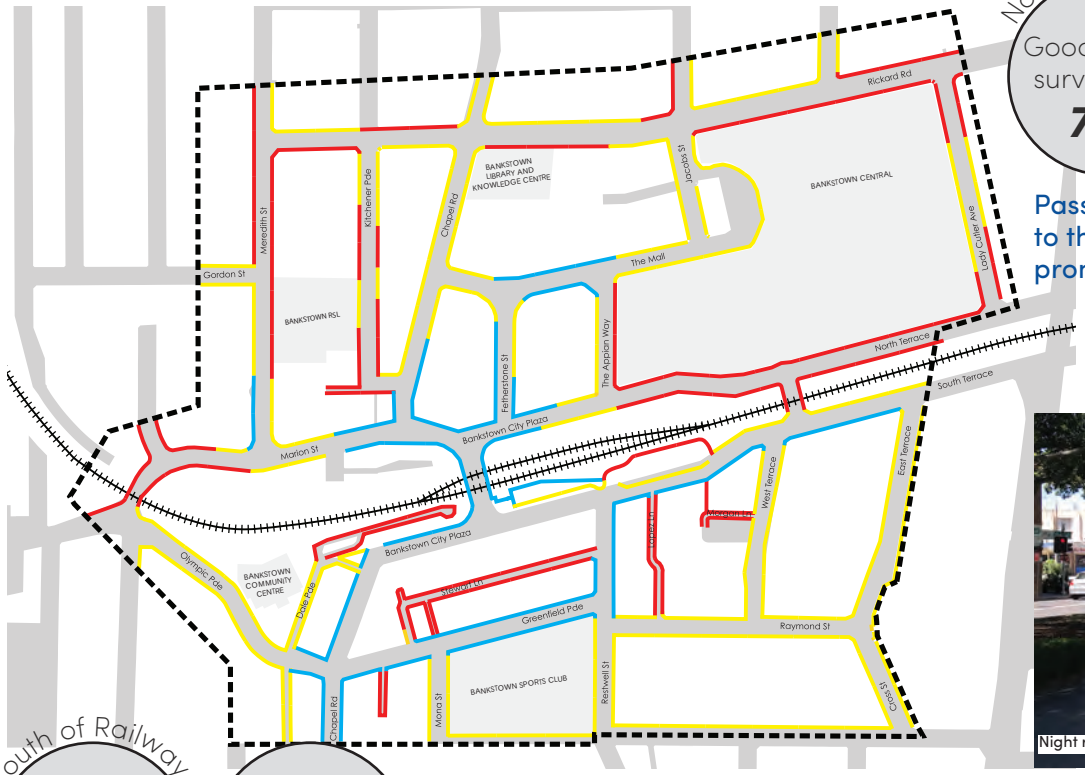


Inground lights on tree pit

Issues + Opportunities

- Provide pedestrian level lighting to key N-S and E-W corridors and to key routes leading to railway station
- Coordinated approach to lighting fabric to CBD streets and parks
- Enhance extent of under awning lighting

PEDESTRIAN ELEMENT: **SURVEILLANCE**



North of Railway

Good level of surveillance **7.5%**

Low level of surveillance **42%**

Passive surveillance can contribute to the level of safety in the city promoting longer hours of activity



Night routes through open space can lack surveillence



Low level of surveillance to Stewart Lane due to the inactive frontage

South of Railway

Good level of surveillance **19%**

low level of surveillance **25%**

Good level of surveillance
Some level of surveillance
Limited level of surveillance

not to scale

Key Observations

- Higher levels of surveillance occur in areas with greater street frontage activation
- Laneways and through site links discourage pedestrian traffic at night due to reduced safety

Issues + Opportunities

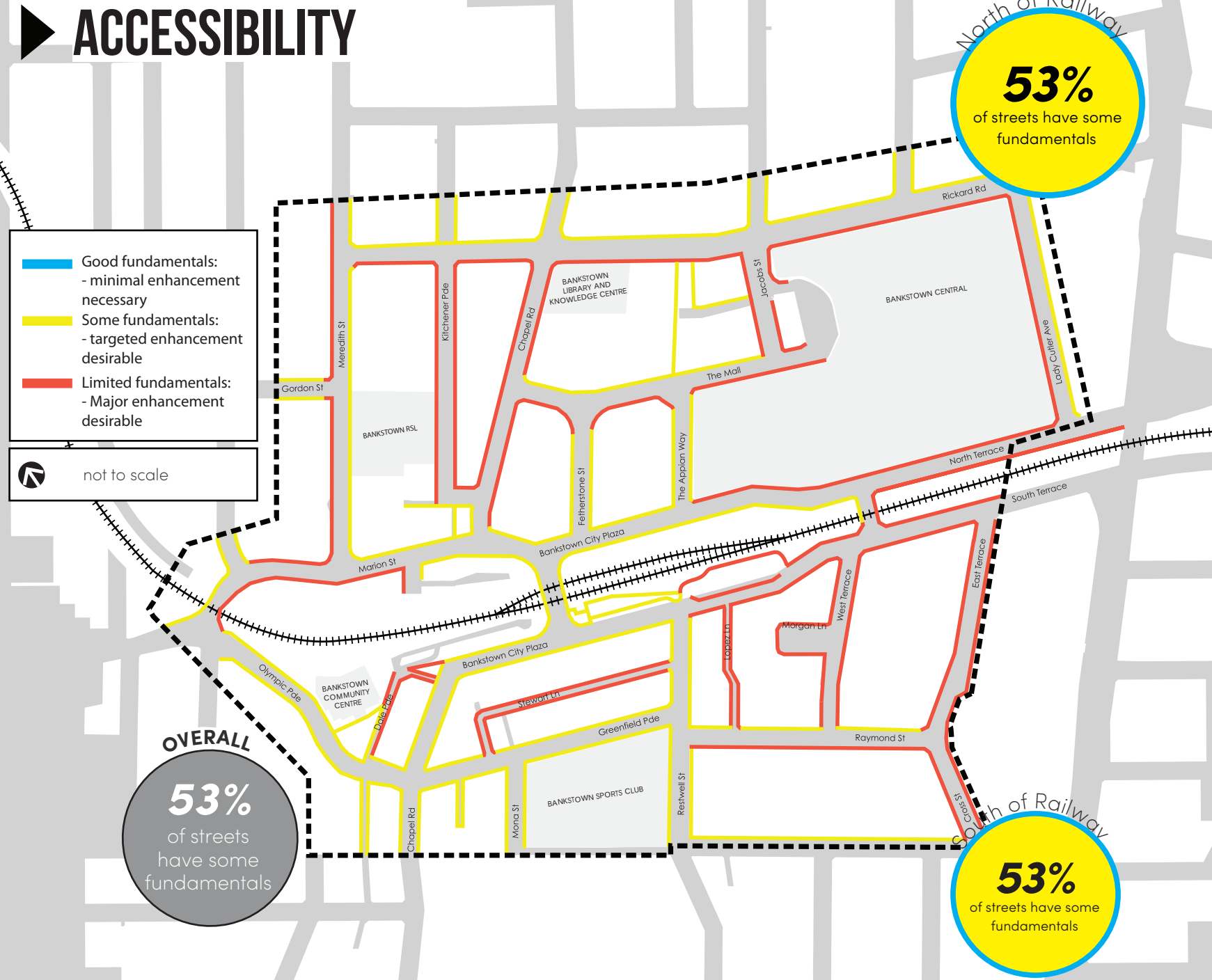
- Encourage night trading to key pedestrian routes
- Consider viability of night access through open space areas with low lighting levels
- Pop up events and community activities around the city scan play a role in passive surveillance

OVERALL **13%** of streets have a composite good level of surveillance

OVERALL **35%** of streets have a composite low level of surveillance

PART THREE.

ACCESSIBILITY

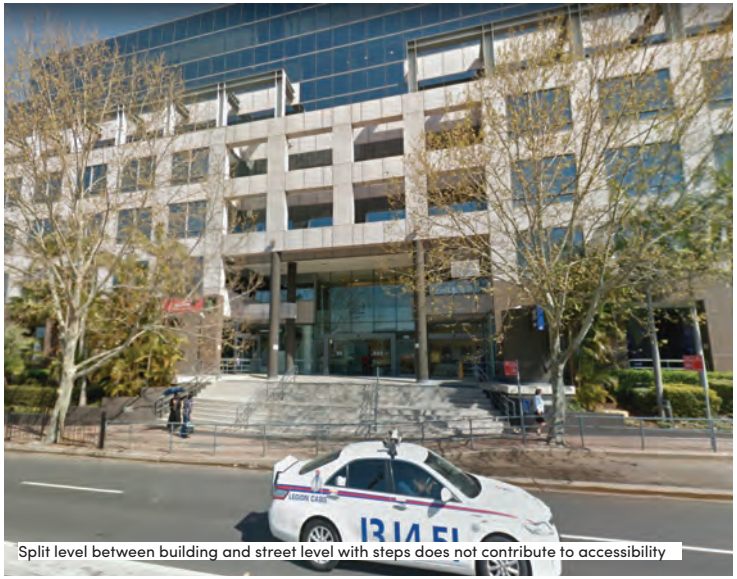




Raised pedestrian zebra crossing to promote street accessibility at Bankstown City Plaza South



Pram ramps with uneven pavement and wide carriageway become obstacles for elderly, people with children and people with disability - Kitchener Parade



Split level between building and street level with steps does not contribute to accessibility

Key Observations

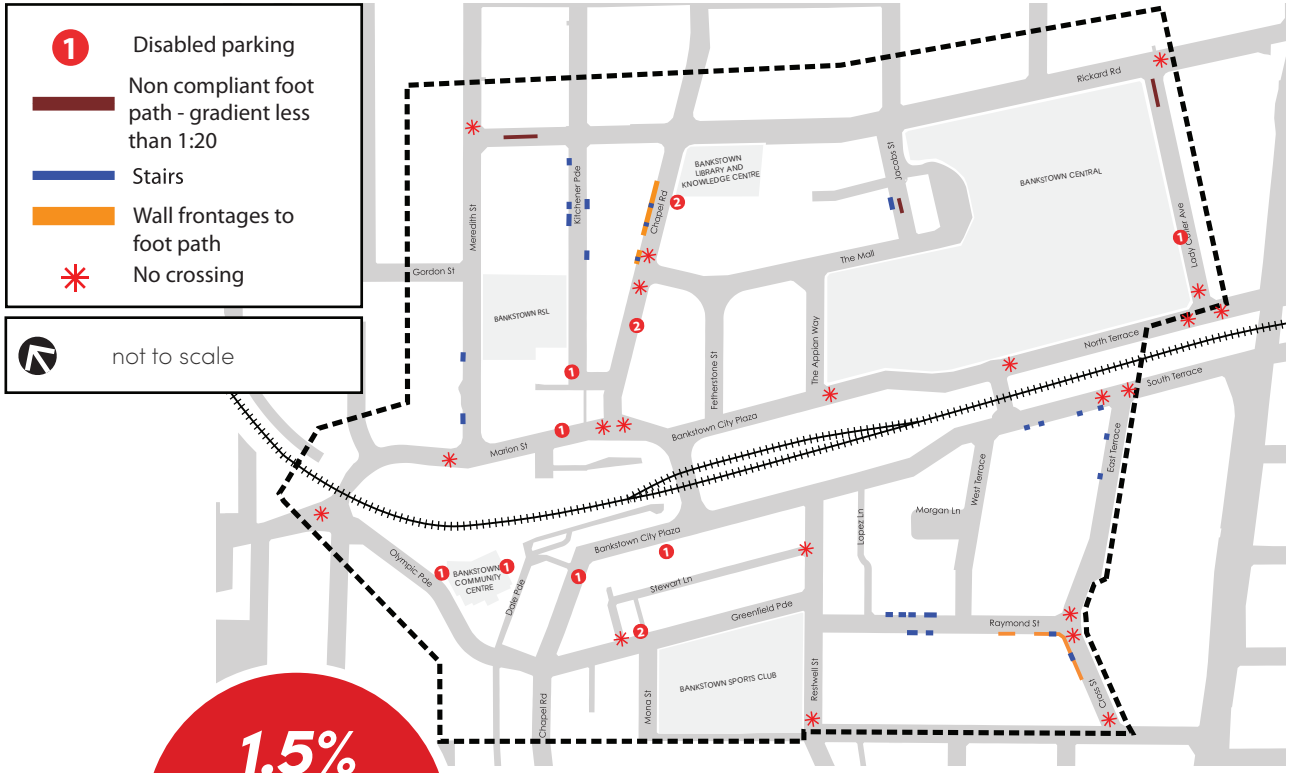
- There are no street corridors in Bankstown that achieve a high level of accessibility - over half meet some requirements but fall short in others
- Generally streets in Bankstown CBD are of accessible grade
- There is limited on street disabled parking
- Buildings (residential/office/facility) with split level from street level create some difficulties for accessibility
- Driveways reduce comfort of those with disabilities or the elderly
- Access into Bankstown CBD s favour vehicular traffic with difficult and sometimes missing crossing points for pedestrians
- The railway provides a challenge for access north to south

Issues + Opportunities

- Improve overall performance for accessibility of street corridors including:
  - -all crossing legs catered for
  - -regular kerb crossings
  - -regular disabled parking spaces
  - -seamless disabled access routes that are not convoluted

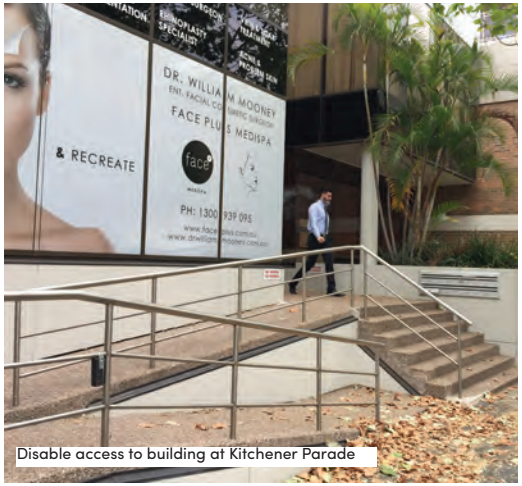
PART THREE.

PEDESTRIAN ELEMENT: **UNIVERSAL ACCESS**



1.5% of streets in Bankstown have a non-compliant grade

Improved accessibilty around the CBD can provide comfort for people with special needs - the elderly, people with disability, people with children and people with heavy burdens



Disable access to building at Kitchener Parade


Handrail to street - Kitchener Parade



Disabled parking



Disabled parking - Lady Cutler Ave



Non compliant kerb ramps - South Terrace

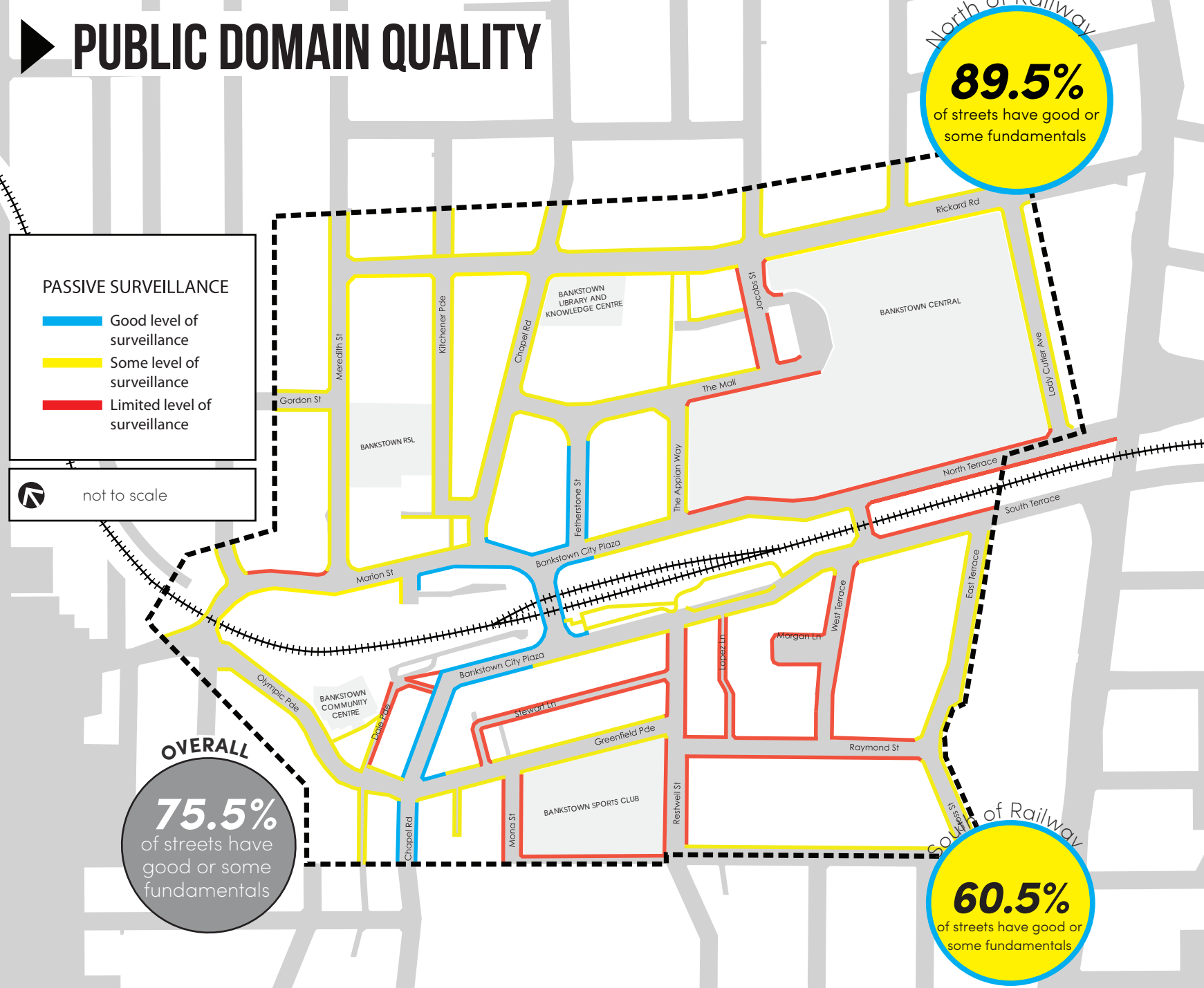

Uneven pavement at Marion Street



Accessible ramp at Bankstown City Plaza

PART THREE.

PUBLIC DOMAIN QUALITY



Public domain quality can encourage street life through increasing length of stay and building identity and character for the centre


Upgraded street furniture at Marion St


Pavement upgrade adjoining Bankstown Civic Tower at Rickard Rd



Signages at Marion St

Key Observations

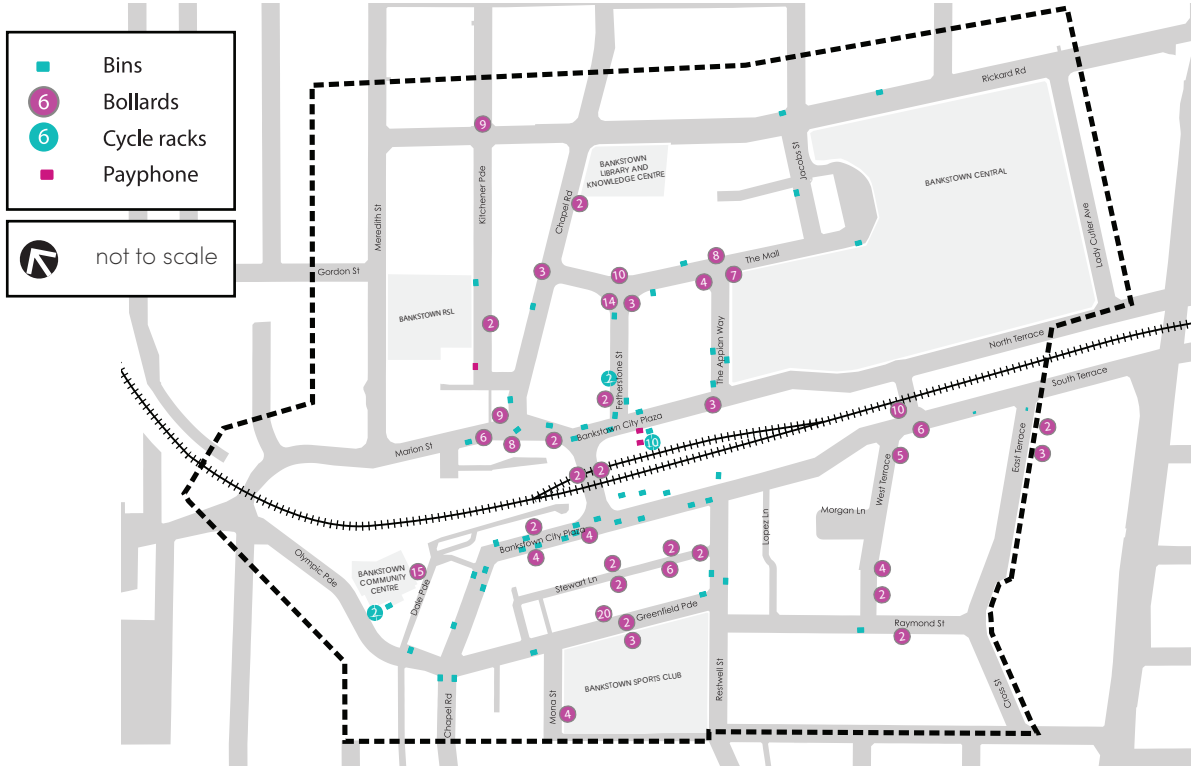
- Council has undertaken an ongoing programme of public domain improvements to major streets in the past 15 years. This has focused on pavements street trees and furniture.
- Some of the best spaces in Bankstown have been the result of this programme including Chapel Street south and Bankstown Plaza (North Terrace) at Chapel Street.
- In other places the physical public domain improvements address some the fundamentals but to be the best street they can be - other fundamentals need to fall into line.

Issues + Opportunities

- Continue implementation of public domain improvements to those corridors needing to be addressed
- Review opportunities to address both pedestrian through zone objectives and to optimise street tree planting - for example increased building setbacks

PART THREE.

PEDESTRIAN ELEMENT: **STREET FURNITURE**



Street furniture should be part of a simple coordinated suite and should be placed where it is most likely to be used and serve its function

Key Observations

- Street furniture has been implemented to individual streetscape projects as they have been rolled out
- Street furniture is generally in good condition

Issues + Opportunities

- Co-ordinate the palette of street furniture
- Focus furniture uses where it will be used and can be maintained



Payphones near train station


Bollards at Marion St


Bike racks near train station



Bin near bus stop at Marion St



Bollards at Marion St



Upgraded bollards and bin at the intersection of The Mall

PART THREE.

PEDESTRIAN ELEMENT: **SIGNAGE + WAYFINDING**



Wayfinding can support the legibility, function and enjoyment of CBD systems that have a discernible and rational structure



Identification Signage to Council Chambers

Key Observations

- The CBD lacks a structure of pedestrian access and public space which can be portrayed in wayfinding
- Directional information markers provided to all street corners in the south but appear to only be concentrated around the core of the CBD in the north
- Signage fabric lacks coordination
- Text on some directional signage is too small to see

Issues + Opportunities

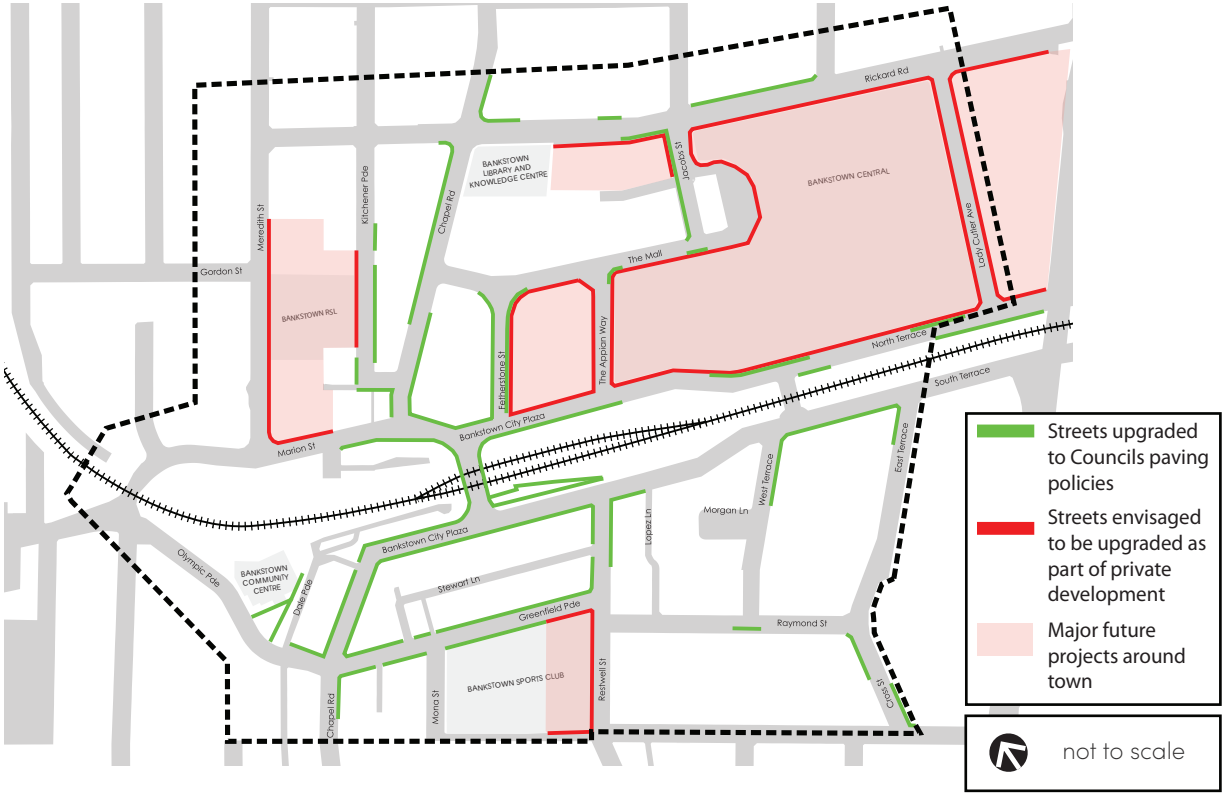
- Provide a rational structure of access and public space which can be supported by wayfinding
- Develop a coordinated approach to wayfinding and signage that is functional and legible and develops a 'Bankstown Identity'



Informtaion signage


Directional signage

PEDESTRIAN ELEMENT: **PAVEMENT UPGRADES**





Upgraded pavement - Chapel Rd South



Upgraded pavement - Fetherstone St



Upgraded pavement - Bankstown City Plaza North

Key Observations

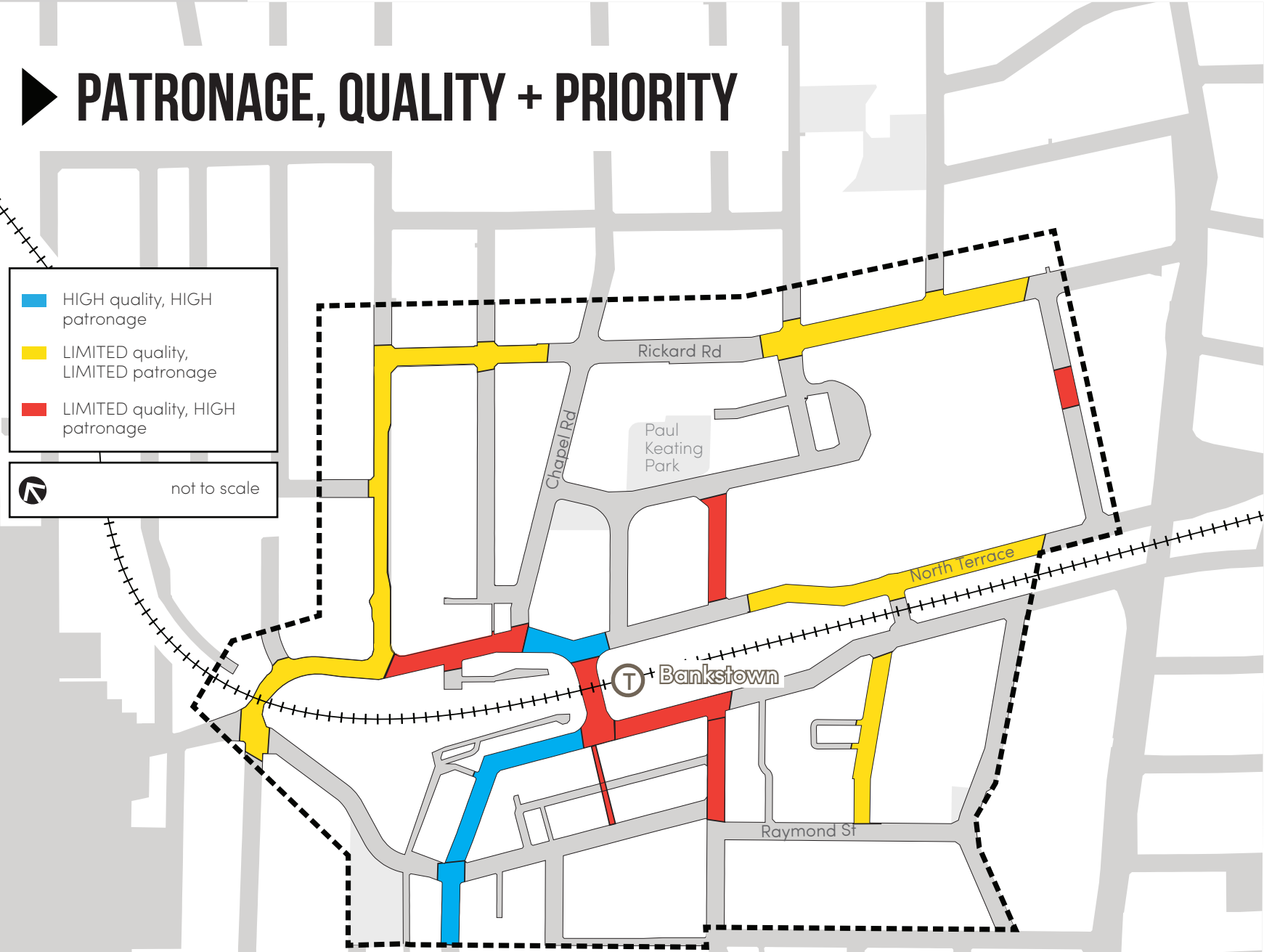
- Core focus of street upgrades lie north and south of railway station
- Some streets that have been upgraded to date have future development sites

Issues + Opportunities

- Integrate public domain improvements with related strategies to enable optimum outcome - eg development setbacks andtraffic modifications
- Seek to complete full street corridors to achieve optimum benefit to pedestrian movement

PART THREE.

PATRONAGE, QUALITY + PRIORITY



Street Corridor	Patronage	Streetscape Quality
Bankstown City Plaza (north)	HIGH	HIGH
Chapel Road South (incl Bankstown City Plaza / Saigon Place)	HIGH	HIGH
Chapel Road (south)	HIGH	HIGH
Bankstown City Plaza Bridge	HIGH	LIMITED
Appian Way	HIGH	LIMITED
Lady Cutler Avenue crossing	HIGH	LIMITED
Marion Street between Meredith St and CHapel Rd.	HIGH	LIMITED
South Terrace at the bus interchange	HIGH	LIMITED
Restwell St	HIGH	LIMITED
Marion Street west of Meredith Street	LIMITED	LIMITED
Meredith Street	LIMITED	LIMITED
Rickard Road	LIMITED	LIMITED
North Terrace east of Appian Way	LIMITED	LIMITED
West Terrace	LIMITED	LIMITED

Target improvements where patronage is already high





The Lady Cutler Ave. crossing sees the 2nd highest pedestrian counts in the CBD, yet because of limited streetscape qualities, nearly 90% of activity is 'crossing' from inside one wing of Bankstown Central to another.



The City Plaza Bridge outside the train station sees the highest pedestrian counts in the CBD, despite large barricades limiting pedestrian connectivity.

PART THREE.

FUNDAMENTALS: REPORT CARD

An appraisal of the streets of Bankstown was undertaken with the aim of understanding relative level of performance of individual street corridors based on the fundamental street qualities. Where tangible variations were evident between precincts or sides of a corridor these were evaluated separately. The table below summarises this assessment.

The assessment applied the following criteria in identifying a score from 1-5 as outlined opposite. From the composite of the scores, an overall score for each corridor was identified. This is mapped into 3 composite categories: Good, Some and Limited fundamentals.

Criteria: CONNECTIVITY
- Continuity
- Width
- Availability of crossings

Criteria: INTERRUPTIONS
- Number
- Length of interrupted walk

Criteria: EASE OF MOVEMENT
- Capacity provided by Footpath width / through zone
- Intersections to cross

Criteria: ACTIVATION
- Level of activation

Street Corridor	Connectivity	Interruptions	Ease of movement	Activation	Comfort	Safety	Accessibility	Public Domain Quality	Total score	Average Score
NORTH										
Rickard Road north	3.5	3	2	2	2	2	3	1	18.5	
Rickard Road south	3	3.5	2.5	1	2	1	2	2.5	17.5	
Gordon Street	3	3	2	2.5	1	3	2.5	1	18	
Bungalow Crescent	3	2.5	2	2.5	2	2	2.5	1	17.5	
Meredith Street west	3.5	3	3	2	3.5	2.5	2	1	20.5	
Meredith Street east	3	2	2	1	2	1.5	2.5	1	15	
Kitchener Parade	4	2.5	3	2	4	2	2	2	21.5	
Chapel Road North	4	4	4	3.5	2.5	3	2	3.5	26.5	
Fetherstone Street west	5	3.5	4	4	2.5	4	3	4.5	30.5	
Fetherstone Street east	5	2	4.5	2.5	3	3	3	3.5	26.5	
The Mall north	4	4.5	4.5	3	2.5	2	3	4.5	28	
The Mall south	2	1.5	2	2	2	2	2	3	16.5	
The Mall west	2.5	3	3.5	1.5	1.5	2	2	3.5	19.5	
The Appian Way west	4	4	4	3.5	3.5	2.5	3	2	26.5	
The Appian Way east	4	4.5	3.5	1	2	1	3	2	21	
Jakob Street	2	3.5	2.5	1	1	2.5	2	3	17.5	
Lady Cutler Avenue west	3.5	4	4.5	2	2	2	1.5	1	19.5	
Lady Cutler Avenue east	3.5	2.5	3	1	1	2	2.5	1	16.5	
Marion Street west	2.5	2	2	1	2	2	2	2	15.5	
Marion Street east	3	4	3	4	4	4	3	4	29	
Bankstown City Plaza	4	5	5	5	5	5	3	5	37	
North Terrace north	4	2.5	2.5	1	1.5	1	2	2	16.5	
North Terrace south	2	2.5	1	1	1.5	1	2	2	13	**21.21**

Criteria: COMFORT

- Shelter provided by awnings and trees canopy

Criteria: SAFETY

- Composite safety - lighting and passive surveillance
-

Criteria: ACCESSIBILITY

- Accessibility level of walkway
- Through zone capacity

Scoring	
Very Good	5
Good	4
Fair	3
Poor	2
Very Poor	1

Composite	Average Score range	Total score range
Good	4 to 5	30-40
Some	2 to 4	16-30
Limited	1 to 2	1 to 16

Street Corridor	Connectivity	Interruptions	Ease of movement	Activation	Comfort	Saftey	Accessibility	Public Domain Quality	Total score	Average Score
SOUTH										
Olympic Parade north	4.5	5	2.5	2.5	4	2.5	2.5	2	25.5	
Olympic Parade south	4.5	5	3.5	2.5	4	2	2.5	2	26	
Dale Parade	3.5	1.5	2.5	2	1.5	2	1.5	3	17.5	
Chapel Road South (incl Bankstown City Plaza) west/ north	4.5	5	3	5	4	3.5	3	3.5	31.5	
Chapel Road South (incl Bankstown City Plaza) east / south	4.5	5	5	5	4.5	3.5	3.5	3.5	34.5	
South Terrace north	2	2.5	1.5	1	1.5	2	1.5	1	13	
South Terrace south	3	4	3	4	4	4	2	2.5	26.5	
Stewart lane	1	1	1	1	1	1	1	1	8	
Greenfield Parade west	4	3	2.5	4	3	4	3.5	3.5	27.5	
Greenfield Parade east	3	2	2.5	1	1.5	4	2.5	3.5	19.5	
Mona Street west	3	4	1	1	2.5	2.5	2	1	17	
Mona Street east	4	2	0.5	1	1	2.5	1.5	1	13.5	
Restwell Street west	2	3	2.5	1.5	1.5	2	3.5	3	19	
Restwell Street east	2	3	2	2	1.5	2	2.5	2	17	
Lopez Lane	2	4	1	1	1	1	1	1	12	
West Terrace	3	3.5	2	2	1.5	2	2	1	17	
East Terrace	3.5	2.5	3	2.5	1.5	2	2	1	17	
Morgan Lane	1	2	0.5	1	1	1	1	1	8.5	
Raymond Street north	3.5	3.0	2	2	1	2	2.5	2	18	
Raymond Street south	3	2	2.5	2.5	2	2	1.5	2	17.5	
Cross Street	3.5	2.5	2	2.5	2	2	2	2	18.5	**19.26**

APPENDIX 1.

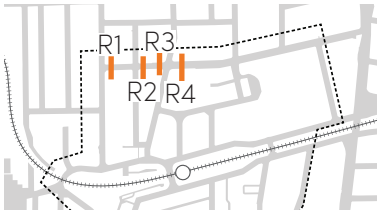
A1

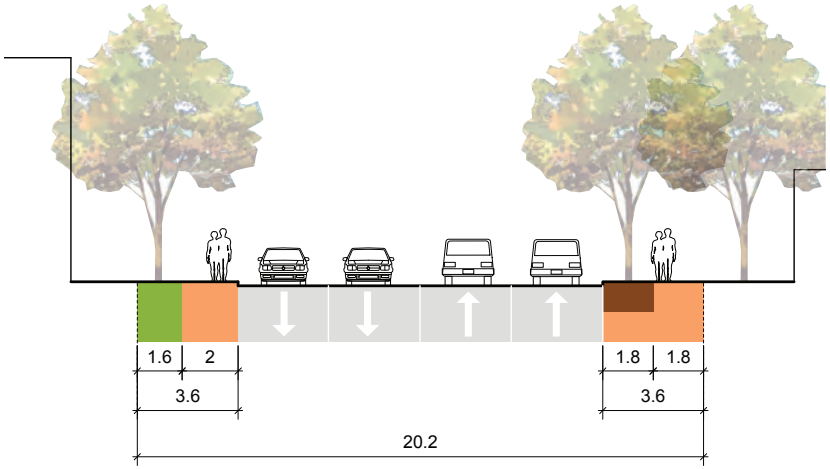
EXISTING STREET SECTIONS

Outlined in this appendix are the detailed street cross sections that currently exist in the centre. These cross sections will be utilised to understand existing capacity for future decision making on the centre's future transport and place frameworks.

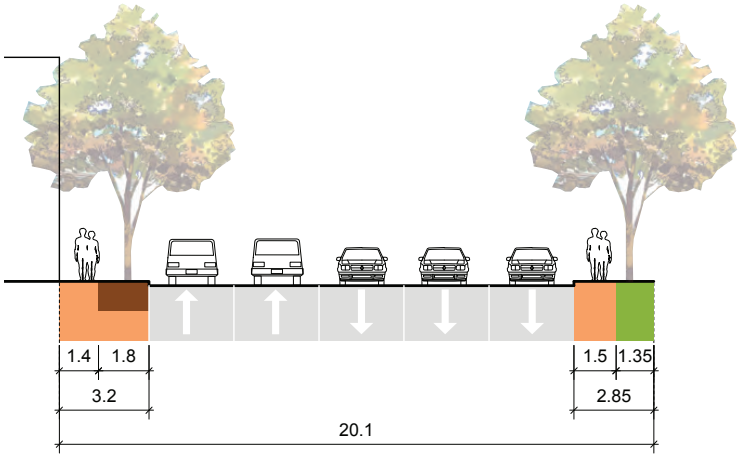
APPENDIX 1.

RICKARD RD

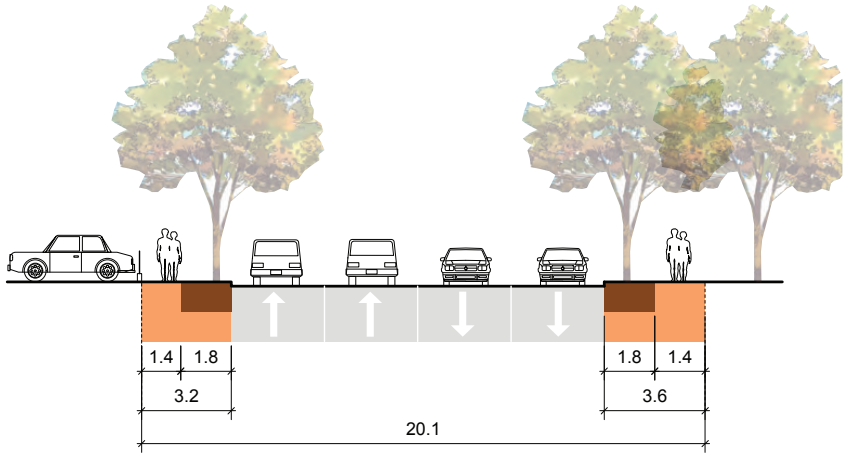




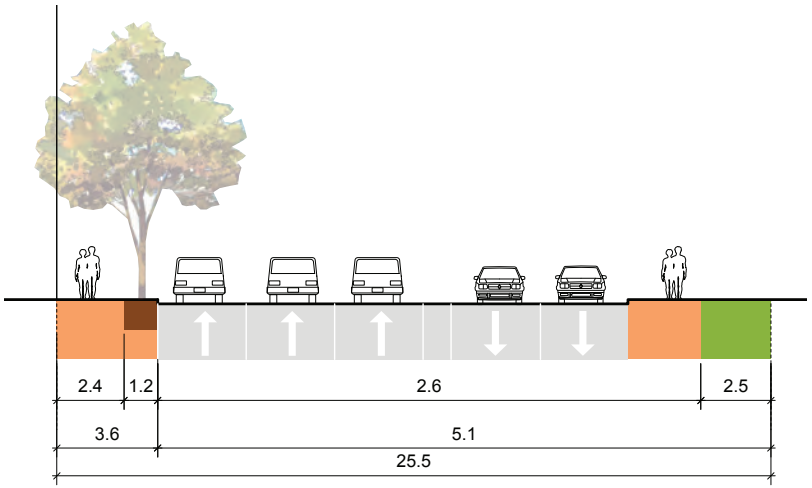
Rickard Rd - R1



Rickard Rd - R3

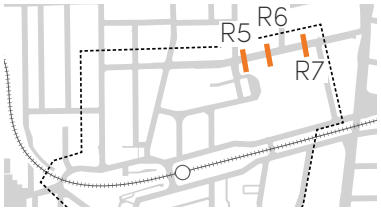


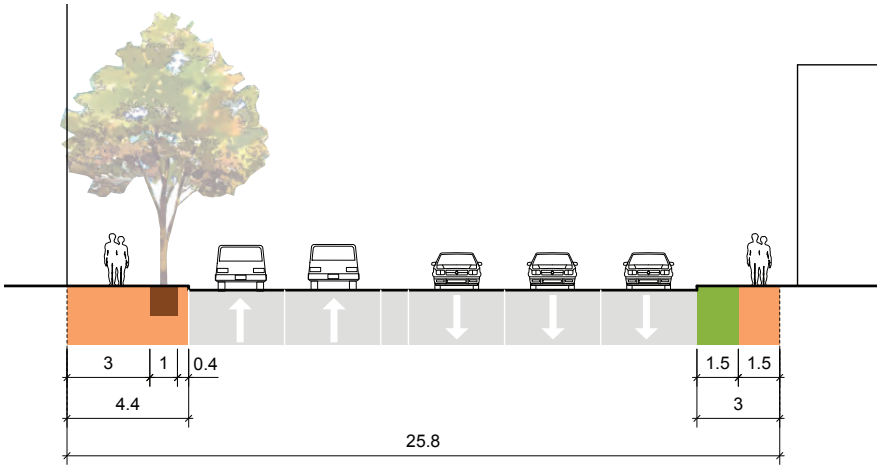
Rickard Rd - R2



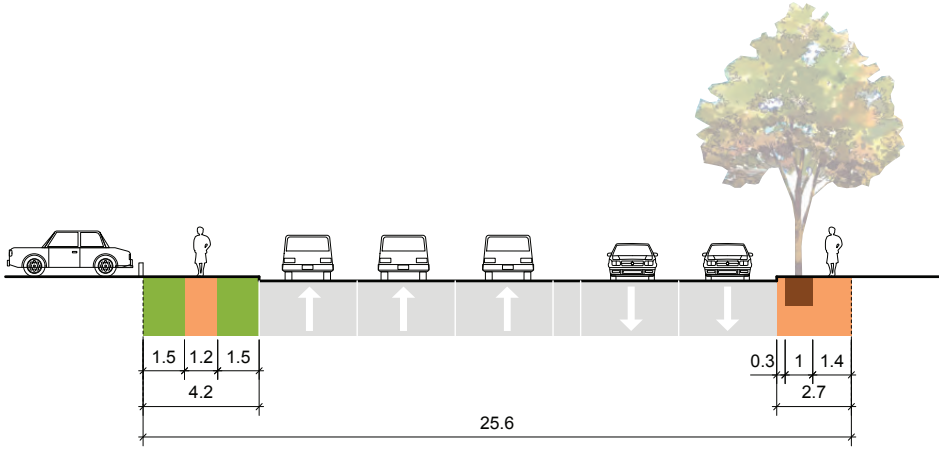
Rickard Rd - R4

RICKARD RD

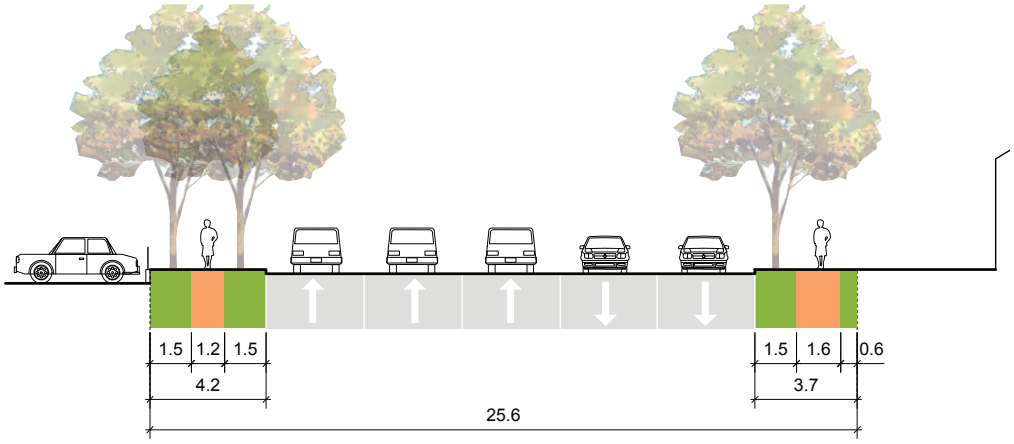




Rickard Rd - R5



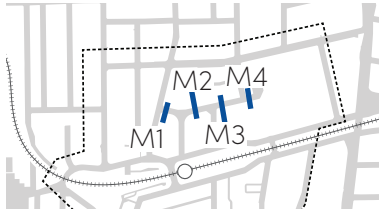
Rickard Rd - R6

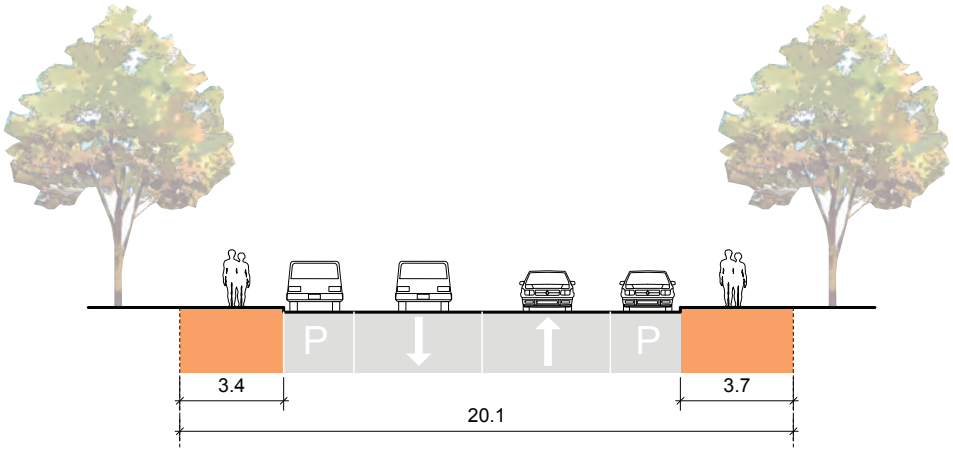


Rickard Rd - R7

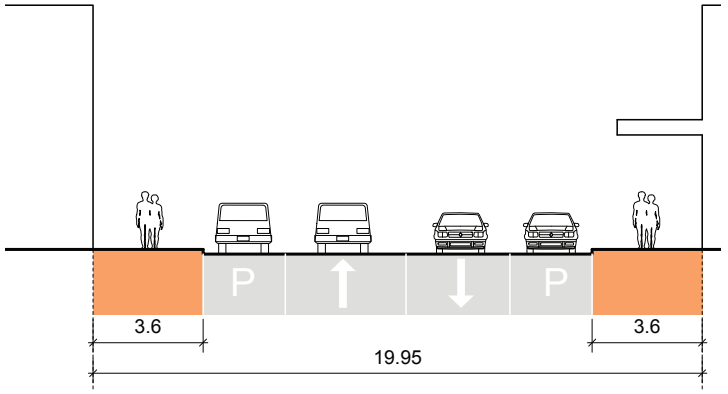
APPENDIX 1.

THE MALL

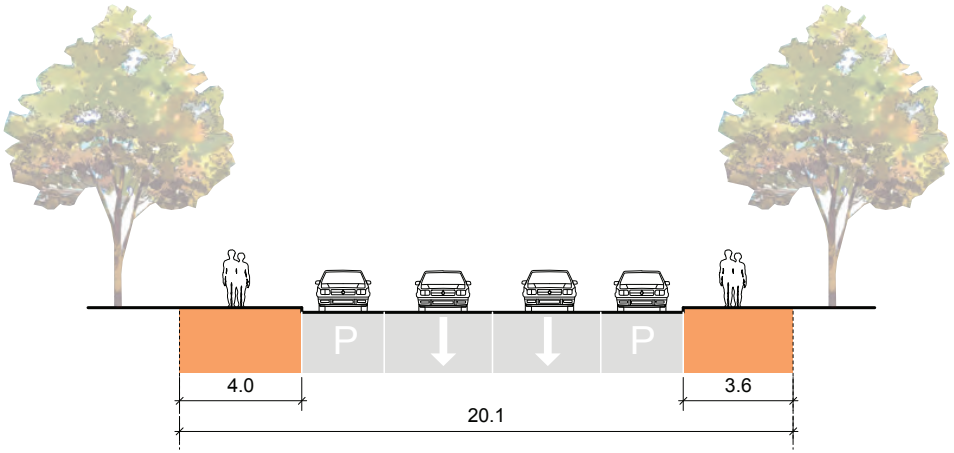




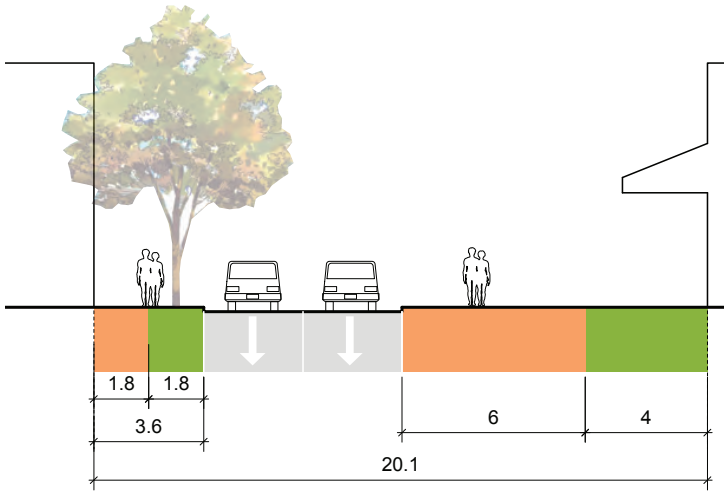
The Mall - M1



The Mall - M3



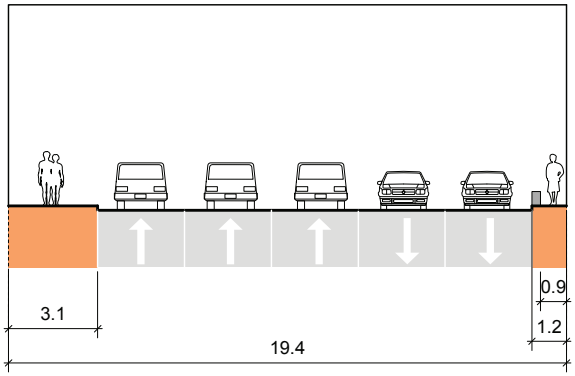
The Mall - M2



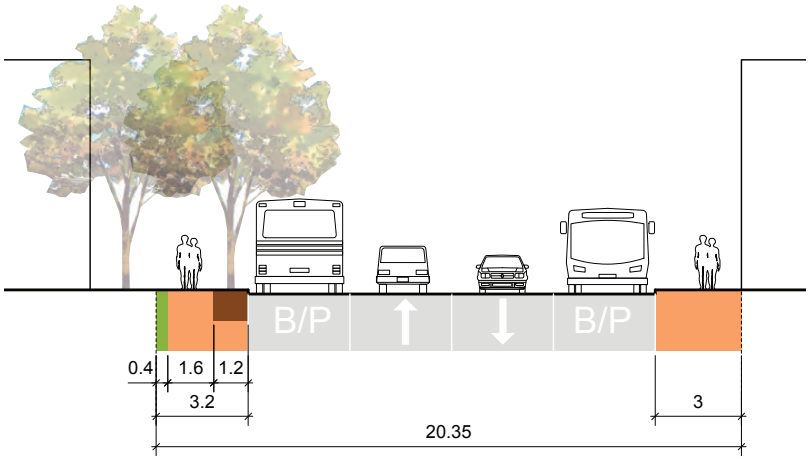
The Mall - M4

MARION ST

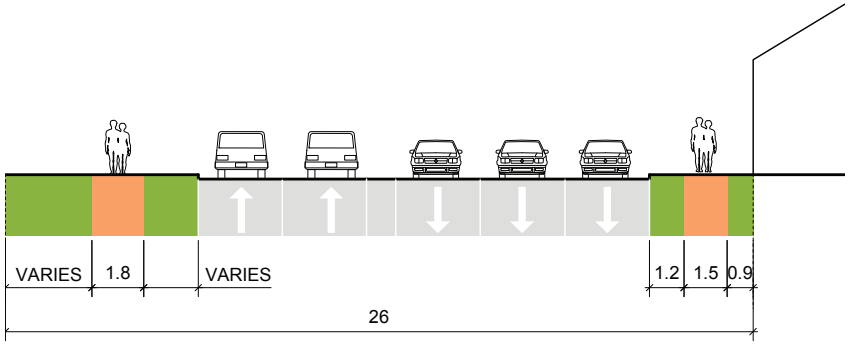




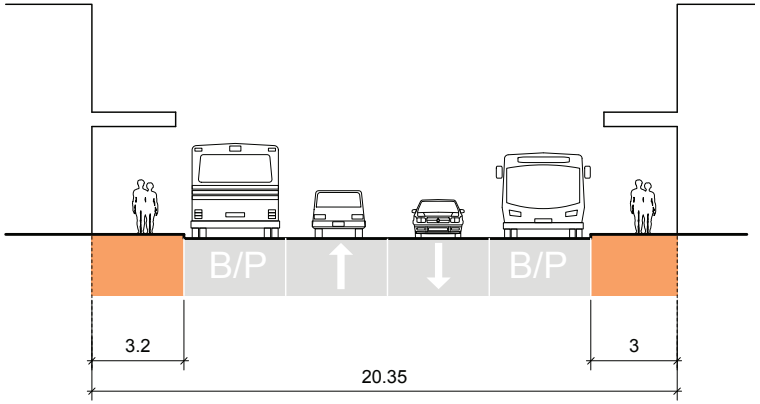
Marion St - MR1



Marion St - MR3



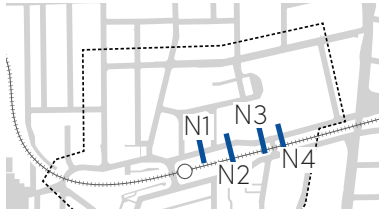
Marion St - MR2

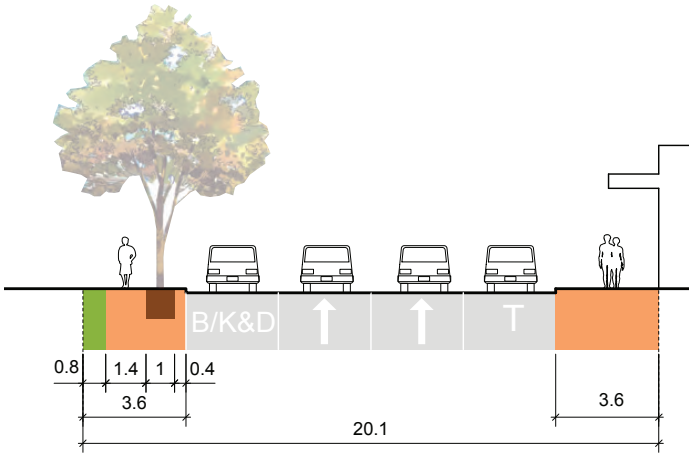


Marion St - MR4

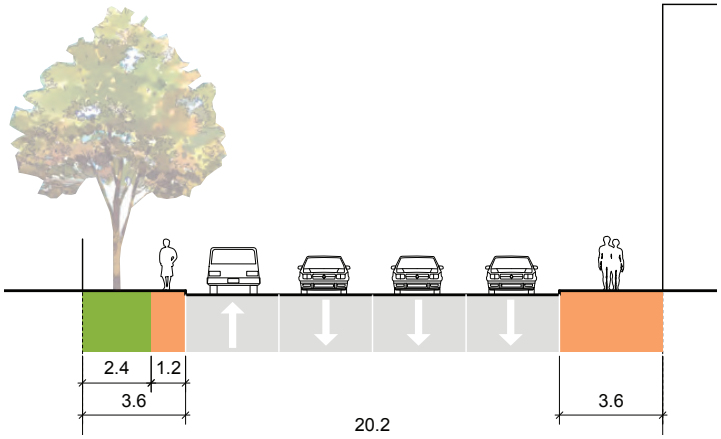
APPENDIX 1.

NORTH TERRACE

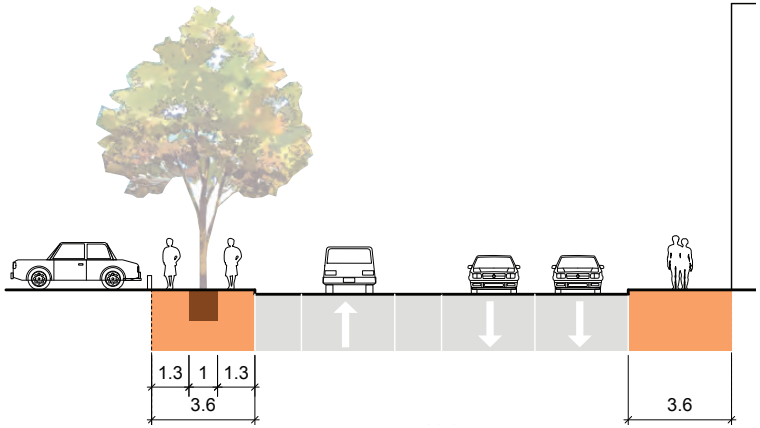




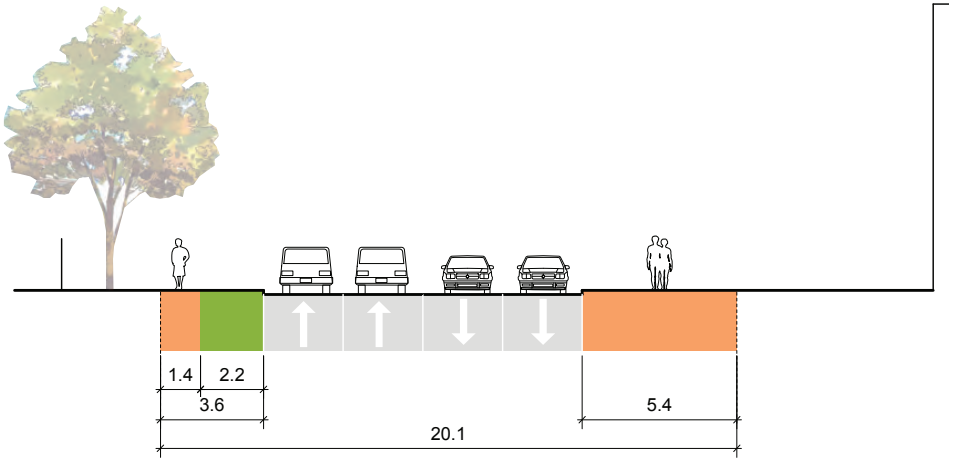
North Terrace - N1



North Terrace - N3

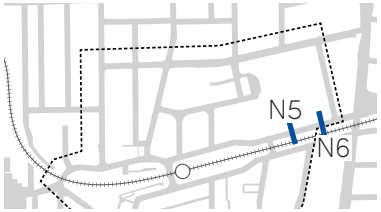


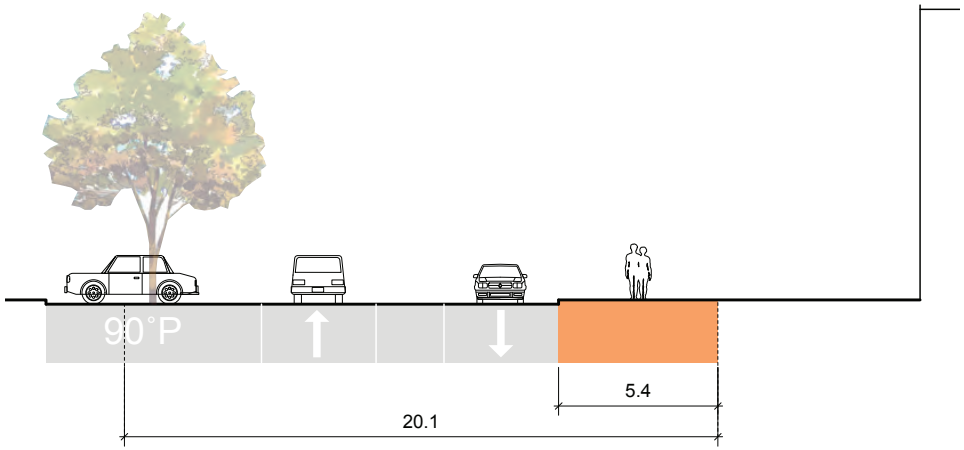
North Terrace - N2



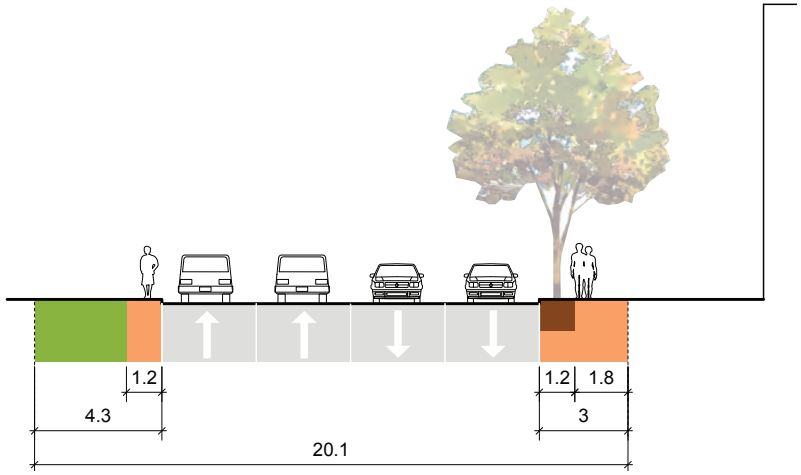
North Terrace - N4

NORTH TERRACE





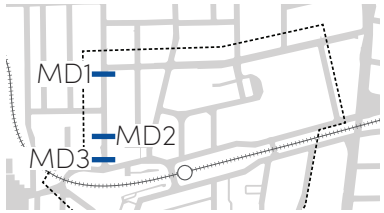
North Terrace - N5

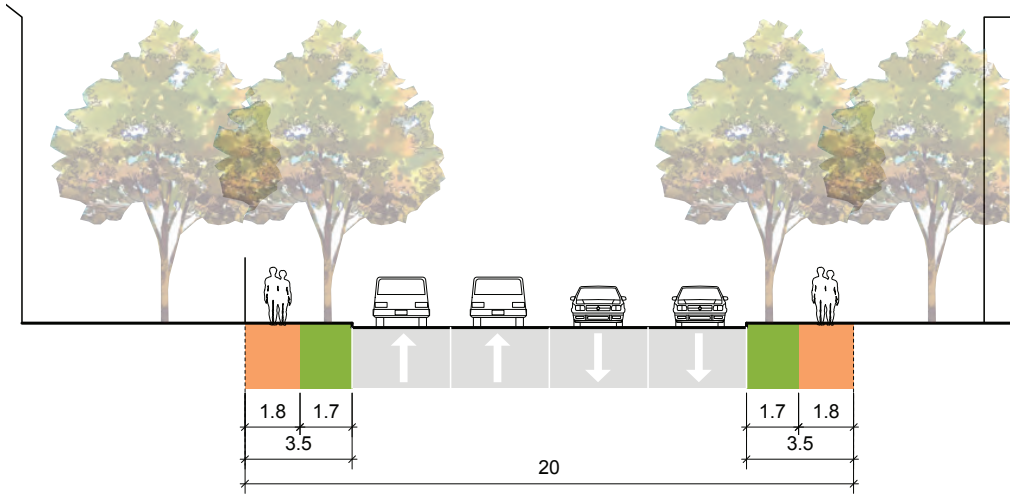


North Terrace - N6

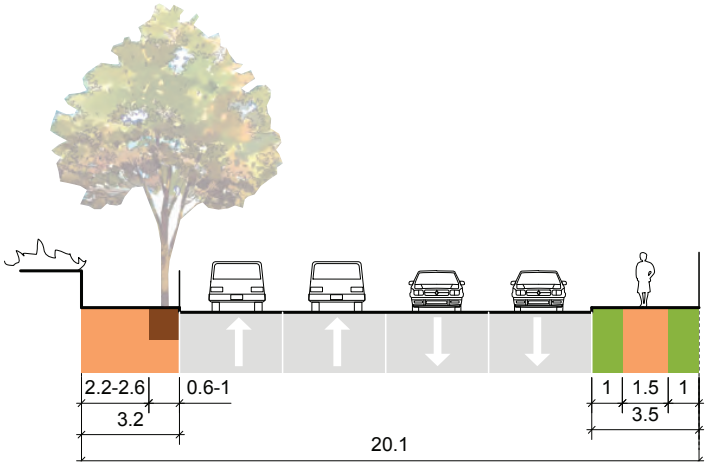
APPENDIX 1.

MEREDITH ST

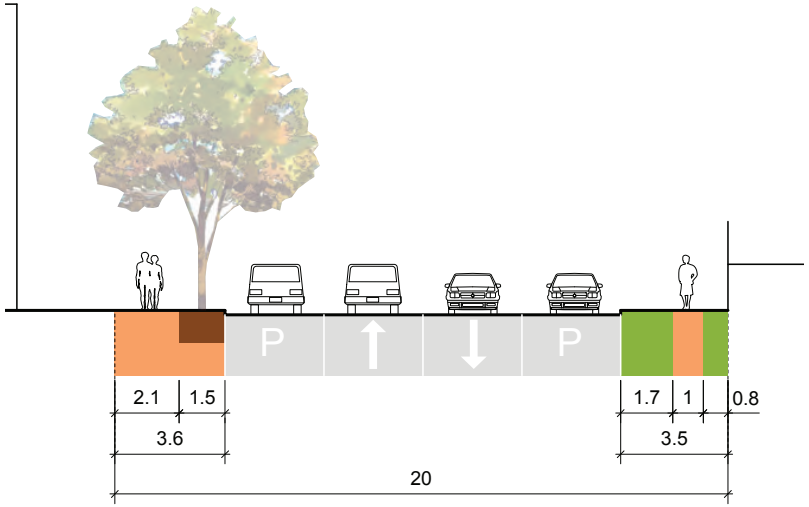




Meredith St - MD1

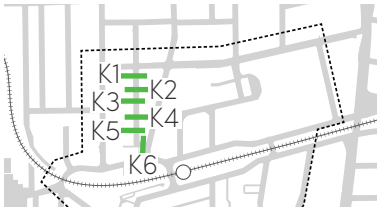


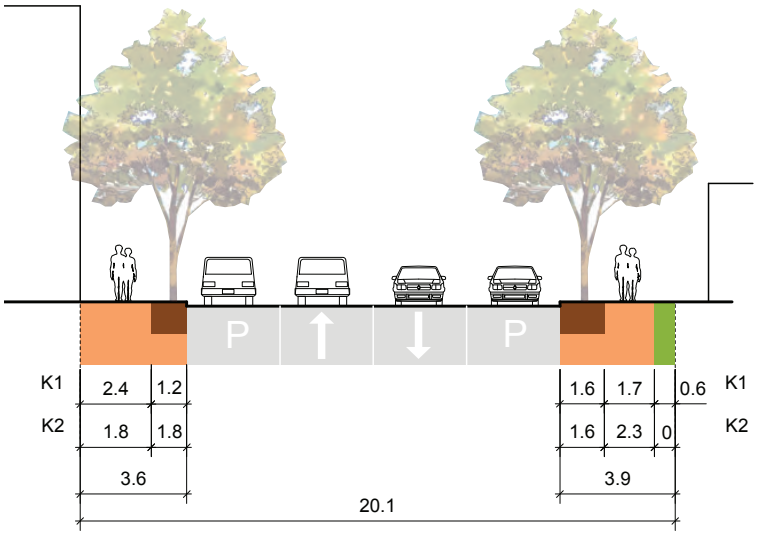
Meredith St - MD3



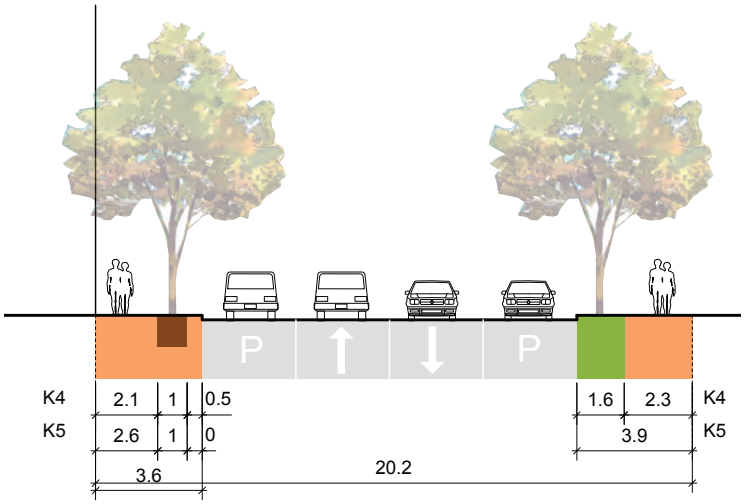
Meredith St - MD2

KITCHENER PARADE

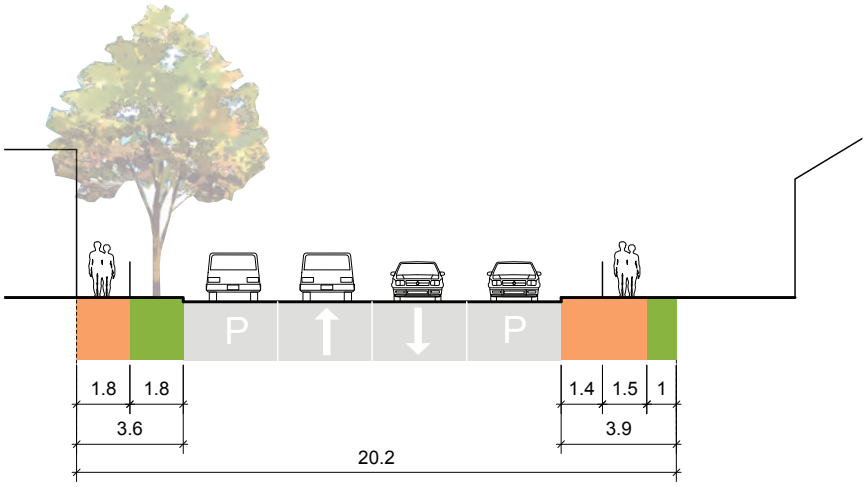




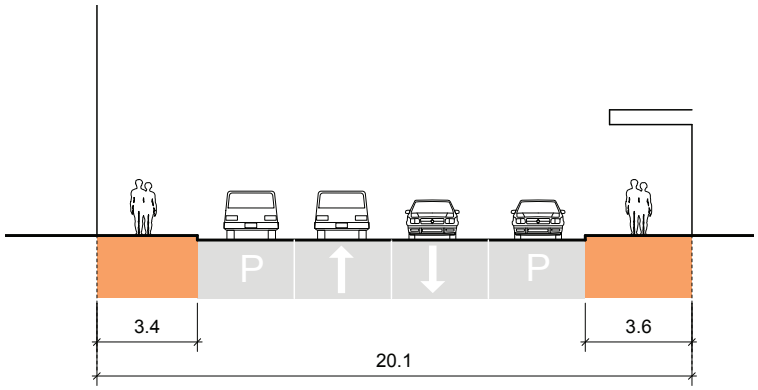
Kitchener Parade - K1 & K2



Kitchener Parade - K4 & K5



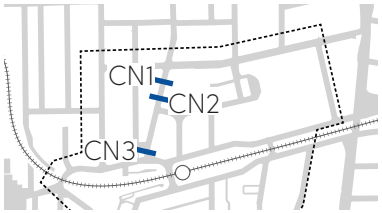
Kitchener Parade - K3

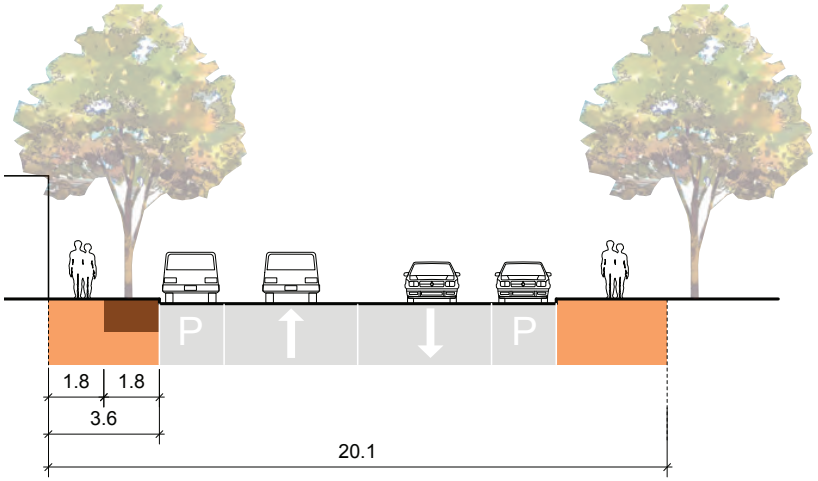


Kitchener Parade - K6

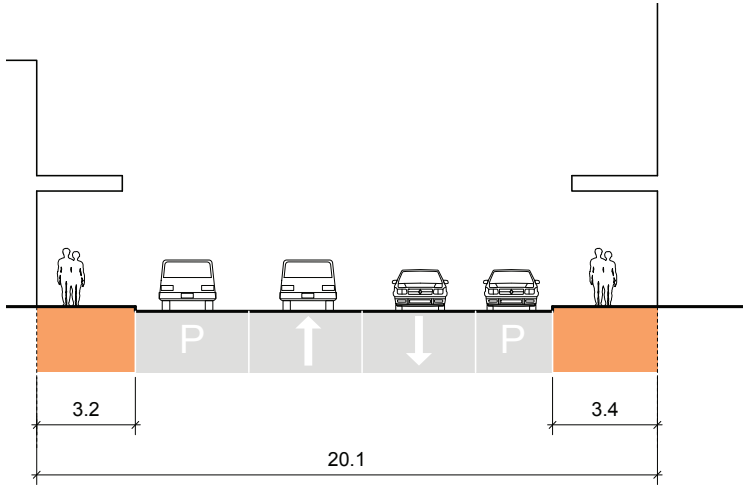
APPENDIX 1.

CHAPEL RD NORTH

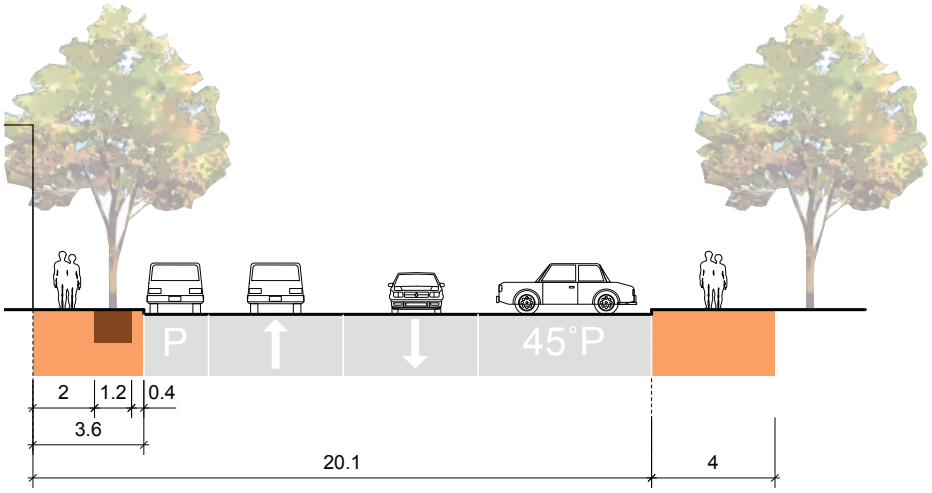




Chapel Rd - CN1

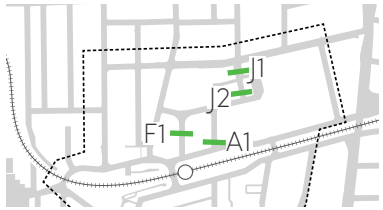


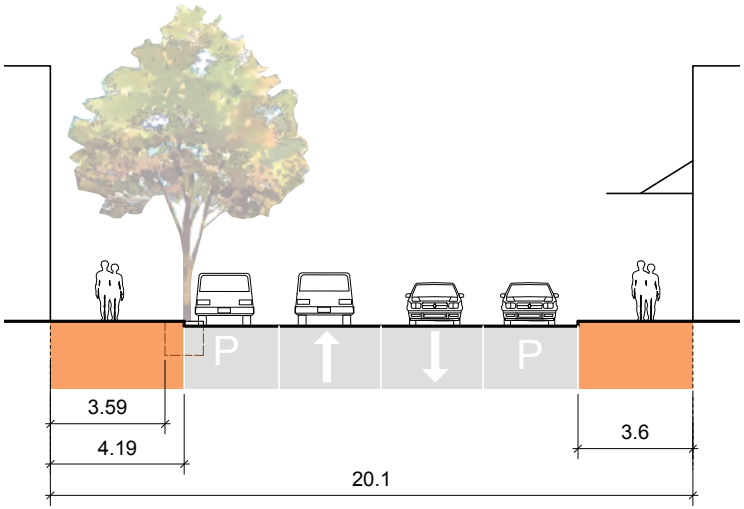
Chapel Rd - CN3



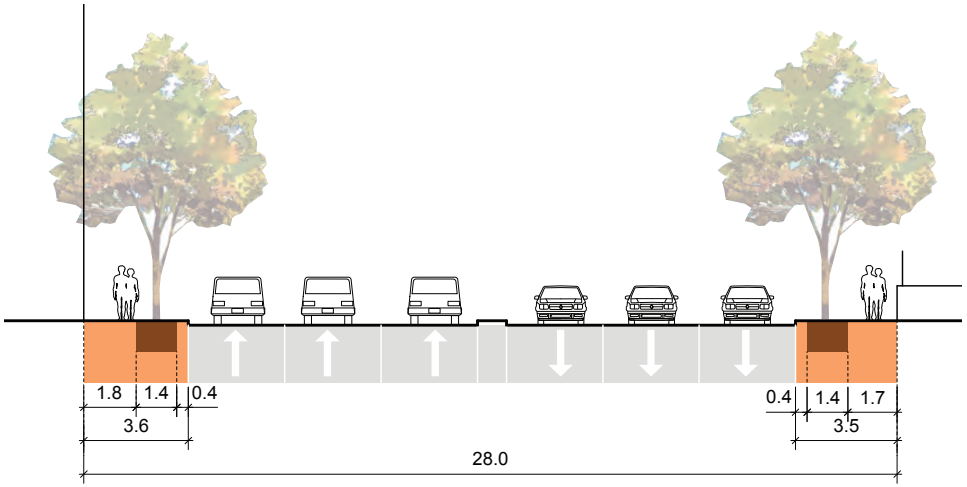
Chapel Rd - CN2

FETHERSTONE ST, JACOBS ST, APPIAN WAY

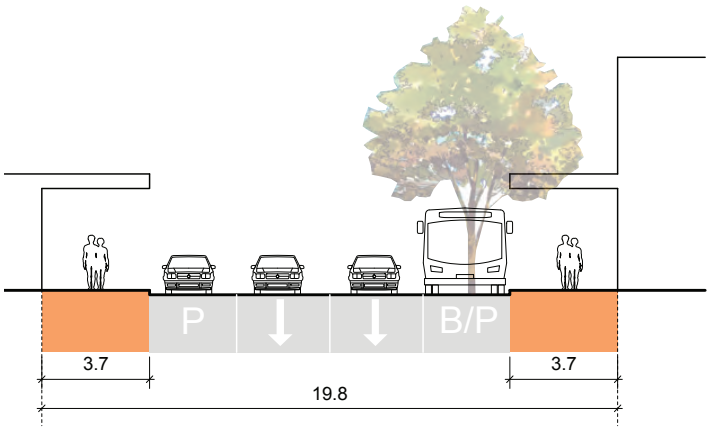




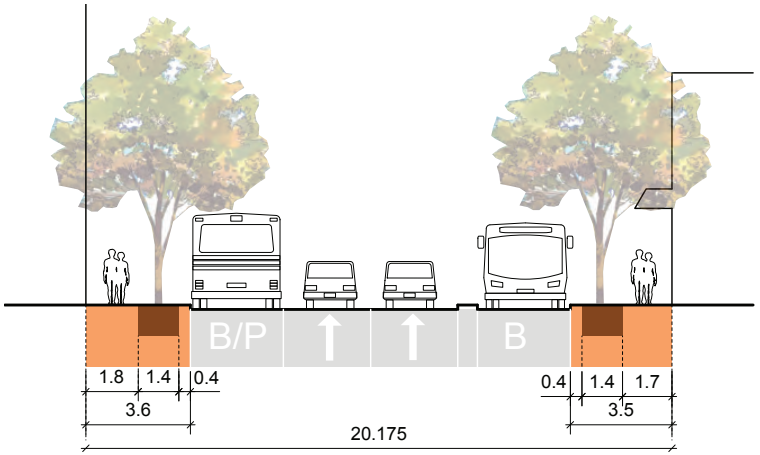
Fetherstone St - F1



Jacobs St - J1



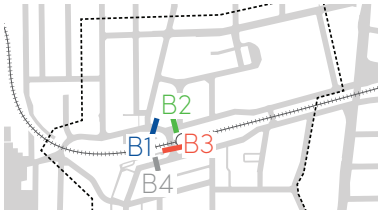
The Appian Way - A1

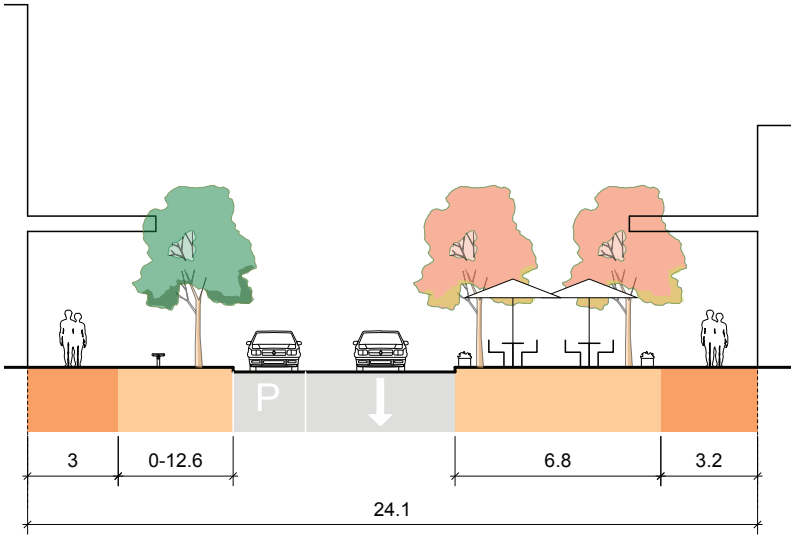


Jacobs St - J2

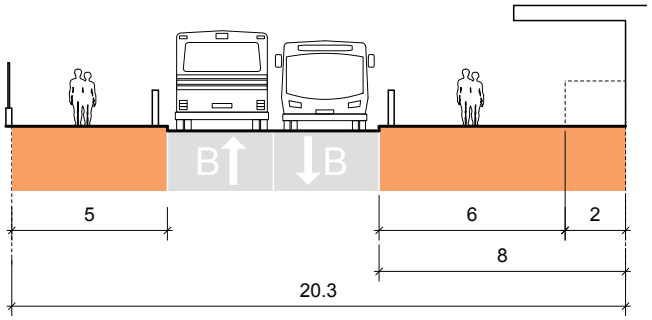
APPENDIX 1.

BANKSTOWN PLAZA

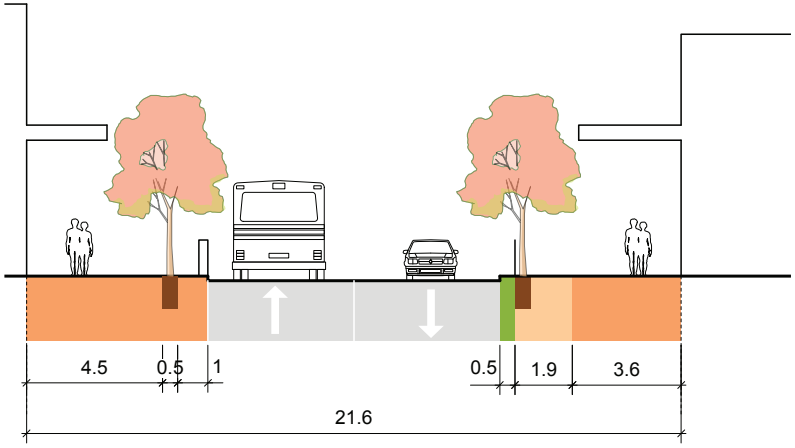




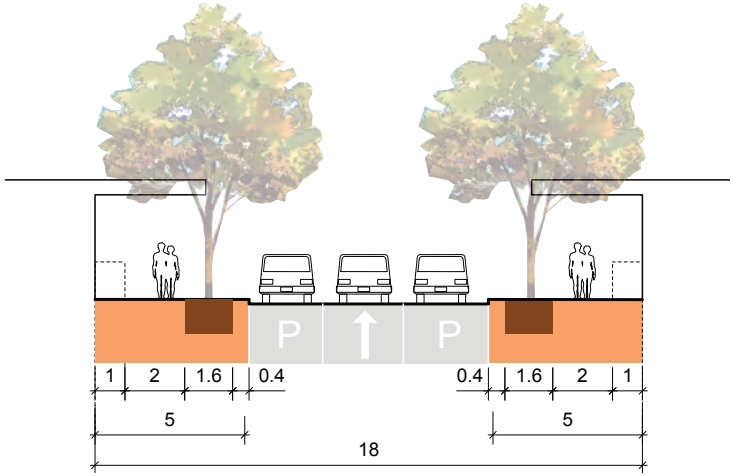
Bankstown Plaza - B1



Bankstown Plaza - B3



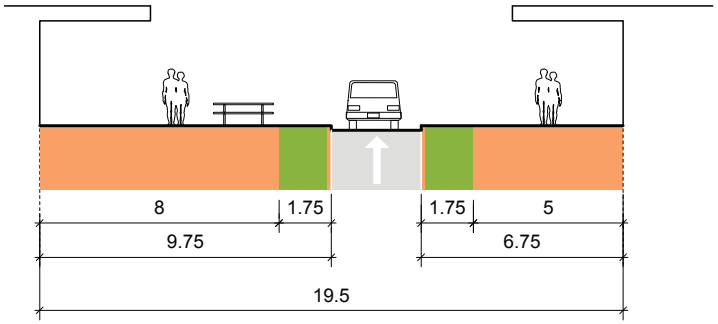
Bankstown Plaza - B2



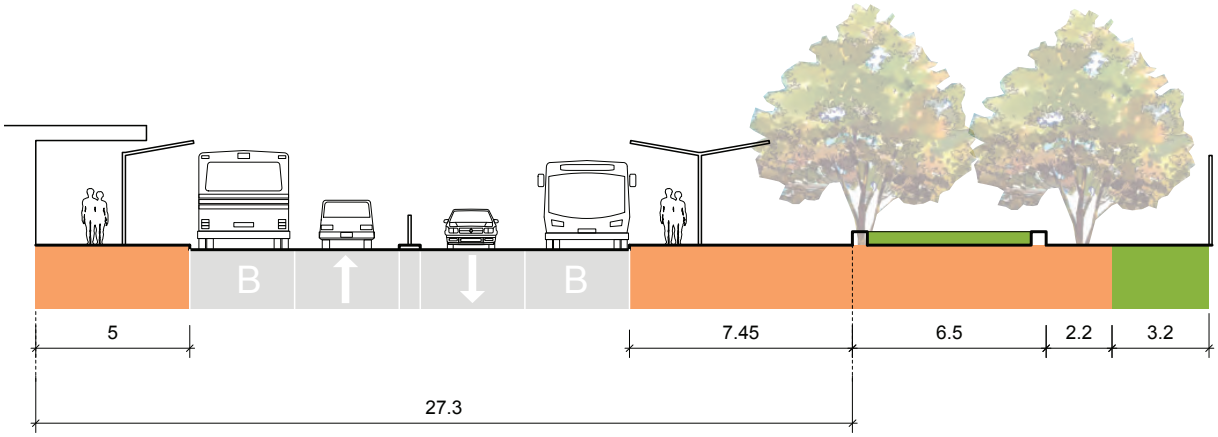
Bankstown Plaza - B4

BANKSTOWN PLAZA





Bankstown Plaza - B5

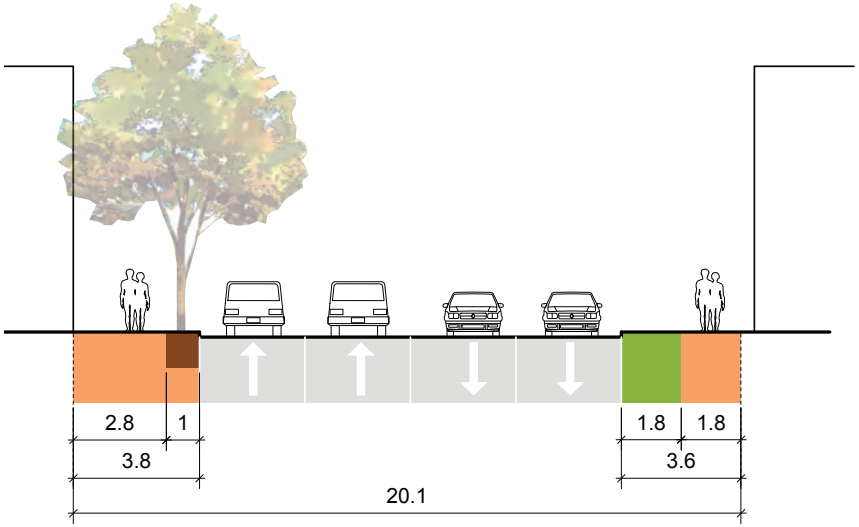


Bankstown Plaza - B6

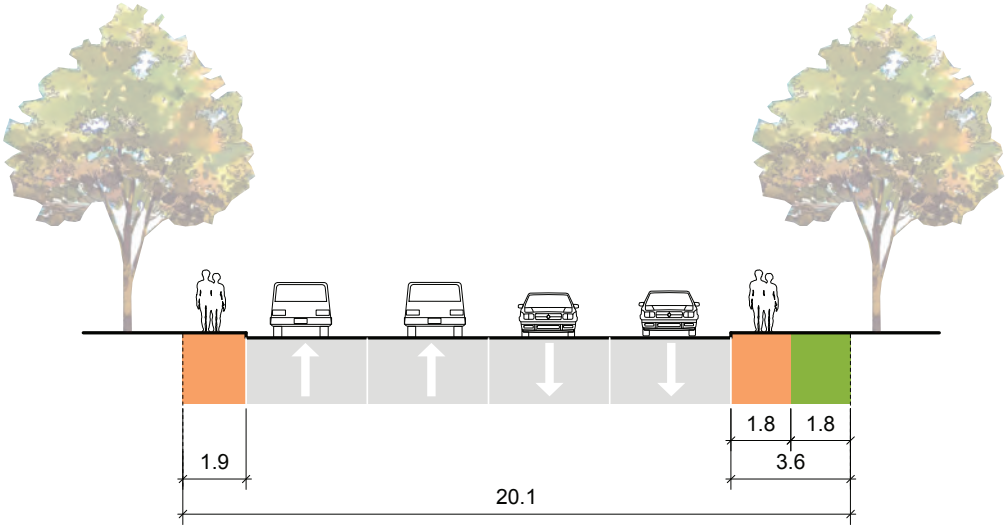
APPENDIX 1.

LADY CUTLER AVE



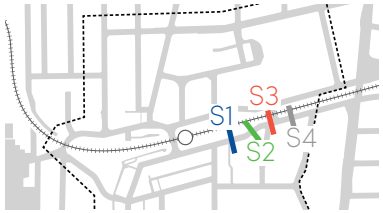


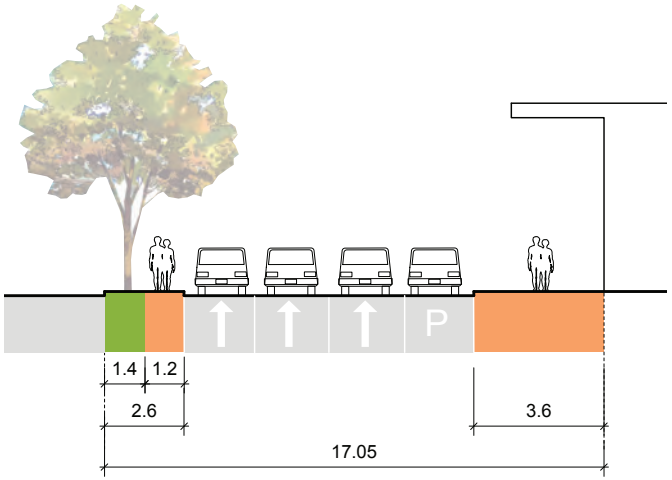
Lady Cutler Ave -L1



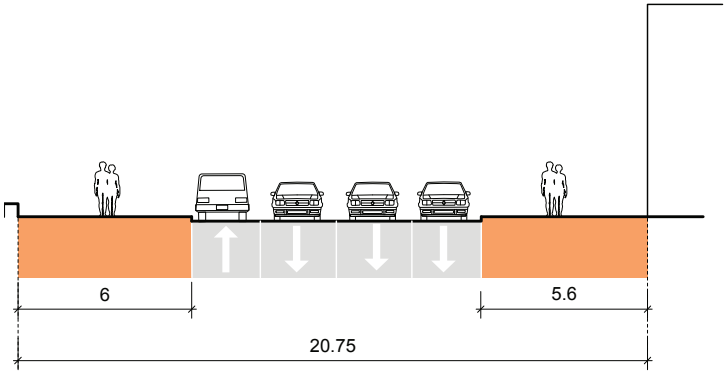
Lady Cutler Ave - L2

SOUTH TERRACE

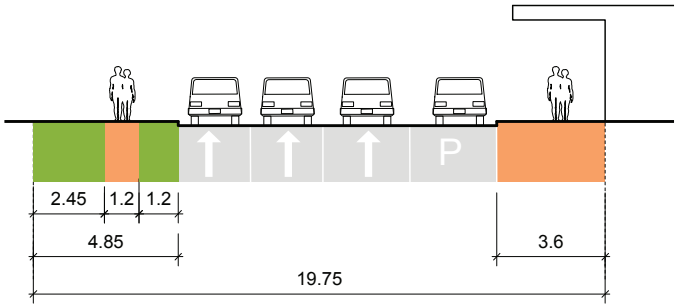




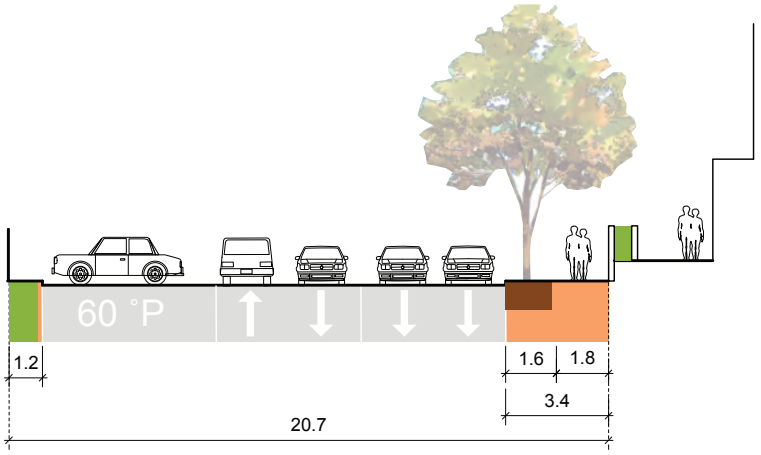
South Terrace - S1



South Terrace - S3



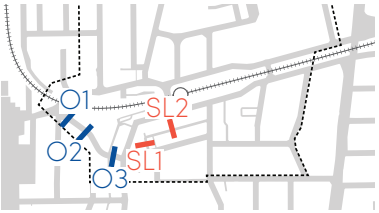
South Terrace - S2

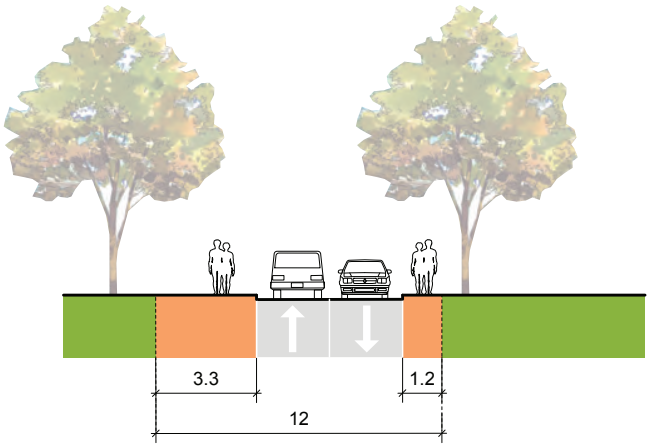


South Terrace - S4

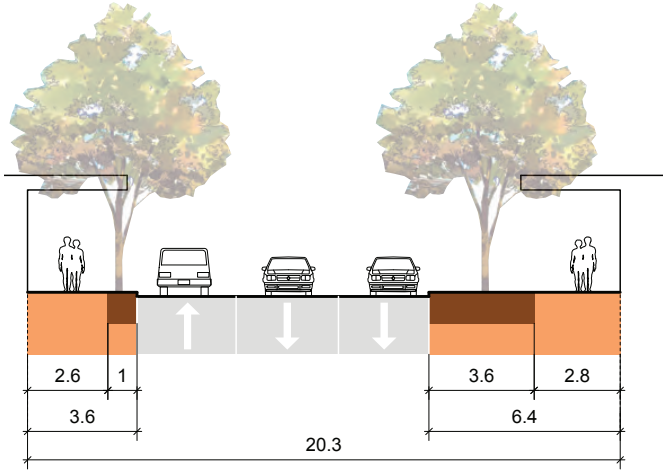
APPENDIX 1.

OLYMPIC PARADE, STEWARD LANE

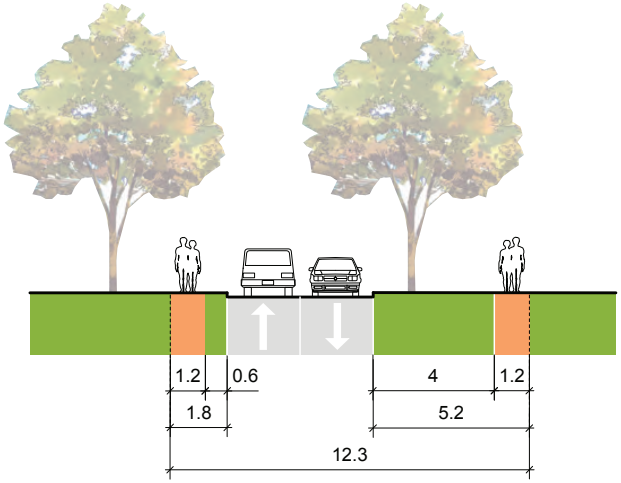




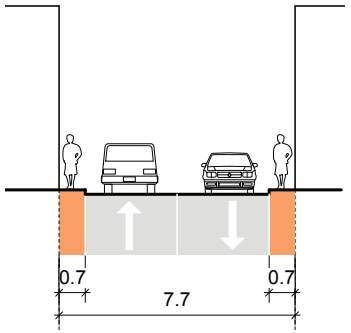
Olympic Parade - O1



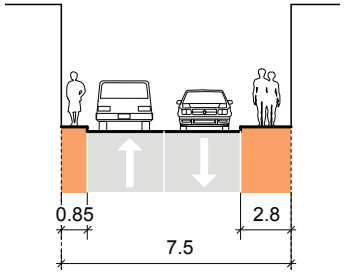
Olympic Parade - O3



Olympic Parade - O2

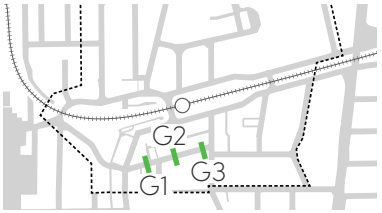


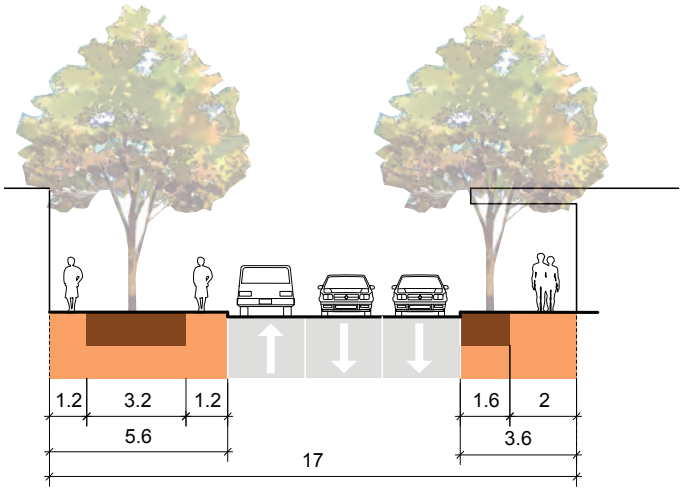
Steward Lane - SL1



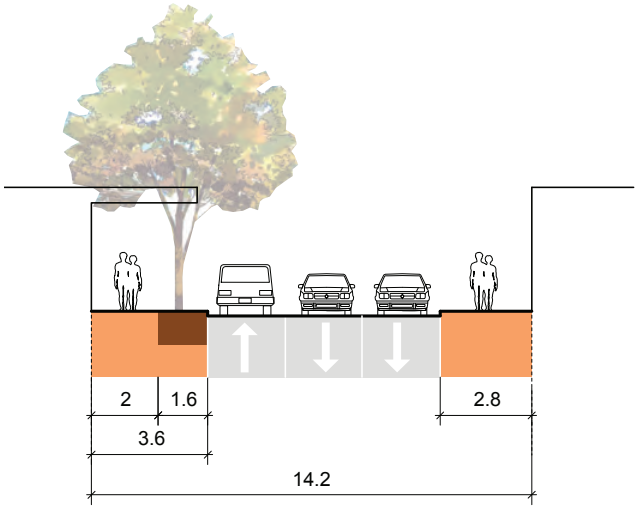
Steward Lane - SL2

GREENFIELD PARADE

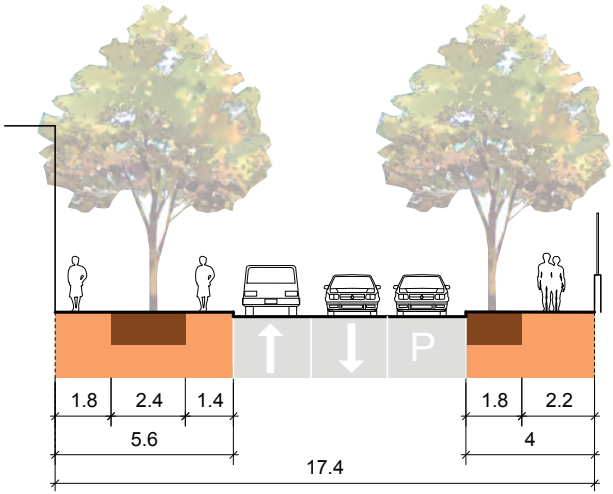




Greenfield Parade - G1



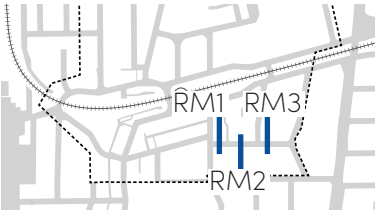
Greenfield Parade - G3

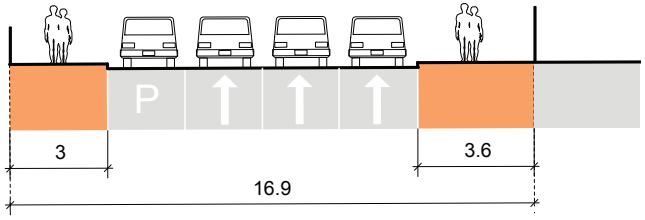


Greenfield Parade - G2

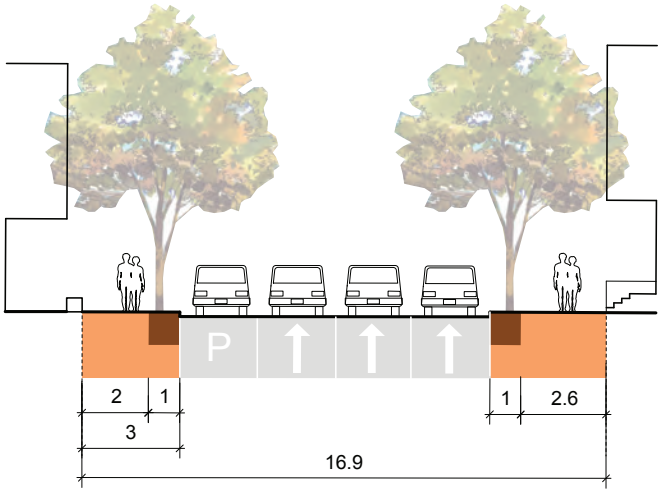
APPENDIX 1.

RAYMOND ST

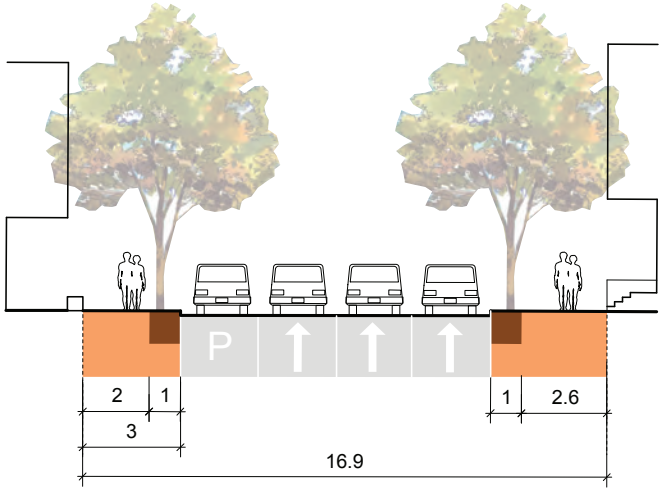




Raymond St - RM1

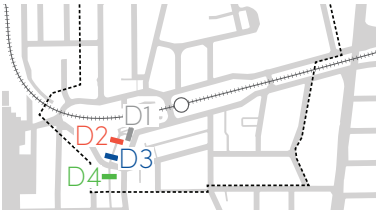


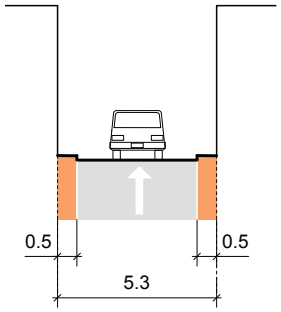
Raymond St - RM2



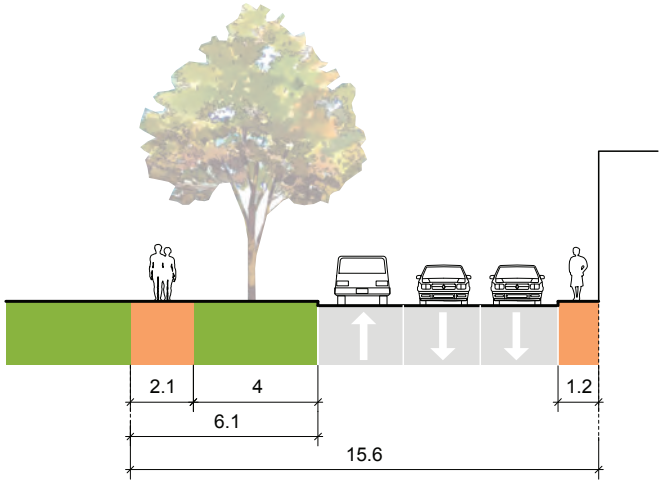
Raymond St - RM3

DALE PARADE

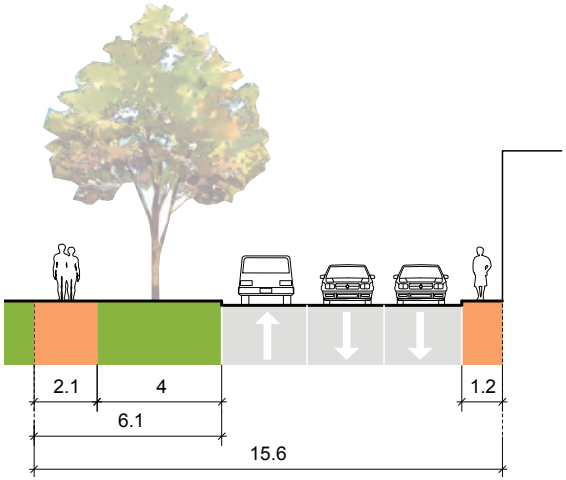




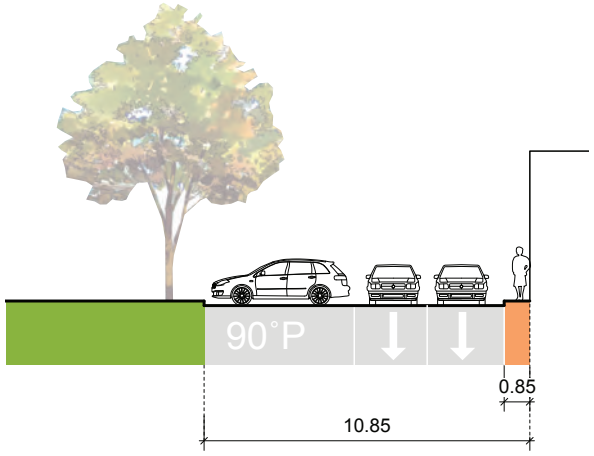
Dale Parade - D1



Dale Parade - D3



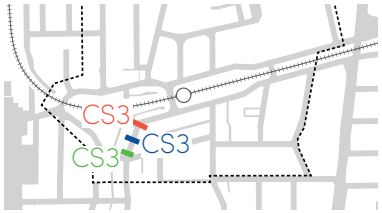
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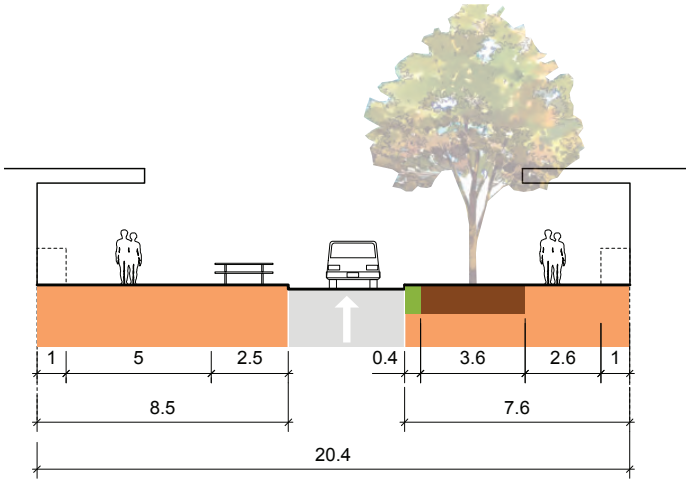


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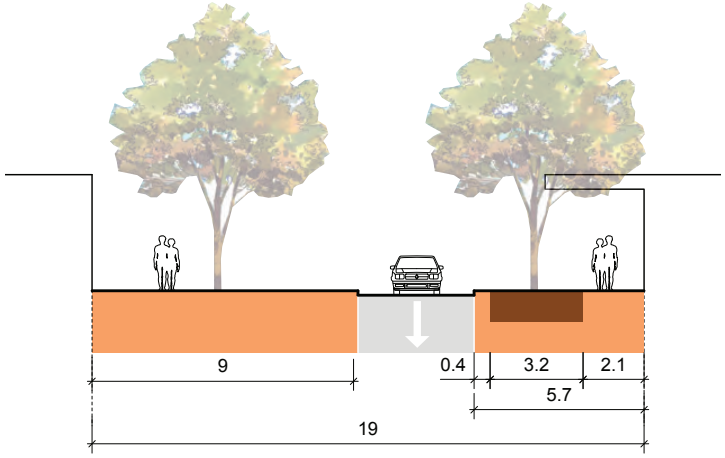
APPENDIX 1.

CHAPEL RD (SOUTH)

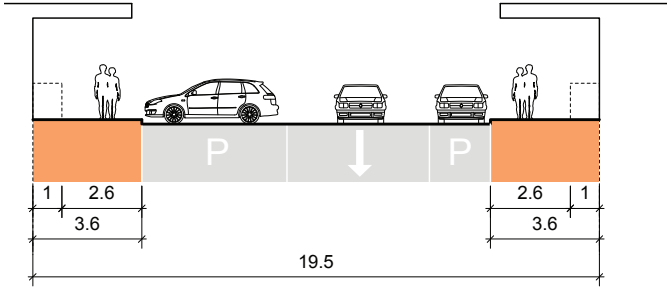




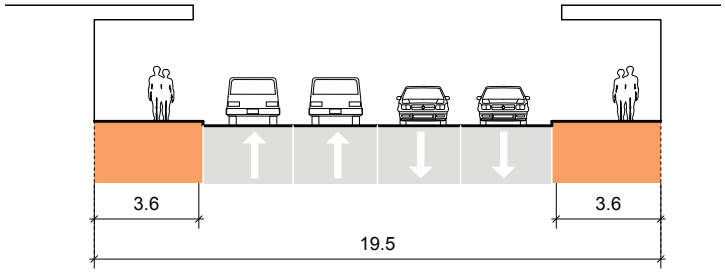
Chapel Rd - CS1



Chapel Rd - CS3

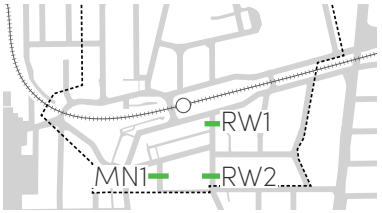


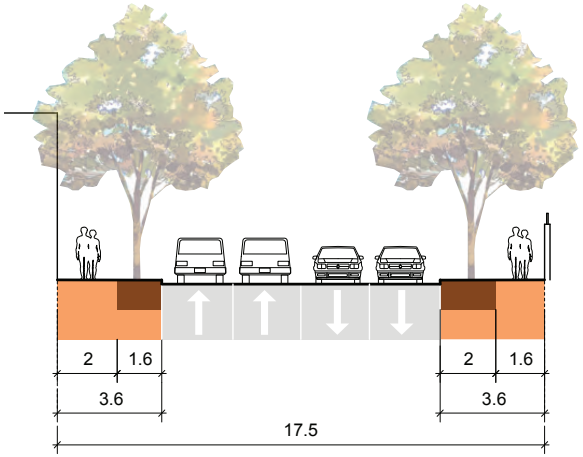
Chapel Rd - CS2



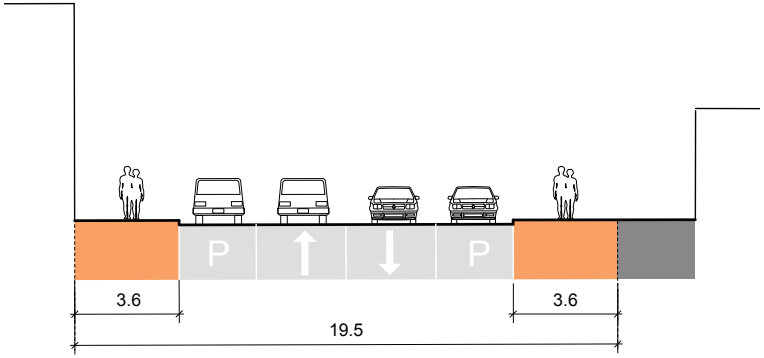
Chapel Rd - CS4

MONA ST, RESTWELL ST

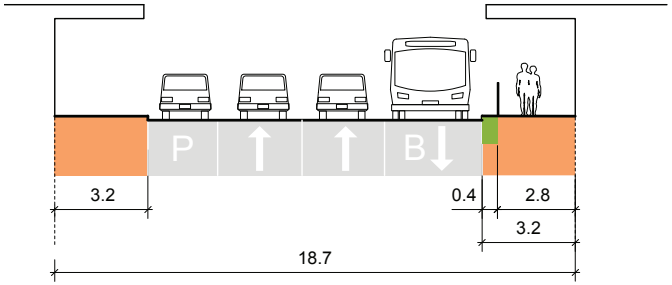




Mona St - MN1



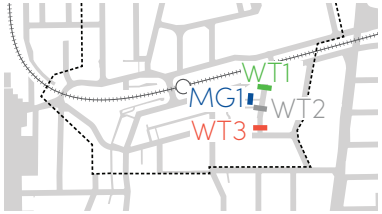
Restwell St - RW2

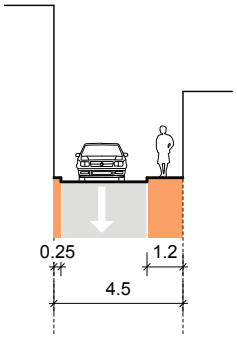


Restwell St - RW1

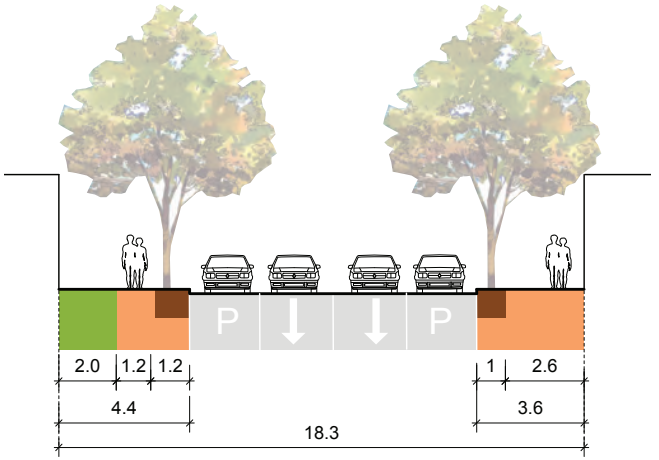
APPENDIX 1.

MORGAN LANE, WEST TERRACE

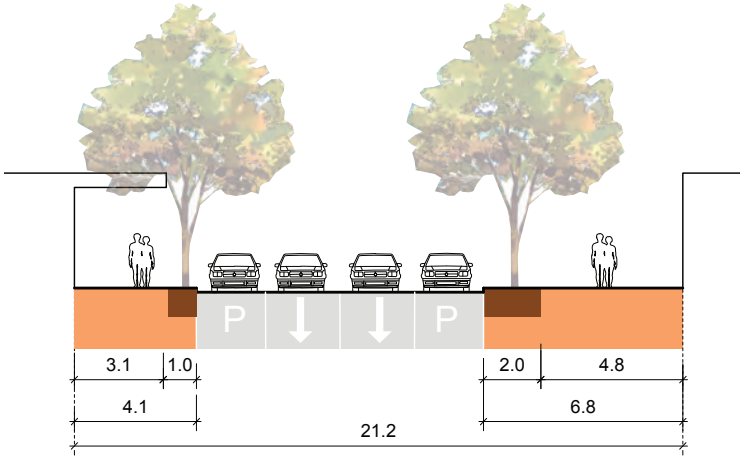




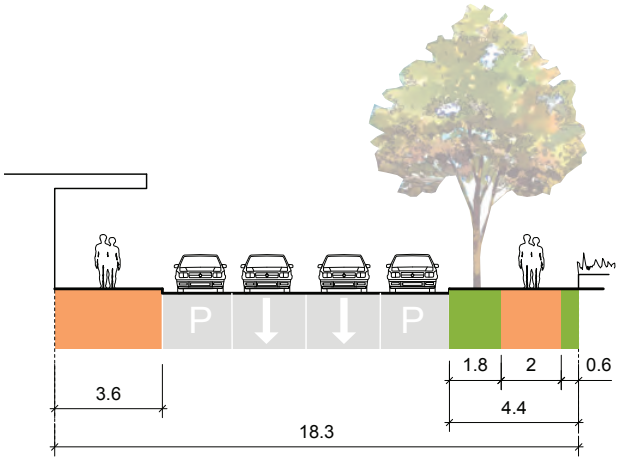
Morgan Lane - MG1



West Terrace - WT2

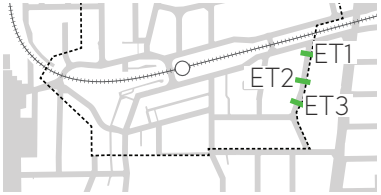


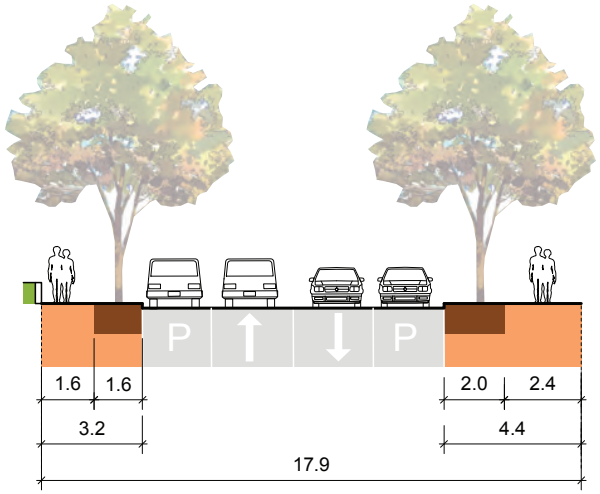
West Terrace - WT1



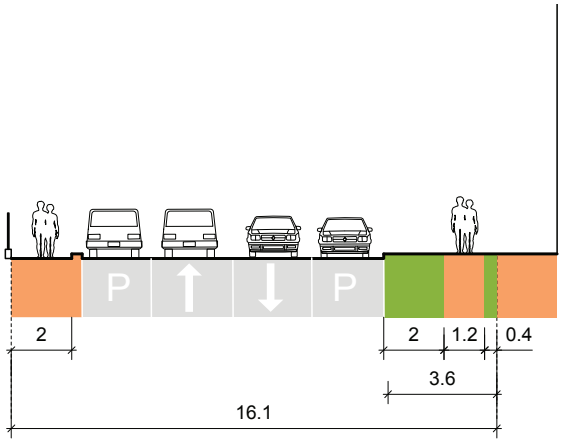
West Terrace WT3

EAST TERRACE

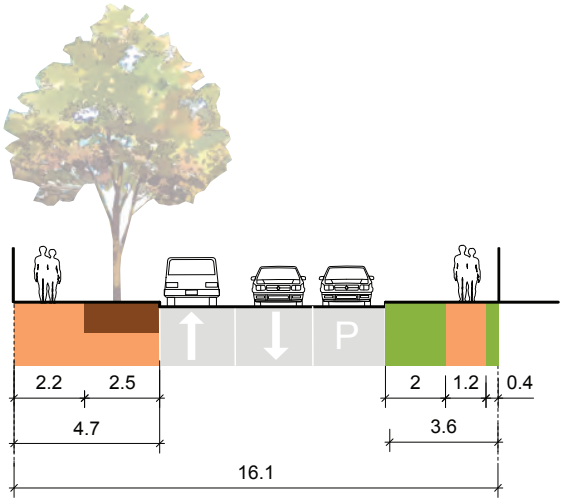




East Terrace - ET1



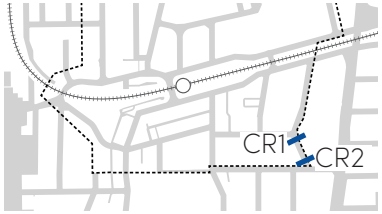
East Terrace Et3

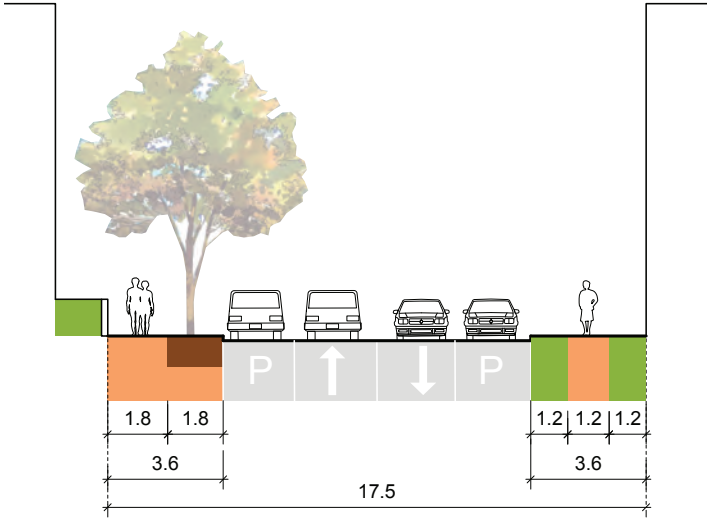


East Terrace - ET2

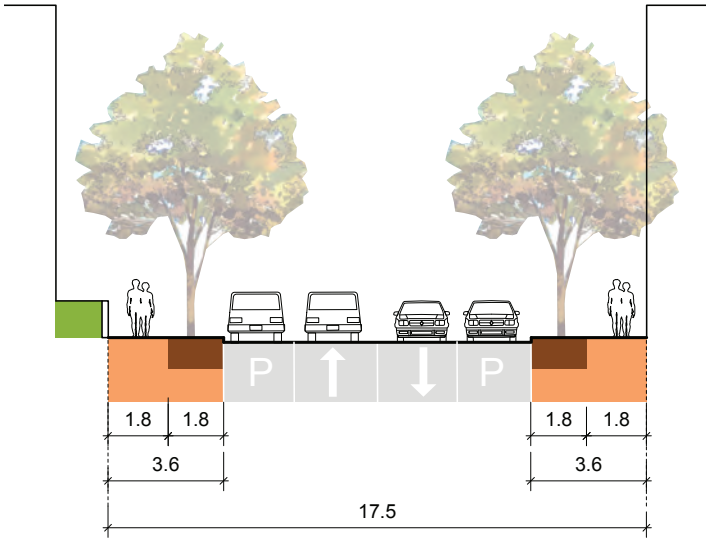
APPENDIX 1.

CROSS STREET





Cross Street - CR1



Cross Street - CR2

REFERENCE MAP



APPENDIX 2.

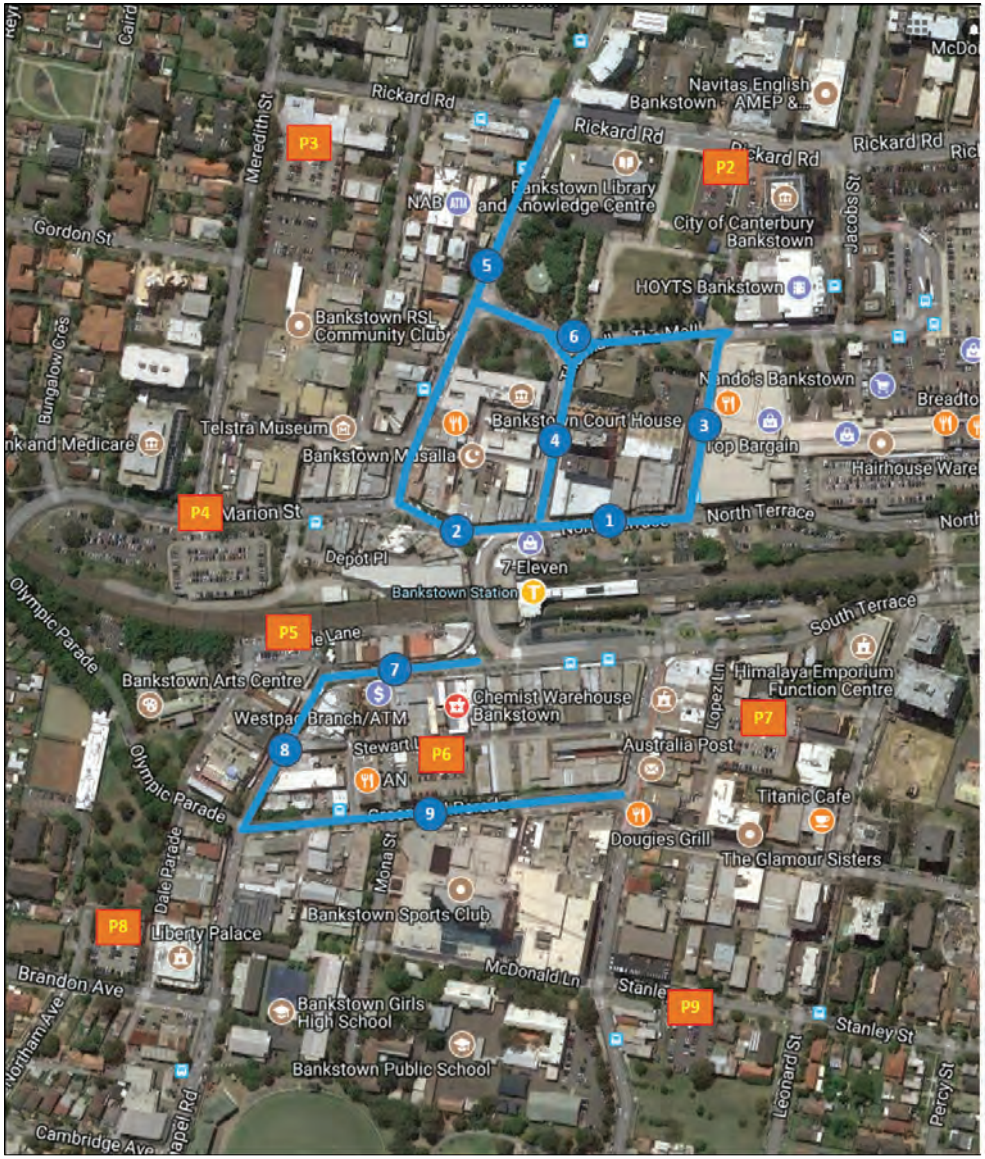
A2

2018 PARKING SURVEYS

Parking surveys were commissioned by GTA and undertaken in early March 2018 for a typical weekday. The parking surveys included occupation surveys for unrestricted parking spaces (within specific sections of off-street parking facilities) and duration of stay surveys for restricted (timed) parking spaces. Both the occupancy and duration of stay surveys were undertaken in one-hour intervals. The surveys were undertaken from 8:30am to 5:30pm. The areas and facilities surveyed along with type of surveys are shown on the following pages.

APPENDIX 2.

PARKING SURVEY MAP



On-Street Parking (Duration of Stay)
Off-Street Parking (Duration of Stay & Occupancy)

[On-Street Parking]

1. North Terrace
2. Bankstown City Plaza
3. The Appian Way
4. Fetherston Street
5. Chapel Road
6. The Mall
7. Bankstown City Plaza
8. Chapel Road
9. Greenfield Parade

[Off-Street Parking]

P2. City of Canterbury
- Duration of Stay

P3. Meredith St Car Park
- Level 1. Duration of Stay
- Level 2-4. Occupancy

P4. Marion St Car Park
- Outdoors. Duration of Stay
- Level 1-2. Duration of Stay
- Level 3. Occupancy

P5. Dale Lane Car Park
- Duration of Stay

P6. Greenfield Pde Car Park
- Level 1-7. Duration of Stay
- Level 8-9. Occupancy

P7. West Tce Car Park
- Level 1. Duration of Stay
- Level 2-3. Occupancy

P8. Brandon Ave Car Park
- Level 1-4. Duration of Stay
- Level 5. Occupancy

P9. Stanley St Car Park
- Occupancy

ON STREET PARKING

1. North Terrace

There is no publicly available on-street parking along the surveyed sections of North Terracebetween The Appian Way and Fetherstone Street as it consists of taxi and bus zones, and drop-offand pick-up only zones, which in effect constitutes no parking for longer than five minutes at atime. However, of the five parking spaces available in the pick-up and drop-off zone, duration ofstay surveys indicate that between two and five vehicles utilise this space at any one time, after 12:30pm.

2. Bankstown City Plaza

Publicly available on-street parking along Bankstown City Plaza between Chapel Road and Featherstone Street consists of short term parking of either 1/2P (half hour parking) or P5min (fiveminute parking) and accounts for eight parking spaces broken down as follows:

- One P5min space between 8:30am to 6:30pm Monday to Friday and 8:30am to12:30pm Sat.
- Seven 1/2P spaces between 8:30am to 6:30pm Monday to Friday and 8:30am to12:30pm Sat.

Periods outside the above are considered periods of unrestricted parking. Duration of stay surveys indicate that peak parking demand is approximately 100 per cent of the provided on-street parking, and average demand is approximately 85 per cent. Compliance for the spaces varied from 100 per cent for the P5min to 62 per cent indicating moderate noncompliance of time restrictions (i.e. parking longer than allowed to).

3. The Appian Way

Publicly available on-street parking along The Appian Way between The Mall and North Terrace consists of the following:

- 14 1/2P spaces between 8:30am to 6:30pm Monday to Friday and 8:30am to 12:30pm Saturdays
- Two spaces with loading zone restrictions between 6am to 11am Monday to Friday and 1/2P between 11am to 6pm, and 8:30am to 12:30pm Saturdays.
- Periods outside the above are considered periods of unrestricted parking.

Duration of stay surveys indicate that peak parking demand is approximately 90 per cent of the provided on-street parking, and average demand is approximately 75 per cent. Compliance for the spaces varied between 40 per cent to 100 per cent depending on the location of the onstreet parking spaces with an overall compliance of 62 per cent.

4. Fetherston Street

Publicly available on-street parking along Fetherston Street between The Mall and North Terrace consists of the following:

- Four spaces of P5min between 8:30am to 9:30am Monday to Friday, 1P between 9:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays
- Nine spaces of 1P parking between 9:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays
- 3 spaces of P15min (15 minutes parking) between 8:30am to 6pm Monday to Friday.

Times outside of the above are considered periods of unrestricted parking. Duration of stay surveys indicate that peak parking demand is approximately 100 per cent of the provided on-street parking, and average demand is approximately 90 per cent. Parking compliance varies from 45 per cent to 62 per cent with an average compliance of approximately 50 per cent. This indicates that half of vehicles park in spaces longer than allowed to. This is evident in the P5min spaces where a number of vehicles park for in excess of one hour during the P5min time period.

ON STREET PARKING CONT.

5. Chapel Road

Publicly available parking along Chapel Road between Rickard Road and Marion Street consists of the following:

- 26 spaces of 1P parking between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays
- Five spaces of 1P parking between 8:30am to 3:30pm Monday to Friday and 8:30am to 12:30pm Saturdays, and no parking between 3:30pm to 6pm Monday to Friday
- Two spaces of 1/2P between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Sat.

Times outside of the above are considered periods of unrestricted parking. Duration of stay surveys indicate that peak parking demand is approximately 100 per cent of the provided on-street parking, and average demand is approximately 90 per cent. Parking compliance along Chapel Road varies from less than 50 per cent to over 60 per cent.

6. The Mall

Publicly available parking along The Mall between Chapel Road and The Appian Way consists of 29 spaces with 1P parking restrictions between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays. Duration of stay surveys indicate that peak parking demand is approximately 100 per cent of the provided on-street parking, and average demand is approximately 90 percent. Compliance ranges from 66 per cent to 70 per cent.

7. Bankstown City Plaza

Publicly available parking along Bankstown City Plaza consists of 19 spaces restricted to 1/2P between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays. Surveys indicate that peak demand matches the provided capacity with average demand at 90 per cent throughout the survey period. Parking compliance along Bankstown City Plaza is approximately 70 per cent.

8. Chapel Road

Chapel Road between Greenfield Parade and Dale Parade consists of the following on-street parking provision available to the public:

- 33 spaces restricted to 1/2P between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Sat
- One P15min space between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Sat.

Times outside of the above are considered periods of unrestricted parking. Duration of stay surveys indicate that peak parking demand is approximately 100 per cent of the provided on-street parking, and average demand is approximately 90 per cent. Parking compliance along Chapel Road ranges from approximately 50 per cent to 65 per cent across the 1/2P restricted spaces.

9. Greenfield Parade

Publicly available parking along Greenfield Parade between Chapel Road and Restwell Street include the following:

Eight spaces restricted to 1P between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Sat.

Nine spaces restricted to 1/4P (15 minutes parking) between 8:30am to 6pm Monday to Friday and 8:30am to 12:30pm Saturdays

Two spaces restricted to truck zone between 6am to 5pm Monday to Friday and 1P 8:30am to 12:30pm Sat

Four spaces allocated to a works zone 7am to 5pm Monday to Friday and 7am to 1pm on Sat

Three spaces restricted to 1P parking between 8:30am to 3pm Monday to Friday and 8:30am to 12:30pm Saturdays with no stopping between 3pm to 6pm Monday to Friday.

Times outside of the above are considered periods of unrestricted parking. Of the above spaces available to the public during the survey period (excluding truck zone and works zone), on-street parking demand almost matches the provided supply with an approximate average demand of 80 per cent for the spaces throughout the survey period. Parking compliance ranged from 30 and 50 per cent for the 1/4P restricted spaces to between 56 per cent and 85 per cent for the 1P restricted spaces.

APPENDIX 2.

OFF STREET PARKING

P2 City of Canterbury-Bankstown Parking

P2 is located adjacent to the Bankstown Civic Tower nd is accessed via Rickard Road and Jacobs Street. P2 has a total of 88 parking spaces of which 64 spaces are publicly available. Of these 64 spaces, five spaces are restricted to P15min (15 minute parking), 16 spaces restricted to 1P, and 43 spaces restricted to 2P. Peak demand across all three time restriction categories matches that of the supplied parking provision with an average demand of approximately 85 per cent over the whole car park. Parking compliance for the different time restrictions range between 60 per cent to 100 per cent.

P3 Meredith Street Car Park

The Meredith Street car park is a multi-level car parking located on the south-east corner of the intersection of Meredith Street and Rickard Road and accessed via Meredith Street. The car park has a total capacity of 287 of which275 spaces are publicly available. These are split into the following categories:

- 206 unrestricted spaces
- 65 4P (four hour) restricted.

Peak demand for the unrestricted and 4P spaces was surveyed to almost reach capacity with compliance for the 4P spaces at 78 per cent.

P4 Marion Street Car Park

The Marion Street car park is a multi-level car park located on the southern end of the intersection of Marion Street and Meredith Street. The Marion Street car park has a total capacity of 492 spaces of which 462 spaces are available for use by the public. The 462 spaces are split into the following restrictions:

- 142 unrestricted spaces
- 91 spaces restricted to 1P
- 119 spaces restricted to 3P
- 110 spaces restricted 4P.

Analysis of the survey indicates that the publicly available car parking for the Marion Street car park is at capacity with peak demand measured to be 90 per cent of capacity. Compliance for the restricted parking spaces ranges from approximately 65 per cent to 85 per cent.

P5 Dale Lane Car Park

The Dale Lane car park is an at-grade car park and is part of Dale Lane, located off Dale Parade. The Dale Lane car park contains 49 parking spaces of which 44 spaces are available to the public. All 44 spaces are restricted to 1P parking between 8:30am to 6pm Monday to Friday. Surveys show a peak demand of 44 vehicles across the day indicating that parking capacity has been reached. Parking compliance for the Dale Lane car park is approximately 75%.

P6 Greenfield Pde Car Park

The Greenfield Parade Car Park is located between Stewart Lane and Greenfield Parade and contains 271 parking spaces over nine levels. Publicly available spaces account for 250 spaces with an additional space allocated for disability parking. The 250 publicly available spaces are split into the following restrictions:

- 69 unrestricted spaces
- 110 spaces restricted to 2P
- 62 spaces restricted to 3P.

Peak demand is seen to reach provided parking capacity over the day with 90 per cent of spaces occupied by 10:30am. Additionally, the unrestricted spaces are fully occupied starting from the beginning of the survey period (8:30am) indicating either worker or commuter parking. Average demand is above 85 per cent for 2P restricted parking and above 75 per cent for 3P restricted parking. Parking compliance is 87 per cent and 76 per cent for 2P restricted parking and 3P restricted parking, respectively.

P7 West Terrace Car Park

The West Terrace car park is located between West Terrace and Lopez Lane with access via Lopez Lane or Morgan Lane (off West Terrace). The West Terrace car park contains 259 parking spaces over three levels. Publicly available car parking consists of 230 spaces and are split into the following restrictions:

- 176 spaces of unrestricted parking levels two and three
- 54 spaces restricted to 4P on level one.

Occupancy surveys for the unrestricted parking show a peak demand of 176 spaces occur from 9:30 until 2:30 with demand remaining at remaining at 166 spaces until the end of the survey period (5:30pm). Peak demand for the restricted 4P parking was measured to be 54 spaces with an average demand of over 85 per cent across the day. Parking compliance for the restricted parking spaces was analysed to be 91 per cent.

P8 Brandon Ave Car Park

The Brandon Avenue car park is located between Brandon Avenue, Dale Parade and Northam Avenue with access from Northam Avenue. The Brandon Avenue car park consists of four levels and contains 241 parking spaces. There are 236 spaces available to the public, not including three disability parking spaces, and are split into 92 unrestricted spaces on level four and 144 spaces restricted to 4P parking on levels one to three. Occupancy survey results for the Brandon Avenue car park show that demand for parking begins at approximately 9:30am, with 95 per occupation after this time. Prior to 9:30am, occupancy across the car park is approximately 40 per cent. The unrestricted parking remains at over 90 per cent occupancy until the end of the survey period. The restricted parking has a peak demand of 119 spaces. And an average demand of over 80 per cent of capacity throughout the survey period. Parking compliance was analysed to be 93 per cent for the restricted parking spaces from the duration of stay surveys.

P9 Stanley Street Car Park

The Stanley Street car park contains 61 unrestricted parking spaces and is located on Stanley Street between Restwell Street and Leonard Street. Occupancy surveys show demand reaching capacity by 9:30am with illegal parking noting to occur in the afternoon indicating high demand for parking in this location.

Parking Summary

Parking within the study area, as shown by the surveys and accompanying analysis, is in high demand. The existing off-street car parks often reach capacity. Parking demand reaches capacity quite early in the day with high demand (above 80 per cent) being sustained past the end of the survey period. It occurs for both restricted and unrestricted parking. This is a strong indication for a high proportion of all-day parking, predominantly seen in areas of commuter parking.

Likewise, on-street parking is in high demand, with parking compliance for on-street parking significantly worse than in off-street facilities. This is evident for a number of on-street locations where non-compliance is greater than compliant parking. Analysis of the survey results show that compliance is above at least 65 per cent for off-street parking whereas this can sometimes be less than 50 per cent for on-street parking

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