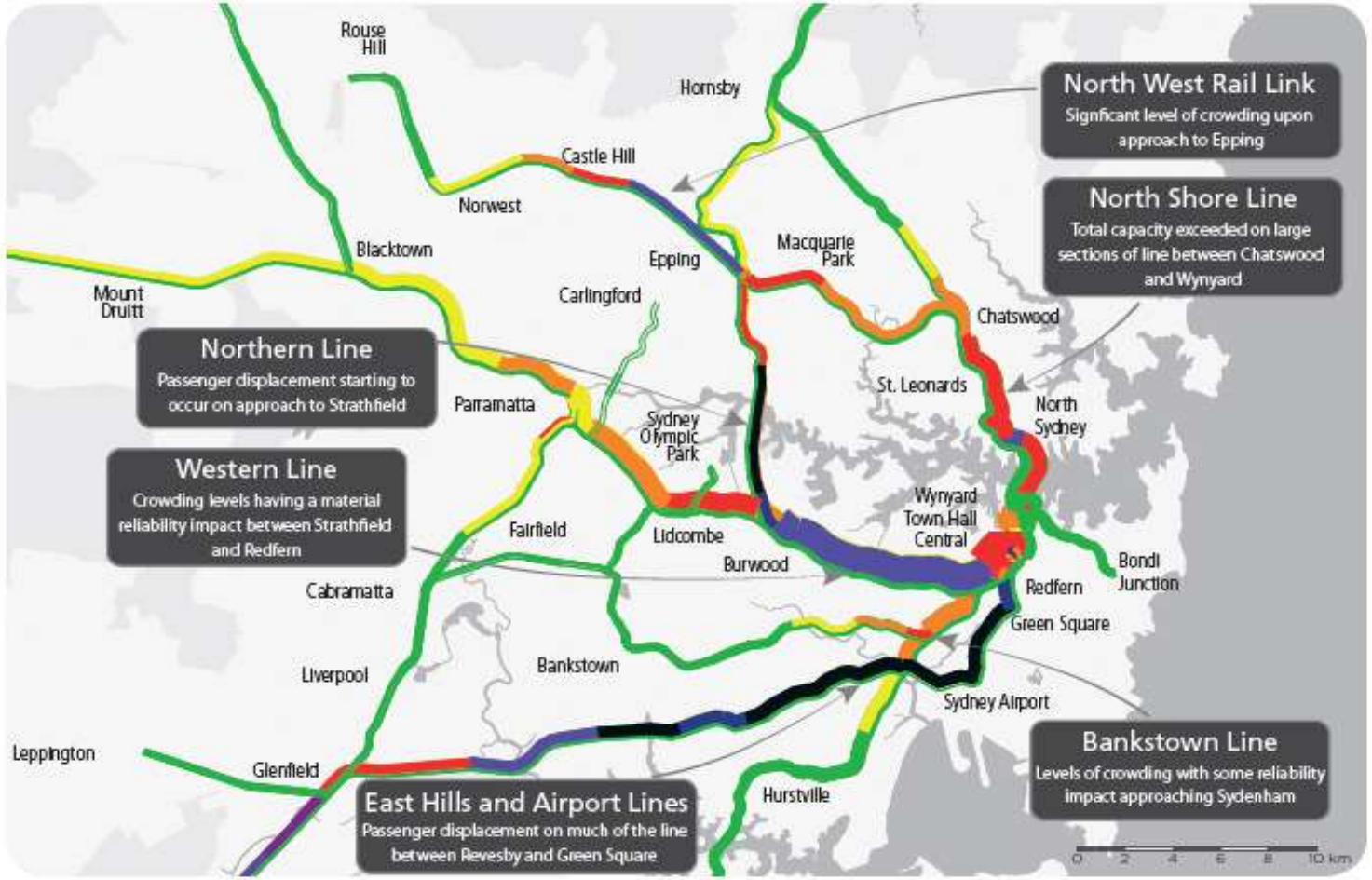
The Turbulent Sydney Metro Story

Ecotransit Sydney
Mathew Hounsell
Co-convenor



Crowding Level		Description of crowding for double deck trains
	Very Low	Passengers are mostly seated
	Low	Seated capacity is reached and people start to stand
	Moderate	Standing space approaching full for reliable running
	High	Crowding with some reliability impact
	Very High	Crowding starting to have material reliability impact
	Passenger displacement	Additional passengers are unable to board the train

Note: The above passenger crowding levels are based on total capacity (including both seated and standing passengers). This is a more generally accepted measure internationally rather than expressing capacity on the basis of seating alone.

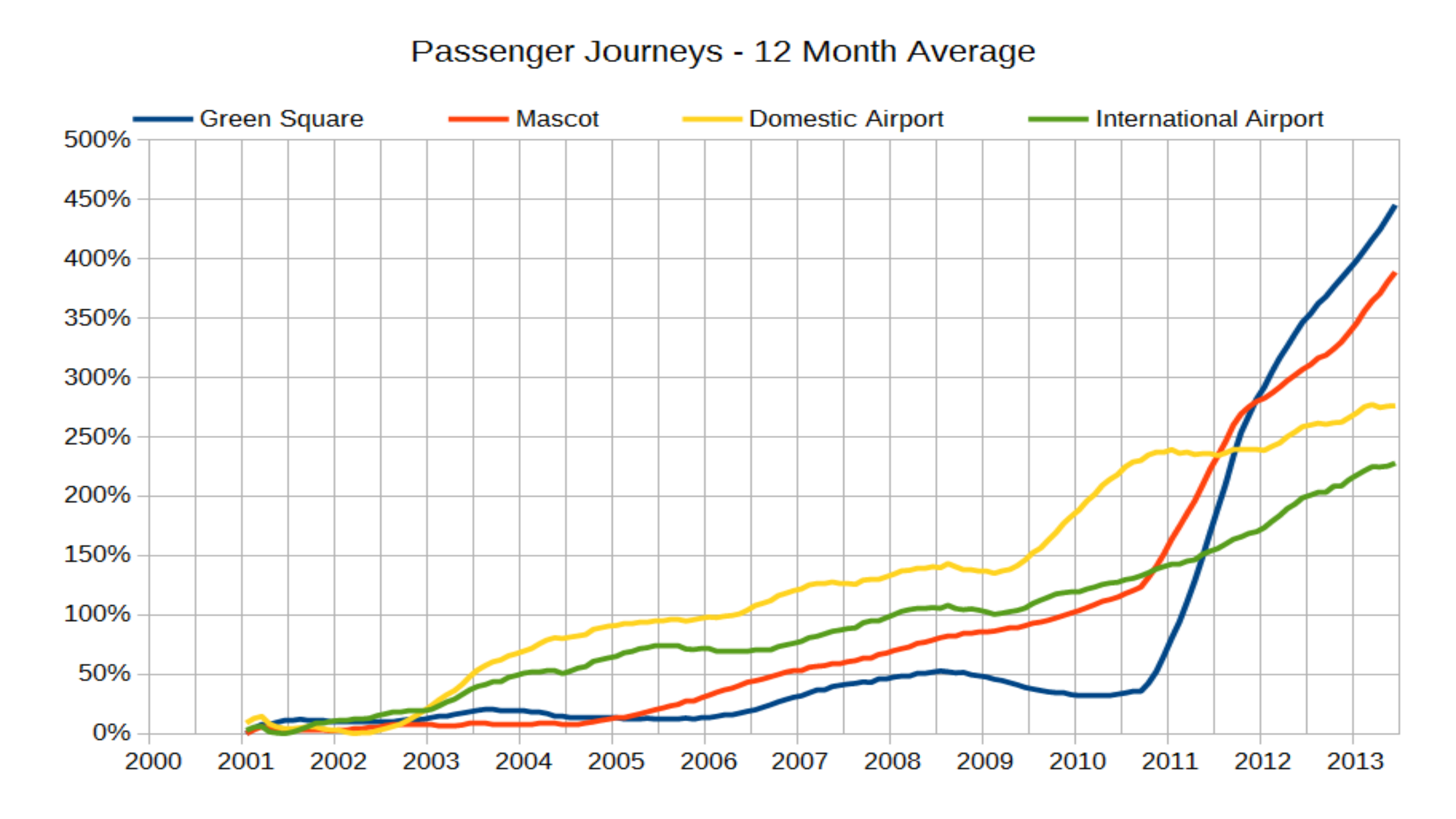
Source: Transport for NSW

Key changes over the last decade

⬆ 13%	Population
⬆ 7%	Weekday trips
⬆ 10%	Weekend trips
⬆ 23%	Vehicles

Growth by mode

⬆ 24%	Train trips
⬆ 19%	Bus trips
⬆ 5%	Vehicle trips
⬆ 21%	Total public transport


Passenger Journeys - 12 Month Average
Green Square
Mascot
Domestic Airport
International Airport
500%
450%
400%
350%
300%
250%
200%
150%
100%
50%
0%
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

Joint Study on Aviation Capacity in the Sydney Region

- There is already some crowding in the am peak on CBD bound trains. Some of these services are already full (but with some standing room available) before they reach the International Terminal. This period is also the peak period for passenger arrivals at the airport. **Based on current growth levels, between 2013 and 2018 all of these CBD-bound am peak services will be full** unless additional rolling stock and train paths can be allocated to the Airport Rail Link.
- There are currently 8 trains per hour in the peak on the Airport Line. A sequence of rail projects including the Kingsgrove-Revesby quadruplication, completion of the South West Rail Link and construction of the Revesby turnback will provide capacity for additional services on this line. If additional rollingstock is allocated to the line, it is anticipated an additional 4 trains per hour in the peak will commence in 2016 when the South West Rail Link opens. This will temporarily relieve crowding in peak periods but in the longer term, additional services will be required as shown in Figure 2.

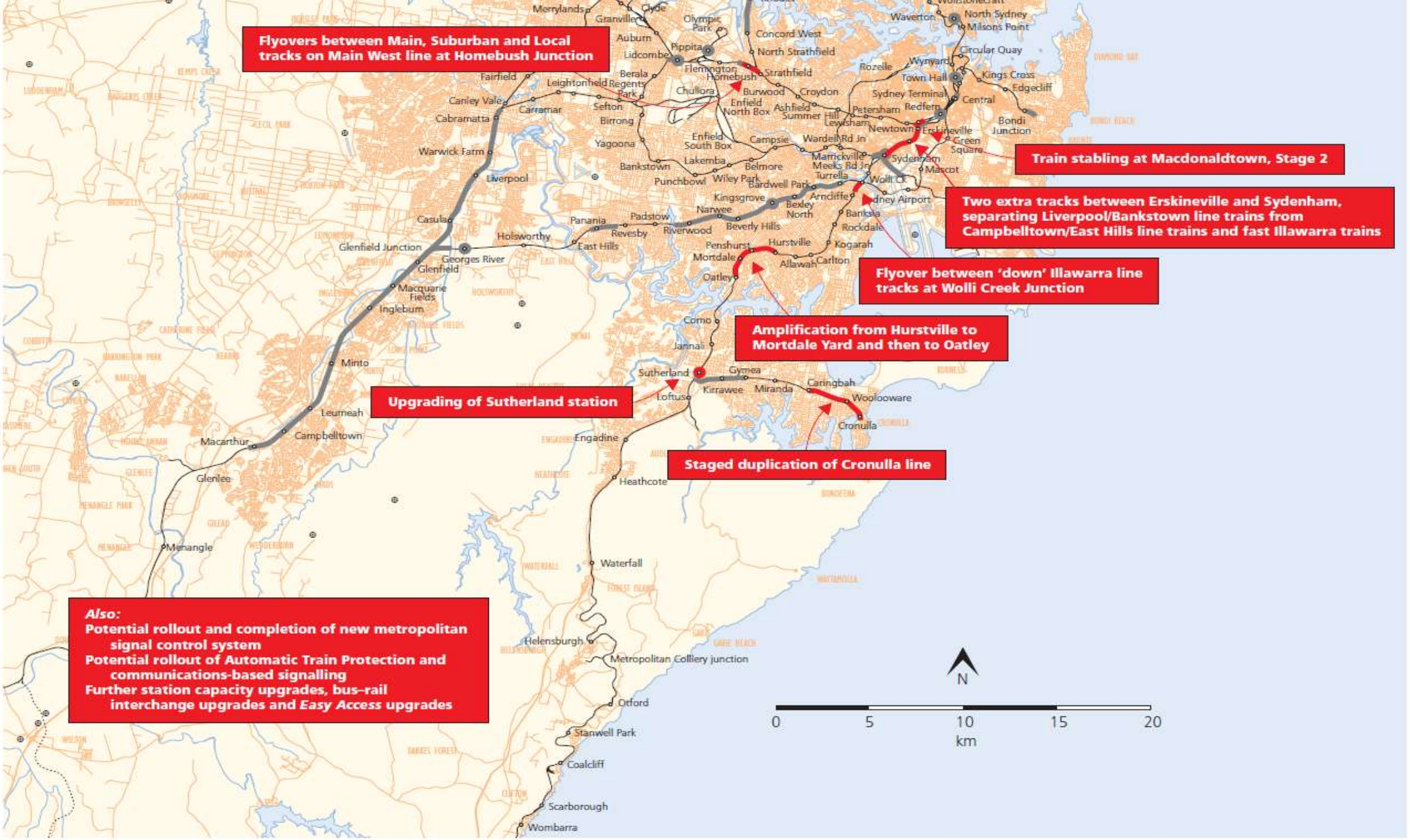


Figure 5.2. Rail network developments between 2006 and 2011 (for details, see section 4.4).

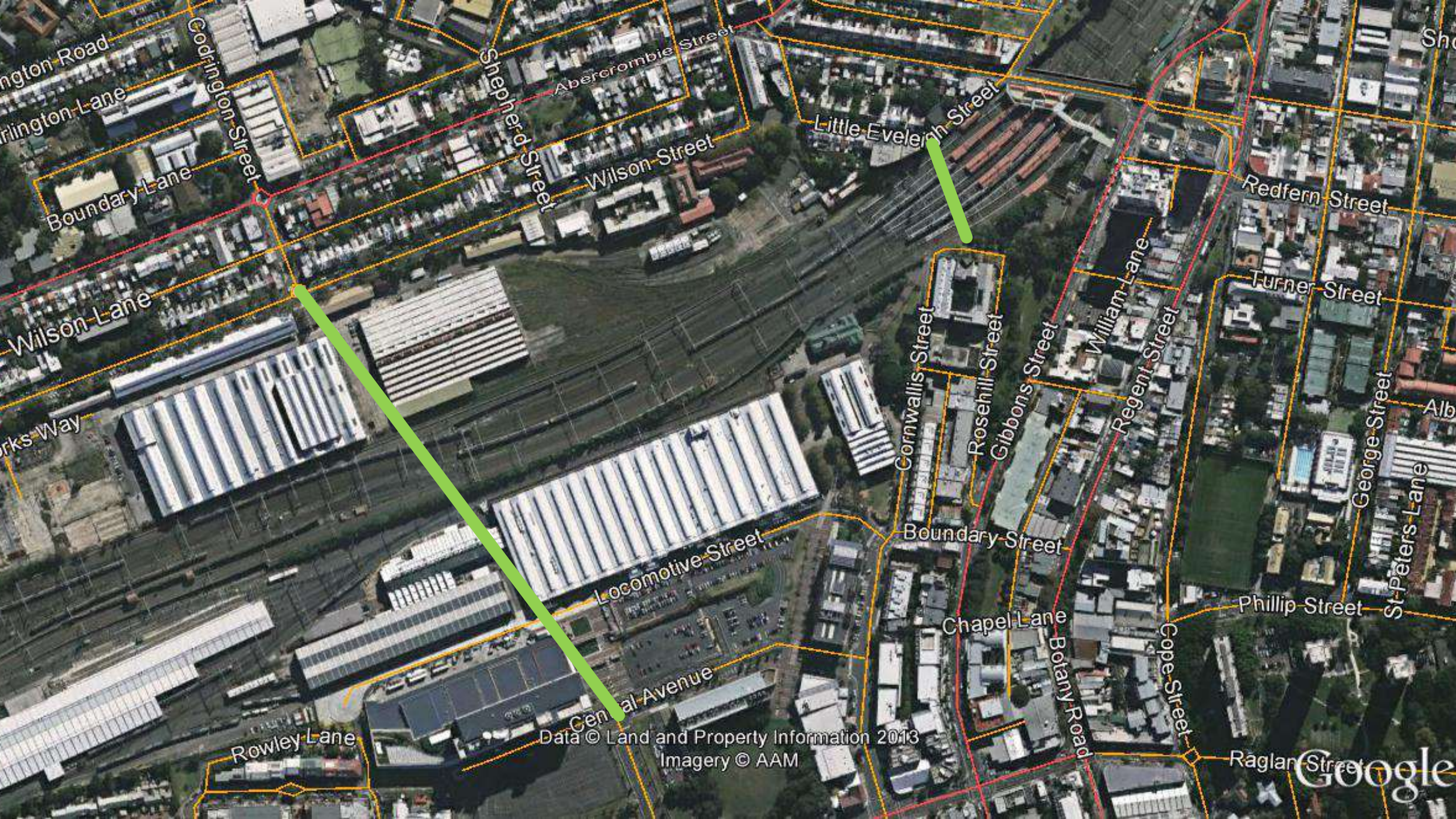
Sydenham - 6 Tracks In

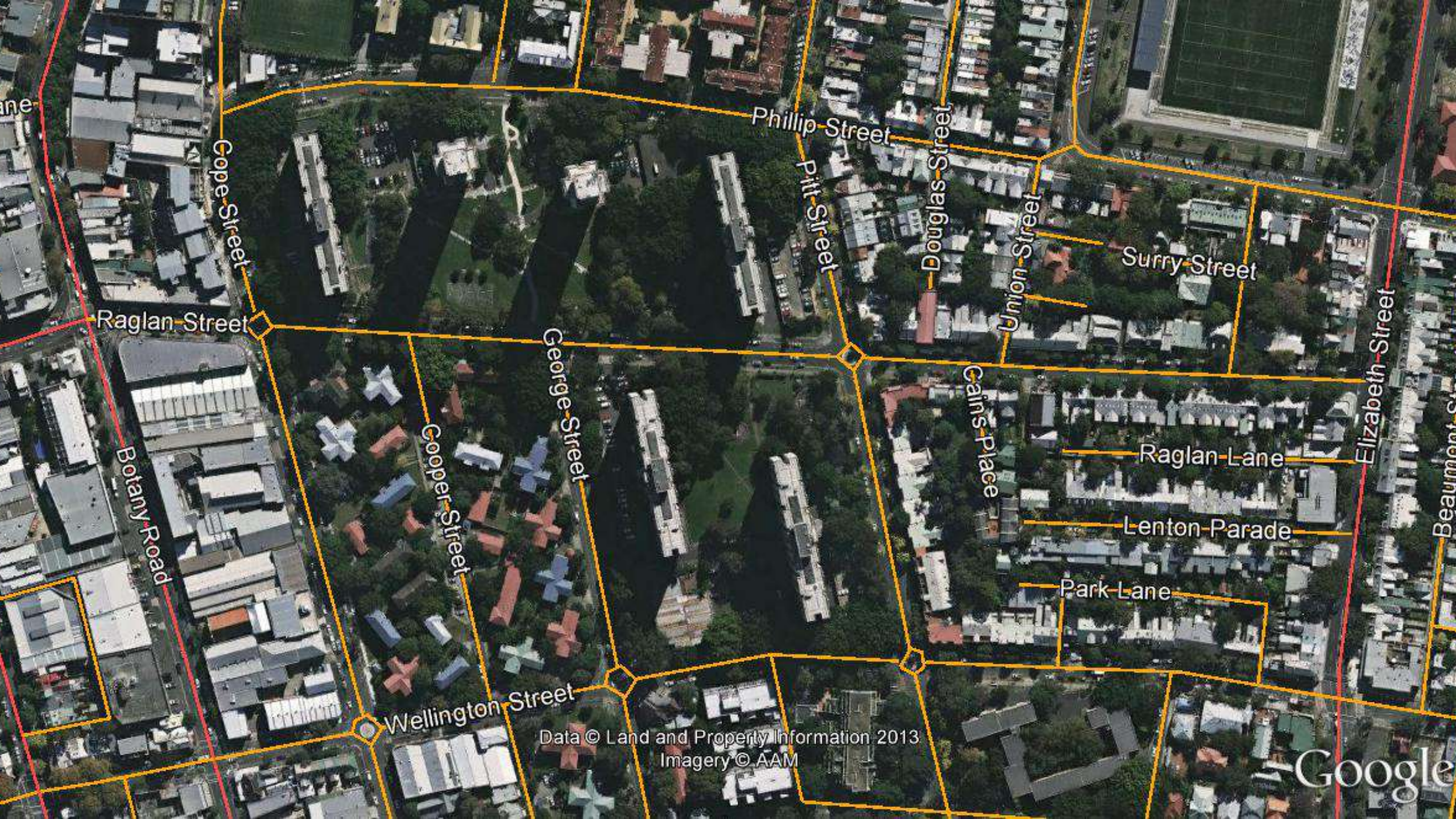
Sydenham – 4 Tracks Out

Sydenham – 6 Platforms


1
Bridges – built for 6 tracks
Imagery © AAM
Google

Erskineville


Godrington Road
Godrington Lane
Godrington Street
Shepherd Street
Abercrombie Street
Boundary Lane
Wilson Street
Little Evelegh Street
Redfern Street
Wilson Lane
Turner Street
Cornwallis Street
Rosehill Street
Gibbons Street
William Lane
Regent Street
George Street
St Peters Lane
Boundary Street
Locomotive Street
Chapel Lane
Botany Road
Cope Street
Phillip Street
Rowley Lane
Raglan Street
Data © Land and Property Information 2013
Imagery © AAM
Google


Phillip Street
Cope Street
Pitt Street
Douglas Street
Union Street
Surry Street
Elizabeth Street
Raglan Street
George Street
Cooper Street
Botany Road
Cains Place
Raglan Lane
Lenton Parade
Park Lane
Wellington Street
Data © Land and Property Information 2013
Imagery © AAM
Google

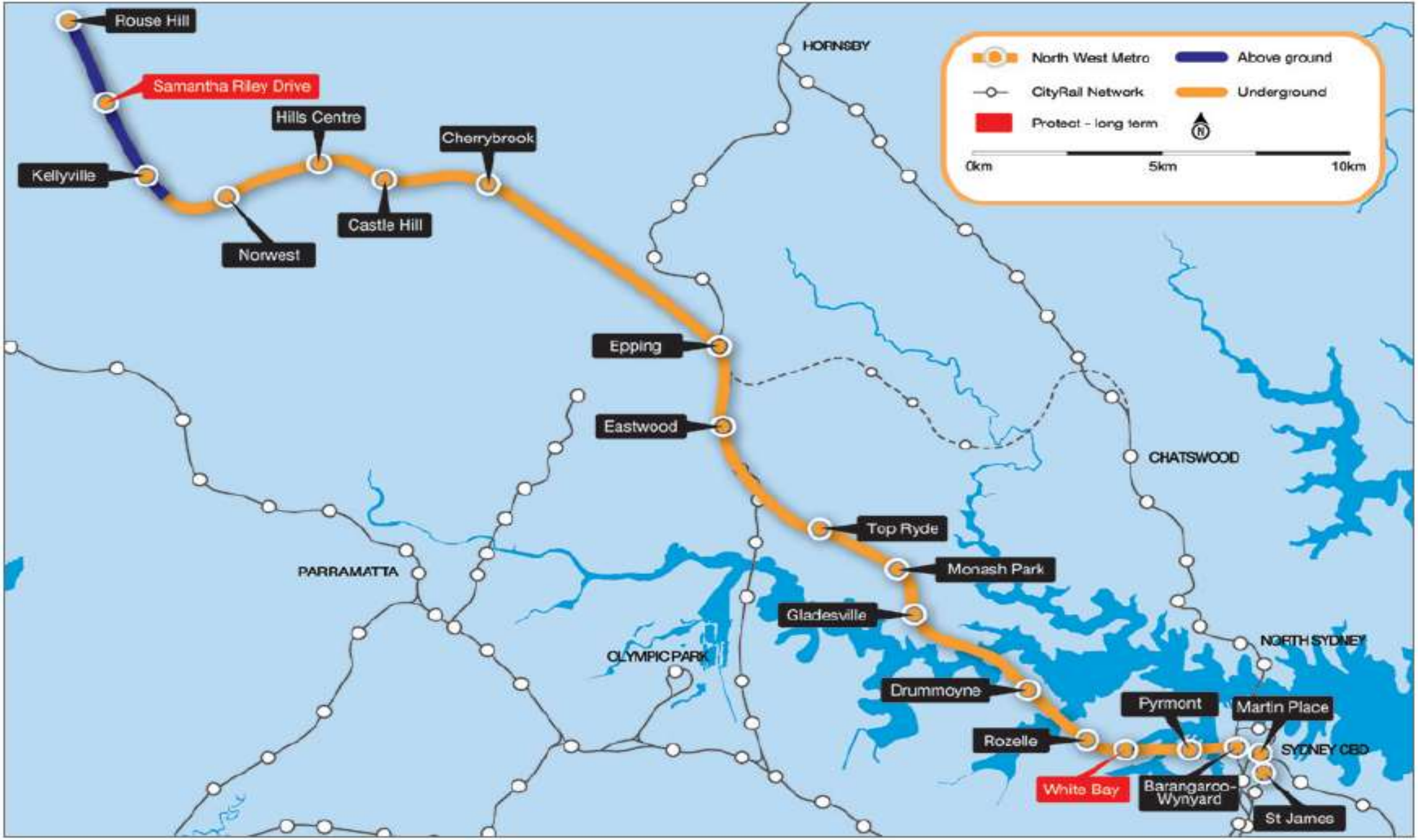
Why Metros?

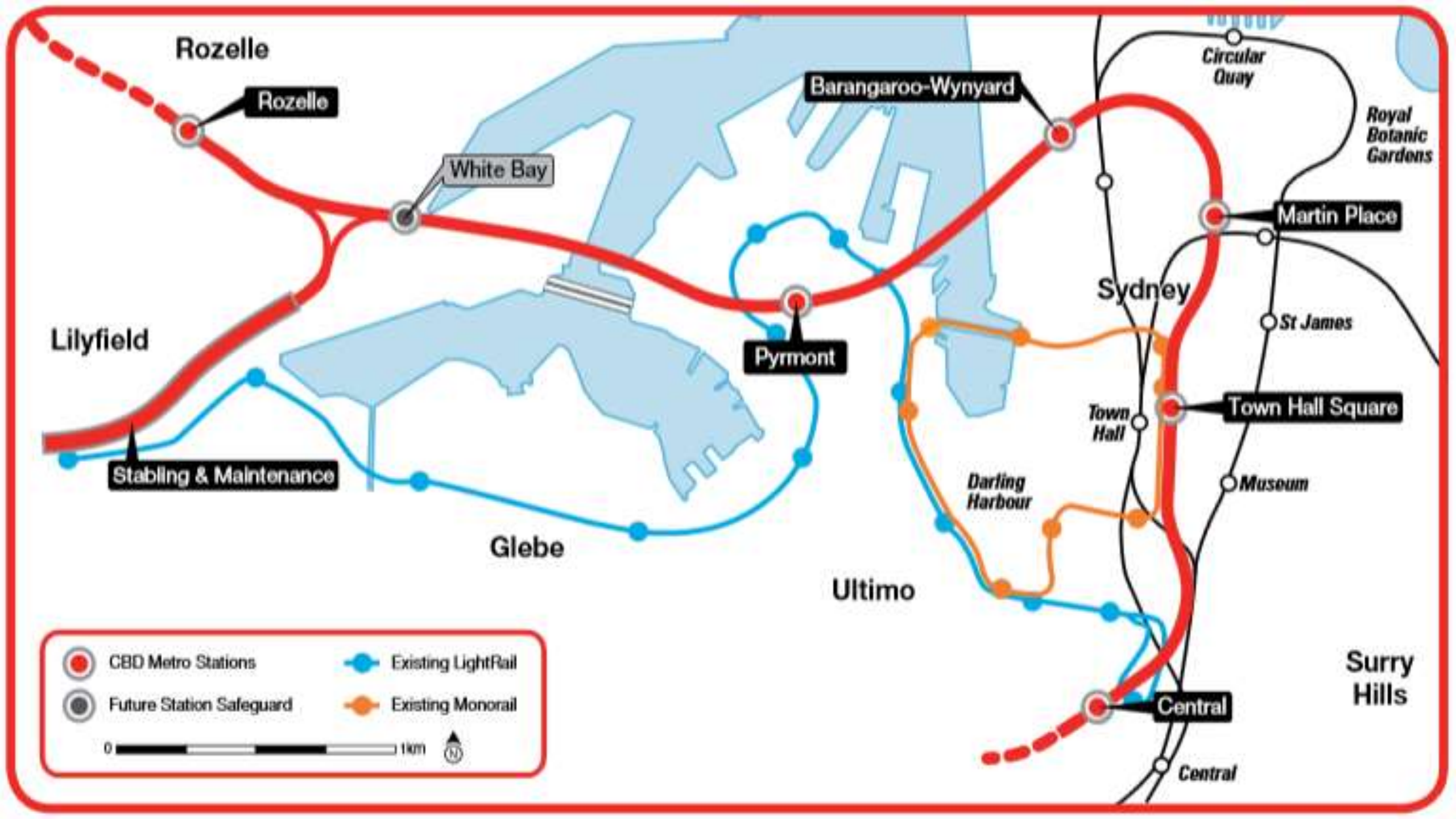
Rouse Hill
Hills Centre
Cherrybrook
Kellyville
Castle Hill
Norwest
Epping
Denistone East
Top Ryde
Gladesville
Henley
Drummoyne
Pyrmont
Rozelle
Martin Place
Wynyard
St James

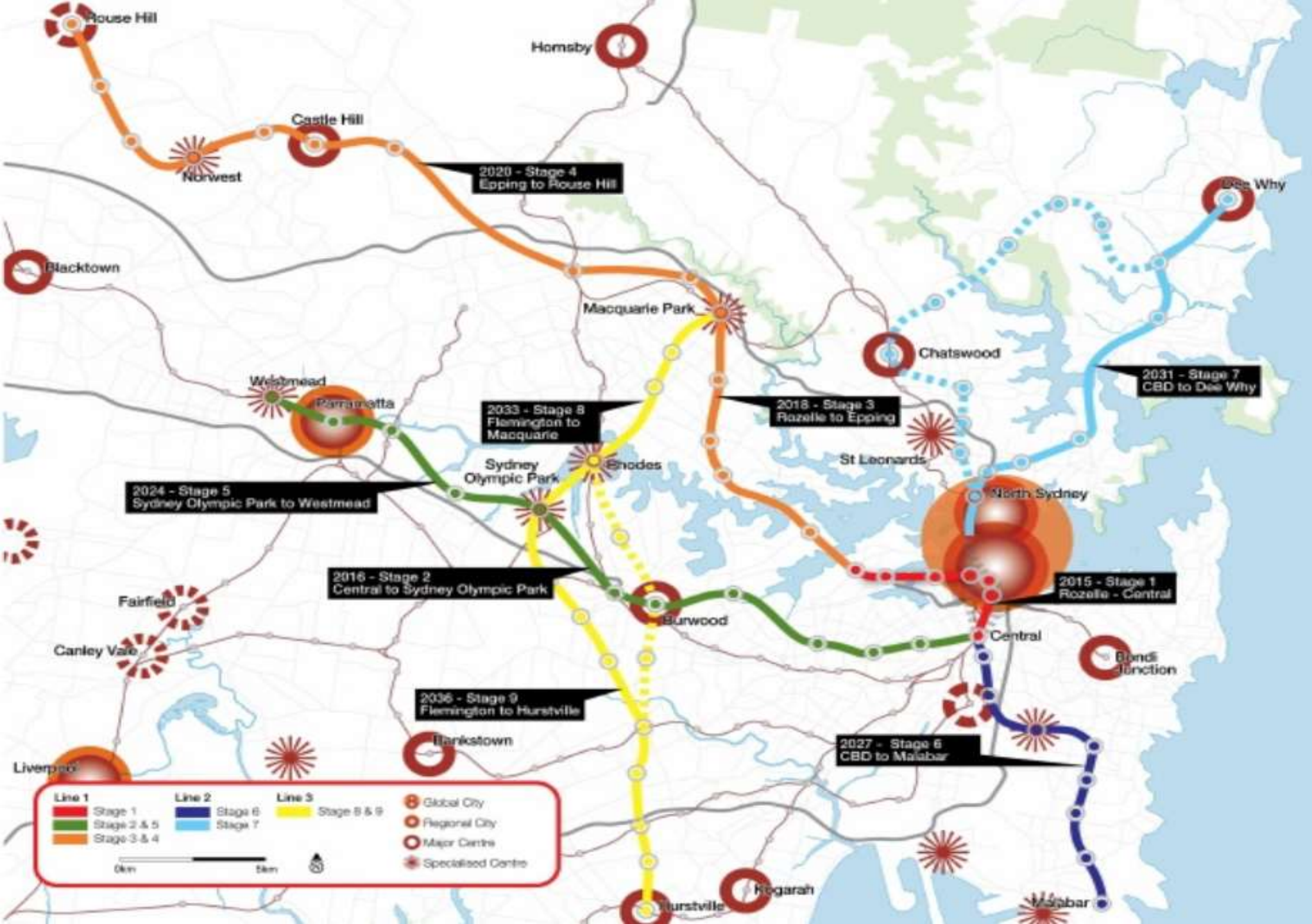
LEGEND:

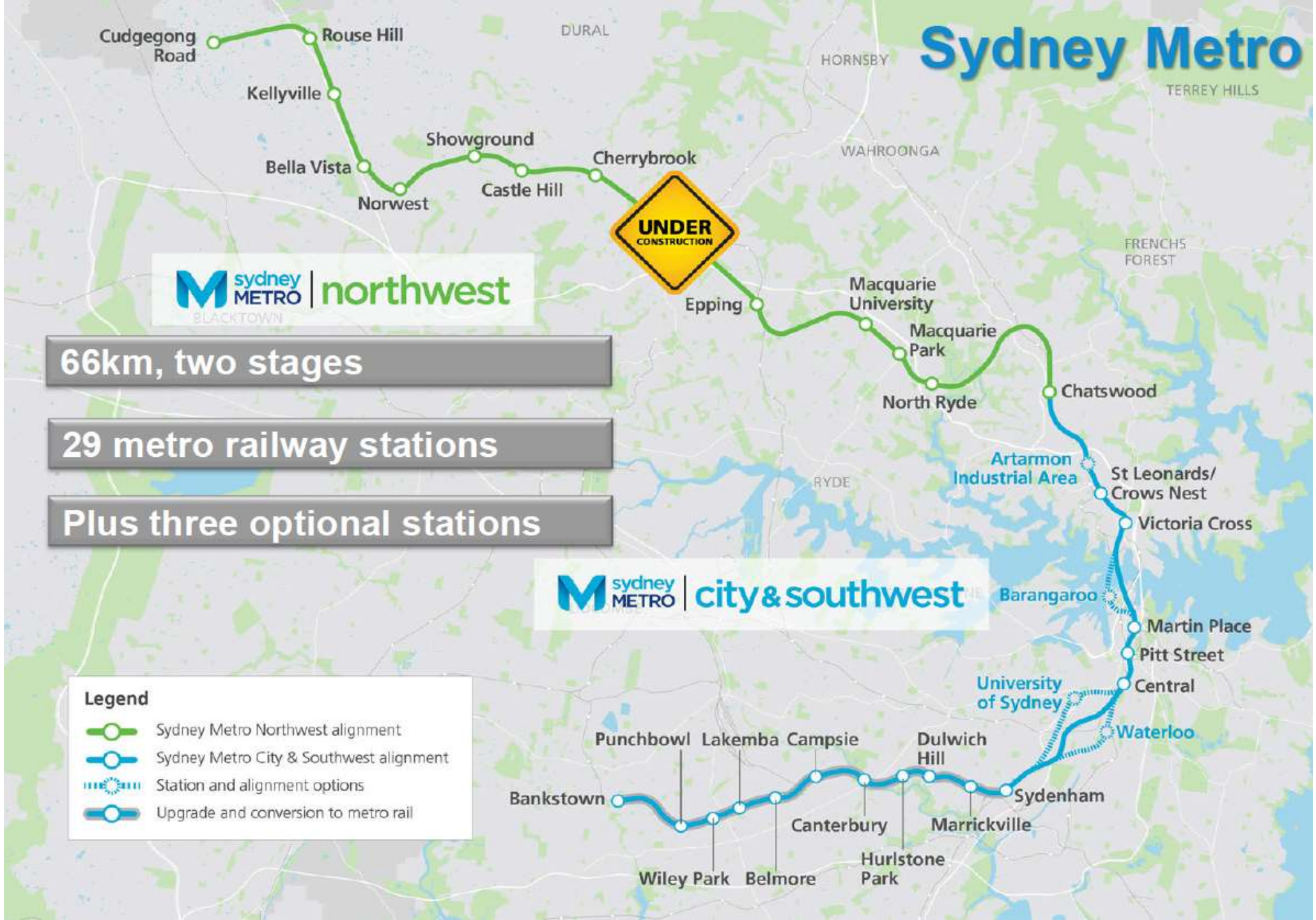
- Passengers can interchange with CityRail network here
- Passengers can interchange with light rail here

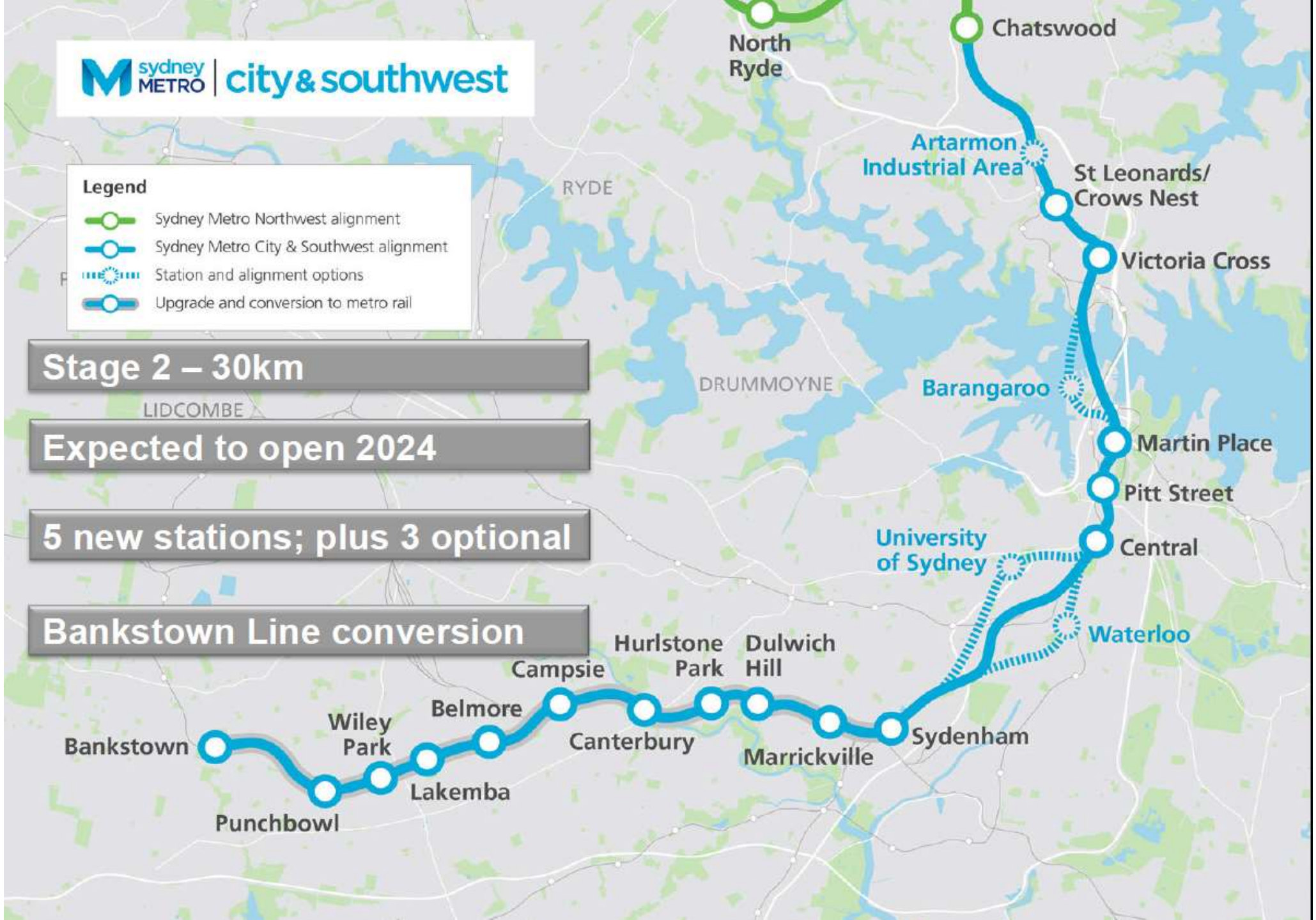
Figure 1.2 Key features of the North West Metro




Rozelle
Rozelle
White Bay
Barangaroo-Wynyard
Circular Quay
Royal Botanic Gardens
Martin Place
Sydney
St James
Lilyfield
Pyrmont
Town Hall Square
Town Hall
Stabling & Maintenance
Darling Harbour
Museum
Glebe
Ultimo
Central
Surry Hills
Central
CBD Metro Stations
Future Station Safeguard
Existing LightRail
Existing Monorail
0
1km
N


Rouse Hill
Hornsby
Castle Hill
Norwest
2020 - Stage 4
Epping to Rouse Hill
Dee Why
Blacktown
Macquarie Park
Chatswood
2031 - Stage 7
CBD to Dee Why
Westmead
Parramatta
2033 - Stage 8
Flemington to
Macquarie
2018 - Stage 3
Rozelle to Epping
St Leonards
Sydney
Olympic Park
Rhodes
2024 - Stage 5
Sydney Olympic Park to Westmead
North Sydney
2016 - Stage 2
Central to Sydney Olympic Park
2015 - Stage 1
Rozelle - Central
Fairfield
Burwood
Central
Canley Vale
Bondi
Junction
2036 - Stage 9
Flemington to Hurstville
Bankstown
2027 - Stage 6
CBD to Malabar
Liverpool
Line 1
Stage 1
Stage 2 & 5
Stage 3 & 4
Line 2
Stage 6
Stage 7
Line 3
Stage 8 & 9
Global City
Regional City
Major Centre
Specialised Centre
0km
5km
Kogarah
Hurstville
Malabar


Sydney Metro
Cudgegong Road
Rouse Hill
Kellyville
Bella Vista
Showground
Norwest
Castle Hill
Cherrybrook
UNDER CONSTRUCTION
Epping
Macquarie University
Macquarie Park
North Ryde
Chatswood
Artarmon Industrial Area
St Leonards/ Crows Nest
Victoria Cross
Barangaroo
Martin Place
Pitt Street
Central
University of Sydney
Waterloo
Sydenham
Marrickville
Dulwich Hill
Campsie
Lakemba
Punchbowl
Bankstown
Canterbury
Hurlstone Park
Belmore
Wiley Park
DURAL
HORNSBY
TERREY HILLS
WAHROONGA
FRENCHS FOREST
RYDE
BLACKTOWN
sydney METRO | northwest
66km, two stages
29 metro railway stations
Plus three optional stations
sydney METRO | city & southwest
Legend
Sydney Metro Northwest alignment
Sydney Metro City & Southwest alignment
Station and alignment options
Upgrade and conversion to metro rail


sydney METRO | city & southwest
Legend
Sydney Metro Northwest alignment
Sydney Metro City & Southwest alignment
Station and alignment options
Upgrade and conversion to metro rail
Stage 2 – 30km
Expected to open 2024
5 new stations; plus 3 optional
Bankstown Line conversion
RYDE
DRUMMOYNE
LIDCOMBE
North Ryde
Chatswood
Artarmon Industrial Area
St Leonards/ Crows Nest
Victoria Cross
Barangaroo
Martin Place
Pitt Street
Central
University of Sydney
Waterloo
Sydenham
Marrickville
Dulwich Hill
Hurlstone Park
Canterbury
Campsie
Belmore
Lakemba
Wiley Park
Punchbowl
Bankstown

Waterloo

People around Waterloo have traditionally relied upon buses and walking as a transport solution.

Earmarked by the NSW Government for possible greater residential development and urban renewal, Waterloo now stands as a possible option for metro.

Waterloo is a centre for community and cultural activity and a growing residential area, with business activity increasing in the area in recent years.

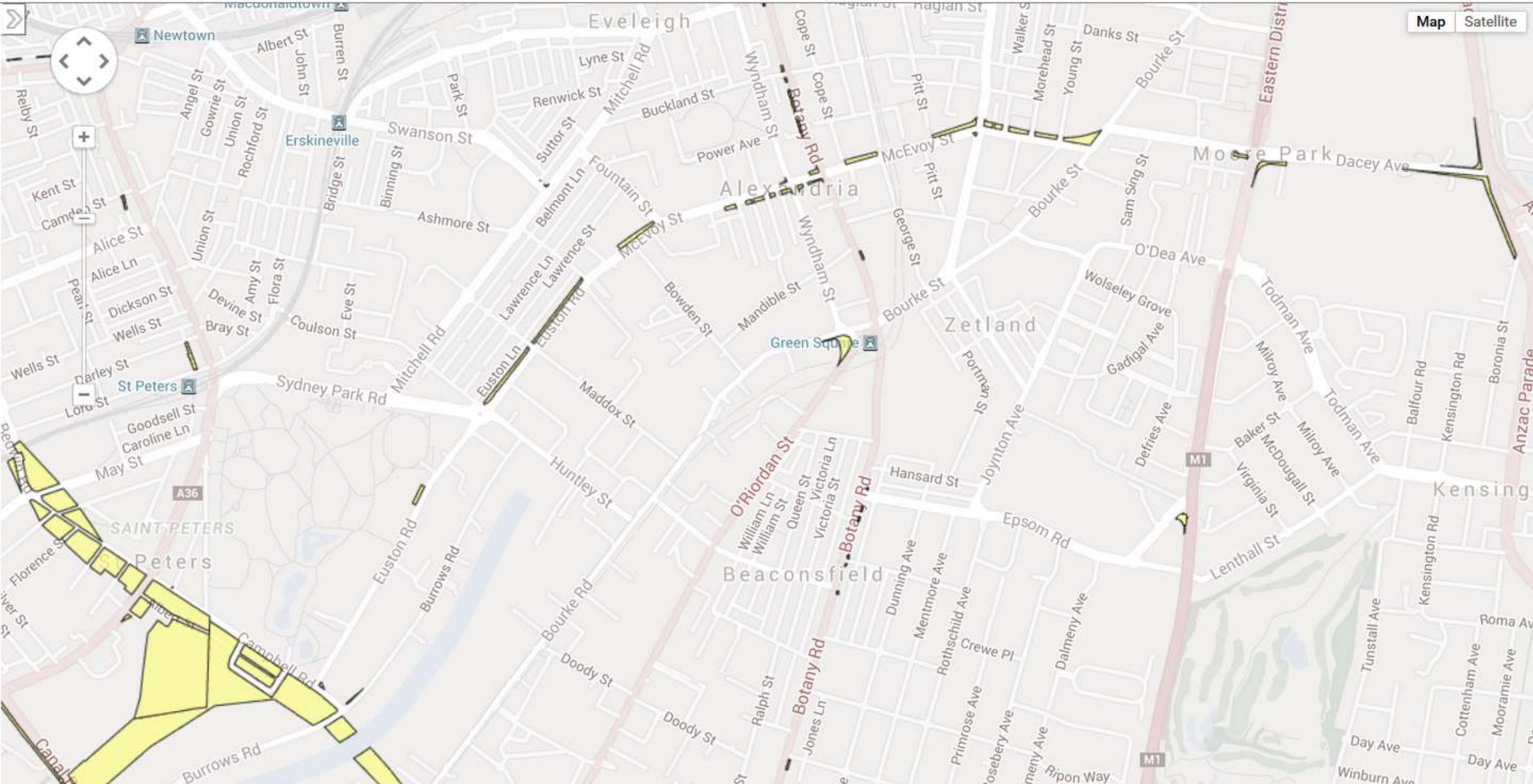
A new metro station at Waterloo would help revitalise the Waterloo precinct and support the extension of the CBD to the south.

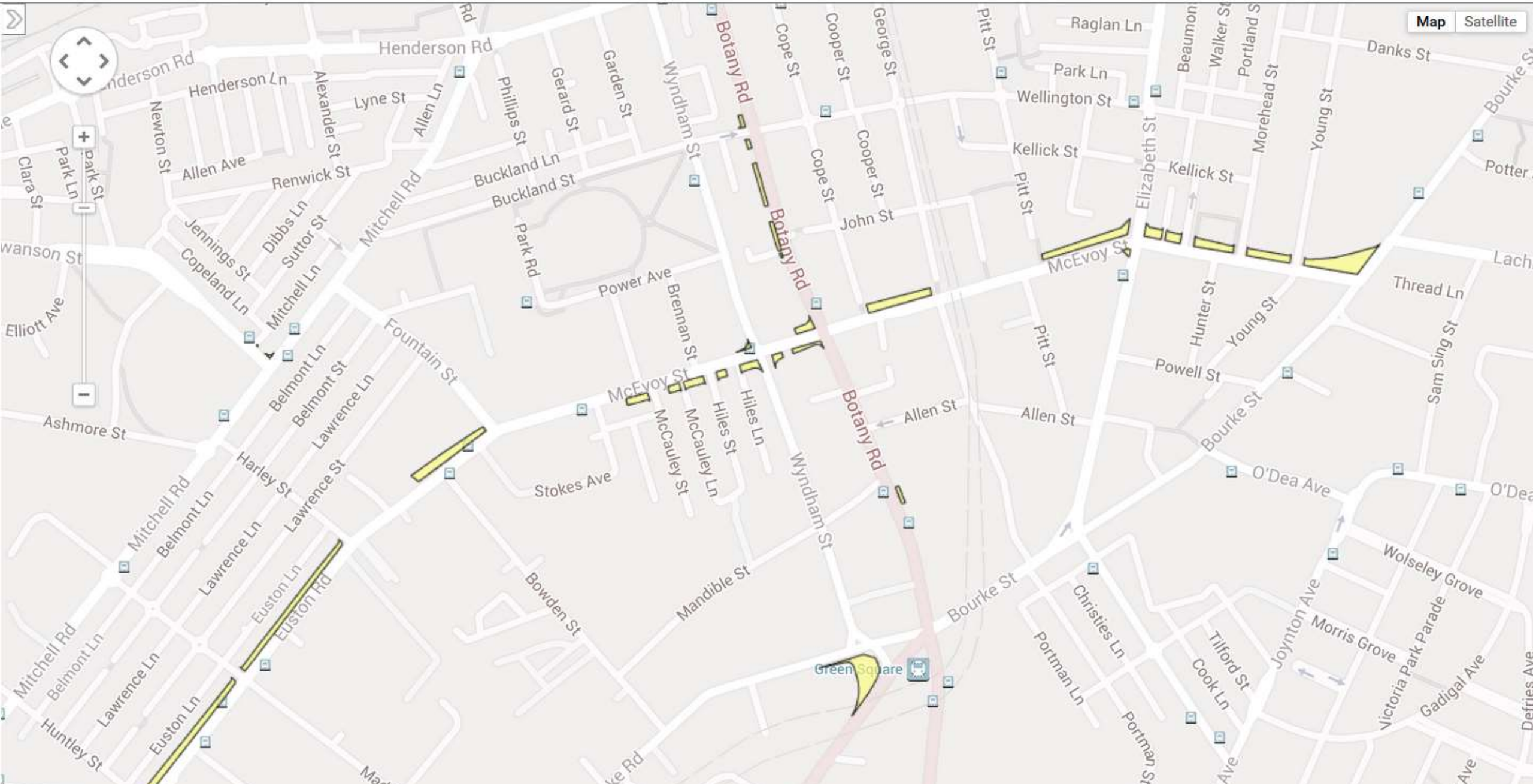
It would also:

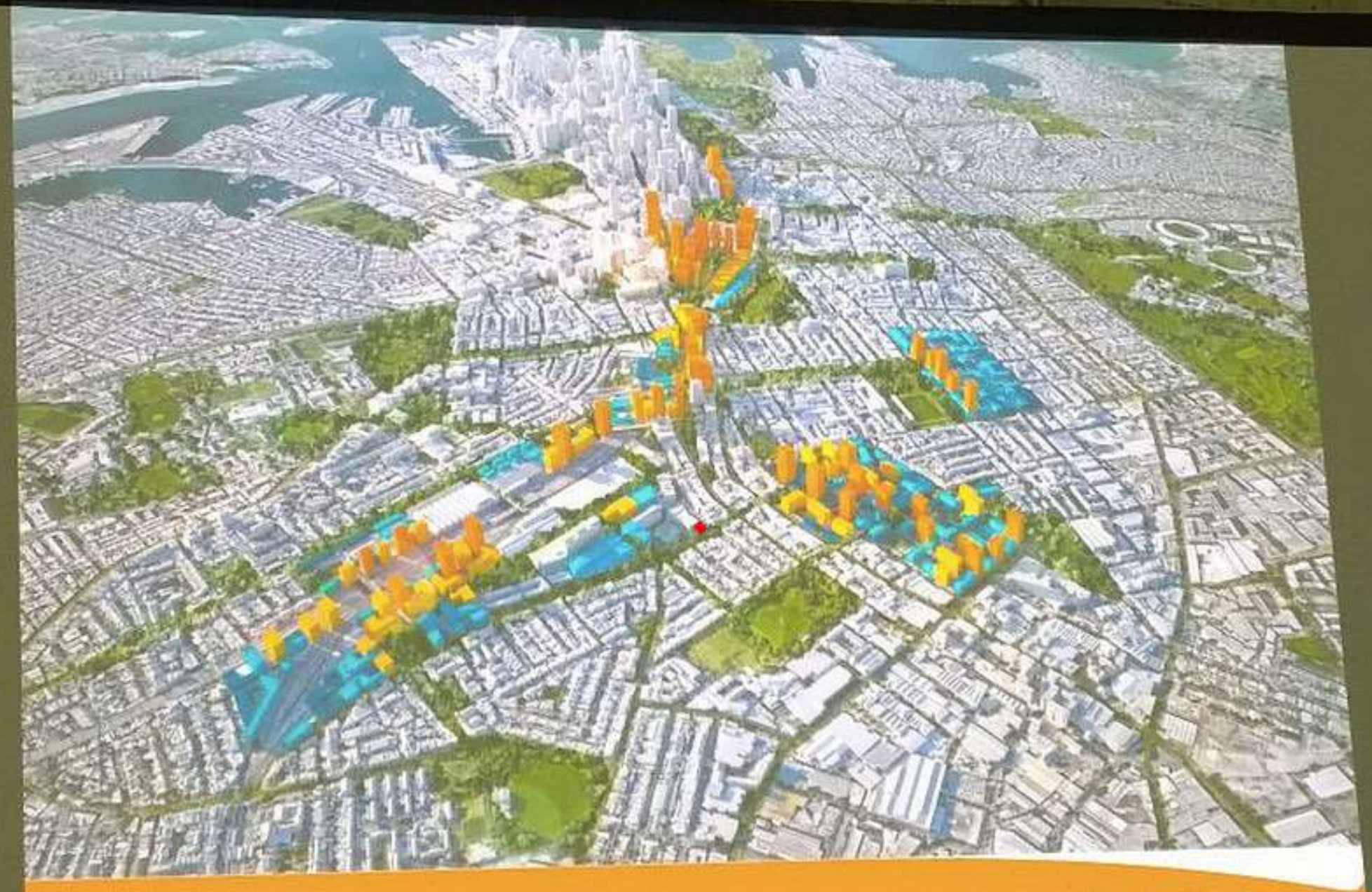
- Provide a high quality connection with bus services along Botany Road
- Provide additional connectivity to Australian Technology Park and Redfern Station
- Contribute to the NSW Government objective to transform Waterloo and Redfern.

The metro station would also allow further development and expansion of the Global Economic Corridor between the Sydney CBD and Green Square.

WATERLOO – station summary	
Station type	Underground
Location	Waterloo
LGA	City of Sydney
Centre type	Local Centre
Primary station function	Origin and Destination
Catchment	Residential and Employment
Access modes	
Walk	Yes
Cycle	Yes
Bus	Yes
Light rail	No
Taxi	Yes
Kiss and ride	Yes
Park and ride	No


Map
Satellite
Newtown
Erskineville
St Peters
Eveleigh
Alexandria
Zetland
Beaconsfield
Moore Park
Green Square
SAINT PETERS
Peters
Kensing
Albert St
Burren St
Swanson St
Ashmore St
Sydney Park Rd
Mitchell Rd
Euston Rd
Botany Rd
McEvoy St
Bourke St
Wyndham St
Lawrence St
Euston Ln
Maddox St
Huntley St
Bourke Rd
Doody St
Burrows Rd
Epsom Rd
Hansard St
Lenthall St
O'Riordan St
Joynton Ave
Todman Ave
O'Dea Ave
Dacey Ave
Eastern Distri
Anzac Parade
Kensington Rd
Day Ave
Ripon Way
M1
A36
Lyne St
Renwick St
Buckland St
Power Ave
Pitt St
George St
Sam Sing St
Danks St
Young St
Morehead St
Walker St
Cope St
Wyndham St
Mandible St
Bowden St
Fountain St
Belmont Ln
Lawrence Ln
Coulson St
Devine St
Bray St
Wells St
Darley St
Dickson St
Alice St
Alice Ln
Kent St
Reiby St
Angel St
Gowrie St
Union St
Rochford St
John St
Park St
Bridge St
Binning St
Suttor St
Mitchell Rd
Amy St
Flora St
Eve St
Goodsell St
Caroline Ln
May St
Florence St
Canal Rd
Campbell Rd
Ralph St
Jones Ln
Dunning Ave
Mentmore Ave
Rothschild Ave
Crewe Pl
Primrose Ave
Dalmeny Ave
Tunstall Ave
Cottenham Ave
Mooramie Ave
Roma Av
Winburn Ave
Wolseley Grove
Gadigal Ave
Defries Ave
Milroy Ave
Baker St
McDougall St
Virginia St
Balfour Rd
Kensington Rd
Boronia St
Portman St
Queen St
Victoria St
Victoria Ln
William St
William Ln

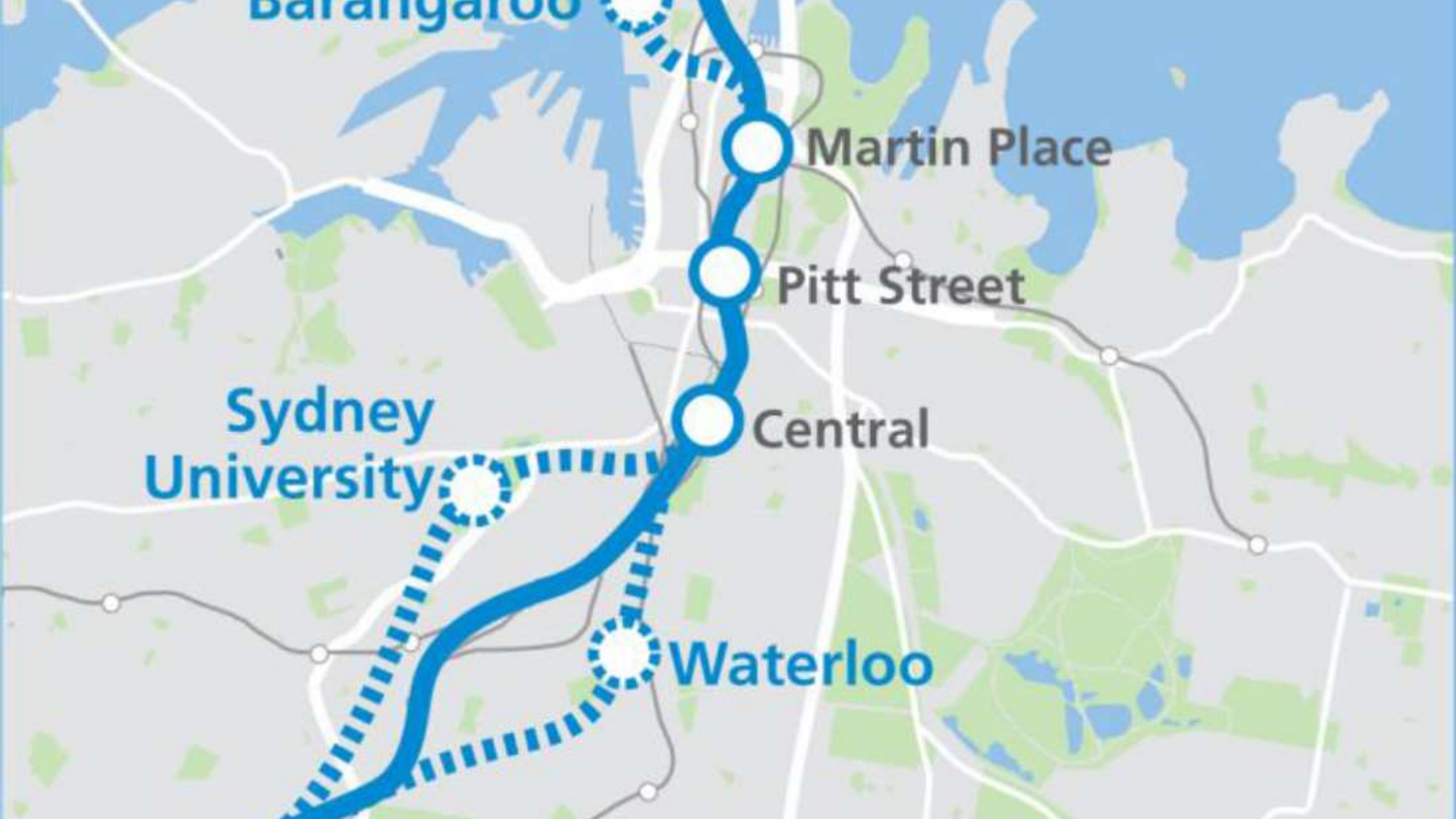

Map
Satellite
Botany Rd
Henderson Rd
Henderson Ln
Lyne St
Allen Ln
Alexander St
Newton St
Allen Ave
Renwick St
Park Ln
Clara St
Park St
Phillips St
Gerard St
Garden St
Wyndham St
Buckland Ln
Buckland St
Park Rd
Mitchell Rd
Dibbs Ln
Suttor St
Jennings St
Copeland Ln
Mitchell Ln
Elliott Ave
Power Ave
Brennan St
Fountain St
Belmont Ln
Belmont St
Lawrence Ln
Lawrence St
Ashmore St
Harley St
Mitchell Rd
Belmont Ln
Lawrence Ln
Euston Ln
Euston Rd
Huntley St
Stokes Ave
McEvoy St
McCauley St
McCauley Ln
Hiles St
Hiles Ln
Bowden St
Mandible St
Wyndham St
Allen St
Cope St
Cooper St
George St
John St
Pitt St
Raglan Ln
Park Ln
Wellington St
Kellick St
Elizabeth St
Beaumont St
Walker St
Portland St
Morehead St
Young St
Danks St
Potter
Lach
Thread Ln
Sam Sing St
Hunter St
Powell St
Bourke St
O'Dea Ave
Wolseley Grove
Morris Grove
Joynton Ave
Victoria Park Parade
Gadigal Ave
Christies Ln
Portman Ln
Tilford St
Cook Ln
Green Square

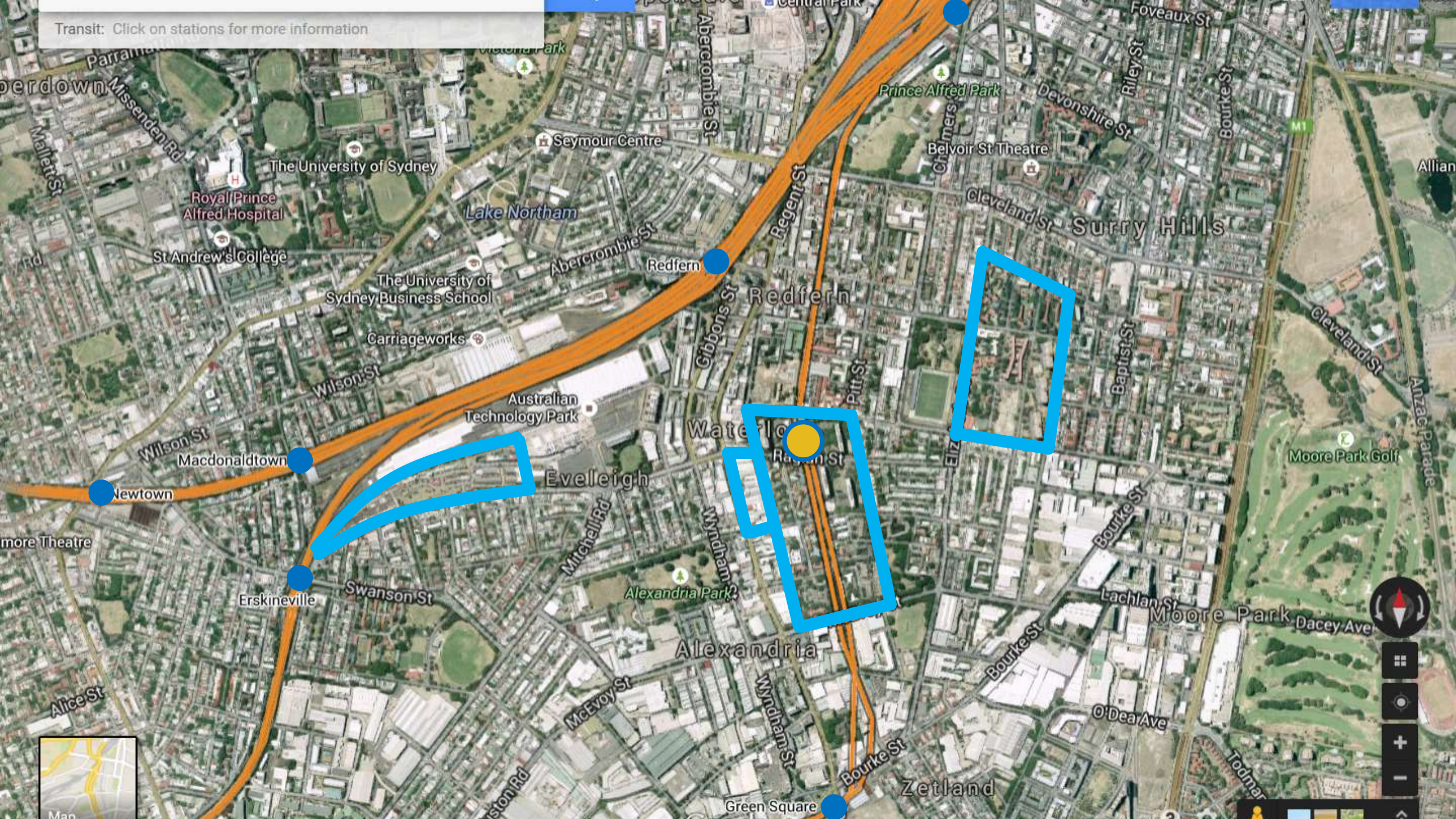


Central to Eveleigh

NSW

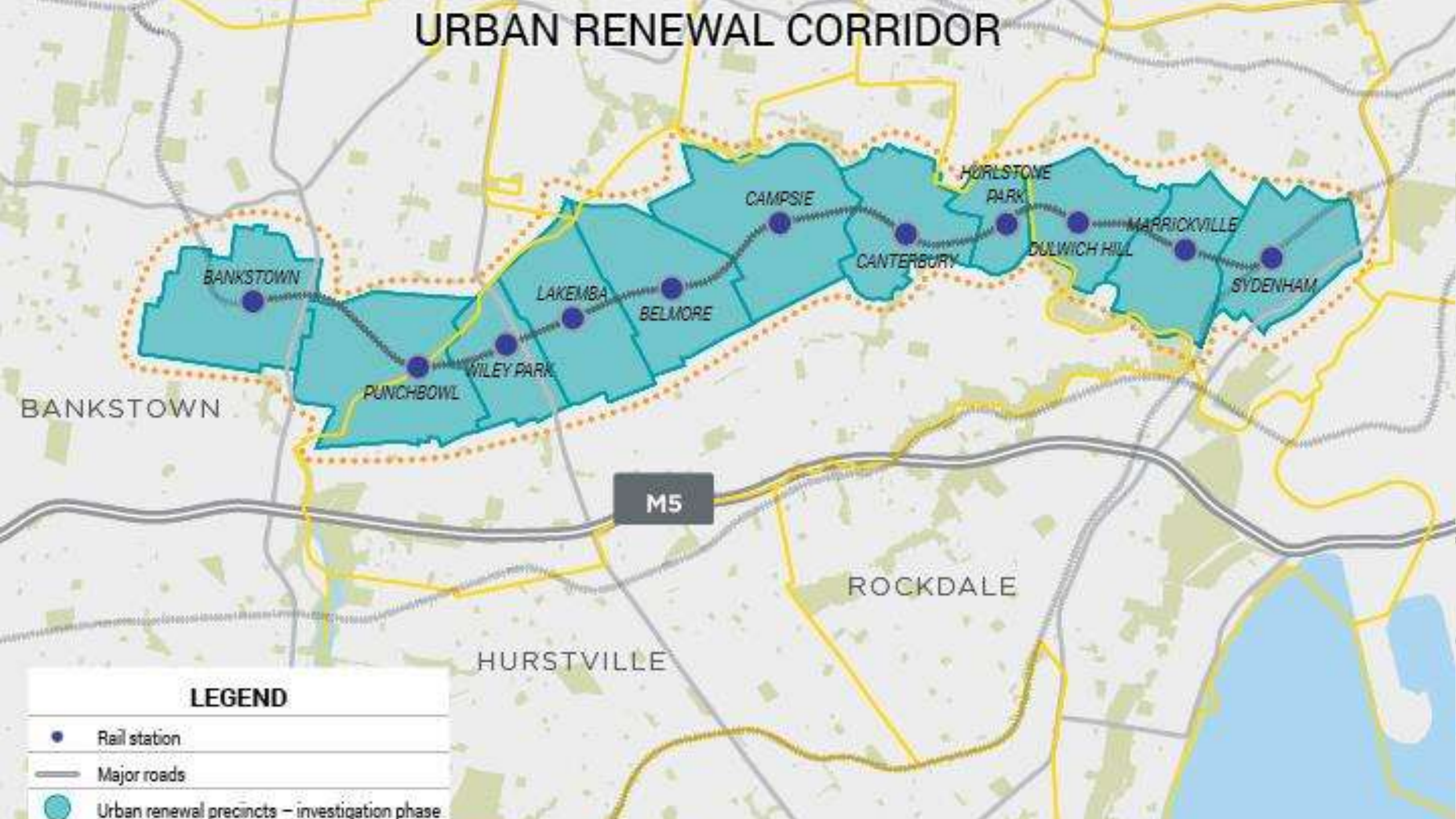
UrbanGrowth NSW


Martin Place
Pitt Street
Sydney
University
Central
Waterloo


Transit: Click on stations for more information
Parramatta Rd
Missenden Rd
Mallett St
Victoria Park
Abercrombie St
Seymour Centre
The University of Sydney
Royal Prince Alfred Hospital
Lake Northam
St Andrew's College
The University of Sydney Business School
Carriageworks
Redfern
Regent St
Prince Alfred Park
Chalmers St
Belvoir St Theatre
Devonshire St
Riley St
Bourke St
Foveaux St
Cleveland St
Surry Hills
Gibbons St
Pitt St
Baptist St
Australian Technology Park
Wilson St
Macdonaldtown
Newtown
Eveleigh
Waterloo
Moore Park Golf
Anzac Parade
Mitchell Rd
Wyndham St
Alexandria Park
Erskineville
Swanson St
Alexandria
Moore Park
Lachlan St
Dacey Ave
O'Dea Ave
McEvoy St
Alice St
Zetland
Green Square
Todman

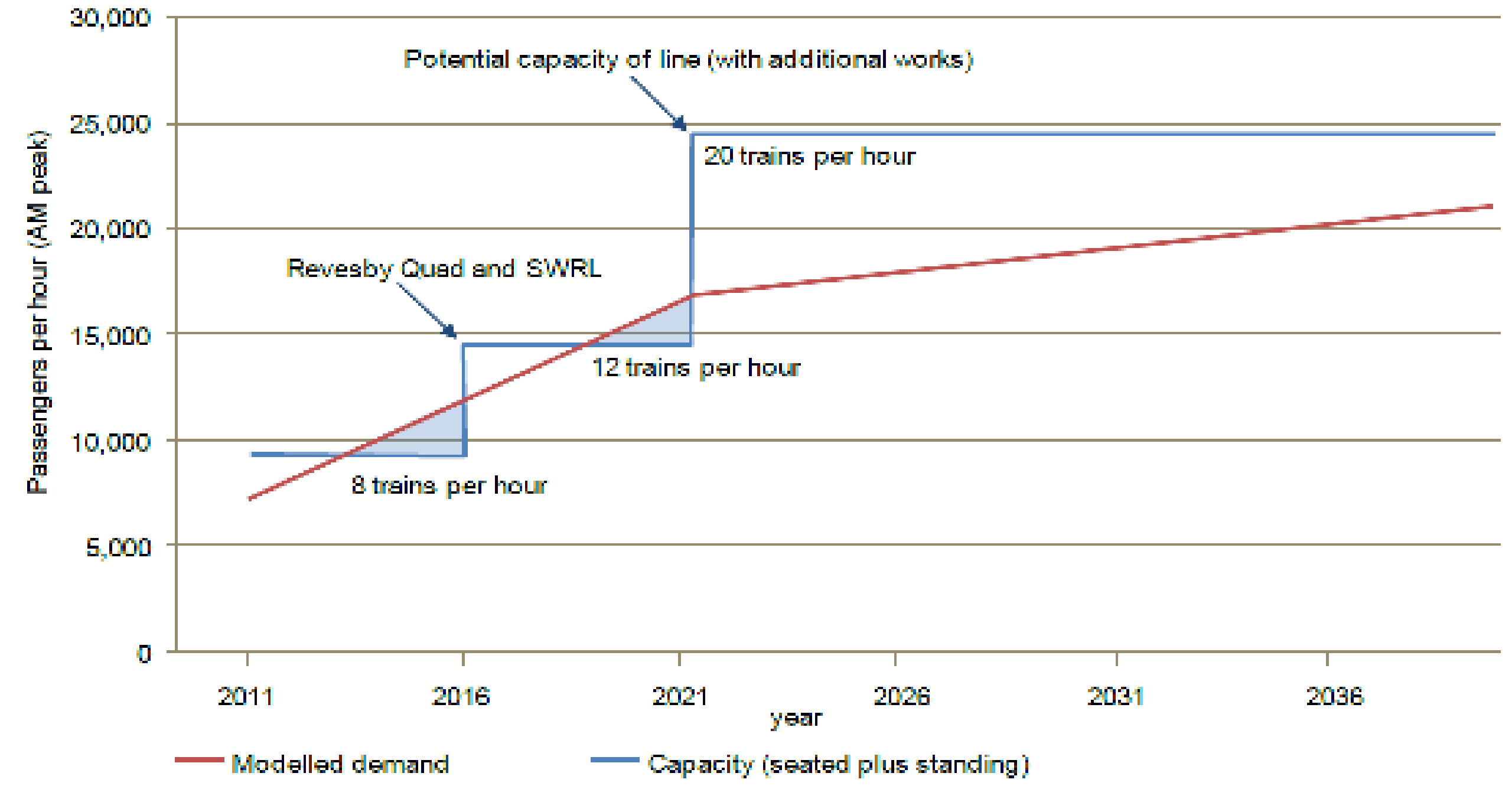

BLACKTOWN
CABRAMATTA
LIVERPOOL
PARRAMATTA
EPPING
HORNSBY
BANKSTOWN
BURWOOD
CHATSWOOD
HURSTVILLE
NORTH SYDNEY
WOLLI CREEK
MANLY VALE
SYDNEY CITY
GREEN SQUARE
BONDI JUNCTION
RANDWICK

URBAN RENEWAL CORRIDOR



What about the passengers?

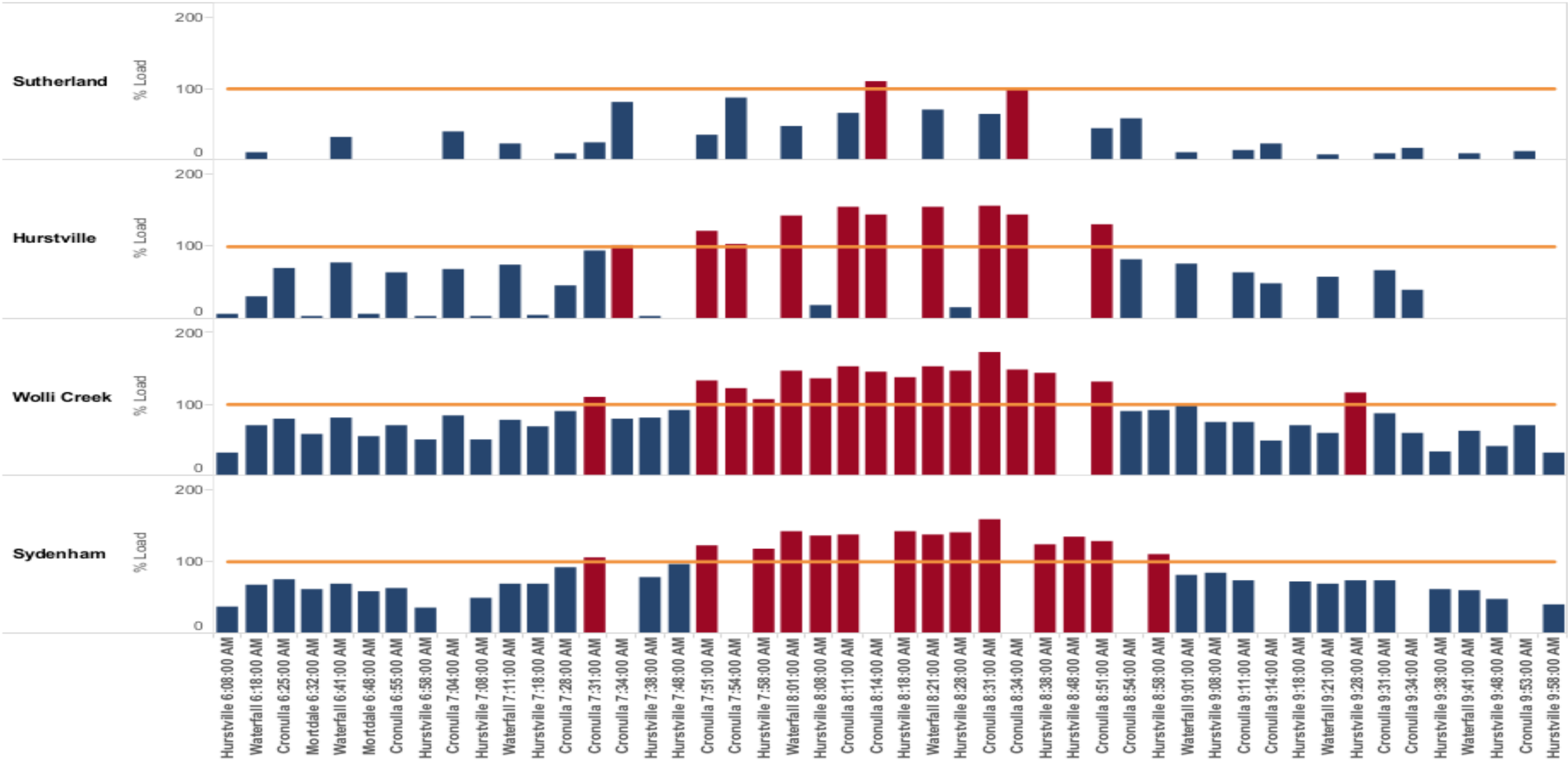
Figure 2 Potential Airport Rail Link capacity compared to modelled demand in the am peak



Train Loads Survey: March 2015 - By Line

Progressive Passenger Loading on T4 Eastern Suburbs & Illawarra Line in AM Peak

Illawarra Line

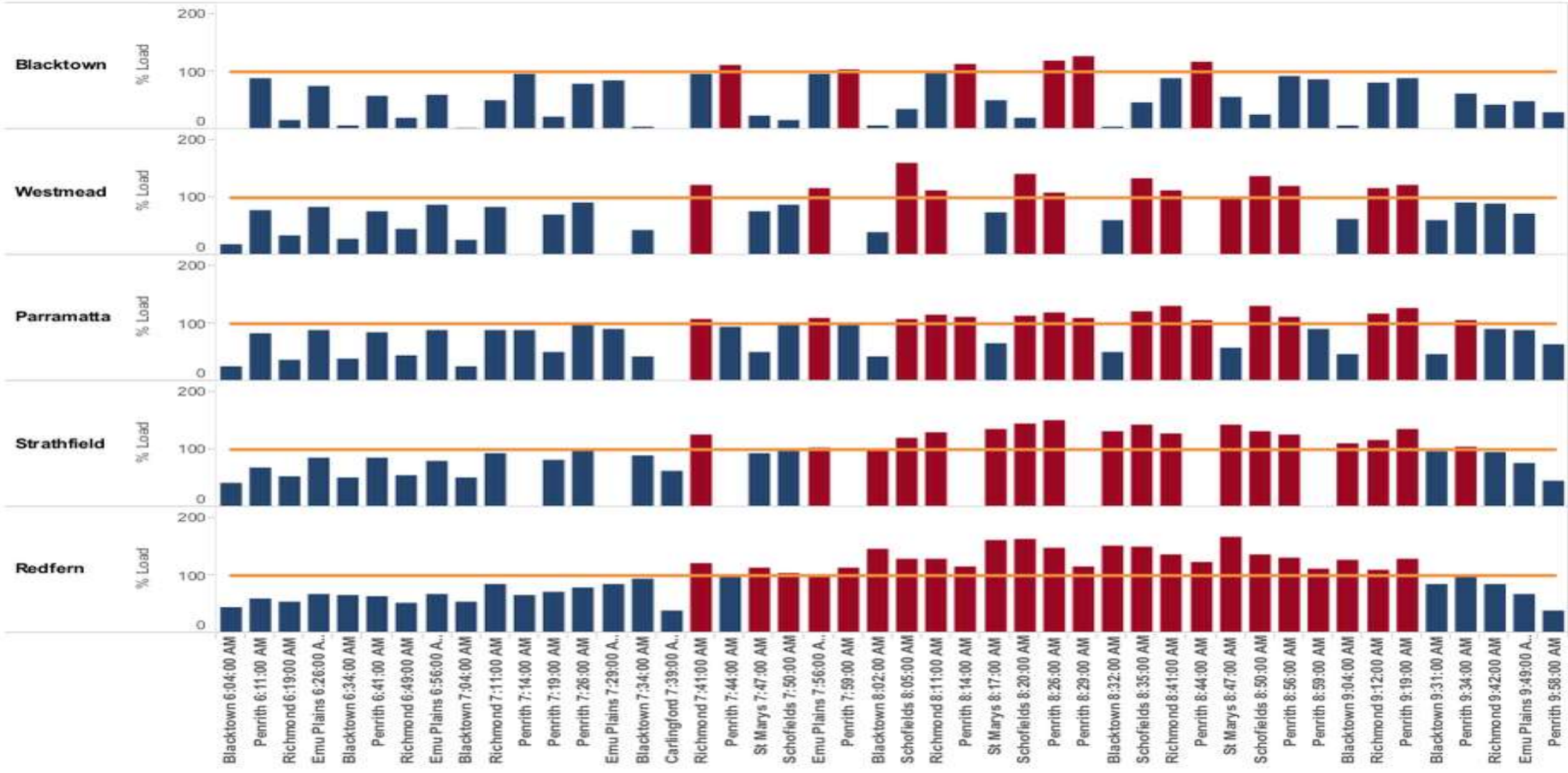


AM Peak = Origin Station and Central Arrival Time. PM Peak = Destination Station and Central Departure Time

Train Loads Survey: March 2015 - By Line

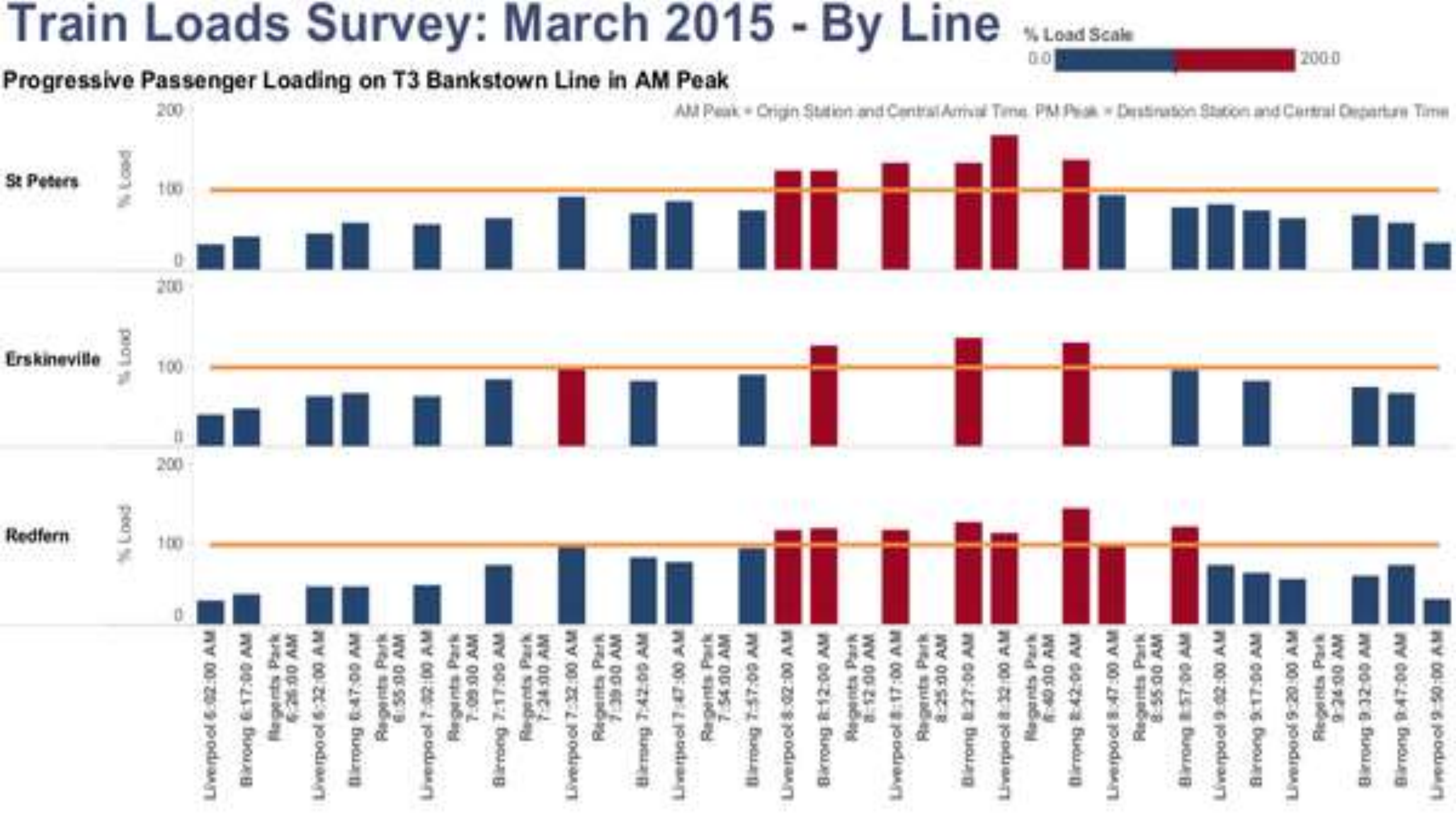
Progressive Passenger Loading on T1 North Shore, Northern & Western Line in AM Peak

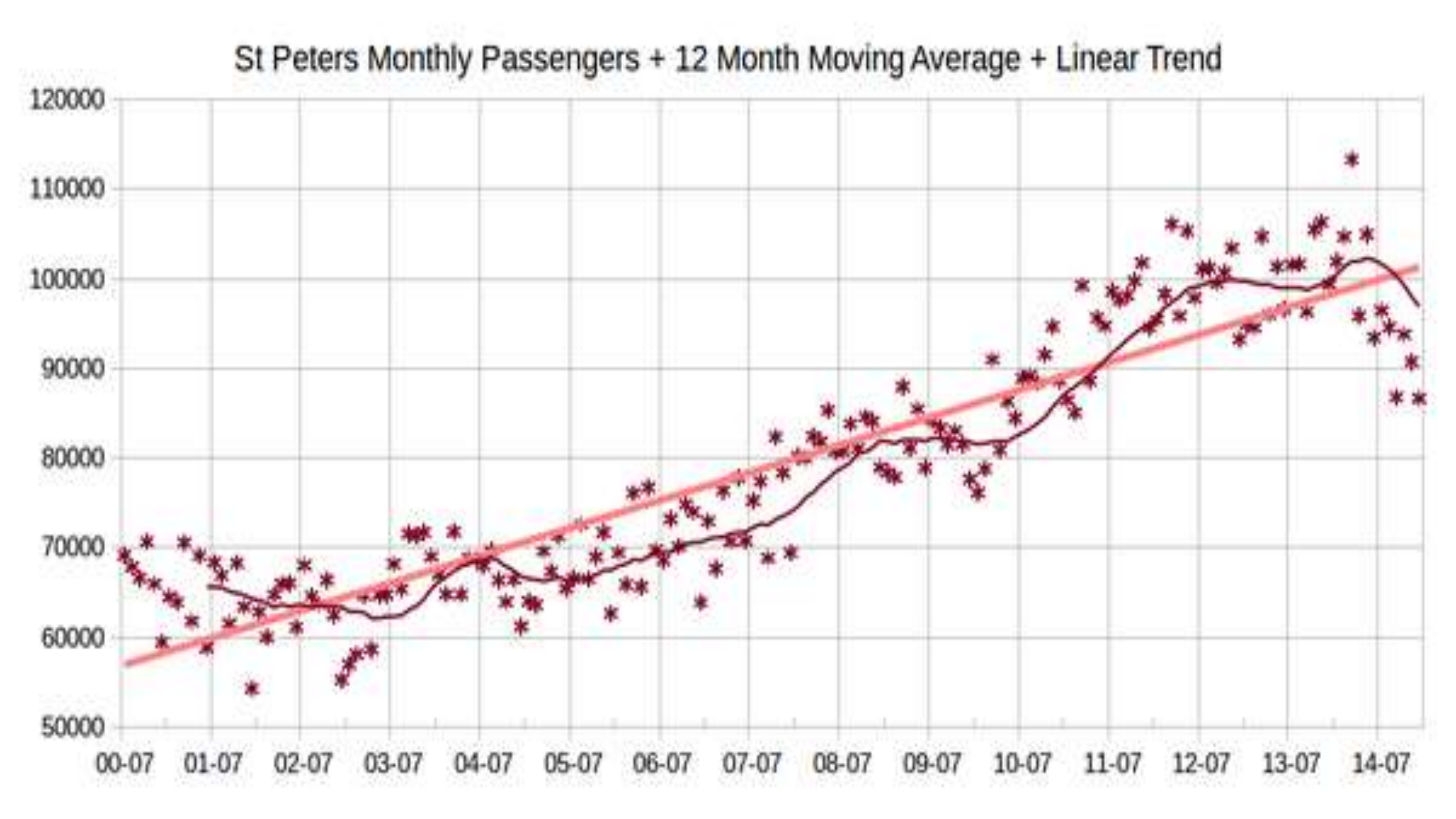
Western Line

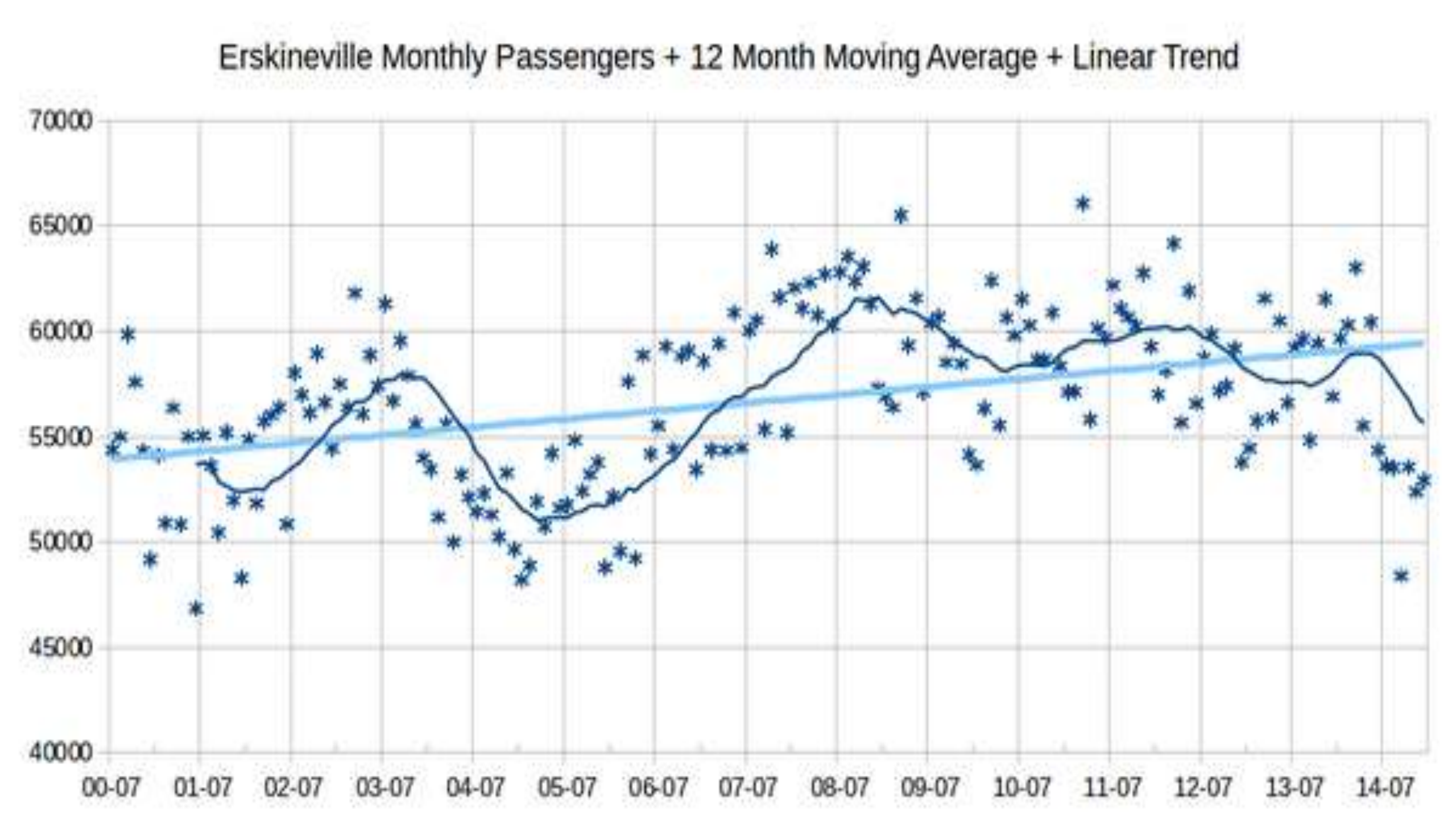


AM Peak = Origin Station and Central Arrival Time. PM Peak = Destination Station and Central Departure Time

Train Loads Survey: March 2015 - By Line



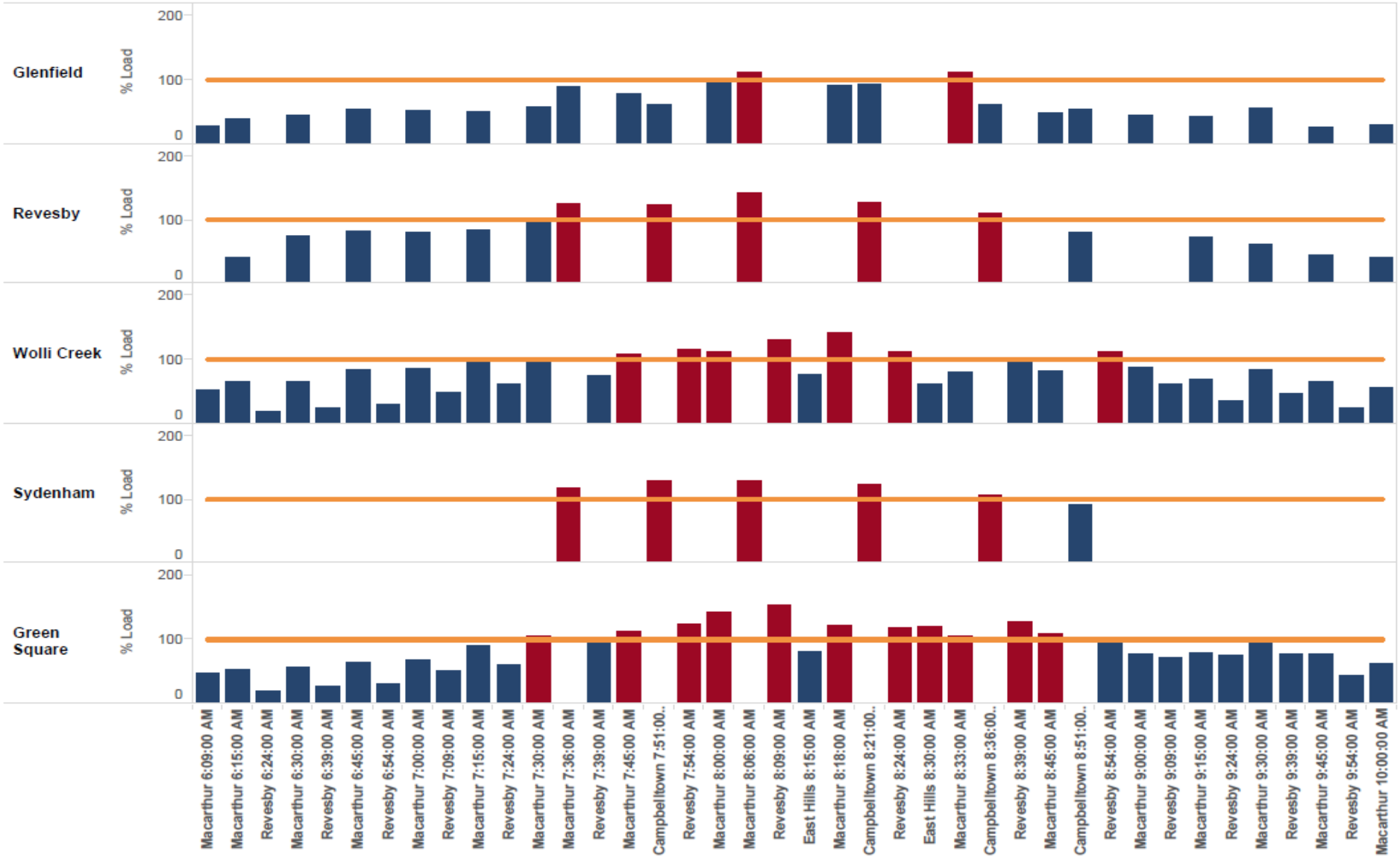

St Peters Monthly Passengers + 12 Month Moving Average + Linear Trend
120000
110000
100000
90000
80000
70000
60000
50000
00-07
01-07
02-07
03-07
04-07
05-07
06-07
07-07
08-07
09-07
10-07
11-07
12-07
13-07
14-07


Erskineville Monthly Passengers + 12 Month Moving Average + Linear Trend
70000
65000
60000
55000
50000
45000
40000
00-07
01-07
02-07
03-07
04-07
05-07
06-07
07-07
08-07
09-07
10-07
11-07
12-07
13-07
14-07

Train Loads Survey: March 2015 - By Line

Progressive Passenger Loading on T2 Airport, Inner West & South Line in AM Peak

Airport Line



AM Peak = Origin Station and Central Arrival Time. PM Peak = Destination Station and Central Departure Time

INSTRUCTIONS

Select a Peak period, then select the desired Main Line and then Sub Line(s). Stations can also be filtered.

Toggle with (All) checkboxes to see all Main Line, Sub Line and Stations available.

AM Peak is read from top to base, PM Peak is the reverse.

Peak

AM

Main Line

- [x] T2 Airport, Inner West & South Line

Sub Line

- [x] Airport Line
- [ ] South Line

Station

- [x] Glenfield
- [x] Green Square
- [ ] Holsworthy
- [ ] Redfern
- [x] Revesby
- [x] Sydenham
- [x] Wolli Creek

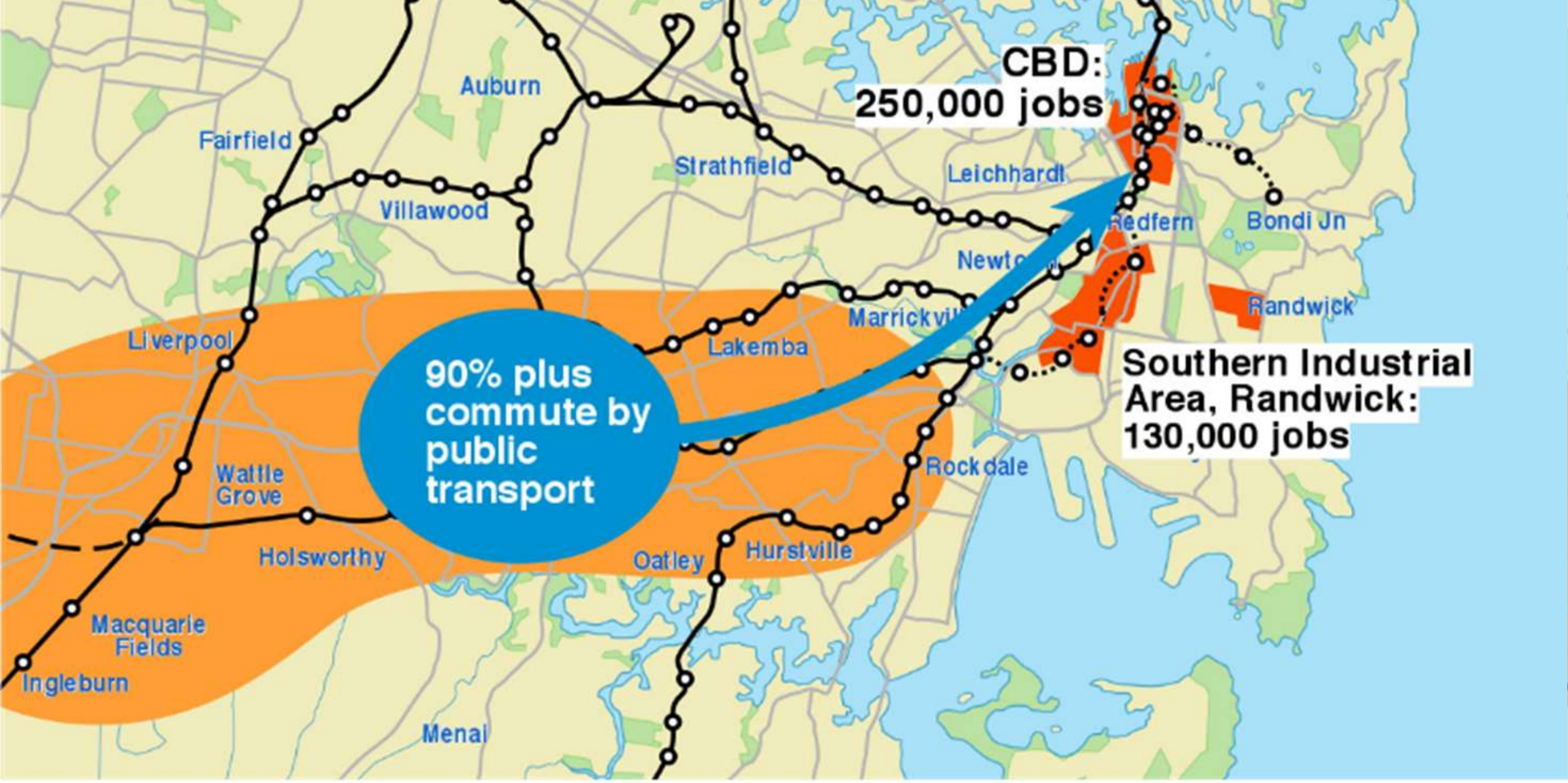
% Load Scale

0.0 — 200.0

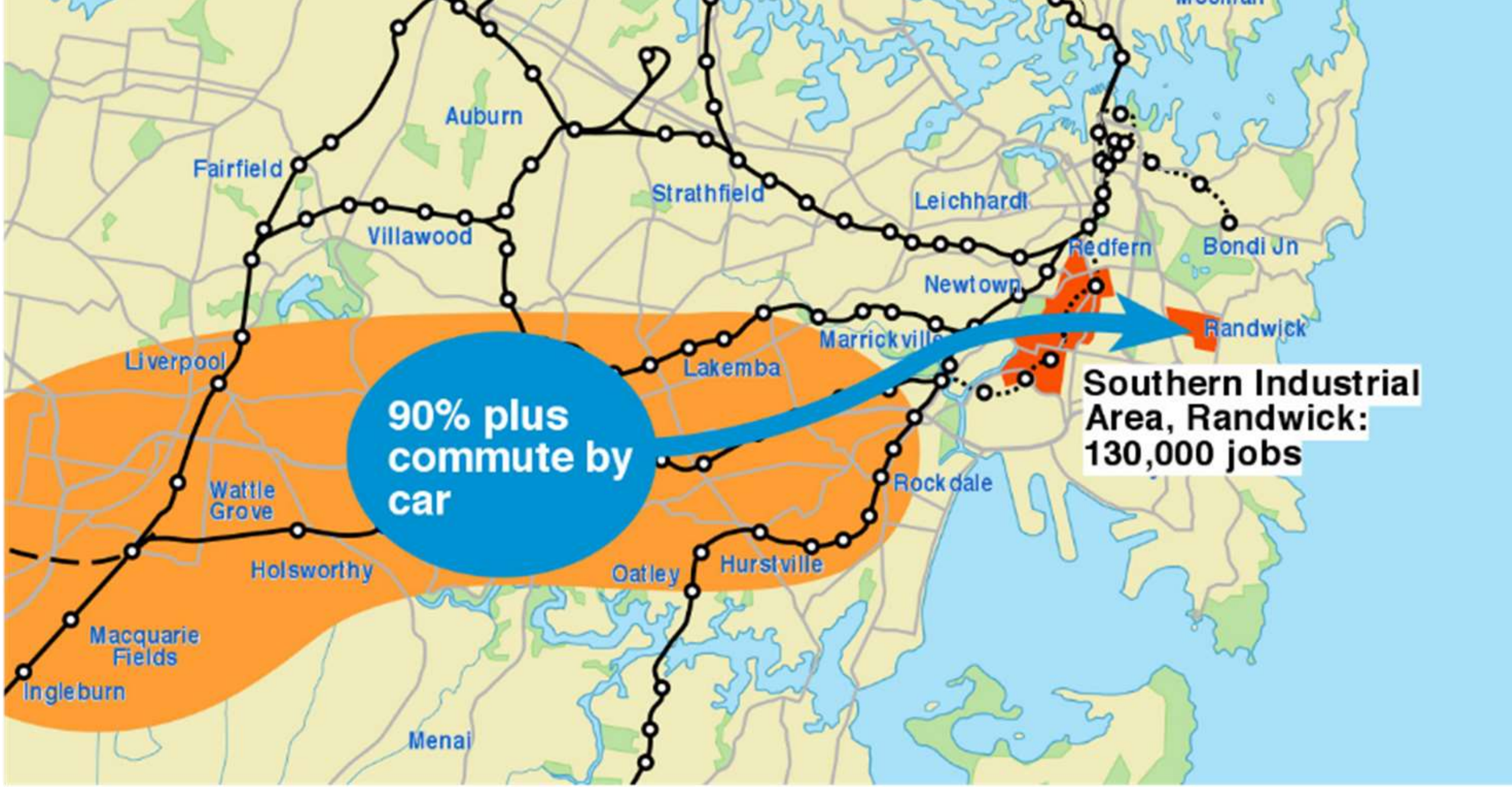
MTR Property & Railway-related business

- The Corporation is involved in a wide range of business activities in Hong Kong in addition to its railway operations. These include
  - the development of residential and commercial property projects,
  - property management,
  - shopping malls
  - leasing and management,
  - advertising media and
  - telecommunication services in trains and stations.

What does this means for Alexandria, Erskineville, and the Inner City?



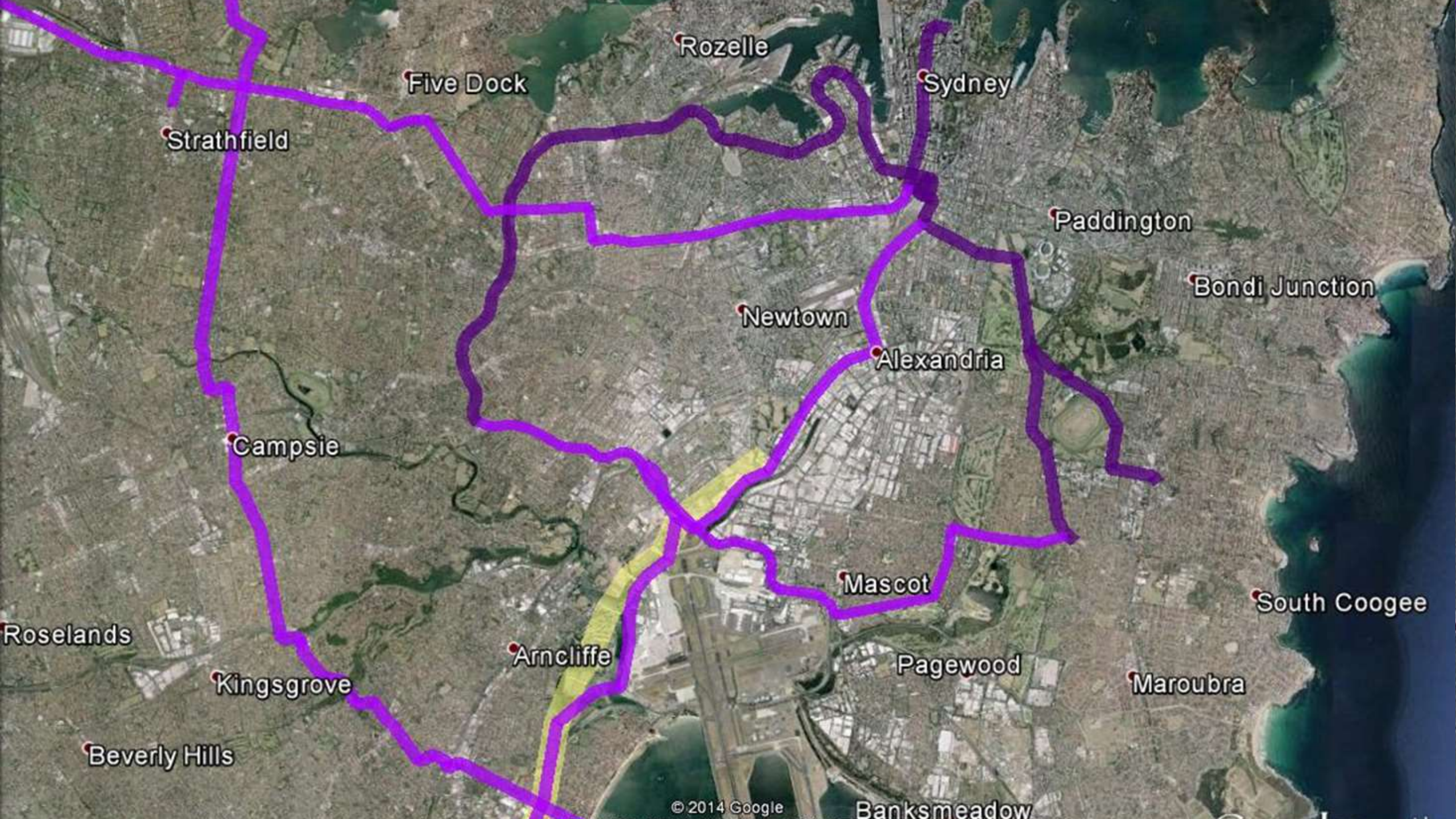
South-West Sydney's greatest commuter problem:

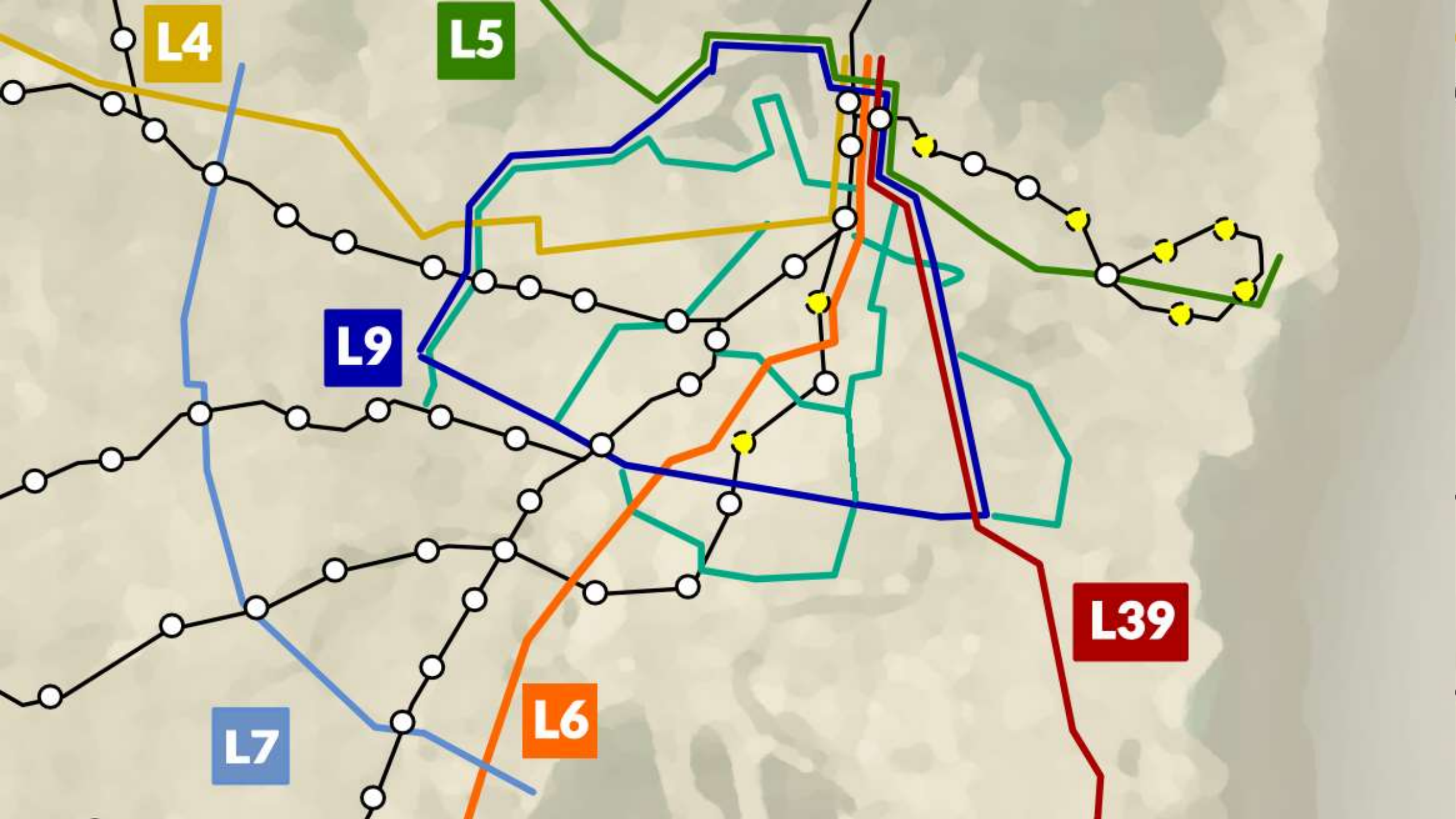


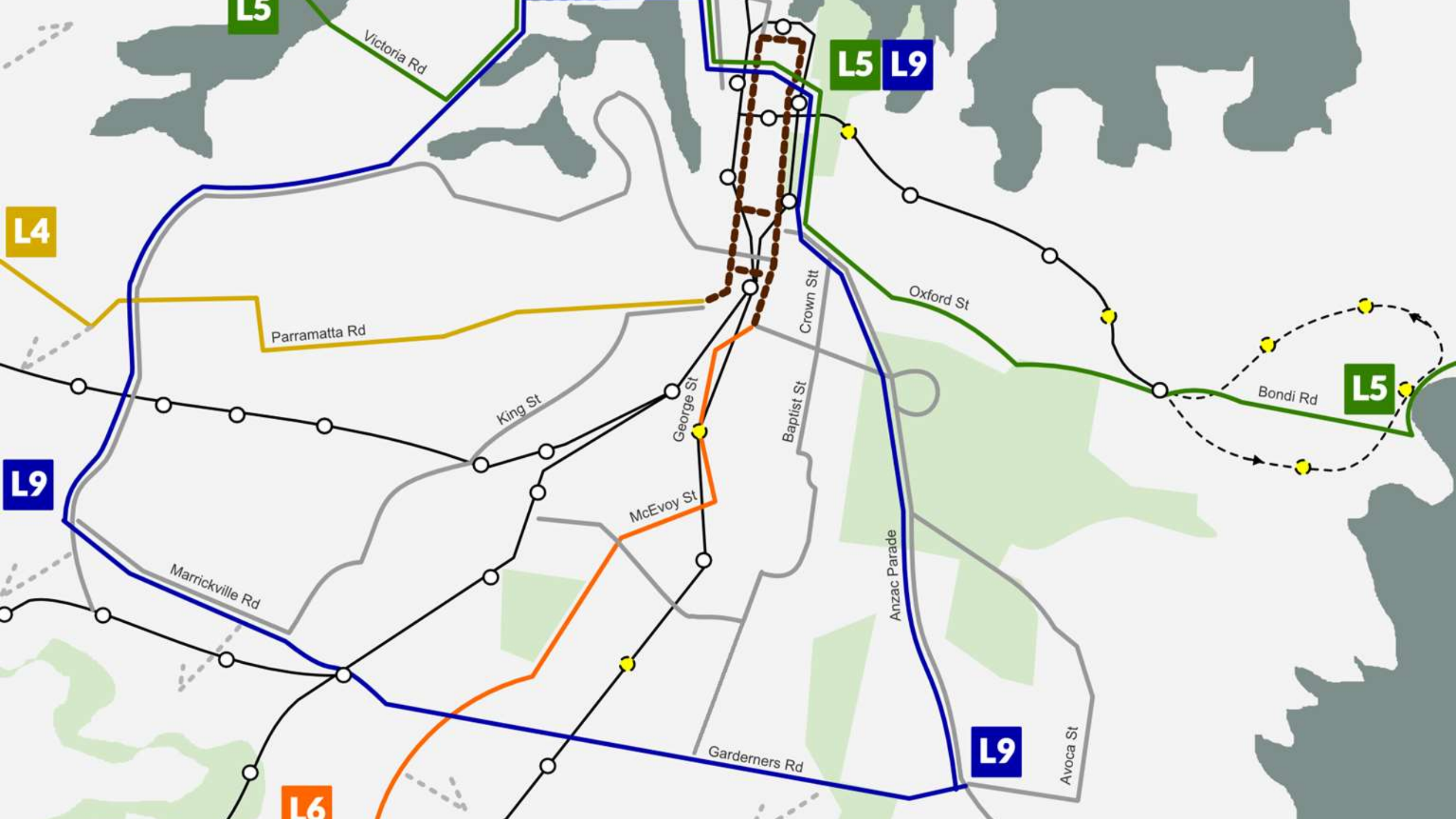
South-West Sydney's greatest commuter problem:

How do we fix this mess?


BROWN'S BUILDINGS
bentons
bentons.com
bentons real estate


Rozelle
Five Dock
Sydney
Strathfield
Paddington
Bondi Junction
Newtown
Alexandria
Campsie
Mascot
South Coogee
Roselands
Arncliffe
Pagewood
Kingsgrove
Maroubra
Beverly Hills
© 2014 Google
Banksmeadow


L4
L5
L9
L7
L6
L39


L5
Victoria Rd
L5
L9
L4
Parramatta Rd
King St
George St
Crown Stt
Baptist St
Oxford St
Bondi Rd
L5
L9
McEvoy St
Marrickville Rd
Anzac Parade
Garderners Rd
L9
Avoca St
L6

WHAT NEXT?

- Join a local group, and NoWestconnex
- Tell your neighbours and friends.
- Call your MPs and Councillors
- Put signs on your front fence.