

Westconnex

Ecotransit Sydney
Mathew Hounsell
Co-convenor

Table 3 Level of Service Criteria – Midblock Sections

Level of service (LOS)	AustRoads Description	Road Section (vehicles per lane per hour)
LOS F	Forced flow. The amount of traffic approaching a point exceeds that which can pass it. Flow break-down occur, and queuing and delays occur.	900-1700
LOS E	Traffic volumes are close to capacity and there is virtually no freedom to select desired speed and to manoeuvre within the traffic stream. Flow is unstable and minor disturbances within the traffic stream will cause break-downs in operation.	720-1360
LOS D	Approaching unstable flow where all drivers are severely restricted in their freedom to select desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is poor and small increases in traffic flow will cause operational problems.	585-1105
LOS C	Stable flow but most drivers are restricted to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience has declined noticeably.	450-850
LOS B	Stable flow where drivers still have reasonable freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is less than LOS A.	Not Applicable
LOS A	Free flow in which drivers are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high and the general level of comfort and convenience is excellent.	

Auckland Harbour Bridge - 2 weeks after opening. (Sir George Grey Special Collections)





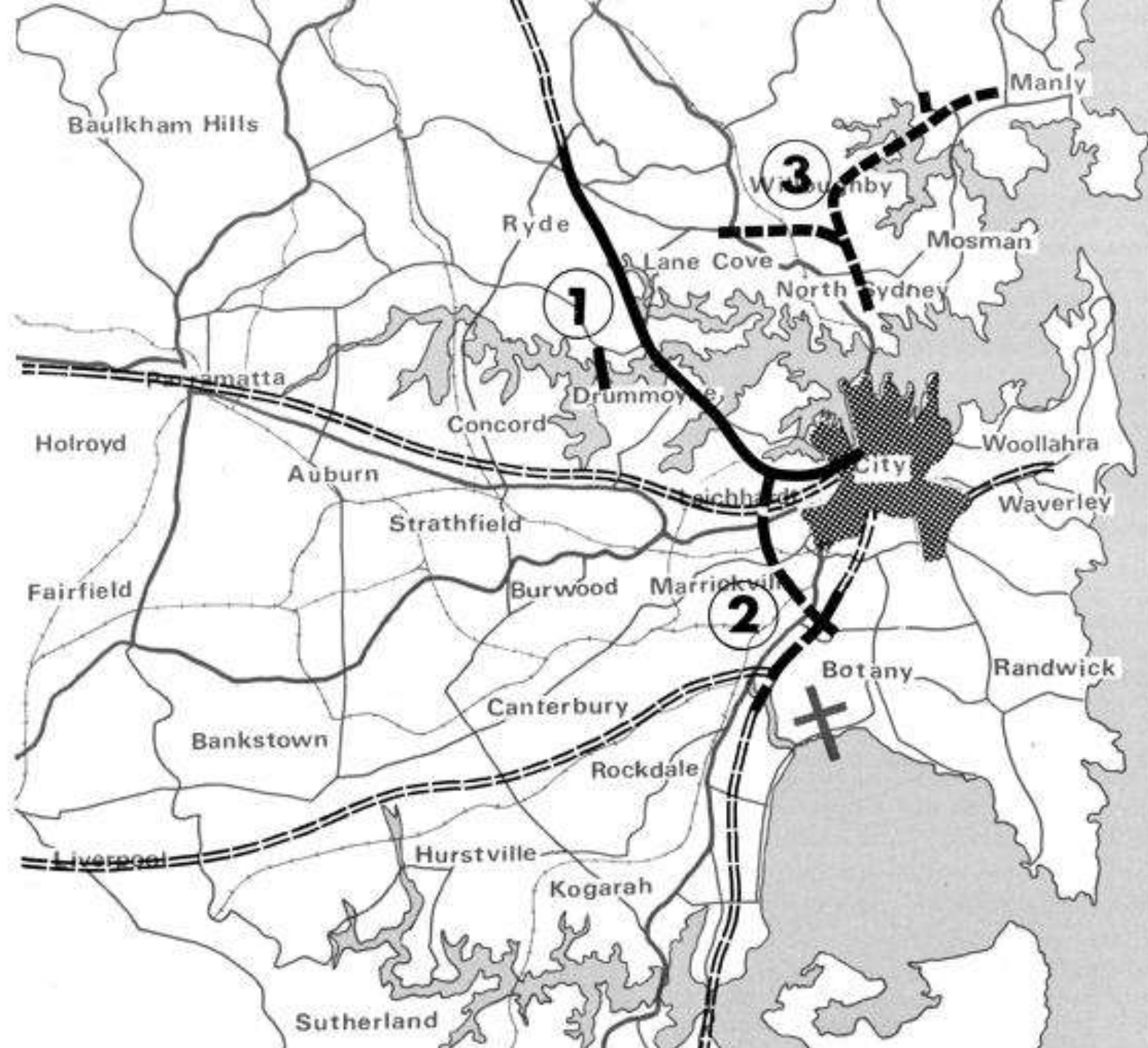


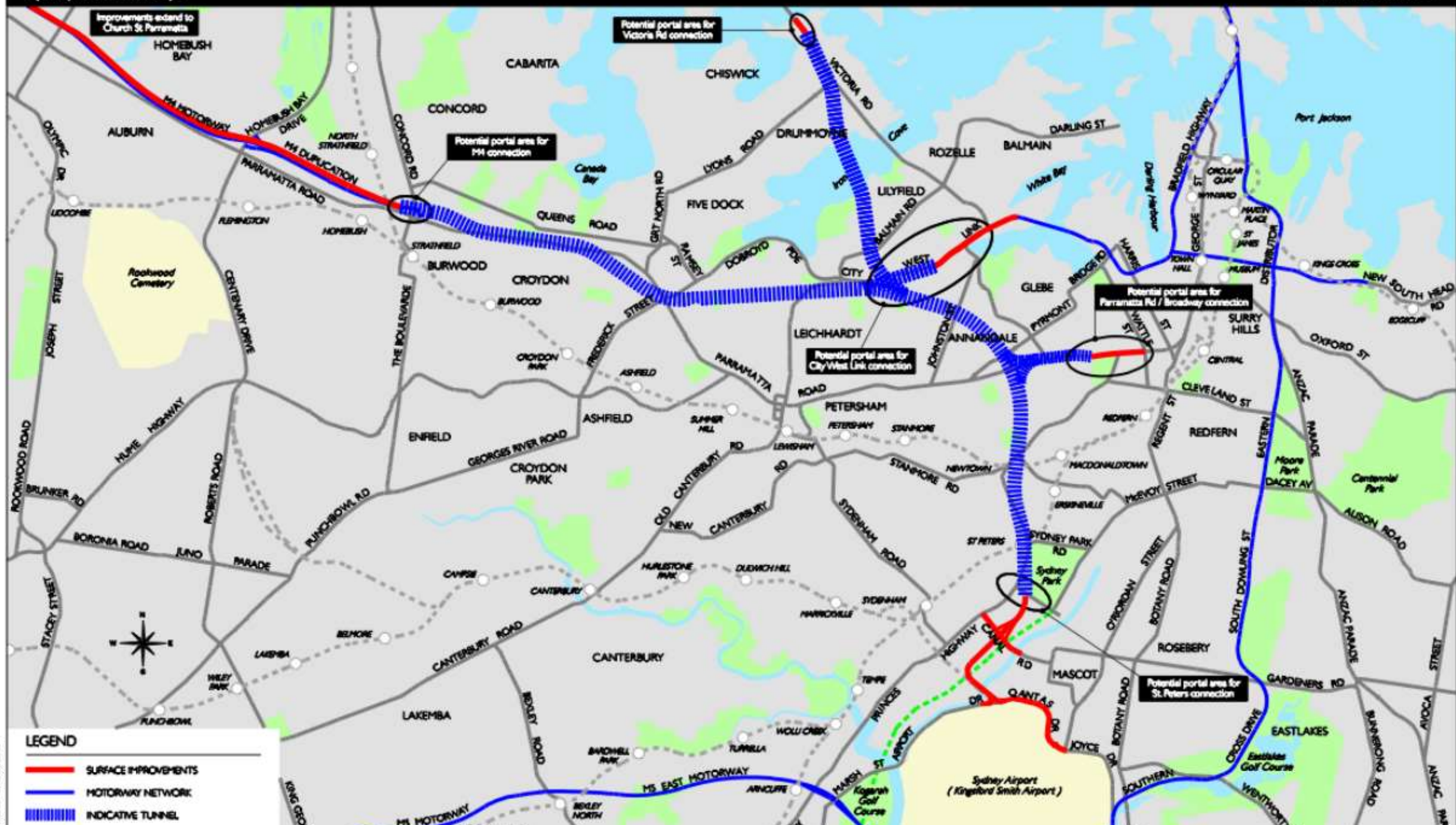






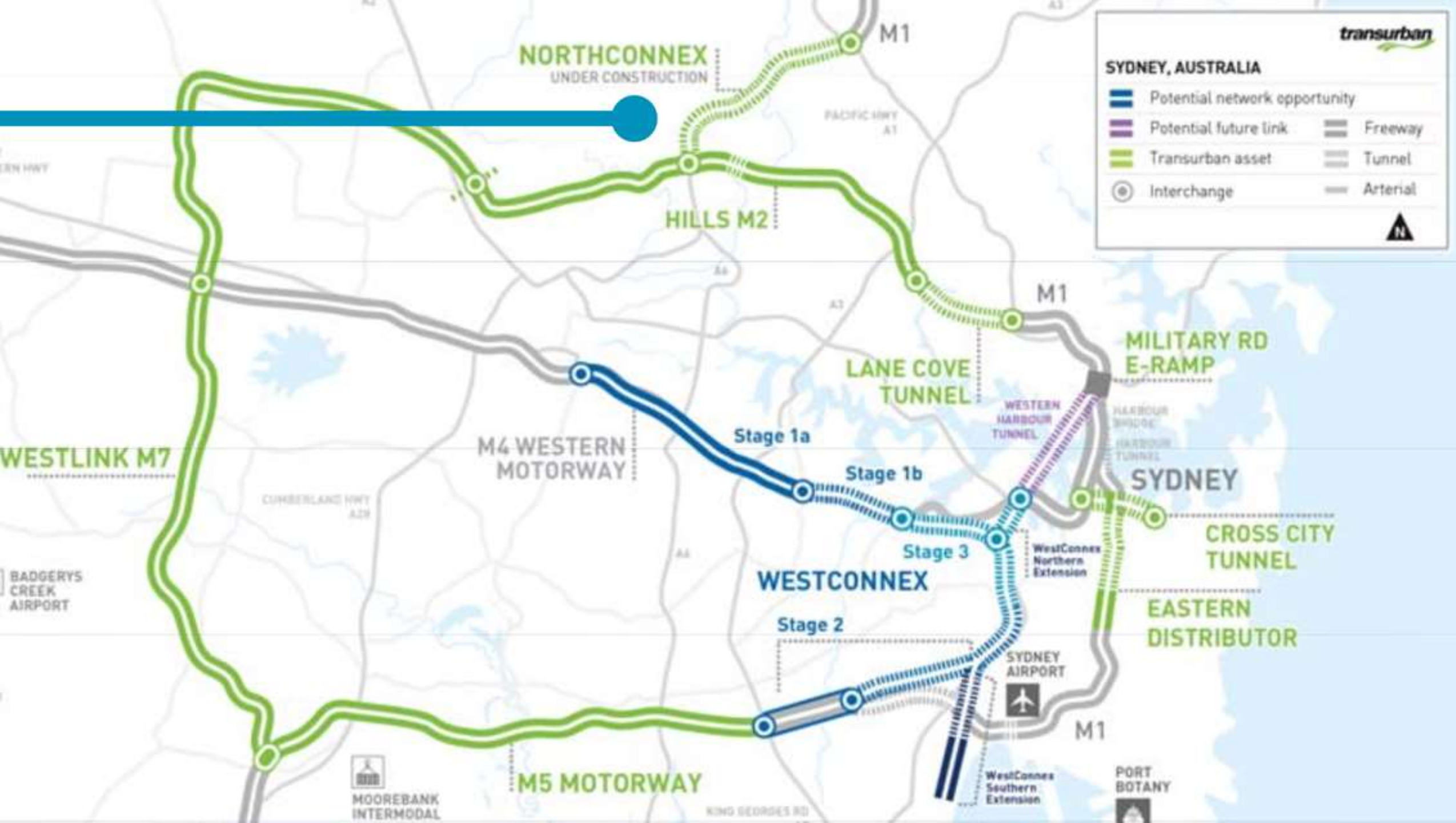






SYDNEY, AUSTRALIA

- | | | | |
|--|-------------------------------|--|----------|
| | Potential network opportunity | | Freeway |
| | Potential future link | | Tunnel |
| | Transurban asset | | Arterial |
| | Interchange | | |



SYDNEY NETWORK

NORTHCONNEX

- Construction proceeding on time and budget
- Land acquired and works underway at all tunnelling sites
- Total project cost is approximately \$3.0 billion, including Government's contribution
- M7 truck toll currently 1.89 times car toll and will reach 3 times car toll by 1 January 2017
- Expected project completion late 2019



OPERATIONAL ENHANCEMENT

- Increase in recoveries following implementation of GLiDe on LCT, M7 and Roam in July 2015, in addition to ongoing process improvements

POTENTIAL FUTURE DEVELOPMENT

- Prepared to assist the Government in delivery of road agenda
- Potential for significant network expansion over medium term

Figure 5-3 Volume to capacity ratios on the network with WestConnex. 2031 morning peak

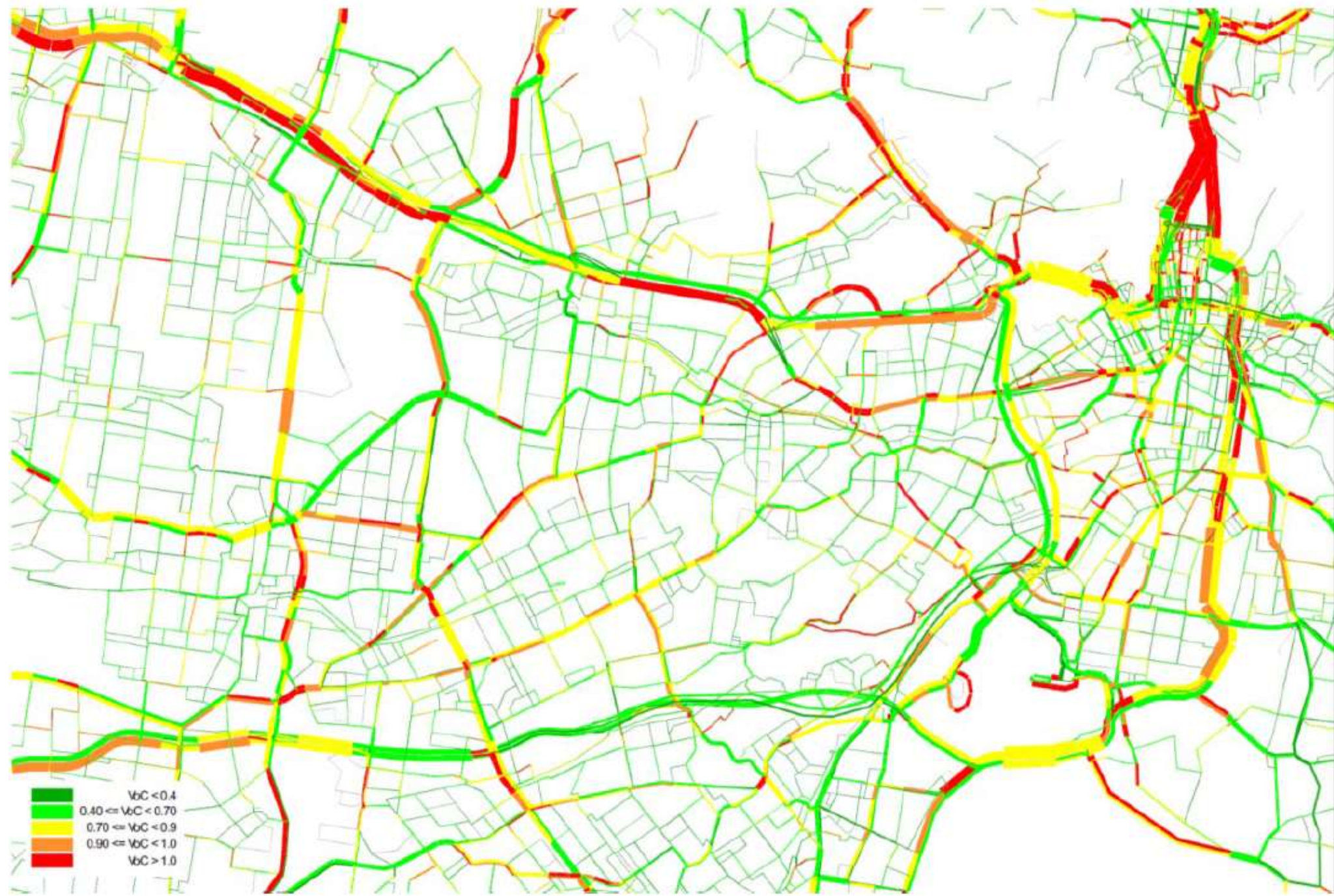
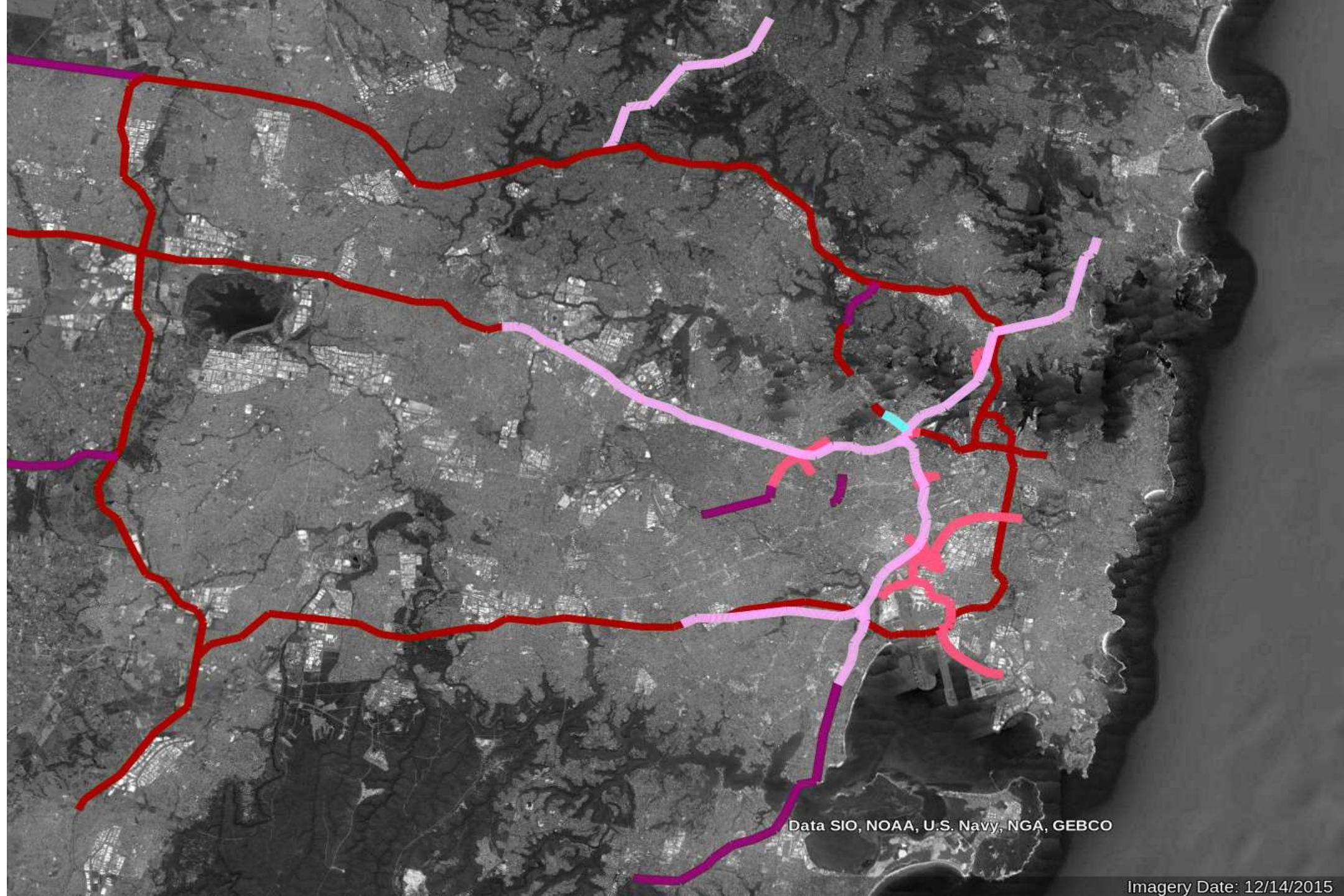


Figure 7-1 Link volume to capacity ratio on the network following WestConnex and Western Harbour Tunnel, 2031 morning peak



WestConnex Rozelle interchange





Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Imagery Date: 12/14/2015



Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Imagery Date: 11/26/2015



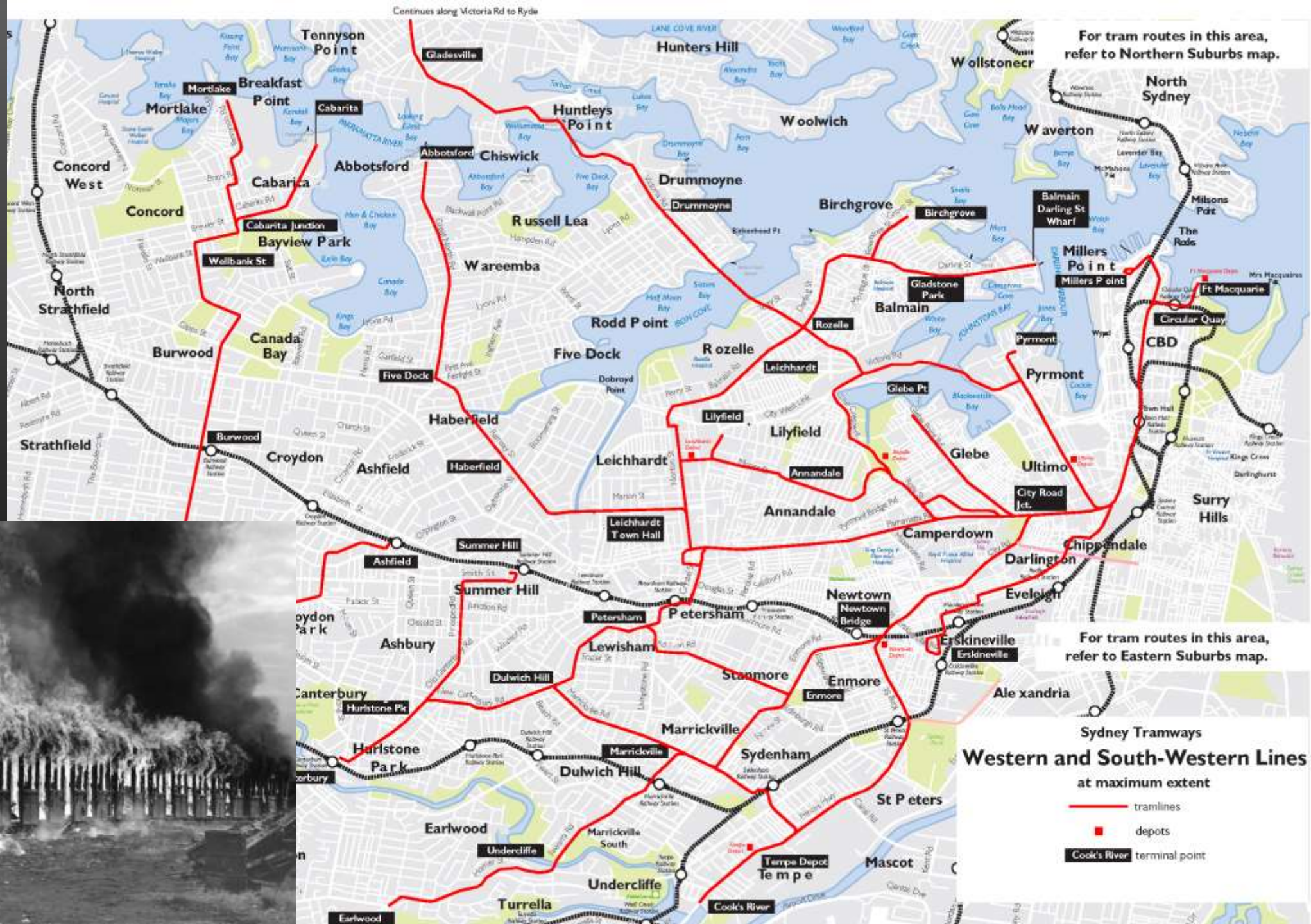
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Imagery Date: 11/26/2015



Average Network Speed Drops from 34 km/h to 28 km/h

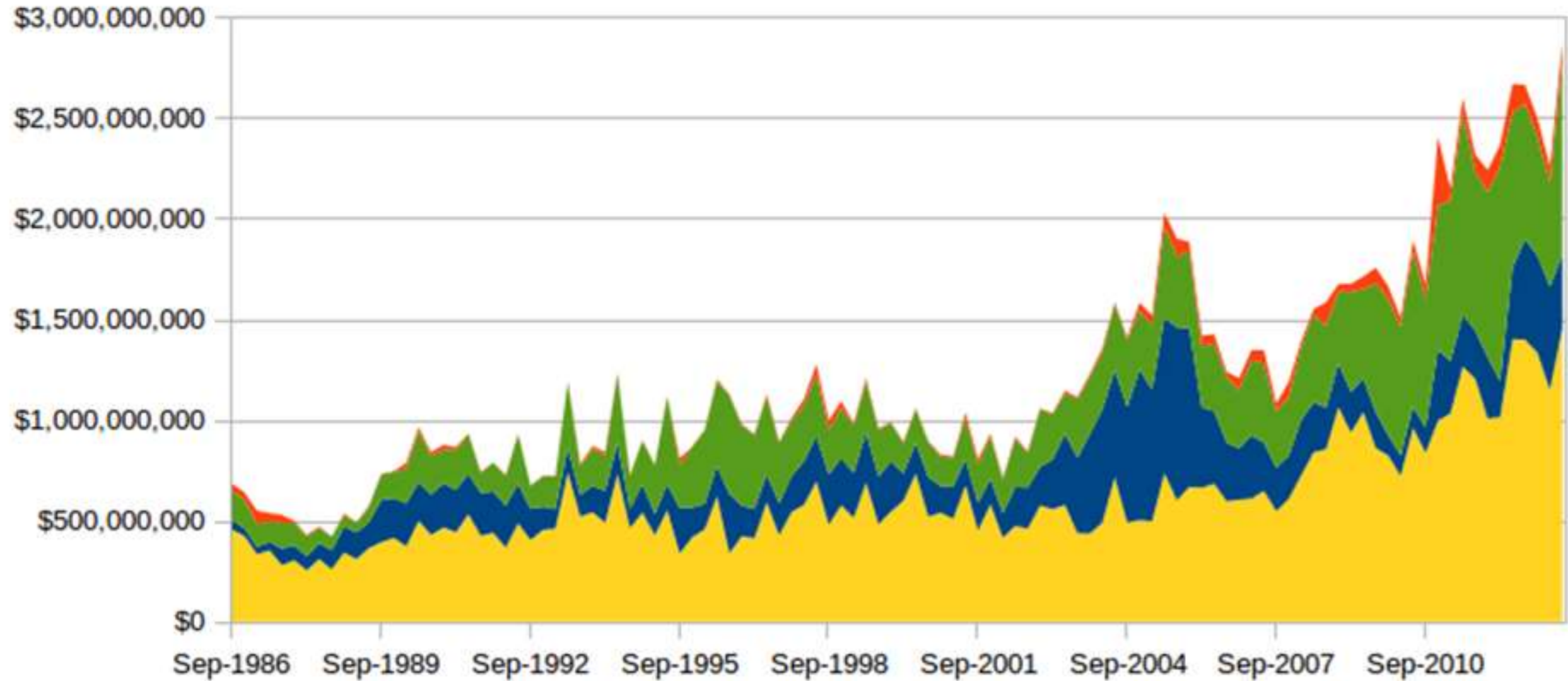
Origin	Destination	2021 w/o Westconne x – Minutes	2021 w/ Westconne x – Minutes	Tranit 131500.info - Minutes
Penrith	CBD	114	92	62
Penrith	Surry Hills	117	89	58
Penrith	Airport	113	91	71
Parramatta	Strathfield	30	20	12
Parramatta	CBD	64	44	17
Parramatta	Airport	101	66	40
Strathfield	Surry Hills	45	30	14
Strathfield	Airport	66	44	28
Summer Hill	Broadway	27	24	24
Liverpool	Randwick	61	42	80
Liverpool	U Syd	61	43	65



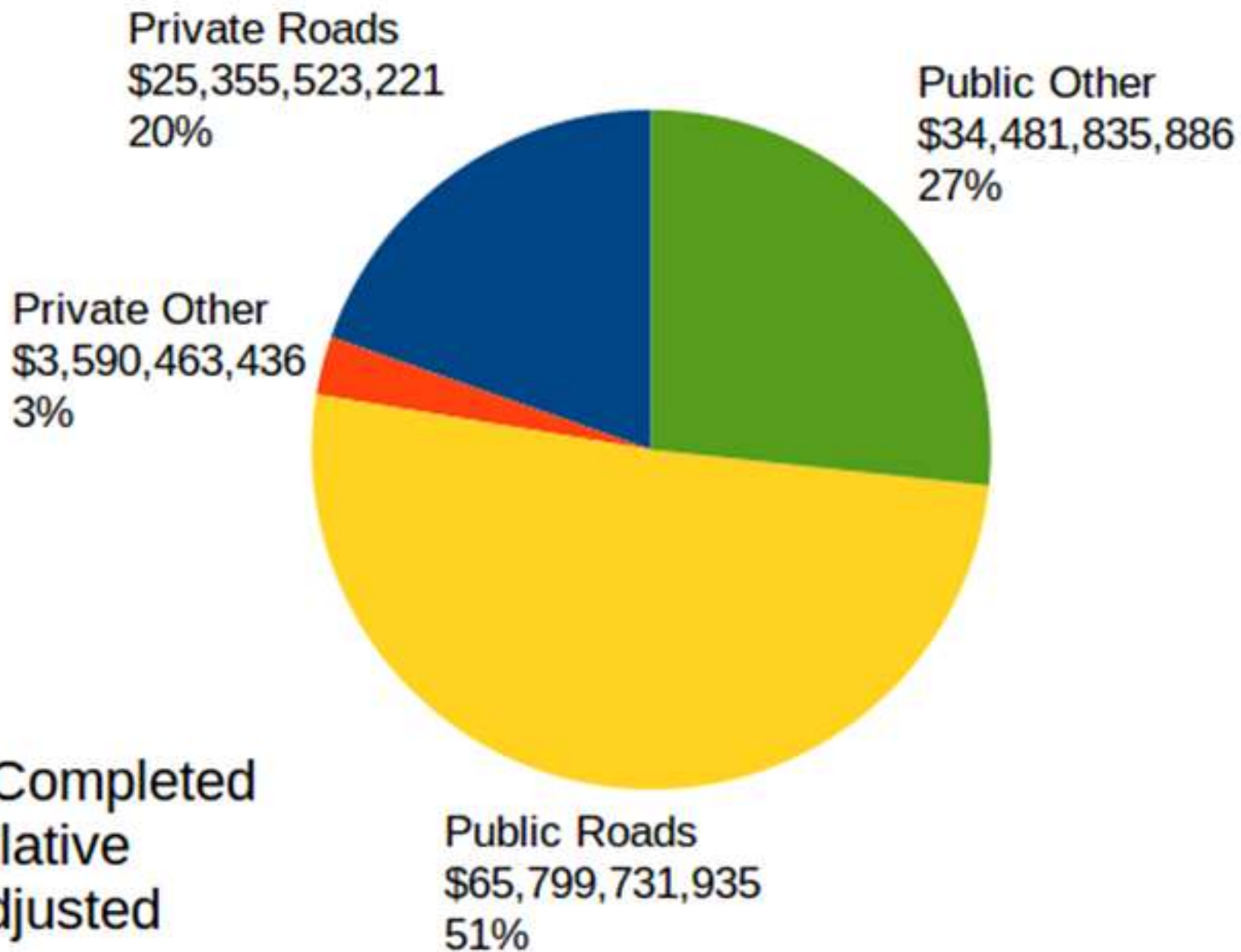
You Get What
You Pay For

Work Completed - CPI Adjusted

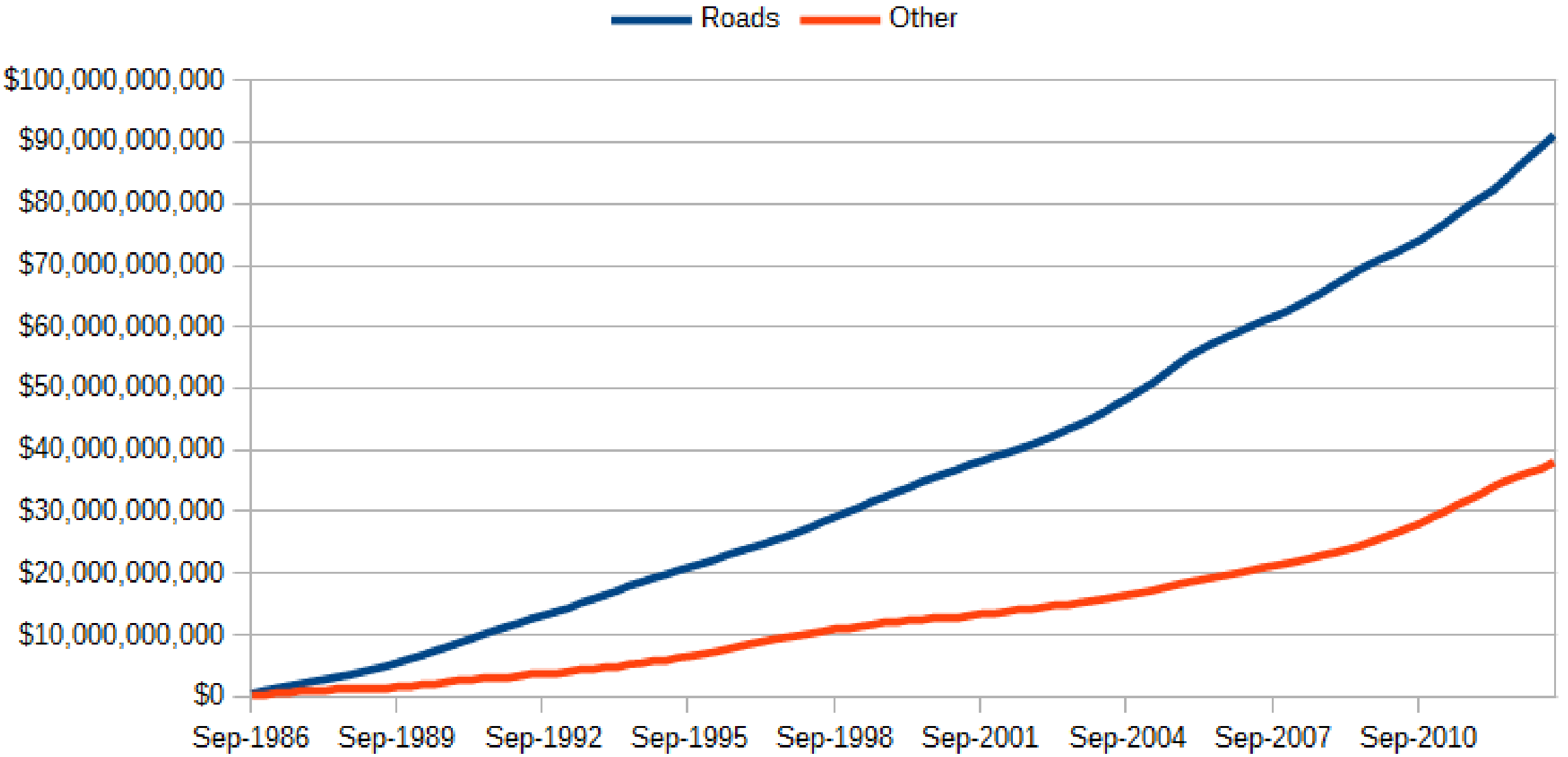
Public Roads Private Roads Public Other Private Other



NSW Work Completed
- Cumulative
- CPI Adjusted

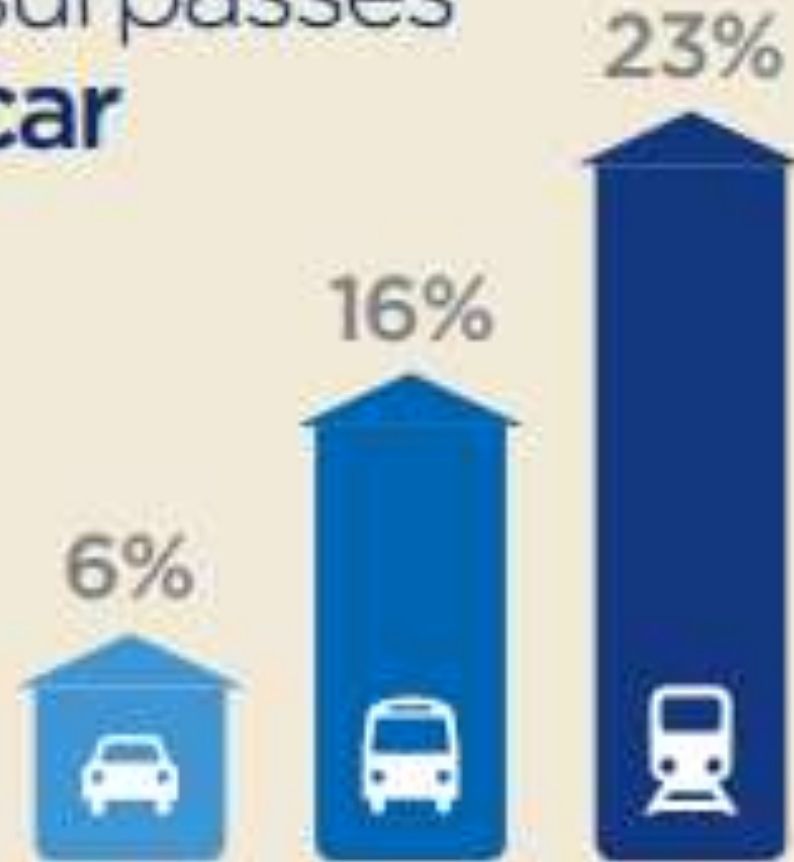


NSW Work Completed - Cumulative - CPI Asjusted - Private + Public







In the last decade...





GROWTH IN
bus & train
travel
surpasses
car



Key changes over the last decade

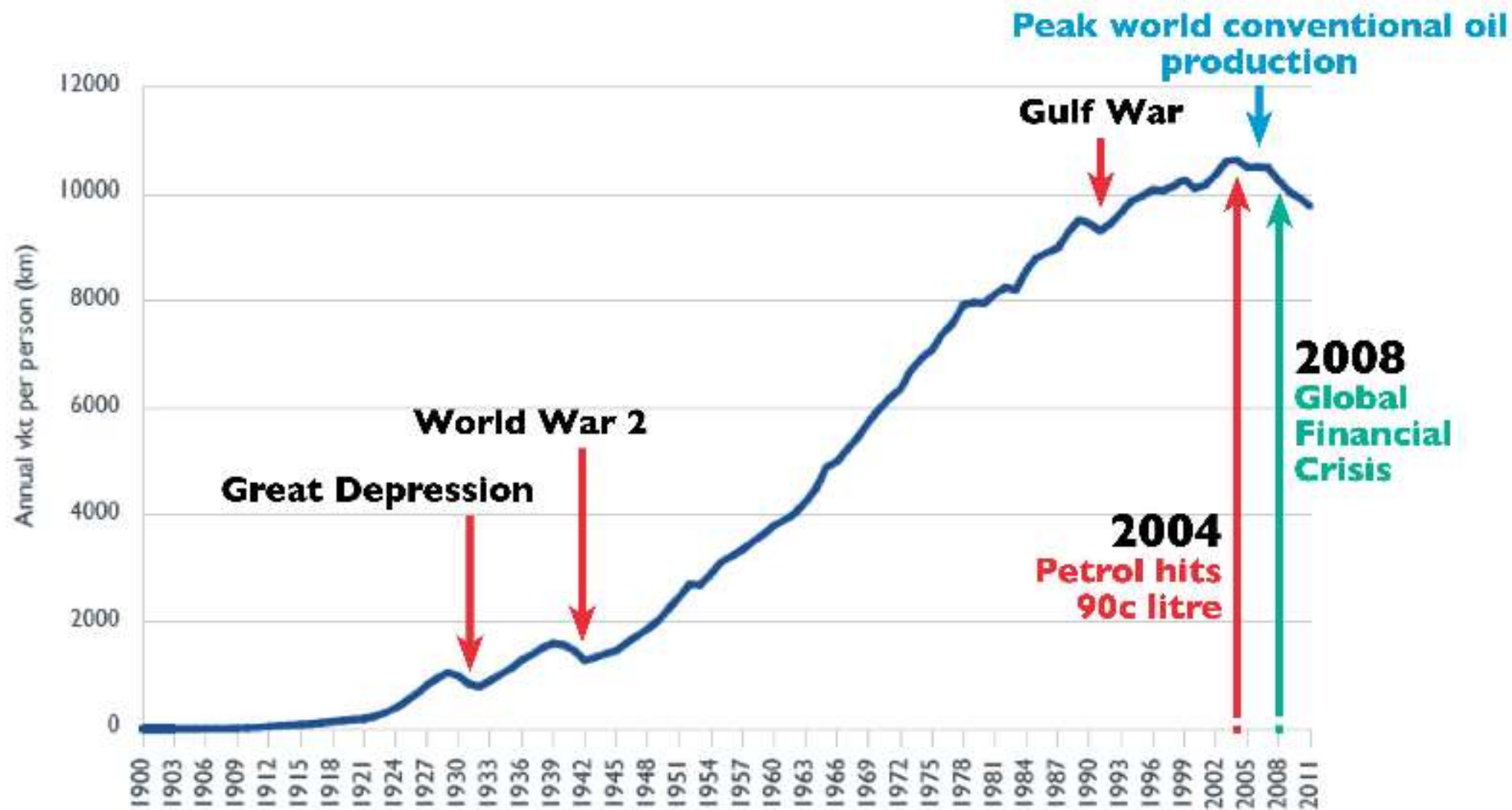
	↑ 13%	Population
	↑ 7%	Weekday trips
	↑ 10%	Weekend trips
	↑ 23%	Vehicles

Growth by mode

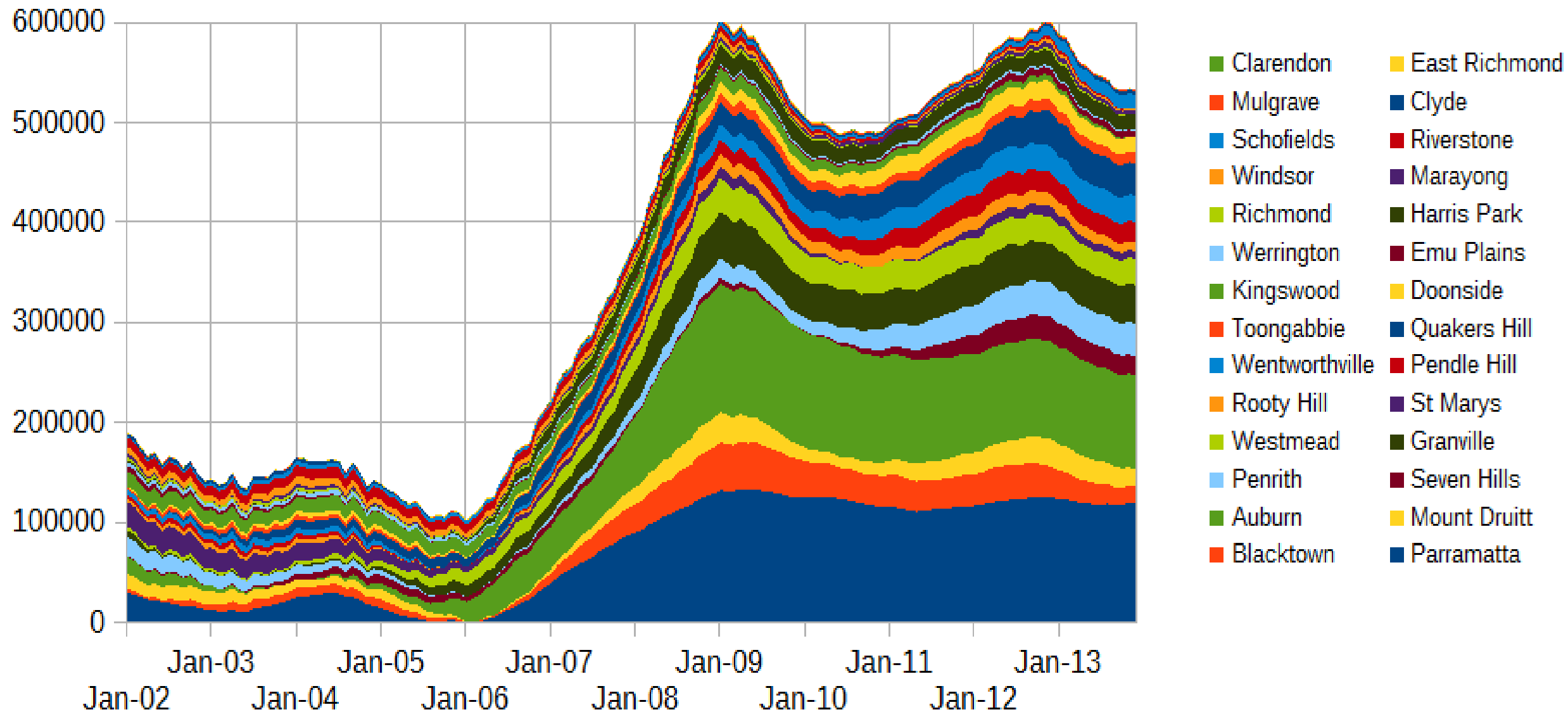
	↑ 24%	Train trips
	↑ 19%	Bus trips
	↑ 5%	Vehicle trips
	↑ 21%	Total public transport

Household Travel Survey Report: Sydney 2012/13

Australian trend in vehicle kilometres travelled per person



Change in Monthly Patronage (12 month Average) Western Line





High Capacity Transport

Capacity vs Cost

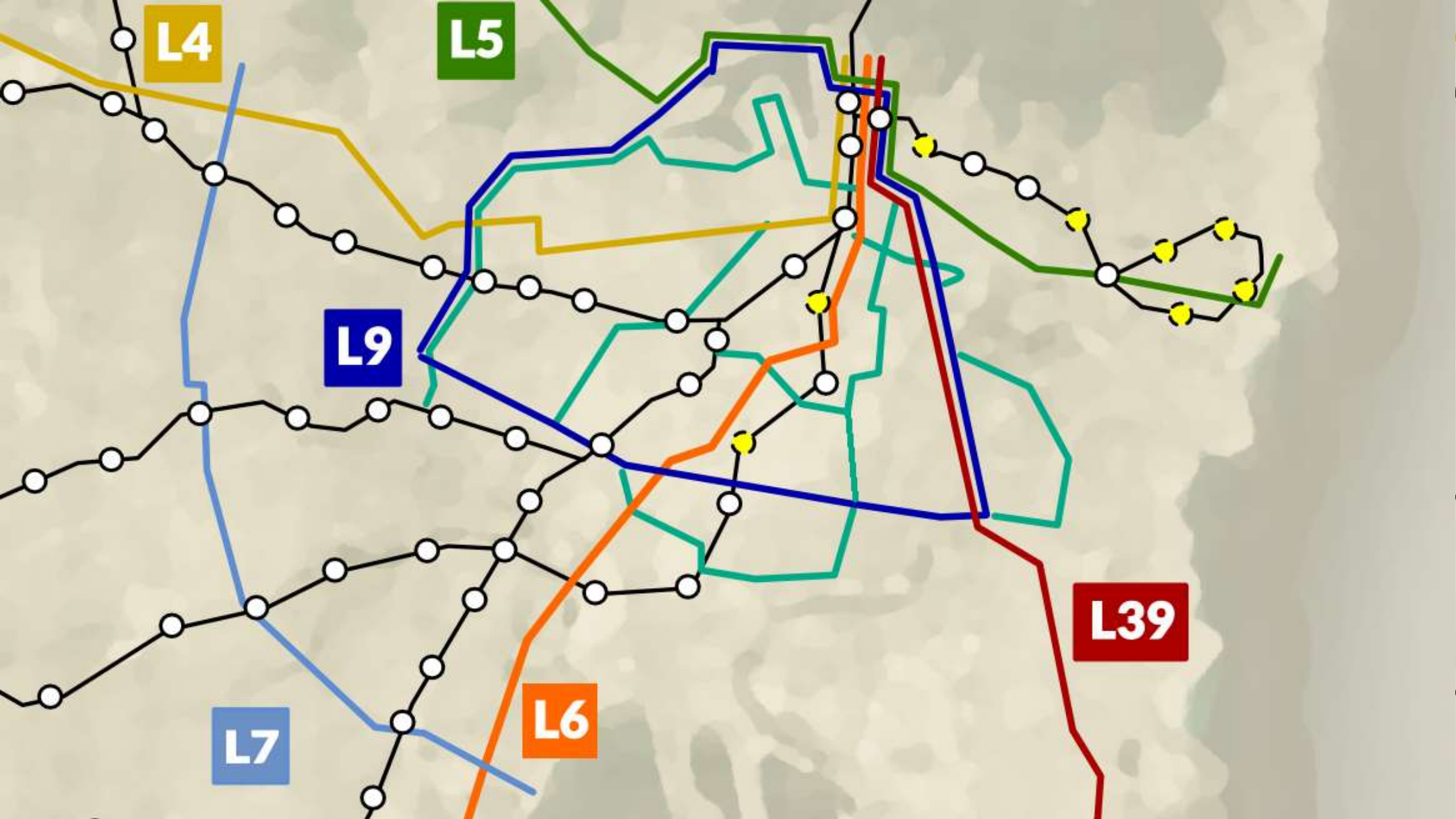
Type	Persons	Persons/Lane/Hour
Private Car	1.2	2,400 (Actually 1,440)
Bus	50	1,500
Articulated (Bendy) Bus	100	3,000
Light Rail 45m	250	7,500
North West Rail Link Train	900	27,000
Sydney Train	1,200	36,000

Type	Km
Light Rail Extension	\$40,000,000
Underground Railway Tunnel	\$250,000,000
Surface Toll Road	\$90,000,000
Twin 3 Lane Toll Road Tunnel	\$500,000,000









Ecotransit Sydney

Mathew Hounsell

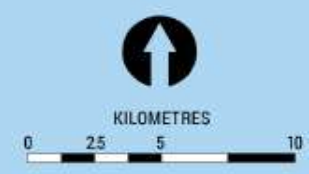
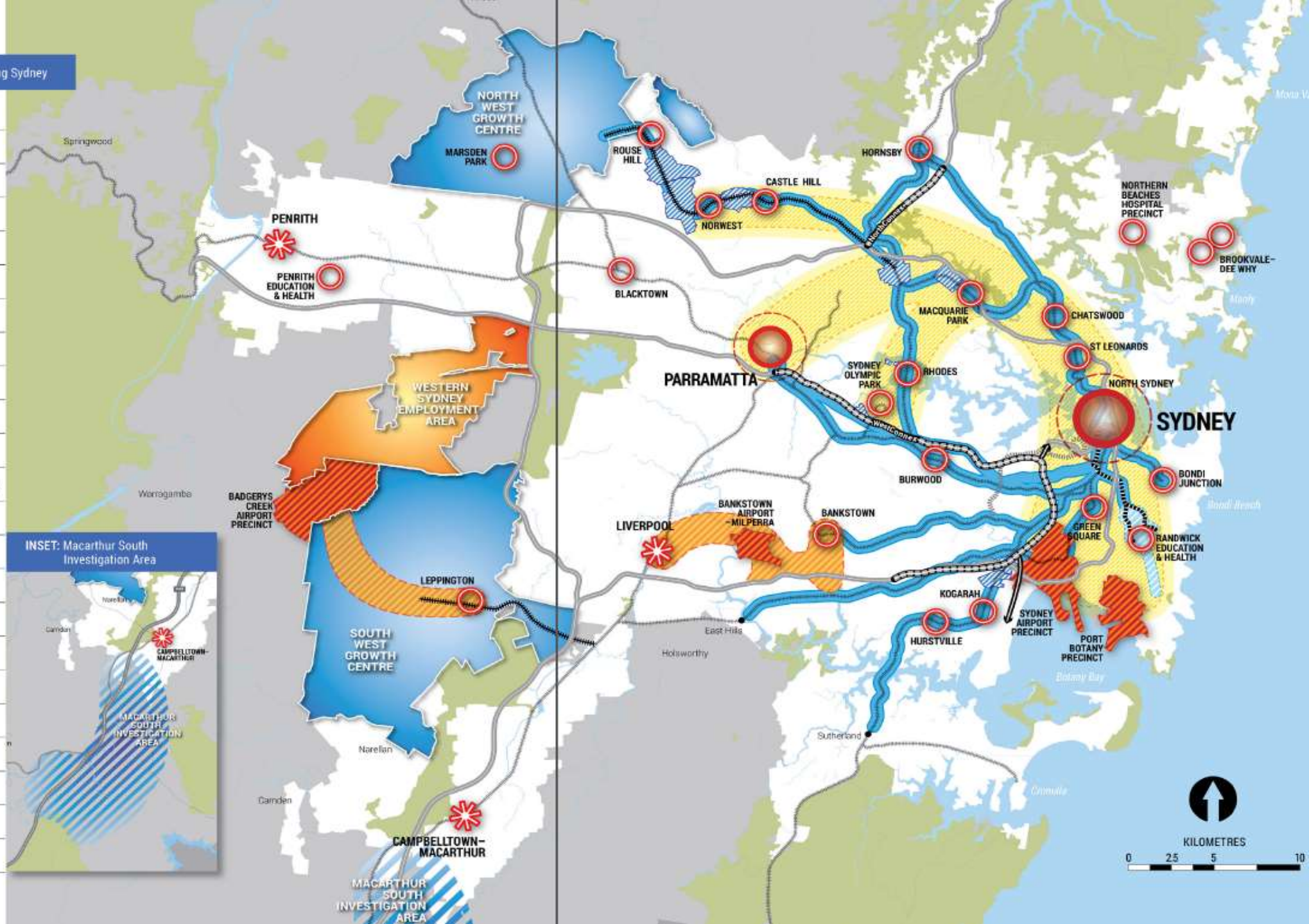
Co-convenor

The Plan For Growing Sydney



FIGURE 2: A Plan for Growing Sydney

-  CBD
-  Regional City Centre
-  Strategic Centre
-  Growth Centre – future urban development
-  Urban Investigation Area – potential growth centre
-  Priority Precinct – major urban renewal
-  Urban Renewal Corridor
-  Local renewal opportunities yet to be identified
-  Western Sydney Employment Area
-  Global Economic Corridor
-  Transport Gateway – airports and ports
-  Enterprise Corridor – attracting new economic activity
-  Metropolitan Urban Area
-  Metropolitan Rural Area
-  Parks & Reserves
-  Waterway
-  Rail Network – existing network
-  Rail Network Extension – under construction
-  Inner West Light Rail – existing
-  CBD & South East Light Rail – under construction
-  Motorway – existing network
-  Motorway Expansion – proposed
-  Proposed Motorway Extension





Expectations

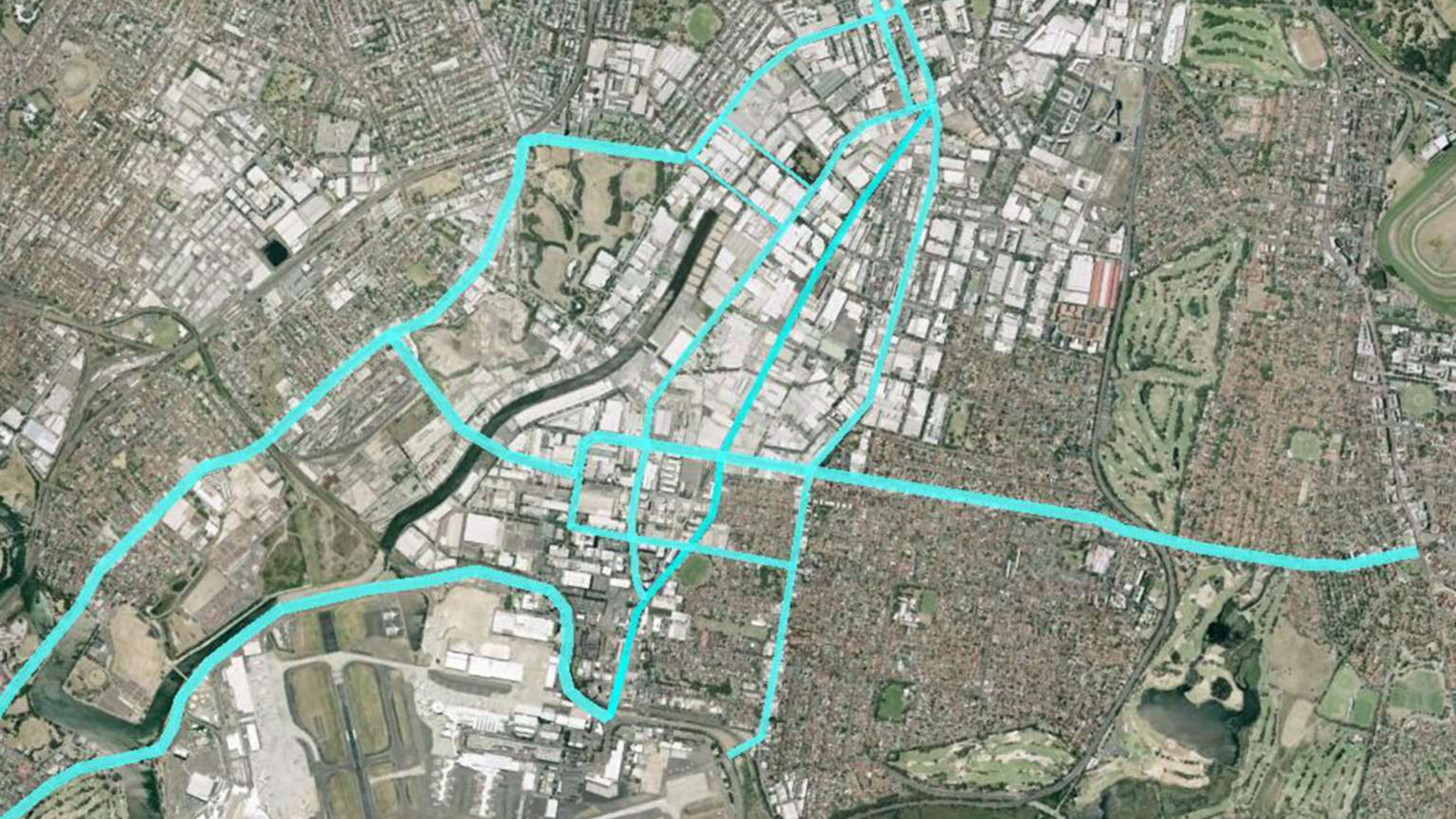
Extra Persons per Precinct:

- ▶ Parramatta Road corridor - 80,000
- ▶ Bays Precinct - 36,000
- ▶ Evenleigh - 50,000+
- ▶ Waterloo - 40,000
- ▶ Green Square - 50,000
- ▶ Mascot - 20,000+
- ▶ Olympic Park - 20,000+
- ▶ Parramatta - 20,000+
- ▶ Granville - ?

The background features a dark grey gradient on the left and a series of overlapping, semi-transparent green triangles on the right, creating a modern, geometric aesthetic.

Westconnex






Campbell St

Interstate 20 US Highway 90

Google earth



Campbell St

This is an aerial photograph of a city, likely San Jose, with several transit lines overlaid. The lines are color-coded: red, yellow, blue, cyan, and green. A red dot marks the location of Campbell St. The map shows a dense urban area with buildings, streets, and some green spaces. The transit lines are complex, with many intersections and loops. The red lines form a central network, while the yellow, blue, and cyan lines branch out to different parts of the city. The green line is a single segment in the center. The overall layout suggests a comprehensive public transit system.

Imagery © 2011 ESRI, DigitalGlobe, GeoEye, AeroGRID, IGN, and the GIS User Community

Google earth