Westconnex 4

Northern Suburbs

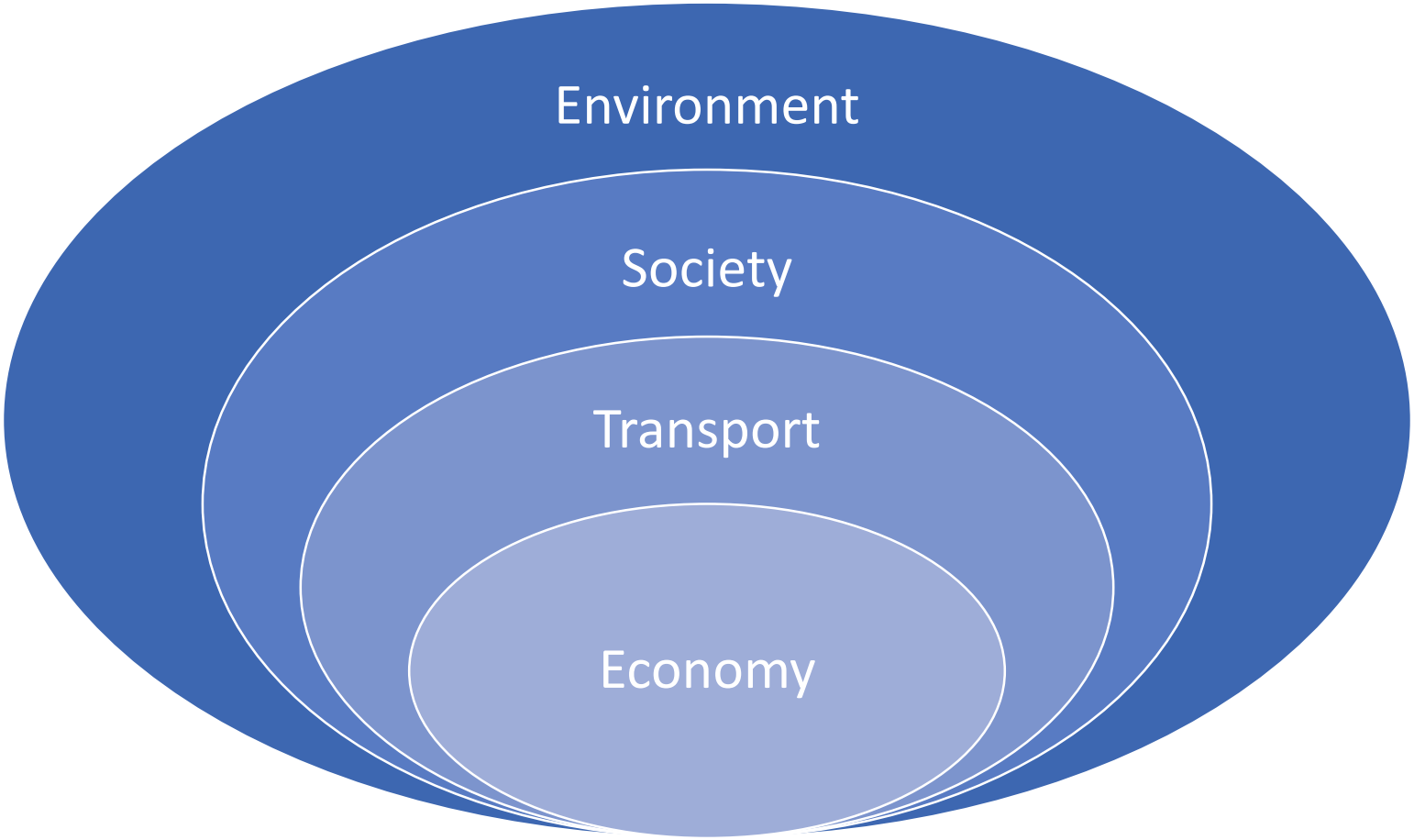
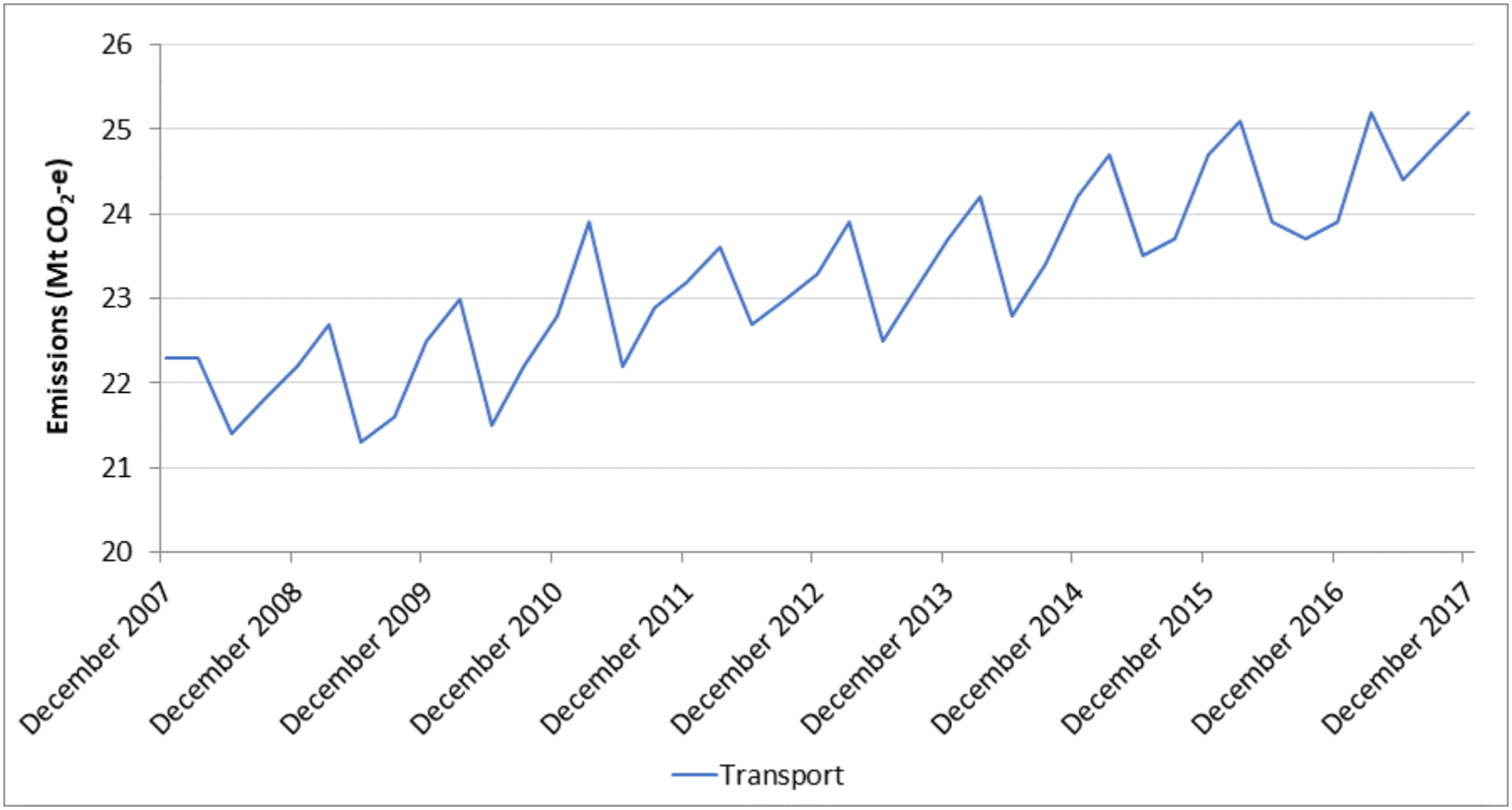
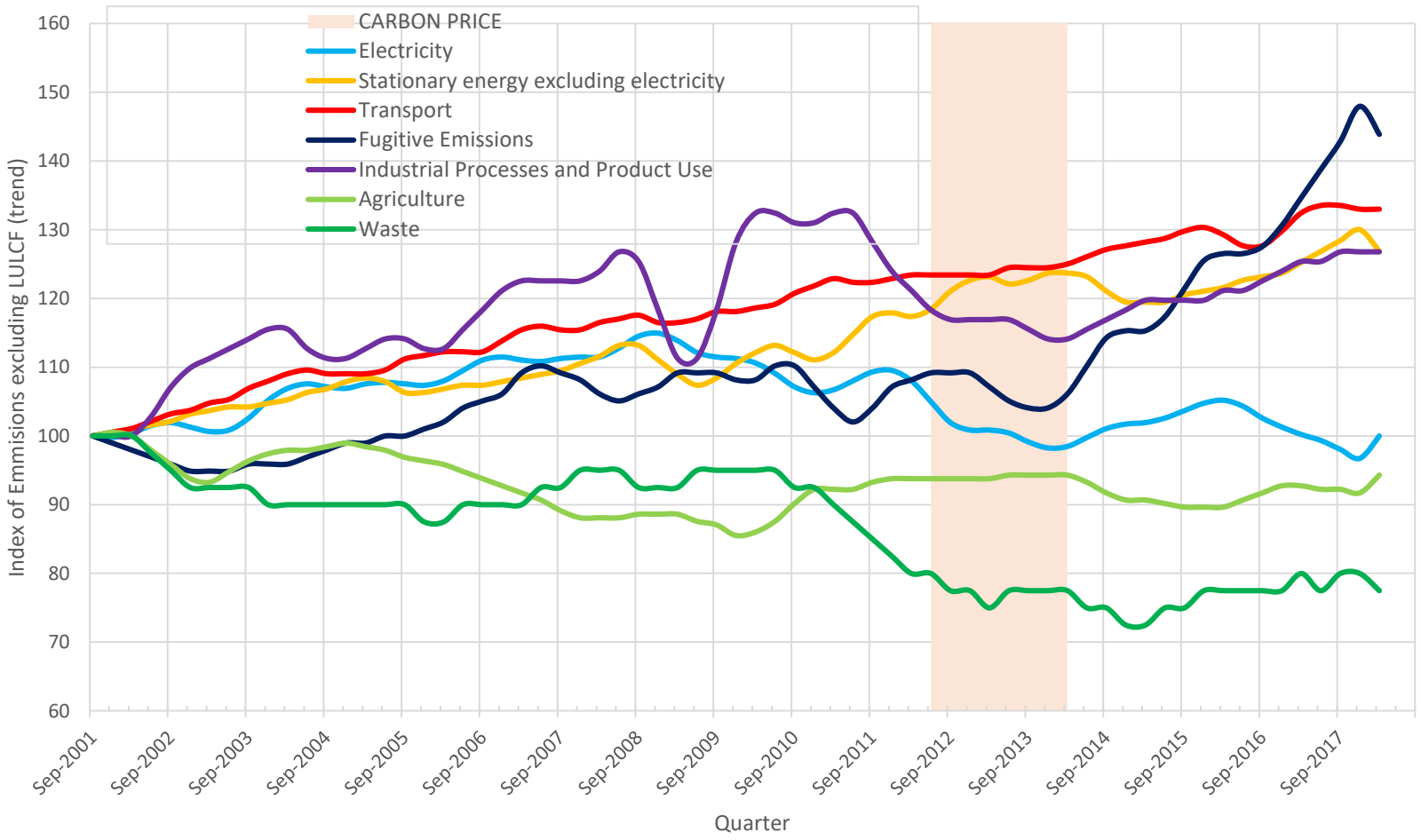
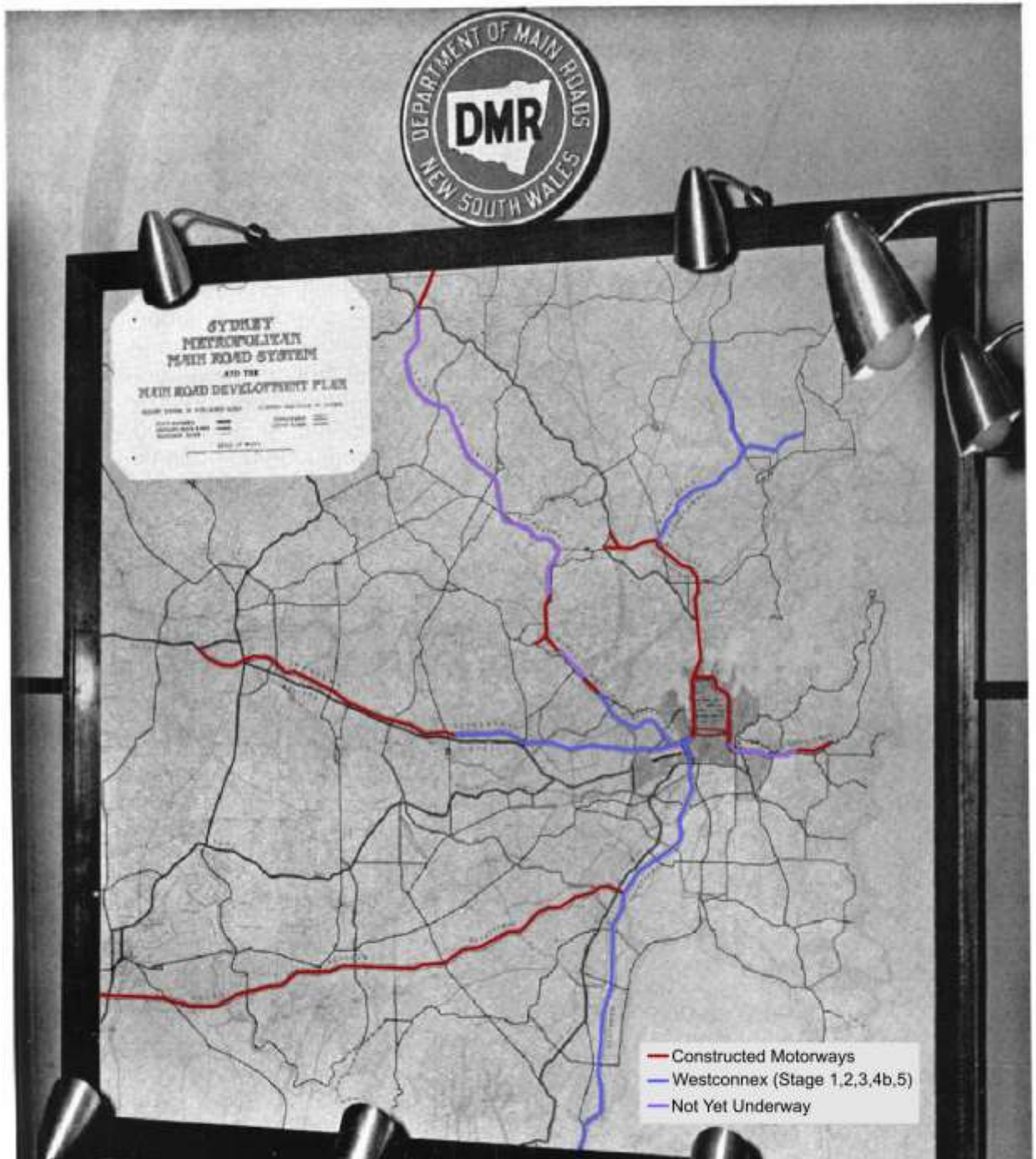

Environment
Society
Transport
Economy

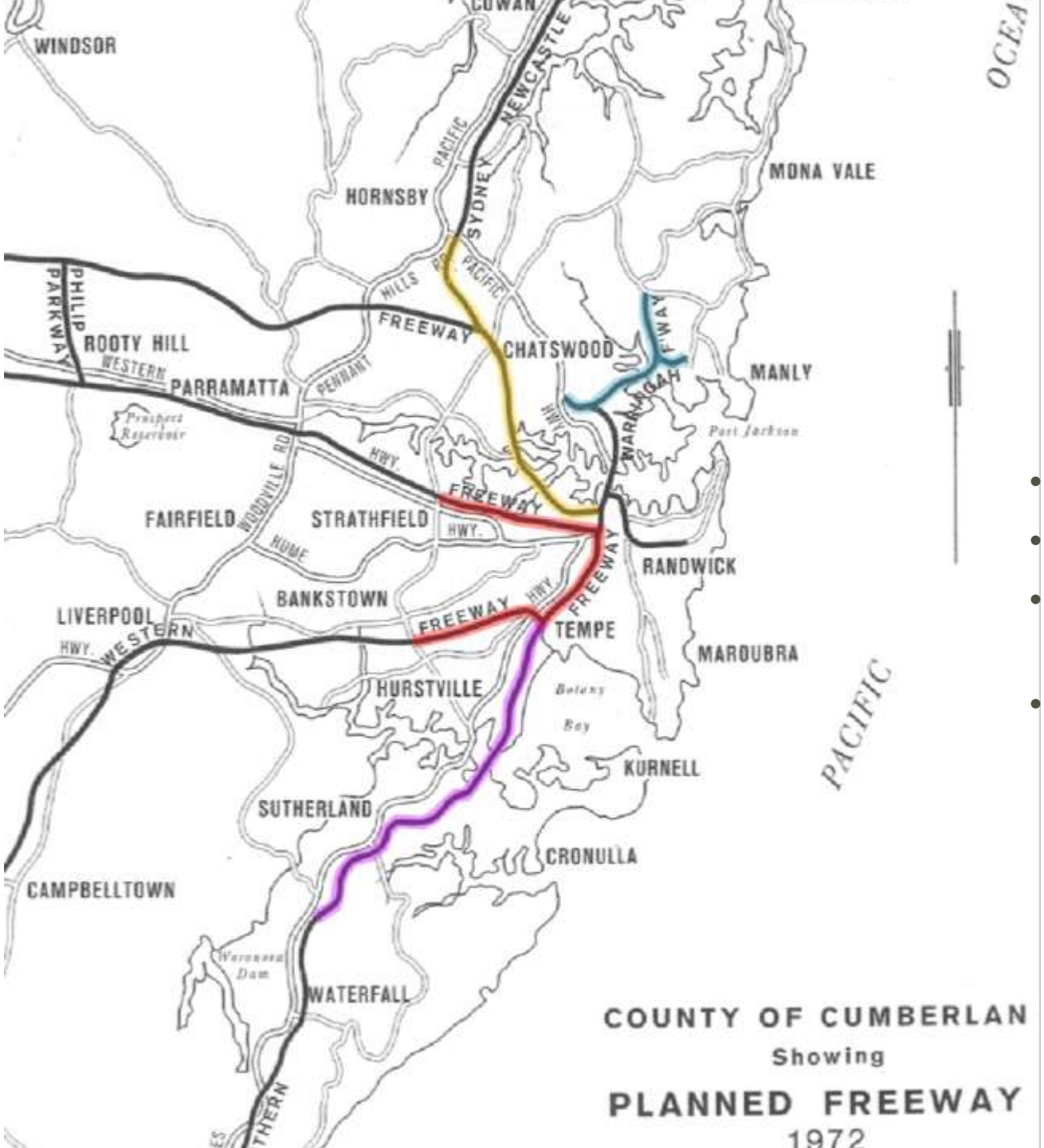
Figure 14: Transport emissions, quarterly, 'unadjusted' emissions, December 2007 to 2017



Index of Quarterly Emissions by Sector since 2001-02, Trend excluding LULUCF

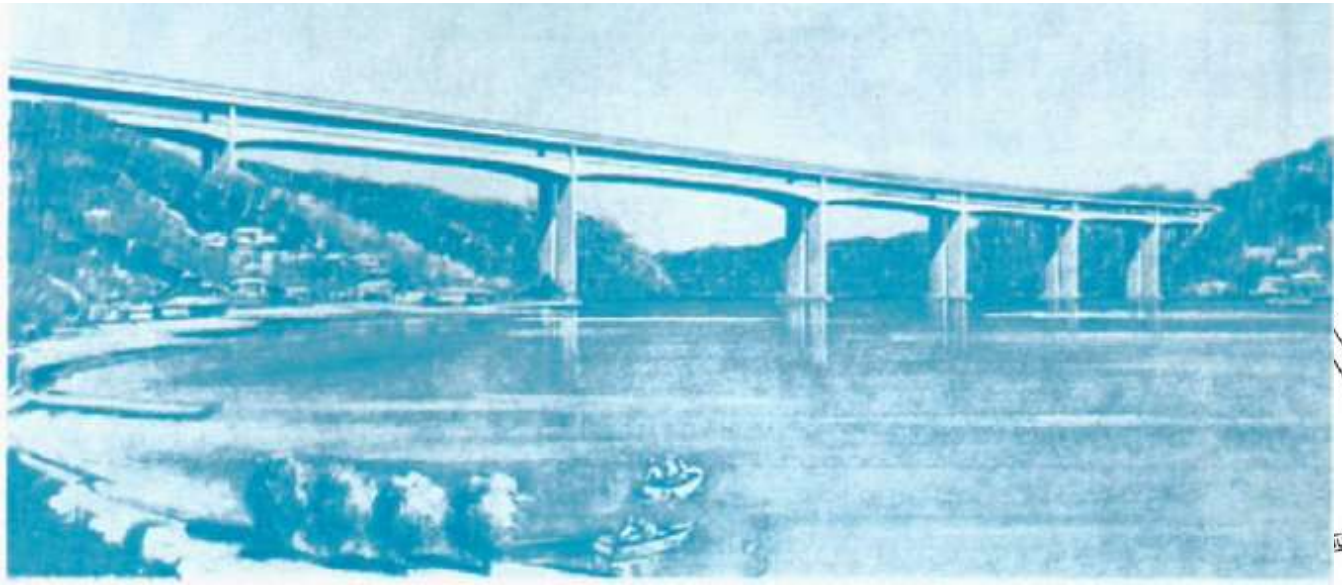


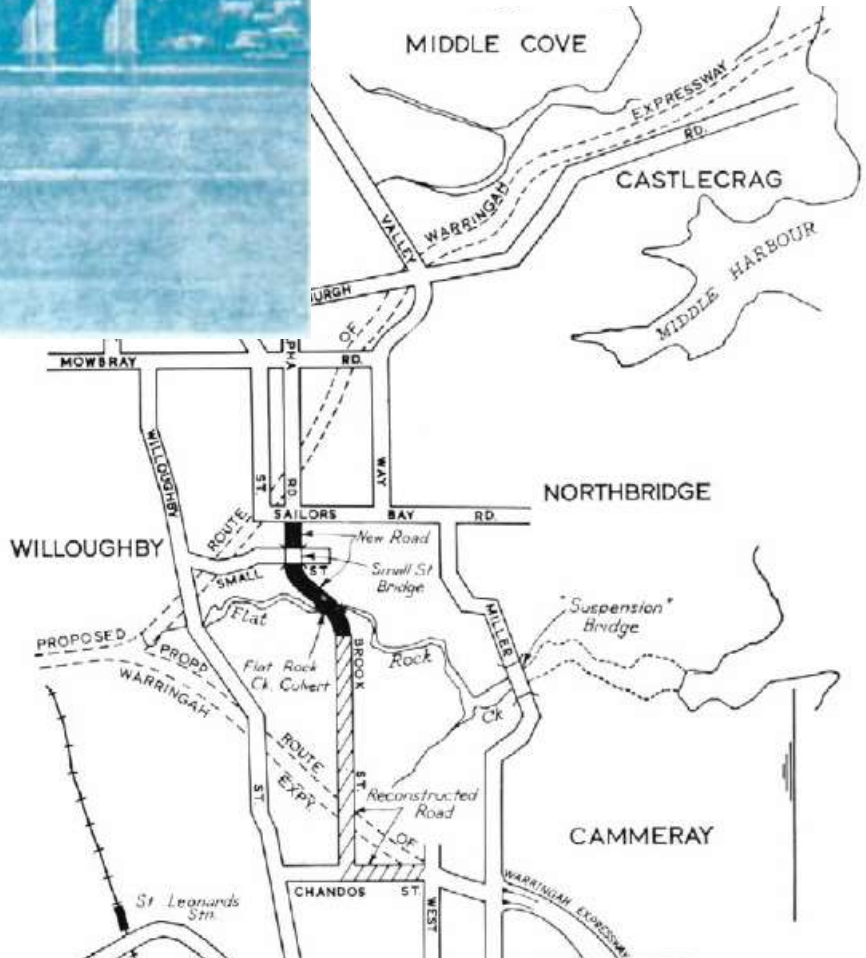

DEPARTMENT OF MAIN ROADS
DMR
NEW SOUTH WALES
SYDNEY
METROPOLITAN
MAIN ROAD SYSTEM
AND THE
MAIN ROAD DEVELOPMENT PLAN
Constructed Motorways
Westconnex (Stage 1,2,3,4b,5)
Not Yet Underway



- *WestConnex (red),*
- *F6 (magenta),*
- *Northern Beaches Link (cyan),*
- *Lane Cove Valley Expressway (yellow).*

Artists Impression – Castle Crag





Change

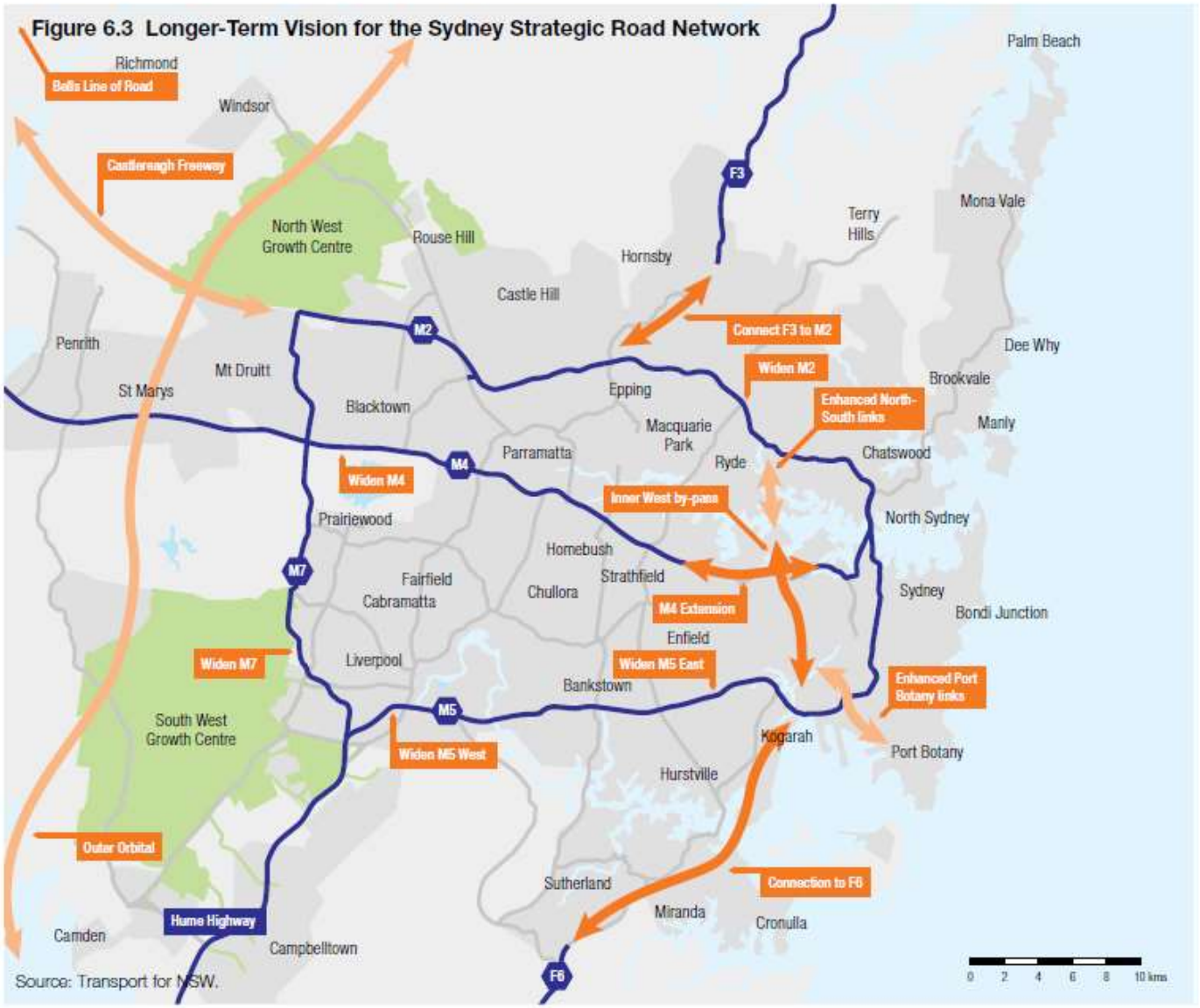
On 17th February, 1977

- Mr T. (Tom) S. Hope, A.S.T.C.. F.I.E.Aust., F.C.I.T., retired from the Department after holding the position of Engineer-in-Chief since 19th June, 1975.

On 23rd February, 1977

- the State Government announced its decision to abandon major portions of planned inner-urban freeways in Sydney. On that day, the Minister for Transport and Highways, Mr Peter Cox, M.L.A., issued a statement
- *"Much of the major construction works proposed for inner-urban freeways is now quite **beyond financial feasibility**. One of the significant factors is that currently available funds and the level of funds likely to be available in the foreseeable future will only provide for limited development and improvement of the existing road system."*

The State Infrastructure Strategy 2012 – 2032

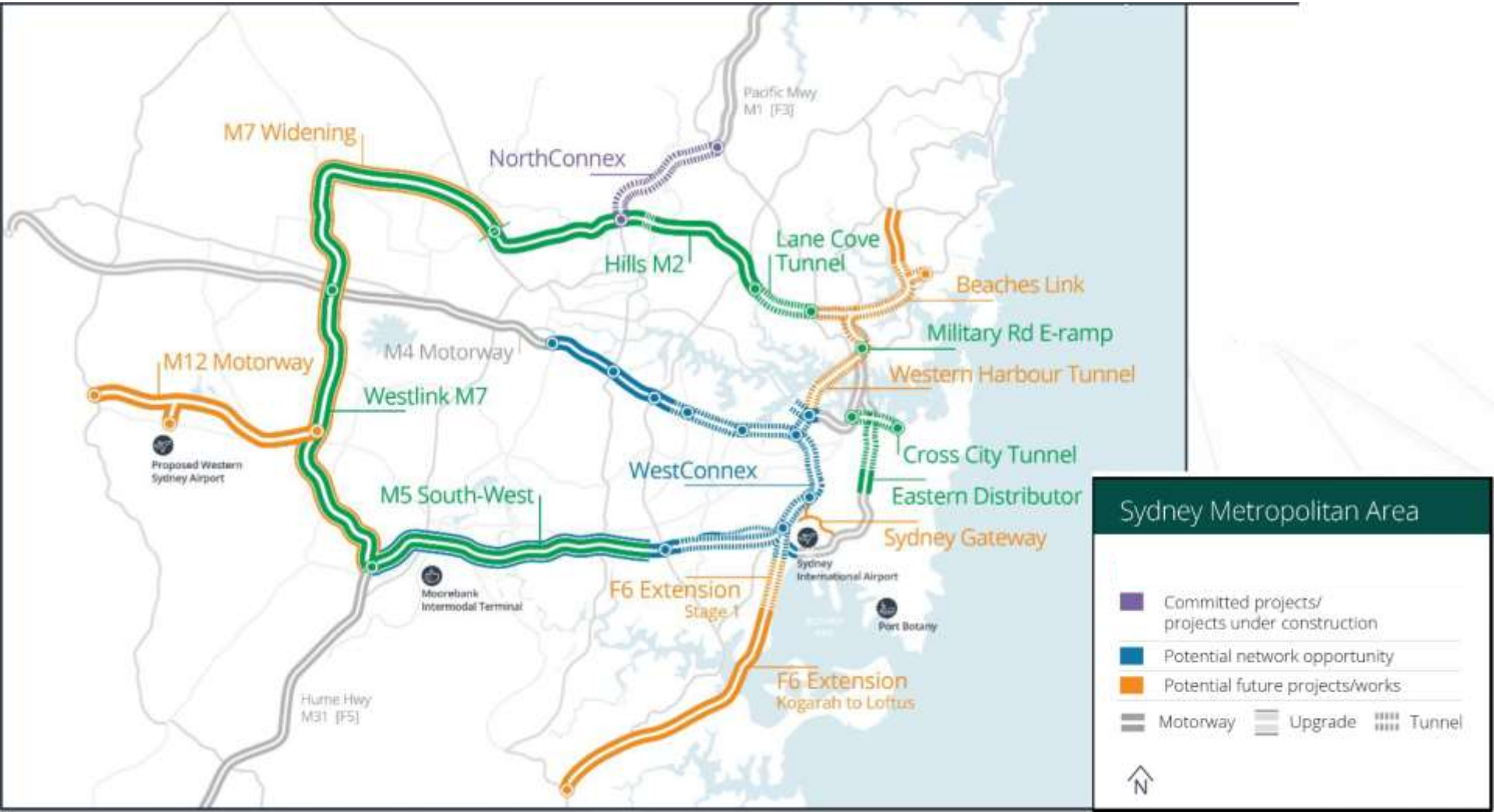


Recommendations to the NSW Government November 2014

Figure 3.3 Long-Term Transport Master Plan: vision for Sydney's motorway network

Source: Long-Term Transport Master Plan (2012)

Planned Motorways > $41 billion



Planned Motorways = $ NFI billion

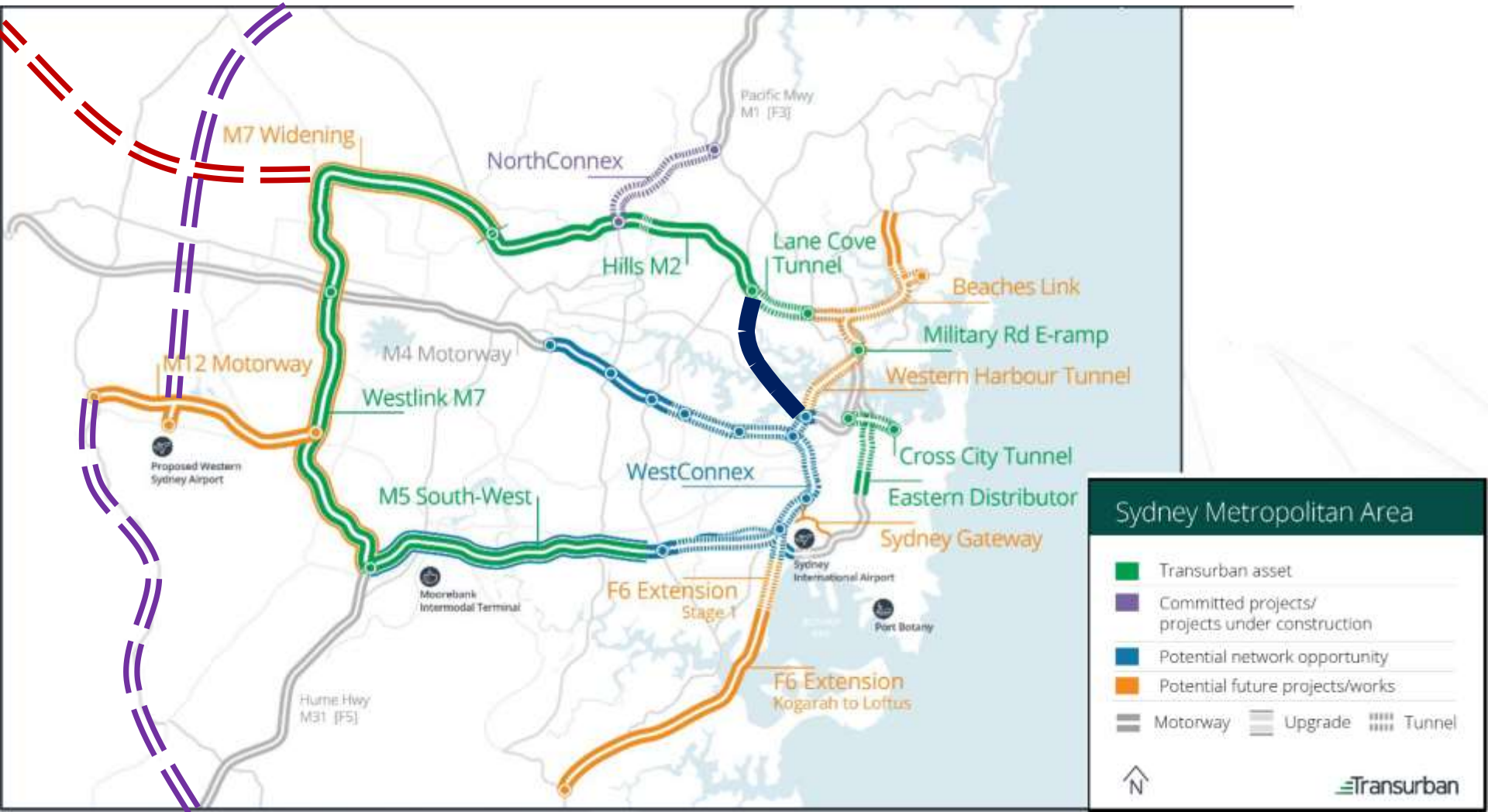
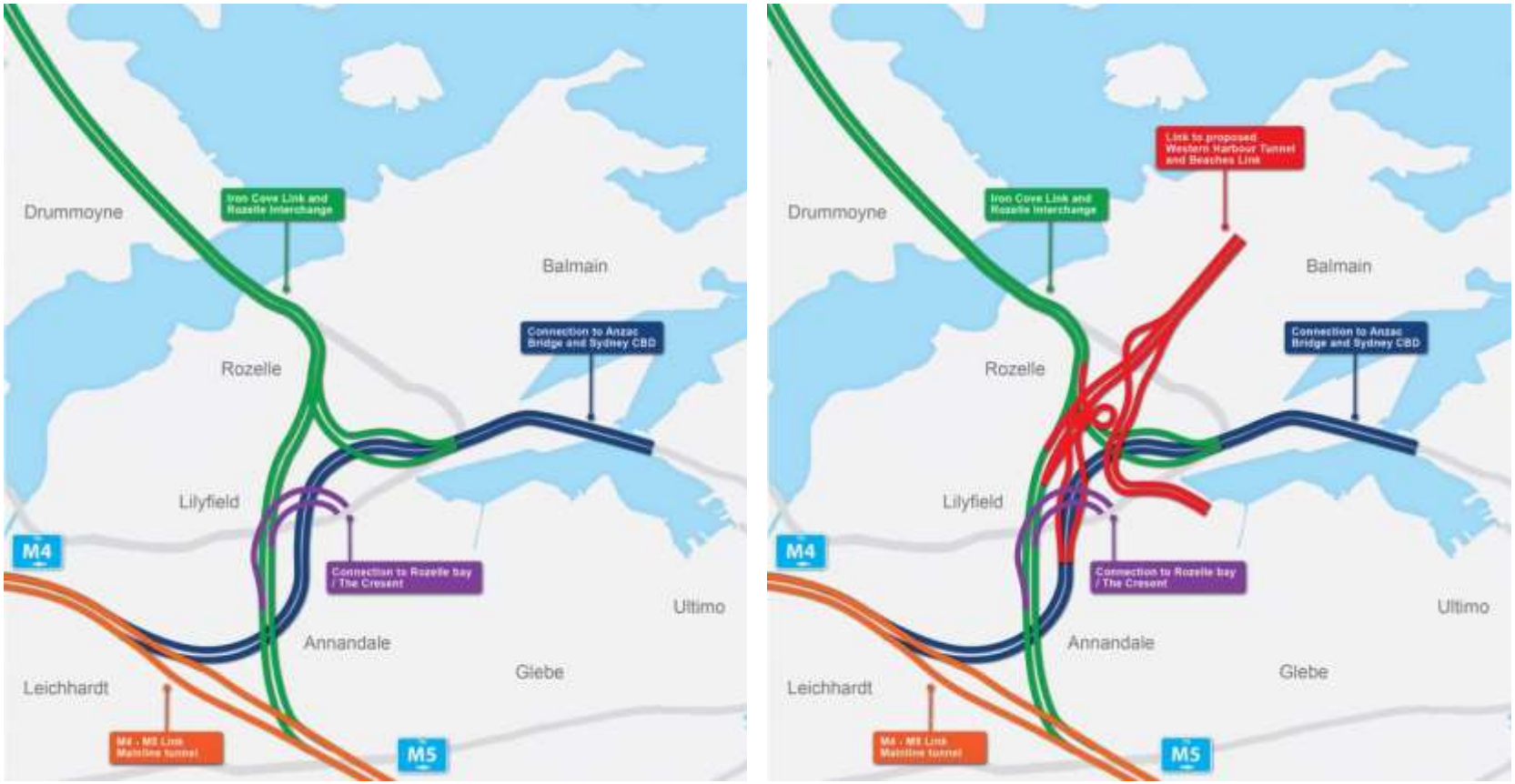


Figure 4 The M4-M5 (Stage 3) motorway section



Space Required to Transport 48 People

Car

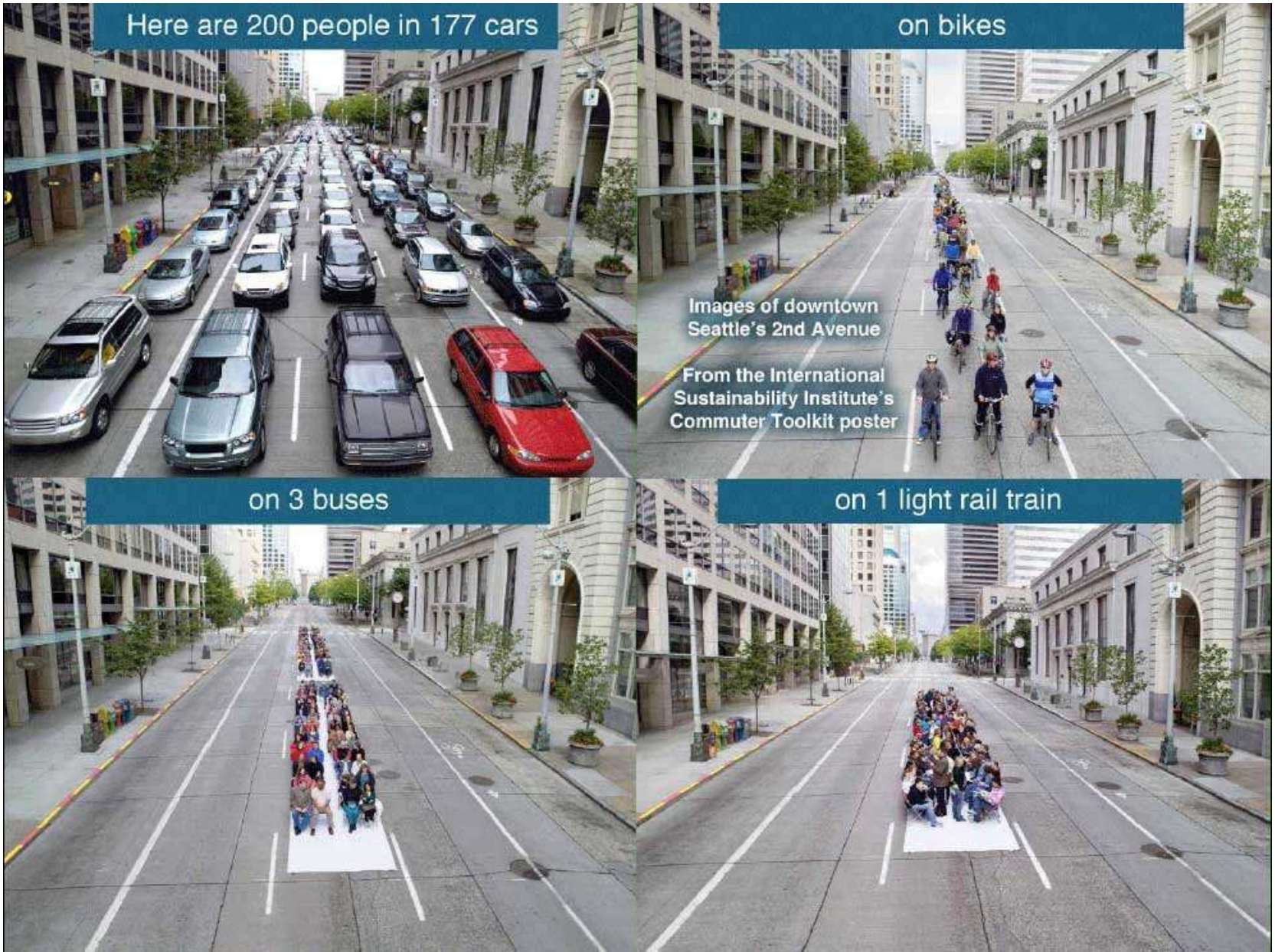
Electric Car

Autonomous Car

Source: Cycling Promotion Fund

CITY OF VANCOUVER

It is about Geometry & Land



What's important depends upon perspective

Traffic engineer:	F	A
Economist:	A	F

Chasm

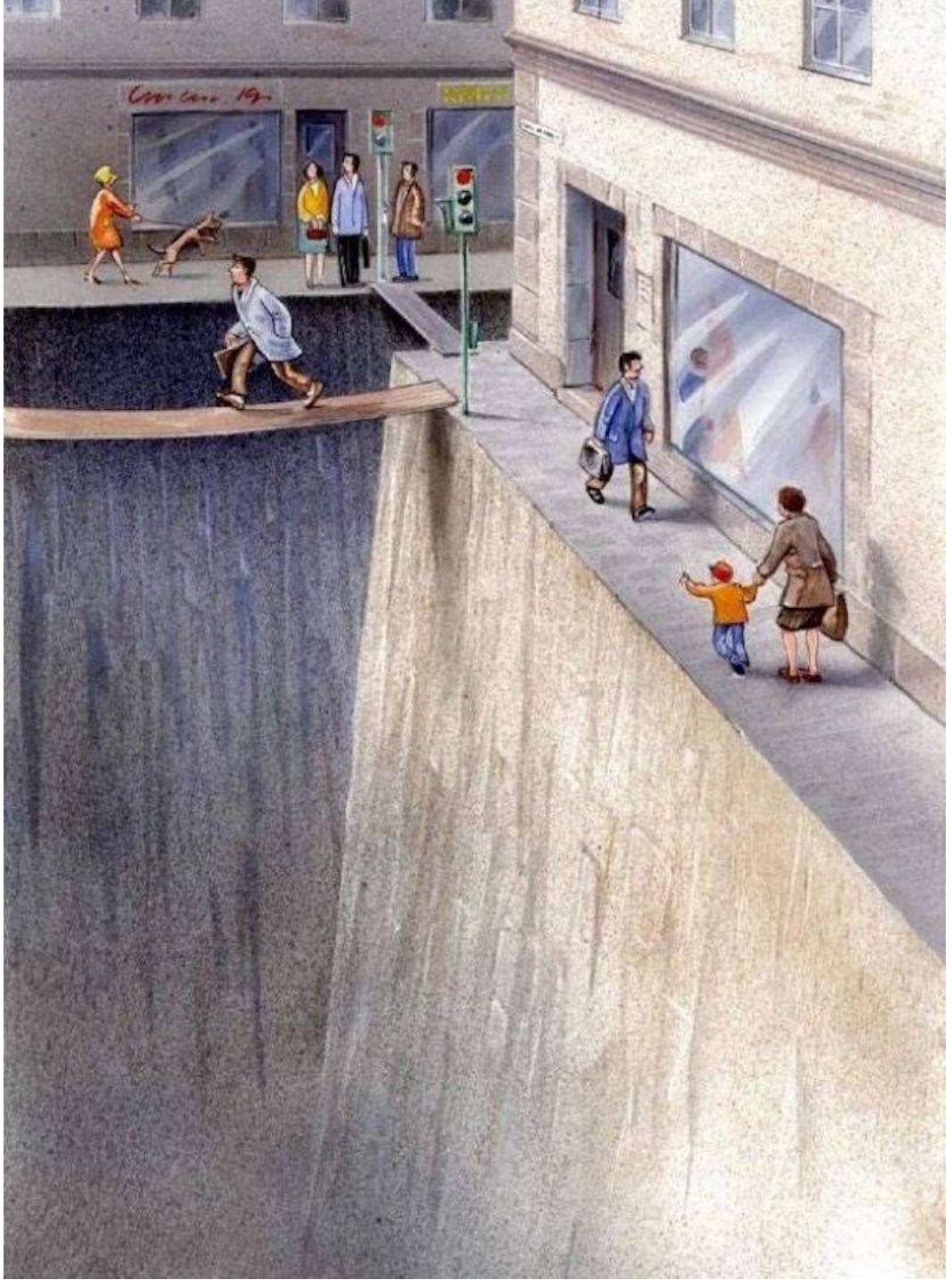
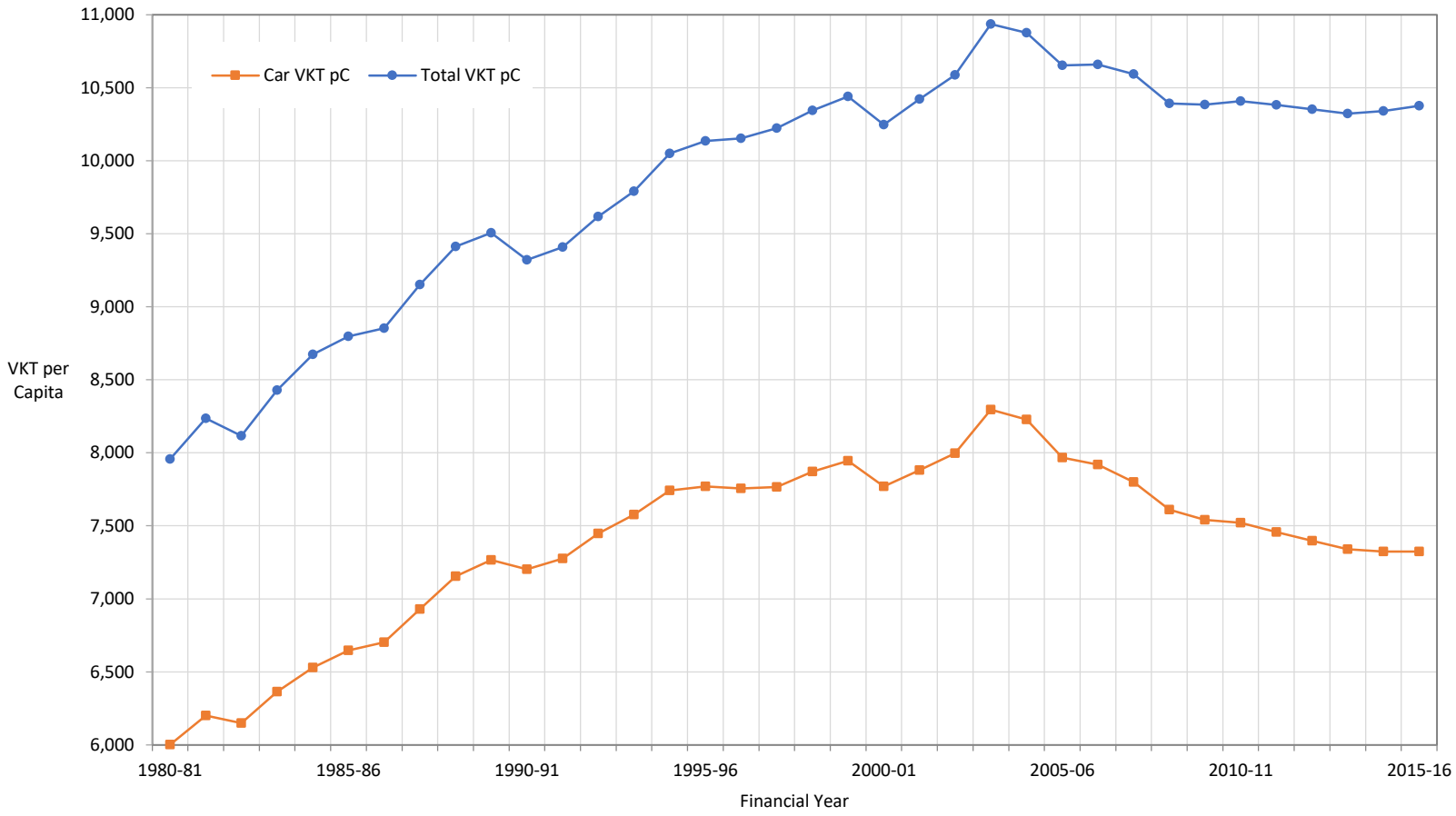


Figure 12: Vehicle kilometres travelled in Australia per capita per financial year since 1980



Transport Usage Study Area

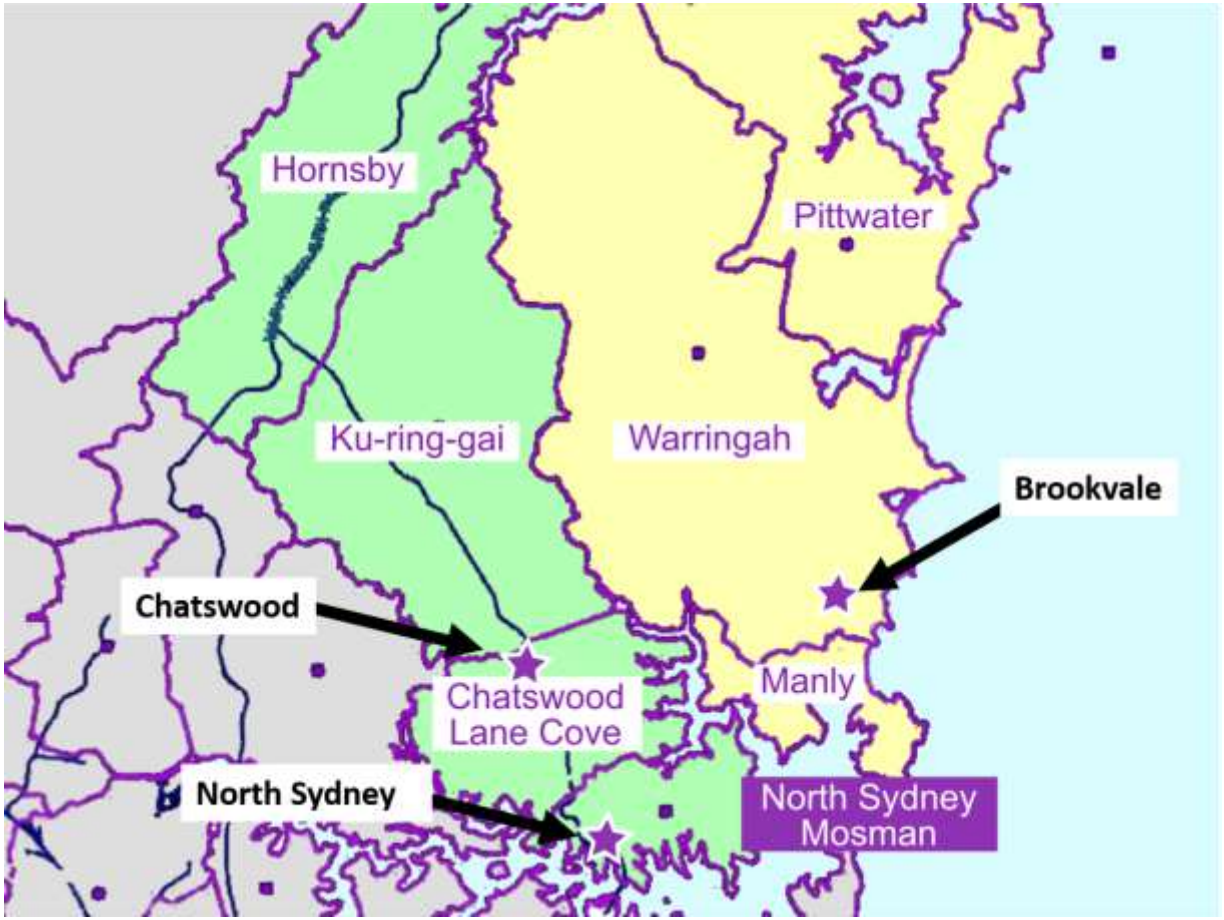
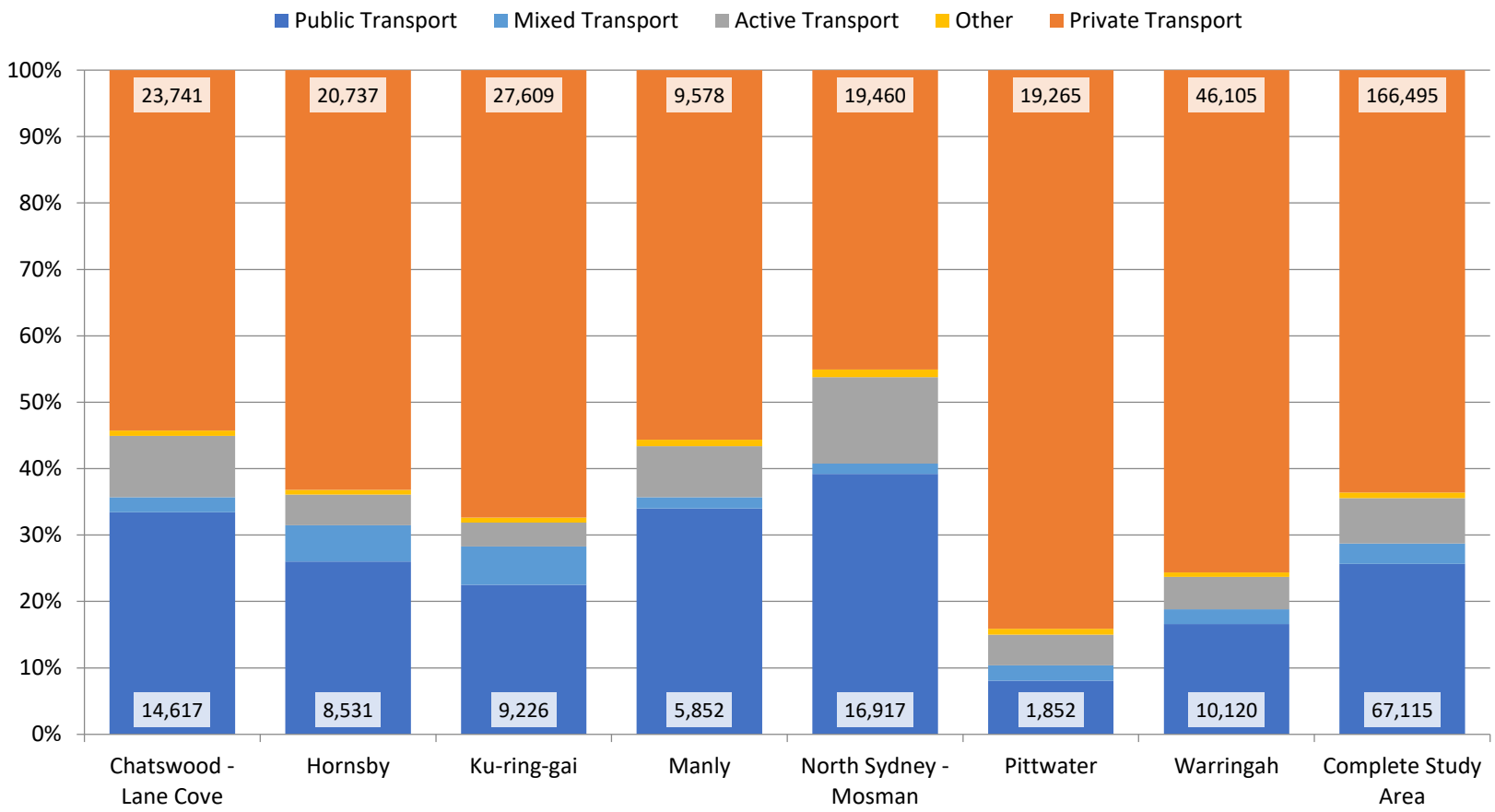
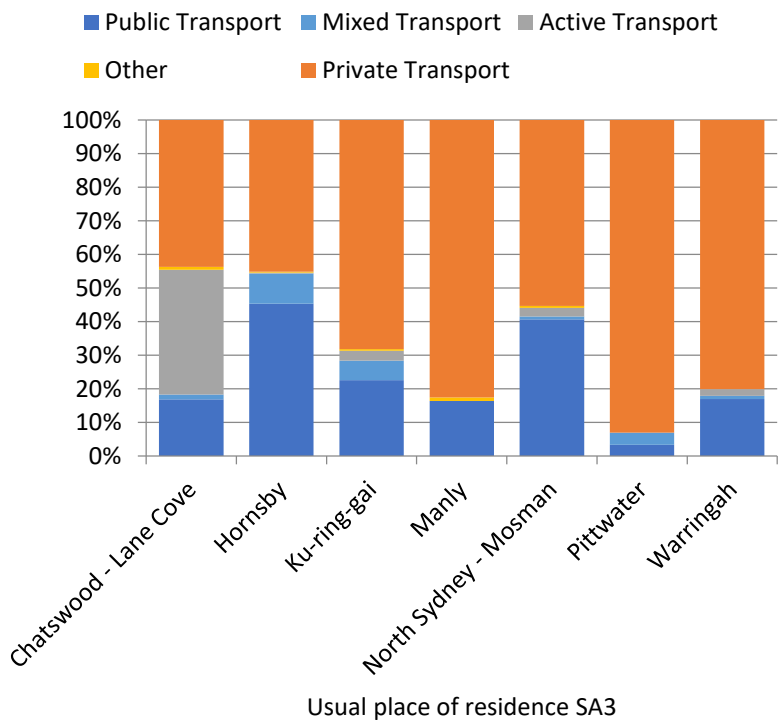


Figure 14: Mode-split for journey-to-work for people living within the study area (2011)



Passengers travelling to SA2 in 2011 Census JTW

Chatswood East



Brookvale

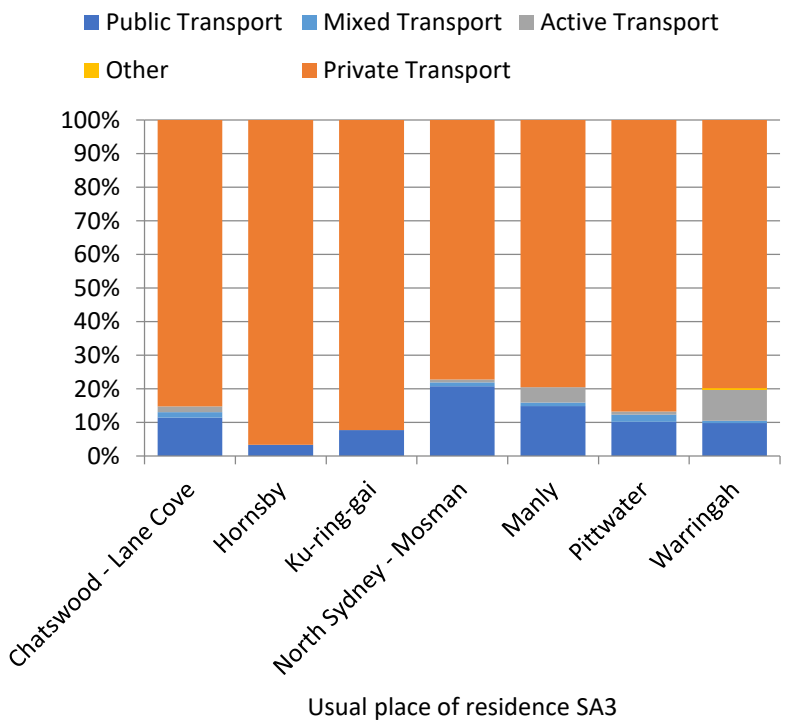
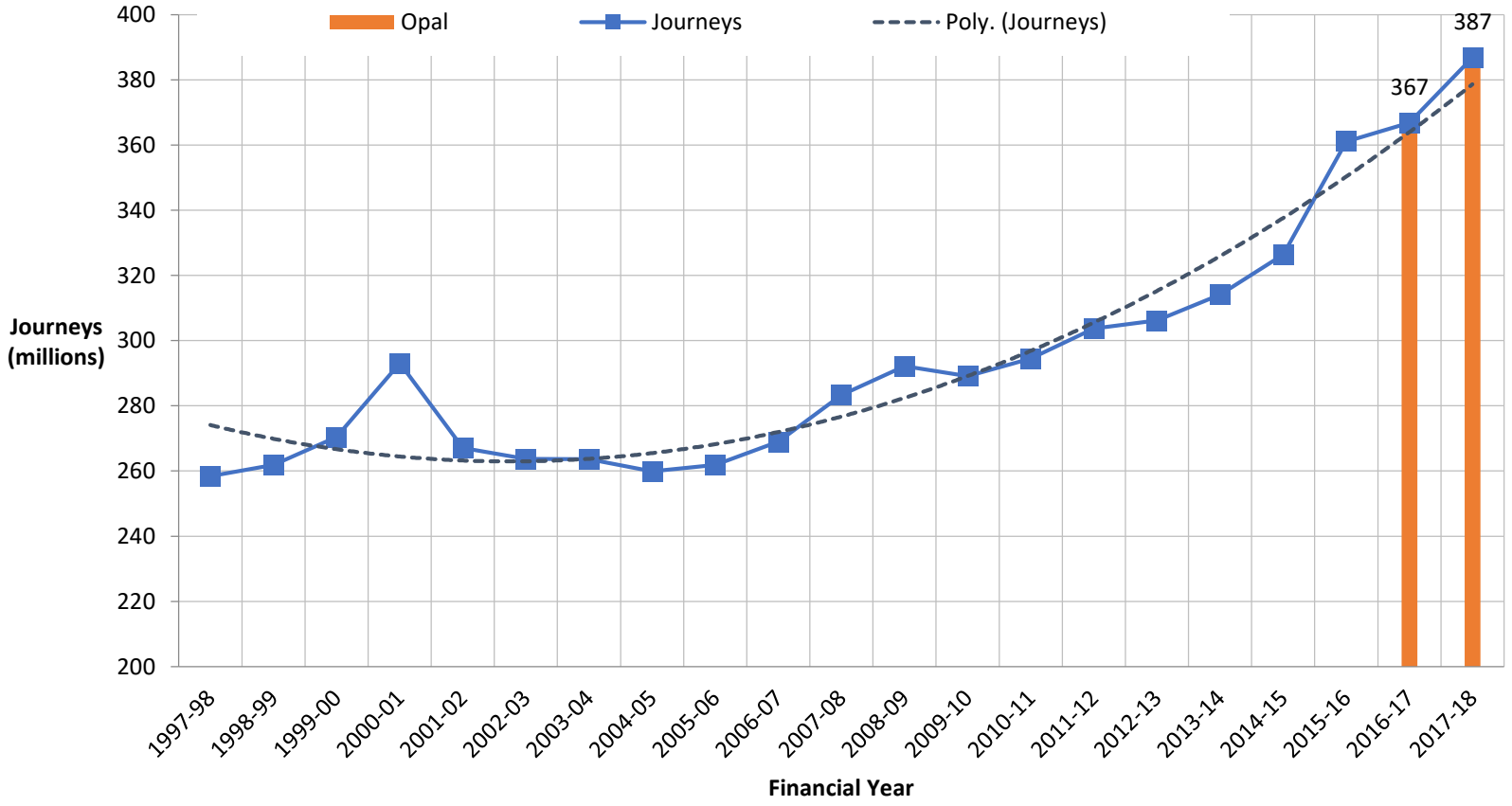
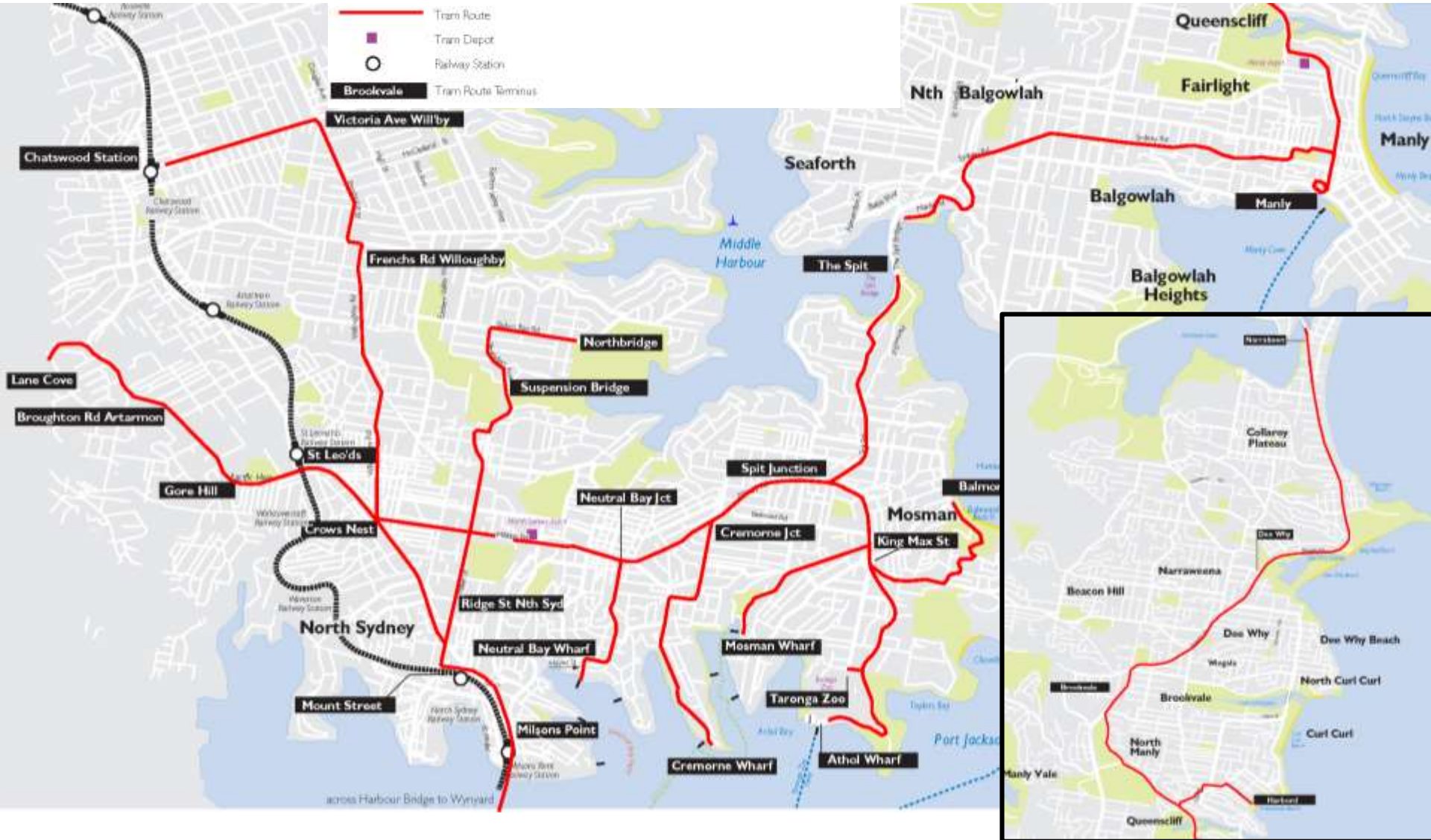


Figure 14: Estimated public transit patronage on heavy rail in GMA NSW



Sydney Tramways
Northern Lines
at maximum extent, 1934



More persons per hour in the trams than the cars

What happened?

Figure 2 Preferred 2036 metro network

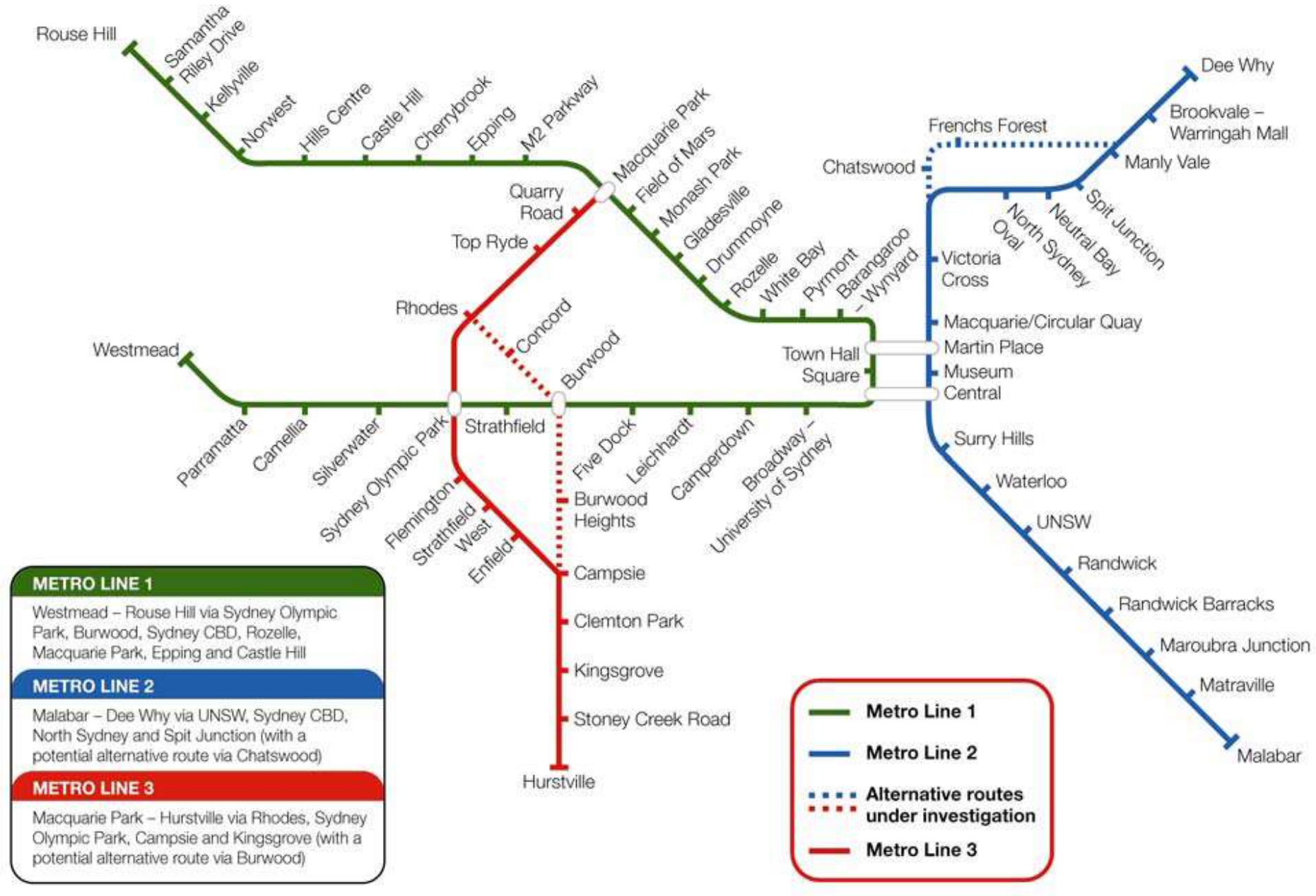


Figure 3 - Proposed staging plan

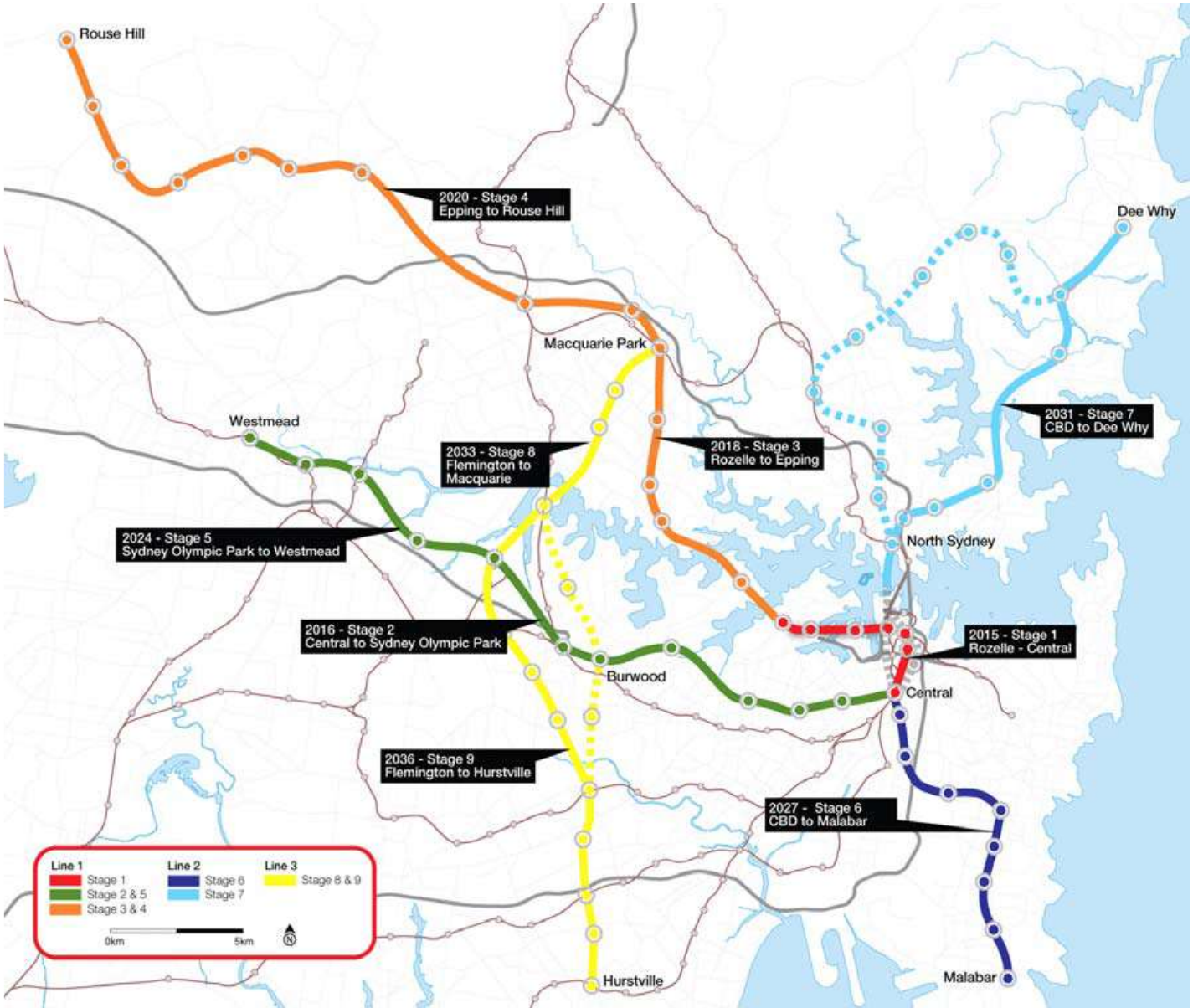


Table 4.4 Strategic Merit Test Scores

CORRIDOR DEFINITION						
		SERVING METROPOLITAN STRATEGY CENTRES	OPPORTUNITY FOR URBAN RENEWAL	FUTURE POPULATION DENSITIES	IMPROVING ACCESSIBILITY TO EMPLOYMENT	
33	Mona Vale to Macquarie	Low	Medium	Low	High	
34	Mona Vale to North Sydney	Medium	High	High	High	
35	Dee Why to Chatswood	Low	High	Medium	High	

INITIAL CORRIDOR ASSESSMENT						CORRIDOR RATING
POTENTIAL CORRIDOR DEMAND	NEED FOR RAIL CAPACITY IMPROVEMENTS	NEED FOR ROAD CAPACITY IMPROVEMENTS	NEED FOR TRANSIT SPEED IMPROVEMENTS	ADDRESSING AREAS OF SOCIAL DISADVANTAGE	REDUCING TRANSPORT ENVIRONMENTAL IMPACTS	
Low	N/A	High	High	Low	Medium	50
High	N/A	High	High	Low	Medium	95
Low	N/A	High	High	Low	Medium	60

High Medium Low

Figure 4.19 Forecast potential peak metro passengers – total and per kilometre of corridor

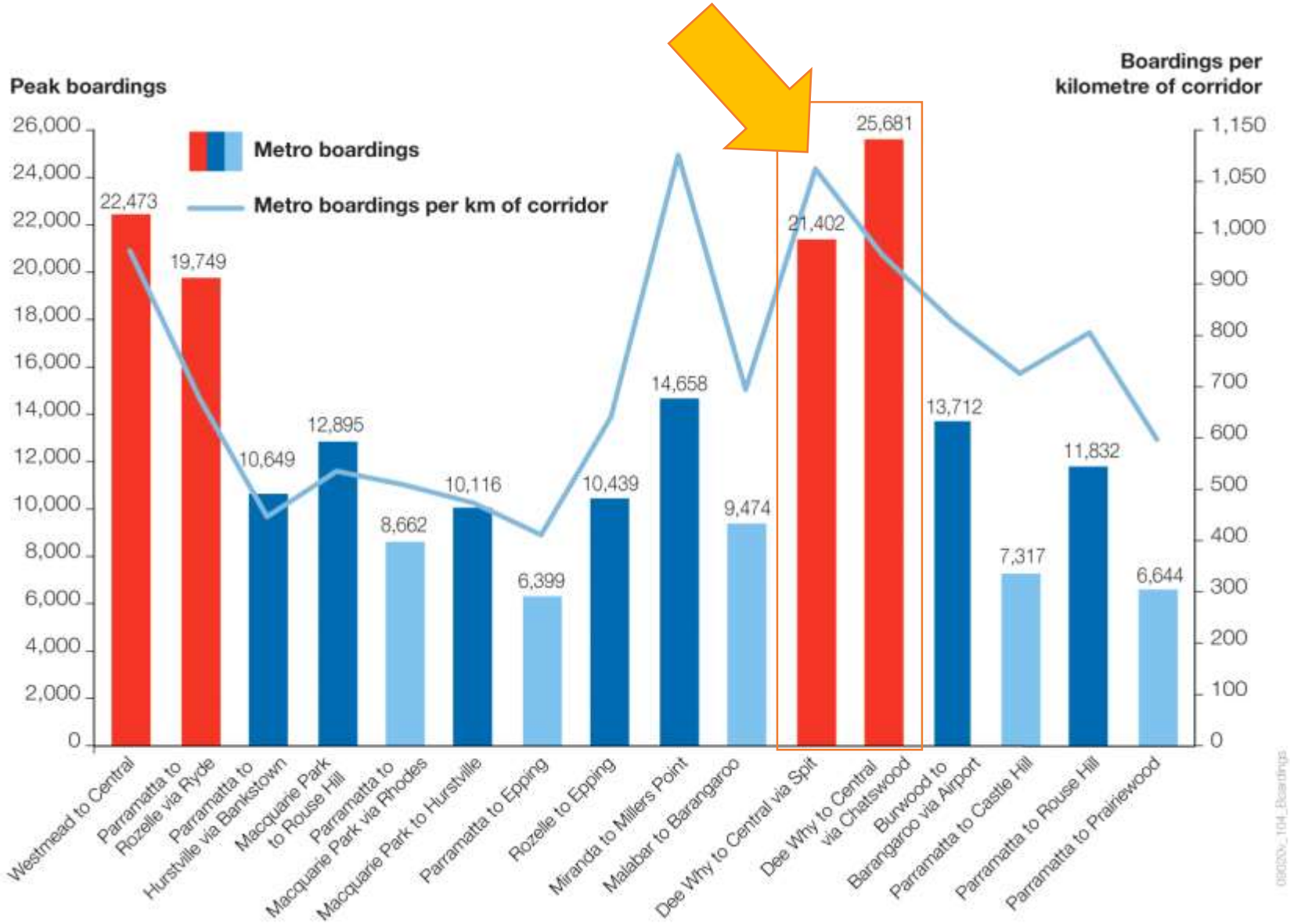


Figure 4.21 Proportion of peak load to total peak boardings (2031 morning peak hour)

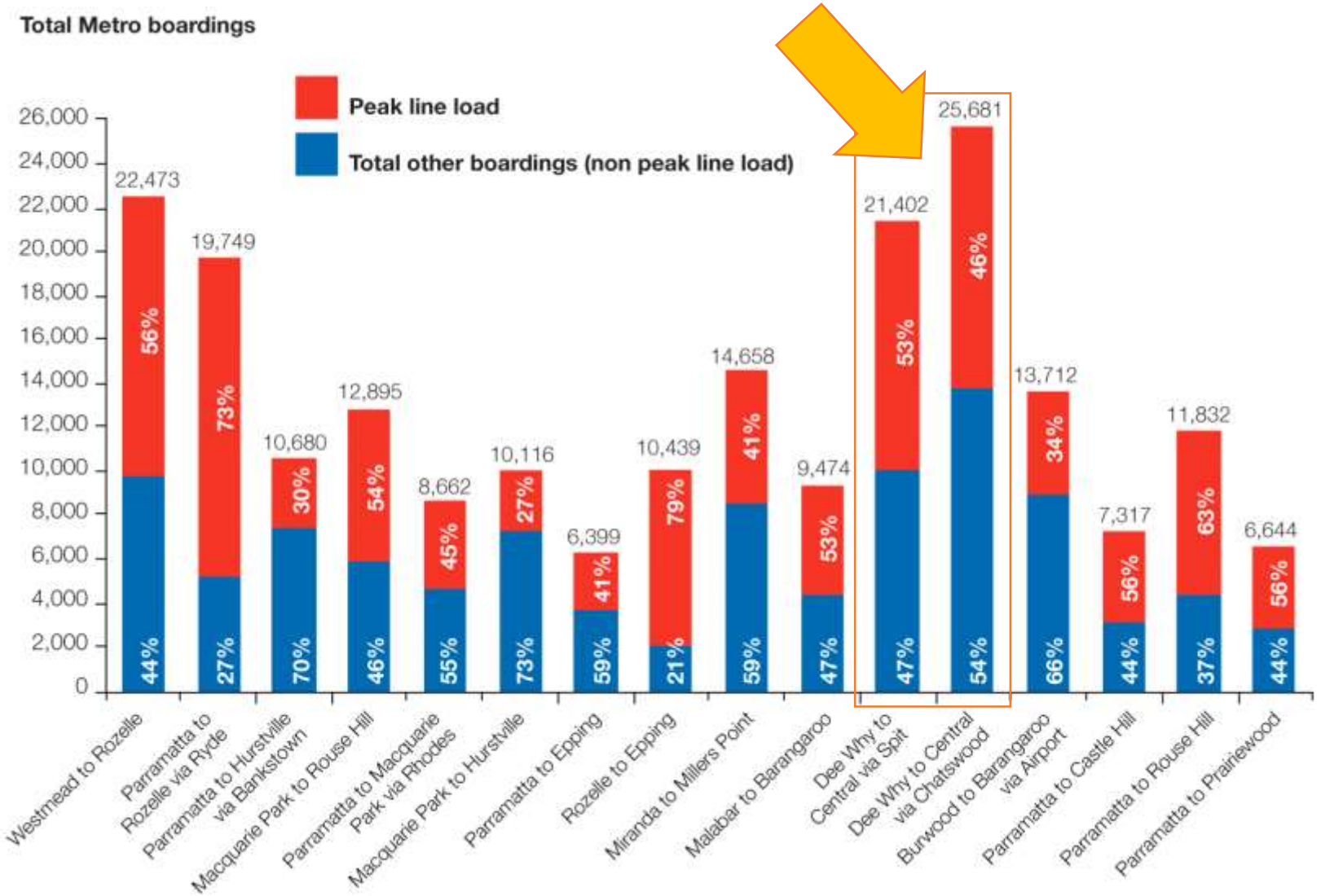


Figure 19 – Indicative vehicle capacity by mode

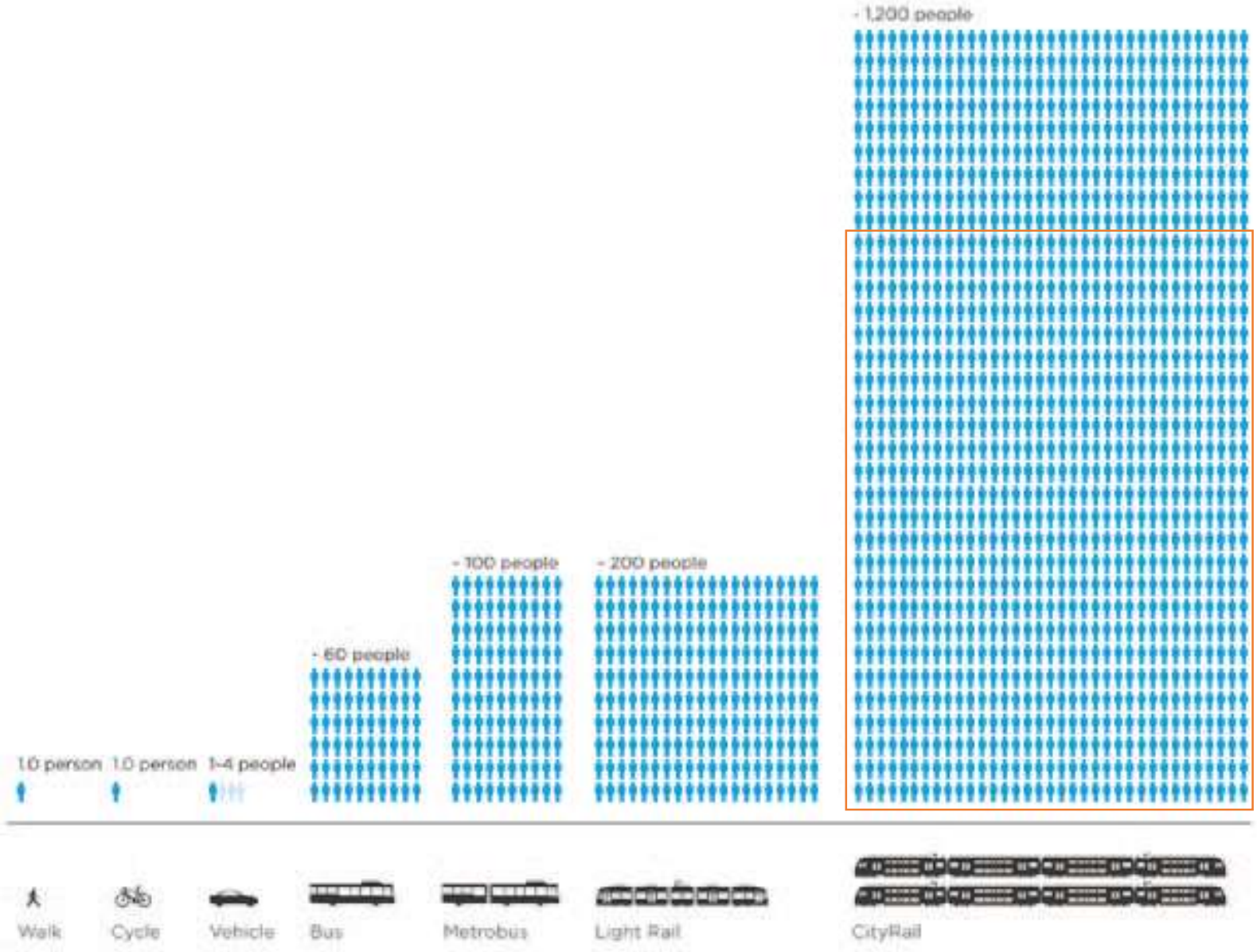


Figure 4.23 Peak line loads STM (excludes Stage 1 Central to Rozelle)

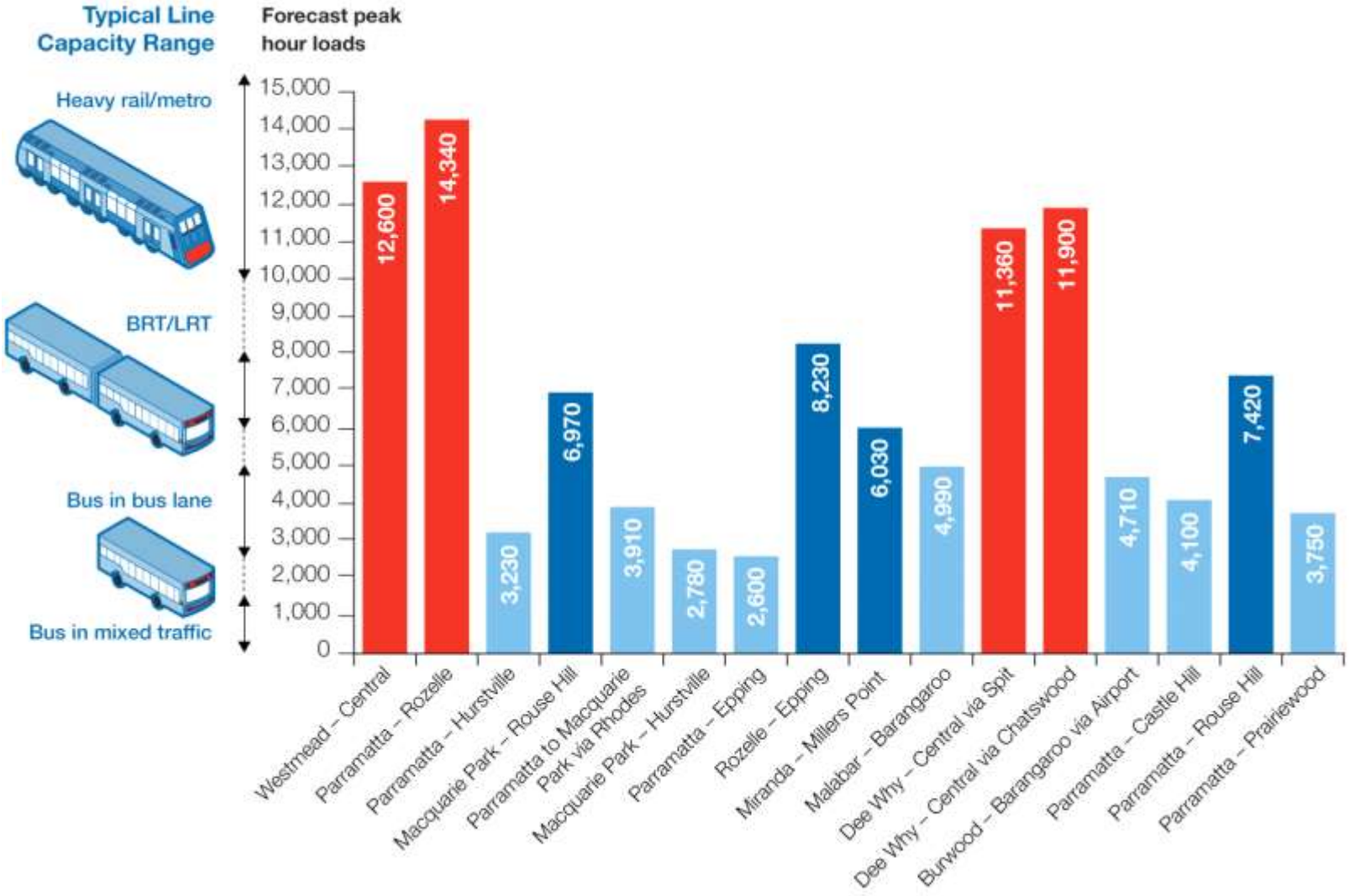
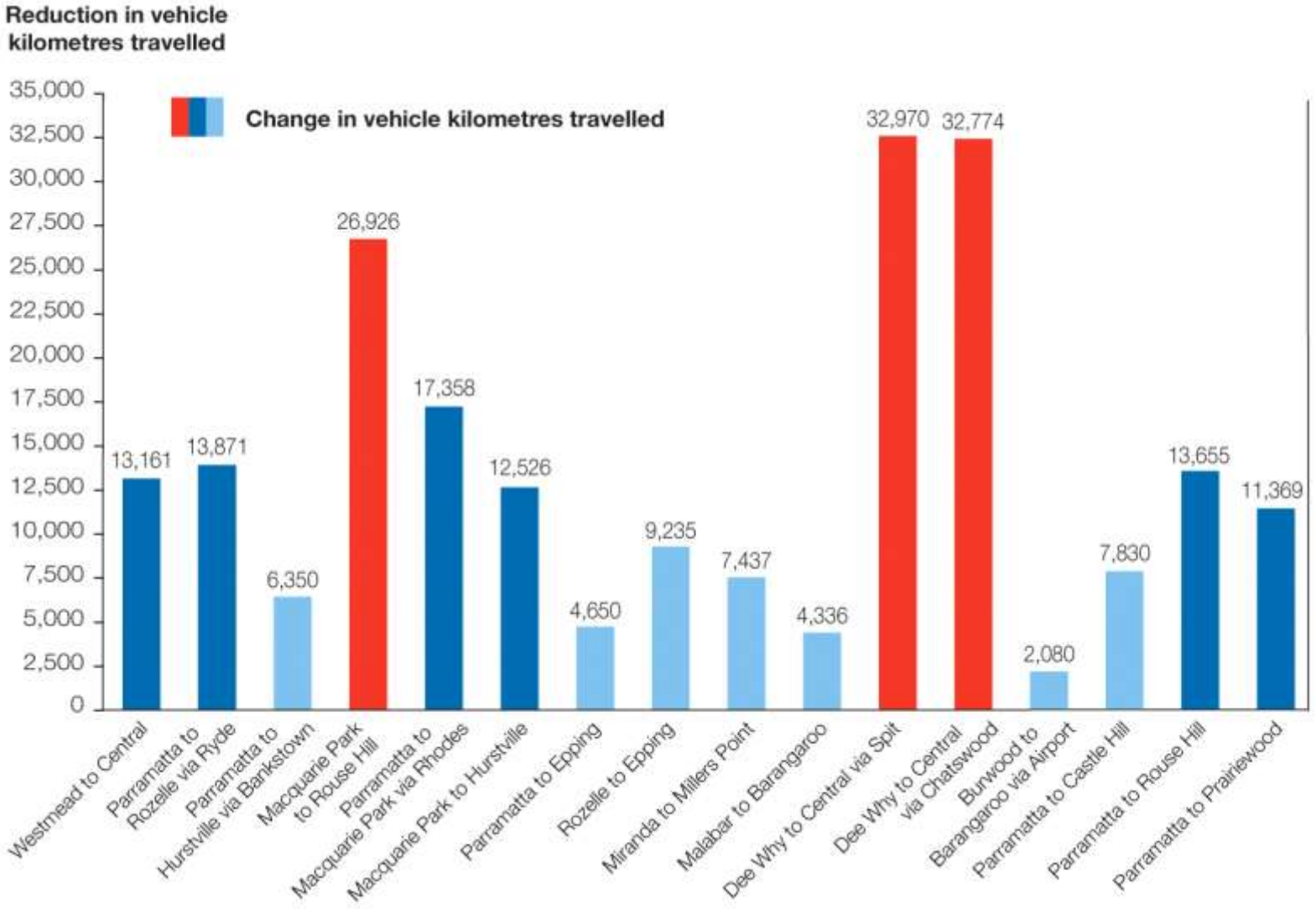
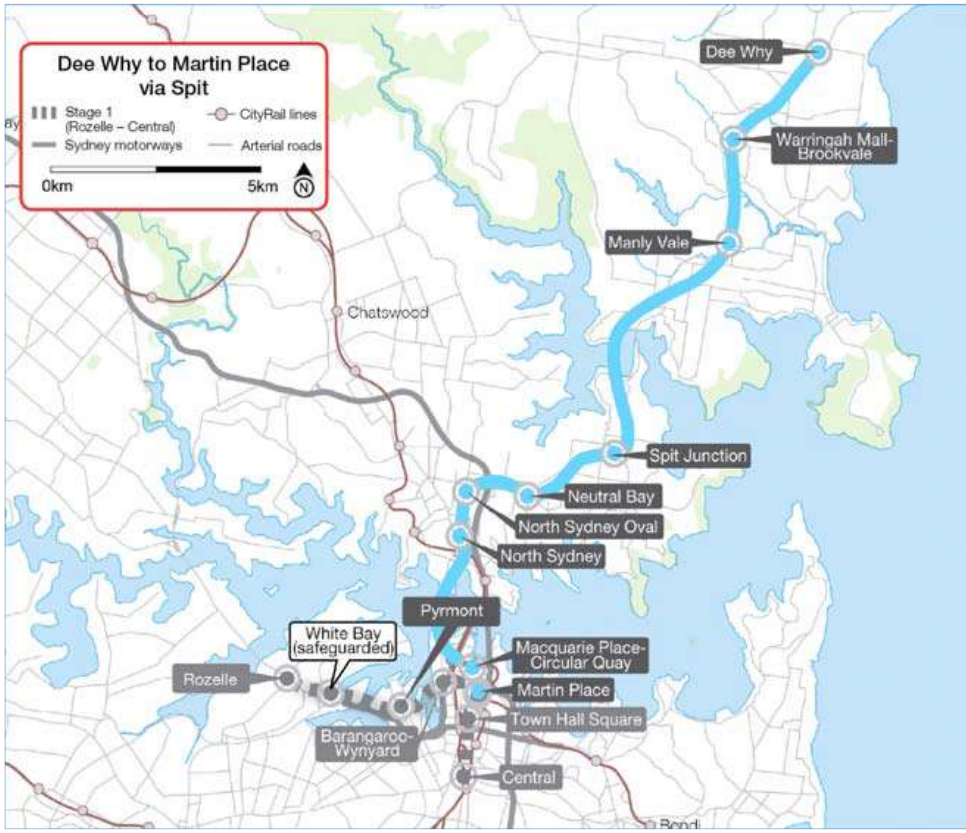


Figure 4.24 Change in Vehicle Kilometres Travelled (VKT)



Dee Why to CBD via Spit

- There are two alternatives for this alignment, with either a tunnel or a bridge at the Spit. The alignment
- via a tunnel at the Spit is 18.2 km long with 8 new stations and an estimated travel time of
- approximately 21 minutes. Station depths are expected to be relatively deep ranging between 15 and
- 55 metres. An alignment via a new bridge at the Spit would be 17.7 km long with 9 new stations and
- an estimated travel time of approximately 22 minutes. Stations would not be as deep for this option.



Dee Why to CBD via Chatswood

- This alignment runs from Martin Place to Dee Why via Chatswood, is 26.4 km long with 12 new
- stations and an estimated travel time of approximately 30 minutes. Station depths are expected to
- range between 15 and 37 metres. It is assumed that a new bridge would be required at the Middle

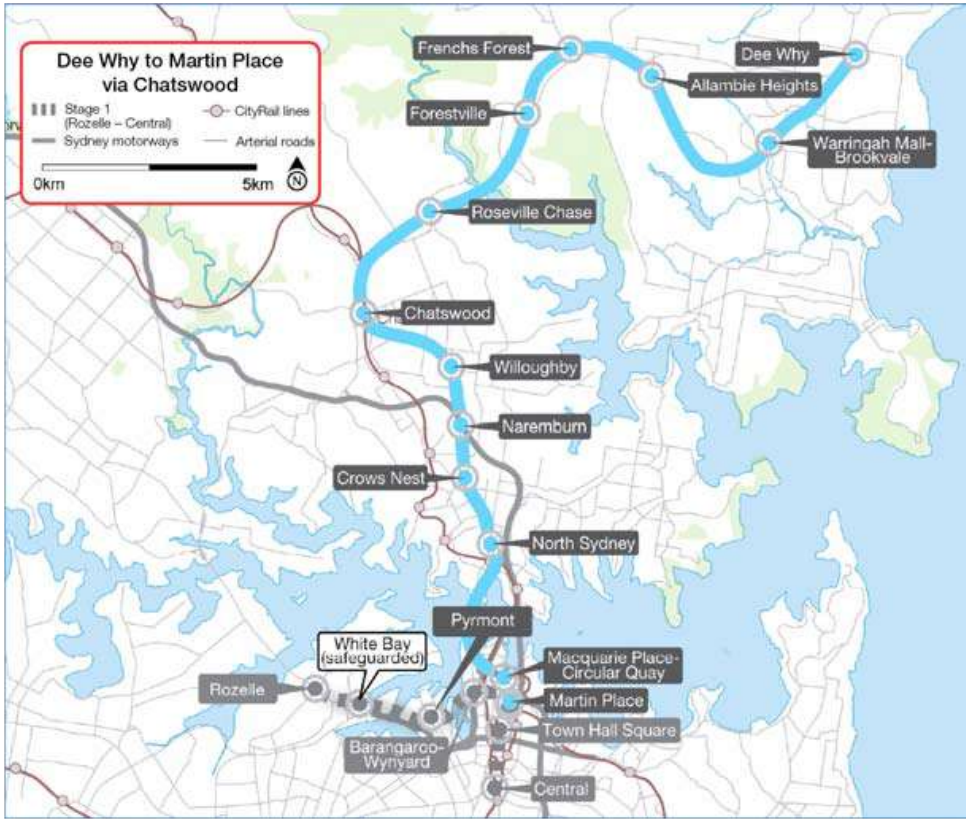


Table 5.15 Forecast road network relief

Corridor	Overall forecast change in car trips AM peak hour	Forecast road network relief	Score	Extension options
Dee Why to CBD via Spit	-2,138	Significant reduction in car trips and car VKT forecast. Most car trips expected to be reduced from the congested Roseville Bridge and Sydney Harbour Bridge corridors.	High	Potential to extend further north to Mona Vale
Dee Why to CBD via Chatswood	-2,587	Significant reduction in car trips and car VKT forecast. Most car trips expected to be reduced from the congested Roseville Bridge and Sydney Harbour Bridge corridors.	High	Potential to extend further north to Mona Vale or potentially north from Chatswood. Although the latter is already well served by CityRail's North Shore Line

Table 5.18 Indicative capital costs (Real $2009 millions)

Corridor	PRI and Government Costs	IMO	Total
CBD to Dee Why via the Spit Tunnel	3,455	2,356	5,812
CBD to Dee Why via Chatswood and Roseville Bridge	5,079	3,362	8,441