



**Let's reclaim Parramatta Road**  
**The light rail solution**



EcoTransit Sydney

**Let's reclaim Parramatta Road**  
The light rail solution



EcoTransit Sydney  
August 2012

[ecotransit.org.au](http://ecotransit.org.au)

[info@ecotransit.org.au](mailto:info@ecotransit.org.au)  
02 9567 8502  
0417 674 080



# Let's reclaim Parramatta Road

## Some light rail advantages

- Modern trams are quieter than buses, are non-polluting, and have greatly superior levels of comfort and accessibility. They can generally double the carrying capacity of routes on which bus services have reached their upper capacity constraints.
- Trams are much more pedestrian-friendly than buses because their path, being constrained by rails, is entirely predictable.
- Studies of tourist behaviour in world cities by the University of Sydney have show tourists travel more widely on rail lines. Light rail will encourage more tourists to travel beyond the CBD and to regional attractors such as the Leichhardt entertainment precinct.
- Modern low-floor trams will be universally accessible for passengers in wheelchairs. Sydney Buses are not universally or consistently accessible and disability advocates report that waits of over an hour for accessible buses are common in the Inner West.

## The light rail solution

Sixty years of government pandering to the road and motorists' lobbies have turned Parramatta Road, once a thriving commercial and residential strip, into 'The Great Western Highway' – a pompous name for a grimy traffic sewer.

But the opportunity now exists to reverse decades of damage, because, under the impact of relentlessly rising motor fuel costs, **Sydney's traffic growth stalled eight years ago.**

With a modest investment in light rail it's now possible to remove tens of thousands of vehicle movements a day – particularly in the peak periods – from Parramatta Road and restore the historic thoroughfare as a pleasant and liveable place!

Every tram carrying 200 passengers is equivalent to a single lane of peak period traffic 2km long. Fewer than 15 trams could carry all the commuters in the car traffic crawling from Strathfield to Railway Square in the morning and afternoon peaks.

Compared to a general traffic lane which can carry less than 2000 people per hour, a tram lane can carry 7,500 people an hour.

It would also carry up to twice as many commuters as a bus express lane. Trams would run every two minutes at peak and every five minutes off-peak. Late night services could run every ten or fifteen minutes connecting with Night Ride buses.

And world experience proves that light rail creates a confidence in its permanence that ephemeral bus routes can never have, so light rail provides certainty for long term investment by employers, developers, home-buyers and small businesses.

# Let's reclaim Parramatta Road

## Do we need to build an underground M4 East first?

Building the world's longest underground urban motorway is completely unnecessary.

Sensing a shift in public attitudes, and painfully aware that passenger car travel has been static for years, the road lobby argues that Parramatta Road could be revitalised by light rail but only after the state builds a prohibitively expensive four- or six-lane motorway tunnel to divert traffic from the road.

In the latest version of this plan, more than the entire width of Parramatta Road would be dug up to create a cut-and-cover M4 East tunnel. Hundreds of buildings would have to be resumed. Construction of this 25m deep trench would disrupt Parramatta Road for years and devastate its environs. It would also require concentrating toxic emissions at a few exhaust stacks.

The build-a-motorway-first argument is entirely spurious. If light rail took over two lanes of the six-lane highway it would replace the equivalent of more than two lanes of general road traffic.

Under the impact of relentlessly rising oil prices, passenger car vehicle kilometres travelled (VKT) in Australian capital cities has been flatlining for eight years. And per capita VKT has been falling since 2004. It's now back to 1993 levels with no sign of the decline stopping.

**By contrast demand for public transport is rising. Our peak period public transport is at, or close to, full capacity.**

If the M4E had been built a decade ago it would have resulted in serious induced traffic growth and quickly reached capacity in the peak periods. This would in turn have led to a decline in overall network speed as traffic flowing onto and off the motorway clogged local streets that could never be widened.

However in the new circumstance of rapidly rising energy prices and no traffic growth, funds spent on extra road space would most likely be completely wasted. These funds could not be spent on the public transport and rail freight alternatives that would substantially reduce road traffic in the short term.

By spending just 5 per cent of the cost of a mega-motorway non-solution, it's possible to massively reduce traffic on Parramatta Road. Every tram carrying 200 passengers is equivalent to a single lane of peak period traffic 2 km long. So a light rail solution will actually clear Parramatta Road of unnecessary road traffic to the CBD and create free-flowing conditions for road traffic that really does need to be there.

*Under the impact of relentlessly rising oil prices, passenger car vehicle kilometres travelled (VKT) in Australian capital cities has been flatlining for eight years. And per capita VKT has been falling since 2004. It's now back to 1993 levels with no sign of the decline stopping.*

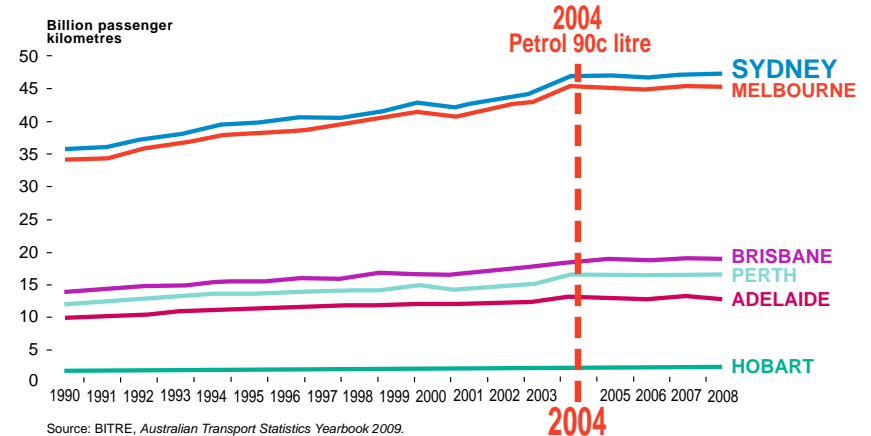
The road's peak period congestion is created by a handful of car commuters.

Approximately 6,000 vehicles travel inbound on Parramatta Road in the morning 2-hour peak and outbound in the afternoon 2-hour peak. If just a quarter of those drivers swap to public transport, the road's bottlenecks will be cleared.

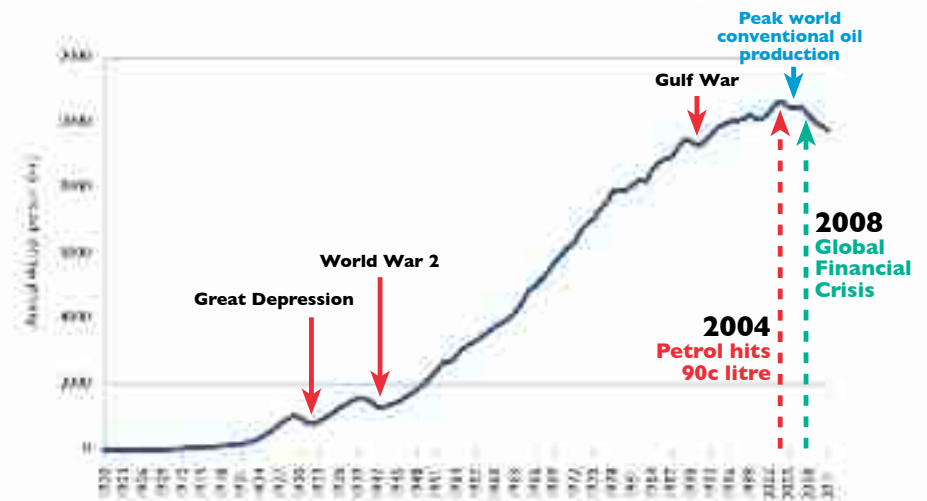
It makes no economic sense to spend a reported \$12 billion on what would be the world's largest underground motorway just to cater for a tiny minority of commuters who insist on driving to work in the CBD.

A small fraction of the \$12 billion price tag for an M4E motorway would revitalise Parramatta Road, create alternative means to access CBD jobs and services and new employment along its route. The light rail solution would revolutionise public transport coverage, capacity and speed and dramatically cut road traffic.

Total car passenger kilometres for capital cities (1991 – 2008)



Australian trend in vehicle kilometres travelled per person



# Getting cars and buses off Parramatta Road

In EcoTransit's proposal, trams would run in the kerbside lanes (the present express bus lanes) with the possibility (subject to detailed planning and staging of replacement of most bus services on the master route) of express buses also using the tram lanes. However we see this as a temporary measure only.

Kerbside tram lanes would be grassed wherever possible and would act as a buffer between the footpath and the general traffic lanes providing a more pleasant pedestrian experience – an urban design solution much used in Europe.

As construction of the light rail route proceeded, bus interchanges, park & ride stations and kiss & ride facilities would be positioned at a series of strategic interchanges along the route. These would act to progressively “filter out” car traffic currently bound for the CBD.

Trams would bring about the revitalisation of Parramatta Road and, as part of an organic renovation of the strip, additional local retail parking would be created, replacing the minimal amount of parking along Parramatta Road itself.

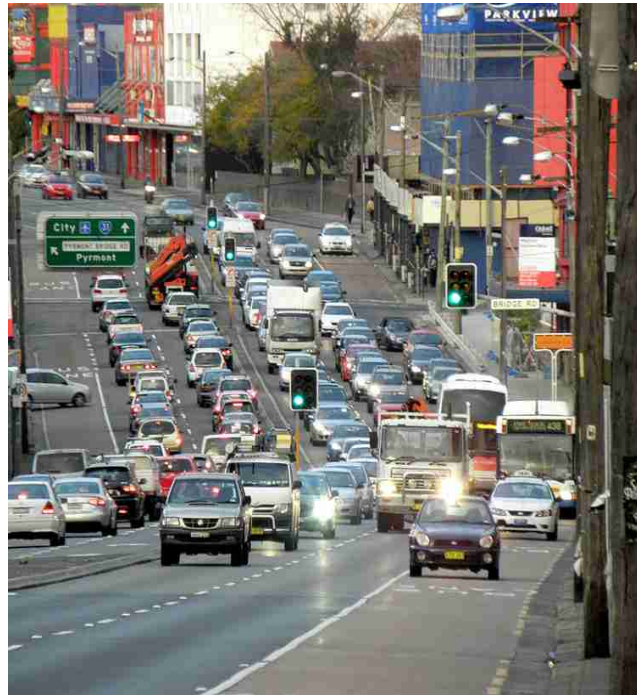
In order to satisfy strongly rising demand for public transport we need to convert bus “master routes” to light rail wherever possible. Light rail can as much as double passenger capacity on bus master routes.

## What's a master route?

A public transport 'master route' occurs where several routes serving different catchments converge into a single route, usually towards a single destination (such as the Sydney CBD).

This may result in unnecessary and inefficient aggregation of vehicles along the master route, with local services reduced as vehicles are diverted to serve the master route.

If this occurs, the solution is to run a single fast, frequent, high capacity, service along the master route, with interchanges along the route being served by more frequent lower capacity feeder services.



For several kilometres west of the CBD, many different bus routes converge on Parramatta Road because it's the shortest express route into the CBD. Duplication of buses running along this master route has led to the major problem of bus congestion in the CBD.

Progressively transferring bus passengers onto a fast very frequent light rail service along the master route will greatly increase public transport capacity, and release buses to provide more frequent and widespread feeder services to interchanges with the light rail-served master route.

With the extension of the light rail along Parramatta Road from Railway Square to Strathfield the city will have trebled passenger capacity along ten kilometres of one of the Sydney's most important transport corridors.

## The right solution for containers

The proper long term solution to container trucks choking Sydney's suburban road network is to move the containers by rail. In this, Sydney is way behind world's best practice.

Railing containers could be achieved for a small fraction of the more than \$12 billion cost of Infrastructure NSW's proposed M4 East and its underground extension to Port Botany.

When Port Botany was first established, the goal was to have 41 per cent of containers moved to western Sydney container terminals by rail. In fact, the NSW railways submission to the 1979 Kyeemagh – Chullora Road Inquiry (which established the 41 per cent goal) stated that rail could handle over 70 per cent of expected container movements. The inquiry accepted the 41 per cent goal explicitly as a temporary political compromise. Since that time, the undue influence of the road transport lobby has seen rail's percentage of container movement fall to below 17 per cent.

Over three decades after the decision to make Port Botany Sydney's main port facility, the movement of containers by rail is hamstrung by the failure of successive governments to duplicate a three kilometre stretch of single track on the Botany goods line and to complete modern container centres at Enfield and Moorebank. Given the political will, this situation could be reversed within a single term of government.

Development of Port Kembla as an overflow port to Port Botany, with completion of the Maldon–Dombarton rail link, would also cost only a fraction of the M4E proposal.

# Let's reclaim Parramatta Road

3

# Let's reclaim Parramatta Road



## **Building Parramatta Road light rail in stages**

The project would be built in five stages. During each stage, there would be minimal disruption to road traffic and local business.

Light rail construction proceeds rapidly past any point on its route. One very successful American scheme for compensating local businesses during construction was to offer paid holidays to proprietors and staff for the few days of disruption to business involved.

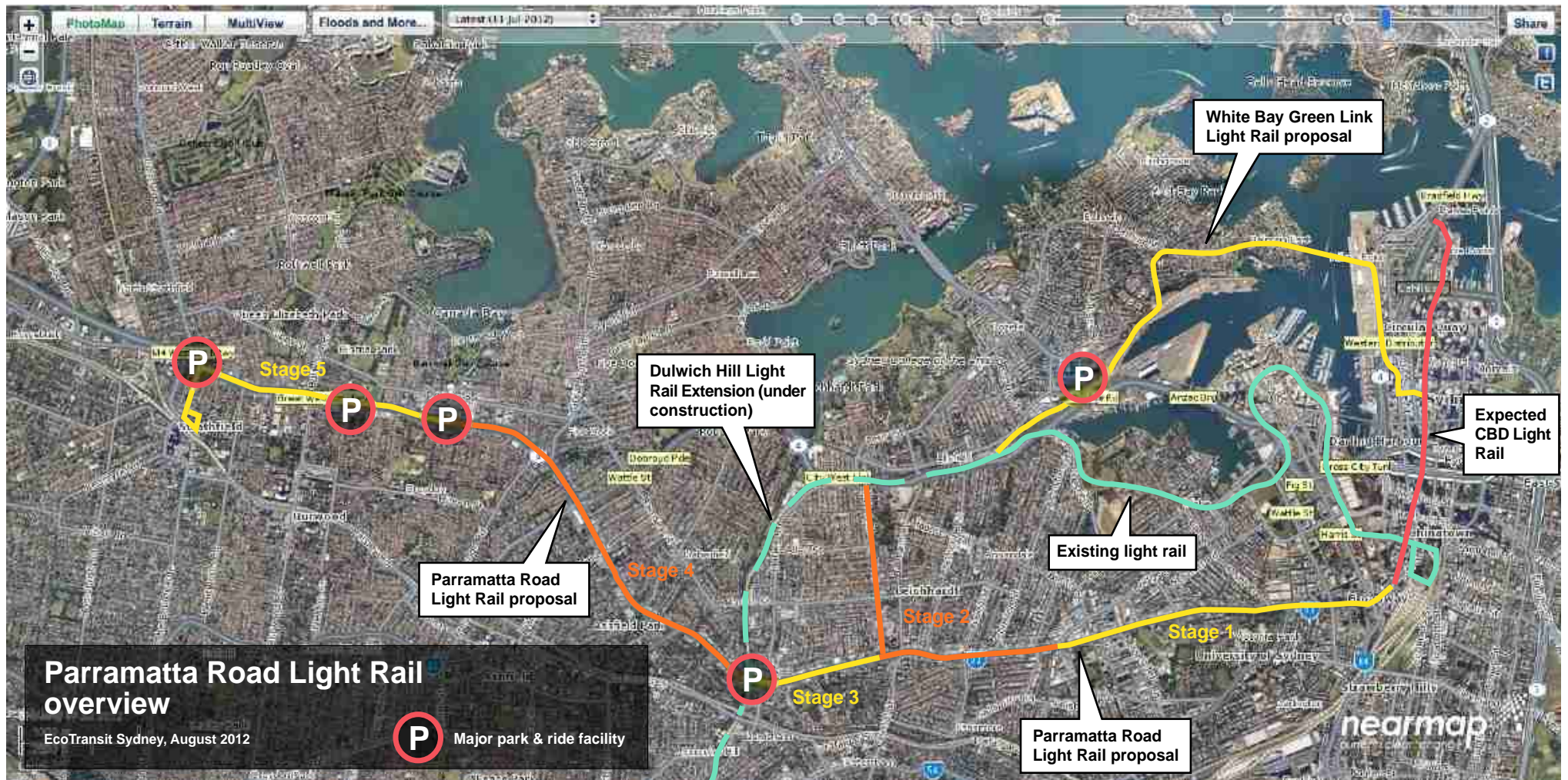
With the completion of each stage, trams would progressively replace more buses on the master route, reduce commuter car traffic, and open up Parramatta Road to an 'organic' process of revitalisation in which local communities, through local government, would have stewardship.

By contrast, Infrastructure NSW's privatised tollway tunnel model is predicated on legislatively overriding local government and a free hand for rapacious developers in the Inner West.

## **Costing the project**

On the basis of recent real-world examples, EcoTransit's light rail solution would cost around \$600 million including light rail vehicles and all track, power supply, stops, interchanges and park & ride. This is 5 per cent of the stated \$12 billion cost of an underground M4 East.

Our estimate does not include the cost of the freight rail measures already mentioned, but this sum would also amount to only a small fraction of the cost of an underground M4 East and its extension to Port Botany.



## A comprehensive light rail system for the Inner West

Parramatta Road light rail would form part of a comprehensive light rail coverage of the Inner West, with EcoTransit's White Bay Green Link proposal providing rapid access to Barangaroo and the northern and Central CBD.

The White Bay Green Link would act to filter out Victoria Road and City West Link car and bus traffic destined for the CBD. For more on the White Bay Green Link visit:

[http://www.ecotransit.org.au/ets/whitebay\\_greenlink](http://www.ecotransit.org.au/ets/whitebay_greenlink)

# Let's reclaim Parramatta Road

# Let's reclaim Parramatta Road



## Stage 1

### Railway Square to Pyrmont Bridge Road

Light Rail in the kerbside lanes from Railway Square to a temporary turnback at Pyrmont Bridge Road Camperdown.

Passengers can interchange with buses travelling to Lilyfield via Forest Lodge or the Inner West via Missenden Road.

This stage would serve:

- University of Technology Sydney, University of Notre Dame, and University of Sydney.
- Royal Prince Alfred Hospital health precinct, including the oncology centre, with short walk.
- Major residential complexes at the 'Central Park' brewery redevelopment, Mountain St, Ultimo and around Booth St, Forest Lodge and major residential complexes being built at Australia St Camperdown.

## Stage 2

### Pyrmont Bridge Road to Norton Street

Light rail in kerbside lane extended from Pyrmont Bridge Rd along Parramatta Rd to a junction just west of Norton St Leichhardt.

Light rail would also be extended along Norton St to City West Link.

A Port Jackson Interchange and park & ride at the junction of City West Link and Norton St. would facilitate passenger flows between Norton St and Dulwich Hill (via light rail) and the Bankstown Line. A bus and light rail interchange will be provided at the junction of Marion and Norton streets.

A free travel zone along Norton St would encourage access to businesses and increase amenity.

The junction of Balmain Rd and Crystal St would be reconfigured to allow traffic to cross Parramatta Rd and free up Norton St.

Buses such as the 438 can be redirected across Norton Street and may be able to continue on to the City via Glebe.

Stage 2 allows customers from Dulwich Hill, Ashbury, Lewisham, and Summer Hill to easily reach Leichhardt entertainment precinct by public transport and creates a frequently served accessible corridor to the RPA health precinct.

## Stage 3

### Taverners Hill

Light Rail would be extended to a new interchange and park & ride next to Hawthorne light rail stop which would allow passenger flows between Parramatta Road, Leichhardt, Rozelle, Glebe, Dulwich Hill, Summer Hill and the Bankstown Line.

Stage 3 would provide a faster connection between the Dulwich Hill light rail and the RPA health precinct and shorten the trip for southern customers to Leichhardt entertainment precinct.

It would also serve the approved development for over a thousand residents in Lewisham next to the Dulwich Hill light rail extension. This development will generate over two thousand customers who will soon be seeking jobs and services in the local area and connections to Parramatta Rd.

While modern light rail vehicles could negotiate the Taverners Hill gradient, this would significantly slow running times. It therefore makes sense to build a short tunnel for light rail and through road traffic under the crest of the hill.

The redirection of traffic off Taverners Hill would allow the creation of recreational areas and a low speed shared traffic zone in the high value area at the crest of the hill. Fort Street School will be well connected to the inner west. The area would be well placed to become a major education precinct to meet increasing demand for schools in the Inner West.



# Let's reclaim Parramatta Road<sub>7</sub>

# Let's reclaim Parramatta Road



## Stage 4

### Hawthorne light rail stop to Burwood

Light Rail extended along Parramatta Road kerbside running, past the intersection of the City West Link at Ashfield, to a major interchange (Burwood Interchange) and stabling facility in the industrial area bounded by Regatta, Queens and Harris Road, and Parramatta Road. This location is well placed to provide park & ride, kiss & ride, recreation and retail services and some high-density residences to supplement its current industrial role.

Currently, Parramatta Road at Ashfield does not have bus lanes or even transit lanes, leaving its peak use at a low 3,400 people an hour. With light rail extension, the capacity of this stretch of road will increase to a capacity of 9,900 people an hour – a trebling of use.

At Ashfield the M4 route turns from Parramatta Road on to City West Link to the City. A park & ride can be provided at the intersection of Fredrick St and Parramatta Road. A large kiss & ride facility at this junction will allow passengers to transfer to light rail. The road corridor is quite wide and provides ample space for stops and operational infrastructure like turnbacks.

A bus interchange at the junction of Liverpool and Parramatta Road will allow Ashfield and Strathfield buses to halve their route and double service frequencies through under-served suburbs like Enfield.

Existing bus routes, and sensible redirections, can cross between Ashfield and Haberfield and provide feeder connections into the Parramatta Road corridor.

Serves:

- Ashfield Park and Bowling Club.
- Higher density residential area north of Ashfield station.
- Under-served residential areas of Croydon.



# Let's reclaim Parramatta Road

9

# Let's reclaim Parramatta Road



## Stage 5

### Burwood to M4 termination

Light rail extended from Ashfield to Strathfield. At Burwood Road there is the opportunity for a bus interchange with major cross routes including Metrobus 41 which connects Burwood to Hurstville and Macquarie Park. This is also the entire length of bus route 461.

There are several large underutilised sites around the intersections of Parramatta Road, Concord Road, and the M4. These provide ample opportunity for a large park & ride station and kiss & ride.

Light rail traveling all the way to the Strathfield termination of the M4 would provide a transformational opportunity for an interchange at Strathfield Station. This would directly connect all the trains with light rail serving all the services, businesses, jobs, and homes along Parramatta Road. Strathfield also has a major bus interchange and is the terminus for services like the Metrobus 91 from Liverpool.



# Let's reclaim Parramatta Road

11