



10,000 Friends of Greater Sydney®

SYDNEY RAIL PLAN STAGE 1 A STRATEGY TO TAKE ADVANTAGE OF THE EXISTING RAIL INFRASTRUCTURE and provide MORE TRAINS, MORE SEATS, LESS WAIT, FASTER TRIPS

A 10,000 Friends of Greater Sydney (FROGS) publication

KEY OUTCOMES

- **RELIABILITY** – trains running on time
- **FREQUENCY** – a 'turn up and go' service for most passengers
- **JOURNEY TIME** – speedier journeys with Metro and express double-deckers
- **STATION ACCESSIBILITY** – passengers can easily change between trains
- **CONNECTING SYDNEY** – easier for passengers to travel between major centres of the city
- **SUPPORTING GROWTH** – more trains to growing population centres and new services for Greenfield areas
- **REDUCED ENERGY USE AND EMISSIONS** - new "Metro-style" trains consume much less power than double-deckers



- **PASSENGER CAPACITY POTENTIALLY DOUBLED**
- **A PROJECT WITHIN STATE BUDGET LIMITS**
- **A SOUND BASE FOR EXPANSION OF RAIL LINES**
- **STATE OF THE ART SIGNALING, TRAINS AND PASSENGER INFORMATION**
- **CONTINUED USE OF DOUBLE-DECKERS FOR LONGER TRIPS**
- **SECTOR 1 OPERATING BY 2014**

For too long, transport plans to reform Sydney's ailing system have been expensive and impractical. With this mind, 10,000 Friends of Greater Sydney set itself the challenge of formulating a plan that the Government could afford and was practical in the short to medium-term.

What we have come up with is a simple idea that has eluded planners for years. The plan is basically this: we will divide the current network into two systems using existing tracks. One track system will operate exclusively as "Metro-style" while the other will be double-decker. We will also introduce state-of-the art signalling, which will see more trains per hour and dramatically increase passenger numbers.

Once developed, this plan can easily be expanded, and will see rail extensions and new lines to the east, north west, west and south west.

GUIDING PRINCIPLES

Our aim is to take advantage of Sydney's existing rail infrastructure, and the best way to do this is to divide the network into two systems.

A 'turn up and go' Metro service - seen around the world - will be introduced in areas with high passenger demand. The existing double-decker trains will be used in areas of lower demand and for services that travel longer distances.

In an eco-age, this new plan will see the introduction of more energy efficient train sets, which will see a reduction in power use. The carriages will be cheaper as they will be bought off the shelf.

KEY CONSIDERATIONS

Some existing sectors would be operated as "Metro-style" services. Metro is a rail system where trains run at high speed between stations, load and unload quickly, and operate at high frequency. They suit short, high demand trips where users are prepared and willing to stand during the journey.

- A Metro system will potentially double the capacity of the existing rail network. This is possible by changing the existing double-decker rail carriages to Metro carriages and by upgrading the train control system to automatic train operation (ATO), which is 21st century signalling used throughout the world. In practical terms, we can increase capacity in Sydney by about 40 % without building new tracks. *(continued on back)*

"Taking advantage of existing infrastructure"

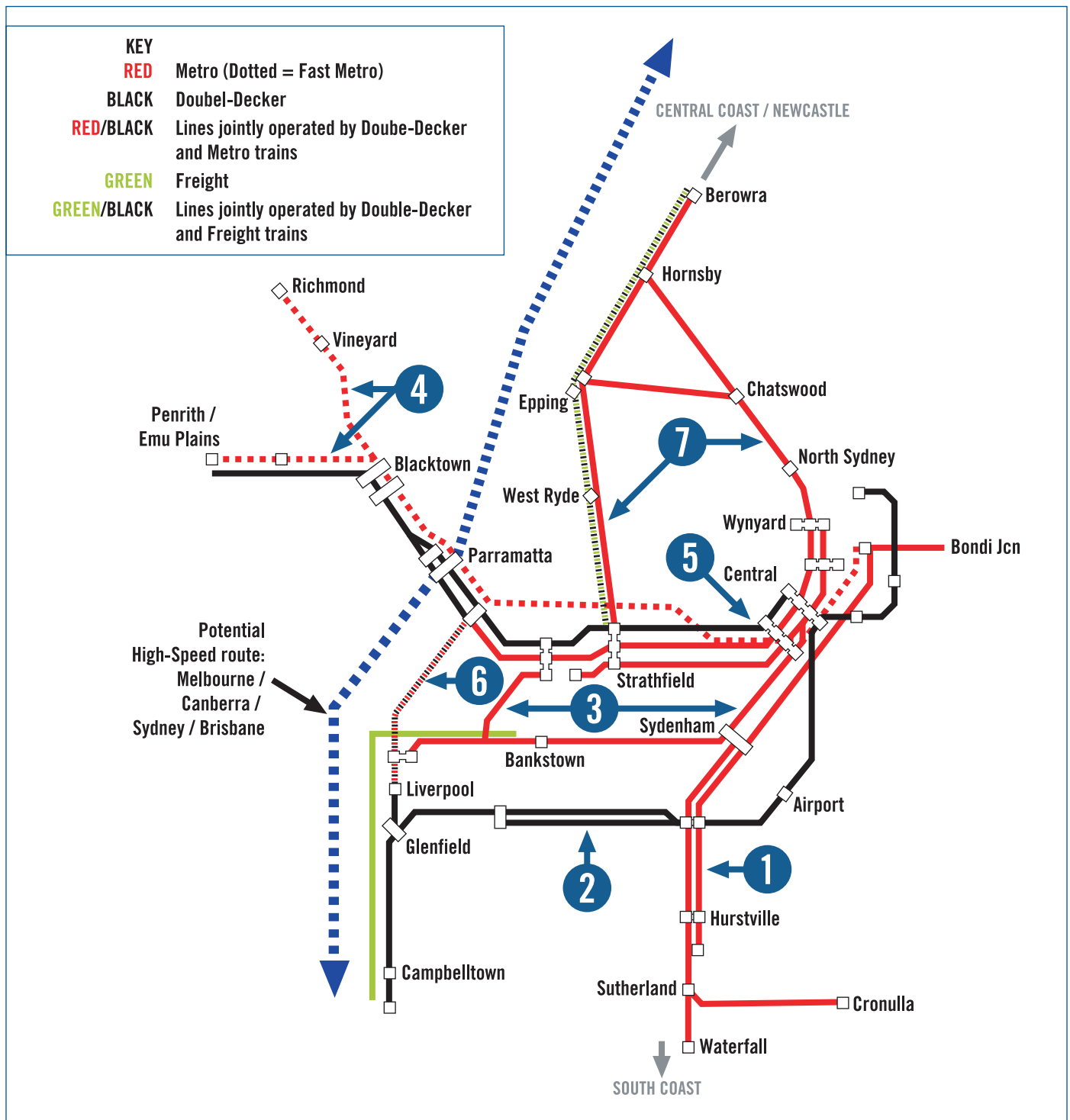




THE RAIL PLAN STAGE 1 – Showing Metro lines, suburban double-decker lines, fast rail line and freight lines

Key elements of the Stage 1 plan are -

- A. CBD-Westmead Tunnel** – To avoid intolerable disruption to existing services on the Main West and Inner West routes in conversion to Metro, extra capacity must be provided in the network. A new underground rail route between the Sydney CBD and Westmead achieves this. Funding by the Federal Government is proposed, as this route forms the initial part of a High Speed rail corridor between Sydney, Canberra, Melbourne and Brisbane.
- B. Four Tracks: St Marys to Penrith** – To extend the Metro service advantages to the Western Region and continue the suburban service to the Blue Mountains, four tracks must be provided between Westmead and Penrith. There are already 4 tracks from Westmead to St Marys so extension to Penrith forms part of this plan, as the corridor already exists for this to occur.
- C. Northern Freight Route** – Conversion of the Strathfield to Hornsby route to Metro is achieved by arranging passenger services from the Central Coast, to utilise the new freight route being established with Federal funds between these locations.





1 EAST & SOUTH

In operation by 2014

Waterfall/Cronulla to Bondi Junction Service: semi-fast – all stations Waterfall/Cronulla to Hurstville then fast to CBD plus Hurstville to Bondi Junction - all stations.

Metro Service: 30 trains per hour (tph) initially. Long-term capacity 40 tph (with ATO).

Additional Services: 2 tph Intercity services to South Coast (Wollongong) to Central Station.

Metropolitan Tracks: 2 tracks Bondi Junction – Sydenham; 4 tracks Sydenham – Hurstville; 2 tracks Hurstville – Waterfall/Cronulla.

2 SOUTHWEST

Macarthur/Glenfield/Revesby – Circular Quay via Airport Service.

Double-decker service; 20 tph.
Long-term capacity 24 tph (with ATO).

3 INNER WEST

Cabramatta/Lidcombe – Wynyard via Bankstown, Homebush – Wynyard via Strathfield Service.

Metro Service; 6 trains ex Cabramatta, 6 trains ex Lidcombe and 12 ex Homebush per hour. Long-term capacity 10, 10, 20 (ATO).

4 WEST

CBD – Olympic Park – Parramatta – Richmond/Mount Druitt/Penrith Service.

Metro Service; 24 tph.
Long-term capacity 40 tph.

Infrastructure requirements: tunnel from CBD to Parramatta (Westmead) then dedicated existing infrastructure to Richmond/St Marys. New dedicated track from St Marys to Penrith.

5 OUTER WEST

CBD – Strathfield – Parramatta – Emu Plains Service.

Double-decker service: 5 tph.

Infrastructure Requirements: existing tracks; Western Mains Central to Westmead; outside tracks Westmead to Emu Plains (shared with Sector 6). Tracks shared with Blue Mountains Intercity services.

6 SOUTH TO NORTH IN WEST

Macarthur/Campbelltown – Parramatta – Emu Plains Service.

Double-deck service: 5 tph.

Shares track Macarthur/Glenfield (Sector 2), Liverpool/Merrylands (Sector 7), and Westmead – Emu Plains (Sector 5).

7 NORTH & NORTHWEST

Liverpool/Epping – Town Hall – Chatswood – Hornsby via Gordon, and Hornsby via Epping/Chatswood Rail Line Service.

Metro service: 30 tph across Harbour Bridge. Long-term capacity 40tph (ATO).

All trackwork exists except Strathfield – Hornsby. Commonwealth plans to upgrade this line to 4 tracks to facilitate freight movement. Sector 7 services would have their own dedicated tracks between Strathfield and Hornsby while outer tracks shared between freight and Intercity (Central Coast/Newcastle) services.



KEY CONSIDERATIONS continued

Comparison between Metro and Double-Decker Trains

Metro trains per hour	= 40
Single deck capacity – seated and standing	= 1200
Maximum line capacity (40 x 1200)	= 48,000 pass/hour
Double-Deckers trains per hour (max)	= 20
Double-deck capacity-seated & standing (max)	= 1200
Maximum line capacity (20 x 1200)	= 24,000 pass/hour

- With people now able to turn up at a train station and jump on a train without needing a timetable, they will be less likely to use their car. Overseas experience has shown that people are more likely to catch a train if there is one train every two to six minutes.
- It will be easy for passengers to move between the Metro and double decker systems. With the new signalling, the double-decker trains will also provide a more frequent service.
- Sydneysiders have been led to believe that a Metro means standing up. The reality is that a Metro provides more seats per hour.
- The immediate focus must be on servicing the CBD and Parramatta – major activity centres – with high capacity rail services. The plan will be rolled out to include the Lower North Shore, Macquarie Park, Olympic Park, Airport and Hurstville. These will be followed by growth centres at Penrith, Norwest, Liverpool, Campbelltown and Bankstown.

THE CHALLENGES

For our plan to be fully operational, there are a number of financial and infrastructure constraints that need to be addressed.

- Limit the financial impact of purchasing new single deck Metro carriages by timing to coincide with the planned purchase of new carriages as the existing fleet is retired. Treasury funds have been committed to purchase 626 double-decker carriages for delivery between now and 2013 to replace the non airconditioned trains, *but there are 885 carriages that need to be replaced before 2017 that are not yet on order.*

We plan to replace the 885 carriages with Metro trains and not extend the existing contract or place further orders for double-decker carriages.

- Continue with the Clearways implementation, as its completion is vital for effective Metro operation.
- Upgrade the existing signalling system to reduce headways between trains, enabling many more trains to get into and out of stations. The existing signalling system is obsolete and the upgrade to block signalling (ATO) must be a priority.
- The Federal Government has indicated interest in funding critical elements of the system, such as the proposed Parramatta Metro and new freight lines. In response, we have included these upgrades into our plan.
- We have also identified that there is unused land and basic infrastructure in Sydney which, with a minimal amount of money, will provide quad tracks between North Sydney and Chatswood, St Marys and Penrith, and the Main North line from Strathfield to Hornsby.



10,000 Friends of Greater Sydney®

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