

# **PROPOSED BRT PROJECTS FOR CONSIDERATION BY INFRASTRUCTURE AUSTRALIA**

**Submission by the Bus Industry Confederation**



**2009**

## **OVERVIEW**

This paper outlines a set of public transport infrastructure projects for consideration by Infrastructure Australia when determining the direction of funding from the Building Australia Fund.

Information and diagrams relating to specific projects have been collated by the Bus Industry Confederation with the support of State Associations and Bus Operators around Australia.

This paper also contains a set of national public transport initiatives identified by the Bus Industry Confederation as a priority for Commonwealth Government investment with a view to making public transport a genuine alternative to the motor car and a solution to the problems of climate change, peak oil and urban congestion.

## **NATIONAL**

There are several short, medium and long-term measures the Commonwealth Government can take through Infrastructure Australia to invest in new public transport systems, and support State Governments in expanding and improving existing public transport services. These measures if adopted will address immediate capacity constraints on systems in urban and regional centres; improve the efficiency and accessibility of systems and make public transport a genuine alternative to the car for all Australians.

The adoption of these measures will play a vital role in elevating public transport as a solution to the problems of climate change, peak oil and urban congestion.

Short Term measures to address immediate capacity demands and holes in the system:

- \$600 million for 2000 new buses on top of State Government existing purchasing and replacement programs over 5 years. Investment to take effect immediately.
- \$10 million for a public transport audit conducted by Infrastructure Australia in conjunction with the Major Cities Unit of the Department of Infrastructure, Transport, Regional Development and Local Government to identify public transport “black holes” in urban and regional centres for immediate address.

Medium Term measures to improve the efficiency and accessibility of public transport systems:

- \$2.2 billion over the next 3 years to purchase rolling stock for train and tram systems.
- \$300 million over three years to achieve integrated public transport service improvements to make existing rail – bus connections more efficient, improved timetabling, implement intelligent transport systems and establish park and ride facilities in transport disadvantaged areas.
- \$100 million over 3 years distributed amongst cities on a per capita basis for the development of an urban congestion “hot spots” program to identify and address major urban congestion blockages in the system and address them with some simple traffic management solutions.
- \$300 million to expand travel demand management programs over the next 3 years.

Long Term investment strategies to build a public transport culture in Australia and make public transport an alternative to the car for all Australians:

- At least \$5 billion investment in public transport infrastructure over the next 2 years through the building Australia fund and remainder of the AusLink 2 program, to assist with the implementation of bus and fixed rail infrastructure projects.
- A commitment of AusLink 2 funding to public transport infrastructure projects of \$5 Billion to 2014.

- The establishment of a Sustainable Transport Fund with revenue generated from transport and emissions trading related sources.

## **NEW SOUTH WALES/ACT**

Proposals for bus based public transport solutions in New South Wales have been broadly separated into two categories; Metro/Outer Metro and Regional and Rural. A bus priority corridor between Queanbeyan and the ACT, put forward by Deane's Transit Group also features amongst the key projects for New South Wales.

### **Metro/Outer Metro**

There are six key projects proposed for Metropolitan, Outer-Metropolitan and Ex-Urban Sydney designed to improve bus and coach services in the city and encourage wider use of public transport.

#### **1. 1000 new metro buses with capital to be provided by the Commonwealth Government**

In his 2004 Review of Bus Services in NSW the Hon Barrie Unsworth referred to the "desirability of an approach that pools funding resources from all 3 tiers of government – federal, state, and local. The Review suggests that at a central and local level, the NSW Government work with its federal, interstate (for cross border issues) and local government counterparts towards this goal."

The key representative body for bus operators in NSW, the Bus and Coach Association of NSW contends that 1000 new buses are needed to maximize the efficiency and effectiveness of bus operations in metro and outer-metropolitan Sydney.

These additional buses, if provided by funding through a three tiered funding pool would lower running times, improve and increase services to outer-metropolitan areas of the city and compliment rail services along major corridors to provide a greater number of Sydney-siders with an alternative to the car.

Increased public transport patronage in outer-metropolitan can play a significant role in reducing the traffic congestion experienced in the city during peak times and mitigating the impacts of fuel price increases on household income.

#### **2. A new coach terminal facility for Sydney**

Eddy Avenue is the hub of all regional coach tourism in NSW. The Eddy Avenue coach terminal handles 750,000 passengers a year with these numbers rapidly growing. The facility is now outdated, undersized and woefully inadequate for the needs of interstate travelers and overseas tourists.

Eddy Avenue coach terminal was built in 1955 and has scarcely been upgraded since. It is unsafe, unclean and inadequate. Anecdotal evidence from operators involved descriptions of the site likening it to a "public toilet".

Investment in making this terminal a world-class facility, where travelers can set down, plan accommodation, tickets and receive information about available attractions in a modern, sleek and attractive environment is a must.

#### **3. Upgrade the 43 strategic corridors in Sydney from regular bus services to appropriate forms of Bus Rapid Transit**

This project would require the development of infrastructure and acquisition of bus rapid transit rolling stock to establish existing strategic corridors as Bus Rapid Transit routes fed by local services, some of which might be demand responsive.

#### **4. Upgrade bus priority measures on the two existing Bus Transit Ways.**

This project would involve all Transit Way signals being pre-emptive and the extension of the Northwest Transit Way to Richmond, where it would become a Bus Rapid Transit system. This could be partially funded by the closure of the Richmond railway line and its replacement by the Bus Rapid Transit system.

#### **5. BRT as an interim solution to the North West rail project**

A Bus Rapid Transit service running parallel to the proposed North West rail line and fed into by local bus services could provide an immediate solution to the mass transit needs of commuters in the area until construction of the rail line is complete.

This would serve the purposes of fulfilling the transport demand in the area, easing traffic congestion coming from the North West area and building a public transport culture amongst residents in the area, which would benefit the rail corridor through increased patronage in the future.

#### **6. Better bus stop facilities at Wynyard, QVB and on the outbound route along Clarence Street**

As the volume of people using these stops continues to increase, the requirement for better shelter, seating and passenger information systems becomes more urgent at these stops.

### **Regional and Rural**

Regional and rural projects proposed cover 6 key regional centres in New South Wales. The regional and rural proposals refer to specific items needed at specific locations rather than an overarching strategic investment approach.

#### **Ballina**

- It is proposed that a “B” Bus priority light be installed on Kerr Street (Pacific Highway) at the Shopping Centre entrance.

#### **Lismore**

- The construction of a traffic light at Dibbs Street and Ballina Road.
- Relocation of Pedestrian lights outside Goonellabah Public School 50 metres to the east to the intersection of Jubilee Avenue.
- Extension of Oliver Avenue, Goonellabah to Ballina Road
- Bus Shelters and bus zones at St Vincent’s Hospital, Dalley Street and Avondale Avenue.
- Bus Shelters at Lismore Transit Centre.

#### **Mittagong**

- Bus shelters and walkways at Highlands Marketplace and Homemaker Centre.

- Bus Stopping place opposite Bowral Pool in Bowral Road – not very safe at present.

## **Tamworth**

- Traffic lights installation at Manilla Road and Tribe Street.
- Roundabout at Gunnedah Road and Dampier Street.
- Roundabout at Kent Street and Werris Creek Road.
- Roundabout at Grant Street and Hillvue Road.
- Roundabout at Ringers Road and Goonoo Goonoo Road.
- Cover bus interchange at Kable Avenue, main stop.
- Bus shelters at Currububula
- Sealing of the bus interchange at Duri on Werris creek Road

## **Dubbo**

- Cover the main bus stop in Macquarie Street to match the Cab rank cover next to the bus stop.

## **Griffith**

- Covered main bus stop at the taxi stand in the main street.

## **Queanbeyan to ACT Bus Priority Corridor**

With 61 per cent of persons living in Queanbeyan employed in the ACT and 37 per cent of persons working in Queanbeyan living in the ACT (source: Queanbeyan City Council), on average 2,300 passengers are carried travel between the two cities in the morning peak period each weekday.

Increasing traffic congestion has resulted in bus travelling times between the two cities increasing by 45 per cent in the past two years. This means it is imperative that an adequate public transport system between the two cities, particularly during peak times, be established.

The following measures are required to establish a bus priority corridor between Canberra and Queanbeyan:

- The construction off the existing Norse Road slip lane near Harman and continue that bus lane to the intersection of Canberra Avenue and Hindmarsh Drive.
- The installation of “B” priority signals in both directions at the corner of Canberra Avenue and Hindmarsh Driver.
- The installation of pre-intersection bus lanes and “B” priority signals on Canberra Avenue at Ipswich and Nyrang Streets.
- The installation of traffic lights at the corner of Canberra Avenue and Giles Street.
- Installation of bus priority lanes and “B” priority signals to permit buses to travel in the new centre lane in Constitution Avenue up to London Circuit and make a right hand priority turn from the centre lane. Local ACTION buses would also benefit from this measure.

## **VICTORIA**

Four key projects for Bus Rapid Transit in Melbourne have been identified in areas where rail services are lacking and additional bus services are already being used to service the needs of outer metropolitan commuters.

### **Chelsea to Doncaster via Springvale [see map 1]**

This Bus Rapid Transit route would cover the existing successful SmartBus route Springvale to Nunawading, part of the Green orbital route. The development of the Eastlink Road will allow much greater bus priority in these areas and the development of major interchanges for this Bus Rapid Transit system will see transit oriented developments built around the interchanges.

### **Huntingdale to Stud Park via Wellington Road [see Map 1 ]**

The 900 Smartbus Route is already operating with limited priority. The establishment of a Bus Rapid Transit system along this Corridor would provide a mass transit system in an area that lacks rail services.

Greater bus priority is possible using median links between Monash University, Chadstone shopping centre and other major activity centres along the route.



**MAP 1 – Chelsea to Doncaster via Springvale and Huntingdale to Stud Park via Wellington**  
**Road Bus Rapid Transit Routes**



**Sydenham – Caroline Springs – City via Westgate Bridge [see Map2]**

This Bus Rapid Transit system would service areas outside of the major rail corridors and see the establishment of a new radial bus route to the city.

The Bus Rapid Transit system would utilize the capacity on the Western Highway created by the Deer Park Bypass. The area which would be serviced by this system is a growth area and a Bus Rapid Transit system would provide cross town links and complement orbital bus routes.

## **MAP 2 - Sydenham – Caroline Springs – City via Westgate Bridge Bus Rapid Transit Route**



### **Monash Freeway Bus Rapid Transit**

A Bus Rapid Transit system built to travel along the Monash Freeway and service the mass transit needs of adjoining areas would be a very cost-effective solution to increasing demand for public transport in the area.

The South East Rail corridor from Pakenham, Cranbourne and Dandenong is at capacity during peak times and capacity constraints cannot be addressed by rail without significant infrastructure upgrades to the whole heavy rail network.

A Bus Rapid Transit system can provide an immediate, mid-term and potentially highly cost-effective long term solution to these capacity constraint issues.

In this system, buses would travel on an express run to the city in a High Occupancy Vehicle lane and loop back from the designated city drop and pick up points. As the buses would run express, they would not impede traffic flow on the Freeway.

This Bus Rapid Transit solution could be introduced very quickly and could serve as an interim measure to ease traffic congestion and satisfy public transport demand during any upgrade to the South East Rail Corridor.

Buses also provide a great deal of flexibility and at the end of any rail corridor upgrade, the rolling stock used in the Monash Freeway Bus Rapid Transit system could be redeployed to service demand in other areas of the city.

The following measures have been identified for the development of a Bus Rapid Transit system along this route:

- The upgrade of the Monash Freeway to 3 or 4 lanes providing the opportunity to introduce a High Occupancy Vehicle transit lane.



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- The development of park and ride infrastructure along the Monash Freeway in places such as Stud Road, Narre Warren and Berwick.
- The purchase of rolling stock suited to the Bus Rapid Transit system i.e. articulated and double articulated buses.

## **SOUTH AUSTRALIA**

There are two corridors that could be developed in Adelaide as highly successful options to demonstrate and implement Bus Rapid Transit systems.

### **Two key Bus Rapid Transit corridor projects are proposed for Adelaide.**

#### **Northern Adelaide**

The Main North Road from Gepps Crossing to the City Centre could have a Bus Rapid Transit corridor, approximately 9 kilometres in length, developed within the existing road infrastructure. This would require a dedicated bus lane on the curbside in both directions. Bus priority measures at the traffic lights would complement the bus lane and shorten travel time on the system.

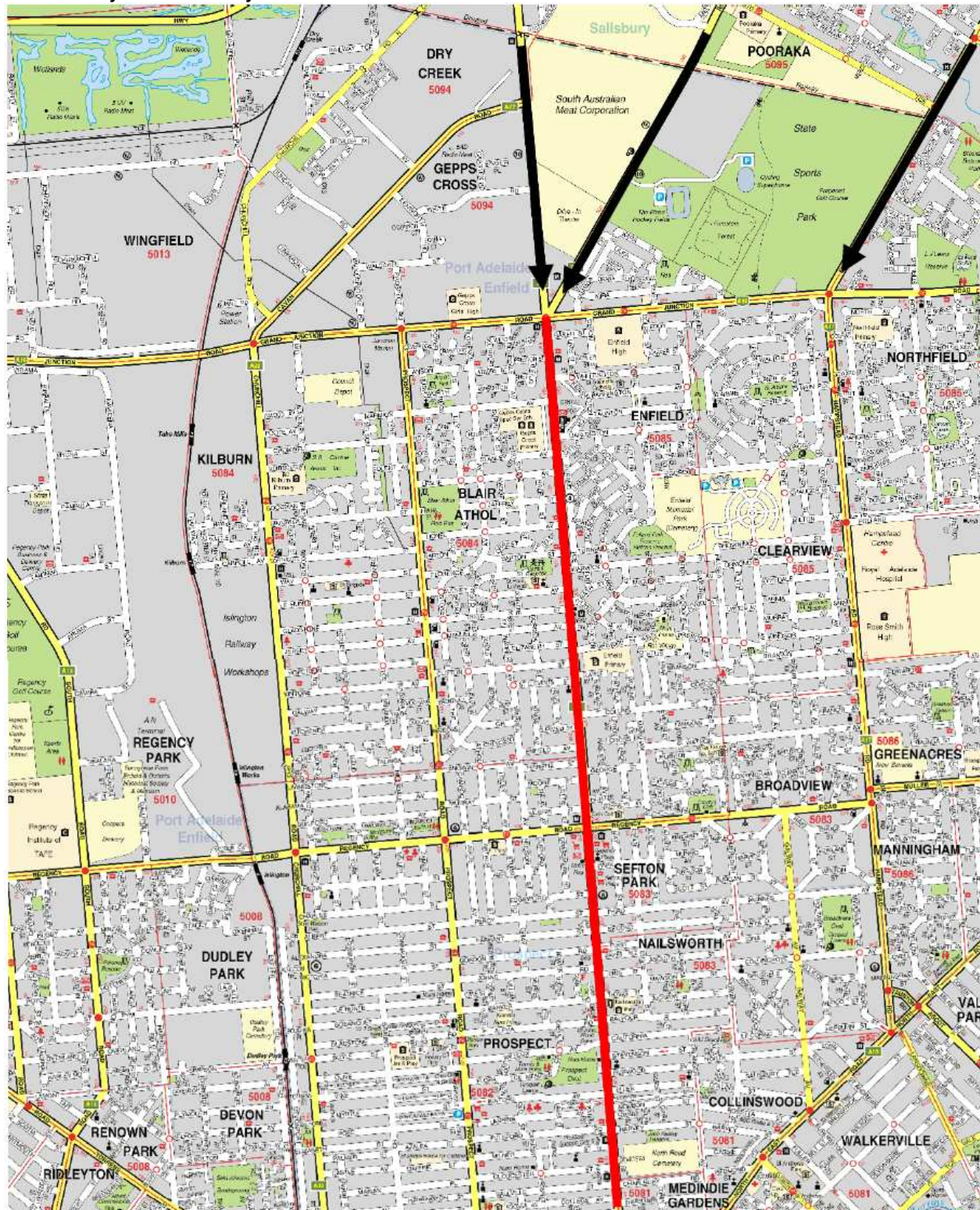
A park and ride facility should be provided just north of the intersection of Main North Road and Grand Junction Road with a minimum car park space of 600, but this must allow for expansion.

The roads carrying the BRT corridor would be [refer to map 1]:

- Main North Road – from the intersection of Grand Junction Road to O’Connell Street
- O’Connell Street
- King William Road
- King William Street

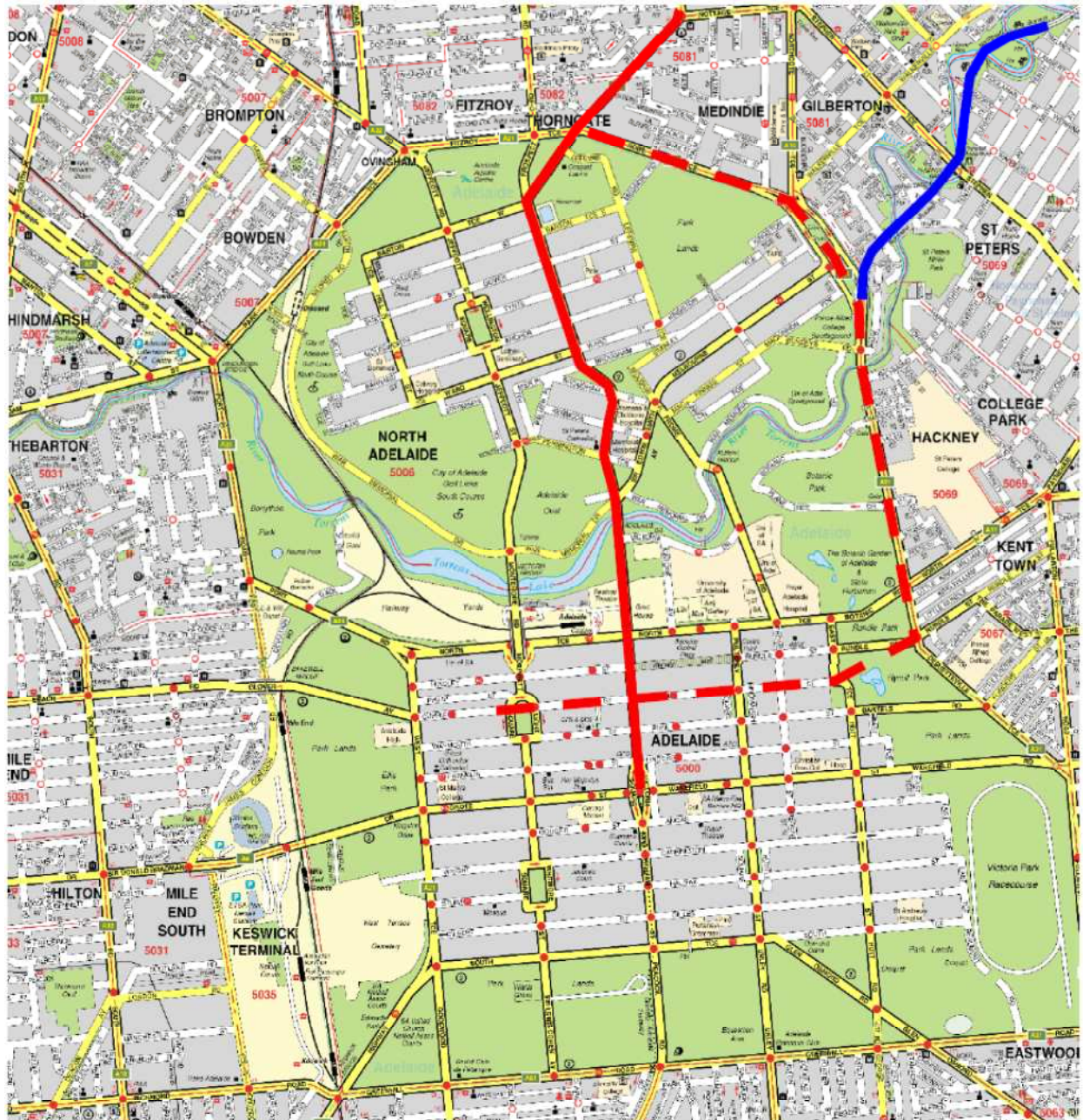
## **MAP 1 – Rapid Transit Corridor for Northern Adelaide**

*Proposed Public Transport Projects for Consideration by Infrastructure Australia*  
**Submission by the Bus Industry Confederation**





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## **Southern Adelaide**

The Tonsley rail corridor could be utilized better through the development of a purpose built roadway for a bi-directional Bus Rapid Transit.

The Bus Rapid Transit could join South Road between Cross Road and the Anzac Highway intersection. Major roadwork is currently occurring at the South Road/Anzac Highway junction to improve traffic flow. Also the Glenelg tramline will have grade separation over South Road as part of the South Road upgrade.

Anzac Highway should then be used with a dedicated bus lane in both directions between South Road and West Terrace. As a complementary project this bus lane could be extended towards Glenelg to assist with bus traffic along the length of the Anzac Highway. West Terrace and Grote Streets in the city would also require bus lanes in each direction.

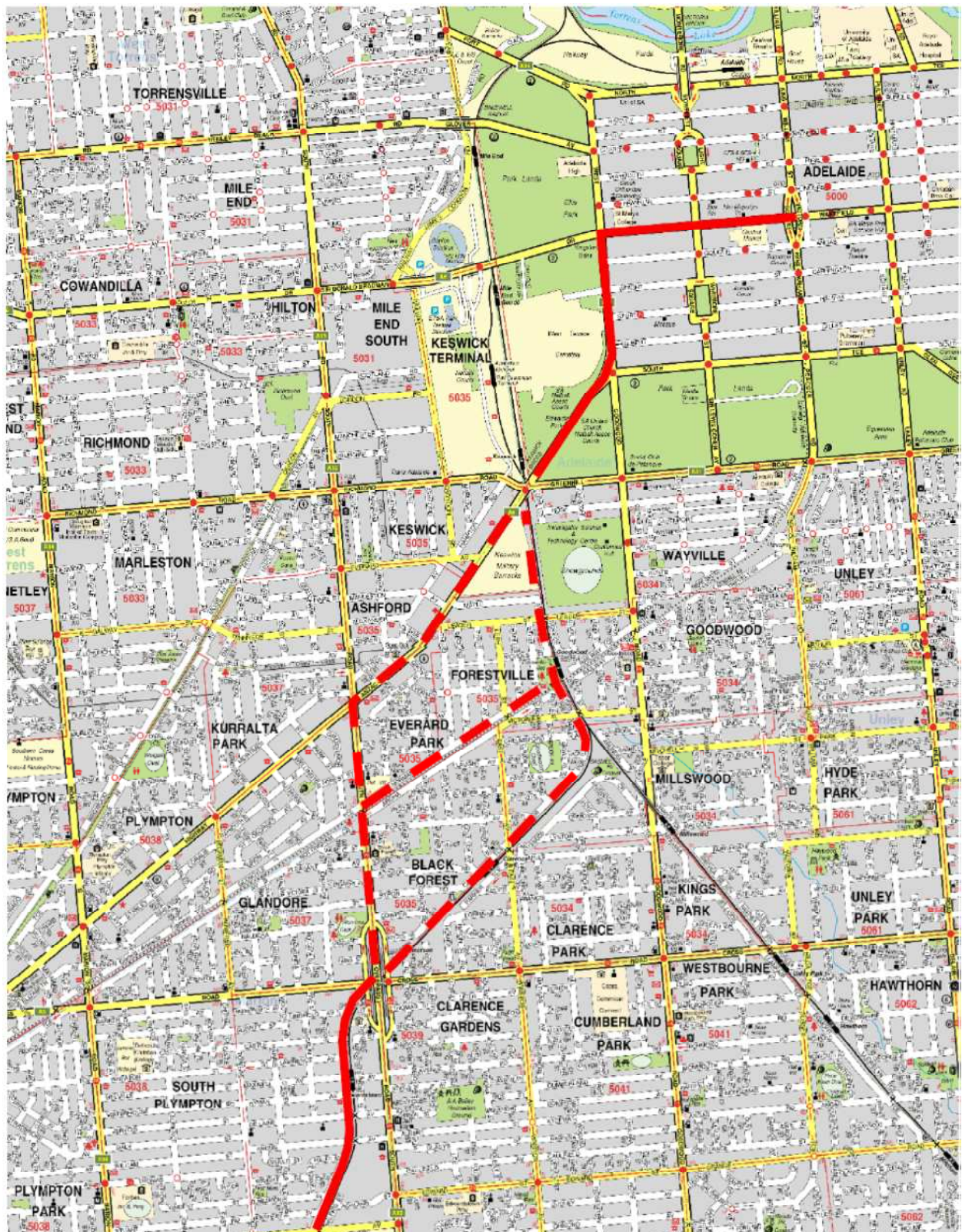
The Bus Rapid Transit corridor would then connect to the northern Bus Rapid Transit corridor on King William Street to allow a through linking of north/south bus services and ensuring that the city centre is not left with a lot of terminating buses from the north and south and therefore requiring excessive kerb space for turn around zones.

Where the BRT uses existing roads, bus priority traffic light controls would need to be incorporated within the corridor.

A Park & Ride facility should be provided near the intersection of South Road and Sturt Road at Bedford Park. The minimum capacity for this facility would need to be 600 cars, but possible future expansion would need to be incorporated into the planning and design of the facility. The length of the proposed Bus Rapid Transit corridor from Sturt Road to the City Centre is approximately 12 kilometres. This corridor is shown on the attached map [refer to map 2].

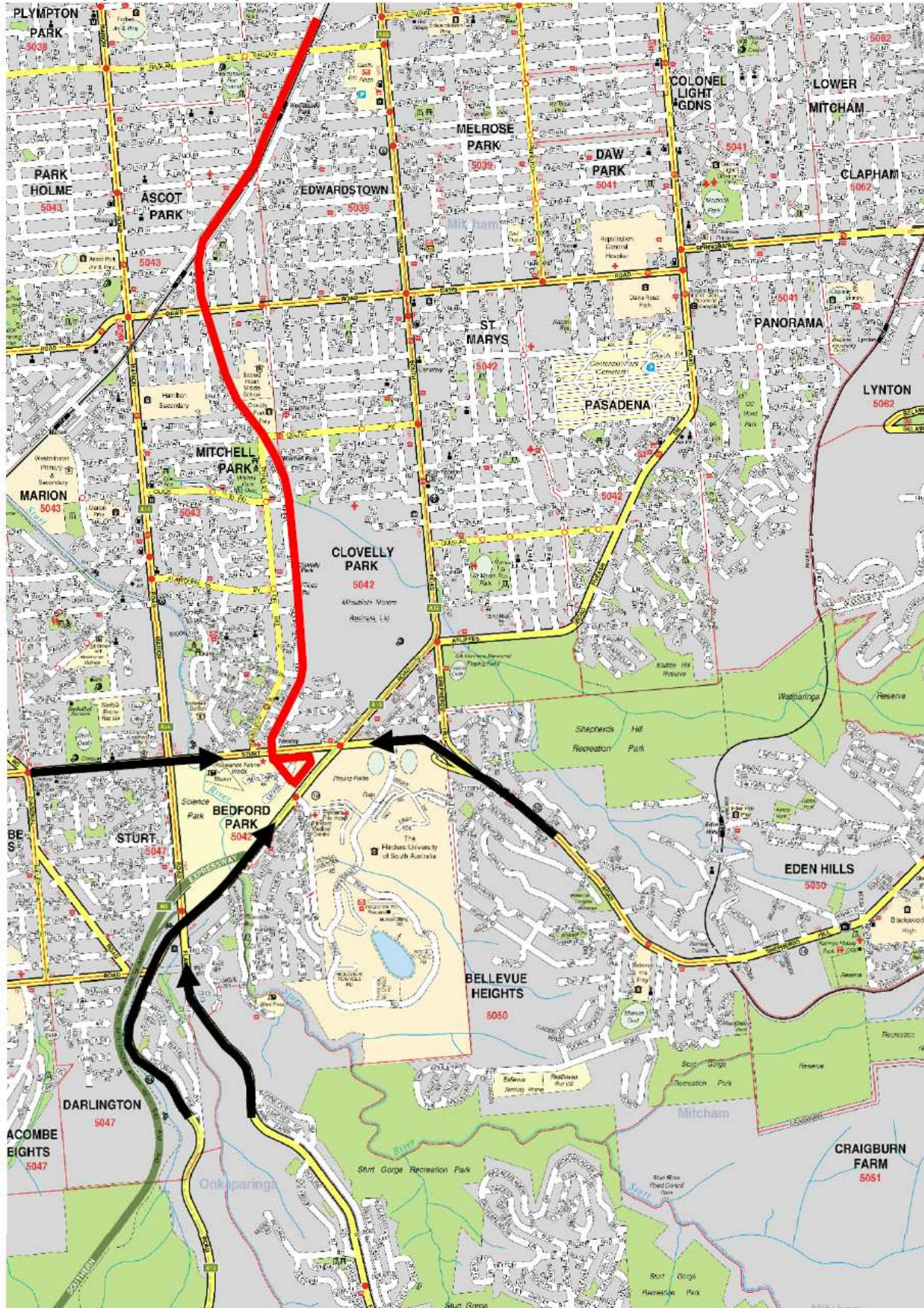


**MAP 2 – Rapid Transit Corridor for South Adelaide**





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**WESTERN AUSTRALIA**



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This North Eastern corridor, if established, would redress the shortfall in public transport in the area created by a lack of a major rail line and create a sixth and final spoke to the main public transport spine network in Perth and provide comprehensive coverage of all metropolitan corridors in the city.

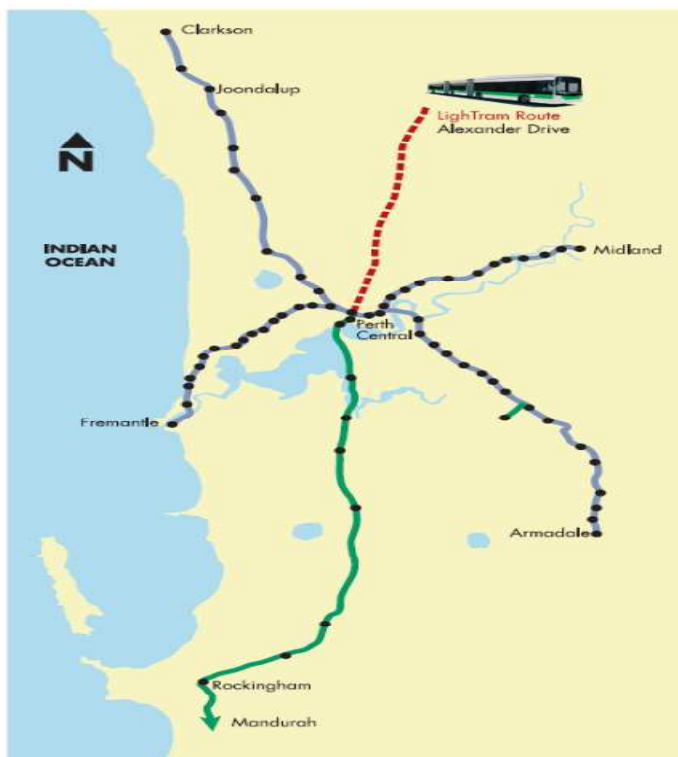
### **Bus Rapid Transit for the North Eastern Corridor of Perth**

Public transport in the north eastern suburbs of Perth currently consists of conventional bus services. The growth in population and consequently public transport demand has been significant in the area and capacity constraints are being experienced on the system. The north eastern corridor has a potential catchment of 250,000 people who are not being serviced by a form of mass transit in to the city.

The solution to the transport demand in the area can be delivered by a cost-effective high capacity system such as Bus Rapid Transit system.

This transport spine would follow an alignment along Alexander Drive and Fitzgerald Street. [See Map 1]

### **MAP 1 – Bus Rapid Transit (Light Tram) for the North Eastern Corridor of Perth (Route marked in red)**



## **TASMANIA**

Increased traffic congestion in Hobart and Launceston is having significant impacts on bus running times and reliability. It is also having a negative impact on the productivity of workforces in both cities.

A solution needs to be provided to mitigate the impacts of traffic congestion on the environment and economy of these Tasmanian cities and given the relatively high-cost of light rail systems, combined with the fact that there are already bus systems in place in both cities, bus priority measures, including Bus Rapid Transit, can provide the answer to these problems.

There are only a handful of bus priority measures in place in Hobart and Launceston, these include:

- On-street bus stations which are bus only areas in some places;
- Contra flow lanes in Hobart (Collins Street and Franklin Square)
- Southbound bus lane through Elwick Road – Main Road Intersection
- Buses are able to go straight ahead from the turn left only lane – southbound on Elizabeth Street at the intersection with Federal Street.
- The recent introduction of the “give way to buses pulling out from stops” Road Rule.

There are two key bus priority projects which, if implemented, can improve traffic flows and to provide people living in Hobart and Launceston with a genuine alternative to the car.

### **Southern Outlet – Macquarie Street Bus Priority**

The existing bus routes along the Southern Outlet and Macquarie Street are arriving on capacity constraints which are affecting bus reliability and running times.

A bus priority project will improve the public transport service in these areas. There are currently three lanes available on the route; two wide traffic lanes and an emergency stopping lane. The emergency stopping lane should be converted to a bus only lane or a transit lane during peak times. This would enable buses to bypass the queues and greatly encourage public transport use.

In addition this bus priority system could be fed into by a park and ride facility currently being developed by the Kingborough Council and Metro.

### **Main Road Hobart – Glenorchy Infrastructure Study**

The all-stops service between Hobart and Glenorchy is Hobart’s primary public transport corridor.

It contains three old style shopping streets (New Town, North Hobart and Moonah) where councils are trying to slow car traffic down and provide for pedestrians.

Several of the intersections along the route are becoming increasingly complex sets of traffic lights. As a result traffic congestion along the route has been growing steadily. There is a need for a study to be undertaken of the potential to improve bus movements along this corridor through bus priority or Bus Rapid Transit solutions.