



**RAA Submission  
State Government's Proposed Extension  
to the Tram Network**

June 2017



**RAA**

## **Introduction**

The Royal Automobile Association of South Australia (RAA) represents the interests of more than 685,000 South Australians in both the metropolitan and regional areas. Our members look to RAA to represent their interests on a broad range of motoring and mobility related issues.

RAA welcomes the opportunity to provide comment on the proposed extension of the tram network and as a key stakeholder be involved in any future discussions in relation to public transport policy and its application.

## **Executive Summary**

RAA strongly supports a public transport network that encompasses and integrates a range of transport modes including the likely potential use of autonomous vehicles and ride sharing options.

An integrated, efficient and affordable public transport network is vital to a strong and prosperous economy. Without a public transport system that allows all South Australians to get around as easily as possible for whatever purpose – work, play, study or socialising, not only are individuals in our community at a disadvantage but communities themselves become marginalised.

Decisions as to the best places to extend the tram network should include consideration, on a common sense basis of the cost of the proposed network, the level of inconvenience to those who wish to, or have no choice but to, use other transportation modes, in particular the private motor car. Duplication of public transport services along the same route should be avoided and considered in determining where best to invest in the extension of the tram network.

The RAA enjoys a strong and positive relationship with the state government, particularly in relation to road and other transportation infrastructure policies. Before final decisions are made about potential tram routes, RAA looks forward to having discussions with the Department for Planning Transport and Infrastructure (DPTI) on the relative merits and implications of each of the routes.

## **Public Transport – RAA Policy**

RAA supports the target of South Australia's Strategic Plan to increase the level of public transport use to 10% of all journeys by 2018 and double the number of cyclists by 2020. To do this public transport must be convenient, accessible to all sectors of the community, affordable and reliable.

RAA believes that public transport must be designed to allow users to incorporate other mobility options in their travel modes including cycling, walking and the use of private vehicles where appropriate for part of the journey. RAA supports improvements to the public transport system provided that the investment is thoroughly researched and will result in demonstrable benefits to the community through higher patronage and quality of service. The application of priority corridors for certain types of vehicles, such as buses, bicycles and trams on some routes is supported as a means of improving efficiency of public transport on high demand routes. However these treatments need to be applied strategically and any implications on the network thoroughly assessed before implementation.

RAA acknowledges that trams are an integral part of the public transport system and can be very effective in moving patrons efficiently along key routes. Tram usage must be thoroughly assessed to ensure they deliver net operational benefits to public transport. Critically any impacts on the corridor for other road users and pedestrians must be assessed and any consequences managed to ensure there is broad community support.

## **Public Transport - Recommendations**

The current public transport system is heavily focussed on journeys into and out of the City of Adelaide. This often results in relatively short north-south or east-west journeys requiring a change of service which can result in longer journey time compared with use of private vehicles. This results in high levels of private vehicle usage for such journeys that could be provided by public transport. The proposed extension of the tram routes does not address this. Therefore consideration should be given as part of any significant investment in public transport to improving cross city services.

This could be achieved through greater use of suburban passenger interchanges at key locations such as major shopping centres, university campuses, and the airport together with additional park and ride facilities to support increased use.

### **Ride sharing**

RAA considers that consideration should be given to the role that recent developments in mobility could offer in the public transport system, particularly where a demand exists and patronage is low. In such situations alternatives such as ride sharing could offer some additional flexibility in the provision of such services where existing modes may not be viable.

### **Autonomous vehicles**

The rapid advance in technology now sees public access vehicles operating in a number of environments albeit under relatively controlled environments. It is predicted the role for this type of vehicle will grow and could support existing public transport services and ultimately supplant them on some routes. Consideration therefore needs to be given to including these in public transport planning.

### **RAA Public Transport Policy**

RAA supports the principles in the State Government's Integrated Transport and Land Use Plan (ITLUP) which RAA had previously called for and was ultimately involved in its development. The Plan incorporates a number of solutions to improve public transport including the reintroduction of trams on a key routes to both inner and middle Adelaide. The aim of this is to support residential and commercial development along transport corridors and reduce the ongoing dependence on private vehicles as a principal form of transport.

The 30 Year Plan for Greater Adelaide, originally released in 2010, was updated in 2016 to include the ITLUP recommendations for public transport. The Plan now includes a target of 60% of all new housing being constructed in close proximity to public transport whether it be rail, tram, O'Bahn or bus in order to meet the three objectives of the plan which are to maintain and improve liveability, increase competitiveness and manage climate change to achieve sustainability.

The existing RAA Public Transport Policy supports the principles of the 30 Year Plan for Greater Adelaide to transition to a transit focussed and connected city and recognises the importance of an efficient, convenient system to support development and reduce dependence on private vehicles where possible. The Policy also supports improvements to the public transport system provided that the investment in public transport projects and programs can demonstrate tangible benefits to the community. The development of autonomous vehicle technology will provide opportunities for both private and public transport and therefore needs to be considered as part of a public transport system.

The advent of ride sharing presents opportunities for this type of service together with more traditional forms such as taxis to provide public transport in areas of low patronage and should therefore be an integral part of public transport planning.

### **Cost Benefits**

The Australian Bureau of Statistics Journey to Work Data shows a rise in the number of journeys by public transport, cycling and walking, particularly from many of the inner suburbs. Better integrated public transport services can bring long term benefits to the community through encouraging increased population densities along key routes. Higher population densities have the potential to reduce the cost of providing public transportation density although the minimum population target density to sustain effective public transport is 3,000 people per square kilometre, a figure that currently achieved in only a few of Adelaide's suburbs, such as Unley and Norwood.

Trams represent a substantial investment both in rolling stock and the dedicated infrastructure to support them. Therefore detailed economic assessment is essential to ensure that such investment is justified particularly in comparison with cheaper forms of public transport such as buses, for example.

RAA supports the government's approach to undertake a business case assessment for each of the proposed tram routes as the cost benefits of investing in trams need to be carefully assessed. While it is understood that the assessment will include an estimation of the land use and wider economic benefits of each route, these elements can be difficult to predict and therefore should not be overestimated. The Grattan Institute referred to this issue in reviewing Canberra's proposed light rail plan and cautioned against overestimating these factors, noting that submissions to Infrastructure Australia for funding typically exclude these factors from any cost benefit analysis for this reason. This is an important point as the benefits frequently cited from investing in tram routes is better land use and wider economic benefits.

### **Proposed Tram Routes - Comments**

In November 2016, the State Government announced that it would commit \$4 million to fully assess each of the proposed routes that will form the extended tram network, referred to collectively as AdeLINK. The proposed routes are broadly as follows:

- EastLINK: Extending east through Kent Town to The Parade, Norwood;
- WestLINK: Following Henley Beach Rd to Henley Square, with a branch line to Adelaide Airport;
- ProspectLINK: Following O'Connell St to Prospect Rd;
- UnleyLINK: following Unley Rd and Belair Rd to Mitcham;
- CityLINK: Following a continuous loop around the city with transfers at other tram lines and the Adelaide Railway Station, and
- PortLINK: Using the existing Outer Harbor line with additional services to Port Adelaide, West Lakes and Semaphore.

RAA supports the extension of the tram network along North Terrace to East Terrace together with an extension of approximately 100m north on King William Road to service the Festival Centre and Adelaide Oval.

RAA welcomes the thorough approach being undertaken to assess the benefits and impacts of the proposed tram route extensions that includes:

- Route identification and assessment;
- Community sessions and feedback;
- Tram services planning and public transport modelling;
- Engineering and urban design;
- Economic evaluation of preferred routes.

RAA acknowledges that part of the process will include a business case for each of the proposed routes that will include final project costs, location of tram stops, planning and design considerations together with environmental and land value benefits.

A recommendation on a preferred route for the CityLink route has not been determined because further assessment is required on the benefits and impacts of each of the three options under consideration. RAA looks forward to having discussions with DPTI on the relative merits and implications of each of these route.

#### **RAA Comment/Position**

A summary report has been released by DPTI of the first stage which makes an initial recommendation on a preferred corridor for each of the routes, based on criteria that includes potential for economic development and impacts on both the road network and existing public transport services RAA has provided comments on each of these corridors to DPTI in December 2016, focussing on the operational implications on the network (see Attachment 1).

RAA has previously met with DPTI to discuss the proposed tram routes and particularly the impact on the roads where the trams would potentially operate. With the exception of the PortLINK route that would predominantly utilise the existing rail corridors, all other routes will be accommodated within existing road corridors and will include shared running, i.e. vehicles will be allowed to drive on the area occupied by the tram as is currently permitted on the southern section of King William Street. Therefore, the potential benefits of the individual tram routes must be considered against the impact on traffic and access, including the potential to redirect traffic to adjacent routes.

The impact of the proposed tram routes on the road network is largely dependent on the role that each road plays in DPTI's Functional Hierarchy for Land Use in Transport in South Australia. This document identifies those roads that form part of a major traffic route, such as South Road and those that are deemed to be peak hour routes, such as Unley Road and West Lakes Boulevard, for example. Therefore, trams on these roads will have the greatest impact on access and travel, particularly Unley Road and Belair Road. Other routes including Prospect Road, Henley Beach Road Norwood Parade, although used during peak periods are not deemed critical to peak traffic flow. However other issues on these routes, such as the loss of trees and local access, may be considered more critical and may ultimately determine whether they are viable.

RAA has reviewed each of the proposed AdeLINK routes noting that the PortLINK extension offers the greatest potential with the least impact on the existing road network by linking Outer Harbour, Port Adelaide, West Lakes, Grange and Semaphore to the city because it would use existing rail corridors where available.

#### **Summary**

RAA strongly supports an integrated and efficient public transport network that encompasses a range of transport modes including the potential role of autonomous vehicles and ride sharing options on some routes.

Trams must be considered in conjunction with other transport modes as part of a flexible and convenient public transport system to service as many people as possible while avoiding duplication of services on the same

routes. The issue of better east-west and north –south service connectivity should also be considered as part of any major investment in the public transport network.

RAA has provided comments to the Department for Planning Transport and Infrastructure on the relative merits of each of the proposed *AdeLINK* routes highlighting that traffic flow and local access on peak period corridors such as Unley Road and Belair Road will be adversely affected with increased traffic on adjacent roads as an unintended consequence.

### AdeLINK Tram Routes – Summary of Routes from Multi-Criteria Analysis Summary Report

InfraPlan has undertaken a Multi-Criteria Analysis (MCA) and produced a summary report for each of the respective routes to provide information about the options for each route that are now being considered through the next stages of the five stage process. This involved the testing of the original AdeLINK tram network against other potential routes identified. The total scoring of each of the options for the proposed routes is shown the following tables together with RAA's position on each of the proposed routes.

InfraPlan will undertake the next phase of the study that will involve exploring the integration opportunities between land use, street attributes and tram corridor planning. This will then provide a framework for more detail planning of the tram routes including stop locations, together with the identification of constraints and opportunities. The studies will commence in February 2017 to model the patronage demand; develop the operation framework of the tram system, including potential stabling options; assessment of road traffic operations and integration with bus and train services; and potential road and track layouts, including the location and style of tram stops within an urban design framework.

<b>EastLINK</b>		
<b>Option A:</b> Norwood Parade ITLUP Route (via Rundle Road, Parade West, Norwood Parade and Penfold Road)	<b>Option B:</b> Magill Road (via Rundle Rd, Beulah Rd, Sydenham Rd)	<b>Option C:</b> Hybrid Option, Norwood Parade and upper Magill Road (connecting via Glynburn Road or other route)
37	26	38

#### RAA Comment

- Option A is supported in principle as Norwood Parade is not deemed a major traffic route or a peak period route
- This option does not impact on Magill Road which is a peak hour route whereas Options B and C would have a negative impact on sections of both Glynburn Road and Magill Road
- There are concerns with the impact on traffic at the intersection of Penfold Road/Magill Rd and St Bernards Road because of the limited space at the intersection
- Terminating the tram on St Bernards Rd is not supported because of the impact on traffic flow and the level of pedestrian it is likely to generate
- It is recommended that the tram be terminated within the Magill Campus (or the playing fields opposite) with signalised access onto St Bernards Road

<b>PortLINK</b>			
<b>Option A:</b> ITLUP route, light rail conversion via Torrens Junction, including Grange, Semaphore and West Lakes spurs (reserving the option for Henley Beach addition)	<b>Option B:</b> Electrification of Existing Heavy Rail plus Port Adelaide Spur	<b>Option C:</b> Light rail conversion to Outer Harbour, Tram to West Lakes and Grange, Option via Torrens Junction	<b>Option D:</b> Heavy or Light Rail to Outer Harbour, tram to Grange and West Lakes via Grange Road and Frederick Road
37	26	39	28

#### RAA Comment

- Option A is supported in principle as this option utilises existing rail corridors and will have minimal in traffic compared with other options while providing access to West Lakes

- Option C is not supported because it would impact on traffic movements along Grange Road which is a peak period traffic route as defined in the Functional Hierarchy for Land Use in Transport in South Australia

**ATTACHMENT 1 (cont.)**

- Option B does not provide a link to West Lakes which is considered to be an important part of the PortLINK proposal and is therefore not supported while Option D is not supported because of the impact on both Grange Road and Frederick Road

<b>ProspectLINK</b>	
<b>Option A:</b> Prospect Road ITLUP Route (via O'Connell Street)	<b>Option B:</b> Churchill Road (via O'Connell Street, Barton Tce West, Jeffcott Rd, Torrens Road)
32	10

**RAA Comment**

- Option A is supported in principle as Prospect Road is not deemed an arterial road or a peak period route although there will be some impact on traffic movement at the northern end of O'Connell Street
- Option B is not supported because of the greater impact on traffic movement along Churchill Road which is a peak period route and currently carries nearly 40% more traffic than Prospect Road

<b>UnleyLINK</b>	
<b>Option A:</b> Unley Road and Belair Road ITLUP Route (via Pulteney St)	<b>Option B:</b> Goodwood Road terminating at Repatriation General Hospital site (utilising Glenelg Line)
43	19

**RAA Comment**

- Option A is not supported because of the potential impact on traffic movement along Unley Road which is deemed a peak period route and services a number of suburbs to the south and in the Adelaide Hills
- Numerous bus services currently use Unley Road, some of which are express from the southern suburbs therefore passengers would be required to transfer from buses to trams at Mitcham to continue the journey into the city or duplicate services over the same route
- Option B is not supported because Goodwood Road is deemed a major traffic route in the Functional Hierarchy for Land Use in Transport in South Australia and there are concerns that the addition of trams would increase congestion on this route

<b>WestLINK</b>	
<b>Option A:</b> Henley Beach Road ITLUP Route (via West Tce and Glover Ave) including Airport spur via Airport Road	<b>Option B:</b> Sir Donald Bradman Drive (via Grote Street) terminating at Airport
34	18

**RAA Comment**

- Option A is supported because Henley Beach Road is not deemed a peak hour route in the Functional Hierarchy for Land Use in Transport in South Australia
- The incorporation of a spur to service the Adelaide Airport is supported

- Option B is not supported because Sir Donald Bradman Drive is deemed an major traffic route in the Functional Hierarchy
-