

CBD and South East Light Rail

submission by Hunter Transport Consulting Pty Ltd

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The NSW Government is to be congratulated on its initiative to introduce Light Rail as the mode of transport best suited to providing a highly efficient method of transporting passengers on corridors with the density and volume of patronage as that proposed.

This submission recommends some changes to the design set out in the EIS in order to deliver the best possible service (highest capacity and most efficient) on the new Light Rail line and to set it up as the basis for further expansion of the Light Rail network in the near future.

The proposed changes are summarised as follows:

1. The system should be built using looped terminals at all locations
2. All LRV's should be single-ended
3. All platforms should be side platforms
4. Overhead wiring should be used along the full length of the route

These recommendations are based on study of successful Light Rail and tram systems in other cities both within Australia (Melbourne) and overseas (predominantly Europe).

More details on these recommendations are provided below.

1. Looped terminals

Given the high service frequency and likely strong demand on the route, looped terminals provide the best method of turning around LRV's at the end of each trip.

By comparison, dead-end shunts (as proposed in the EIS) place an unnecessary restriction on the capacity of the service by limiting the number of LRV's that can be reversed at each terminal, because of the time taken for drivers to 'change ends'. This will be particularly critical at Circular Quay.

At looped terminals LRV's need only a nominal 2 minutes 'recovery' timetabled at the city end of each trip and can virtually run 'straight in / straight out' when arriving late, as no time is wasted by drivers changing ends nor is there the need for complicated relay driver / step back crew rostering.

A looped design at Circular Quay will take up less road space and provide a simpler system for customers. Instead of passengers having to choose which out of three platforms their LRV will depart from, all services would depart from the same single platform.

Looped terminals are widely used on European systems and in fact formed the basis for the former Sydney tram system at many locations including Circular Quay and La Perouse, and well as being chosen for current use at Central Station on the Inner West Rail line.

2. Single ended LRV's

In conjunction with the above, LRV's can then be built to a single-ended design, with a driver's cab at only one end and passenger doors on only one side.

The resulting space saved can be given over to more passenger seating resulting in higher seating capacity in a single-ended LRV. The single-ended design also provides greater passenger comfort because most seats would face forward (as they do on buses).

Single-ended LRV's are widely used on European systems.

3. Side platforms

All stops should feature side platforms and the plan for island platforms should be discarded.

Side platforms provide for more efficient operation because passengers travelling in opposite directions do not conflict with each other, something which places an operational constraint on the system when, for example, two heavily loaded trams arrive at an island platform simultaneously.

Side platforms also enable easy interchange between LRV's and buses, as both modes can stop at the same locations.

In addition, side platforms enable easy substitution of LRV's by buses during times of track maintenance or unexpected disruptions to service (an example of the latter being the use of the Capitol Square platforms by buses during the recent closure of the Inner West Light Rail line).

Concerns about road space required for side platforms can be overcome by building staggered platforms at tight locations, with the use of slewed tracks where required.

4. Overhead wiring

Plans for wireless operation should be abandoned. Wireless operation adds considerable weight to the LRV's and unnecessary complication to the operation.

LRV's will be delayed at intermediate stops and at Circular Quay whilst recharging their batteries, which places a capacity constraint on the system.

Wireless technology is too much in its infancy and so it would be best to stay with long proven overhead wiring technology, particularly in a city such as Sydney where hot summer temperatures and heavy use of air-conditioning will place a significant drain on power supplies.

Although wireless operation may to some people provide a 'prettier' looking system, in reality the visual landscape of any city such as Sydney features many obstructions that others would find unattractive, and it is likely that overhead wires will just blend in with the background for most people.

Many European cities feature trams powered by overhead wires travelling through some of the most beautiful parts of the city and the wires are rarely cited as being a visual intrusion.