



# REFLECTIONS ON LIGHT RAIL STAGE 2

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Graham O’Loughlin

# Advantages of Stage 1

1. The terrain - no steep grades, no bridges, tunnels or major engineering structures required.
2. The route – mainly straight, ideal for high speed running
3. Land use – Government controlled land for a reserved track, corridor ready for (re)development.
4. Environmental or heritage difficulties - minor
5. Travel time – faster than existing bus or car options
6. Unmet demand for travel on that route





# Structures Needed for Stage 2

1. Raising of London Circuit (reported as \$100m)
2. Additions or modifications to Commonwealth Avenue bridge
3. Whatever is required to circumnavigate Parliament House
4. Pedestrian access to stops in the median strips at Deakin and Curtin (and possibly others)
5. Additional expenditure to implement “wire-free” running required by the NCA. Further NCA requirements can be expected.

**ALL EXPENSIVE AND CARBON EMISSIONS INTENSIVE**



# Advantages of Stage 2?

1. The terrain - no steep grades, no bridges, tunnels or major engineering structures required.
2. The route – ~~mainly~~ straight, ideal for high speed running.
3. Land use – ~~Government~~ controlled land for a reserved track, corridor ready for (re)development.
4. Environmental or heritage difficulties – minor.
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6. Unmet demand for travel on that route.



# Conclusion

Light Rail Stage 2 was a soundly based idea - but

It needs review and updating to reflect current circumstances.



## **Reflections on Light Rail Stage 2**

### **Graham O’Loughlin**

We are here to discuss Light Rail Stage 2. I am a public transport enthusiast, and have been for most of my life. But I also have experience in the planning and management of major construction projects – the ones that are large, complex, multidisciplinary, and take more than 10 years to execute.

The first question to ask how about a proposed major project is whether it is within the context of an overall policy framework or strategy. In this case the answer is certainly yes - there is an overall public transport strategy for Canberra, and the ACT Labor Party with the support of the Greens took a proposal for a light rail service between Gungahlin, Civic and Woden to the 2012 election where it was endorsed. A good start.

#### **Some good things about Stage 1**

Before moving to Light Rail Stage 2 we need to look at Light Rail Stage 1. It has been operating since 2019, and is generally regarded as a success. There is a belief that because Stage 1 was a success then Stage 2 should be also. But there are significant differences between them, and Stage 1 had some special advantages. Consider:

- the terrain. No adverse grades, no bridges, tunnels or major engineering structures required.
- the route. Mainly straight line with a few gentle curves. Ideal for high speed running.
- land use. Government controlled land for a reserved track almost all the way. Land use in the surrounding corridor ready for development or redevelopment – ideal for land value capture.
- no significant environment or heritage difficulties
- potential for travel time to compare favourably with alternatives
- and – most important – a real unmet demand for travel.

Gungahlin has been experiencing rapid population growth but without a matching increase in local employment. Hence a high demand for work travel, with a congested road system. Light Rail Stage 1 provided welcome relief: had it not proceeded, the ACT Government would have been forced to make major investments in road works and buses.

#### **Flexibility in major projects**

It is now apparent that few if any of the advantages quoted above for Stage 1 are applicable to Stage 2. But before going there, I want to emphasise the need to build flexibility into the execution of major projects. It is a reality that very few major complex projects are completed in a way that corresponds exactly with how they were conceived in the first place. Work practices change, legislation changes, new ideas emerge and technology offers new benefits. Parliament House began construction in 1981 based on a brief prepared by the NCDC in the late 1970s, and was completed in 1988. Had it been completed in accordance with its original design then it would not have accommodated the additional members and

senators that were legislated in 1984, and it would probably not have had any computers in it. (Remember that personal computers were a rarity in 1980 and the first IBM PC did not appear until 1983).

We should not be reluctant or ashamed to make beneficial changes or improvements to a major project as it proceeds – if we do, and if it is consistent with the original objectives, it is not a “backflip”. And if we don’t, there is a risk that the result will be obsolete before it begins.

### **Light Rail Stage 2 – not quite as good**

Let us now disregard 2a and 2b and look at Light Rail Stage 2 as a whole in comparison to Stage 1. The demand is not proven, the travel time is greater than at present and the route is convoluted and has some grades to be encountered. Another major difference is the extent of significant engineering works that will be required for Stage 2. As a minimum, we have:

- the raising of London Circuit (reported as \$100m)
- additions or modifications to Commonwealth Avenue bridge
- whatever is required to circumnavigate Parliament House
- pedestrian access to stops in the median strips at Deakin and Curtin (and possibly others)
- additional expenditure required to implement “wire-free” running required by the NCA. Further NCA requirements can be expected.

Another negative is that much of the Stage 2 route offers few opportunities for land value capture, with many existing properties committed to public bodies or institutions. Capitalising on the remaining possibilities between Curtin and Woden will be difficult and controversial.

### **Costs and benefits**

It seems axiomatic that public funds should not be used on ventures for which the costs exceed the benefits. But both costs and benefits can be intangible and hard to measure, and the threshold of a Benefit/Cost Ratio (BCR) of 1.0 should be treated as a guide or a warning rather than a rule. Most public transport operations in Australia require ongoing subsidies, and passing the BCR threshold should not be expected. If we got too fussy about BCRs in the ACT we would have very little public art, and probably not much of a bus service. But if the BCR for Light Rail Stage 1 is around 0.5 (as reported) then the projected BCR for Stage 2 will be a lot less than that – low enough to send a strong warning sign.

From a funding point of view the BCR is a guide to “is this project worthy of investment?”. If the answer is yes the next question that arises is “can we afford it?” And then we come to



the budget impact, outlined by my distinguished colleague Dr Ahmed, who can give you a more informed assessment than I can.

## **Jobs**

The ACT Government has been accused of favouring this project because of union influence, and generation of employment. Given the current workforce shortages and the low rate of unemployment, this should not be a compelling argument. Further, if this project were to be deferred or revised, the funds released would surely be transferred to other works – in housing, health or education. (Note that if electric buses were introduced in place of Light Rail, there are now 2 established electric bus manufacturers in Australia. The Light Rail vehicles are made in Spain).

## **A greener alternative**

Substituting electric buses for light rail vehicles is an enticing change to the project. It would be cheaper and faster to implement, and reduce substantial expenditure on steel and concrete (that presently require fossil fuels to produce). The objective of replacing fossil fuels with electricity would be retained (with a further advantage of charging the buses overnight at off-peak times. Light rail, even with batteries, needs to draw power during times of peak consumption from the grid).

## **Transparency, trust and due process**

It is apparent that there is continuing public unease about this project, mainly centred on limited benefits, mounting costs and traffic disruption. The disquiet is fuelled when the Government proceeds with consultation on details but does not reveal any facts or figures about the key features of the project as a whole. Letters to Ministers with well-argued questions and suggestions draw responses that are mechanical reiterations of the existing Government policy (I exclude the Greens from this comment). More constructive engagement would be reassuring.

The ACT Government has a policy framework for the assessment and conduct of capital projects, but it seems to be more honoured in the breach than in the observance. Minister Steel refers to Light Rail Stage 2 as a committed project (“it’s not a proposal – it’s a project”). But Stage 2b has received none of the statutory approvals, the NCA requirements for the vicinity of Parliament House are not known, and the construction work is not funded.

In September 2021 the ACT auditor-general released a report on the business case and economic analysis of Stage 2a. It found the benefits to be unsupported and overstated, and the costs underestimated. The report recommended that the economic analysis be revised and updated and “made publicly available”. The Government agreed to respond fully. It hasn’t happened yet, but expenditure continues.

## **Conclusion**

The concept of a rapid transit service to Woden is soundly based, as is the further expansion between major nodes in the ACT. It was conceived more than 10 years ago, in advance of any detailed understanding of what is now Light Rail Stage 2.

Much has changed in the last decade. We know more about the challenges of Stage 2, and the ACT budgetary situation has deteriorated following the pandemic. Electric buses have emerged as a viable alternative (there are now over 100 electric buses operating in Sydney, and every other State capital has significant fleets operating and on order).

No shame should attach to reviewing a project that was conceived more than a decade ago – in fact it is good practice. I urge a pause and independent review of Stage 2 now.

JGOL 12 September 2022