



## **Comments on *Light Rail Network – A modern transport system for a growing city***

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The Conservation Council ACT region is the peak non-government environment organisation for the Canberra Region. We have been the community's voice for the environment in the Canberra region since 1979.

Our mission is to achieve an ecologically sustainable and zero net carbon society through advocacy, education, research and engagement with community, the private sector and with government.

We represent more than 40 member groups that in turn represent more than 15,000 supporters. We harness the collective expertise and experience of our member groups and networks. We work collaboratively with Government, business and the community to achieve the highest quality environment for Canberra and its region.

The Conservation Council is active in a number of campaign areas. Our current focus includes:

- **Biodiversity Conservation** – protecting our unique ecological communities and the Bush Capital
- **Climate Change** – a regional, national and global challenge
- **Planning** – the right things in the right places
- **Transport** – connecting people and places
- **Waste** – being efficient through closed-loop systems
- **Water** – smart use of a scarce resource
- **Governance** – for a Smarter, Sustainable Canberra

### **1. Overview**

The Conservation Council welcomes the opportunity to comment on the ACT Government document *Light Rail Network – Delivering a modern transport system for a growing city* (Light Rail Network), October 2015<sup>1</sup>. We also take the opportunity to consider the context provided by the *Public Transport Improvement Plan*<sup>2</sup> that was also published by the ACT Government in October 2015.

Minister for Planning Mick Gentleman states in the Introduction of *Light Rail Network* that 'This work considers how we could extend light rail across Canberra in the future... [and] also explores where we could build demand for bus priority lanes or bus rapid transit to support light rail over time.'<sup>3</sup>

The Minister also invites views and states “opinions and comments on future light rail corridors are important to help us finalise the Light Rail Network.”<sup>4</sup>

*Public Transport Improvement Plan* states: “Your views on how we can deliver the best possible public transport for Canberra are important.”<sup>5</sup> The Plan also says in the Ministers’ introduction that:

Canberra needs a smart, integrated public transport system that is easy to use, there when you need it and gets you there on time.<sup>6</sup>

The Ministers set out their expected benefits of integrated public transport:

The benefits of integrated public transport for our community are substantial: it supports social inclusion, drives economic development, maintains liveability and reduces congestion.<sup>7</sup>

The Conservation Council supports an integrated transport plan for the ACT. A central feature should be a mass transit public transport system. Light rail can be part of such a system. Other elements of an integrated transport system should include:

- an integrated ticketing system
- co-location of stops for buses and trams and linking various transport options
- reduce vehicle speeds through speed limits and traffic calming, include private vehicle-free zones in suburbs and town centres
- appropriate urban planning along public transport routes to enhance usage
- encouraging people to travel as car passengers rather than as car drivers
- planning that supports walking, cycling and public transport by locating more homes within walking and cycling distances of workplaces, shops, schools, services and public transport
- community engagement and ownership of our transport plan
- ways for Canberra residents to invest in their own urban transport infrastructure

The initiatives outlined in the Government’s *Public Transport Improvement Plan* which assist integrated public transport are set out as:

- A one ticket, one fare, one network approach which will integrate the service provided by ACTION and light rail
- Releasing a draft Light Rail Network Plan to the Canberra community, for a conversation about where and how light rail can extend right across the ACT
- More transport, more often with the reinvestment of 1.2 million bus kilometres saved along the light rail line
- Efficiency improvements to ACTION delivering a better bus service for the community and
- The first comprehensive survey of the Canberra community on public transport.<sup>8</sup>

While the Government's *Public Transport Improvement Plan* initiatives go some way on delivering integrated public transport there still needs to be an integrated transport plan or strategy with more done about cars, walking and cycling and to ensure that public transport is accessible to those who need it most. Light rail is a great boost to public transport infrastructure but its real success will be if it succeeds in 'driving' improvement in the overall public transport system.

The ACT does have *Transport for Canberra – Transport for a sustainable city 2012–2031* (Transport for Canberra)<sup>9</sup> as a strategy for transport to 2031. Transport for Canberra, however, only talks of light rail in the future rather than a project already commenced and it should lay the foundation for transport beyond 2031, including the expected costs and the benefits of a light rail system over the longer term and over the full network.

Transport for Canberra has 'mode shift' targets that will not achieve the benefits of integrated public transport set out by the Government.<sup>10</sup> Mode shift means the shift to sustainable modes of transport which, in the current Canberra context, are walking, cycling and public transport.

The Government's 2004 *Sustainable Transport Plan* and 2012 *Transport for Canberra* plan set targets for public transport patronage to increase from 6.7% in 2001 to 9% in 2011 and 16% in 2026<sup>11</sup>. By 2014 the public transport mode share had increased to only 7.1%<sup>12</sup>.

Canberrans are too dependent on driving private motor cars for transport. The Conservation Council supports policies that reduce this dependence and diversify the range of transport options. We suggest that integrated public transport will have a range of environmental benefits in encouraging people away from driving cars thereby reducing the footprint of our transport needs. Motor vehicles in private and business (including government) fleets need to be reduced in number and there needs to be a higher proportion (moving to 100%) of reduced emission and zero emission vehicles.

Local cycling and walking, including walking to bus stops and tram stops, would be encouraged if the current Territory Plan requirement of a 1.5 metre wide footpath on every new street was also applied on every existing street. Planning for individual suburbs should support sufficiently large populations that there will always be enough local children to support a fully viable local primary school within walking and easy cycling distance.

The ACT Government should provide efficient public transport commuting links by, as a minimum, designating "smart" transit lanes on all congested road sections. "Smart" transit lanes are relatively short transit lanes (or bus lanes) that offer maximum public transport efficiency with minimum delays to general traffic. In general, the ACT's roads should be built and managed as a way of integrating the transport system, with preference given to supporting speed, frequency and flexibility for public transport journeys.

The ACT Government should continue to maintain and expand safe and direct walking and cycling routes to encourage walking and cycling to work.

The Conservation Council takes the opportunity provided by consultation on *Light Rail Network* to comment on routes both generally and specifically and also to suggest some environmental principles to be applied in setting routes and building additional stages of the light rail network and other public transport options.

Environmental principles to be considered in planning and implementing future light rail and other public transport routes include: maximising replacement of car driving by public transport, walking, cycling and travelling as car passengers, maintained and enhanced biodiversity conservation (minimal impact in construction and operation; and comprehensive accountable offsets); and carbon neutral construction and operation.

The Conservation Council welcomes the *Light Rail Network* plan, noting that it might be the equivalent of a master plan for the light rail system we have requested previously as part of an integrated transport plan and which was set out in the *Parliamentary Agreement for the 8th Legislative Assembly for the Australian Capital Territory*<sup>13</sup>. Noting that good policy takes time, it is unfortunate that, if this is meant to be the master plan, it was only released in October 2015. As a result of this late release, earlier public discussion of light rail was limited to the stage 1 route from Gungahlin to Civic rather than looking at light rail as a network and a major part of the overall planning of Canberra.

The Conservation Council supports the Minister's commitment to 'support and promote an integrated public transport network to encourage people to leave their car at home.'<sup>14</sup> At the same time we note that an improved public transport network alone will not substantially increase mode shift particularly from private motor vehicle driving to public transport. An integrated public transport network is only one part of an integrated transport plan.

The Council agrees that an integrated transport plan is 'integral to ACT Government planning, transport, climate change and health strategies.'<sup>15</sup> As such, the Light Rail and integrated transport network is a critical and significant investment for the ACT community. The *Light Rail Network* plan should meet a range of strategic aims. A comprehensive plan is critical for good policy, implementation and to provide the public with a clear vision for this major long-term Canberra-wide investment.

As an integrated transport plan is a long-term project uncertainties will exist. In these cases, relevant plans should identify scenarios and options to guide how uncertainties might be navigated. The Conservation Council believes the *Light Rail Network* plan should provide the additional level of the information needed to underpin a successful integrated transport plan of which Light Rail must be a part.

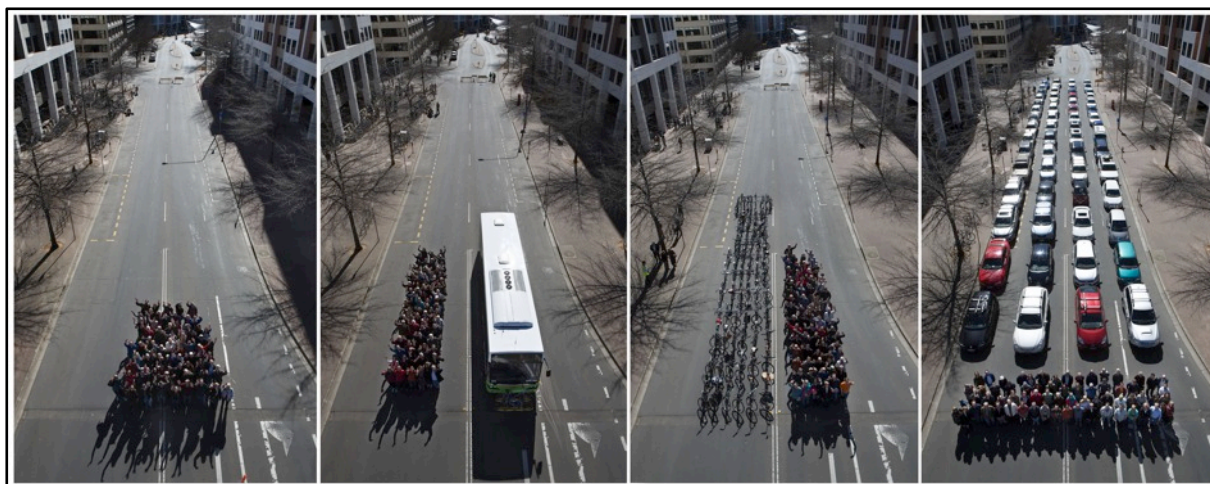


Figure 1 Canberra Transport photo from <http://www.bikeoz.com.au/>. Update needed for light rail.

## 2. Some environmental principles

The Conservation Council's overarching principle on development is outlined in *Managing the Urban Edge – Discussion Paper 2013*: 'Retention and enhancement of ecological values should be incorporated into the design and management of existing and new urban developments.'<sup>16</sup> This principle should also apply to transport corridors. Planning in Canberra should first take account of what needs to be protected, particularly climate and the conservation and enhancement of biodiversity.

The Conservation Council believes measures should be put in place to minimise 'edge' impacts of any transport corridors including but not limited to litter and rubbish control, water sensitive urban design, and proactive management of known or potentially invasive plants so that they are not planted.

The ACT's natural environment is facing a death by a thousand cuts. Currently, each project in the ACT is assessed within its own perimeters with reference to other previous assessments and previous practices to allow for its own 'small' impacts on the environment. This allows for a gradual chipping away of environmental values. Given that public transport already has a range of environmental benefits, public transport should also be an overall contributor to biodiversity conservation.

It is essential that planning and implementation of future light rail and other public transport routes include biodiversity conservation through minimal impact in construction and operation. Any required public transport corridor offsets arrangements should be transparent, genuine, comprehensive and accountable with a genuine overall net improvement in biodiversity outcomes.

### **Recommendation 1.**

***The ACT Government should enhance and maintain biodiversity conservation in planning and implementation of public transport corridors including minimal impact in construction and operation taking account of potential edge impacts and comprehensive accountable offsets arrangements when necessary.***



The Conservation Council supports public transport corridors as opportunities for appropriate plantings of local endemic species. We have already noted that *eucalyptus elata* plantings along Light Rail Stage One on Northbourne Avenue were an inappropriate species for their location and treatment. The Conservation Council does not see replacement of these street trees along Northbourne Avenue as having a major environmental impact given they are not remnant trees but are planted, are not the best trees for naturally occurring soils and weather conditions, and the trees are deteriorating and will mostly need to be removed over future years for public safety or because they fall over by themselves.<sup>17</sup>

The Conservation Council supports current Australian trees being replaced by Australian trees and grasses, preferably endemic to the region and suited to the soils and expected climatic conditions for Canberra, that can be easily maintained and which contribute to the aesthetics of the Bush Capital and create to a sense of a grand boulevard and entrance to Canberra.

The Conservation Council supports the planting of more trees than are removed along the light rail route, particularly along Northbourne Avenue.

***Recommendation 2.***

***Where appropriate, trees that need to be removed should be replaced by Australian trees and native grasses, preferably endemic to the region and suited to the soils and expected climatic conditions for Canberra and remove exotic plantings, including from road verges, and replace with appropriate endemic species.***

It is noted that most routes proposed in the draft *Light Rail Network* are along existing road alignments and could be expected to already have a minimal impact. However, we do share the concerns of the Friends of Black Mountain that the proposed Molonglo to City route might adversely affect the natural values of Black Mountain. There should be no additional impacts on Black Mountain from light rail or other transport corridors including from power lines.

***Recommendation 3.***

***There should be no incursion into Black Mountain for public transport corridors including for power-line corridors and sub-stations.***

In June 2015 Minister for Capital Metro, Simon Corbell, announced that 'Stage one of Canberra's light rail network will operate on 100% renewable energy'.<sup>18</sup> This is also stated in the draft *Light Rail Network*.<sup>19</sup> The Environmental Impact Statement documents for Stage One of the Light Rail Network included an estimation of the greenhouse gas emissions from the project in order to provide for a carbon-neutral construction phase.<sup>20</sup> These initiatives should be maintained for all future public transport developments especially given that the ACT Government has stated that transport emissions will form an increased proportion of the ACT's future greenhouse gas emissions: "In 2020 it is projected that transport will be 54% of emissions..."<sup>21</sup>

In terms of greenhouse gas emissions Light Rail is the only current transport option for Canberra that will have zero net emissions in operation and this is a fundamental environmental consideration. At the same time, even though light rail will reduce the number of bus journeys, we will still need buses and other vehicles in the transport system and these modes should also be carbon neutral.

This would include future procurement of electric buses or other available zero emissions technologies and support mechanisms to encourage transition of the private vehicle fleet. Any future transport strategy should be developed to achieve overall carbon neutrality in both construction and operation.

The carbon emissions associated with construction of light rail have yet to be resolved. The Capital Metro Annual Report 2014-15 states under 'Reducing emissions':

The successful bidder for the Project will be required to implement measures to reduce the impacts of greenhouse gas emissions resulting from construction activity. This would include avoiding and reducing emissions through energy efficient construction practices as well as sourcing carbon offsets by investing in programs such as reforestation or renewable energy initiatives.<sup>22</sup>

The Environmental Impact Statement for Stage One provided a technical paper on Greenhouse Gas Estimation<sup>23</sup> based on a design concept to allow for consideration of impacts. The consortium to build Canberra's light rail – Canberra Metro – will be required to provide details of how it will deal with greenhouse emissions as part of its contract for construction. The Government has stated that these details can be made public when they are known.

***Recommendation 4.***

***The ACT Government should provide that light rail and all future public transport developments are undertaken to obtain carbon neutral construction and operation.***

Public transport developments have three main impacts on greenhouse emissions: emissions during construction, emissions during operation, and impacts on emissions from private vehicles. The impact of a successful public transport development on emissions from private vehicles may be greater than the development's emissions from construction and operation.



The principal environmental benefit of public transport should be that of reducing emissions from private vehicles. These emissions reductions usually far exceed secondary emissions impacts that arise from the construction and operation of the public transport system.

While there has been a small change in transport modes in the ACT from 2001 to 2011, most of the 2% increase in the combined mode shares of walking, cycling and public transport resulted from car passengers switching to other modes of transport. Car driving fell by only 0.7%.

The planning and implementation of public transport systems in the ACT should be done with the aim of minimising use of private vehicles particularly in order to reduce greenhouse gas emissions.

***Recommendation 5.***  
***The ACT Government, in its planning and implementation of public transport systems, should aim to minimise the use of private vehicles in order to reduce greenhouse gas emissions.***

### **3. Integrated transport plan**

The draft Light Rail Network is one step towards truly sustainable transport for Canberra and is only one element of a strong integrated transport plan. As stated:

The draft *Light Rail Network* is the ACT Government's vision for a modern transport system that showcases Canberra as a prosperous, sustainable and liveable city.<sup>24</sup>

Currently, the plan does not constitute an integrated transport plan. It is prefaced with general wording around creating a more sustainable, compact city; reducing emissions from transport, increasing active travel and meeting other important aims<sup>25</sup>.

To present a compelling case for the full light rail network as part of an integrated transport plan, clear, measurable objectives are required. The indicators of success will be unclear without such objectives in this document.

It is assumed the draft Light Rail Network draws from the strategy of '*Transport for Canberra*'<sup>26</sup> although this is not clearly noted in the draft *Light Rail Network* plan. The link should be clarified and *Transport for Canberra* should be reviewed to more accurately reflect the role of light rail in Canberra's future transport options. The review should identify targets for the mode shares of travelling as car drivers and/or passengers, and identify a process for regularly monitoring progress towards targets, identifying any additional measures that will be required for the mode share targets to be achieved, and revising the plan in order to achieve the targets.



**Recommendation 6.**

***The draft Light Rail Network be revised to reflect Transport for Canberra and the ACT Government undertake a review of Transport for Canberra to add and update targets and reflect the role of light rail in Canberra's future transport options.***

If Canberra is committed to leading the world as a model sustainable, liveable city our integrated transport plans should consider cities such as Curitiba (capital of the Brazilian state of Paraná), which boasts a public transport mode share of 45%. Transport mode share aims should be based on what we need to do to reach our social, environmental and health goals. Canberra can learn from the examples of many cities with low private transport mode share with low population density over large geographic footprints similar to Canberra.

*Transport for Canberra* includes modal shift targets: by 2026 16% of journeys to work should be by public transport, and a further 14% by active transport modes<sup>27</sup>. However given the transformative effect of the light rail network, the modal shift targets in *Transport for Canberra* should be increased.

The targets and objectives of integrated transport planning in *Transport for Canberra* should be reviewed to reflect the draft *Light Rail Network* plan's aims around renewing our urban form, increasing density, increasing active transport and reducing car reliance.

**Recommendation 7.**

***Increase existing mode share goals in Transport for Canberra and review its targets and objectives of integrated transport planning in line with Light Rail Network.***

The Conservation Council believes that it is not enough to build an improved public transport system and then expect that mode shift will then occur. As we have previously submitted: 'Among many things, public transport needs to become more flexible and timely and provide convenience to the community relative to cars. This will require an active effort and consideration of potentially unpopular measures such as increased parking charges, "congestion" levies, genuine traffic calming with lower speed limits and road closures and support for car sharing schemes and arrangements.'<sup>28</sup>

**Recommendation 8.**

***The ACT Government undertake an active program to achieve and exceed its existing "mode share" targets through improved flexibility, timeliness and convenience for the community of public transport relative to travelling as drivers of private cars.***

The change in Canberra transport modes has been small and half the 2.1% increase in the combined mode shares of walking, cycling and public transport, from 2001 to 2011, resulted from car passengers switching to other modes of transport. Car driving fell by only 0.4%.

**Table 1 Analysis of ABS Census Community Profiles<sup>29</sup>**

	<b>2001</b>	<b>2011</b>	<b>Increase (decrease)</b>
Walked only	3.6%	4.2%	0.6%
Bicycle	1.9%	2.4%	0.4%
Public transport	5.7%	6.7%	1.0%
Walk+ Cycle+ Public transport	11.2%	13.2%	2.1%
Car as passenger	8.0%	7.0%	(-1.0%)
Driver	61.9%	62.3%	0.4%

***Recommendation 9.***

***The ACT Government in planning and implementing public transport corridors should aim to minimise the driving of private vehicles.***

It is important to consider convenience and flexibility in integrating the ACT transport system so as to encourage and retain public transport users. According to the [Transport Demand Elasticities Study](#), "Over a typical weekday, a 10% increase in average wait times is expected to result in a 1.7% decrease in bus patronage".<sup>30</sup>

A light rail stop can add more to journey time than a bus stop. This is because, despite not carrying fuel onboard and requiring sophisticated steering and suspension mechanisms, "light" rail cars tend to weigh more per passenger than buses and acceleration can be slower without more powerful motors or flywheel systems.

Ways to maintain acceptable journey times while retaining existing stops include:

- use of bus-inspired construction designs and modern lightweight materials, so that rail cars can decelerate and accelerate more quickly and hence need less time per stop;
- offer alternating services (e.g. one service stops at even-numbered stops, and the next service stops at odd-numbered stops) at peak times when journey time becomes more critical than service frequency

***Recommendation 10.***

***Consider options to retain existing public transport stops along the Gungahlin-Civic route.***

The Conservation Council recognises that there should be a wide range of benefits from the implementation of light rail and some of these are mentioned. For example the document includes:

**Revitalising our urban centres and supporting active lifestyles** – Light rail will encourage a higher proportion of Canberra's population growth in centres and public transport corridors, which helps our local economy, health and wellbeing.<sup>31</sup>

Statements such as these should be included with specific targets in either the *Light Rail Network* or *Transport for Canberra* in order that the claims are meaningful and are achieved across a range of directorates within ACT Government, in this case ACT Health.

**Recommendation 11.**  
***Include specific targets around health outcomes from more active travel and other measures of the integrated transport plan.***

#### **4. Connecting public transport and urban form for environmental and social outcomes**

A successful integrated transport plan for the ACT must link planning of our urban form, services and other infrastructure to our public transport routes. *Light Rail Network* does not adequately explain how light rail infrastructure aligns with urban planning, roads and other infrastructure.

The draft *Light Rail Network* plan outlines five 'transformative effects' on page 9. These include reducing car dependency, providing environmentally responsible public transport and stimulating urban renewal. The introductory notes on page 5 note that a reliable public transport network can 'guide our city to become increasingly more sustainable, compact and well connected.'

As the ACT has strong climate change mitigation policy and environmental protection policies, the transformative effects of the network should include focus on environmental outcomes.

Stimulating urban renewal and a more compact city form does not necessarily ensure environmental sustainability or that environmental assets are protected. Urban development and densification can be done poorly or well. The integrated Light Rail Network plan should include in its objectives measures to track how light rail associated development is appropriate for environmental as well as social outcomes such as housing affordability and service provision. Without measurable objectives under these aims, there is the potential for the development along light rail routes to generate perverse outcomes. These could include increasing housing unaffordability along routes, forcing lower income families to housing away from light rail and exacerbating social division, as well as promoting unsustainable, poor quality high density developments.

**Recommendation 12.**

***Include specific objectives and measures for the Light Rail Network aims of environmental performance and social sustainability. These measures must indicate how urban development stimulated by the Light Rail Network will be of a high standard to ensure good environmental and social outcomes.***

## **5. Integrating other transport modes with Light Rail Network**

The draft *Light Rail Network* plan is prefaced in the Minister's comments as part of an integrated transport network:

"as our city grows we will continue to support and promote an integrated public transport network to encourage people to leave their car at home. An integrated transport network with light rail at its heart is fundamental to that strategy".<sup>32</sup>

As Light Rail is a significant and important investment for Canberra, the *Light Rail Network* document should give more detail about options for the integration of light rail with bus systems and other modes of transport.

Park and Rides are indicated in all Light Rail maps, suggesting that car reliance will be maintained as the light rail system develops. As the plan states it will reduce car reliance (page 9) and assist to make the city 'more sustainable' (page 5), the plan should state how cars integrate with the Light Rail network. For example, it could include plans for low or zero emissions vehicles, to tackle other transport emissions in the integrated transport system.

**Recommendation 13.**

***Include other integrated transport elements into the Light Rail Network to assist reach targets for mode shift and other objectives of the transport system.***

**Recommendation 14.**

***Include existing policy ideas and potential scenarios for low/zero emissions vehicles and how private vehicles integrate with the Light Rail network to meet modal shift goals and emissions reduction goals.***

The Light Rail Network mentions developing new high frequency bus routes that will integrate with the Light Rail spine. Maps could indicate where these higher frequency bus routes could run, and indicate frequency of these buses.

Frequent bus connections through suburbs connecting to the Light Rail spine can work to stimulate public transport use, if connecting bus routes and the light rail service is frequent enough that waits at stops are short. The best 'driver' of public transport use is adequate service.

***Recommendation 15.***

***Include potential or planned bus services and their frequency on light rail network maps to illustrate options for high-level public transport service in line with modal shift goals.***

The plan also notes that the Light Rail Network will support 'more active lifestyles' (page 9), suggesting that active transport modes will integrate with Light Rail. The Light Rail Network plan should indicate what role active transport plays.

***Recommendation 16.***

***Include indicators of cycle and pedestrian infrastructure in the Light Rail network maps to illustrate how the integrated transport plan will meet modal shift and active transport goals.***

## **6. Light rail network routes**

The draft *Light Rail Network* plan indicates that the high priority legs are Gungahlin to City, Woden to City and the Parliamentary Triangle loop. The Conservation Council recommends that light rail development be prioritised by providing additional public transport options and achieving mode shift goals, and urban planning in order to achieve more sustainable urban spaces, places, and boundaries for Canberra.

The Conservation Council recommends that priority be given to routes that stimulate more environmentally and socially sustainable development and lifestyles in existing urban and commercial areas: Gungahlin, the Parliamentary Triangle, Woden, Tuggeranong and Belconnen.

The Light Rail Network should also take account of social needs, including those of people with a disability, older persons, and others, bearing in mind that although it might be frequent, light rail will not have flexible routes. There should be early integration with the ACT Government's demand responsive transport services.

Given that the Light Rail Network must meet a range of aims in order to make Canberra a more sustainable city, urban renewal should also align with the objective of a more compact and sustainable urban form. This means the proposed Light Rail routes should only be progressed if they enable urban renewal that will reduce car dependence, increase density in an environmentally and socially sustainable way, and stop or reduce greenfields development, measured over an extended time period.

**Recommendation 17.**

***All Light Rail Network proposed routes should be assessed to ensure they would meet the recommended environmental and social objectives of the Light Rail Network.***

The Conservation Council office currently sits on the proposed route Belconnen-Civic and although we would love to have a stop outside our office there is a limited population along Barry Drive and Belconnen Way until Aranda and Calvary Hospital. Belconnen might be better reached by taking a spur off the Gungahlin route at Macarthur Avenue (re-joining Belconnen Way from Fairfax Street) or even Ginninderra Drive (then possibly turning left at Haydon Drive and up College Street to Belconnen) so as to service more residents and institutions along the way. On the other hand, light rail along the proposed route would provide rapid transport from the city-university precinct to Belconnen.

These options would also move the proposed route away from Black Mountain ameliorating potential impacts on its natural values.

It might be beneficial to prioritise earlier development of the Belconnen-Civic route in order to allow for later extension to Kippax and the proposed West Belconnen development. Earlier development would allow for better take-up of public transport in the newer suburbs before car-dependent transport options develop.

**Recommendation 18.**

***Give consideration to re-routing the Belconnen-City link and consider giving it a higher priority.***

The Conservation Council notes that the draft Light Rail Network states that the “Eastern connections” stage:

Supports compact growth in our eastern residential and commercial areas – Kingston, Eastlake, Fyshwick and Eastern Broadacre.<sup>33</sup>

The Eastern Broadacre planning process is considering options for agricultural, conservation and recreation uses being considered rather than simply development for industrial use. The best environmental and social outcome for future use of Eastern Broadacre might not be industrial and employment focused development. This would be in line with the aim of containing Canberra’s urban footprint and creating a more compact city in line with the stated aims in *Light Rail Network*.

Additionally, the draft *Light Rail Network* plan assumes that Light Rail connections to the airport are valuable as patronage may significantly increase over time. Investment in public transport infrastructure should be linked to patronage need. However, assumptions about increasing airport patronage driven by new international flights and other growth in air transit indicate a potential environmental harm. As the ACT is a leader on climate change action, there is the potential that the ACT should work to limit air traffic and instead promote more sustainable forms of transit into the ACT such as rail links. Thus the Eastern Connections leg should be carefully considered on the grounds of environmental sustainability and ensure that it meets environmental and social aims.

***Recommendation 19.***

***The Eastern Connections route be considered in terms of environmental and social outcomes and without assuming the outcome of the Eastern Broadacre process.***

The proposed Molonglo to City link seems to be markedly different from most other routes or sections as it seems to have a long stretch along Parkes Way with little or no population and it does not have many reasons to stop along the way. As well as the possible impacts on Black Mountain (see recommendation 3) there would be a complicated traversal of the Glenloch interchange. The route to Molonglo might be better construed as a spur or loop from Woden or the Woden line (say Cotter Road) rather than focussing on travelling directly to the City. Perhaps Molonglo could be serviced by zero-emission bus priority lanes or zero-emission bus rapid transit along the proposed route rather than light rail.

***Recommendation 20.***

***Consideration be given to a light rail route to Molonglo which does not traverse Parkes Way and which would service existing population areas.***

There could also be consideration of links between town centres in addition to the identified Woden-Tuggeranong route. Another possible link would be between Gungahlin and Belconnen given that the high levels of this inter-town traffic were used as an argument for the development of the Gungahlin Drive Extension (both the two-lane and four-lane versions). However this might then rely on earlier development of the Belconnen-City route.

Given that the light rail carriages will have a track of “four feet eight and a half inches” – the railway standard gauge – it might be possible to consider future development along the Canberra section of currently disused railway alignment of the Captains Flat line. We support retention of the heavy rail service to Kingston and that it be connected with an interchange to the light rail.



## **7. Implementation of integrated transport network and light rail: long term management**

The Conservation Council believes that the *Light Rail Network Plan* should provide a compelling case for a successful, completed integrated transport system with light rail. As such it should include information on scenarios for the implementation of future Light Rail development. The Conservation Council acknowledges that it is not possible to guarantee funding for future development of the network and management plans for these developments. However the integrated transport system is a transformative project that will have a significant influence on Canberra's future. Although the current plan indicates that light rail has been considered in the Territory Plan and some town centre master plans there should be indication to illustrate how the Light Rail Network, and the wider integrated transport network, will be ensured and managed into the future.

***Recommendation 21.***

***Include further information and indicators about how the Light Rail Network and integrated transport system will be managed and governed to ensure the objectives of the system are met.***

The Conservation Council understands the importance of governance processes for policy to ensure environmental and other aims are met over time. As such the plan should give some information about considerations of how the vision and development of the network will traverse election cycles. This could take the form of scenarios, for example establishing some legal structure for Transport Canberra, the new agency merging Capital Metro and ACTION,<sup>3435</sup> to be an independent body tasked with meeting the environmental and social aims of the integrated transport network.

***Recommendation 22.***

***Consider adopting legislation for Transport Canberra to be an independent body tasked, among other things, with meeting the environmental and social aims of the integrated transport strategy.***

The Conservation Council believes Roads ACT should be integrated into Transport Canberra. Roads planning and management cannot be undertaken independently of other transport forms, and activities in any area influence other transport infrastructure.

For example, all roads in the ACT should be designed not just for cars, but also take into account pedestrians and cyclists, and also the possibility that they might also form part of a public transport route, including light rail. Roads, lights and signals should be designed to enhance public transport speed, frequency and flexibility.

Roads ACT currently builds roads with a view to building more expanded or more new roads in the future and it operates on assumptions about future car traffic without having a role in reducing that traffic or in assisting in shifting transport modes. Roads ACT should have broader transport objectives than the building of roads for cars and the integration of Roads ACT into Transport Canberra is necessary to assist in the delivery of a fully integrated transport policy.

**Recommendation 23.**

**Legislate for Roads ACT to have broader transport objectives than building of roads for cars and integrate Roads ACT into Transport Canberra to provide for an integrated approach to transport in the ACT.**

There should be scrutiny to ensure that Roads ACT does not dominate the new entity Transport Canberra. The Auditor-General would be well placed to undertake this scrutiny.

**Recommendation 24.**

**The Auditor-General be resourced to undertake an audit of Roads ACT's role in delivering integrated transport outcomes including its proposed role in the Transport Canberra entity.**

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<sup>1</sup> ACT Government, Transport Canberra, [Light Rail Network – Delivering a modern transport system for a growing city](#), October 2015

<sup>2</sup> ACT Government, Transport Canberra, [Public Transport Improvement Plan](#), October 2015

<sup>3</sup> ACT Government, Transport Canberra, [Light Rail Network – Delivering a modern transport system for a growing city](#), October 2015, page 3

<sup>4</sup> [Light Rail Network](#), page 3

<sup>5</sup> [Public Transport Improvement Plan](#), page 22

<sup>6</sup> [Public Transport Improvement Plan](#), page 3

<sup>7</sup> [Public Transport Improvement Plan](#), page 3

<sup>8</sup> [Public Transport Improvement Plan](#), page 3

<sup>9</sup> Environment and Sustainable Development Directorate, [Transport for Canberra - Transport for a sustainable city 2012–2031](#), 2012

<sup>10</sup> [Public Transport Improvement Plan](#), page 3

<sup>11</sup> Targets are in ACT Government, [The Sustainable Transport Plan 2004](#), page 29. The targets were reported against by the [Commissioner for Sustainability and the Environment in 2007](#)

<sup>12</sup> ACT Government, [ACTION Expenditure Review: Government response to the final report prepared by MRCagney](#), October 2015

<sup>13</sup> Appendix 1, Clause 2 Transport “Progress a light rail network for Canberra by: ...Creating a Canberra wide light rail network master plan” [Parliamentary Agreement for the 8th Legislative Assembly for the Australian Capital Territory](#), page 4

<sup>14</sup> [Light Rail Network](#), page 4

- <sup>15</sup> *Light Rail Network*, page 4
- <sup>16</sup> Conservation Council ACT Region, *Managing the Urban Edge*, December 2013
- <sup>17</sup> This is discussed further in Conservation Council ACT Region, *Comment on draft Environmental Impact Statement (EIS) for proposed Capital Metro Light Rail Stage 1 – Gungahlin to Civic*, July 2015 pages 2-4
- <sup>18</sup> Simon Corbell MLA *Clean, sustainable light rail to run on 100% renewable energy*, 20 June 2015
- <sup>19</sup> *Light Rail Network* page 9
- <sup>20</sup> Parsons Brinckerhoff, *Greenhouse Gas Emissions Estimation – Capital Metro Project (Stage 1 – Gungahlin to Civic)*, June 2015
- <sup>21</sup> Environment and Planning Directorate, ACT Distribution of Emissions, <http://www.environment.act.gov.au/cc/acts-greenhouse-gas-emissions>
- <sup>22</sup> Capital Metro Annual Report 2014-15 <http://www.capitalmetro.act.gov.au/news-and-resources/reports-and-studies/annual-report>
- <sup>23</sup> Parsons Brinckerhoff, *Greenhouse Gas Emissions Estimation – Capital Metro Project (Stage 1 – Gungahlin to Civic)*, June 2015
- <sup>24</sup> 'What is the Transport Canberra Network?' *Light Rail Network*, page 4
- <sup>25</sup> See *Light Rail Network* pages 3,4,5 & 9.
- <sup>26</sup> Environment and Sustainable Development Directorate, *Transport for Canberra Transport for a sustainable city 2012–2031*, 2012
- <sup>27</sup> 'Table 8: New 2016 Mode Share Target (Journey to Work)', Environment and Sustainable Development Directorate, *Transport for Canberra Transport for a sustainable city 2012–2031*, 2012, page 58
- <sup>28</sup> Conservation Council ACT Region, *Comment on draft Environmental Impact Statement (EIS) for proposed Capital Metro Light Rail Stage 1 – Gungahlin to Civic*, page 8
- <sup>29</sup> Leon Arundell, analysis of ABS Census Community Profiles at <http://abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles?opendocument&navpos=230>
- <sup>30</sup> ACT Government Department of Urban Services *FINAL REPORT ACT Transport Demand Elasticities Study*, Canberra, April 2003, page 38
- <sup>31</sup> *Light Rail Network*, page 9
- <sup>32</sup> *Light Rail Network*, page 3
- <sup>33</sup> *Light Rail Network*, page 10
- <sup>34</sup> Joint Media Release: Chief Minister Andrew Barr and Shane Rattenbury MLA *Transport Canberra: one agency, one ticket, one network*, 27 October 2015
- <sup>35</sup> ACT Government, Transport Canberra, *Public Transport Improvement Plan*, October 2015, page 6