



ENGINEERS
AUSTRALIA

Greater Newcastle Transport Plan

Engineers Australia submission

16 February 2018



ENGINEERS
AUSTRALIA

Engineers Australia
11 National Circuit, Barton ACT 2600
Tel: 02 6270 6555
Email: publicaffairs@engineersaustralia.org.au

www.engineersaustralia.org.au

About Engineers Australia

Engineers Australia is the peak body of the engineering profession, with over 100,000 members from all engineering disciplines across the country. Established in 1919, Engineers Australia is a not-for-profit organisation, constituted by Royal Charter to advance the science and practice of engineering for the benefit of the community.

Introduction

Engineers Australia welcomes the opportunity to provide a submission on the Draft Greater Newcastle Future Transport Plan. This Plan supports Transport for NSW's Future Transport 2056 Strategy and provides the strategic direction for future transport planning for the Greater Newcastle area.

Greater Newcastle covers five local government areas, servicing a population of over 1 million people, and has been identified by the state government as a key Global Gateway, which will support the economy over the coming decades and beyond.

This submission addresses a range of issues and provides related recommendations for consideration.

Transport objectives

The Draft Future Transport Plan ranges widely and presents some travel data and future travel projections for Greater Newcastle. However, it does not refer to or identify a need for the extensive work, using complex and highly developed travel projections, which is needed to analyse the possible future transport/land-use configurations across the whole region. Only by using such scientifically-derived forecasts can transport system options be tested for effectiveness, efficiency, cost and benefits - the whole gamut of system and project appraisal - and then the planned system optimised.

Engineers Australia notes that the skills and the data resources for such transport system design and analysis are held very weakly in Australia, though they have in the past been strong. These skills and resources need to be retained by Governments and they need to be applied and updated continually; this is not a one-off process. Other technical and commercial sectors do maintain their crucial demand and projection capabilities to deliver better outcomes, short and long term.

The draft Plan does not articulate a clear transport vision for Greater Newcastle, nor does it describe the transport planning objectives that the Plan seeks to deliver. As a consequence, it is not clear what role Greater Newcastle will play in achieving the future transport strategy for NSW. This is particularly important given the region's role as Australia's largest regional economy. The Plan would benefit by identifying alignment with federal Government's transport priorities, particularly in relation to Smart Cities, defence infrastructure, and national road and rail networks.

The draft Plan focuses on six of the 10 customer outcomes (3, 4, 6, 7, 8, 9). It is not clear why customer outcomes 1 (a safe transport system for every customer with zero deaths or serious injuries...), 2 (a transport system which is resilient to significant weather event ...), and 5 (increased accessibility to employment services...) are not also relevant to Greater Newcastle.

Service and infrastructure initiatives

Engineers Australia welcomes the long-term planning horizon (20+ years) and supports the initiatives identified within the draft Plan. Given the disruptive future of our transport technology, the flexible investment approach identified in the draft Plan is supported.

With technology central to the future transport plans of NSW, ensuring that transport modes interrelate effectively is crucial. Systems such as Mobility as a Service (MaaS), autonomous vehicles moving both freight and people, last mile freight transport systems, smart motorways and integrated mass transport will require not just the physical adaptations to roads, rail and ports, but the amalgamation of technology and physical assets in new ways that cannot, at this point of time, be clearly envisaged.

However, the draft does not outline in any detail time lines for the initiatives identified in Section 2.3 nor does it clearly differentiate between those that are under investigation and those that are underway, and those that apply outside Greater Newcastle (e.g. Lakes Way and Golden Highway improvements).

Similarly, the draft does not currently refer to the draft Freight and Ports Plan, and does not appear to be consistent with that Plan in relation to rail infrastructure. For example, the draft Greater Newcastle Transport Plan refers to higher speed connections on the east coast as a 20+ year initiative (although what mode of transport will be accelerated is unclear), while the draft Freight and Ports Plan refers to extension of the Pacific Highway to Raymond Terrace and the Lower Hunter Freight Bypass as 0-10 year initiatives.

This ambiguity should be addressed to provide clarity to the overall transport plan. Additionally, adding references to the Infrastructure Australia audit would help provide greater clarity to the transport needs of Greater Newcastle.

Engineers Australia considers that the draft Plan misses an opportunity to be more ambitious in relation to delivery of higher speed rail connectivity to Sydney and to more effectively plan for electric vehicle charging infrastructure.

The need to improve transport between Newcastle and Sydney cannot be underestimated if the aspirations of the NSW Government for development of the state are to be achieved.

Land use and transport vision for 2056

Engineers Australia supports the evidence-based planning approach identified within the Plan and supports the Plan's intent to integrate transport and land use to deliver sustainable transport options within Greater Newcastle (which is the area within which 95% of trips take place). However, we do not support the notion that transport is sustainable with increasing private vehicle trips. The emergence of autonomous vehicle technology provides an opportunity for shared, on-demand vehicles that could lead to a reduction in traffic congestion. Conversely, private ownership of autonomous vehicles has the potential to significantly increase congestion.

We acknowledge the opportunity for an increasing proportion of trips to be made by active transport, as more than half of trips are less than five kilometres, and encourage Transport for NSW to make more funding available to local councils to deliver active transport infrastructure.

Figures 10 and 11 of the draft Plan clearly identify strong connectivity between Newcastle and Lake Macquarie, particularly between Glendale, Charlestown, Kotara, Broadmeadow and

Newcastle CBD. Improved public transport between these destinations has the potential to reduce traffic congestion on the road network.

The Plan does not currently identify the interaction between private and defence air travel and the wider transport network, and it is not clear whether Section 3.1 includes analysis of the contribution of air travel to travel behaviour. Section 3.2 of the Plan would benefit from inclusion of a discussion on how Williamstown Airport will contribute to the Global Gateway capability of Greater Newcastle, and the infrastructure required in the wider transport network to support air travel for commuting and visitation.

Engineers Australia supports the development of integrated transport networks for Greater Newcastle's strategic centres, and welcomes the inclusion of proposed networks for Newcastle and Maitland CBDs. We would prefer that network plans for the other 12 emerging centres be prepared as part of the current planning process, rather than deferred for the precinct planning process. In relation to the Newcastle CBD plan, the ferry network should include potential for ferry services to the proposed cruise ship terminal at Carrington. The Cardiff – Glendale network plan should include the Lake Macquarie Transport Interchange, with limited stops services transferred from Cardiff to a new train station at Glendale.

The planning processes which the NSW Government has underway (Greater Newcastle Metropolitan Plan 2017 and the Draft Greater Newcastle Future Transport Plan 2018) are interlinked but the linkages are not referenced in either document.

More significantly, there is no indication that these plans have been refined to optimise land-use and transport. For example, the process used to locate secondary and tertiary education facilities—as generators of high travel volumes—with respect to their future transport needs is not clear. Nor is it clear that issues such as ensuring that specific land use planning outcomes articulated in the Hunter Regional Plan have been considered, such as: planning for residential housing lands with road networks that allow efficient local bus routing and local/trunk transit interchanges; and recognising that vehicle technology is evolving and existing roads are becoming more congested. On this last point, it is worth reiterating that privately-owned self-drive vehicles are likely to increase congestion issues.

A more focussed approach to the Future Transport and the Metropolitan Plans is essential. Sustainability of the future Greater Newcastle area will require major changes from the present high car use coupled with expanding fringe suburban districts. Greater intensification of land occupancy and utilisation of much higher efficiency vehicle/track systems are needed as the primary outcome of both the Future Transport Plan and the Metropolitan Plan.

Customer outcomes for Greater Newcastle

As mentioned previously, we recommend that Customer outcomes 1, 2, and 5 also be explored within the Plan.

In relation to Customer Outcome 3, Engineers Australia supports the identified actions to improve connectivity, integrate services and make use of capacity. We note the use of on-demand services is likely to increase as autonomous vehicles become more prevalent. Autonomous taxis are likely to take a larger share of trips and could become an important public transport option.

As discussed above, transport analysis indicates that transport between north Lake Macquarie and Newcastle CBD dominates transport trips. The priority corridors identify the need to develop multi-modal routes between Charlestown and Newcastle CBD but not between Glendale and Newcastle CBD. Given the amount of traffic currently travelling between Glendale and Newcastle CBD, this corridor should be added.

Engineers Australia supports adoption of the Movement and Place framework described in response to Customer Outcome 4. However, we encourage Transport for NSW to apply the framework to support development of an integrated transport network, beyond just its road function.

The plan also needs to address all aspects of transport journeys whether they are:

- By foot
- Bicycle
- Bus
- Taxi, Uber, or other on-demand services
- Private cars, whether traditional or autonomous
- Motorcycle
- Heavy or light rail
- Ferry
- Plane

Each mode should integrate seamlessly through suitably designed, resourced and located interchanges throughout the network. In this way people can move from one mode to another without a major disruption to travel. Park and ride options should also be considered as they have worked in other areas, but require suitable parking capacity and location.

Discussion on Customer Outcome 6, while mentioning alternative fuels as a technology change, does not include mention of infrastructure required to support electric vehicles.

Engineers Australia supports the proposals in relation to Customer Outcome 7. We particularly support development of a 30-minute public transport catchment around Newcastle CBD and recommend this approach be extended to other key employment nodes in Greater Newcastle including Maitland, Charlestown and Cardiff-Glendale.

We support investigation of flexible transport services (Customer Outcome 8) and the actions proposed to support development of Greater Newcastle as a Global Gateway (Customer Outcome 9). As discussed above, the Plan could reference actions proposed in the draft Freight and Ports Plan to develop the Port of Newcastle and include further actions to support passenger and freight movement through Williamstown Airport.

Recommendations

Engineers Australia recommends that:

1. A clear transport vision and planning objectives for Greater Newcastle are articulated in the Greater Newcastle Future Transport Plan.
2. The Plan clearly articulates integration to federal transport priorities and identifies opportunities for collaboration among three levels of government.
3. Customer outcomes 1, 2, and 5 also be explored within the Plan.
4. The initiatives under investigation and underway be more clearly identified, along with the time frames in which they are proposed and the contribution they make to meeting the transport planning objectives for Greater Newcastle.
5. Transport for NSW make much more ambitious commitments to public and active transport and emerging autonomous and electric vehicle initiatives required to meet planning objectives and identified customer outcomes.
6. The Plan clearly articulates how it interacts with the draft Freight and Ports Plan, and in particular, how implementation of the Freight and Ports Plan will facilitate improvements in non-freight related transport.

7. The Plan provides more ambitious timeframes for higher speed rail connection between Sydney and Newcastle.
8. The Plan includes discussion of infrastructure required to support electric vehicles.
9. Transport for NSW works more closely with local councils to facilitate high quality active transport infrastructure, particularly within and between town centres, particularly in relation to funding.
10. The Plan specifically identifies opportunities to improve public transport between Glendale, Charlestown, Kotara, Broadmeadow, and Newcastle CBD.
11. The Plan includes discussion of the contribution of air travel and the implications for expanded air travel on the wider transport network.
12. Integrated transport network plans for all 14 strategic centres be included in the Plan.
13. The Newcastle CBD network plan includes ferry service to the proposed cruise ship terminal at Carrington.
14. The Cardiff-Glendale network plan includes the Lake Macquarie Transport Interchange.
15. The Plan includes actions to integrate autonomous on demand services into the public transport system.
16. The corridor from Glendale to Newcastle CBD via Cardiff and New Lambton be added to the Plan for development of multi-modal transport. Alternatively, the John Hunter to Newcastle CBD corridor could be extended to Glendale via Cardiff.
17. The Plan describes the application of the Movement and Place framework to an integrated transport network, rather than just the road component.
18. 30 -minute public transport catchments be developed around all major employment nodes within Greater Newcastle.

Conclusion

Greater urbanisation brings with it the challenges of moving people and goods effectively and efficiently. As Greater Newcastle grows these challenges will come into greater focus.

These challenges are not simply in relation to providing physical assets but the integration of technology. Cities that are adaptable to future disruptions that technology brings will have the advantage.

To plan effectively for these changes means breaking down existing silos. For too long transport and metropolitan planning have worked independently, leading to decision making that is not aligned, piecemeal and ineffective. Planning has lagged behind land use and transport has too often been seen as a retrofit rather than the invigorator of progressive city planning.

Engineers design, build, operate, maintain and use transport infrastructure. Their specialised skills and engagement in almost every part of the transport sector gives engineers a special insight to the capacity and innovative capacity of transport now and into the future.

Contact details

Thank you for the opportunity to make a submission on the draft plan. To discuss matters raised in this submission, please contact Helen Link, General Manager Engineers Australia Newcastle Division on (02) 4911 7310 or by email at hlink@engineersaustralia.org.au.



ENGINEERS
AUSTRALIA