Congestion in Greater Hobart

Summary report

July 2011

Department of Infrastructure,
Energy and Resources

Tasmania
Explore the possibilities

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1 SUMMARY

- The Department of Infrastructure Energy and Resources (DIER) has developed a report on congestion in Greater Hobart which outlines the influences of congestion and the approach DIER is undertaking to manage congestion.
- DIER recognises that there is community concern regarding congestion on key urban roads in Greater Hobart and that appropriate measures need to be put in place to manage traffic growth and delays.
- DIER's strategic planning for the transport system takes a long term (20 year) view which enables us to identify which parts of the network will experience the highest volumes and delays.
- Travel time analysis for Greater Hobart shows that traffic delays are confined to short periods during the morning peak and to a lesser extent the evening peak during school days.
- At a network level, the Brooker Highway experiences the greatest delays and slowest travel speeds of urban arterials within Greater Hobart.
- Due to the need to ensure that we wisely invest our limited financial resources, the State Government is increasingly focused on carefully planning our roads and ensuring that our existing infrastructure and services operate more efficiently.
- Transport systems are complex, no single response is able to address the range of factors contributing to congestion. An integrated approach including a range of complementary measures tailored to the particular circumstances of each urban area offers the best prospect of managing congestion.
- The Government is focused on ensuring existing infrastructure and services operate more efficiently and safely through the use of technology and innovation, demand management and better land use planning, rather than focusing on new infrastructure solutions.

2 WHAT INFLUENCES CONGESTION

- Congestion can occur when the demand for transport services approaches or exceeds available capacity. Congestion can be caused by a number of interrelating factors such as characteristics of transport infrastructure, availability and usage of alternative transport options, an increasing trend in trip making, traffic incidents and weather conditions.
- Congestion can cause a variety of economic, social and environmental impacts such as delays, higher vehicle operating costs, crashes and loss of amenity. The majority of the community's concern about congestion focuses on its impact on travel times.

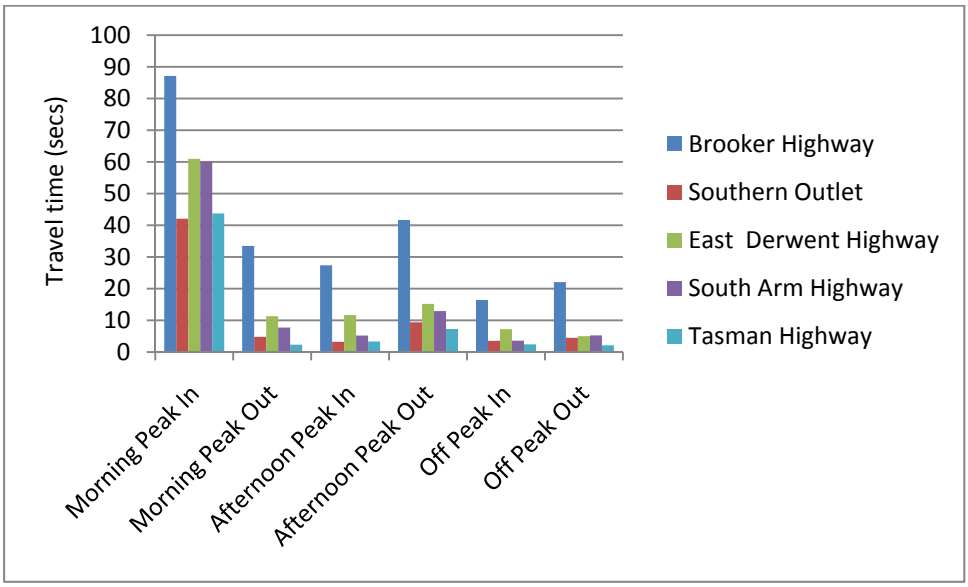
3 MEASURING CONGESTION

- Congestion can be measured by a variety of measures including travel time, delays and capacity analysis.
- Travel time analysis for key urban arterials undertaken in 2006 indicated that:

- All routes experienced some delays in the morning peak on the inward run into the Hobart CBD.
- The Brooker Highway experiences the greatest delays (12 minutes) on the morning peak inward run, followed by the South Arm Highway and East Derwent Highway (nine minutes).
- The Southern Outlet and Tasman Highway experienced the least delays at seven minutes on the morning inward run.
- Afternoon peaks tend to be less concentrated than during morning periods, reflecting variability in school finishing times and to some extent employment.

- Figure 1 shows the delay per kilometre in seconds for each 10km route travelled. The morning and afternoon peak delay is determined by comparing the travel time in minutes against the off peak.

Figure 1 Delay/km (in seconds based on nominal speed – 10km route), 2006



- Data is available confirming that, in comparison with other states, major urban corridors in Greater Hobart are significantly less congested.

4 COMMUNITY RESPONSES TO CONGESTION

4.1 Major infrastructure responses

- Major infrastructure responses such as tunnels or bypasses are often raised as potential solutions to managing congestion.
- The cost of constructing major infrastructure responses is vastly out of proportion to Greater Hobart's traffic issues and reflects an infrastructure focus rather than a network or system-wide perspective.
- The cost of building infrastructure is expensive. It is estimated that the recently proposed tunnel from the Southern Outlet to Brooker Avenue would cost around $1 billion.

- Often the responses may not solve the issue, for example, a 2008 traffic survey on the Macquarie Davey couplet indicates that a large proportion of traffic on the couplet is not through traffic but uses the couplet to access the Hobart CBD at various points. Stage one of the proposed tunnel is likely to only remove 15% of the traffic on the Macquarie Davey couplet during the morning peak and 14% in the evening peak.

4.2 One way streets

- Converting the one way street system within Hobart CBD to two way streets has been raised in the Jan Gehl *Inner City Development Plan* released in late 2010 to increase pedestrian amenity and also by Hobart Alderman to solve congestion on local streets through the CBD.
- DIER will need to work with Council to understand the wider network implications from making changes to one way street systems including undertaking traffic modelling to assist in determining the merit of future changes to the network.

5 DIER'S APPROACH TO MANAGING CONGESTION

- Addressing congestion is a complex matter because of the range of factors that contribute to its cause such as modal choice (private car, buses, walking and cycling), crashes and capacity of infrastructure.
- No single response is able to address the range of factors contributing to congestion. Therfore, an integrated approach including a range of complementary measures tailored to the particular circumstances of each urban area offers the best prospect of managing congestion.
- Due to the need to ensure that we wisely invest our limited financial resources, DIER is increasingly focused on strategically planning our roads and ensuring that our existing infrastructure and services operate more efficiently.

5.1 What is DIER doing?

- DIER is undertaking a range of actions to improve traffic flow and travel time reliability along key urban links including investment in improving public transport services, use of intelligent transport systems and targeted infrastructure upgrades rather than focusing on new infrastructure solutions. This approach includes a mixture of system wide approaches and corridor specific initiatives.
- **Transport planning** - The State Government has invested significant resources to improve transport planning in Greater Hobart. The Government has developed strategic frameworks and information systems to improve passenger transport outcomes in urban areas, these frameworks are:
  - *Tasmanian Urban Passenger Transport Framework.*
  - *Southern Integrated Transport Plan.*
  - *Tasmanian Walking and Cycling Strategy for Active Transport.*
  - *Greater Hobart Household Travel Survey.*
- **Passenger transport** - DIER is undertaking a system wide approach to improve the passenger transport system in terms of increasing the attractiveness and use of public transport, walking and cycling. The State Government has allocated $7M over

two years for the Passenger Transport Innovation Program which will support both immediate improvements in passenger transport and also assist in planning for long term change.

- **Brooker Highway Plan** - The State Government in conjunction with Brighton, Glenorchy City and Hobart City Councils has developed a transport plan which identifies priorities for upgrading the highway over the short, medium and long term. The highway experiences the greatest travel time delays and slowest travel time speeds in Greater Hobart.
- **Tasman Highway variable speed limits** - The Tasmanian Government is implementing a $1.8M project to improve traffic flow and prevent rear end crashes through variable speed limits. Variable speed limits will be used to reduce crash risk by decreasing the speed of vehicles and by lowering the speed of vehicles approaching congested locations. In addition to improved road safety, the variable speed limit will result in improved traffic flow, more reliable journey times, and greater utilisation of the available road space during peak travel times.
- **Kingston Bypass** - The bypass is a $41 million project currently under construction. The bypass was developed in response to managing capacity issues along the Channel Highway through Kingston and also infrastructure deficiencies and safety associated with the existing highway in terms of width, property access and intersection treatments.
- **Southern Outlet and Macquarie Street** - The State Government has allocated $750, 000 to improve the flow of Hobart city-bound traffic on the Southern Outlet and Macquarie Street, projects include:
  - Southern Outlet bus lane.
  - Macquarie Street clearway.
  - Planned upgrade of the Southern Outlet and Macquarie Street junction.

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