The

Hobart Northern Suburbs Rail Action Group Inc's

submission to the

Legislative Council
Sessional Committee Government Administration B
Integrated Transport Options Inquiry

August 2012

I'd rather be on the
NORTHERN SUBURBS RAILWAY

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Executive Summary

The Hobart Northern Suburbs Rail Action Group Inc (HNSRAG) submit that public transport in the Hobart Northern Suburbs lacks efficiency, effectiveness, and integration, and thus suffers from chronically low patronage in stark contrast to national public transport patronage trends. With efficient, effective and integrated public transport as the backbone of a strong and vibrant community, it is little wonder that residents, businesses and community groups are crying out for a public transport system overhaul and the Hobart Northern Suburbs Railway.

With the Hobart Northern Suburbs Railway as a simple, but highly efficient and effective, centre piece of an integrated public transport system, HNSRAG submit that the Hobart Northern Suburbs would reap significant social, economic, environmental and tourism benefits.

Unlike major road upgrade or construction projects undertaken by DIER, the Hobart Northern Suburbs Railway has required a business case analysis. Despite immense community support for the Hobart Northern Suburbs Railway, the Tasmanian Government's Department of Infrastructure, Energy and Resources (DIER) have failed to properly assess the rail option on two occasions. Both times DIER have:

- deviated from the simplest, most efficient and effective route;
- failed to understand rail infrastructure;
- failed to properly assess passenger demand; and
- failed to adequately consider the benefits.

HNSRAG and its many thousands of supporters firmly believe that State Government needs to make a change in the way it delivers public transport and that the implementation of the Hobart Northern Suburbs Railway is the first step in delivering an innovative and integrated public transport system.

Recommendations

HNSRAG respectfully make the following recommendations:

- That the Northern Suburbs Light Rail Business Case be independently and properly reviewed and that the BCR be amended to reflect all the benefits and a consideration of proper passenger demand analysis;
- That the Hobart Northern Suburbs Railway Project be prioritised by the Tasmanian Government and Federal Government funding be sought;
- That good public transport provision is seen as not only an infrastructure issue but also one of economic development, tourism, planning, health and community services.
- That future road expansion projects be subject to the same rigorous business case requirements as public transport projects;
- That Infrastructure Australia's guidelines be complied with to ensure public transport projects take priority; and
- That the rail corridor be protected and used for rail purposes.

The Hobart Northern Suburbs Rail Action Group Inc (HNSRAG) was formed in 2010 in response to the strong public desire to coordinate a community based campaign for reinstating passenger rail services. HNSRAG's aim is to facilitate the establishment of the Hobart Northern Suburbs Passenger Rail Service and the preservation of the rail corridor between Hobart and Brighton for rail services. Since its inception HNSRAG has attracted a strong membership and supporter base. Membership includes individual, family, corporate and foundation, and the supporter base is broad incorporating not only thousands of residents of the Northern Suburbs but also community organisations, transport economists, politicians (Local, State and Federal), and businesses. HNSRAG's strength comes from its grassroots approach to engaging the community in the campaign by regularly speaking to community groups, holding community forums and information sessions, and organising special events.

HNSRAG are delighted to be able to provide a submission to the Legislative Council Government Administration Committee B Inquiry into Public Transport on behalf of its members and supporters. This submission has four key components:

- highlighting the issues with the current state of public transport in the Hobart Northern Suburbs and make the compelling case for requiring an alternative, improvement and integration;
- detailing the Hobart Northern Suburbs Railway Proposal and how it could be a catalytic change in the way public transport is delivered in Tasmania;
- critiquing the previous alternative public transport studies and making key distinctions; and
- providing clear guidance as to the future opportunities.

The Current State of Metro Tasmania Services in the Hobart Northern Suburbs

Public passenger transport services in the Hobart Northern Suburbs area are provided by Metro Tasmania which receives approximately 75% of its revenue through government service contracts[1]. These service contracts provide for a "high penetration, low frequency" operating service[2]. Whilst such services can claim to have fair network coverage it comes at the cost of:

- low service frequency - where parts of the Hobart Northern Suburbs do not have a service operating for extended periods of time (ranging from a few hours to the entire weekend)[3];
- long journey times - where although Granton is only 19 kilometres from the Hobart CBD it can take an hour to travel there by public transport.

The exception to this is the Main Road Corridor between Glenorchy and Hobart where services operate on a high frequency basis, however due to substantial road congestions issues journey times between these two destinations are long and irregular.

Furthermore, service provision is often inappropriate for members of the community who require wheelchair accessibility. Metro Tasmania makes no guarantee that a service route will provide a Disability

[1] Metro Tasmania (2009) *Annual Report 2008/2009*, Metro Tasmania, Hobart

[2] Department of Infrastructure, Energy and Resources (2010) *Tasmanian Urban Passenger Transport Framework*, Tasmanian Government, Hobart, p 10

[3] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand

Discrimination Act (DDA) compliant vehicle on every occasion, let alone at regularly. For any public transport patron requiring this service they are required to contact Metro Tasmania prior to travel to request a DDA compliant vehicle. Whether one is provided is then dependent on fleet availability and placement. For these public transport patrons there is not only an appalling lack of frequent services but also an inherent risk in there journey planning (and therefore access to services and facilities) that a service will not be available at all at the time of day or even day of the week that they need to travel.

As the sole provider of public transport in the Hobart Northern Suburbs, Metro Tasmania struggles to effectively and efficiently provide the desired level of network coverage and simultaneously maintain service frequency and journey times that are attractive to the travelling public. As a result public transport patronage is the lowest in Australia (see Figure 1). When compared to other Australian capital cities where public transport patronage is significantly increasing it suggests that alone Metro are failing to adequately capture an appropriate share of the transport market. This is particularly concerning because it is occurring in an environment where increased fuel and parking prices, road congestion, and concern about the carbon impact of motor vehicles ought to make it easier for them to entice people away from private transport to public transport. The point of distinction between Tasmania's public transport system and other Australian capital cities is that Tasmania's system offers only a single modal choice (bus) whereas elsewhere they offer multi-modal choices (bus, train, ferry, tram, etc) with each mode capitalising on its inherent efficiencies and when integrated with others it achieves overall journey efficiencies for the travelling public.

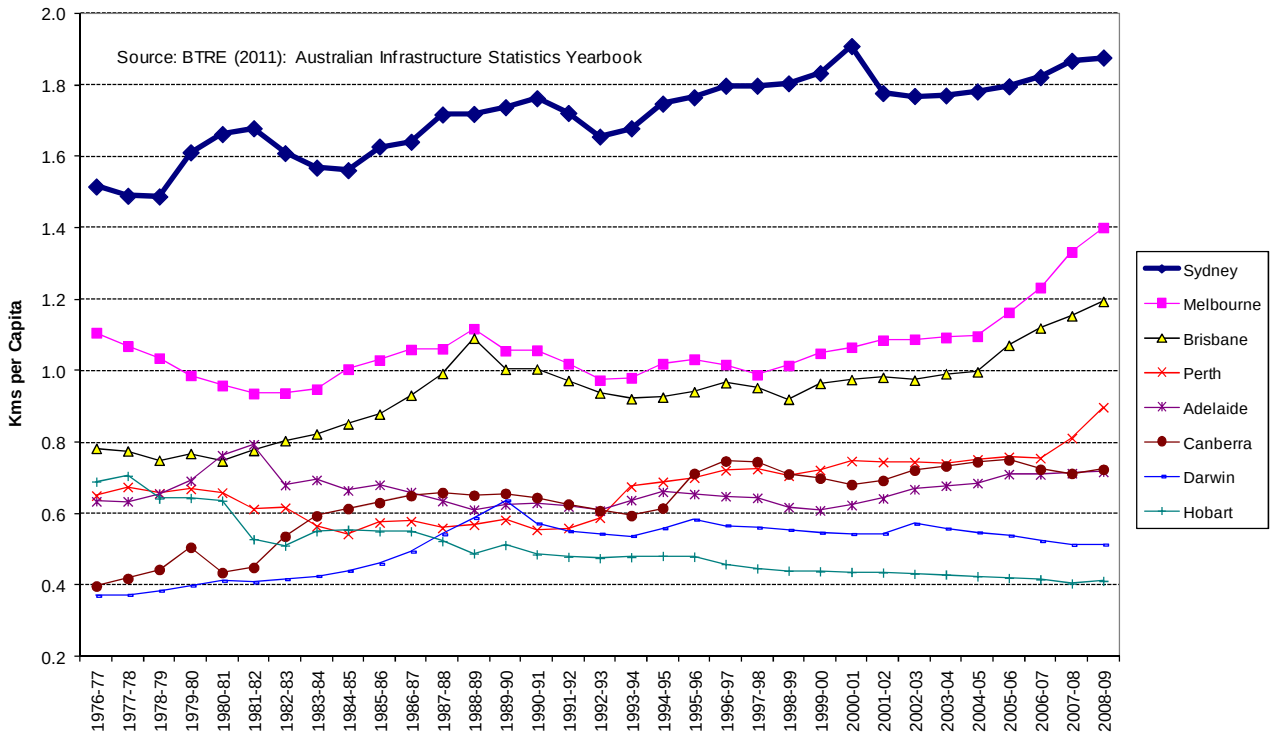

Figure 1: Public Transport Patronage Per Capita in Australian Cities

Why Do We Need Improved Public Transport in the Hobart Northern Suburbs?

Poor Current Public Transport Patronage

As outlined above public transport options are singular and do not represent good coverage, frequency or journey times. The unfortunate consequence of a poor public transport option is that car dependency is increased significantly and therefore so does the dependency on road networks.

Increased Road Congestion

As the major road arterial into Hobart, the Brooker Highway is classified as a National Highway. Of the five major arterial roads into Hobart, the Brooker Highway experiences the longest delays and slowest travel speeds as outlined below:

table 7. average Travel Speed (km/h – 10km)

	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out	Off Peak In	Off Peak Out
Brooker Highway	27.12	46.64	49.32	42.17	58.02	54.73
E. Derwent Highway	32.72	59.25	59.28	55.66	63.98	66.09
S. Arm Highway	34.46	71.50	72.65	64.83	75.08	75.25
Tasman Highway	42.83	85.57	82.51	76.55	84.32	85.95
Southern Outlet	43.51	84.74	82.06	76.51	81.50	85.39

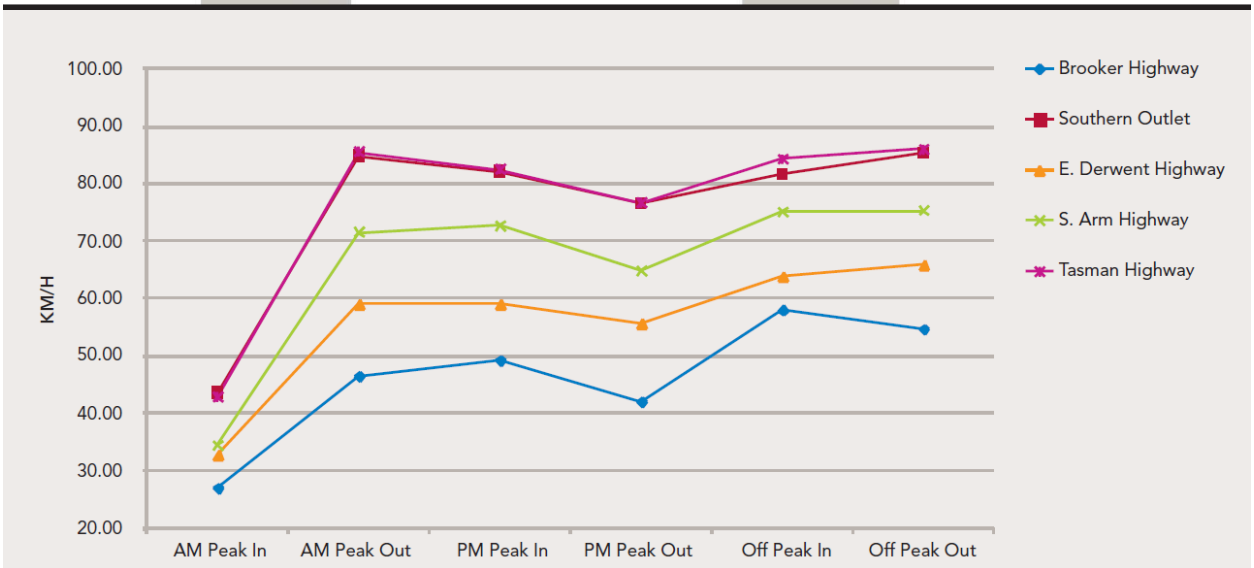

Figure 2: Average Travel Speeds on Hobart Arterial Roads, Southern Region Overview Report, DIER, Oct 2007

The Brooker Highway is below acceptable levels of services with "severely restricted flow" by the Department of Infrastructure, Energy and Resources (DIER) own standards[4] and is expected to worsen with the imminent opening of the Brighton Transport Hub and the subsequent closure of the rail freight service into the Hobart Port.

[4] Department of Infrastructure, Energy and Resources (2011) *Brooker Highway Transport Plan,* Tasmanian Government, Hobart, p 7

High levels of Transport Disadvantage in the Hobart Northern Suburbs

People who are transport disadvantaged rely primarily on public transport, walking, lifts from friends and family, and taxis to meet their travel needs[5]. Transport disadvantage can occur for a number of reasons including the lack of available private transport, disability, low income, cost of operating a private vehicle, and no licence (whether too young or old) and is often measured in term of accessibility and mobility [6]. In 2006, the Department of Infrastructure, Energy and Resources (Tasmanian Government) conducted an extensive audit and review of transport services in Southern Tasmania. In addition to analysing freight movement the review looked at passenger transport including public passenger transport provision and private passenger transport infrastructure requirements[7]. The audit and review was collated and reported in the *Southern Region Background Report: Southern Integrated Transport Plan*. The report highlighted some of the key transport issues and was arguably one of the first occasions where the concept of transport disadvantage was publicly acknowledge and graphically represented by the Tasmanian Government. As a major review and initiative of the Tasmania Government the *Southern Region Background Report: Southern Integrated Transport Plan* was to be a guide for future transport planning and funding and provide the basis for the development of a 30 year strategic passenger transport plan[8]. Figure 3 below reproduces the map developed using data collected by the Tasmanian Government showing the extent of transport disadvantage in the Greater Hobart Area. The high to very high levels of transport disadvantage in the more rural and fringe areas of Greater Hobart are perhaps not surprising given that these areas, in some instances, do not have any Metro Tasmania bus services and that distances required to travel to services, employment, and education are relatively greater than in more suburban areas. Indeed many of the new housing estates (both public and private) that are currently being built, or have been recently completed, are being developed in areas with virtually no public transport provision, or at the most very minimal private contractor operated public passenger bus transport provision. These include Richmond, Brighton, Sorell, South Arm, and New Norfolk. This demonstrates a worrying, and continuing trend to urban sprawl that arguably lacks sustainability both environmentally and socially. Of particular concern to these outlying areas is the lack of services, employment and education opportunities in their communities and the need to travel greater distances to access these.

Whilst high to very high levels of transport disadvantage in the rural and fringe areas of Greater Hobart are of concern, and reflect a significant need to change land use planning policy and practice, what is surprising and very alarming is the high to very high levels of transport disadvantage in suburban areas, particularly in the Hobart Northern Suburbs. As Figure 3 shows, there are significantly high levels of transport disadvantage in the suburbs of Berriedale, Rosetta, Glenorchy, Claremont, and Chigwell[9].

[5] Department of Infrastructure, Energy and Resources (2006) *Southern Region Background Report: Southern Integrated Transport Plan*, Tasmanian Government, Hobart

[6] Department of Infrastructure, Energy and Resources (2006) *Southern Region Background Report: Southern Integrated Transport Plan*, Tasmanian Government, Hobart

[7] Department of Infrastructure, Energy and Resources (2006) *Southern Region Background Report: Southern Integrated Transport Plan*, Tasmanian Government, Hobart

[8] See for example the Department of Infrastructure, Energy and Resources (2010) *Tasmanian Urban Passenger Transport Framework*, Tasmanian Government, Hobart

[9] Department of Infrastructure, Energy and Resources (2006) *Southern Region Background Report: Southern Integrated Transport Plan*, Tasmanian Government, Hobart

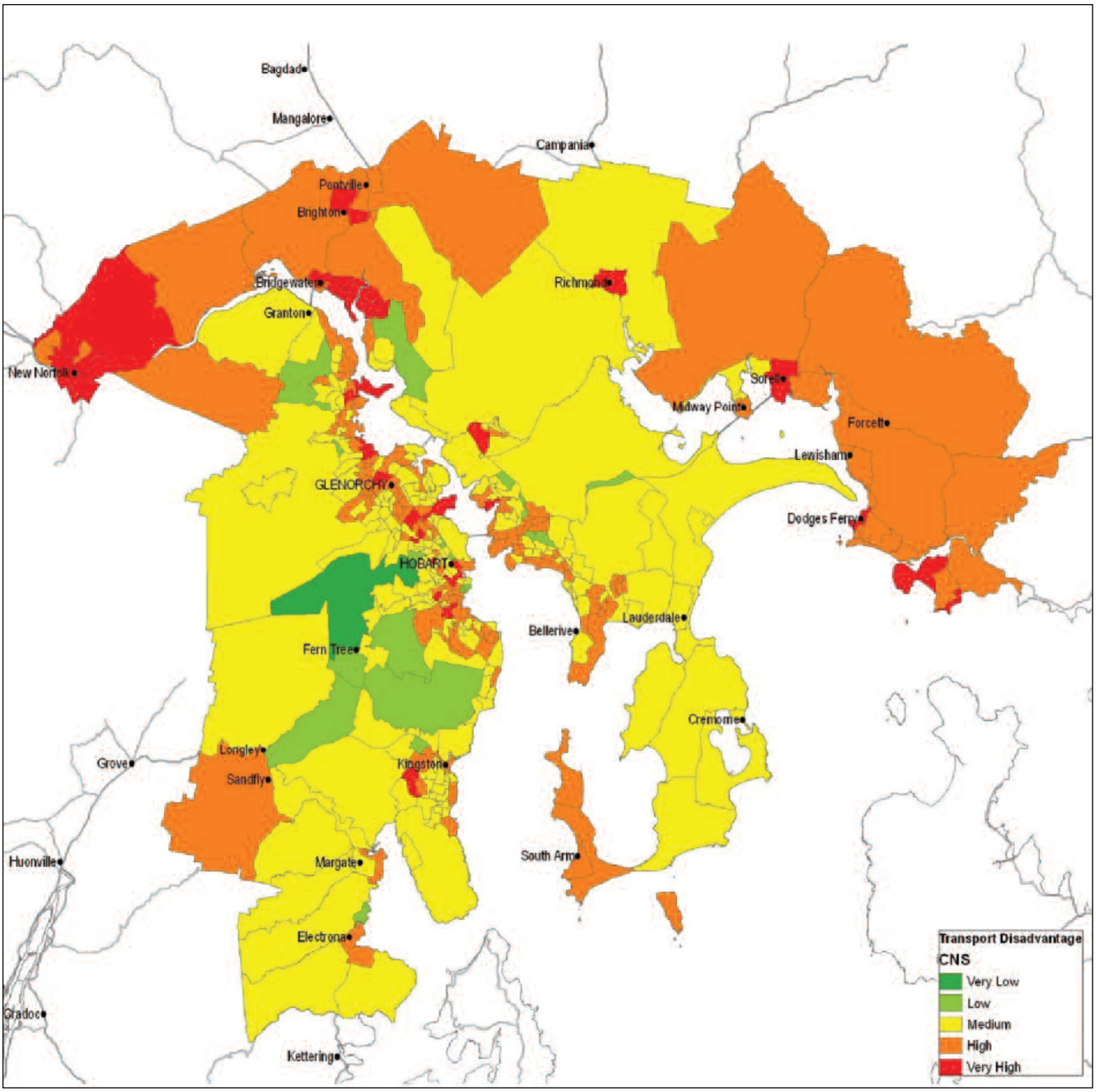

Figure 3: Transport Disadvantage in Greater Hobart, Southern Region Overview Report, DIER, Oct 2007

These suburbs are not new, although there are some new housing developments being built on remaining vacant land. Whilst these suburbs are served by Metro Tasmania, they remain transport disadvantaged because the lack of appropriate and effective public passenger transport services that meet the needs of the population and their characteristics. For example, the area in Claremont known as Cadbury Estate, is identified as having very high levels of transport disadvantaged primarily because it has a significant elderly population who are either unable to drive or have limited access to a private motor vehicle, but whom rely heavily on the public passenger transport services to access services such as medical, aged care, recreational, and social. In this situation the mere existence of a public passenger transport service is not enough to negate transport disadvantage. Transport disadvantage exists in this community arguably because the lack of frequent and appropriate services (for example *Disability Discrimination Act* compliant vehicles) in a predominantly elderly population effecting their accessibility and their mobility.

In addition to the mapping of transport disadvantage by the Department of Infrastructure, Energy and Resource (Tasmanian Government), a needs gap study conducted by Currie, Enright, Hoey, and Paterson came to similar conclusions[10]. Their study outlines an approach to analysing the performance of passenger transport services in meeting the needs and addressing transport disadvantage in Hobart[11]. This was done by identifying and categorising need and using a sophisticated public transport network model that measured not only service quantity but also quality[12]. Their conclusions were reached by comparing the "need scores with the network supply scores for each time period and trip purpose"[13] . Simply put, where the need score was high and the supply score was also high (reflecting no services or very high cost services) then a public transport provision gap was identified[14]. Thus this study confirmed, for example, that in Claremont there is indeed a gap in public transport provision due to the "Mixed Very High/High Need and Very High/High Cost" compounded by "poor bus service levels"[15].

Similarly, the suburb of Chigwell has been identified as having very high levels of transport disadvantage. Again this is not due to the absence of a public passenger transport service, but instead the lack of appropriate and frequent services. This highlights the service provision dilemma of coverage versus frequency and the problems of trading one off against the other.

The combination of poor public transport services, transport disadvantage and increased travel distances to access employment, education and services has also been linked to the concept of "forced car ownership"[16]. As the name suggests "forced car ownership" occurs where there is no alternative and adequate substitute for gaining access to facilities[17]. Within the Hobart Northern Suburbs there are areas which receive no public transport services or where the services that do exist are so infrequent that they cannot be utilised for every day to day activity. Thus it is entirely possible that individuals and households may be forced into car ownership, and the related expenses, not out of choice but instead necessity in order to function and participate as best they can in the community. In recent research on "high car ownership on low income

[10] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand

[11] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand

[12] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand

[13] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand, at p 9

[14] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand

[15] Currie G, Enright D, Hoey C & Paterson D (2003) *Quantitative Approaches to Needs Based Assessment of Public Transport Services – The Hobart Transport Needs Gap* Study, 26th Australasian Transport Research Forum, Wellington, New Zealand, p 15

[16] Bannister D (1994) "Equity and acceptability questions in internalising the social costs of transport" in *Internalising the Social Costs of Transport*, Organisation for Economic Co-operation and Development – European Conference of Ministers of Transport, Paris

[17] Bannister D (1994) "Equity and acceptability questions in internalising the social costs of transport" in *Internalising the Social Costs of Transport*, Organisation for Economic Co-operation and Development – European Conference of Ministers of Transport, Paris

(HCOOLI) households"[18] it is suggested that it is possible that over half of expenditure costs for a household could go towards transport[19]. In adapting the notion of "housing stress" (a condition the result of households expending 30 percent or more on housing associated costs[20]), Dodson, Gleeson, and Sipe suggest that "transport stress" could likewise exist[21]. The emergence of transport stress is significant and ought to be of grave concern to those charged with building sustainable communities.

Opportunity to Reduce Carbon Emissions

In Tasmania 42% of all greenhouse emissions are generated through transport, and of those transport emissions 92% come from road based transport[22]. With increased concern about the environmental impacts of greenhouse emissions, and now growing concerns about the economic impact of such emissions in a post-Carbon Tax economy, it is becoming more imperative that emissions are decreased. With road based transport emissions making up a considerable percentage of overall emissions, and evidence clearly showing that alternative transport options such as rail are low carbon (or even no carbon) emitters, it is an opportunity ripe for exploitation. Further more, with the use of alternative transport options powered by electricity (such as electric or battery powered rail), Tasmania has the opportunity to produce the lowest carbon emission public transport in the world if it is powered by renewable energy sources such as hydro and wind power.

Opportunity to Reap the Social, Economic and Environmental Benefits of Good Public Transport

As will be detailed later in the submission efficient and effective public transport services encourage and foster good social, economic and environmental outcomes. By providing an effective and efficient public transport system that responds to transport disadvantage the social benefit outcomes clearly come through the removal of accessibility and mobility barriers to existing and future community and health services, employment and education opportunities, and provide an opportunity for community engagement[23].

With regard to the economic benefits, evidence from other cities shows that good public transport systems act as an investment attractor, encourage transit oriented development, and stimulate existing business growth[24]. HNSRAG submit that this would be the case in the Northern Suburbs. Throughout our campaign HNSRAG has reached out to and included the local business community and enjoys their strong support because the lack of good public transport has been identified by them as a barrier to economic growth and worse still a disincentive for business.

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[18] Currie G (2009) "Australian Urban Transport and Social Disadvantage" in *The Australian Economic Review*, vol 42, No 2, pp 201-8

[19] Currie G (2009) "Australian Urban Transport and Social Disadvantage" in *The Australian Economic Review*, vol 42, No 2, pp 201-8

[20] National Housing Strategy (1991) *The Affordability of Australian Housing: NHS Issues Paper 5*, National Housing Strategy, Canberra

[21] Dodson J, Gleeson B, & Sipe N (2004) *Transport Disadvantage and Social Status: A review of literature and methods*, Research Monograph 5, Urban Policy Program, Griffith University, Brisbane

[22] Department of Infrastructure, Energy and Resources (2007) *Southern Region Overview Report,* Tasmanian Government, Hobart

[23] Johnston B (2009) *Hobart Northern Suburbs Railway Proposal: June Presentation to the Institute of Engineering and Technology Mid Year Lecture*, Hobart & Johnston B (2009) *Hobart Northern Suburbs Railway Proposal: December Presentation to Community Meeting*, Hobart

[24] Newman?????

The environmental benefits of improved public transport go beyond a reduction in carbon emissions to the development of better land use policies. Utilising good public transport systems as an attractor of investment means that it is possible to discourage urban sprawl and its associated lack of transport connectivity and instead encourage medium to high density inner urban living along well defined and permanent transport corridors.

What are Public Transport Attractors?

For any public transport system to be successful and to maintain and grow patronage, HNSRAG submits that it must focus on delivering a service that is an attractive alternative to the private motor vehicle. There are some logical and well defined "attractors" which have been identified as major factors in facilitating a modal shift towards public transport. They are:

- *Accessibility*
  - ✓ *Easily located/identified service/stations*
  - ✓ Located close to services, facilities and other transport options
  - ✓ Fully Disability Discrimination Act compliant
- *Convenience*
  - ✓ Easy connection services, facilities and other transport options
  - ✓ Service provision at convenient times (eg weekend, after hours, etc)
  - ✓ Easily identifiable services
- *Integrated*
  - ✓ Seamless connection to other modal choices including timetable and ticketing integration
- *Fast*
  - ✓ Service must deliver the comparable or better journey time in comparison to private vehicle
- *Frequency*
  - ✓ High service frequency to reduce delay in waiting for service
- *Cleanliness*
  - ✓ Well cleaned and presented vehicle
  - ✓ No/Low emissions for the mode of transport
- *Efficiency*
  - ✓ Time and ticketing efficiency
  - ✓ Energy efficiency
- *Affordability*
  - ✓ In comparison to the total cost of running a private motor vehicle
- *Comfort*
  - ✓ Easy access
  - ✓ Enough seating, warm etc
- *Attractiveness*
  - ✓ All of the above

The Hobart Northern Suburbs Railway Proposal

This proposal features modern electric rail vehicles traversing the existing northern suburbs rail corridor between the Hobart Waterfront and Brighton. As there is now only a single railway line between Hobart and Granton (the other line making way for the Inter-City Cycleway) some stations have passing loops and recharging facilities to allow trains to travel in both directions on the single track and batteries to be recharged whilst passengers embark/disembark. In peak times, up to 5 trains could operate at 12 minute intervals, with the journey time between the Brighton Transport Hub and the Hobart Waterfront taking 28 minutes as shown in Figure 4. Importantly the service has been designed to be accessible, convenient, fast, frequent, clean, efficient, affordable, comfortable, and attractive.

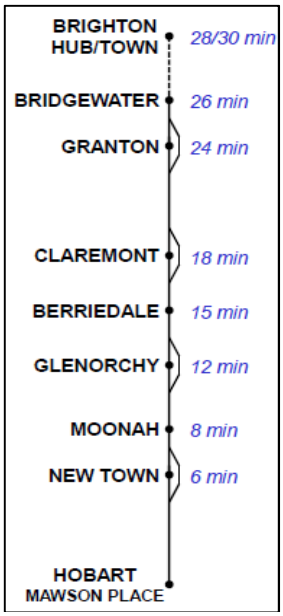

Figure 4: Hobart Northern Suburbs Railway schematic showing journey times

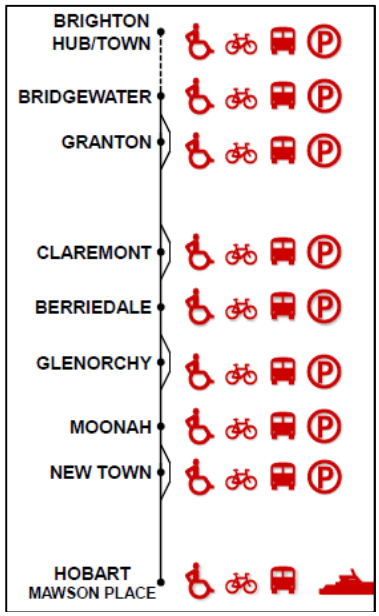

Figure 5: Hobart Northern Suburbs Railway schematic showing integration with other modes

Accessible, Convenient and Integrated

As identified previously one of the keys to good public transport lies in easy access, good connections and integration with other modes. The Hobart Northern Suburb Railway (as shown in Figure 5) provides for "park and ride" at every stations (with the exception of Mawson Place), integration with bus services at all stations, ferry service integration at Mawson Place, and integration with the existing Inter-city Cycleway. Furthermore every station and each rail vehicle is fully Disability Discrimination Act compliant and allows for easy wheelchair/pram/bicycle access.

Fast

One of the key attractors of the Hobart Northern Suburbs Railway is its ability to provide a fast journey time particularly in comparison to the private motor vehicle and the existing Metro Tasmania "Express" services. The railway benefits from the advantage of having a dedicated corridor on which it gets priority and is not subject to road traffic conditions. A comparative study of journey times by mode demonstrates that the Hobart Northern Suburbs Railway travelling at a modest speed can, through the efficiencies of rail, can halve the journey time of a private motor vehicle and a current express bus service (Figure 6).

Route →	New Rail[1]	X1 Bus[2]	X1A Bus[2]	X1 Bus[2]	X1 Bus[2]	1952 Rail[3]
CLAREMONT	0	7:26	7:43	8:05	8:33	8:50
GLENORCHY	6	7:39 13	7:56 13	8:23 18	8:47 14	9:00 10
MOONAH	9	-	19	-	-	9:05 15
NEW TOWN	12	-	8:06 23	-	-	9:07 17
HOBART	18	8:05 39	8:23 40	8:47 42	9:10 37	9:15 25

Better than car in peak times
Comparable with car off-peak

1. Calculated minutes using 65 km/h maximum speed, 1 min stops
2. Express bus times from Metro Tasmania Bridgewater – Hobart timetable, 23/09/07
3. Passenger train No. 25 from TGR Working Timetable, 1952

Figure 6: Inward Journey Time comparison with Metro Express Bus

Clean and Efficient

Rail is the most energy efficient form of land passenger/freight transport (Figure 7). A steel wheel on a steel rail is seven times more efficient that a rubber tyre on road[25]. By powering the rail vehicles from a renewable energy source such as Hydro, and supplementing it with solar energy produced by panels mounted on the vehicles and stations, it is possible that the Hobart Northern Suburbs Railway could be carbon neutral.

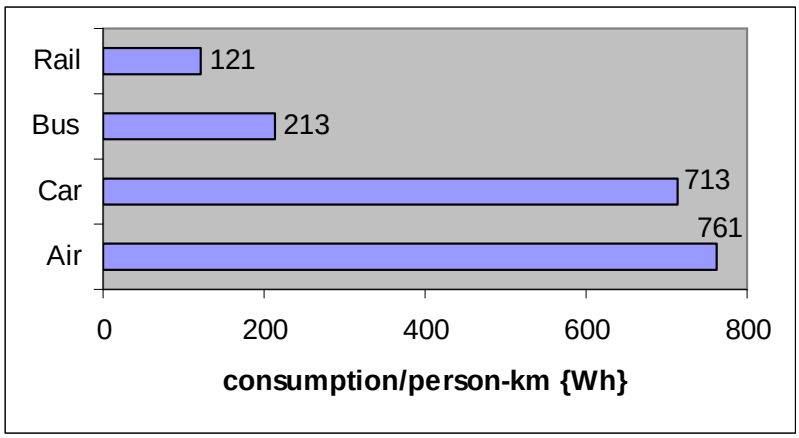

Figure 7: Typical energy requirements for passenger vehicles, Evolution of Electric Traction, 1990

[25] Fischer T (2011) *Trains Unlimited in the 21st Century*, HarperCollins Publishers, Sydney

Comfortable and Attractive

Electric rail vehicles are quiet and there are a variety of electric power supply options that would eliminate the need for overhead supply infrastructure. New rail vehicles are manufactured in Australia and are modern and streamline in design. The rail corridor itself traverses some scenic and attractive areas of Hobart and the Northern Suburbs, including picturesque river views, major tourist attractions such as MONA and Cadbury and major residential and central business districts.

Station Location and Infrastructure

Hobart Terminal (Mawson Place) - (Figure 8)

The Hobart Northern Suburbs Railway requires a 400 metre extension of the existing railway line to connect it to the CBD. This extension would be at street level (tramway style) from the existing Hobart Railyards beside Davy Street terminating Mawson Place. This terminal is only one block from the existing Metro Tasmania Bus mall and would ideally suit integration with a ferry service. The service would terminate at the front door of a soon to be redeveloped Tasmanian Museum and Art Gallery, in the historic Sullivan Cove precinct and in close proximity to Salamanca and the Hobart Central Business District.

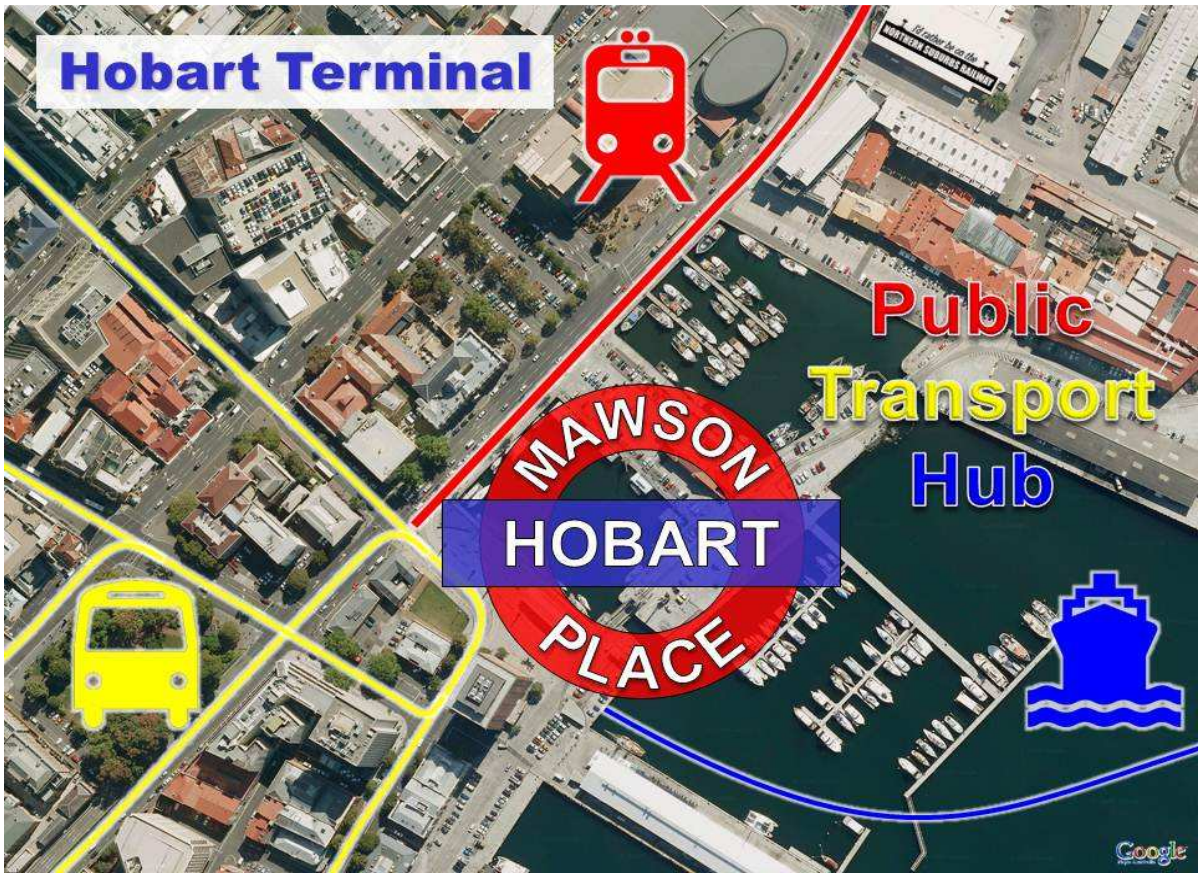

Figure 8: Hobart Mawson Place Terminal

New Town Station (Figure 9)

Population Catchment = 13 799 residents (2006 Census)

It is proposed that the station would be located adjacent to the old Tasmanian Government Railway's New Town Station. To facilitate rail vehicles travelling in both directions a passing loop would be installed with an island platform. Extensive car parking facilities already exist at the nearby sporting facility and are not utilised on weekdays and is ideally suited for a park and ride site. From New Town it is a vey quick and scenic six minute rail journey to Hobart waterfront along the banks of the Derwent River and passing the Royal Tasmanian Botanical Gardens. This station would also provide excellent public transport to the hockey grounds which have, and can, host national and international competitions. It is also conveniently located near the National Trust property, Runnymede.

Figure 9: New Town Station

Moonah Station (Figure 10)

Population Catchment = 13 180 residents (2006 Census)

The Moonah Station could either be located at its original site (south of Albert Road) or in closer proximity to the Moonah Central Business District area on the northern side of Albert Road. This station is right in the heart of a major business and retail precinct while still providing for important connections to the residential areas of Moonah, West Moonah and Lutana. With existing parking already established there remains scope for expansion of a park and ride facility if demand required.

Figure 10: Moonah Station

Glenorchy Station (Figure 11)

Population Catchment = 15 134 residents (2006 Census)

The Glenorchy Station is conveniently located in the heart of the Glenorchy City Municipality and adjacent to Northgate Shopping Centre. Once again to facilitate rail vehicles travelling on a single track in both directions a passing loop is installed and a realignment of the Inter-City Cycleway provides for an island platform. Located at the heart of the Glenorchy CBD it provides easy access to retail and service businesses as well as a number of Government agencies. It is also adjacent to the King George V Sport and Community Precinct which has recently received $8.7million of funding to be redeveloped. As part of this redevelopment it is anticipated that there will be a significant increase in visitations to the precinct through the provision of greatly improved football, soccer, cricket and general sporting facilities, allied health services, a new central Migrant Resource Centre, and an expanded Tasmanian Transport Museum.

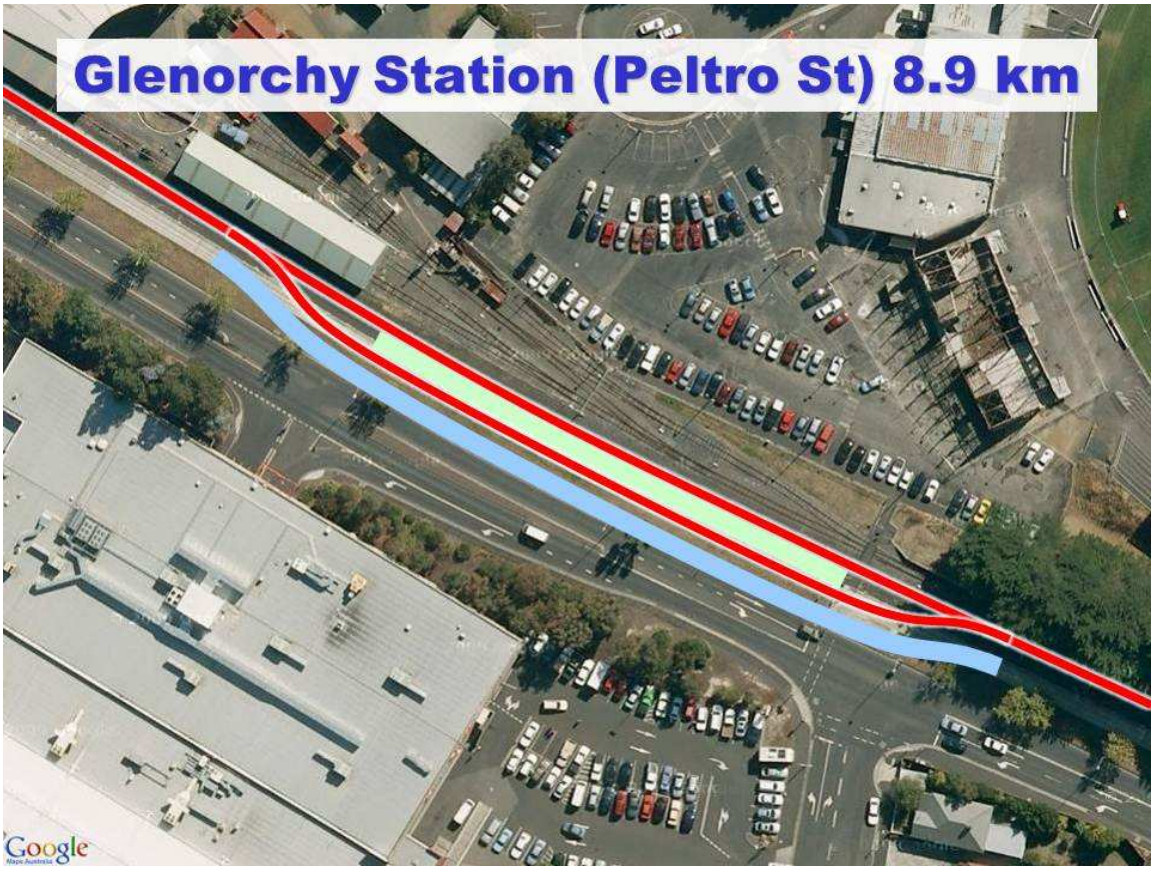

Figure 11: Glenorchy Station

Berriedale Station (Figure 12)

Population Catchment = 5 190 residents (2006 Census)

The Berriedale Station is located within 500 metres of Tasmania's most popular attraction and the internationally renowned Museum of Old and New Art (MONA) and provides a 15 minutes service connection between and the Tasmanian Museum and Art Gallery door-to-door. It is also has ample room for park and ride and serves the residents of Berriedale, Chigwell and Collinsvale and Glenlusk.

Figure 12: Berriedale Station

Claremont Station (Figure 13)

Population Catchment = 9 558 residents (2006 Census)

Claremont Station is located adjacent to the Claremont Central Business District. It serves the residents of Chigwell, Claremont, Cadburys Estate and Austins Ferry. It is also within walking distance of the major tourist attraction Cadburys chocolate factory. It also provides for a passing loop to allow for trains to travel in both directions.

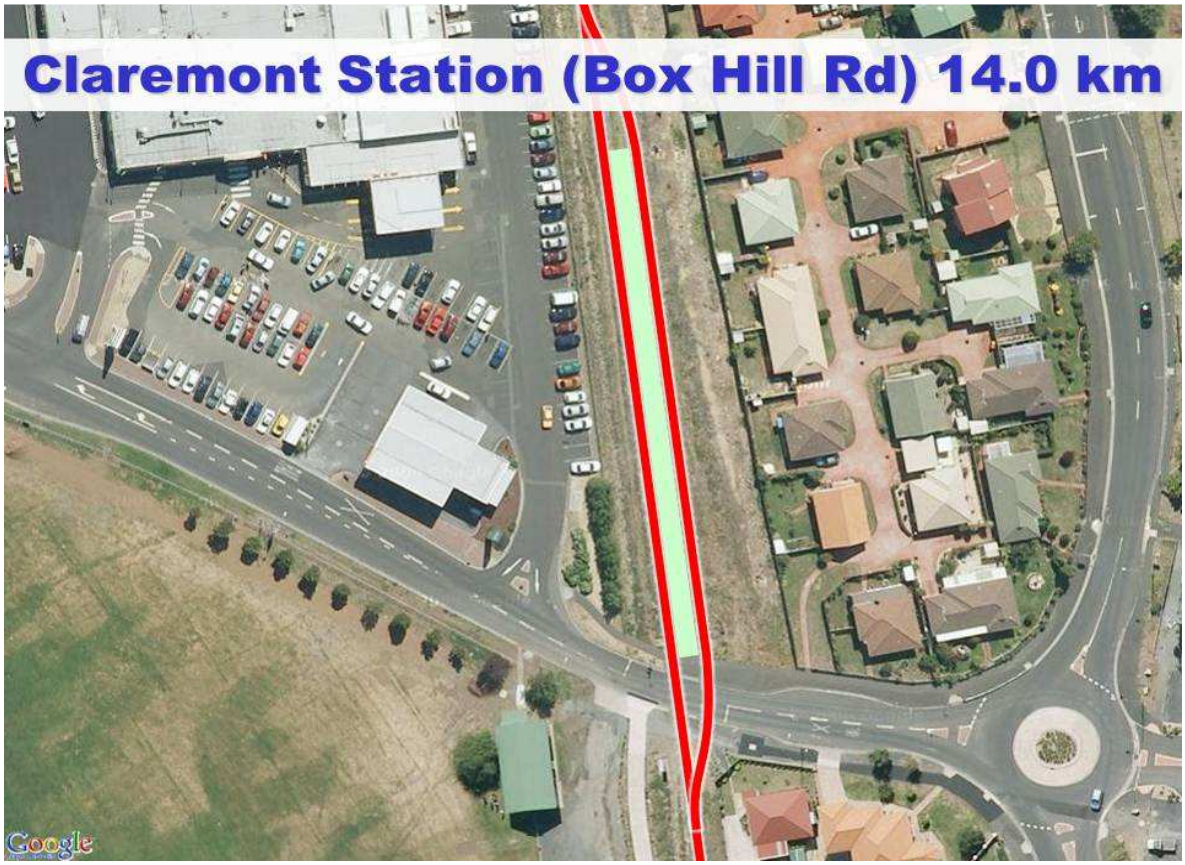

Figure 13: Claremont Station

Granton and Bridgewater/Brighton Stations (Figure 14)

Granton Population Catchment = 7318 residents (2006 Census)

Bridgewater/Brighton Catchment = 14 329 residents (2006 Census)

These stations provide a service for the residential catchments Granton, Bridgewater, Brighton, New Norfolk, Pontville and beyond. With plenty of available land for park and ride, there is also room for the location of a storage and maintenance facility. Rail services from these stations could provide a frequent service with a journey time of approximately 30 minutes. This would be a vast improvement on the current Metro Express service from Brighton which can take 90 minutes with very infrequent services.

Figure 14: Granton and Bridgewater Stations

Infrastructure Benefits of the Hobart Northern Suburbs Railway

Unlike the development of passenger rail services in other Australian capital cities, Hobart is uniquely advantaged by the fact that there is already an existing railway line and corridor that is grossly under-utilised. This negates the need to acquire (sometimes compulsorily) land to develop the corridor and usually constituting the most expensive component of any rail expansion project. When the Tasmanian Government purchased the railway line in 2009 it became the owner of a very valuable rail transport corridor with the ability to ensure its utilisation and reap the benefits of that purchase.

It is submitted that the reestablishment of passenger rail services would ameliorate the need to do much of the planned expensive Brooker Highway upgrades. As outlined above DIER have deemed the Brooker Highway to be currently at below acceptable levels of service and expect congestion issues to worsen significantly over the next 20 years with the Highway already at, or near, capacity. In the Tasmanian Government's 2011 Infrastructure Australia Submission, $213million worth of Brooker Highway (Berriedale Road to Doman Highway Interchange) capacity and efficiency upgrades and $25million of safety and asset maintenance projects were identified. In addition to this $770million was sought for the construction of a new Bridgewater Bridge that would not have any rail capacity. In total, the request was for over $1billion worth of road projects (Domain Highway Interchange to Bridgewater) to alleviate congestion and increase capacity on a road transport corridor which is adjacent to a rail corridor that is under-valued, under-utilised and that with a significantly smaller investment of money (approximately 10% of that required of road) could alleviate congestion and capacity issues through attracting passenger transport to rail.

Utilisation of the rail corridor once more for passenger rail services also provides important passenger infrastructure to facilitate tourist and heritage rail access. With the Tasmanian Transport Museum and the Derwent Valley Railway Society both in a position to run tourist heritage rail trips immediately, the only obstacle preventing this is access to the mainline. As passenger services currently do not operate, Tasrail have made it clear to both organisations that re-establishing passenger services, even if only for a one-off tourist journey, is not a priority. If passenger services were established then it would not only provide mainline access for these heritage operators but also the passenger platform infrastructure that would complement a rail experience tourism venture.

Economic Benefits of the Hobart Northern Suburbs Railway

Through investment in rail public transport, and therefore fixed, certain and permanent connectivity between people and economic activity, the Hobart Northern Suburbs Railway could be a catalyst to unprecedented economic stimulation in the Northern Suburbs. Whilst the economic benefits are wide ranging a few are worthy of mention here.

Firstly, it is well recognised that passenger rail services encourage transit oriented development and better land use planning[26]. This is achieved through increased density and clustering of residential and business

[26] Litman T (2010) *Rail Transit in America: A comprehensive evaluation of benefits*, Victoria Transport Policy Institute

activity centres around stations which in turn provide agglomeration benefits, including improved productivity through accessibility and network effects. Whilst the Southern Tasmanian Regional Land Use Strategy[27] outlines a strong desire to increase urban density, particularly with the Northern Suburbs, it give little indication how this could be achieved other than through a gradual and slow process of rezoning on application. However if the Hobart Northern Suburbs Railway Project was implemented then the development opportunities in "brownfield" sites near major stations would drive the changes in land use and zoning and stimulate the changes required.

Secondly, it would stimulate job creation both directly, through employment with the railway, but also indirectly from increased economic activity and prosperity near stations. Once again the innovative and efficient transport mode would provide a level of connectivity yet to be experienced in Tasmania and it would act as an attractor to new and existing businesses to relocate near major stations and thus their customers.

Another important economic benefit is that it provides the public transport infrastructure to major sporting and community venues. With The Hobart Northern Suburbs Railway located on the doorstep of venues such as the Hockey Grounds and the King George V Oval it provides those facilities with the opportunity to market on a national and international stage for events with the support of a world class public transport option.

In addition the utilisation of the rail corridor for passenger rail services goes some way to improving the viability of the entire Tasmanian rail network, including freight. It is HNSRAG's understanding that in Tasmania there are a number of major industries that remain operating in Tasmania on the proviso that it maintains a rail freight service. With the rail network achieving multi-purpose use (freight and passenger) it increases the viability of the rail asset overall and secures it future.

There is also a significant economic benefit achieved through the provision of an efficient public transport system. In the recent report "The True Value of Rail" it was outlined that significant financial losses can be ameliorated through the provision of good passenger rail transport[28]. These saving can be found in the reduction of congestion and journey to work delays and lost time productivity.

Finally, permanent connectivity achieved through passenger rail services, as distinctive from other road based public transport, is likely to achieve increased property values in and around the station nodes[29]. Research has shown that property value increases of 50% are achievable[30] which not only provides a significant windfall for current property owners but acts as an attractor to urban densification and investment.

[27] Southern Tasmanian Council Association (2011) *Southern Tasmanian Regional Land Use Strategy*, Southern Tasmanian Council Association, Hobart
[28] Deloitte Access Economics (2011) *The True Value of Rail Report*, Australasian Railway Association, Sydney
[29] Deloitte Access Economics (2011) *The True Value of Rail Report*, Australasian Railway Association, Sydney
[30] Litman T (2010) *Rail Transit in America: A comprehensive evaluation of benefits*, Victoria Transport Policy Institute

Tourism Benefits of the Hobart Northern Suburbs Railway

The Hobart Northern Suburbs Railway would provide an innovative, efficient and effective public transport service to a number of tourist attractions in Hobart and the Northern Suburbs (Figure 15), in particular the world renowned Museum of Old and New Art. With limited parking available onsite at MONA, MONA have had to look at alternative options and promote the use of their ferry. However they are very keen to explore the opportunities that a rail service would provide on their doorstep. The Hobart Northern Suburbs Railway would also provide a 15 minute connection between MONA and the Tasmanian Museum and Art Gallery. As mentioned above, it also provides access for a possibly lucrative tourist rail venture through existing rail/transport preservation societies.

Figure 15: Current tourist attractions along the Hobart Northern Suburbs Railway

With the possibility that the Hobart Northern Suburbs Railway would be the world's first zero carbon emissions public transport service it is likely that the service itself would become a tourist attraction. This would allow Tasmania to capitalise on the "clean and green" branding of the State and capture more of the eco-friendly tourist market.

Social Benefits of the Hobart Northern Suburbs Railway

As outlined above the effect of transport disadvantage and social exclusion are profound and can be very debilitating. It is submitted that the provision of the Hobart Northern Suburbs Railway would enhance, support and encourage community and social development in the Northern Suburbs through the removal of accessibility and mobility barriers to existing and future community and health services, employment and education opportunities, and provide an opportunity for community engagement[31].

The Hobart Northern Suburbs Railway campaign has also, and continues to be, an exercise in community strengthening, through its grassroots approach. The proponents of the proposal are community members and public transport users who have led the broader community in seeking its implementation. At the heart of the proposal is the opportunity for a community led solution to a community based problem, and already there has been notable community ownership and pride in the proposal and a unified community desire to see its implementation. Public meetings about the proposal have been well attended and packed full of people who are disadvantaged and/or socially excluded, but who feel compelled to have the say in making the proposal a reality, become engaged and participate in the community.

Environmental Benefits of the Hobart Northern Suburbs Railway

The most significant environmental benefit of the proposal is that it seeks to establish a viable and sustainable zero emissions public transport option. Not only would there be an immediate reduction in carbon emission resulting in current public transport users shifting to a lower carbon emission mode but more importantly there would be major reduction as a result of decreased car dependency and improved public transport patronage.

In addition to low or zero carbon emissions, rail transport produces less noise pollution and improves air quality. Because the rail corridor already exists it also has a less visual impact than new or extended road infrastructure.

Rail also provides a safer option of public transport and reduces traffic congestion on major road arterials, reduces the incidences of road accidents, and lessens road damage.

The Development of the Hobart Northern Suburbs Railway Campaign

As highlighted above the Hobart Northern Suburbs Railway campaign finds its strength in a being a grassroots, community driven initiative. The proposal has captured the minds of ordinary Southern Tasmanians because it is simple, logical and would make a positive difference in the lives of so many. Polling conducted by the Southern Tasmanian Council Association recently found that the proposal had

[31] Johnston B (2009) *Hobart Northern Suburbs Railway Proposal: June Presentation to the Institute of Engineering and Technology Mid Year Lecture*, Hobart & Johnston B (2009) *Hobart Northern Suburbs Railway Proposal: December Presentation to Community Meeting*, Hobart

overwhelming support not only in the areas it would service but throughout Southern Tasmania (Figure 16). The HNSRAG committee are frequently called upon by the community to give updates on the proposal's progress and to ensure that it remains firmly on the agenda for the electorate of Denison and Franklin.

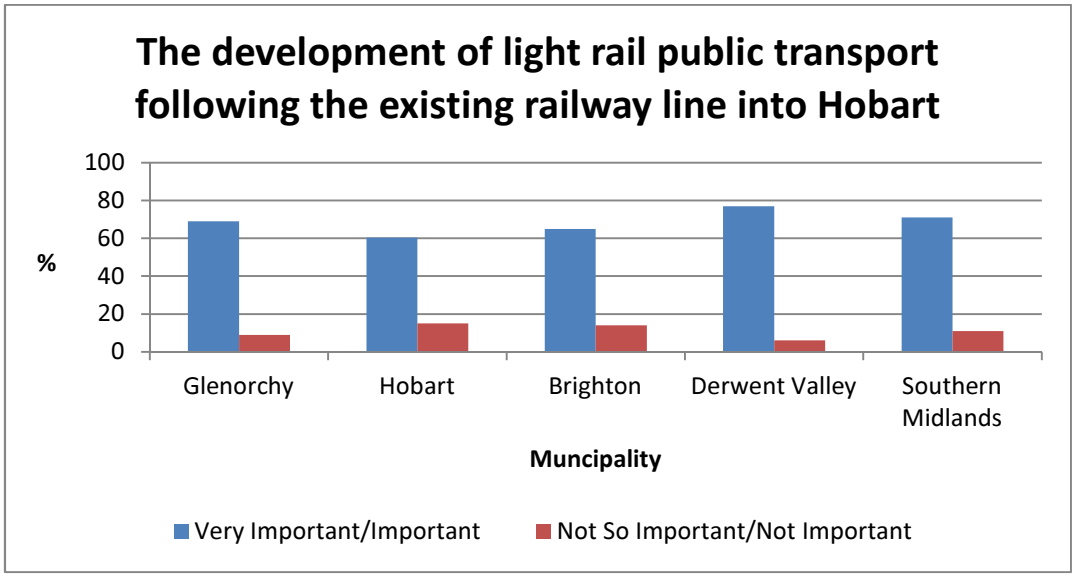

Figure 16: Polling Conducted by Southern Tasmanian Council Association 2011

Not only has the Hobart Northern Suburbs Railway proposal received local support and interest, but it has attracted this nationally. The proposal has been presented to receptive and supportive audiences at national conferences and has been flagged as a project of state and national significance by internationally renowned transport experts and highly respected national leaders.

In response to overwhelming community advocacy the Hobart Northern Suburbs proposal achieved rare tri-partisan political support prior to the 2010 State election. Furthermore representatives at both the local government level and federally have been keen to demonstrate their support for the proposal.

In response to such popularism, the concept of re-establishing passenger rail services in Hobart has been the subject of two Tasmanian Government, DIER, initiated studies both of which, in the eyes of the community, are seriously flawed. The first study in 2009 was conducted by Parson Brinckerhoff and involved a significant deviation from the Hobart Northern Suburbs Railway proposal. The second study was funded in the Tasmanian Government 2010/11 budget as a result of a budget submission made by the proponents of the railway. Minister for Sustainable Transport, Nick McKim, announced the establishment of a Community Advisory Panel to oversee the conduct of the study and invited HNSRAG to participate in the Panel. Unfortunately, when it became apparent that the study was deviating again from the Hobart Northern Suburbs Railway proposal, the HNSRAG after much deliberation resigned from the Community Advisory Panel and once again sought, and achieved the support of the community in its actions.

Parson Brinckerhoff Hobart Light Rail Cost Estimate: Desktop system design and service model 2009 Study Critique

The Parson Brinckerhoff study varies considerably from the scope of the Hobart Northern Suburbs Railway proposal. The Parsons Brinckerhoff study considers a rail service between Hobart and Granton that utilises some sections of the existing rail alignment but is substantially a restoration of the former Hobart Electric Tramway system with street running between Hobart and Moonah, and further street running between Claremont and Granton. It also involves the construction of a new double track tramway in established roads involving costly service relocations, traffic mitigation measures, and associated road works. The rationale for Elizabeth Street running was to capture the populations of North Hobart and West New Town; however HNSRAG submits that these settlements are in close walking and cycling proximity to the city and already well served by bus services.

Standard gauge[32] rolling stock was selected by Parson Brinckerhoff meaning that the sections of existing rail track that were utilised have to be completely re-built. Limited access to narrow gauge[33] freight trains was maintained to Hobart necessitating expensive new dual gauge[34] track and expensive/complicated turnouts to exit the existing rail corridor.

One reason cited by Parson Brinckerhoff for adopting standard gauge rolling stock was poor track condition. The report was completed in May 2009, therefore the track assessment occurred prior to the forced closure of the North-South rail line (due to poor track condition) and well before the $38 million state-wide re-sleepering and re-railing program addressed the relevant section south of Bridgewater Junction.

Another reason for standard gauge equipment selection was an undisputed greater range of rolling stock for this gauge. However, HNSRAG submit that narrow gauge rolling stock is not rare or scarce and is the gauge of new electric railcars for Perth and Brisbane (built in Queensland) as well as numerous light rail/tram systems throughout Asia.

This study concluded that the above rail service would involve a capital cost of $410million. The study is not only a major deviation from the Hobart Northern Suburbs Railway proposal but it also produced a cost prohibitive service that misrepresents the case for passenger rail. HNSRAG is concerned that the study was referenced in the Tasmanian Government's Urban Passenger Transport Framework and the cost prohibitive model used to justify passenger rail as a long term, 30 year goal when in reality the much cheaper and effective Hobart Northern Suburbs Railway proposal could be implemented in the short term with immediate and positive outcomes.

[32] Standard Gauge track is constructed with 1435 mm (4'8½") between rails
[33] Narrow Gauge track is constructed with 1067 mm (3'6") between rails, also known as "Cape Gauge"
[34] Dual Gauge track is constructed using three rails to accommodate standard and narrow gauge rail vehicles

2011 ACIL Tasman Northern Suburbs Light Rail Business Case Critique

In the 2010/2011 Tasmanian State Budget $350,000 was allocated to the "Light Rail Business Case". In June 2010, Minister for Sustainable Transport, Nick McKim, announced in the Budget Estimate Hearings that he would convene a Community Advisory Panel to oversee the conduct of the Northern Suburbs Light Rail Business Case. In July 2010 DIER appointed a Light Rail Business Case Project Manager. In late October 2010 the first Community Advisory Panel meeting was convened and consisted of a representative from HNSRAG, Hobart City Council, Glenorchy City Council, Brighton Council, Metro Tasmania, Future Transport Tasmania, the Sullivans Cove Waterfront Authority, the Planning Institute, and representatives from DIER provided administrative support and project guidance. The Community Advisory Panel was tasked with determining the scope of the business case. It determined that the scope would be to:

> *"Provide a detailed assessment (economic, environment, and social) of the costs and benefits associated with the introduction of an integrated light rail service along the existing rail corridor from Hobart CBD to Brighton Municipality (Bridgewater and/or Brighton)."*

As a result of this decision, project specifications were drafted by DIER and the project went out to tender in December 2010. In February 2011, ACIL Tasman was appointed to conduct the business case. ACIL Tasman entered into a contract with DIER to conduct the study complying with the above scope and tender specifications. ACIL Tasman outlined that they would be delivering the project in a staged approach. Stage One of the project was the development of a background report outlining the issues, possible solutions and making some preliminary findings on this basis. Stage Two was the development of an Optimal Operating Service Model, and finally Stage Three was to proved an economic evaluation of the project and determine a cost/benefit ratio. Each of these stages had a unique report and is worthy of individual consideration.

Stage One: Background Report

The purpose of the Stage One Report was to:

- provide an overview of the policy framework;
- provide an outline of the transport problem;
- examine different solutions including a tidal busway, bus lane and signal priority, road widening, and emission and congestion pricing; and
- provide background and a high-level feasibility analysis to guide the remainder of the study.

The bulk of the Stage One Report was dedicated to considering the high-level feasibility analysis of implementing the light rail service on the existing corridor between Hobart CBD and the Brighton Municipality. ACIL Tasman determined the feasibility by calculating the likely passenger demand and patronage and therefore likely ticket revenue attributable to each station.

Likely passenger demand and patronage for light rail at each station was based primarily on:

- Current Metro express bus ridership;
- A percentage (modelled on 5%, 10% or 15% scenarios) of walk-on ridership within 400/800m radius of stations; and
- One park 'n' ride facility located at Claremont with 300 spaces.

Student patronage was excluded on the basis that "maximising peak demand with school students is likely to reduce the overall viability of the LRS"[35]. This methodology generated the following trip data for each station:

Table 4 **Daily weekday trips associated with each station in the network**

	Current bus passengers plus MONA plus…					
	5% of 400M	10% of 400M	15% of 400M	5% of 800M	10% of 800M	15% of 800M
New Town	72	119	166	214	403	591
Moonah	526	577	628	644	813	982
Derwent Park	616	636	656	765	934	1104
Glenorchy	3522	3547	3572	3651	3804	3957
Berridale	471	491	512	522	593	664
Claremont	193	225	258	263	365	468
Granton	29	32	36	32	39	46
Bridgewater	670	683	697	705	754	802
Brighton	59	74	89	100	156	213

Figure 17: Northern Suburbs to Hobart Light Rail Business Case: Stage One Report

On the basis of this analysis and trip data, ACIL Tasman recommended that the scope of the business case be narrowed to consider services only between Hobart and Claremont, stating that to continue the service beyond Claremont would be so burdensome on the entire service that its overall viability would be seriously, if not irrevocably, jeopardised. HNSRAG strongly argued via the Community Advisory Panel mechanism that this methodology was flawed and was producing results which could not be justified under any scrutiny.

HNSRAG contends that the high-level feasibility analysis and thus the basis for narrowing the scope of the business case is fundamentally flawed for the following reasons:

- Reliance on currently low bus public transport patronage (due to low frequency services and long journey times) is not comparable or indicative of what patronage could be achieved with a replacement service which is far more frequent and which in some instances reduces current journey times by almost 70%;
- Modelling of a best case scenario of 15% walk-on ridership is not generous nor a comparable percentage with other cities. ACIL Tasman confused the public transport patronage percentage of an entire city with that of the public transport patronage percentage in an 800m radius of a station. Whilst across the entire city of Sydney there may be 15% public transport patronage, that patronage increases significantly the closer one is to a station;
- There was a failure to include purpose designed feeder bus services and the impact that they would have on encouraging multi-modal, integrated public transport journeys and ultimately through good joint service coverage a shift from private transport;
- There was no acknowledgement that once established it was likely that the areas around the stations would experience significant growth both in residential terms but also business and that as result more trip generating factors would be present;

[35] ACIL Tasman Ltd (2011) *Northern Suburbs to Hobart Light Rail Business Case: Stage One Question and Answers*, DIER, Hobart

- The Stage One Report failed to properly consider and account for the "spark effect" associated with rail in the face of clear evidence that replacing existing public transport networks with rail acts itself as an attractor and in some cases can triple patronage along the same corridor;
- The report failed to include more than one formal and informal park 'n' ride facility because it argued that people would not drive to a station and leave their vehicles to continue the journey by rail. This conclusion is contrary to firm evidence, both empirical and anecdotal, that this occurs at most rail stations on mainland Australia;
- The Report failed to properly consider "kiss n ride" as an option;
- It excluded or limited student patronage numbers initially on the grounds that there were no schools within the proximity of the railway line. After ACIL Tasman were corrected on this fact, it was still excluded or limited on the basis that to include it would be "likely to reduce the overall viability of the LRS", which defies logic; and finally
- The Report failed to consider existing road traffic as an indicator of likely demand and opportunity for modal shift.

A clear example of how this flawed methodology has lead to the absurdly low levels of patronage attributable to stations can be seen by considering the Granton station data. ACIL Tasman data states that in their best case scenario the Granton station would generate between 29 to 46 trips a day. With most people making a return journey on public transport these figures in reality mean that they predicted that only 15 to 23 people would use a rail service from Granton. With the Granton rail station population catchment area incorporating residents from Granton (1223), Molesworth, (866) and New Norfolk (5229) totalling 7318 residents, ACIL Tasman's figures suggest that they believe that only 0.2-0.3% of nearby residents would utilise a rail service even if it was considerably faster and more frequent than the existing bus system and provided park and ride or kiss and ride facilities. HNSRAG submit that ACIL Tasman's findings are not realistic nor do they understand or take into consideration the high level of public support for the rail service and a strong desire to see a better public transport system.

Despite strong representations from HNSRAG about the need to rectify the methodology flaws, the final Stage One Report concluded "that the last three stations on the proposed line (Granton, Bridgewater and Brighton) seem unlikely to be viable, even when issues such as emissions and travel time savings are included"[36] and recommended the scope for the subsequent Stage Two and Stage Three reports be narrowed on that basis. DIER, as the client of ACIL Tasman, allowed this amendment to the scope and the remainder of the business case was conducted accordingly.

Stage Two Report: Optimal Operating Service Model

The purpose of the Stage Two Report was to provide an engineering analysis given the parameters set by the Stage One Report (Hobart to Claremont Only) and to develop a series of optimal operating service models showing the least costly way of delivering light rail to the Northern Suburbs.

The Stage Two Report delivered two Optimal Operating Service Models (OOSMs) which primarily differentiated on the power supply options (see Figure 18). The OOSMs determined that a capital cost of between $80 million for diesel powered rail vehicles and $92 million for overhead electric powered rail vehicles was likely.

[36] ACIL Tasman Ltd (2011) *Northern Suburbs to Hobart Light Rail Business Case: Stage One Report,* DIER, Hobart

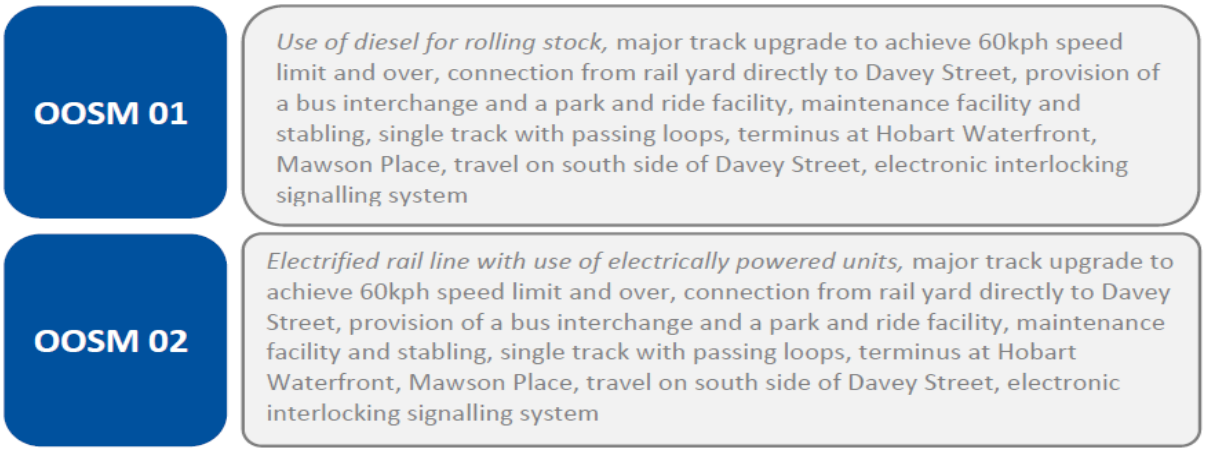

Figure 18: Optimal Operating Service Model recommendations from Northern Suburbs to Hobart Light Rail Business Case: Stage Two Report

HNSRAG were, and are, critical of the assumptions and service modelling that were used to develop the service models. HNSRAG claim that by limiting the scope to between Hobart and Claremont, a non-optimal operating model is required because passing loops stations are not equi-distant as they are in the original scope (Hobart to Brighton). HNSRAG contend that as a result of this non-optimal operating service model time delays would occur whilst waiting for trains to pass and that this would undermine potential travel time savings benefits. Furthermore it is submitted that any future extension would be non-optimal as the passing loops between Hobart and Claremont would be inappropriately placed for extension and would require moving. It is also of great concern to HNSRAG that the Stage Two Report concluded that the entire track is not suitable for passenger trains based on a brief inspection and track condition reports that pre-dated major track condition upgrading work funded by both the State and Federal Governments.

However, despite these concerns HNSRAG were pleased to see that the capital cost estimate substantiated that of the Johnston Hobart Northern Suburbs Railway proposal (less the cost of entire track replacement). Also pleasing is that even with complete track replacement, a capital cost of between $80-92million is certainly within the realms of an Infrastructure Australia funding submission. Interestingly, Infrastructure Australia has stated that there is a minimum $100million project eligibility threshold and HNSRAG contend that should the Hobart Northern Suburbs Railway be fully implemented as originally scoped (Hobart to Brighton) then the project would meet this threshold.

Stage Three Report: Economic Evaluation

The purpose of the Stage Three Report was to calculate the economic costs and benefits associated with the optimal operating service models and determine a Benefit Cost Ratio (BCR). ACIL Tasman adopted the consumer surplus methodology and determined the BCR by dividing the quantifiable benefits by the project costs.

In determining the total benefits ACIL Tasman consider the following benefits as capable of quantification:

- Pollution costs and their reduction;
- Travel time savings;
- Savings in fuel and other operating costs for cars;

- Alleviation of social exclusion;
- Savings from lower accident cost risks; and
- Parking costs.

The following benefits were considered by ACIL Tasman as non-quantifiable:

- Social costs of congestion;
- Social exclusion;
- Creation of Transit Oriented Developments;
- Environmental pollution; and
- Tourism.

HNSRAG contend that the actual quantification of benefits was grossly underrepresented and based on a flawed patronage demand analysis adopted in Stage One. ACIL Tasman's Stage Three Report lacked numerical data substantiating the value attributed to each quantifiable benefit. Furthermore it appears that there was little attempt to find an appropriate method of quantifying benefits which should have been included. For instance it should have been possible to attribute a quantifiable value to land use integration with the transport system (value capture) and to consider the savings from negating the need for alternatives such as road widening. With regard to the "spark effect" (the phenomenon of significant increases in patronage directly attributable to rail) ACIL Tasman were "agnostic"[37] about its existence even in the face of firm evidence that it exist and can be quantified. In their final report they paid mere lip service to its impact on passenger demand and ultimately the BCR.

ACIL Tasman's Northern Suburbs Light Rail Business Case Conclusions

Unsurprisingly, given the above methodology flaws, ACIL Tasman concluded that a "positive social benefits for the NSLRS are a feasible outcome, but also one which carries very high risks"[38]. It determined that the project had BCR of between 0.0 and 1.1 (Figure 19) with the more likely scenario being 0.0.

Table 5 **Benefit cost analysis results**

	Strong Sparks Effect		No Sparks Effect	
	Benefit cost ratio	Net benefit ($ mil)	Benefit cost ratio	Net benefit ($ mil)
OOSM 1 (diesel rolling stock)				
4 % disc rate	1.11	22.7	0.0	-268.8
7 % disc rate	1.10	14.5	0.0	-191.5
10 % disc rate	1.09	9.9	0.0	-144.2
OOSM 2 (electric rolling stock)				
4 % disc rate	0.97	-7.3	0.0	-299.6
7 % disc rate	0.95	-7.4	0.0	-213.8
10 % disc rate	0.94	-6.9	0.0	-161.4

Figure 19: cost analysis results from the ACIL Tasman Northern Suburbs Light Rail Business Case: Stage Three Report

HNSRAG submit that it is absurd to claim a BCR of 0.0 as a conclusion as it mathematically requires that there are absolutely zero benefits, and even ACIL Tasman themselves have admitted that there were

[37] ACIL Tasman Ltd (2011) *Northern Suburbs to Hobart Light Rail Business Case: Stage Three Economic Evaluation Report,* DIER, Hobart

[38] ACIL Tasman Ltd (2011) *Northern Suburbs to Hobart Light Rail Business Case: Stage Three Economic Evaluation Report,* DIER, Hobart

quantifiable benefits. It is greatly concerning that throughout the business case study ACIL Tasman relied heavily upon information sourced from DIER and Metro and appears not to have conducted any of their own research or tested the veracity of the information provided to them. Draft stage reports contained not only the serious flaws outlined above (which remained unrectified in the final version) but also worrying mistakes as to the location of stations and suburbs, but also bizarrely suggested the placement of possible transit oriented developments between an oil refinery and a cemetery. This disturbing lack of local knowledge is apparent also in their patronage assumptions and their reference to parking in Hobart costing a mere $3 per day (inferring that people would not use public transport because parking is so cheap) cannot be substantiated.

HNSRAG contend that had the original scope been adhered to and a proper analysis of passenger demand and benefits done a BCR of at least 2.0 would have been realised and would have provide a compelling basis for a funding application to Infrastructure Australia.

The Future Opportunities for the Hobart Northern Suburbs Railway

Community support for the Hobart Northern Suburbs Railway continues to grow because the proposal is based on sound engineering, robust arguments and compelling benefits. As such the campaign gathers momentum and the HNSRAG continues to advocate at every available opportunity for the proposal.

HNSRAG contend that the proposal (properly assessed) would be particularly appealing to Infrastructure Australia as they have clearly articulated a priority for funding sustainable public transport projects over and above road expansion projects. At the conclusion of the ACIL Tasman Northern Suburbs Light Rail Business Case Minister for Sustainable Transport, Nick McKim stated that he would

> *"now consider approaching the Commonwealth Government, most likely through Infrastructure Australia, for support. In order to bid for funds, Tasmania will need to demonstrate a strong case. It is not enough to nominate a first preference and expect to receive funding. We will need to show that all reasonable options have been properly considered."*[39]

Mr McKim said that he had asked DIER to undertake the necessary supporting work to begin building a project proposal that meets Infrastructure Australia's requirements and stated that

> *"There is more work to be done. It will take some time as a bid must be comprehensive and there are quite a lot of elements required to meet the funding criteria".*[40]

Subsequent to this announcement by the Minister, DIER in a private briefing to HNSRAG outlined that they were preparing a preliminary Infrastructure Australia submission by 11 November 2011 and in doing so they needed to develop a rigorous assessment of the alternatives to rail, eg busway and the Main Road corridor.

[39] McKim N (2011) *More Work to be Done*¸ Tasmanian Government Media Release August 2011
[40] McKim N (2011) *More Work to be Done*¸Tasmanian Government Media Release August 2011

They stated that they had commenced a study into improving the Main Road Public Transport Corridor which was expected to be completed by mid 2012.

It is HNSRAG's understanding that Infrastructure Australia does not necessarily require a rigorous assessment of the alternatives, but that they do expect a business case for the project demonstrating land use integration with the transport system and an evaluation of all the benefits. HNSRAG is concerned that by focusing on developing case studies for every alternative project, DIER are ignoring the fact that the business case for the light rail is significantly flawed and itself needs major revision and work.

HNSRAG expressed concern in September 2011 that the State Government would submit another poor Infrastructure Australia light rail funding submission based upon a flawed report and then claim that the lack of Federal Government commitment is the reason why the project failed. When the Tasmanian Government's 2011 Infrastructure Australia submission was made publicly available in December 2011, HNSRAG noted that indeed the light rail project had been submitted but that explicitly no funding was requested. It is understood that as no funding was requested, no funding has been provided, but as predicted, DIER have advised a HNSRAG representative that the project was "rejected" by Infrastructure Australia. HNSRAG submit that the project was not "rejected" at all, rather funding was never sought.

Whilst the series of DIER initiated reports and actions are disappointing, and has to date been the key determinate of the low priority status the State Government has placed on this project, HNSRAG remains optimistic that progress is being made. At a recent meeting with Minister McKim, HNSRAG once again articulated our concerns with the ACIL Tasman business case and suggested a review of the business case would hopefully resolve many of the issues with it. HNSRAG are delighted to note that Minister McKim has taken on board the suggestion and eagerly await details of the review study.

HNSRAG submit that there has never been a better time to pursue federal funding for a project such as this. With the project largely situated in the marginal federal electorate of Denison (where all party candidates prior to the last election outlined their support for the project and there is no reason to suggest that this would change in any upcoming election) the project has a good chance of securing funding if pursued as a priority project by the State Government.

Furthermore HNSRAG submit that Tasmania can ill afford to not pursue this project. With the alternative road based projects in excess of $1billion, the State Government has little prospect of funding these themselves and all indications are that a Federal Government would be reluctant to fund these short term capacity upgrades over and above a sustainable public transport option.

Conclusions and Recommendations

HNSRAG concludes that public transport provision in Southern Tasmania is in crisis and needs not only a service review but investment in developing an innovative and integrated transport system. We submit that the backbone of such an innovative and integrated transport system ought to be the Hobart Northern Suburbs Railway with feeder bus and ferry services extending coverage and service delivery.

As such HNSRAG make the following recommendations:

- That the Northern Suburbs Light Rail Business Case be independently and properly reviewed and that the BCR be amended to reflect all the benefits and a consideration of proper passenger demand analysis;
- That the Hobart Northern Suburbs Railway Project be prioritised by the Tasmanian Government and Federal Government funding be sought;
- That good public transport provision is seen as not only an infrastructure issue but also one of economic development, tourism, planning, health and community services.
- That future road expansion projects be subject to the same rigorous business case requirements as public transport projects;
- That Infrastructure Australia's guidelines be complied with to ensure public transport projects take priority; and
- That the rail corridor be protected and used for rail purposes.