

HOUSE OF REPRESENTATIVES  
STANDING COMMITTEE ON TRANSPORT & REGIONAL SERVICES

INQUIRY INTO  
THE INTEGRATION OF  
REGIONAL RAIL AND ROAD FREIGHT TRANSPORT  
AND THEIR INTERFACE WITH PORTS

SUBMISSION BY

***pacific national***

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## ***Introduction***

Pacific National is pleased to offer this submission to the Committee's inquiry. We are Australia's largest private rail freight operator, formed in February 2002 from the privatisation and merger of National Rail Corporation and FreightCorp. Pacific National is a joint venture between Patrick Corporation and Toll Holdings, both of whom are listed on the Australian Stock Exchange.

Rail plays a key role in Australia's national freight task, one which has the potential to grow in importance in the coming years under the appropriate policy framework. With annual turnover of more than \$1 billion, around 3,500 employees, 550 locomotives and 12,000 wagons, Pacific National will play a key part in delivering this forecast growth in the nation's rail freight.

Our depth of experience across a breadth of rail businesses (including intermodal/containers, coal, and grain/bulk haulage) gives us a unique insight into the challenges and opportunities for rail and road freight transport and port interfaces. In this submission, we address these issues from Pacific National's view across all its rail activities, as both an above rail (trains) and below rail (track) operator.

Three key problems are identified that are preventing the major benefits from rail's lower cost compared to road being fully realised across the national economy. These include:

- Ongoing policy distortions that subsidise road operators;
- Investment inertia in the absence of longer term investment certainty; and
- Misalignment of objectives, and lack of coordination, between key logistic chain participants. The absence of a coordinated, system-focused regulatory approach is a key issue.

This paper defines an agenda for action that includes:

1. Achieving competitive neutrality between road and rail:
  - Removal of cross-subsidies for heavy road vehicles, for example through the introduction of mass-distance charging; and
  - Incorporation of externalities into charging methodologies.
2. Creating an environment that provides longer term investment certainty:
  - Creating opportunities for increased private investment; and
  - Developing new criteria for Government investment decisions.
3. Redefining policy and regulatory settings to encourage cooperation across logistics supply chain groups. The establishment of a new regulatory body for nationally significant transport chains is proposed.

## ***Role of Australia's regional arterial road and rail network in the national freight transport task***

Rail today already carries approximately 85% of the trans-continental (east-west) non-bulk freight task. This sizeable share reflects the superior economics of rail versus road, particularly over longer distances.

The rail share of east coast (north-south) freight volumes is currently lower, varying from less than 15% on the Sydney-Melbourne corridor to approximately 20% Melbourne-Brisbane. These modal shares have the potential to grow significantly with planned investment in rail infrastructure, and the right industry policy settings.

Rail's share on all corridors, including the shortest inter-capital corridors, could grow significantly if current inequities between road and rail are addressed, in particular in relation to access charging policies and infrastructure investment decisions.

In a landmark study undertaken over a twelve month period by Port Jackson Partners for the Australasian Railway Association<sup>1</sup>, a realistic and achievable outlook for rail has been developed. This rigorous assessment clearly demonstrates the bright future ahead for rail, and the significant benefits that will flow to the national economy, after necessary industry policy reform. A copy of this report is provided with our submission.

With the total inter-capital city freight task forecast to grow on average by 4.5% per annum, the current task carried by rail of 16.5 billion net tonne kilometres (ntks) has the potential to grow over the next decade by 5.8 billion ntk. When the efficiency benefits of already planned rail infrastructure investment are considered, the potential rail task could grow by a forecast further 14.0 billion ntk.

Under reasonable forecasts of future policy and investment scenarios, rail volumes could more than double over the next decade, to a total rail freight task size of 36.3 billion ntk. With projected modal shift from road to rail, the benefits to the economy from this change have been conservatively estimated at \$27 billion by 2014. These benefits include lower transport costs based on the superior efficiency of rail, reduced Government subsidies, and reduced externality costs (air and noise pollution, congestion costs, greenhouse gases and accident costs).

## ***Relationship and co-ordination between Australia's road and rail networks and their connectivity to ports***

Road and rail play quite varying roles in the different freight task segments. In the intermodal or container business, road transport may appear competitive over shorter distances under current policy settings, reflecting significant road transport subsidies and historic underinvestment in rail infrastructure. While these distortions remain, road can set both price and service quality benchmarks against which rail must compete.

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<sup>1</sup> The Future for Freight, Australasian Railway Association/Port Jackson Partners, 2005

Conversely, in the movement of bulk freight, the superior economics of rail dramatically reduce the viability of road transport. In some sectors such as coal haulage, the task is overwhelmingly rail based.

Rail also offers compelling economics in the haulage of grain, even more so when current policy distortions and logistics chain inefficiencies are addressed. As a result of these current distortions, the modal choice for grain movements over short distances is less clear, and can vary between road and rail based on a range of factors including haulage distance, branchline and rural road conditions, and the relative efficiencies of storage, handling and port facilities.

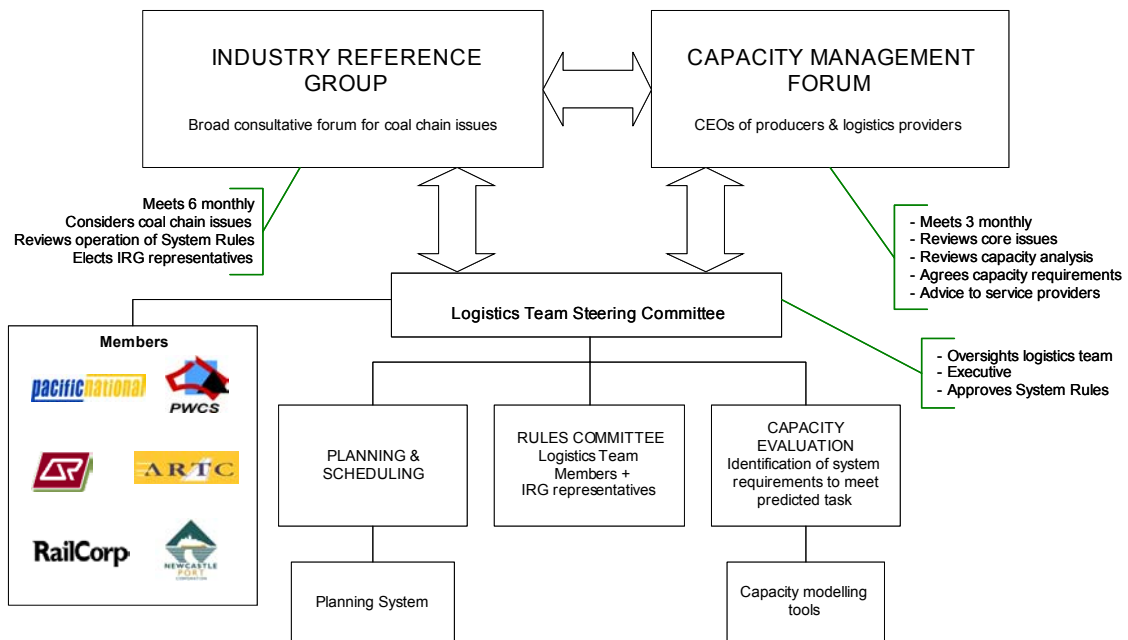
In considering the connectivity between rail networks and ports, Pacific National understands the importance of these links given its major role in Australia's export performance. Pacific National hauls:

- 90 million tonnes of export coal per year, mainly from the Hunter Valley, which represents 35 percent of Australia's total coal export haulage task;
- Approximately 6 million tonnes of export grain per year to ports in New South Wales and Victoria, 28 percent of Australia's grain export haulage task; and
- An estimated 85,000 export/import containers on behalf of shipping companies, where the main export products include wine, cotton, grain and beef.

For coal and grain haulage in particular, connectivity with ports is a critical part of total logistics chain coordination. Yet these two rail tasks provide contrasting examples of the degree and effectiveness of supply chain coordination and the substantial public benefits that can result.

The coal export industry is heavily dependent on its supply chains, of which rail forms a key part (refer Figure 1). Pacific National, through its participation in the Hunter Valley coal chain, has demonstrated that it is possible to secure major system efficiency benefits through the key service providers (mines, rail operators, terminals and ports) engaging in a cooperative process to coordinate the operations of the coal chain. Over the last two years, a productivity increase in excess of 15% has been achieved through improved coordination, without the need for additional investment.

**Figure 1: Logistic Team and Supporting Structure**



By contrast, the haulage of grain by rail faces significant challenges in achieving effective levels of coordination between the logistics chain participants. The grain haulage industry is already burdened with the major problem of harvest variability and the cost impact of underutilised assets (rail, storage and port) in poor seasons. In addition, grain haulage lacks the necessary policy framework and commercial incentives to achieve effective coordination between rail operators, track owners and the key participants in marketing, storage and handling including ports.

This lack of effective coordination is continuing to marginalise the viability of above and below rail operations, and has failed to provide the level of investment certainty needed to redress years of under-investment in almost all aspects of grain haulage, storage and handling.

### Case Study

Attachment 1 focuses on Pacific National’s rail operations in Tasmania and provides a useful case study on the importance of effectively coordinated port connectivity.

In Tasmania, three ports are located within close proximity along the northern coast. Lack of strategic coordination between the container activities of these ports continues to fragment the rail task, adding significantly to rail costs. No single facility has been able to attract sufficient volume to justify the investments required for efficiency. In addition, the current intermodal facility in Hobart is poorly located and inefficient, while a new hub outside the city would deliver substantial efficiency benefits.

Without these and related rail investments, the continued movement of container freight by rail in Tasmania appears unsustainable under the current bias of policy settings towards road.

## ***Policies and measures required to assist in achieving greater efficiency in the Australian transport network***

To achieve greater efficiency in the Australian transport network, including port linkages, there is a fundamental and urgent need to address the policy distortions that currently prevent competitive neutrality between road and rail. Without this, the major economic benefits from rail's true cost advantage over road, for transport users and the Australian economy, will not be realised.

As noted in the ARA report 'The Future for Freight' a level playing field between rail and road transport for infrastructure charging and investment is needed to ensure efficient choices are made between transport modes and to enable investments to be made with certainty.

This requires changes in the following specific areas of public policy:

1. Governments need to charge the heavier and longer travelling trucks the true cost of the damage they cause to roads. Smaller, shorter distance trucks cross-subsidise the heavier and longer travelling trucks, such as B-doubles. Trucks as a whole are significantly cross-subsidised by cars in terms of user charges they pay. Mass-distance charging is a viable and proven policy solution, now in place in Europe and New Zealand.
2. Governments continue to assess road funding more favourably than rail funding, with resulting inadequate levels of track investment. To the extent the bias in road user charging and access regimes are not addressed, Governments must play a major role in funding this much needed rail investment. The commitment to rail investment under AusLink is a welcome start. The ARA report notes that where road and rail compete, for example in intermodal freight, Governments have set road access fees artificially low and effectively capped potential returns on private investment in track infrastructure.
3. In addition, much closer cooperation is needed between track owners and rail operators. While integration in intrastate rail systems has been the norm, Pacific National now operates largely in a separated environment where separation has imposed large costs on rail. Processes between above and below rail operators need significant further development to alleviate these costs, with the aim of replicating where possible the benefits of integration in a structurally separated environment.

Examples of potential disincentives to investment as a result of vertical separation exist across the intermodal, coal and grain rail businesses. The track provider is separated from the operator for intercapital city freight, Hunter Valley coal and NSW grain, and the regulatory framework currently gives the track provider discretion whether, when and how it invests. This causes investment delays and uncertainty in intermodal and grain, where access is not priced at the ceiling due to competition from road. Even where full economic costs can be recovered (as in the Hunter Valley coal industry), we have still seen refusals to invest or delays in timeframes, due to misalignment of objectives.

To ensure that investment is delivered in a timely and responsive way, taking into account the requirements of the whole system, Pacific National seeks a policy and regulatory environment that provides appropriate support for cooperative supply chains.

Pacific National supports the Productivity Commission's recommendation of a national review into the requirements for an efficient and sustainable national freight transport system, including incentives for cooperative supply chain behaviour. In addition, a new Surface Transport Regulator should be established to regulate nationally significant transport chains, with clear policy direction and dedicated resources (along the lines of the Australian Energy Regulator). This body could operate as a Centre of Excellence for transport regulation, and help redress the current plethora of regulatory differences that exist for rail across State and Federal jurisdictions.

The regulatory approach to authorising cooperative structures in surface transport requires amendment, to provide increased support for cooperative models that promote supply chain efficiency and competition among relevant participants. In other words, competition regulation should explicitly recognise that collaborative supply chains are in the public interest, and subject them to clearance against relevant criteria. This would provide direct encouragement for participants to work together, in contrast to the current system in which the public interest presumption is against them, and treats them as an exception to the rule needing to be dealt with through the ACCC's authorisation process.

The policy reform PN proposes may take some time to implement. An interim measure, which would also deliver benefits, would involve minor amendment to the ACCC's access undertaking assessment guidelines to take into account the wider system impacts of an infrastructure service subject to an undertaking.

***Role of three levels of Government and the private sector in providing and maintaining the regional transport network.***

An opportunity exists for the Federal Government to take a leadership position with State and Local Governments leveraging the underlying cost advantage of rail versus road through adjustment to policy settings and investment decisions. The current focus of the Federal Government on addressing export bottlenecks is one example where rail can form part of the solution.

State Governments play a major role in rail regulation, and have varying levels of intervention in above and below rail activities. An example is the close involvement of the NSW Government in the grain haulage task by rail in that State. Through its various mechanisms of involvement, State Governments need to simplify and align their respective regulatory frameworks, and ensure timely investment occurs in rail infrastructure.

Local Governments have the ability, through the Federal Government's Regional Partnerships programme, to seek funding for rail projects in their local area. This represents an under-exploited opportunity to develop transport solutions that draw on the superior economics of rail for many freight tasks. Of equal importance in this process is the role of local government in understanding the true impact of heavy vehicle road damage on regional roads, and ensuring this is taken into account in decisions about investment in alternative transport modes.

# ATTACHMENT 1: RAIL CONNECTION TO PORTS IN TASMANIA

## Limiting Tasmania's efficiency

### *Executive Summary*

Tasmania has a greater dependence on efficient interfaces between road and sea transport than any other state.

There are three ports located within 70km of each other along the State's northern coast, at Burnie, Devonport and Bell Bay, each of which provides connections for containerised freight to mainland Australia and the rest of the world either directly (Bell Bay) or via Melbourne.

The port of Hobart is no longer serviced by any container or break bulk shipping service. All freight requiring transit to or from the State's key population centre must therefore be transported by road or rail. Efficient and effective interfaces between the northern ports and rail transport and an effective regional intermodal hub to service Hobart are fundamental to the state's competitiveness.

The spreading of the State's containerised transport task across the three Northern Ports means none has sufficient volume to justify investment in infrastructure to optimise the flow of freight between Hobart and other regional centres and the rest of the world. Rationalisation of container traffic to a single northern port would allow investments to be made in efficiency of the logistics chain.

None of the Northern Ports are well served by rail infrastructure. There are opportunities to improve the efficiency of the transfer of containers between rail and sea at each port. These are more likely to be economically viable if a single port is servicing all of the State's container transport needs.

An opportunity also exists to develop a dedicated intermodal hub north of Hobart to allow the efficient distribution of containerised freight that has been transported from a Northern Port by rail. The current facility is poorly located adjacent to the Hobart CBD and inefficiently laid out. A site at Brighton on the Northern outskirts of Hobart has been identified that would allow efficient distribution and collection of goods across the greater Hobart area.

The rail infrastructure investments necessary to fund the new intermodal hub to service Hobart and improvements to intermodal transfer facilities at the northern ports cannot be justified while Pacific National Tasmania is required to fully fund the maintenance and upgrade of the rail network and continues to provide rail services to each of the northern ports. The rail network is part of the national rail highway but does not receive any government funding.

Significant benefits would flow to the state if all of the State's container activity was concentrated at one of the northern ports especially if this port featured an efficient intermodal transfer facility and good connections with the rail network.

Even greater benefit could be secured if a new intermodal hub was developed on the northern outskirts of Hobart allowing 24 hour train turnaround, doubling locomotive asset utilisation.



It is recommended that the committee examine opportunities:

- To encourage a rationalisation of Tasmanian container ports so that one facility provided all of the state's needs;
- To facilitate the improvement of the rail interface with that port;
- To facilitate the allocation of funding to contribute to the maintenance of the Tasmanian leg of the national rail highway; and
- To facilitate the development of a new intermodal hub at Brighton to service Greater Hobart.

### ***Introduction***

This paper highlights a number of inefficiencies in the Tasmanian logistics chain and identifies opportunities to make improvements that will benefit the Tasmanian and Australian economies.

### ***Background***

Tasmania exports over 50% of its Gross State Product to mainland Australia and overseas, Tasmania is therefore more dependant on ports and their connections to distribution networks than any other state. All interstate commerce requires transport across Bass Strait. The majority of this trade requires containerised transport. All container vessels that service Tasmania call at either Burnie, Devonport or Bell Bay. The key population centres of Hobart and Launceston are remote from these facilities and therefore require land transport to transfer freight to and from the ports. The existing sea/rail interfaces at all of these ports are inefficient and unsatisfactory.

All rail infrastructure in Tasmania is the responsibility of Pacific National Tasmania (PNT). It receives no support from government for its maintenance or upgrade.

Poor rail alignments, difficult terrain, the high cost of infrastructure maintenance, life expired rolling stock, a highly competitive road industry and the need to service three ports on the north coast means PNT's container freight business is marginal and cannot be sustained. It will require significant rationalisation, investment in improvements to sea/rail interfaces and a new intermodal hub to service Hobart and ongoing support from government for infrastructure maintenance if intermodal rail services are to continue in Tasmania.

## **1.1 CONTAINERISED FREIGHT**

The state is serviced by four major general purpose ports; Burnie, Devonport, Bell Bay and Hobart. Other smaller or specialist facilities exist at Triabunna, Port Latta, Stanley and Macquarie Harbour. The three main ports on the Northern Coast (Burnie, Devonport and Bell Bay) are less than 70km apart.

Each northern port also provides services to other than container ships. Burnie and Bell Bay each handle bulk minerals and woodchips. Devonport handles bulk cement and is the home of the Spirit of Tasmania passenger/freight ferries.

The following table shows container throughput (TEU) for the 2003/04 financial year.

<b>Port</b>	<b>Imports</b>	<b>Exports</b>	<b>Total</b>
<i>Burnie</i>	78,652	88,302	166,954
<i>Devonport</i>	88,476	77,435	165,611
<i>Bell Bay</i>	41,330	46,872	88,202
<i>Hobart<sup>1</sup></i>	467	3,262	3,729
<b>Total</b>	208,925	215,871	424,796

<sup>1</sup> Regular container and break bulk calls to Hobart ceased on 21 January 2005.

If a single port handled this total task it would be the fifth largest container port in Australia, behind Melbourne, Sydney, Brisbane and Fremantle. The withdrawal of the regular Hobart shipping service (January 2005) has resulted in the containerisation of export zinc (previously break bulk). It is now likely that Tasmanian container throughput is larger than Fremantle.

On a per capita basis the Tasmanian population is two and one half times more dependant on efficient shipping, ports and intermodal connections than any other state (0.92 twenty foot equivalent units (TEU)/capita versus 0.37 TEU/capita for Victoria, the next most dependant state).

All of the container ports have been and continue to be state government owned. Each reports to a separate board. The ports have competed with each other to attract business resources and capital. Scarce resources have therefore been spread across the three facilities. No single facility has been able to attract sufficient volume to justify the investments required for efficiency. There appears to have been little overall strategic coordination of investment and development activities across the ports.

The Tasmanian government is in the process of consolidating the ports into a single corporatised entity. This initiative is widely supported and is likely to lead to a more efficient allocation of resources in future. Existing arrangements made with shipping lines at each of the individual ports are however likely to delay any rationalisation to a single port.

An opportunity exists to accelerate the rationalisation of the three northern ports so that a single efficient facility could service the state's entire container shipping needs.

## **1.2 RAIL CONNECTIONS TO PORTS**

The need to service each of the three ports has meant that rail infrastructure investment has also been spread across each facility. As a result none of the northern ports interface well with rail.

### **1.2.1 BURNIE**

An on wharf rail loading facility is available at Burnie. Growth in volumes at that site and limited opportunity for expansion however means that this is only utilised for a

small proportion of the containerised freight. The majority of the containers are shuttled between the wharf area and a rail terminal by road.

The rail terminal is poorly set out and requires excessive shunting and double handling of containers.

Rail access to the Burnie rail yard is adequate. It is however approximately 53km further from Hobart than Devonport and 90 km further than Bell Bay. All three ports are approximately the same distance from Melbourne by sea.

Both the wharf and rail terminal are land locked. They are surrounded by the city of Burnie, little opportunity exists to accommodate growth.

### **1.2.2 DEVONPORT**

The Devonport wharf area is located on the east bank of the River Mersey. The rail terminal is on the west bank. All freight is therefore shuttled between the facilities by road. A bridge would be required over the Mersey to provide a direct connection. This would be very expensive and is likely to adversely affect the Devonport community.

The rail terminal is poorly set out and requires excessive shunting and double handling of containers.

Rail access to the Devonport rail yard is adequate. It is however some 47km further from Hobart than Bell Bay by rail.

Both the wharf and rail terminal are land locked. They are surrounded by the city of Devonport little opportunity exists to accommodate growth.

### **1.2.3 BELL BAY**

The only rail loading facilities at Bell Bay are located on the wharf area. This area is congested and parts of it are not accessible while ships are being unloaded.

The Bell Bay rail facilities have evolved with the port. The yard layout is poor. Connection to the rail network is also suboptimal; the gradient leading out of the port is very steep and limits the weight of trains that can be hauled from the port.

An alternative access has been designed that would rectify this and improve yard layout. Funding has been sought under the DOTARS Regional Partnerships Scheme to construct this access (\$3.5M).

The Port of Bell Bay is located in an industrial area remote from any residential development and immediately adjacent to a 2000Ha industrial estate. It is near the proposed pulp mill site. The port has a reclamation program at concept stage that would provide an additional 30 hectares and provide ample room for growth and construction of an efficient sea/rail interface.

## **1.3 RAIL INFRASTRUCTURE**

The main rail line linking the three Northern Ports with Hobart and Launceston was made part of the National Rail Network (defined Interstate Rail Network) in 2004. Despite this no Federal or State funding has yet been allocated to this key piece of

national infrastructure. It is in poor condition having been inadequately funded for several decades. Support has been sought from the Auslink program for these works (\$3M pa).

### ***Southern Intermodal Hub***

The southern intermodal hub that services Hobart, has evolved from an old rail maintenance facility rather than being purpose built to provide intermodal services. It is located at Macquarie Point, adjacent to the Hobart CBD.

It is poorly located and laid out, inefficient and adversely affects the amenity of the surrounding tourist/commercial precinct. Its location requires heavy road freight vehicles to enter the Hobart CBD to collect and deliver freight.

A site has been identified at Brighton on the northern outskirts of Hobart that would be suitable for a modern intermodal hub. It would interface well with the rail network and allow efficient distribution and collection of freight across greater Hobart.

The rail component of the southern intermodal hub will cost approximately \$9M. A further \$15M – \$20M would be expended by the freight forwarding industry constructing facilities on site for cross docking, warehousing etc.

## **1.4 RECOMMENDATIONS**

It is recommended that the committee:

- Review the State's container port needs and examine opportunities to facilitate the rationalisation to a single northern port;
- Support the submission made under the Regional Partnerships scheme to improve rail access to Bell Bay (\$3.75M);
- Support the allocation of Auslink funding to contribute to the maintenance of the Tasmanian portion of the National Rail corridor, Hobart to Burnie and Western Junction to Bell Bay (\$3M pa); and
- Examine opportunities to assist with the construction of the proposed new Southern Intermodal Hub to service Hobart (\$9M).

## **Appendix A – Tasmanian Container Shipping Services**

There are eight ships operating regular services across Bass Strait. These are operated by four different Shipping Lines and all call at the three Northern Ports.

A single international service is operated by the AAA consortium. This provides a weekly connection to Singapore and Malaysia as part of a Sydney, Bell Bay, Fremantle, Singapore, Kelang call cycle.

The following table summarises the shipping services carrying containers across Bass Strait.

<b>Company</b>	<b>Service Frequency</b>	<b>Tasmanian Port</b>	<b>Destination</b>	<b>Vessels</b>	<b>Technology</b>
<i>Toll Shipping</i>	6 days per week	Burnie	Melbourne	Victorian Reliance Tasmanian Achiever	Roll on Roll off “Mafi” trailers
<i>Patrick Shipping</i>	6 days per week	Devonport	Melbourne	Searoad Tamar Searoad Mersey	Roll on Roll off “Cassette”
<i>ANL</i>	3 days per week	Bell Bay	Melbourne	ANL Bass Trader	Lift on Lift off
<i>TT Line</i>	7 days per week 2 days per week	Devonport	Melbourne  Sydney	Spirit of Tasmania I, II, III	Roll on Roll off – road trailers on passenger vessel.
<i>AAA Consortium</i>	Weekly	Bell Bay	Fremantle, Singapore, Kelang	Various	Lift on Lift off

Toll Shipping operates services six days each week between Melbourne and Burnie using the dedicated roll on roll off container carriers Victorian Reliance and Tasmanian Achiever. These vessels utilise “Mafi” trailer technology.

Patrick Shipping operates services six days each week between Melbourne and Devonport using the dedicated roll on roll off container carriers Searoad Tamar and Searoad Mersey. These vessels utilise “Cassette” technology to achieve rapid loading and unloading.

ANL operates three services per week between Bell Bay and Melbourne using the container ship ANL Bass Trader. This is a lift on lift off vessel.

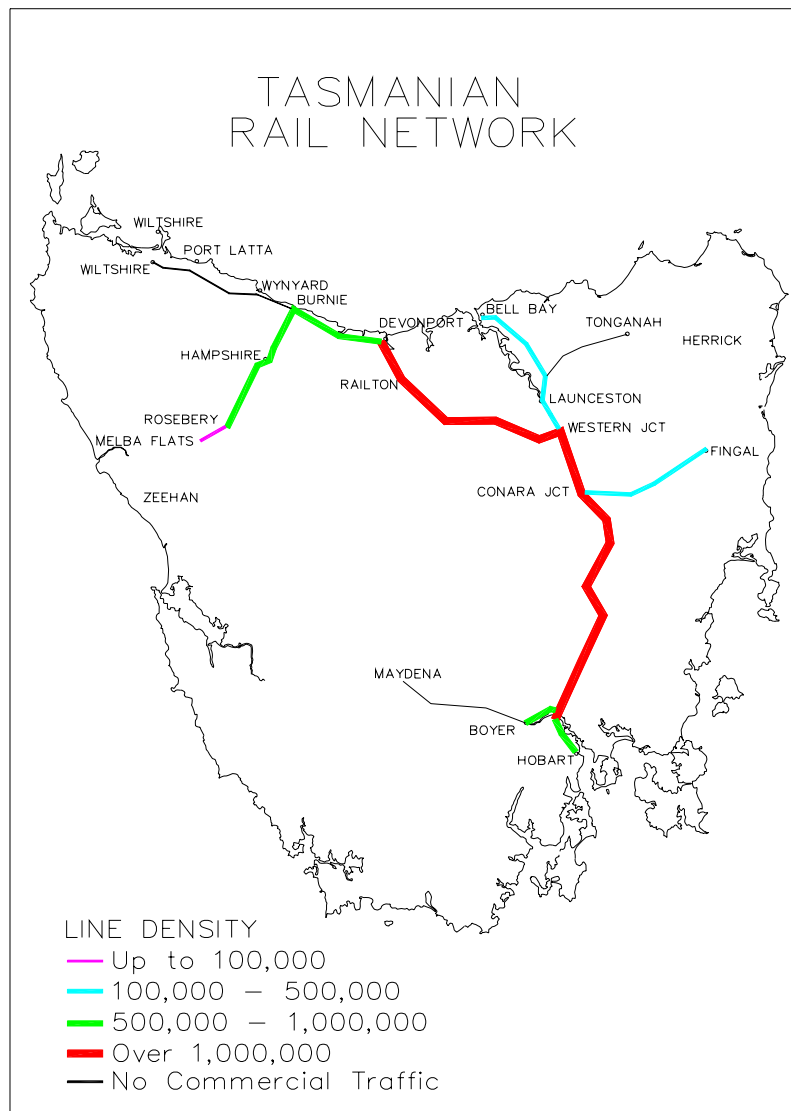
The TT line operates the three Spirit of Tasmania vessels from Devonport. Two are used to provide a daily connection to Melbourne. The third is used for twice weekly services to Sydney. These are predominately passenger vessels but also carry roll on roll off freight. That is, they carry standard road semi trailers on the cargo decks.

## APPENDIX B - THE TASMANIAN RAIL FREIGHT NETWORK

The Tasmanian Rail network runs from Wiltshire in the north-west, Melba in the west, Bell Bay in the North, Tonganah and Fingal in the east and Hobart and Maydena in the south. Regular scheduled freight services do not utilise the entire network.

Scheduled services operate over the network between Melba, Burnie, Bell Bay, Fingal, Hobart and Boyer. There are no scheduled services between Wiltshire and Burnie, Maydena and Boyer or Tonganah and Launceston.

Map 1 shows the rail lines and the current freight density across the network.



MAP 1 THE TASMANIAN RAIL NETWORK

The Tasmanian rail system operates under some severe handicaps. Tasmania's difficult topography, relatively small population and industrial base, isolation from the mainland and the rundown infrastructure and rolling stock all limit its efficiency.

The track follows the original 19<sup>th</sup> century alignments. These reflect the earthmoving capabilities of the time. Gradients are therefore steep and curves tight. This reduces efficiency by restricting the tonnage that can be hauled by locomotives and reducing train speeds.

Narrow gauge provides lower train stability levels than standard or broad gauge. This means train speeds must be lowered further. The impact of defects in the track are also significantly greater than for standard gauge track of a similar standard.

The infrastructure is therefore relatively expensive to maintain. It is also more expensive to operate than railways that traverse less demanding topography.

The replacement value of the rail network is in excess of \$1 Billion. Rail operations currently generate revenue of less than \$35 Million per annum. PNT is responsible for the maintenance of the infrastructure and receives no assistance for this.

Under federal government ownership (1978 – 1997) some infrastructure asset renewal and replacement was undertaken. However used rail and sleepers were typically transferred from the mainland rather than new materials being used. These assets are now life expired and significant defects and failures are occurring.

Both prior to and since privatisation, asset renewals have been minimised. Insufficient funds have been available to fully fund the replacement program that was required to maintain the network at an appropriate standard. A “maintenance debt” therefore exists.