

Historic freight rate data and review of Tasmanian Freight Equalisation Scheme and Tasmanian Wheat Freight Scheme



REPORT TO BITRE

- Final
- 30 April 2008



Australian Government
Department of Infrastructure, Transport,
Regional Development and Local Government
Bureau of Infrastructure, Transport and Regional Economics

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Sinclair Knight Merz
ABN 37 001 024 095
590 Orrong Road, Armadale 3143
PO Box 2500
Malvern VIC 3144 Australia
Tel: +61 3 9248 3100
Fax: +61 3 9248 3400
Web: www.skmconsulting.com

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COVER PHOTO: Roll on Roll off vessel with Mafi trailer at Webb Dock, Port Melbourne. (C Carboon)

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Definitions and abbreviations

ANL	Australian National Line (shipping line)
AUD	Australian dollars
b-double	Road truck with two trailers; typically lead (A) trailer of around 20' and tag (B) trailer of 40 – 48'. Typically up to 26 m long and payload of around 36 – 38 tonnes. The largest road truck routinely registered in Victoria and Tasmania.
BTRE	Bureau of Transport and Regional Economics, now known as the Bureau of Infrastructure, Transport and Regional Economics.
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CVP	Continuing Voyage Permit – permit allowing an internationally flagged ship to undertake shipping trade between domestic Australian ports. Issuance of CVPs is dependent upon there being no available Australian flagged vessel to undertake the task. CVPs last for three months.
Demurrage	Charges levied on shippers paying for freight services resulting from delays to trucks, ships and other freight vehicles and resources.
DITRDLG	Department of Infrastructure, Transport, Regional Development and Local Government
DOTARS	Department of Transport and Regional Services (Federal government) now known as Department of Infrastructure, Transport, Regional Development and Local Government
Dry (goods)	Goods freighted at ambient temperature (not temperature controlled)
FCL	Full Container Load
Gtk	Gross tonne.kilometre – a widely used measure for charging train operators for rail access. Gross tonne refers to the total weight of the train (including locos, wagon tare weight and payload) plus return journeys of empty trains.
ISC	Inter-State Commission (federal government body defined in Australian constitution, but currently not in operation).
ISC Review, 1985	Review which established the structure of the TFES
LCL	Less than container load (ie smaller item/s for shipping, such as a pallet, drum or carton, loaded with other smaller items into a container shared between several consignees
Nimmo Report 1976	1976 report which established the TFES.
Nixon Review, 1998	Tasmanian Freight Equalisation Scheme Review Authority review of TFES. The structure and many parameters still in use were proposed in this study.
ntk	Net tonne.kilometre – moving one tonne of payload freight one



	kilometre. A convenient method to compare freight costs over different routes and distances.
NWW	Notional Wharf to Wharf (shipping rate or charge)
PC	Productivity Commission
Rail Freight Equivalent	Standard rail journey which is assumed to be used if a land bridge was available between Tasmania and the mainland. Used as the basis for calculating sea freight disadvantage for wheat shipments (on the basis that rail would be used for land movements of wheat over 420 km)
Reefer	Refrigerated (container)
Road Freight Equivalent	Standard road journey which is assumed to be used if a land bridge was available between Tasmania and the mainland. Used as the basis for calculating sea freight disadvantage.
SVP	Single Voyage Permit – permit allowing an internationally flagged ship to undertake shipping trade between domestic Australian ports. Issuance of SVPs is dependent upon there being no available Australian flagged vessel to undertake the task. SVPs last for one journey between Australian ports.
TEU	Twenty foot Equivalent Unit (means of adding containers of different sizes – 1 x 40' container = 2 TEU)
Tasmanian Freight Equalisation Scheme Review Authority	1998 review, generally known as the Nixon Review which established the current structures and many parameters.
TFES	Tasmanian Freight Equalisation Scheme
TWFS	Tasmanian Wheat Freight Scheme



Executive Summary

SKM was engaged to assist the Bureau of Infrastructure, Transport and Regional Economics (BITRE) with provision of historic freight rate data and information for continuation of various time series analysis projects and general assessment of various industries and Australia's broader economic activity where freight is a component. A specific application of this was in the review of the Tasmanian Freight Equalisation Scheme (TFES) and Tasmanian Wheat Freight Scheme (TWFS) being undertaken by BITRE for the Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG).

This report provides current and available historic freight rate information on routes requested, covering commodity types carried by road, rail, sea and air. This information has been drawn from a variety of sources, primarily SKM's freight rate database supplemented with shadow quotes and industry discussions. This report also provides information on Bass Strait shipping services.

The TFES subsidises containerised freight flows for certain goods to and from Tasmania. The TWFS has subsidised bulk wheat shipments to Tasmania, and the Australian government has decided to extend the scope of the TWFS to all wheat shipped to Tasmania.

Trends in freight rates since 1996 are summarised in Table 1. This compares long haul sea freight rates between major capital cities (eg eastern states – Perth, Melbourne – Brisbane) with shorthaul interstate capital road and rail rates (ie Adelaide – Melbourne, Melbourne – Sydney, Sydney – Brisbane). These are typical rates for large shippers, exclude backloading rates and do not allow for empty running. Rates are expressed in cents per net tonne.kilometre in \$ of the day, and trends in real terms, adjusting for CPI inflation rates.

■ **Table 1 Summary of freight rate trends**

Year	CPI	Road			Rail			Sea		
		c/ntk	c/ntk discounted to 1996 values	% increase on 1996 values	c/ntk	c/ntk discounted to 1996 values	% increase on 1996 values	c/ntk	c/ntk discounted to 1996 values	% increase on 1996 values
1996	-	3.06	3.06	-	1.82	1.82	-	1.98	1.98	-
1997	-0.02	3.46	3.46	12.9%	2.29	2.29	25.8%	2.01	2.01	1.8%
1998	1.60	3.71	3.65	5.6%	2.65	2.61	14.3%	1.96	1.93	-4.1%
1999	1.80	3.86	3.73	2.2%	2.94	2.84	8.7%	1.88	1.81	-6.1%
2000	5.80	4.60	4.19	12.4%	3.68	3.35	18.1%	2.06	1.88	3.7%
2001	3.10	5.62	4.96	18.3%	4.18	3.68	9.8%	2.00	1.76	-6.1%
2002	3.00	5.46	4.67	-5.7%	5.31	4.55	23.4%	2.67	2.28	29.3%
2003	2.40	5.60	4.68	0.1%	5.51	4.60	1.3%	3.07	2.56	12.2%
2004	2.60	5.93	4.83	3.2%	5.67	4.61	0.2%	3.06	2.49	-2.7%
2005	2.80	6.79	5.37	11.3%	6.29	4.97	7.8%	3.12	2.46	-1.1%
2006	3.30	7.20	5.50	2.5%	6.58	5.03	1.1%	3.45	2.64	7.0%

Road and rail rates based on the weighted average (by freight volumes) of to / from Melb-Syd, Melb-Adel, Syd-Bris, Mel-Bris
Sea rates based on average of all major capital city rates, which are dominated by the eastern states - Perth corridors

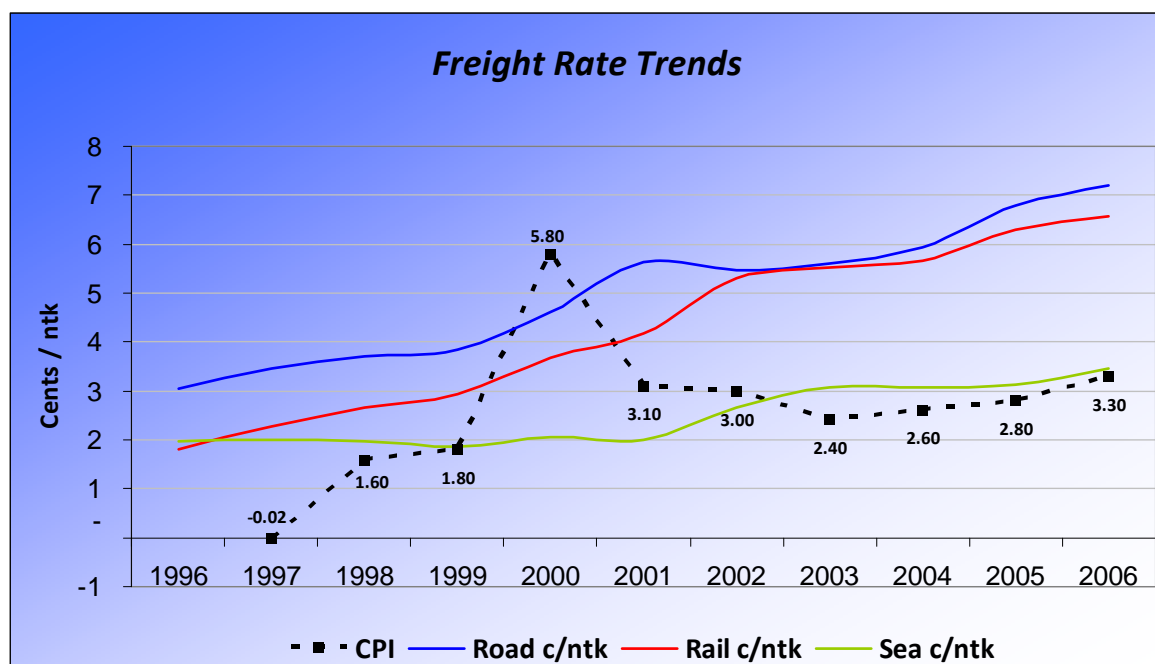


The clear trend from this is that both road and rail rates have risen more quickly than sea rates, and also CPI as illustrated below. Cumulative increases in freight rates 1996 – 2006 are:

- Road: 80%
- Rail: 176%
- Sea 33%.

The main reasons behind these cost increases include:

- Fuel and driver costs (road and rail particularly)
- Increasing profitability targets for rail, following privatisation and corporatisation of virtually all former government rail businesses
- Increasing rail maintenance expenditure in recent years, much of which is “catch up” expenditure following periods of underinvestment and deterioration in track quality.



The conclusions and suggestions from the study are:

- We support the principle that assistance should be tied to defined sea freight cost disadvantage compared with road (or rail) equivalent costs which would be incurred if a land bridge was available between Tasmania and the mainland.
- Existing arrangements which permit shippers to claim in various ways provide greater opportunity for maximising claims and add to system complexity for claimants and



administrators. Requiring identification of wharf to wharf costs from original documentation should be the basis of all claims.

- Calculations should be based on verified wharf to wharf costs for the sea journey between northern Tasmania and Melbourne. We agree with the decision to remove door to door, wharf to door and door to wharf based claims and allowances.
- The proposal that claims are required to identify wharf to wharf costs between northern Tasmania and Melbourne as the only basis for TFES claim will mean that the scaling factors for onforwarding in Tasmania and or on the mainland will not be required, greatly simplifying the system and increasing transparency.
- It is concluded that the sea freight cost disadvantage is a function of activities occurring between the receiving stevedore's gates and the despatching stevedore's gates. In practice, intermodal costs such as container hire, lifts, storage etc are included in all up TEU rates, and are not itemised. Hence, we propose that the disadvantage be calculated on the basis of wharf to wharf costs, which in practice include these other intermodal costs.
- We suggest that a single TFES payment per TEU is preferable, based on the difference between sea costs (which already include intermodal costs) and a Road Freight Equivalent cost.
- Alternatives include a floor price reimbursement, plus a proportion of disadvantage over the floor, to a maximum cap of say twice the floor. We suggest that the proportion could be in the range one third to one half.
- It is generally accepted that the costs involved in assessing the disadvantage for every type of Bass Strait shipping movement would greatly exceed the benefits in doing so. Thus, the notion of a single Road Freight Equivalent Cost has been used for comparison and calculation purposes.
- Road Freight Equivalent Costs for TFES purposes should be based on b-double truck movements, since these are the predominant vehicle type for large freight movements in Tasmania and Victoria.
- The equivalent road cost should be set at 10.5 cents per ntk, or \$44.10 per tonne for the agreed average 420 km water journey. This applies up to 13 tonnes gross per TEU (ie net payload of around 11 – 11.5 tonnes) permitting three TEU / b-double.
- TFES assistance has always identified "heavy freight" for lower levels of assistance on the basis that road haulage of such freight is more expensive, whereas sea freight is typically charged on a volumetric basis. The basic issue in this is that a typical b-double can carry three TEU, but is limited to about 39 tonnes per truck. The maximum gross weight per 20' container for sea loading is typically 24 tonnes, meaning that one b-double can only carry two TEUs exceeding 13 tonnes gross each, not three.



- We agree that heavy freight should receive a lower TFES rate of assistance, based on the actual sea freight disadvantage concept, and have calculated the reduced subsidy at 23%, as set out in section 6.4.
- Our conclusion is that there should be a single road freight equivalent rate, based on the net contents (11.5 tonnes) of boxes of 13 tonnes gross, applying for both north and southbound containers.
- This makes the Road Freight Equivalent Rate \$507 per TEU
- Our conclusion is that attempting to calculate road freight equivalents for each movement would increase scheme administrative costs for both claimants and scheme administrators, with little benefit overall, which is consistent with the findings of Nixon 1998 and the Productivity Commission 2006.
- We have concluded that the existing sliding scale for payments with specific break points has substantial disadvantages, leading to our conclusion that extension of principles of categories or groupings to road freight equivalent costs has the same difficulties and is not supported.
- On this basis, a fixed price approach is to be preferred, for the following reasons:
 - It provides incentives for all shippers to minimise their freight costs
 - It minimises unintended effects which may encourage sub optimal freighting arrangements to maximise claims
 - It eliminates aspects of the scheme acknowledged as being arbitrary
 - It provides substantial administrative simplification, for consignors and scheme administrators.
- If a fixed price rebate is considered too simplistic an approach, an alternative would be to set a minimum floor price (possibly at the calculated median sea freight disadvantage) and then provide incremental payments at a proportion of the additional disadvantage for the given shipping movement, up to a maximum cap.
- Our conclusion is that the sea freight equivalent should be based on Wharf to Wharf rates between northern Tasmania and Melbourne; and we see no strong reasons to move from the existing base of median rate paid by all shippers.
- The sea freight disadvantage will be the difference between the Road Freight Equivalent Cost (\$507) and the median dry wharf to wharf cost:, as shown below:

	Dry	Reefer	Dry and Reefer
Road Freight Equivalent Rate	\$507	\$558	\$521
Wharf to wharf median sea freight rate	\$1,160	\$1,189	\$1,168
Sea freight disadvantage	\$653	\$631	\$647



- We agree with the contention that reusable packaging, such as produce boxes and beer kegs should be included within eligible goods.
- We support retention of TFES being based on a payment per TEU. To accommodate circumstances where transport of fully loaded road trailers is more cost effective from a total logistics perspective, the following conversions are suggested:
 - standard b-doubles should be regarded as equivalent to 3 TEU
 - 40' – 48' semi trailer trailers should equal 2 TEU
 - The smaller lead trailers of b-doubles (A trailers) be equivalent to 1 TEU.
- The Rudd Labor government made an election commitment to extend the Tasmanian freight schemes to King Island and Flinders Island for intrastate trade between these islands and the Tasmanian mainland. Interstate movements between these islands and the Australian mainland are already eligible. We suggest that Road Freight Equivalents for these movements should be based on a typical Tasmanian semitrailer, carrying capacity around 23 tonnes with gross mass up to 42.5 tonnes, trailer length around 40 – 44, with typical rates around 15 cents / ntk. The sea freight disadvantage is estimated as follows:

	King Is – Devonport	Flinders Is - Bridport
Road equivalent cost (\$ / tonne)	\$45.00 / tonne	\$17.25 / tonne
Distance (kilometres)	300	115
Average tonnes / container	15 tonnes	15 tonnes
Road equivalent cost / TEU	\$675	\$259
Sea freight cost	\$950	\$1,860
Sea freight cost disadvantage	\$275	\$1,601

- We agree with the Productivity Commission that a rail equivalent freight rate for bulk wheat should be used to calculate sea freight disadvantage. We suggest that the most relevant rail comparisons for land transport equivalent to the 420 km across Bass Strait are the likely rates we expect for NSW / Victoria to Geelong and NSW / Victoria to Melbourne, of around 7 cents / ntk including rail access charges. This gives a rail equivalent rate of \$29.40 / tonne for bulk movements. (Existing rail rates for bulk grain have been around 4.75 cents / ntk, but on very low volumes due to drought, have not provided adequate revenue for infrastructure maintenance nor rail operator profitability).
- Typical rail container rates for similar journeys are around 8.5 cents / ntk, or \$35.70 / tonne, but road tends to be more cost effective than rail for journeys of 420 km, except where very large volumes of heavy containers move between two rail connected terminals.



- The position concerning wheat shipments and sea freight cost disadvantage is summarised as follows:

	Containerised wheat		Bulk
	Compared with rail containers	Compared with bulk rail	
Average shipping rate (2006-07)	\$1,196 / 20' box	\$1,196 / 20' box	na
Average tonnes / TEU	24	24	na
Sea rate			
Equivalent rate / tonne	\$49.82	\$49.82	\$41.30
Rate cents per ntk	11.9	11.9	9.8
Rail rates			
Rate per tonne	\$35.70	\$29.40	\$29.40 / tonne
Rate cents per ntk	8.5	7.0	
Sea freight cost disadvantage	\$14.12	\$20.42	\$11.90

- We suggest that wheat reimbursement rates for all wheat shipments should be set at \$11.90 / tonne.



1. Introduction

SKM was engaged to assist the Bureau of Infrastructure, Transport and Regional Economics (BITRE) with provision of historic freight rate data and information for continuation of various time series analysis projects and general assessment of various industries and Australia's broader economic activity where freight is a component. A specific application of this was in the review of the methodology for setting the parameters, and updating these parameters, in the Tasmanian Freight Equalisation Scheme (TFES) and Tasmanian Wheat Freight Scheme (TWFS) being undertaken by BITRE for the Department of Infrastructure, Transport, Regional Development and Local Government (DITRDLG).

This report provides current and available historic freight rate information on routes requested, covering commodity types carried by road, rail, sea and air. This document provides a summary of the information provided in detailed excel spreadsheets, as well as discussion of the methodology, interpretation and issues which should be considered when using this information. It also includes information on Bass Strait shipping services.

Part Two of the study report assesses issues covering the TFES and TWFS and makes suggestions and conclusions concerning options for improvement of these schemes in meeting stated objectives.



2. Background, objectives and approach

2.1 Background – Tasmanian freight schemes

It has long been recognised that interstate trade between Tasmania and the mainland incurs higher costs than would apply for similar distances on the mainland where direct land transport alternatives exist. Schemes have been in place since at least 1976, and are designed to provide compensation to companies and individuals incurring these higher costs. The Tasmanian Freight Equalisation Scheme (TFES) was implemented in 1976, and the Tasmanian Wheat Freight Scheme (TWFS) was re-established in 2004 replacing a number of previous schemes in 1989 to provide assistance to bulk shippers of wheat to Tasmania.

In 1998, the Tasmanian Freight Equalisation Scheme Review Authority calculated road freight equivalence costs for 1996-97, which formed the basis for adjustment of payment rates under the equalisation schemes until 2005-06.

The Productivity Commission reviewed Tasmanian freight subsidy arrangements in 2006, published in December 2006 as Report 39. The Commonwealth government's response accepted most of the Productivity Commission recommendations, including Recommendation 4:

“Department of Transport and Regional Services (DOTRS) and the Bureau of Transport and Regional Economics (BTRE) should revise the methodology for setting and updating the remainder parameters, and review them every three years. In particular, they should review how wharf-to-wharf costs should be defined. The results of parameters review should be published.”

The work summarised in this report is aimed at assisting BTRE with information required to implement this recommendation.

2.2 Objectives

The objectives of the project were to review the methodology, equivalent freight rates and to construct road and rail freight equivalence factors that reflect appropriate current freighting conditions and rates paid.

In order to do this, information was required on changes in freighting arrangements, costs and rates for both Bass Strait movements and similar all land journeys on the mainland.



2.3 Approach adopted

The approach adopted to achieve the required outcomes was:

- 1) Review of relevant previous work, to understand the original approach and objectives, and subsequent modifications. This included:
 - Tasmanian Freight Equalisation Scheme Review Authority's 1998 Advisory Opinion report
 - The Productivity Commissioner's Report 39, reviewing Tasmanian subsidy arrangements
 - The Australian government's response to the Productivity Commission's report.
- 2) Review of indexing and adjustment since 1998. This provided a view on deviations that may have occurred over this period between current Tasmanian freighting arrangements and costs, and the indexed road freight equivalence values.
- 3) Analysis of the current Bass Strait freight task, based on claims and payments made under the TFES and TWFS, to provide information on how a composite freight rate could be structured. This considered issues such as freighting volumes, commodities, format of units freighted (containerised, full truck load, bulk, break bulk etc.).
- 4) Consideration of how freight market practices may affect equivalences between Tasmanian sea modes and road and rail modes predominately used on the mainland. This considers the relationship between full truck / trailer loads (FTL) commonly used in road transport, with containerised cargo commonly used for general freight by sea and rail.
- 5) Construction of an index of freight rates, equivalences and differences contrasting freighting, equivalences and differences, contrasting freighting to and from Tasmania of similar journeys on the mainland. This considers:
 - Containerised ambient temperature freight
 - Containerised temperature controlled freight
 - Heavy freight (defined in TFES as freight with stowage densities of 1.1 m³ or less per one tonne)
 - Livestock
 - Dry bulk (wheat, grain etc).

2.3.1 Data Sources

Data sources used for this project were:

- Discussion with a range of transport industry service providers, industry associates and other stakeholders



- SKM's data base of freight rates, assembled from a wide variety of available sources including:
 - Data from projects where clients were assisted to seek freight services
 - Data from assisting freight service providers lodge quotations and submissions to provide transport services
 - Discussion with industry contacts and others with useful information
 - Data from "Shadow Quotations" sought specifically to supplement data, fill gaps or investigate anomalies
 - Publicly available information such as Pacific National's annually published "Book Rates" for rail services.

The freight rates data base aims to provide rates typically paid by substantial, regular uses of freight services, typically spending more than \$50,000 - \$100,000 per month.

All rates shown are expressed as dollars of the day, without any adjustment for inflation or changes in value of Australian currency.

More information on specific data issues and interpretation is provided in Appendix A.



3. Freight rate data

This section summarises information from the separate freight rate spreadsheet model which contains a wide variety of tabular information from which the summary presented here is drawn.

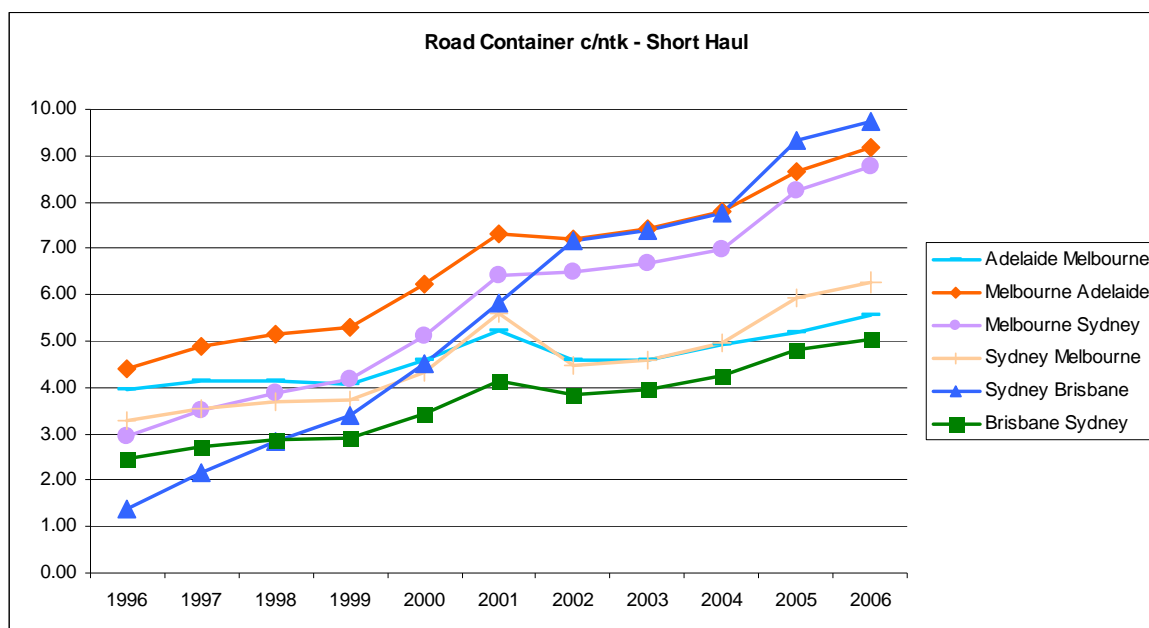
Rates here are expressed in AUD cents per net tonne.kilometre – that is, the rate paid to move one tonne of freight one kilometre. This provides a consistent base for the comparison of costs for difference journey lengths and across modes.¹ Calculations of cents / ntk use applicable distances for the mode concerned – road distances for road rates, rail distances for rail rates, etc.

Rates are in dollars of the day, without adjustment for inflation or changes in currency value.

3.1 Mainland intercapital routes

Freight rates for mainland inter capital routes from 1996-2006 are shown in Figure 1 - Figure 6.

■ **Figure 1 Containerised road freight rates – short haul**

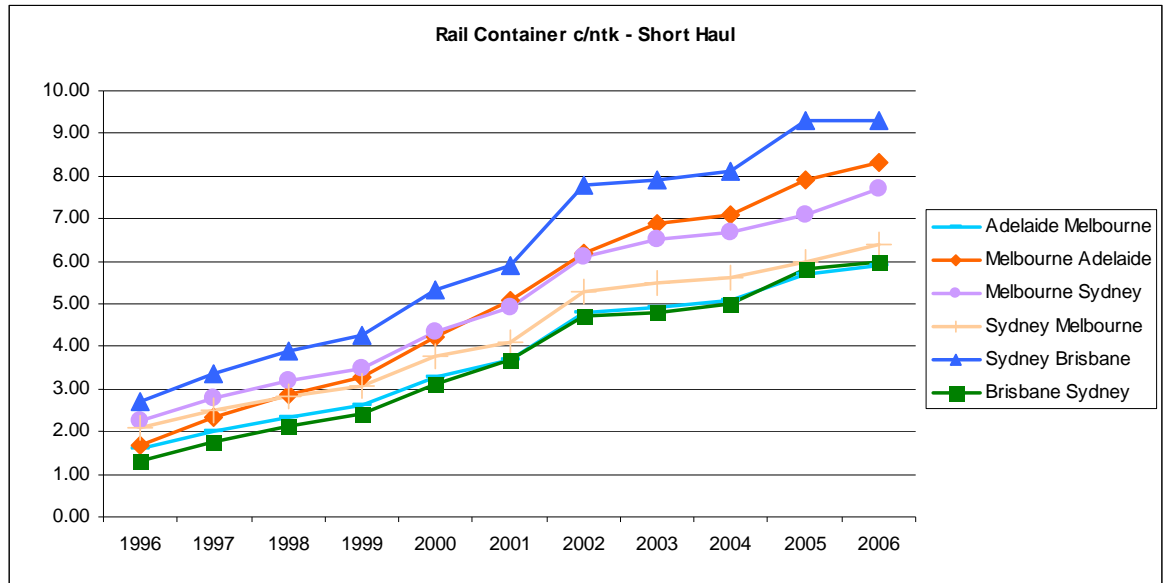


Source: SKM

¹ The term “net” refers to the weight of the goods and immediate packaging only. It contrasts with gross tonne kilometres, commonly used in rail transport, where it refers to the gross weight of the train (including freight, locos, wagon tare weight, and also the tonne.kilometres involved in returning empty trains for the next forward journey).

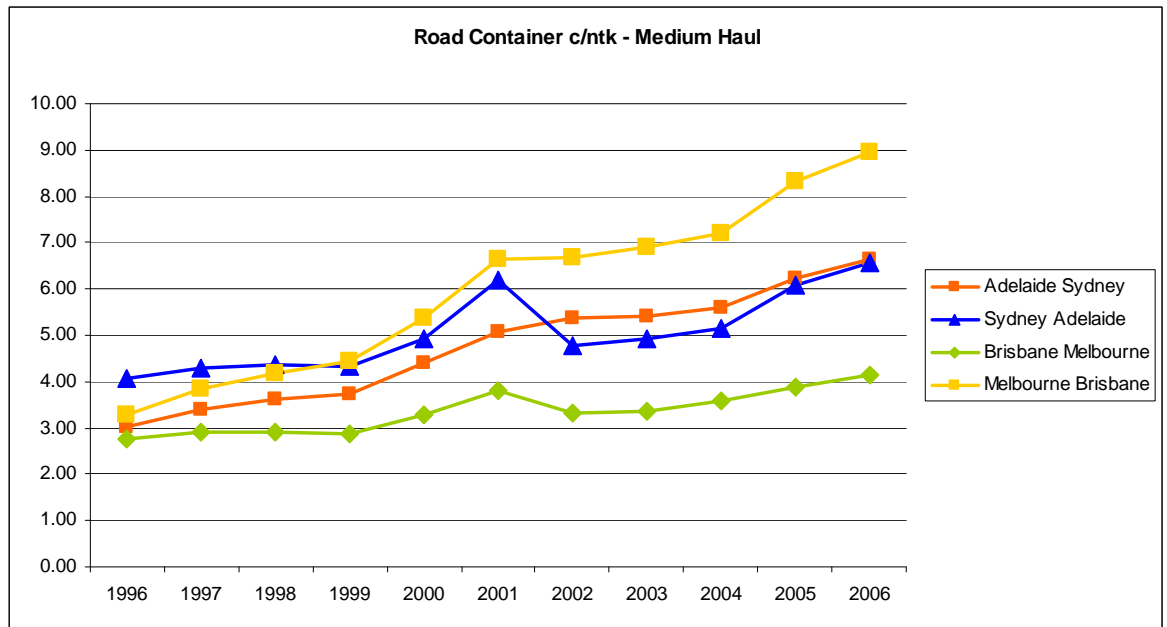


■ **Figure 2 Containerised rail freight rates – short haul**



Source: SKM

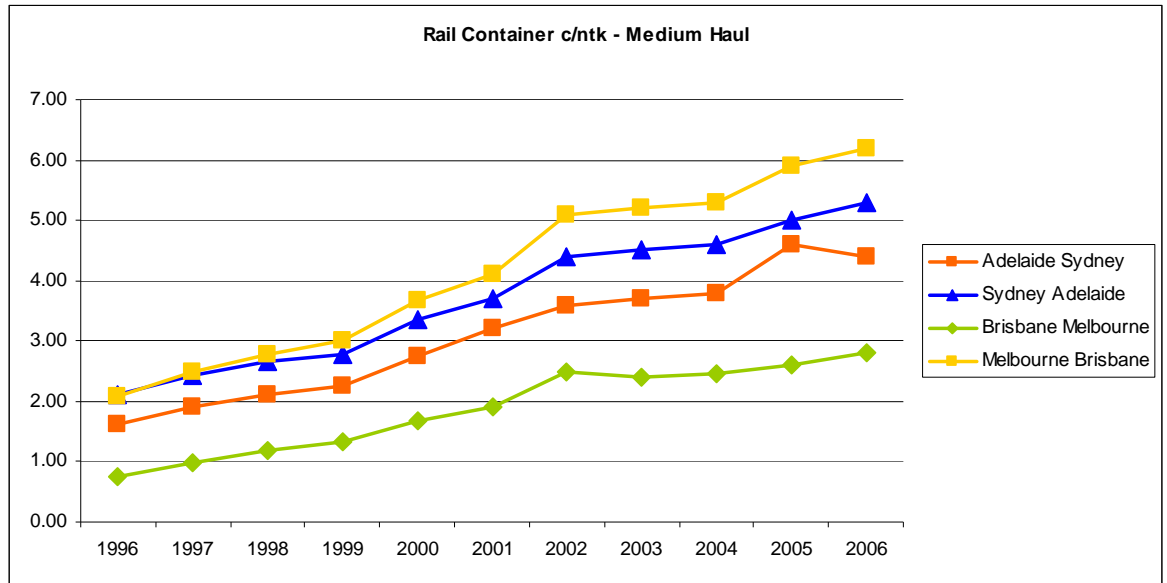
■ **Figure 3 Containerised road freight rates – medium haul**



Source: SKM

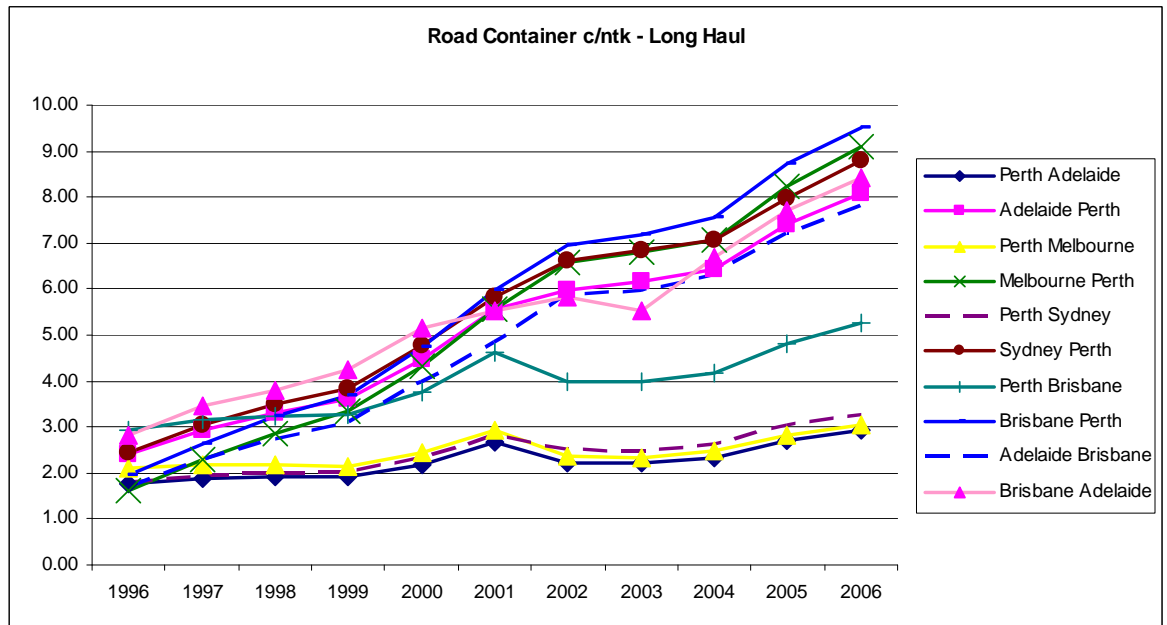


■ **Figure 4 Containerised rail freight rates – medium haul**



Source: SKM

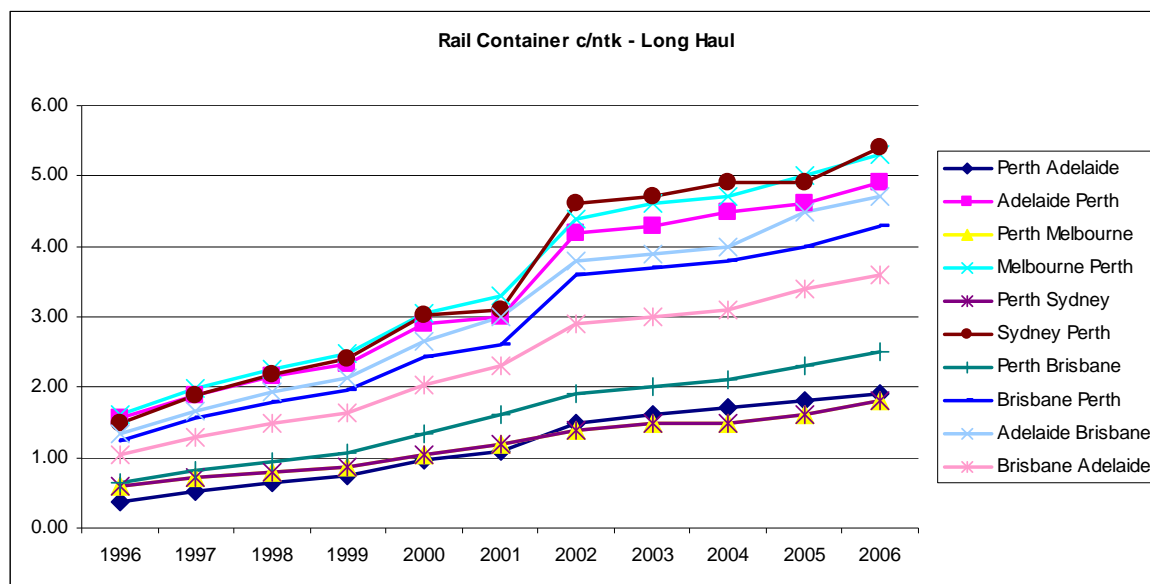
■ **Figure 5 Containerised road freight rates – long haul**



Source: SKM



■ **Figure 6 Containerised rail freight rates – long haul**



Source: SKM

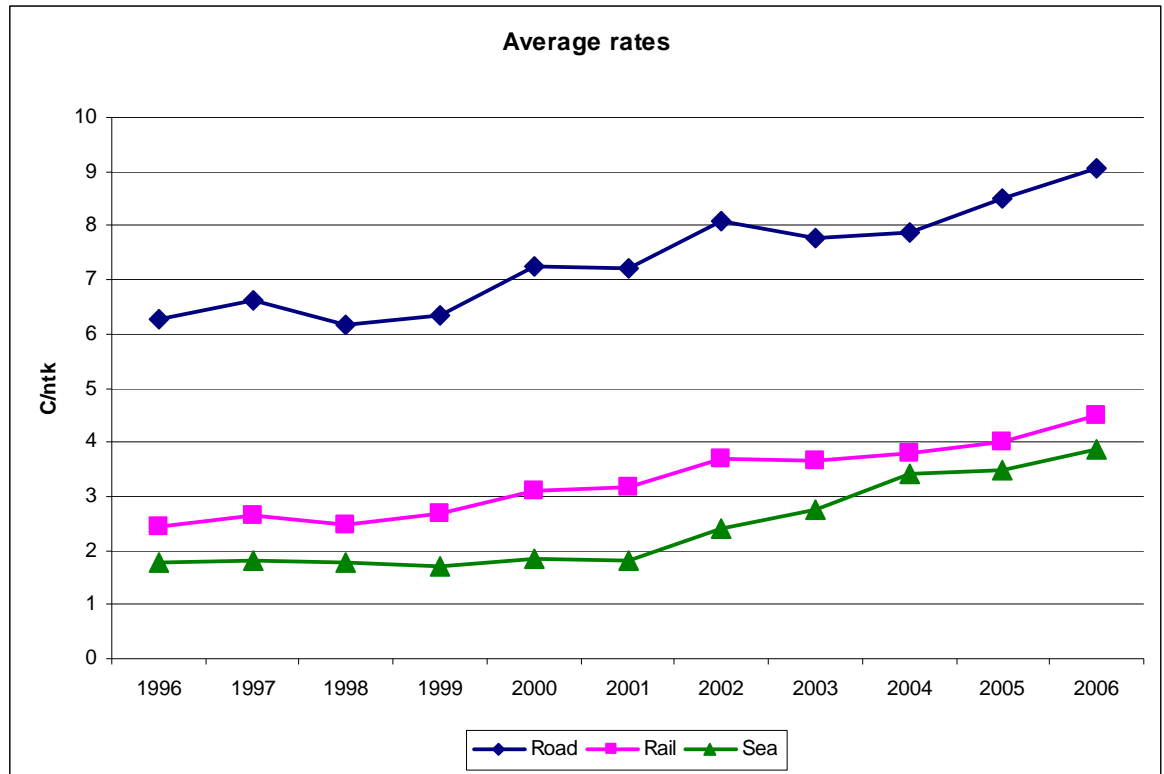
3.2 Dry bulk rates (wheat)

Rates for movement of wheat from major growing areas to export ports are shown in Figure 7, and rates for the main routes are shown in Table 2.

These are representative of rates as at the end of 2007. Since then, Asciano (owner of Pacific National, Australia’s dominant rail operator, particularly in Victoria, NSW and Tasmania) has announced the likely withdrawal from grain cartage by rail in Victoria, a very substantial reduction in services in NSW, and likely closure of Tasmanian container rail services, due to poor profitability. While sale of these businesses as going concerns is possible, it is very likely that the scale of operations will reduce, the total grain task hauled by rail will decline (even in non drought years) and rates will increase. This is further discussed in section 6.14.



■ **Figure 7 Grain freight rates national average**



Source: SKM

■ **Table 2 Grain rates for major routes (c/ntk)**

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Western Australia to (300km)	Kwinana											
	Road	4.43	4.84	5.05	5.14	6.01	6.13	7.20	7.34	7.00	7.97	8.60
	Rail	2.36	2.59	2.70	2.75	3.22	3.29	3.90	3.78	4.00	4.14	4.65
South Australia to (200km)	Port Lincoln											
	Road	6.31	6.62	6.66	6.54	7.41	7.35	8.20	7.87	8.10	8.48	8.92
	Rail	2.65	2.95	3.12	3.21	3.79	3.91	4.70	4.70	4.70	5.13	5.75
NSW/SA to (400km)	Port Pirie											
	Road	5.59	5.89	5.95	5.87	6.67	6.65	7.50	7.20	7.30	7.80	8.24
	Rail	2.12	2.33	2.43	2.48	2.91	2.97	3.50	3.49	3.60	3.79	4.21
South Australia to (350km)	Adelaide											
	Road	5.60	5.89	5.95	5.86	6.66	6.62	7.50	7.20	7.10	7.78	8.22
	Rail	2.26	2.48	2.60	2.66	3.12	3.20	3.80	3.79	3.80	4.13	4.58
NSW/Vic to (350km)	Geelong											
	Road	5.77	6.18	6.34	6.35	7.32	7.38	8.60	8.17	8.40	9.19	9.70
	Rail	1.91	2.18	2.36	2.47	2.97	3.10	3.80	3.77	4.00	4.26	4.75
NSW/Vic to (350km)	Melbourne											
	Road	5.74	6.16	6.32	6.33	7.30	7.37	8.60	8.17	8.40	9.19	9.72
	Rail	1.91	2.18	2.36	2.47	2.97	3.10	3.80	3.77	4.00	4.26	4.75
NSW to (300km)	Port Kembla											
	Road	5.75	6.16	6.32	6.32	7.28	7.33	8.50	8.16	8.40	8.91	9.70
	Rail	1.62	1.85	2.01	2.12	2.54	2.66	3.30	3.27	3.40	3.71	4.14
NSW to (400km)	Newcastle											
	Road	6.20	6.56	6.65	6.58	7.50	7.49	8.50	8.16	8.40	8.80	9.46
	Rail	1.89	2.08	2.19	2.24	2.64	2.71	3.20	3.18	3.40	3.46	3.89

Source: SKM

3.3 Parcels and smalls

This section contains available information on airfreight rates for parcels and smalls. Most transport companies offer relatively simple rating scales for parcels and smalls, accepting that there will be a degree of cross-subsidisation across routes. The analyses presented in Table 3 are based on typical 5 kg parcels send by air or road express (over shorter distances) to provide “next morning” delivery.

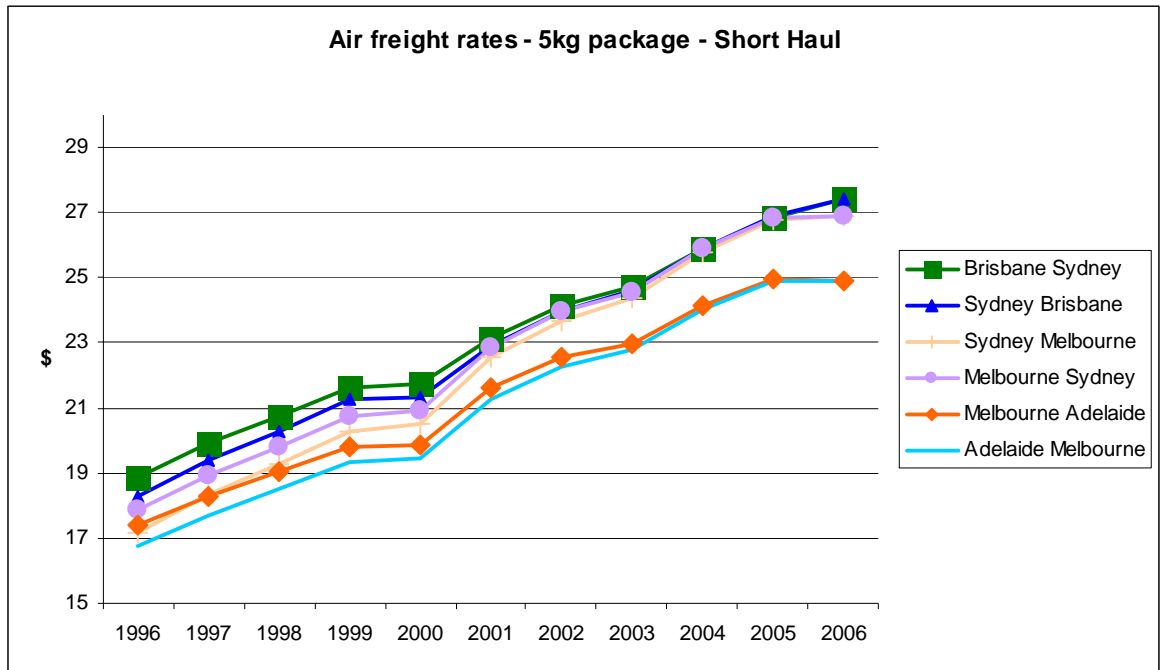
■ **Table 3 Parcel rate trends**

		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Brisbane	Sydney	\$18.89	\$19.89	\$20.74	\$21.62	\$21.74	\$23.13	\$24.15	\$24.70	\$25.92	\$26.82	\$27.40
Brisbane	Melbourne	\$21.35	\$22.71	\$23.92	\$25.16	\$25.58	\$27.31	\$28.67	\$29.58	\$31.16	\$32.41	\$33.40
Brisbane	Adelaide	\$22.04	\$23.48	\$24.77	\$26.09	\$26.63	\$28.36	\$29.80	\$30.78	\$32.43	\$33.76	\$34.90
Brisbane	Perth	\$37.06	\$39.59	\$41.98	\$44.39	\$46.05	\$48.45	\$50.96	\$53.02	\$54.63	\$56.99	\$60.90
Sydney	Brisbane	\$18.30	\$19.38	\$20.30	\$21.25	\$21.32	\$22.91	\$23.99	\$24.61	\$25.91	\$26.88	\$27.40
Sydney	Melbourne	\$17.18	\$18.31	\$19.29	\$20.29	\$20.48	\$22.53	\$23.69	\$24.38	\$25.76	\$26.81	\$26.90
Sydney	Adelaide	\$22.64	\$23.83	\$24.87	\$25.94	\$26.13	\$28.29	\$29.51	\$30.26	\$31.70	\$32.80	\$32.90
Sydney	Perth	\$36.52	\$38.67	\$40.66	\$42.68	\$43.89	\$46.95	\$49.12	\$50.83	\$52.15	\$54.18	\$56.40
Melbourne	Brisbane	\$20.51	\$21.96	\$23.25	\$24.58	\$25.08	\$26.90	\$28.35	\$29.34	\$30.99	\$32.33	\$33.40
Melbourne	Sydney	\$17.86	\$18.92	\$19.83	\$20.76	\$20.90	\$22.86	\$23.95	\$24.58	\$25.88	\$26.86	\$26.90
Melbourne	Adelaide	\$17.40	\$18.30	\$19.05	\$19.82	\$19.86	\$21.60	\$22.53	\$23.00	\$24.14	\$24.96	\$24.90
Melbourne	Perth	\$31.47	\$33.33	\$35.03	\$36.77	\$37.62	\$40.46	\$42.35	\$43.77	\$44.95	\$46.69	\$48.40
Adelaide	Brisbane	\$22.91	\$24.26	\$25.45	\$26.68	\$27.17	\$28.76	\$30.11	\$31.01	\$32.57	\$33.81	\$34.90
Adelaide	Sydney	\$21.62	\$22.92	\$24.06	\$25.23	\$25.50	\$27.80	\$29.12	\$29.98	\$31.51	\$32.73	\$32.90
Adelaide	Melbourne	\$16.73	\$17.70	\$18.51	\$19.36	\$19.46	\$21.27	\$22.27	\$22.80	\$24.01	\$24.89	\$24.90
Adelaide	Perth	\$26.69	\$28.42	\$29.99	\$31.60	\$32.40	\$35.03	\$36.79	\$38.08	\$39.25	\$40.86	\$42.40
Perth	Brisbane	\$37.25	\$39.77	\$42.12	\$44.51	\$46.19	\$48.52	\$51.02	\$53.05	\$54.63	\$56.97	\$60.90
Perth	Sydney	\$38.00	\$40.01	\$41.85	\$43.73	\$44.77	\$47.70	\$49.73	\$51.29	\$52.46	\$54.34	\$56.40
Perth	Melbourne	\$31.47	\$33.33	\$35.03	\$36.77	\$37.62	\$40.46	\$42.35	\$43.77	\$44.95	\$46.69	\$48.40
Perth	Adelaide	\$26.69	\$28.42	\$29.99	\$31.60	\$32.40	\$35.03	\$36.79	\$38.08	\$39.25	\$40.86	\$42.40

Source: SKM



■ **Figure 8 Air parcel freight rates (5kg) – short haul**



Source: SKM

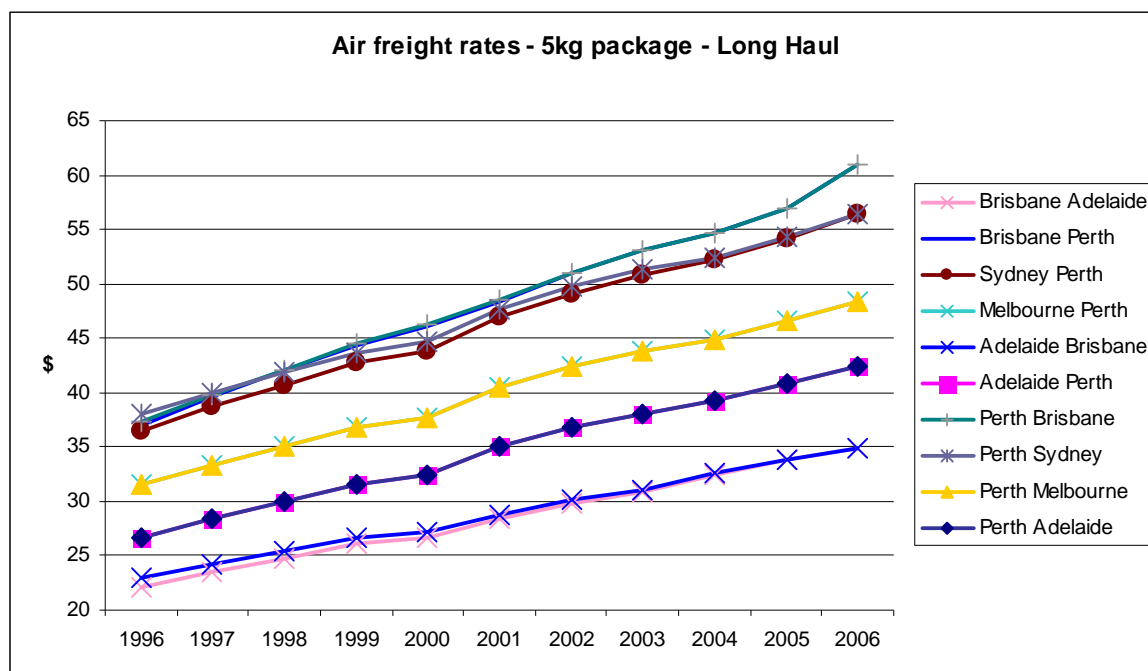
■ **Figure 9 Air parcel freight rates (5kg) – medium haul**



Source: SKM



■ **Figure 10 Air parcel freight rates (5kg) – long haul**



Source: SKM

3.4 Live animals

Historic information on rates for movement of live animals has been difficult to obtain, and estimates below are based on current rates for typical movements from livestock production areas to nearest abattoir-meat processing centre or export port. The SKM database had few records for live animals. Available information is shown in Table 4.

■ **Table 4 Live animal movement rates**

Origin	Destination	Distances	c/ntk
Roma	Brisbane	550 km	16.8
Dubbo	Sydney	400 km	18.4
Hamilton	Melbourne	300 km	19.7
Sale	Melbourne	225 km	19.7

Source: SKM

3.5 Container rates between Melbourne and northern Tasmanian ports

Typical container rates between northern Tasmanian ports and Melbourne are shown in Table 5, sourced from discussions with shipping industry representatives and major shippers. Rates are similar between all ports, and differences generally reflect the proximity of the Tasmanian origin / destination to the competing ports. Sea freight rates involving a more distant port will have to offer lower rates to compensate for greater road costs in Tasmania to arrive at a competitive door to door price. These rates are noticeably lower than others identified through the TFES claims database



and other industry sources, and tend to confirm that the small number of larger shippers obtain more favourable rates.

■ **Table 5 General Bass Strait freight rates between Melbourne and northern Tasmania (c/ntk)**

	Dry		Reefer	
	\$ per TEU	c/ntk	\$ per TEU	c/ntk
Container				
Northbound	\$550	8.5	\$550	9.6
Southbound	\$625	7.1	\$640	9.6
Trailer load				
Northbound	\$1,300	14.1	\$1,350	14.6
Southbound	\$1,450	15.7	\$1,500	16.2

Source: SKM. Rates from shipping company discussions; tonnage from TFES claims database

Cents per net tonne kilometre are calculated based on calculated TEU rates as shown in Table 6 and the average Bass Strait journey of 420 km. These average weights were calculated by BITRE from the TFES database for 2006-07, excluding records with zero tonnes, blank tonnes or invalid data, plus 1.5 tonnes for the tare weight of the box. Trailer load rates assume 22 tonnes per trailer.

■ **Table 6 Average tonnes per TEU: 2006-07**

	Dry	Reefer	Total
Northbound			
Average tonnes per TEU	13.9	12.1	13.3
Gross mass per TEU	15.4	13.6	14.8
Southbound			
Average tonnes per TEU	19.5	14.3	19.5
Gross mass per TEU	21.0	15.8	21.0
North and southbound			
Average tonnes per TEU	115.6	12.2	14.7
Gross mass per TEU	17.1	13.7	16.2

Notes

Based on TFES claims data for 2006-07

Excludes records with null tonnes or zero tonnes

For records with 1 TEU or more

Tare weight of 1.5 t / TEU added to net tonnes

Source: BITRE

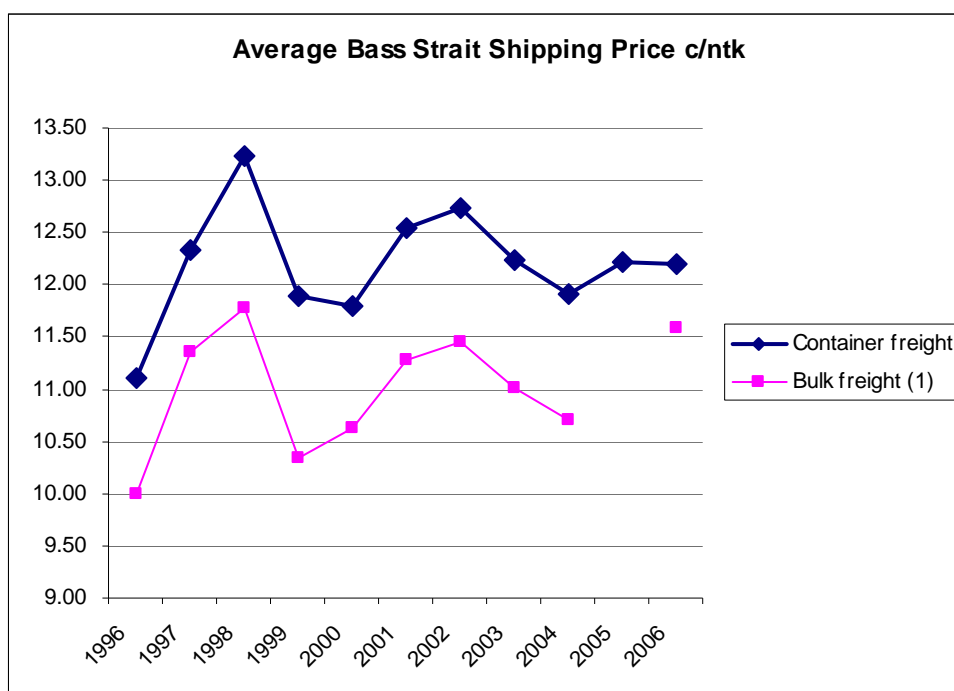
SINCLAIR KNIGHT MERZ



3.6 Wheat rates between Melbourne and northern Tasmania

Average published Bass Strait container and bulk shipping rates are shown in Figure 11. These rates are substantially higher than those shown in Table 5 above, and also longer haul interstate sea freight rates, shown in Figure 12. The reasons for this are believed to include the fact that these are raw freight rates, including the door to door, wharf to door and door to wharf allowances where applicable (and a significant proportion of claims were on a DD, DW or WD basis); and rates have not been ‘scaled’ to a Melbourne – northern Tasmanian equivalent.

■ **Figure 11 Average Bass Strait wheat shipping rates 1996 – 2006**

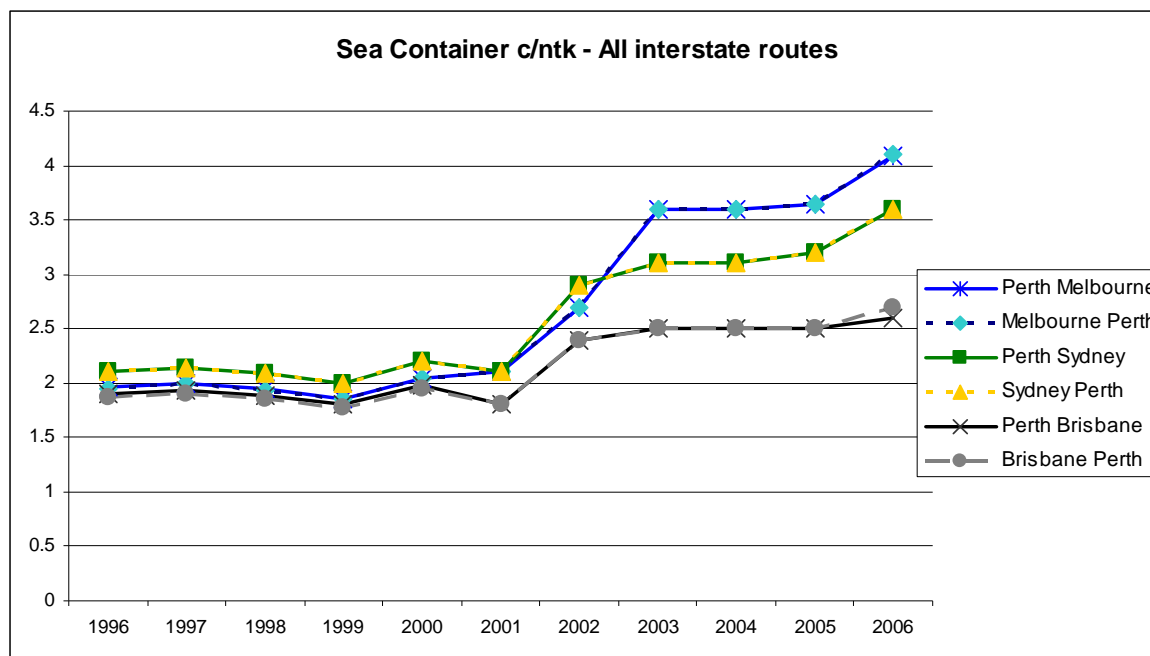


(1) There were no claims for wheat in bulk in 2005-06.

Sources: BTRE Report 112 – Table VIII.29, SKM freight rate database; TFES database; DoTARS Sub 53 p 19, personal communication, Tim Risbey.



■ **Figure 12 Containerised sea freight rates – long haul**



Source: SKM

3.7 Freighting arrangements to and from King Island and Flinders Island

King Island receives a weekly service from the SeaRoad Mersey calling en route from Devonport to Melbourne. Flinders Is receives a regular service from Bridport operated by Southern Shipping, with roughly monthly services to Port Welshpool in Gippsland, Victoria. Distances are shown in Table 7.

Rates for the most common movements, between King Island and Melbourne, and Flinders Island and Bell Bay, are shown in Table 8 and Table 9.

■ **Table 7 Bass Strait shipping distances**

	Bell Bay	Bridport	Burnie	Devonport	King Island	Welshpool
Melbourne	455km	-	405km	445m	285km	-
King Island	-	-	-	300km	-	-
Flinders Island	-	115km	-	-	-	230km

Source: SKM

Calculations for cents per net tonne kilometre have been calculated based on 15t per TEU to and from King Island. Flinders Island freight is based on 15t per TEU both ways, a combination of groceries, produce and empties. This also reflects the limited lift capacity on the island. Livestock is a very important factor in the trade for Flinders Is, and livestock rates have been based on 350 kg cows / steers, 45 kg sheep and published scheduled rates.



These tables show higher rates to King Island and much higher rates to Flinders Island (compared with Bass Strait and road trips for similar distances), both reflecting scale economies and possibly also competition issues.

■ **Table 8 Current rates Victoria to / from King Island and Flinders Island**

	south bound			north bound		
	distance	freight unit	c/ntk	distance	freight unit	c/ntk
King Island (to / from Melbourne) – 20' containers	285 km	\$750 / box	17.54	285 km	\$750 / box	17.54
Flinders Island (to / from Welshpool) – 20' containers	230 km	\$2,317 / box	67.15	230 km	\$2,317 / box	67.15
Livestock (cows / heifers)	230 km	\$88.50 / head	109.94	230 km	\$88.50 / head	109.94
Livestock (sheep)	230 km	\$13.75 / head	132.85	230 km	\$13.75 / head	132.85

Source: SKM

■ **Table 9 Current rates Tasmania to / from King Island and Flinders Island**

	south bound			north bound		
	distance	freight unit	c/ntk	distance	freight unit	c/ntk
King Island (to / from Devonport) – 20' containers	300 km	\$950 / box	21.11	300 km		
Flinders Island (to / from Bridport) – 20' containers	115 km	\$1,860 / box	107.83	115 km	\$1,860 / box	107.83
Livestock (cows / heifers)	115 km	\$60.45 / head	150.18	115 km	\$60.45 / head	150.18
Livestock (sheep)	115 km	\$6.60 / head	127.54	115 km	\$6.60 / head	127.54

Sources: SKM from shipping industry discussions and Southern Shipping Deed of Agreement with Tasmanian Transport Commission.

Livestock rates highlighted in yellow above are as in the Southern Shipping Deed of Agreement with the Tasmanian government, and were correct as at 1 July 2007, and do not include wharfage. There have been several rate adjustments since then, for annual CPI and fuel surcharge increases. Current (early 2008) total livestock rates (including wharfage) are estimated to be around 180 c / ntk.



It is worth noting that freight rates quoted by Southern Shipping were above the standard rates specified in the Deed of Agreement between the Tasmanian Transport Commission and Southern Shipping Company Pty Ltd². However, the explanation lay in the inclusion of wharfage in quoted shipping rates, and application of one annual CPI increase and three fuel surcharge increases, taking the fuel surcharge to 10%, not reflected in the pricing schedule in the published Deed of Agreement.

Livestock rates are around double those for containerised goods, which is not unusual, given the greater time and effort required in loading, unloading, feeding and cleaning afterwards.

² http://www.transport.tas.gov.au/_data/assets/pdf_file/0008/20231/Transport_Commission_and_Southern_Shipping_Company_Pty_Ltd_and_Geoffrey_Gabriel_18_July_2007.pdf



4. Bass Strait shipping arrangements

4.1 Shipping service providers

4.1.1 Australian flagged vessels

Regular Bass Strait shipping services are provided by the following companies:

- **ANL** – operates a single lift on lift off vessel between Appleton Dock Melbourne and Bell Bay, with occasional calls to Hobart. Generally six crossings per week.
- **Sea Road** (former Patrick Shipping) – operates two Ro-Ro vessels between Webb Dock Melbourne and Devonport, including one call on Sundays at King Island. Generally 12 crossings per week. Sea Road offers a sea / rail service between Melbourne and Hobart and occasional ship calls in Hobart.
- **Toll Shipping** operates two Ro-Ro vessels between Webb Dock Melbourne and Burnie. Generally 12 crossings per week.
- **TT Line** operates two passenger ferries between Station Pier and Devonport which also carry freight. Generally 14 sailings per week, but more in peak passenger periods (summer / autumn) and fewer in winter.
- **Southern Shipping** operates two vessels providing a sea freight and passenger service between Bridport and Flinders Island with approximately monthly sailings to Port Welshpool. This service is largely operated “on demand”, subject to sufficient volumes.

The major dimensions of these services are summarised in Table 10. More information is in Appendix B.

4.1.2 Internationally flagged vessels

There are also some regular international shipping services calling to northern Tasmanian ports, which can carry domestic cargo if Single Voyage or Continuous Voyage Permit (SVP / CVP) is held. These will not be issued if Australian flagged vessels are available to perform the shipping task. Thus, in practice, international ships carrying Bass Strait cargoes are limited to movements between Tasmania and Fremantle, Brisbane and other ports not serviced by the Australian companies listed above.

■ **Table 10 Bass Strait shipping services**

	ANL	Sea Road		Toll		TT Line		TOTAL
Vessels Type Cap (TEU)	Bass Trader Container 448 (CMA CGM)	Tamar RoRo 260 (sale doc)	Mersey RoRo 180 (sale doc)	Tasman Achiever RoRo 450 (Toll)	Victorian Reliance RoRo 450 (Toll)	Spirit of Tas I RoRo (Drive through)	Spirit of Tas II RoRo (Drive through)	7 vessels 1,838 tot + TT Line 368 av excl TT Line
Services	<ul style="list-style-type: none"> ■ Appleton E ■ Bell Bay ■ Burnie ■ Hobart (occasionally) 	<ul style="list-style-type: none"> ■ Webb Dock ■ Devonport 	<ul style="list-style-type: none"> ■ Webb Dock ■ Devonport ■ King Island 	<ul style="list-style-type: none"> ■ Webb Dock ■ Burnie 	<ul style="list-style-type: none"> ■ Webb Dock ■ Burnie 	<ul style="list-style-type: none"> ■ Station Pier ■ Devonport 	<ul style="list-style-type: none"> ■ Station Pier ■ Devonport 	
Sailings/ Calls	Appleton – Bell Bay: 3 / wk Burnie– Weekly	3 times per week	Devonport 3 / wk King Is - weekly	3 times per week	3 times per week	Nightly (2)	Nightly (2)	Melb – Northern Tas ~ 29 sailings / wk Melb King Is 1 / wk
Commodities	containers	containers, dairy, timber, cement, hazardous chemicals, trailers		paper, containers, trailers		groceries, trailers, containers	groceries, trailers, containers	
Sailing Capacity (TEU cap x voyages)	134,000	132,000 total both vessels		270,000 total both vessels		~ 804 sailings, capacity not known		551,000 + TT Line
TEU Carried	67,200 (est)	93,000 (sale doc)		160,000 (Toll)		78,000 (annual report)		398,200
Other freight		10,000 cars (1)		10,000 cars (1)		178,000 pax 256,000 cars	178,000 pax 256,000 cars	
Total TEU	67,200 (est)	103,000		170,000		78,000		418,200
Est utilisation	50%	78%		62%		NA		55 – 60% excluding TT Line

(1) Converted at 1 car = 1 TEU

(2) Generally one south bound and one north bound crossing each night, seven days per week. No Sunday sailings 25/5/08 – 20/7/08. One crossing day / night 27/7/08 – 16/8/08 while one vessel in dry dock. Two crossings day / night weekends late December – mid April and around 15 other days.

Source: SKM, from published information, industry discussion and estimates where firm information unavailable.

4.2 Shipping service users

There are two distinct segments among users of Bass Strait shipping services:

- A very small number of very large users, such as Australian Paper, Cadbury, McCain, Cascade Brewery, Norske Skog and Simplot
- A very large number of small to medium users.

Large users generally have consistent usage patterns, are well organised to minimise costs in meeting their needs and have substantial negotiating power, resulting in competitive rates. The smaller users tend to be the reverse: they generally have little negotiating power, often paying full scheduled rates for irregular usage patterns. Many use freight forwarders to provide full door to door services.

Connections to other locations, both domestically and around the world, are available through intermodal connections or transshipment. Domestic freight movements with interstate origins or destinations are generally sent by road to SA and NSW; road or rail to Queensland, and rail or sea to WA and Darwin. International transshipment generally requires road transfer of containers between Webb Dock and Swanson Dock (about 6 kilometres) or Appleton Dock and Swanson Dock (about 1 km).

4.3 Analysis of the Bass Strait freight task

4.3.1 Overall tonnes, volumes and movement patterns

This section provides an analysis of the Bass Strait freight task, based on the data collected by CentreLink in its administration of payments to claimants under the TFES and TWFS. Table 11 shows a breakdown of overall freight movement patterns for 2006-07, from available records. Records were often incomplete, and useful dimensions on which useful analyses could be based were not always easily available.

4.3.2 Proportion of Bass Strait shipping claiming TFES subsidies

Calculations of Bass Strait shipping volumes from published shipping industry information estimated the total trade at 398,200 TEU for 2007 excluding cars (as shown in Table 10). Analyses from TFES returns from CentreLink show total claims for 146,300 TEU. This suggests that approximately 37% of Bass Strait trade is eligible for subsidy, slightly lower than broader estimates in the Productivity Commission report 39 of around 40%. This could be partly due to the reducing density of freight generally, stemming from less bulk goods, smaller consignment sizes, more just in time deliveries and more elaborate consumer packaging.

■ **Table 11 Sea freight patterns to and from Tasmania (all TFES and TWFS 2006-07**

Route Code	Dry (including livestock)					Reefer					Grand Total TEUs
	no.	Cont' loads	Tonnes	Cubic Metres	Total TEUs	no.	Cont' loads	Tonnes	Cubic Metres	Total TEUs	
Northern Tasmania - North Bound											
Northern Tasmania to Victoria	17,826	47,661	611,869	474,841	55,771	14,617	22,297	316,170	191,812	26,873	82,643
Northern Tasmania to New South Wales	3,281	1,587	29,083	40,891	2,227	3,823	294	6,812	14,460	753	2,980
Northern Tasmania to South Australia	893	442	7,303	13,887	684	1,211	24	2,957	2,132	199	883
Northern Tasmania to Queensland	1,721	828	15,738	18,584	1,082	2,167	1,262	23,339	12,786	2,012	3,094
Northern Tasmania to Western Australia	1,351	7,385	118,693	107,020	12,421	583	847	20,059	1,156	1,652	14,072
Northern Tasmania to Northern Territory	36	81	1,864	221	162	1	-	1	3	0	162
Subtotal	25,108	57,984	784,549	655,445	72,347	22,402	24,724	369,338	222,349	31,488	103,835
Southern Tasmania - North Bound											
Southern Tasmania to Victoria	1,931	1,087	18,050	33,508	2,633	12,629	70	9,353	53,845	1,908	4,541
Southern Tasmania to New South Wales	665	70	8,164	9,505	459	9,258	174	6,551	48,332	1,627	2,086
Southern Tasmania to South Australia	287	32	2,288	2,263	113	3,195	49	2,638	10,153	342	456
Southern Tasmania to Queensland	447	69	5,678	6,953	293	4,787	4	2,313	18,115	609	902
Southern Tasmania to Western Australia	225	5	2,504	2,208	110	1,873	-	1,157	4,976	165	275
Southern Tasmania to Northern Territory	17	1	319	231	14	8	-	4	5	0	14
Subtotal	3,572	1,264	37,003	54,668	3,622	31,750	297	22,015	135,425	4,652	8,274
Northern Tasmania - South Bound											
Victoria to Northern Tasmania	15,306	23,946	450,537	256,451	29,896	625	94	1,987	5,027	203	30,099
New South Wales to Northern Tasmania	479	757	11,671	12,339	858	28	-	65	177	6	864
South Australia to Northern Tasmania	347	148	2,037	4,360	213	1	-	3	-	0	213
Queensland to Northern Tasmania	111	88	878	2,751	123	14	21	292	17	29	151
Western Australia to Northern Tasmania	404	501	11,790	477	499	-	-	-	-	-	499
Northern Territory to Northern Tasmania	-	-	-	-	-	-	-	-	-	-	-
Subtotal	16,647	25,440	476,912	276,378	31,588	668	115	2,347	5,221	238	31,826

Route Code	Dry (including livestock)					Reefer					Grand Total TEUs
	no.	Cont' loads	Tonnes	Cubic Metres	Total TEUs	no.	Cont' loads	Tonnes	Cubic Metres	Total TEUs	
Southern Tasmania - South Bound											
Victoria to Southern Tasmania	4,350	653	19,856	32,434	1,523	1,206	23	1,545	5,145	199	1,722
New South Wales to Southern Tasmania	182	24	304	903	55	31	-	27	89	3	59
South Australia to Southern Tasmania	56	5	103	227	12	4	-	9	2	0	13
Queensland to Southern Tasmania	663	484	50,619	10,623	496	46	-	27	12	1	497
Western Australia to Southern Tasmania	89	58	1,365	492	73	2	1	25	2	1	74
Northern Territory to Southern Tasmania	-	-	-	-	-	-	-	-	-	-	-
Subtotal	5,340	1,224	72,247	44,678	2,160	1,289	24	1,632	5,249	205	2,365
Grand Total	50,667	85,912	1,370,711	1,031,169	109,717	56,109	25,160	395,332	368,245	36,583	146,300

Source: SKM, from CentreLink data



4.3.3 Onforwarding – southern Tasmania and non Victorian locations

These analyses examine onforwarding beyond the sea journey between northern Tasmania and Melbourne, considering overall northbound / southbound and whether the onforwarding is in Tasmania, on the mainland or both. It is based on the TFES claims database 2006-07. There are views (including that expressed by the Productivity Commission 2007) that there may be distortions resulting from claimant information being submitted to maximise TFES claim revenue, and not reflecting actual shipping patterns.

We asked shipping lines servicing the trade to review this table and comment on its accuracy. Consensus was that the table aligned with their understanding of onforwarding arrangements. It appears most unlikely that any substantial quantities of containers are onforwarded on international vessels under SVP or CVPs, as these permits were most unlikely to be issued between Tasmania and Melbourne, as the basis for issuing these permits is that Australian flagged vessels are unavailable to undertake the task. There are some claims for freight which goes direct between Tasmania and Fremantle, Sydney under CVP / SVP arrangements, but data limitations prevent further analysis.

■ Table 12 Tonnage and cubic metres by routes 2006/07 – based on TFES claims

Destination	t	m ³	% of north bound t	% of north bound m ³	% of total freight t	% of total freight m ³
North Bound Freight						
Direct Northern Tasmania to Victoria (not onforwarded either end)	928,039	666,653	76.5%	62.4%	52.6%	47.6%
Southern Tasmania to Victoria (Onforwarded Tasmania only)	27,404	87,353	2.3%	8.2%	1.55%	6.2%
Northern Tasmania to Interstate (Onforwarded mainland only)	225,848	211,141	18.6%	19.8%	12.79%	15.1%
Southern Tasmania to Interstate (Onforwarded both ends)	31,614	102,741	2.6%	9.6%	1.8%	7.3%
Subtotal North Bound	1,212,905	1,067,888	100.0%	100.0%	68.7%	76.3%
	t	m ³	% of south bound t	% of south bound m ³	% of total freight t	% of total freight m ³
South Bound freight						
Direct Victoria to Northern Tasmania (not onforwarded either end)	452,524	261,478	81.8%	78.9%	25.6%	18.8%
Victoria to Southern Tasmania (Onforwarded Tasmania only)	21,401	37,579	3.9%	11.3%	1.2%	2.7%
Interstate to Northern Tasmania (Onforwarded mainland only)	26,735	20,122	4.8%	6.1%	1.5%	1.4%
Interstate to Southern Tasmania (Onforwarded both ends)	52,478	12,348	9.5%	3.7%	3.0%	0.9%
Subtotal South Bound	553,139	331,527	100.0%	100.0%	31.3%	23.7%
Total	1,766,043	1,399,415			100.00%	100.00%

Source: SKM, from CentreLink data



Table 12 shows that the vast bulk of TFES freight is claimed on the basis of movements between northern Tasmania and Victoria, and that onforwarding within Tasmania is limited to less than 3% of tonnes. Around 15% of tonnes were onforwarded on the mainland, or was shipped direct from Tasmania to other ports (more for northbound than southbound) and about 4% were onforwarded both ends.

4.4 2006 – 07 commodity flows

This section examines recorded commodities for which assistance under the TFES was claimed, and results are summarised in Table 13 and Table 14. Our view is that these analyses of this data are at best of limited reliability and usefulness, as discussed below. In particular, there were so many records missing one or more of volume, tonnes and product descriptions that meaningful conclusions were almost impossible.

■ Table 13 Top 20 commodities handled by weight 2006/07 – north bound

Commodity description	Tonnes in Fin Yr 2006/07	% of North bound freight	Cubic Metres in Fin Yr 2006/07	% of North bound freight
Newsprint	282,183	23.27%	28,247	2.33%
Vegetables and vegetable products / Frozen	236,523	19.50%	5,537	0.46%
Paper and Paper Products / Paper	175,952	14.51%	16,971	1.40%
Beverages / Cartons	70,063	5.78%	40,633	3.35%
Confectionery & Chocolate Products / Other	61,242	5.05%	133,231	10.98%
Vegetables and vegetable products / Fresh	58,076	4.79%	36,475	3.01%
Metals and Metal products / Metal waste and scrap	41,476	3.42%	47,751	3.94%
Timber	34,319	2.83%	184,833	15.24%
Cheese	24,565	2.03%	25,388	2.09%
Aluminium Powder Metal & Paste	22,680	1.87%	505	0.04%
Milk and Milk products / Milk, Dried, Condensed and UHT	21,835	1.80%	31,517	2.60%
Wood & Cork Products	20,356	1.68%	130,350	10.75%
Fish and Fish products / Fresh	19,438	1.60%	71,422	5.89%
Paper and Paper Products / Waste paper	18,907	1.56%	-	0.00%
Particle Board	13,743	1.13%	-	0.00%
Milk and Milk products / Milk powders, Concentrates and Preparations	11,035	0.91%	11,232	0.93%
Recycled Glass	9,483	0.78%	-	0.00%
Beverages / Beer	8,939	0.74%	1,634	0.13%
Machinery and Transport Equipment	6,980	0.58%	73,046	6.02%
Milk and Milk products / Butter	6,683	0.55%	4,200	0.35%
Other products	68,427	5.64%	519,572	48.65%
Total	1,212,905	100.00%	1,067,888	100.00%

Source: SKM, from CentreLink data



■ **Table 14 Top 20 commodities handled by weight 2006/07 – south bound**

Commodity description	Tonnes in Fin Yr 2006/07	% of South bound freight	Cubic Metres in Fin Yr 2006/07	% of South bound freight
M & M Raw Materials / All Other Goods (1)	238,783	19.69%	287,509	23.70%
M & M Raw Materials / High Density Goods	134,583	11.10%	11,131	0.92%
Fodder (Excluding Wheat)	61,118	5.04%	2,504	0.21%
Fishing - All Other Goods	50,052	4.13%	10,607	0.87%
Wheat	31,735	2.62%	1,355	0.11%
Grains (FCL) / Wheat	21,042	1.73%	5,144	0.42%
Grains (FCL) / Barley	4,052	0.33%	660	0.05%
Grains (FCL) / Other/Mixed (3,323	0.27%	645	0.05%
Fertilisers	2,634	0.22%	207	0.02%
Bakery / All Other Goods	1,808	0.15%	531	0.04%
M & M Equipment / High Density Goods	737	0.06%	128	0.01%
P Scheme Veterinary Supplies, High Density	612	0.05%	-	0.00%
Fertilisers, Organic	562	0.05%	557	0.05%
P Scheme Veterinary Supplies	336	0.03%	28	0.00%
Grains (FCL) / Lupins	319	0.03%	132	0.01%
P Scheme Packaging Material	294	0.02%	4,694	0.39%
Grains (FCL) / Oats	225	0.02%	33	0.00%
Bakery / High Density Goods	180	0.01%	-	0.00%
M & M Equipment / All Other Goods	174	0.01%	162	0.01%
Other Agricultural Machinery and Equipment	117	0.01%	1,595	0.13%
Other products	452	0.08%	320,294	96.61%
Total	553,139	100.00%	331,527	100.00%

(1) M&M = manufacturing and materials

Source: SKM, from CentreLink data

Data collected and available from CentreLink was limited, and prevented some analyses which may have been useful. The following issues are the most important:

- Incomplete data. Some records included container numbers, tonnes and m³, where others only record one or two of these items.
- There is no means of easily separating non containerised goods, or goods on or in non standard container types
- Formatting of data is not conducive for easy analysis. Some records are entered as text or alien formats requiring manual adjustment or re-entry.
- Given the large data files, manipulation is slow and tedious, however this is difficult to avoid given the multiple likely uses of the raw data

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- Data records are incomplete, at times inaccurate and at times recorded data is conflicting. Not all fields are recorded for each transaction, and at times anomalies such as recorded tonnes but zero containers, pallets and livestock (ie no goods).

As a minimum, we suggest that the following should be recorded for all TFES claims:

- **Date of shipment**
- **Consignor name and contact person**
- **Consignee**
- **Wharf / port at which ship loaded**
- **Wharf / port at which ship unloaded**
- **Shipping line**
- **Form of freight (eg containerised, truck trailer, other as specified)**
- **Container number/s or trailer registration numbers – essential to group LCL shipments in same container**
- **Container or trailer type code (covers size, dry / reefer, open top, hi cube, tautliner, pantechnicon, flat top trailers etc)**
- **Container / trailer gross mass**
- **Gross volume of container (m³)**
- **Livestock animal type and head count**
- **Freight paid (\$) wharf to wharf**
- **Commodity code (selected from approved commodity code listing).**

The following are lower priority information items which could be collected if possible:

- Despatch address
- Delivery address
- Other charges on invoice
- Name and contact person at freight forwarder, cargo agent or any other party involved in organising freighting and lodging TFES claim.

Incomplete claims should be rejected.

4.5 Tasmanian Wheat Freight Scheme

The Tasmanian Wheat Freight Scheme applies to bulk wheat shipped to Tasmania. It is the only bulk product subsidised. The current version (with some minor adjustments) has been in place since 1989. It was abolished in 2004 when containerised wheat was made eligible under TFES, but was quickly reinstated. It is capped at \$1.05 m, and paid at a flat rate per tonne up to \$20.65, or the shipper's total wharf to wharf cost, whichever is lesser. Claims for around 50,850 tonnes will result in the full \$20.65 per tonne; if more is shipped, the subsidy rate per tonne reduces. Claims under the scheme are shown in Table 15. There were no claims under TWFS in 2005-06, and more wheat claimed under TFES than TWFS in 2006-07.

It has been reported that this was due to shipping wheat in containers being cheaper after TFES rebate than shipment in bulk, despite a lower bulk shipping rate. The containerised reimbursement rates and % of cost of shipment combine to give extremely high implied freight rates. This could be influenced by a substantial number of TFES wheat claims being for DD, WD and DW, and on routes other than Melbourne – northern Tasmania. The raw freight rates in the TFES database includes non wharf to wharf components, and do not adjust for longer distances in routes other than Melbourne – northern Tasmania.

■ **Table 15 Tasmanian wheat shipments: TFES and TWFS usage and claim**

	2004-05 (Date shipped ⁽¹⁾)	2005-06 (Date shipped ⁽¹⁾)	2006-07 (Date shipped ⁽¹⁾)
Containerised wheat			
Total containerised freight cost ⁽²⁾	\$1,981,046	\$4,133,004	\$3,969,381
Total (net) subsidy paid	\$ 957,205	\$2,069,825	\$1,1697,204
TEUs	1,433	2,842	2,210
Tonnes	34,813	69,780	52,777
Subsidy			
Average per TEU	\$668	\$728	\$768
Average per tonne	\$27.50	\$29.66	\$32.16
As % of cost of shipment	48%	50%	43%
Freight rates ⁽²⁾			
Average per 20' container, 24t	\$1,366	\$1,422	\$1,805
Average per tonne	\$56.91	\$59.23	\$75.21
Bulk wheat			
Total bulk wheat freight cost	\$1,050,516	\$0	\$1,303,621
Total (net) subsidy paid	\$566,482	\$0	\$652,581

	2004-05 (Date shipped ⁽¹⁾)	2005-06 (Date shipped ⁽¹⁾)	2006-07 (Date shipped ⁽¹⁾)
Tonnes	27,433	0	31,002
Subsidy			
Average per tonne	\$20.65	\$0	\$20.65
As % of cost of shipment	54%	Na	50%
Freight rates ⁽²⁾			
Average per tonne	\$38.24	\$0	\$41.30

(1) TFES database is reported on a “Date paid” basis, based on claim date, which can be up to two years after shipment. This analysis has been adjusted to “Date shipped” to eliminate any possible distortions from this.

(2) Freight cost includes door to door, wharf to door and door to wharf claims. They come from various mainland ports, and have not been scaled to a Melbourne – northern Tasmanian equivalent.

Source: BITRE



5. Tasmanian freight schemes

5.1 Background

Tasmania's position as a relatively small island state with a population of just under 500,000 has prompted long standing debate about the extent and form of assistance governments should provide.

TFES was established in 1976 to provide assistance to Tasmanian producers in shipping island production to the mainland, and on a limited range of production inputs, particularly in manufacturing, mining, agriculture, forestry and fishing. Consumer goods, imports, goods intended for export, bulk commodities and backhauling of some empty containers are not eligible. Expenditure was \$92.3 million in 2005-06 and \$89.6 million in 2006-07.³ Accrued liability is generally greater, as claimants can claim for two years from shipment date.

TWFS was re-established in 2004 replacing a number of previous schemes. It was originally established in 1989 to provide assistance to bulk shippers of wheat to Tasmania. It provides a subsidy of the lower of \$20.65 per tonne, or the actual cost incurred, but is capped at \$1.05 m per annum. This means that about 50,000 tonnes per annum would be eligible for subsidy at the maximum rate. Total expenditure on the wheat freight scheme in 2006-07 was \$0.6 million. This is in addition to \$1.7 million claimed for containerised wheat under the TFES. It has been announced that the cap is to be removed, but timing for this has yet to be announced.

5.2 Recent history

There have been a number of reviews and adjustments to the Tasmanian freight schemes, including, in recent times:

- 1976: The TFES was established using the concept of sea freight cost disadvantage as proposed in the Nimmo Report.
- 1985: The Inter-State Commission reviewed TFES arrangements, and the present structure is essentially as proposed by the ISC
- June 1998: Review of TFES Rates of Assistance (Tasmanian Freight Equalisation Scheme) – undertaken by the Tasmanian Freight Equalisation Scheme Review Authority, but generally referred to as the Nixon Review. The report from this study referred to earlier reviews, such as that by the Inter-State Commission (1985), but these have not been considered here as the Nixon review provides the current base which supplanted earlier schemes.

³ DOTARS 2006-07 Annual Report.



- Review of parameters in 1998-99, 1999-2000, 2000-01, 2001-02, 2002-03 and 2005-06, none of which were applied⁴, resulting in the 1996-97 values proposed by the Nixon review continuing to be applied.
- December 2006: Tasmanian Freight Subsidy Arrangements (Productivity Commission, Report 39).

The federal government's response to the Productivity Commission Report 39 accepted most of the recommendations in full, and all of the others in part. The extension of TFES to include eligible goods travelling between the Tasmanian mainland and King Island and Flinders Island was announced by both Liberal and Labor parties prior to the 2007 federal election.⁵

The present project is part of the governmental process to implement the changes outlined in the government's response.

5.3 Tasmanian Freight Equalisation Scheme Review Authority (the Nixon review), 1998

Although this review occurred nearly 10 years ago, and there have been six reviews of adjustment parameters since, the structures proposed by Tasmanian Freight Equalisation Scheme Review Authority are still in use, as are the values proposed for major parameters such as intermodal costs, road freight equivalents and door to door adjustments.

It appears that this review struck a significant measure of success in trying to reconcile the vast array of different Tasmanian freighting tasks which could justify assistance with the need to establish a simple yet structured system able to withstand claims of bias and unfairness. While history reveals a number of unintended consequences, the fact that 10 years later virtually all the structure and most of the detail is still in use is an impressive achievement.

The Nixon Review defined the wharf to wharf cost to include both wharfage and stevedoring costs, with a residual (undefined) intermodal cost.

As the Tasmanian Freight Equalisation Scheme Review Authority review proposals are still in use and were the subject of the Productivity Commission's 2006 inquiry, they are not further discussed here.

⁴ DOTARS submission to the PC stated that adjustments to the parameters "would have been expected to redistribute assistance among recipients, while their impact on overall programme expenditure would have been minor."

⁵ See, for example the ABC's news report <http://www.abc.net.au/news/stories/2007/10/28/2072465.htm>



5.4 The Productivity Commission Inquiry Report 39

The Productivity Commission reviewed the TFES and TWFS in 2006 – 07. Its Final Report, released on 24 May 2007, was stated as focussing on ways to improve the efficiency and effectiveness of current arrangements, given that they were to remain, but be reviewed.

This reflected the Prime Minister’s statement of 7 September 2006 announcing that the government would not phase out the TFES nor abolish the TWFS, as they were important programs in equalising cost disadvantages between states and territories. The government’s intention to continue to review the Tasmanian freight arrangements to ensure that they were operating as intended, and for the benefit of all Tasmanians.

5.5 Productivity Commission recommendations and Commonwealth government response

The Commonwealth government’s response to the Productivity Commission’s Final Report indicated the intention to implement the substantive recommendations. This intention was expressed:

“Key changes to be implemented as a result of these decisions are:

- (a) restructuring the basis for claiming TFES assistance to minimise the adverse incentives the current TFES generates. This will involve ensuring that, as far as is practicable, assistance is paid on the basis of the demonstrated sea freight cost disadvantage as a result of having to ship goods across Bass Strait;
- (b) enhancing the administration and auditing of the TFES, involving updating and enhancing systems and more comprehensive public reporting of information;
- (c) revising the methodology for setting and updating the parameters used to calculate TFES assistance;
- (d) expanding the TWFS to include all bulk and containerised unprocessed wheat shipments, and for eligible shipments to be paid at the same rate and not be subject to the current cap on TWFS payments; and
- (e) unprocessed wheat will no longer be eligible under the TFES.”

This report is part of implementing key change (c) above.



6. Issues and opportunities with Tasmanian freight assistance programs

This section discusses the issues, challenges and problems with the current Tasmanian freight assistance programs, as identified by the Productivity Commission, others with whom discussions were held during the course of this project.

6.1 Cost disadvantage

The basis for Tasmanian freight schemes is to reduce the cost disadvantage faced by Tasmanian producers from higher sea freight costs between northern Tasmanian ports and Victorian ports, compared with costs that would apply if these goods could be moved by road.

We support this basis for definition of cost disadvantage, and believe that assistance should be tied to these issues. We contend that calculations should be based on verified wharf to wharf costs only, which in practice also include intermodal costs.

The higher costs come from a number of areas:

- Higher sea freight costs than apply for road or rail for journeys of around 420 km.
- The requirement for intermodal transfers between transport modes
- The need for provision of specific equipment, such as sea freight containers
- Lower efficiency levels involved in moving some containerised goods. This can stem from the fact that containers often carry less goods than “equivalent” truck loads, due to:
 - Smaller cubic capacity
 - The tare weight of the container reducing available payload for goods.

Work assessing freight transport costs consistently shows that sea freight rates are more expensive over shorter journeys than road – sea has much higher fixed costs, offset by lower variable costs as distances and tonnages per shipment increase. The trade off point between sea and road is typically assessed at between 1,500 and 3,000 km, but varies according to whether freight is in bulk or containerised, and the size of shipments, as well as market issues affecting sea freight rates at any given time. Rail transport also has higher fixed costs than road, although lower than sea. The trade off point between rail and sea is typically between 3,000 and 5,000 km, but factors such as transit times and sailing frequencies can have a substantial influence. The trade off point between road and rail is around 1,000 km for containerised freight movements in Australia, clearly reflected in road / rail market share on various corridors.



An alternative basis for cost assessment would be from stevedore gate to stevedore gate, incorporating the intermodal activities performed at these terminals. We find this less attractive, for two main reasons:

- There is a wide range of different levels of activities performed at stevedore terminals, from simple container transfer and storage through to road assembly, container packing and unpacking, palletising and depalletising goods, customer order picking etc.
- This basis for cost assessment would encourage inclusion of other activities not strictly associated with sea freight cost disadvantage, through transferring the location of such activities to stevedore terminals.

Existing arrangements which permit shippers to claim in various ways provide greater opportunity for maximising claims and add to system complexity for claimants and administrators. Requiring identification of wharf to wharf costs from original documentation should be the basis of claims.

We agree with proposals to remove door to door, wharf to door and door to wharf based claims and allowances.

In order to implement this, total door to door invoices without the specific itemisation of the wharf to wharf component should be rejected. A routine review of the unit rates for other transport and logistics services will be required, to identify for prosecution any attempts to artificially inflate wharf to wharf costs by reducing other costs.

In our view, claims that such invoices will be difficult to produce for consignors sending (and being invoiced for) freight on a total door to door cost has little basis. There are many examples of changes to government financial regulations rapidly being accommodated – Tax Invoices and Receipts, Franked and Unfranked dividends, Franking credits are some recent examples. These requirements could readily be met with little difficulty by modern billing and accounting systems.

6.2 Scaling factors

The Nixon review incorporated scaling factors which are used to adjust TFES payments where freight movements incorporate onforwarding to or from northern Tasmanian and or Victorian ports (Nixon, Appendix a p 10), Productivity Commission, p 67) and the claimant submitted a door to door invoice.

The proposal to require all claims to identify wharf to wharf costs between Melbourne and northern Tasmania as the only basis for TFES claim will mean that the scaling factors for onforwarding in Tasmania and or on the mainland will not be required. The focus will be simply on the sea journey between northern Tasmania and Victoria. This will enable



substantial simplification of the system for claimants and administrators. It will also improve transparency, as the system will be easier to understand.

6.3 Road equivalent costs (Part 1)

It has been widely accepted that the costs involved in assessing the disadvantage for every different type of Bass Strait shipping movement would greatly exceed the benefits in doing so. Thus, the notion of a single Road Freight Equivalent Cost has been used for comparison and calculation purposes.

It is apparent that there is no universal road equivalent cost for all journeys of any given distance, even for a standard load. Substantial differences arise from the size and type of vehicle used, the extent to which it is fully loaded on both forward and return journeys, as well as the requirement for inputs such as refrigeration or looking after livestock. For example, when fully loaded on forward and return journeys, semi trailers rates are typically around 14 cents per net tonne.kilometre, compared with 10 – 11 for b-double loads, 9 for double road trains and 8 for triple road trains.

It is our conclusion that Road Freight Equivalent Costs for TFES purposes should be based on b-double truck movements, since these are the predominant vehicle type for large freight movements in Tasmania, Victoria and indeed most of the east coast of Australia as far north as Mackay.

Thus we suggest that the equivalent road cost should be set at 10.5 cents per ntk, or \$44.10 per tonne for the agreed average 420 km water journey. More information on the SKM b-double truck cost model is in Appendix C. This model uses aspects of both bottom up calculation of costs (giving around 7.2 c / ntk), and top down calculations from known rates charged in the market place (averaging 10.5 c / ntk). The difference between these two figures comes from non fully productive truck time, such as empty running, less than full running, cancelled jobs leading to idle time, queuing and similar time not able to be recovered through demurrage, etc. This shows that these components of less than fully efficient operation are around 30%, consistent with typical industry experience.

This applies for goods loaded up to 13 tonnes gross per TEU (ie net payload of around 11 – 11.5 tonnes) permitting three TEU / b-double. Issues for heavier containers are discussed in section 6.4.

Costs per TEU for a 420 km journey are impacted by the weight of both the payload and the container itself. Taking standard 20' boxes, possible values include:

- \$110.25 for an empty box of 2.5 tonnes (empty boxes are not eligible for subsidy under TFES)
- \$507.15 for the net weight of 11.5 t / TEU



- \$558 for the net weight of 11.5 t / TEU, including a surcharge of 10% for the greater costs of temperature controlled freight
- \$573.30 for a “road limit equivalent” gross mass of 13 tonnes – giving 39 tonnes / 3 TEU, the road mass payload limit for modern low tare b-doubles (although note that this implies container payloads of 11.5 tonnes after the tare weight of the container)
- \$653 for a typical full northbound 20’ produce type container of 14.8 tonnes gross weight (13.3 tonnes of payload plus 1.5 tonnes for the container tare weight).
- \$926 for the typical full southbound 20’ container of 21 tonnes (19.5 tonnes payload plus 1.5 tonnes for the container)
- \$714 for the average of all TFES eligible north and southbound boxes (listed in the two points immediately above)
- \$1,146.60 for a 20’ container at road limits of 26 tonnes.

Extension of this discussion to 40’ boxes would further increase the complexity. The analysis has not been extended to 40’ containers as most Tasmanian sea freight is despatched in 20’ boxes or on semitrailer trailers.

A number of approaches could be considered, including:

- A single value, based on average TEU mass
- Separate values for north and southbound containers, based on the different average weights in each direction (as shown in Table 6).

Ideally, a single value (in the interests of overall scheme simplicity) would be desirable.

The average for all TFES eligible containers is 16.2 tonnes gross per TEU, which would give a Road Freight Equivalent cost of \$714. However, this has the disadvantage of underestimating southbound container equivalent costs, while overestimating northbound costs. An alternative would be for the value per TEU to be based on averages for north and southbound movements separately. This would give \$653 for the average TFES eligible northbound 20’ container of 14.8 tonnes gross weight (13.3 tonnes of payload plus 1.5 tonnes for the container tare weight), and \$926 for the average TFES eligible southbound 20’ container of 21 tonnes (19.5 tonnes payload plus 1.5 tonnes for the container).

There is a close interaction of these issues with the treatment of “Heavy Freight”, which has always been a feature of the TFES, recognising that sea freight disadvantage is less for heavy containers, as they are more expensive than lighter boxes to move by road and rail, but generally have the same sea freight rate.



Possible treatment of heavy freight issues is considered next, before our conclusions of road freight equivalents.

6.4 Heavy freight

TFES assistance has always identified “heavy freight” for lower levels of assistance on the basis that road haulage of such freight is more expensive, whereas sea freight is typically charged on a volumetric basis (eg Tasmanian Freight Equalisation Scheme Review Authority, 1998 p 21; Productivity Commission, 2006 p 75). Heavy freight is defined as that with stowage factors less than $1.1 \text{ m}^3 / \text{tonnes}$. This definition must have come from Nimmo (1976) or ISC (1985) as Nixon (1998) recommended it be retained (p 25). Thus, the TFES applies a discount of 40% to assistance paid for heavy cargoes.

The basic issue in this is that a typical b-double can carry three TEU, but is limited to about 39 tonnes per truck. The maximum gross weight per 20’ container for sea loading is typically 24 tonnes, meaning that one b-double can only carry two TEUs exceeding 13 tonnes gross each, not three. Road trucks with empty slots are very commonly seen near container ports (see Figure 13), with this being the most common explanation.

Road rates for fully loaded b-doubles are currently around 10.5 cents / ntk, giving a kilometre rate of \$4.095. The worst case scenario would be containers just exceeding the 13 tonnes cut off for three containers per b-double: 14 tonnes boxes where only two can be carried per truck. This gives an equivalent rate of $\$4.095 / 28 \text{ tonnes} = 14.6 \text{ cents / ntk}$, or 43% more. The Productivity Commission quotes one example of heavy freight (Circular Head Dolomite) which suggested a 30% discount may be more appropriate.

■ Figure 13 Two TEUs per b-double with empty slot



CRT / Patrick b-double at Port Melbourne (S Manders)



Standard twenty foot containers have volumes of around 30 m³, giving a stowage density of 2.6 m³ / tonnes for a 13 tonnes gross box (30 m³ / (11.5 tonnes payload). The loaded box will have a cargo density of 2.3 m³ / tonnes (30 m³ / 13 tonnes gross). Thus, to meet road loading standards of 3 TEU / b-double, cargo density within containers must be greater than 2.6 m³ / tonnes, resulting in boxes with stowage density of 2.3 m³ / tonnes or more. This suggests that the criterion for heavy cargo should be substantially higher than the existing 1.1 m³ / tonne. The 2.6 m³ / tonnes aligns well with road freight “cubic conversion”, which is applied to very light cargoes⁶.

TFES data shows average gross masses per TEU of 14.8 tonnes for northbound and 21.0 tonnes for southbound movements, with 16.2 tonnes overall. The average mass for boxes exceeding 13 tonnes gross has been calculated from the TFES database, and results are summarised in Table 16. The average net masses for containers have been assessed in the following groups, based on the number of containers able to be legally carried by various truck types used for wharf cartage:

Group	Average of all containers
■ Less than 11.5 t	7.9 t
■ 11.5 t – 18 t	14.0 t
■ Heavier than 18 t	24.1 t
■ All	13.8 t

Only two not three containers can be carried per b-double where containers are more than 13 tonne gross. The disadvantage for containers over 13 t gross (11.5 t net) is calculated at 23% (excluding the container tare) compared with boxes less than 13 t gross. For very heavy boxes (over 18 tonne gross) where only one can be carried per b-double, the disadvantage would be 60% less (excluding the container tare) for containers exceeding 19.5 t gross. However, in practice, such containers would normally be carried on semitrailers, which with typical costs of around 14 c / ntk, the disadvantage is 33%.

⁶ Road freight is typically charged as \$ per tonne for the journey, but very light goods stowing at more than 3 or 4 m³ / tonnes are charged as if they stowed at 3 or 4 m³ / tonnes, reflecting the fact that a truck when physically full cannot carry more, even if it is well below its gross carrying capacity. The art of successful freight forwarding is blending cargoes to ensure that vehicles are both physically full and at their mass limits when despatched. This maximises revenue from both tonnes carried but also cubic conversion. It is possible to charge for more than say the 25 tonnes on a trailer from tonnes carried plus cubic conversion of very light freight.



■ **Table 16 TFES container weight and disadvantage assessment – high density freight**

	<i>Road freight equivalent reference</i>	<i>Container weight between 11.5 and 18 tonnes</i>	<i>Container weight greater than 18 tonnes</i>
Average net weight (tonnes per TEU)	11.5	14.0	21.6
Average gross weight (tonnes per TEU) ¹	13	15.5	23.1
Maximum number containers on a B double	3	2	1
Net freight on a B double (tonnes)	34.5	28.1	21.6
Gross freight on a B double (tonnes) ²	39	31.1	23.1
Rate per net tonne kilometre (\$)	50	61	80
Disadvantage over RFE reference (net)	na	23%	60%
Rate per Gross tonne kilometre (\$)	44	55	75
Disadvantage RFE reference (gross)	na	25%	69%

1. Assumes container tare of 1.5 tonnes.
2. Maximum B double gross weight is 39 tonnes.
3. Road freight costs calculated by multiplying the SKM B double rate (10.5 cents per net tonne kilometer) by the tonnes of freight carried by the distance across Bass Strait (420 kilometers for the purposes of the TFES).

Source BITRE; SKM freight rates for b-doubles

It is suggested that these average container mass values should be confirmed against more comprehensive and reliable container weight data expected to be collected through the Centrelink TFES data collection process in the future.

We agree that heavy freight should receive a lower TFES rate of assistance, based on the actual sea freight disadvantage concept. The sea freight disadvantage is lower for heavy freight, because road rates are largely tonnage based.

We suggest that the discount for heavy freight should be 23%, based on the analysis in Table 16. While a greater discount (up to 60%) could be applied for very heavy boxes exceeding 18 t, where only one TEU can be carried per truck, the TFES records relatively few very heavy boxes, and we feel that the additional complication is not justified.

This approach adjusts for the lower disadvantage for boxes heavier than 13 tonnes. Accordingly, there is no strong case for a further adjustment of assistance rates for heavier freight.



6.5 Road equivalent costs (Part 2)

Returning to the discussion of what the road equivalent cost should be based upon, the main options were:

- Single rate, based on average of northbound and southbound (but this overcompensates northbound at the expense of southbound movements)
- Separate rates for north and southbound (however this effectively double counts the reduction in assistance for heavier boxes southbound, as well as being more complicated).

Our conclusion, based on the treatment of heavy containers and the problems of both approaches above, is that there should be a single road freight equivalent rate, based on boxes of 11.5 tonnes net, applying for both north and southbound containers. This makes the Road Freight Equivalent Rate \$507.

6.6 Intermodal cost adjustment

The current arrangements include a fixed intermodal cost adjustment of \$100 per TEU which is added to the notional wharf to wharf cost in order to establish the total cost disadvantage, with \$100 being intended to approximate intermodal costs of using shipping. This allowance has not been changed since the 1998 Tasmanian Freight Equalisation Scheme Review Authority report, when it was recommended that this rate be reviewed using the transport storage component of the consumer price index. However, that recommendation has not been implemented, due mostly to concerns about accuracy of the estimates. Our views on the components and typical costs directly associated with the sea journey are:

▪ Container lifts, Tasmania (truck-terminal, terminal-ship)	\$50.00
▪ Terminal storage (1 day Tasmania)	\$15.00
▪ Container lifts, Melbourne (ship-terminal, terminal-truck)	\$30.00
▪ Terminal storage (1 day Melbourne)	\$35.00
▪ Container hire (4 days)	\$20.00
▪ Container cleaning and admin	\$10.00
▪ Total	\$160.00

However, in practice these costs are included in all up TEU rates, and are not itemised.

There have been suggestions that other costs should also be included, such as the “presently undisclosed costs incurred in getting freight “through the wharf gates” and “on the wharf apron” (Tasmanian Freight Equalisation Scheme Review Authority Review, p 7), greater risk in sea freight and a requirement for higher inventory holdings. These vary widely between commodities and



circumstances, are harder to identify and measure with precision and in most cases are relatively small. For these reasons, we are not convinced that they should be included above.

However, there may be some justification to consider other costs which are incurred because of the requirement for a sea journey, but are not included in the total sea freight rate. These may include costs in preparing goods for sea freight (such as specialised packaging, loading and unloading containers, which is more expensive and labour intensive than loading pallets on tautliner trucks) slower journey times and lower reliability, which may create a need for greater inventory holdings, etc. They are likely to be incurred before the goods are sent to the wharf, and after they are received from the wharf at the other end⁷. SKM does not have any firm data on these costs (which are likely to vary significantly by commodity and shipment sizes). However, it is understood that these issues are being investigated through other consultations.

While there are many other charges that port authorities and others levy on ship owners and stevedores, in practical terms these are incorporated into sea freight rates per TEU or per tonne. This includes the following:

- Wharfage
- Pilotage
- Bunkering (fuel)
- Navigation charges
- Port services charges
- Water
- Sewerage disposal.

In practice, the charges for these services and activities are nearly always included in a single all up charge for door to door freighting arrangements, and they are usually included in wharf to wharf based arrangements. The most common exception is insurance, where shippers may have their own insurance, or may take the shipping line's insurance arrangements. Larger shippers are more likely to have their own insurance; smaller shippers are more likely to use the shipping lines insurance.

It is concluded that the sea freight cost disadvantage is really a function of all activities occurring between the receiving stevedore's gates and the despatching stevedore's gates. Hence, we propose that the disadvantage be calculated on the basis of wharf to wharf costs which in practice mostly include these other intermodal costs without itemisation.

⁷ This area of cost was discussed by the PC (pp 31 – 32).



On this basis, we fail to see an ongoing need for a separate intermodal allowance for the readily identified intermodal costs incurred within the stevedores gates, as the functions and associated costs are already included in all up TEU rates. There may be justification for recognition of intermodal costs incurred before the goods are sent to the wharf, and after they are received from the wharf at the destination end. The main alternative approach would be to require itemisation of a true wharf to wharf cost, covering blue water ship operation only, and then itemisation (or estimation) of the other costs. This approach would require many more changes in shipping company systems and invoicing procedures, with few if any real benefits.

Thus we have concluded that the preferred approach is for a single TFES payment based on the difference between sea costs (which already include intermodal costs) and a Road Freight Equivalent cost. In addition, there may be justification for recognition of intermodal costs incurred before the goods are sent to the wharf, and after they are received from the wharf at the destination end.

6.7 Standardised road freight equivalent costs but actual sea freight costs

The TFES arrangements compare actual (and notional) wharf to wharf costs against a standardised road cost equivalent to arrive at estimates of the actual disadvantage. (Although current practice is generally agreed to enable land transport and other logistics costs to be bundled to appear as wharf to wharf costs, changes to eliminate this are discussed above).

This is a long accepted trade off of accuracy against administrative simplicity in schemes of this type. However, we have concern with a scheme that is partly based on a general equivalent, and partly on an attempt to assess the individual shipper's circumstances. The main alternatives are:

- Attempting to calculate more accurate road freight equivalents for each shipment, or possibly in some broader classes.
- Establishing a "sea freight equivalent" to compare with the road freight equivalent, which would result in a fixed payment per TEU.

Our conclusion is that attempting to calculate road freight equivalents for each movement would increase scheme administrative costs for both claimants and scheme administrators, with little benefit overall, which is consistent with the findings of both Nixon 1998 and the Productivity Commission 2006.

The sliding scale structure for payments has break points for differing levels of compensation for sea freight disadvantage is based on the median Nominal Wharf to Wharf (NWW) freight rates. Class 1 is up to 25% of the median; class 2 25 – 50%; class 3 50 – 75%, and class 4 75 – 100%. These provide payments of 100% of the first \$335.50 disadvantage, plus 75% of the disadvantage



from \$335.50 - \$671, plus 50% of the disadvantage from \$671 to \$1,006.50, but no refund for disadvantage exceeding \$1,006.50. These break points are arbitrary, and provide widely varying incentives for shippers to seek the cheapest sea freight rates. For the largest shippers who generally enjoy the lowest freight rates, incentives are very weak, as any negotiated savings are offset by corresponding reductions in TFES payments.

For these reasons, we have concluded that the existing sliding scale for payments with specific break points has substantial disadvantages.

This leads to our conclusion that extension of principles of categories or groupings to road freight equivalent costs has the same difficulties and is not supported.

This leaves the other main alternative – a fixed payment per TEU. This was proposed by the PC as a fall back alternative if recommended changes were not successful in addressing the widespread perception that many claimants were rearranging their transport invoicing to maximise resultant claims. Other than administrative simplicity, the other significant attraction of a fixed payment strategy is that it provides incentives for all shippers to minimise their transport costs, which current arrangements demonstrably do not. Undoubtedly, however, there would be objections from some shippers who currently receive more than the established fixed payment (unless, of course, it was set at the highest level anyone received in compensation).

However, we have concluded that this fixed price approach is to be preferred, for the following reasons:

- **It provides incentives for all shippers to minimise their freight costs**
- **It minimises unintended effects which may encourage sub optimal freighting arrangements to maximise claims**
- **It eliminates aspects of the scheme acknowledged as being arbitrary**
- **It provides substantial administrative simplification, for consignors and scheme administrators.**

If a fixed price rebate is considered too simplistic an approach, an alternative would be to set a minimum floor price (possibly at the calculated median sea freight disadvantage) and then provide incremental payments at a proportion of the additional disadvantage for the given shipping movement, up to a maximum cap. If this approach were adopted, we suggest that:

- The floor price be set at the median sea freight disadvantage
- The increment be calculated at between one third and one half of the additional disadvantage
- The maximum cap, after which no further disadvantage is compensated, is set at twice the median sea freight disadvantage.



Table 17 contains a summary of the advantages and disadvantages of these options.

■ **Table 17 Comparison of reimbursement calculation options**

Option	Advantages	Disadvantages
Flat rate	<ul style="list-style-type: none"> ■ Simple to administer and use ■ Easy to understand; aids transparency ■ Encourages seeking cheapest freight rate at all price points 	<ul style="list-style-type: none"> ■ May overcompensate those with cheapest rates ■ May not compensate those with higher rates sufficiently
Floor, increment and cap	<ul style="list-style-type: none"> ■ Relatively simple to administer and use ■ Relatively easy to understand ■ System would be relatively transparent 	<ul style="list-style-type: none"> ■ Could overcompensate some users paying the cheapest rates
Existing four step increment based on % of median disadvantage	<ul style="list-style-type: none"> ■ Status quo – maintaining existing arrangements minimises risk of upsetting existing claimants ■ Has been in use and accepted for many years 	<ul style="list-style-type: none"> ■ Complex and difficult to understand ■ Break points appear arbitrary ■ Does not encourage those with lower rates to seek the cheapest option

6.8 Setting the sea freight equivalent

TFES calculations have traditionally been based around median sea freight rates, as it was held that using the average would be too low due to the substantial impact of a few very large shippers who enjoy very low rates and account for a high proportion of the Bass Strait freight task (Tasmanian Freight Equalisation Scheme Review Authority, 1998 p 29). However, Tasmanian Freight Equalisation Scheme Review Authority also felt that the median would be adversely impacted by the significant number of very small shippers sending only one to two containers per year at very high rates because it skews the distribution. Tasmanian Freight Equalisation Scheme Review Authority based the calculation on the median value of shippers sending five or more FCL containers annually wharf to wharf, plus door to door shippers after adjustments for non wharf to wharf costs. This would have the effect of lowering the resulting median value compared with one based on the total population of freight rates.

The PC assessed the impact of using median rates with varying inclusion criteria and average freight rates, which showed that the median sea freight rates had displayed much more volatility than most other parameters over time, and noted that use of median rates exacerbates the lack of commercial incentives to minimise freight costs (p 75), but stopped short of recommending change.

BITRE estimates for total claim per TEU and Wharf to Wharf rates from the TFES database are shown in Table 18. The population of door to door shippers was excluded as the door to wharf



parameter adjustment has skewed the distribution of claims. The average for dry and reefer is for all wharf to wharf shippers, rather than Nixon's recommendation of shippers sending more than 5 TEU per annum, as there was only a small number of claims by shippers who shipped less than 5 TEUs on a FCL basis. Further, rates in Table 18 are for FCL movements only, to avoid inclusion of handling costs in combining LCL shipments into a single container, and for routes between northern Tasmania and Victoria, to remove the effects of scaling factors.

■ **Table 18 TFES shipping rate trends, wharf to wharf shippers – 2006-07 \$ per full TEU**

	Median (\$ / TEU)	Weighted Average (\$ / TEU)	Standard deviation (\$ / TEU)
Rate basis	WW	WW	WW
Dry	\$1,160	\$770	\$280
Reefer	\$1,189	\$1,215	\$235
Dry and Reefer	\$1,189	\$890	\$266

Source: BITRE analyses of TFES database

The issue then arises: which of these should be used to set against the Road Freight Equivalent Rate?

The Nixon Review preferred use of median to average, on the basis that averages could be more subject to the impact of a small number of very large shippers whose negotiating and operational practices enable very low rates. It sought to minimise the opposite effect of bias from high rates paid by the very smallest shippers, by basing the calculations only on shippers sending more than five TEU per year.

Examination of the costs shown in Table 18 shows only small differences between the median and average for reefer, and for the median rates for dry and reefer. This is closer to the generally reported minimal difference between dry and reefer rates, whereas the median and average for dry freight shows a difference of \$390, which is not consistent with trends that were reported by both shipping lines and larger shippers. This likely reflects the low rates paid for dry freight by a few very large shippers.

Given that the median has been used for TFES traditionally and the dry / reefer difference seems more realistic, it may be best to stay with median values.

6.9 Sea freight disadvantage

The sea freight disadvantage will be the difference between the Road Freight Equivalent Cost (\$507) and the median dry wharf to wharf cost, as shown in Table 19.



■ **Table 19 Sea freight disadvantage**

	Dry	Reefer	Dry and Reefer
Road Freight Equivalent Rate	\$507	\$558	\$521
Wharf to wharf median sea freight rate	\$1,160	\$1,189	\$1,168
Sea freight disadvantage	\$653	\$631	\$647

If the incentive structure is retained, the new shipper class boundaries for sea freight disadvantage based on the median dry WW sea freight disadvantage would be:

- Class 1: up to 25% (\$0 to \$326.00).
- Class 2: 25-50% (\$326.01 to \$653.00).
- Class 3: 50-75 % (\$653.01 to \$979.50).
- Class 4: 100 % (\$979.51 and above).

This is based on mean notional wharf to wharf cost disadvantage of \$653, the difference between the median dry freight rate for all wharf to wharf shippers and the RFE of \$507.

6.10 Reefer vs dry

Overall, approximately 25.0 % of Tasmanian freight assisted under TFES in 2006-07 was temperature controlled, shipped in refrigerated containers (with 32.3 % of northbound and 1.3 % of southbound). Shipping in refrigerated containers incurs higher costs for the shipping line, from:

- Higher capital cost for the containers (capital cost around \$40,000 / box against \$4,500 for dry containers) which gives annual capital costs for reefers of \$12,000 / year, \$32.90 / day, and \$1,300 / year, \$3.60 per day for dry containers assuming write off of assets over five years.
- Higher maintenance costs – reefers typically \$750 / year vs \$200 for dry
- Electricity costs – stated as around \$40 / day when on mains power and \$50 / day when on ship power
- Reefers also require more management time for temperature checking, recording and reporting.

On this basis, reefer costs should be around \$200.00 higher, for a typical 3 day shipment requirement, with two days on power, one day on mains and one day on ship. Components are:

■ capital	\$87.90
■ maintenance	\$4.50
■ electricity	\$90.00
■ management time allowance	\$25.00
■ Total	\$207.40



Despite this, market information on rates showed little difference between reefer and dry container freight rates – rate differences were minimal for larger shippers, but were likely to be greater for smaller shippers. We conclude that this is due to market forces, and suggests that the higher costs for temperature controlled freight are being cross subsidised by ambient freight.

Road freight does not typically charge more for moving temperature controlled containers, as the containers used have their own refrigeration system powered by an integrated diesel generator. The shipper provides or pays for the generator fuel. Road typically charges a premium of around 10% for chiller and 15% for freezer freight in tautliners and pantechinon bodies, where the transport company bears the fuel cost and reduction in vehicle payload from the weight and space of the refrigeration equipment.

6.11 Goods eligible for TFES

TFES can be claimed on a range of Tasmanian produced goods despatched to the mainland, and a limited range of inputs for production. Given the implicit assumption that TFES is designed to assist Tasmanian industry and protect employment, this may be reasonable.

There have been several comments that the exclusion of reusable packaging, but inclusion of disposable packaging, is difficult to justify, particularly in more environmentally aware times.

We agree with the contention that reusable packaging, such as produce boxes and beer kegs should be included within eligible goods.

6.12 Comparisons of containerised freight and road equivalents

The TFES scheme is based around containerised freight, reflecting the fact that around 80% of non bulk freight across Bass Strait is despatched in this form. Typical characteristics of ISO boxes and road trucks are shown in Table 20.

■ **Table 20 Typical ISO container and road truck characteristics**

	Containers		Road truck equivalents	
	20' (6.1 m)	40' (12.2 m)	Semi trailer	b-double
Length	20' (6.1 m)	40' (12.2 m)	Semi trailer trailer: 44' – 53' (13.4 m – 16.2 m)	A trailer typically 20 – 24' (6.1 – 8 m) plus B trailer: 44' – 53' (13.4 m – 16.2 m)
Cubic capacity	30 – 33 m ³	60 – 66 m ³	80m ³ – 120 m ³	120 m ³ – 180 m ³
Height	8' 0", 8' 6", 9' 0", 9' 6"	8' 0", 8' 6", 9' 0", 9' 6"	Up to 12' (3.6 m) from trailer deck to max legal height of 4.6 m	Up to 12' (3.6 m) from trailer deck to max legal height of 4.6 m
Maximum gross	24 tonnes	30.5 tonnes	45 tonnes (prime	69 tonnes (prime

	Containers		Road truck equivalents	
	20' (6.1 m)	40' (12.2 m)	Semi trailer	b-double
mass			mover + trailer - varies around jurisdictions of Australia)	mover + two trailers - varies around jurisdictions of Australia)
Tare weight	2 – 2.5 tonnes	3.5 – 4 tonnes	19 tonnes (prime mover + trailer)	30 tonnes (prime mover + two trailers)
Carrying capacity	21.5 tonnes	26.5 tonnes	26 tonnes	39 tonnes

6.12.1 B-doubles

The maximum length for b-doubles in most jurisdictions in Australia is 26 m, enabling one b-double to carry three TEUs, as shown in Figure 14. Typical payloads for b-doubles are 36 – 39 tonnes for palletised general freight.

- **Figure 14 Typical b-doubles – three x 20' containers and refrigerated pantechnicon**



One b-double is broadly equivalent to three 20' boxes, particularly if they are more than 8'6" high. However, three TEUs have substantially greater mass carrying capacity (64.5 tonnes against 39 t) but substantially smaller cubic capacity (90 – 99 m³ compared with up to 180 m³ for a b-double). Containers provide substantially more protection to their contents, and are more readily maintained at freezer temperatures (- 40° C) than the most common curtain sided road trucks.

We support retention of TFES being based on a payment per TEU. To accommodate circumstances where transport of fully loaded road trailers is more cost effective from a total logistics perspective, the following conversions are suggested:

- **Standard b-doubles should be regarded as equivalent to 3 TEU**
- **40' – 48' semi trailer trailers should equal 2 TEU**
- **The smaller lead trailers of b-doubles (A trailers) be equivalent to 1 TEU.**



6.12.2 Gross container mass and net freight mass

Nixon's methodology for comparison of Road Freight Equivalents were based on net freight masses, because if there was a Landbridge, freight would be shipped palletised on trucks, and containers would not be used. This approach has been retained here.

6.13 Bass Strait Islands – King Island and Flinders Island

The Tasmanian freight schemes, as federal schemes, have traditionally only applied to interstate trade, excluding intrastate trade such as that between King Island and Flinders Island and the mainland of Tasmania. However, as shown in Table 8 and Table 9, rates between these islands and both Tasmania and Victoria are substantially higher than movements between northern Tasmania and Victoria. Services are generally poorer, with King Island receiving a single weekly service and Flinders Island an on demand service to Bridport and monthly services to Port Albert.

The Rudd Labor government has confirmed pre-election promises to extend the Tasmanian freight schemes to King Island and Flinders Island, which should make an impact on effective shipping costs between these islands and the Tasmanian mainland. (Previous views had been that intrastate trade was a state matter. The Tasmanian government provides support to the operator servicing the Bridport – Flinders Island route).

We suggest that the typical vehicle that would be used between King Island and Flinders Island and the Tasmanian mainland (should a landbridge exist) would be a typical Tasmanian semitrailer, carrying capacity around 23 tonnes with gross mass up to 42.5 tonnes, trailer length around 40 – 44'. Typical rates for such vehicles operating in Tasmania are around 15 cents / ntk, giving road freight equivalent costs of:

- \$ 45.00 / tonne for the 300 km to King Island from Devonport
- \$17.25 / tonne for the 115 km to Flinders Island from Bridport.

Thus, the sea freight disadvantage is estimated as shown in Table 21.

- **Table 21 Sea freight disadvantage between King Island and Flinders Island and Tasmanian mainland**

	King Is – Devonport	Flinders Is - Bridport
Road equivalent cost (\$ / tonne)	\$45.00 / tonne	\$17.25 / tonne
Distance (kilometres)	300	115
Average tonnes / container	15 tonnes	15 tonnes
Road freight equivalent cost / TEU	\$675	\$259
Sea freight cost	\$950	\$1,860
Sea freight cost disadvantage	\$275	\$1,601



6.14 Tasmanian Wheat Freight Scheme

Rail is the preferred mode for land transport of bulk grain. Typical rail rates for grain to various export ports are shown in Table 2. Rates vary according to the length of the haul, the size of the task, the extent of other rail traffic on the line (which shares fixed costs over more tonnes) and the standard and condition of the rail line, which affects efficiency through impacts on train size, axle loading limits, speed of operation etc.

We expect that Asciano's announcement of closure or sale of its rail grain haulage operations in Vic and NSW will see rail rates increase quite substantially, either in improving Asciano's profitability, or by entry of a new player into these businesses. Rates (including access charges) in the order of 7 – 8 cents / ntk seem likely, to remain below road equivalents of 11 – 13 cents / ntk for b-double movements. (Grain road rates are higher than for palletised goods, as there is much more empty running with grain, returning for the next load). The likely rail rate will substantially increase rail revenue, both for operator profitability and track infrastructure investment, which has been below required standards for many years.⁸

We suggest that the most relevant comparisons for a land transport equivalent to the 420 km across Bass Strait are the likely rates we expect for NSW / Vic to Geelong and NSW / Vic to Melbourne, of around 7 cents / ntk including rail access charges. This gives a rail equivalent rate of \$29.40 / tonnes for bulk movements. (Existing rail rates for bulk grain have been around 4.75 cents / ntk, but on very low volumes due to drought, have not provided adequate revenue for infrastructure maintenance nor rail operator profitability).

Typical rail container rates for similar journeys are around 8.5 cents / ntk, or \$33.60 / tonnes, but road tends to be more cost effective than rail for journeys of 420 km, except where very large volumes of heavy containers move between two rail connected terminals.

The position concerning wheat shipments and sea freight cost disadvantage is summarised in Table 22.

⁸ See, for example Victorian Rail Freight Network Review (2007) for a discussion of rail infrastructure condition, and Asciano's Investor Briefing 11 December 2007 for a discussion of rail operator profitability.



■ **Table 22 Sea freight cost disadvantage - wheat**

	Containerised wheat		Bulk
	Compared with rail containers	Compared with bulk rail	
Average shipping rate (2006-07)	\$1,196 / 20' box	\$1,196 / 20' box	na
Average tonnes / TEU	24	24	na
Sea rate			
Equivalent rate / tonne	\$49.82	\$49.82	\$41.30
Rate cents per ntk	11.9	11.9	9.8
Rail rates			
Rate per tonne	\$35.70	\$29.40	\$29.40 / tonne
Rate cents per ntk	8.5	7.0	
Sea freight cost disadvantage	\$14.12	\$20.42	\$11.90

We suggest that wheat reimbursement rates for all wheat shipments should be set at \$11.90 / tonne. This is consistent with the views of the Productivity Commission, which supports the use of a rail comparison, and rates for bulk shipments. (PC, 2006, p 120 – 121).



7. Conclusions and recommendations

This section summarises the conclusions and recommendations which have been reached concerning the Tasmanian freight assistance schemes.

Cost disadvantage

The basis for Tasmanian freight schemes is to reduce the cost disadvantage faced by Tasmanian producers from higher sea freight costs between northern Tasmanian ports and Victorian ports, compared with costs that would apply if these goods could be moved by road (or rail for bulk wheat). Higher costs result from inherent lower efficiency of sea over shorter distances, and costs from meeting requirements for intermodal transfer, and intermodal handling.

We support this basis for definition of cost disadvantage, and believe that assistance should be tied to these issues.

Basis of claims

Existing arrangements which permit shippers to claim in various ways provide greater opportunity for maximising claims and add to system complexity for claimants and administrators. Requiring identification of wharf to wharf costs from original documentation should be the basis of all claims.

We contend that calculations should be based on verified wharf to wharf costs for the sea journey between northern Tasmania and Melbourne. We agree with the PC's recommendation to remove door to door, wharf to door and door to wharf based claims and allowances.

In order to implement this, total door to door invoices without the specific itemisation of the wharf to wharf component between northern Tasmania and Melbourne should be rejected. We see little support for claims that invoices identifying wharf to wharf costs will be difficult to produce for consignors sending (and being invoiced for) goods on a door to door basis. This also applies for small shippers generally use freight forwarders for these requirements, who will understand the requirements and be well placed to meet them.

Scaling factors

The Nixon review incorporated scaling factors which are used to adjust TFES payments where freight movements incorporate onforwarding to or from northern Tasmanian and or Victorian ports and the claimant submits a door to door invoice.

The proposed requirement that all claims identify wharf to wharf costs as the only basis for TFES claim will mean that the scaling factors for onforwarding in Tasmania and or on the mainland will not be required.



Intermodal allowance

In practice, intermodal costs such as container hire, lifts, storage etc are included in all up TEU rates, and are not itemised. It is concluded that the sea freight cost disadvantage is really a function of all activities occurring between the receiving stevedore's gates and the despatching stevedore's gates. Hence, we propose that the disadvantage be calculated on the basis of wharf to wharf costs which in practice mostly include these other intermodal costs without itemisation.

The main alternative approach would be to require itemisation of a true wharf to wharf cost, covering blue water ship operation only, and then itemisation (or estimation) of the other costs. This approach would require many more changes in shipping company systems and invoicing procedures, with few if any real benefits.

Thus we have concluded that the preferred approach is for a single TFES payment based on the difference between sea costs (which already include intermodal costs) and a Road Freight Equivalent cost.

Road equivalent costs (Part 1)

It is generally accepted that the costs involved in assessing the disadvantage for every type of Bass Strait shipping movement would greatly exceed the benefits in doing so. Thus, the notion of a single Road Freight Equivalent cost has been used for comparison and calculation purposes.

It is our conclusion that Road Freight Equivalent Costs for TFES purposes should be based on b-double truck movements, since these are the predominant vehicle type for large freight movements in Tasmania, Victoria and indeed most of the east coast of Australia as far north as Mackay.

Thus we suggest that the equivalent road cost should be set at 10.5 cents per ntk, or \$44.10 per tonne for the agreed average 420 km water journey. This applies up to 13 tonnes gross per TEU (ie net payload of around 11 – 11.5 tonnes) permitting three TEU / b-double. Conclusions for heavier containers are discussed below.

Ideally, a single value (in the interests of overall scheme simplicity) would be desirable.

Heavy freight

TFES assistance has always identified "heavy freight" for lower levels of assistance on the basis that road haulage of such freight is more expensive, whereas sea freight is typically charged on a volumetric basis. The basic issue in this is that a typical b-double can carry three TEU, but is limited to about 39 tonnes per truck. The maximum gross weight per 20' container for sea loading is typically 24 tonnes, meaning that one b-double can only carry two TEUs exceeding 13 tonnes gross each, not three.



We agree that heavy freight should receive a lower TFES rate of assistance. We suggest that the discount for heavy freight should be 23%, based on the analysis in Table 16. While a greater discount (around 33%) could be applied for very heavy boxes exceeding 18 t, where only one TEU can be carried per semitrailer, the TFES records relatively few very heavy boxes, and we feel that the additional complication is not justified. (The disadvantage would be 60% if b-doubles were used, but in practice cheaper and more suitable semitrailers carry these heavy boxes).

This approach adjusts for the lower disadvantage for boxes heavier than 13 tonnes gross (11.5 tonne contents). Accordingly, there is no strong case for a further adjustment of assistance rates for heavier freight.

Road equivalent costs (Part 2)

Our conclusion is that there should be a single road freight equivalent rate, based on the contents (11.5 tonne) of boxes of 13 tonnes gross, applying for both north and southbound containers.

This makes the Road Freight Equivalent Rate \$507.

Standardised road freight equivalent costs but actual sea freight costs

Our conclusion is that attempting to calculate road freight equivalents for each movement would increase scheme administrative costs for both claimants and scheme administrators, with little benefit overall, which is consistent with the findings of Nixon 1998 and the Productivity Commission 2006.

We have concluded that the existing sliding scale for payments with specific break points has substantial disadvantages, leading to our conclusion that extension of principles of categories or groupings to road freight equivalent costs has the same difficulties and is not supported.

We have concluded that a fixed price approach is to be preferred, for the following reasons:

- **It provides incentives for all shippers to minimise their freight costs**
- **It minimises unintended effects which may encourage sub optimal freighting arrangements to maximise claims**
- **It eliminates aspects of the scheme acknowledged as being arbitrary**
- **It provides substantial administrative simplification, for consignors and scheme administrators.**



If a fixed price rebate is considered too simplistic an approach, an alternative would be to set a minimum floor price (possibly at the calculated median sea freight disadvantage) and then provide incremental payments at a proportion of the additional disadvantage for the given shipping movement, up to a maximum cap. If this approach were adopted, we suggest that:

- The floor price be set at the median sea freight disadvantage
- The increment be calculated at between one third and one half of the additional disadvantage
- The maximum cap, after which no further disadvantage is compensated, is set at twice the median sea freight disadvantage.

Table 17 contains a summary of the advantages and disadvantages of these options.

Setting the sea freight equivalent

Our conclusion is that the sea freight equivalent should be based on wharf to wharf rates between northern Tasmania and Melbourne; and see no strong reasons to move from the existing base of median rate paid by all shippers.

Sea freight disadvantage

The sea freight disadvantage will be the difference between the Road Freight Equivalent Cost (\$507) and the median wharf to wharf cost, as shown in Table 23.

■ Table 23 Sea freight disadvantage

	Dry	Reefer	Dry and Reefer
Road Freight Equivalent Rate	\$507	\$558	\$521
Wharf to wharf median sea freight rate	\$1,160	\$1,189	\$1,168
Sea freight disadvantage	\$653	\$631	\$647

Goods eligible for TFES

We agree with the contention that reusable packaging, such as produce boxes and beer kegs should be included within eligible goods.

Basing TFES on containers

We support retention of TFES being based on a payment per TEU. To accommodate circumstances where transport of fully loaded road trailers is more cost effective from a total logistics perspective, the following conversions are suggested:

- standard b-doubles should be regarded as equivalent to 3 TEU
- 40' – 48' semi trailer trailers should equal 2 TEU

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- The smaller lead trailers of b-doubles (A trailers) be equivalent to 1 TEU.

Bass Strait Islands – King Island and Flinders Island

The Tasmanian freight schemes have traditionally only applied to interstate trade. The Rudd Labor government has extended the Tasmanian freight schemes to King Island and Flinders Island. We suggest that Road Freight Equivalents for these movements should be based on a typical Tasmanian semitrailer, carrying capacity around 23 tonnes with gross mass up to 42.5 tonnes, trailer length around 40 – 44, with typical rates around 15 cents / ntk. The sea freight disadvantage is estimated as shown in Table 24.

■ Table 24 Freight disadvantage between Bass Strait islands and Tasmanian mainland

	King Is – Devonport	Flinders Is - Bridport
Road equivalent cost (\$ / tonne)	\$45.00 / tonne	\$17.25 / tonne
Distance (kilometres)	300	115
Average tonnes / container	15 tonnes	15 tonnes
Road equivalent cost / TEU	\$675	\$259
Sea freight cost	\$950	\$1,860
Sea freight cost disadvantage	\$275	\$1,601

Tasmanian Wheat Freight Scheme

We suggest that a rail equivalent freight rate for bulk wheat should be used to calculate sea freight disadvantage. **We suggest that the most relevant comparisons for a land transport equivalent to the 420 km across Bass Strait are the likely rates we expect for NSW / Vic to Geelong and NSW / Vic to Melbourne, of around 7 cents / ntk including rail access charges. This gives a rail equivalent rate of \$29.40 / tonnes for bulk movements.** (Existing rail rates for bulk grain have been around 4.75 cents / ntk, but on very low volumes due to drought, have not provided adequate revenue for infrastructure maintenance nor rail operator profitability).

Typical rail container rates for similar journeys are around 8.5 cents / ntk, or \$33.60 / tonnes, but road tends to be more cost effective than rail for journeys of 420 km, except where very large volumes of heavy containers move between two rail connected terminals. The position concerning wheat shipments and sea freight cost disadvantage is summarised in Table 25.



■ **Table 25 Sea freight disadvantage - wheat**

	Containerised wheat		Bulk
	Compared with rail containers	Compared with bulk rail	
Average shipping rate (2006-07)	\$1,196 / 20' box	\$1,196 / 20' box	na
Average tonnes / TEU	24	24	na
Sea rate			
Equivalent rate / tonne	\$49.82	\$49.82	\$41.30
Rate cents per ntk	11.9	11.9	9.8
Rail rates			
Rate per tonne	\$35.70	\$29.40	\$29.40 / tonne
Rate cents per ntk	8.5	7.0	
Sea freight cost disadvantage	\$14.12	\$20.42	\$11.90

We suggest that wheat reimbursement rates for all wheat shipments should be set at \$11.90 / tonne.



Appendix A Freight rate sources, methodologies and assumptions



A.1 Typical freight rates

The freight rates presented here are designed to show the rates that would typically be paid by a substantial shipper of goods, spending around AUD \$50,000 - \$100,000 per month through transport contracts. Achieved freight rates are very sensitive to bargaining power, and small shippers often pay multiples of the rates paid by the largest consignors. Similarly, large shippers generally have more ability to arrange their affairs to minimise costs through more efficient load consolidation, greater potential for two way loadings and generally better understanding the costs in freighting, and acting to minimise those costs.

The rate information presented is mostly guided by actual rates as negotiated and paid, gained from consultancy tasks where we have assisted shippers with logistics arrangements or transport service providers gain work or respond to tenders. Actual rates paid are usually a little lower than tendered prices, though post tender negotiation processes. Where shadow quotation prices have been used to supplement freight rate database information or investigate anomalies, this has been taken into account. The amount of difference depends on the relative negotiating power of each side, the availability of alternatives (both for transport companies in terms of other freight) and shippers (other transport providers).

There will always be rates paid that are substantially greater and substantially less than typical rates quoted. These can arise for numerous reasons, but are most commonly related to specific requirements of the task, or specific circumstances applying at the time of the negotiation. Backloading rates, which can be less than half of the forward rate (ie opposite direction on the same route), are a common example. These relate to the fact that on many Australian freight routes, there is a lot more freight flowing in one direction than the other.

In all cases, rates quoted are for typical commodities carried in the typical way for the corridor. Some examples include:

- The largest road vehicle capable of doing the job, consistent with the economies of direct origin to destination journeys versus depot to depot journeys in a larger vehicle which require separate pick up and delivery movements.
- Rail freighting in standard domestic or international shipping containers, terminal to terminal, with road pickup and delivery for capital city journey ends, and rail linehaul for country origins and destination movements exceeding around 250 km.
- Sea freighting in standard shipping containers, within loading gauge (ie no goods protruding outside the allowable loading volume dimensions).
- Airfreight with courier pickup and delivery, airport to airport air linehaul for typical parcels and small most commonly sent by air.



Rates quoted are for the most common level of urgency. Most transport services have a “general” service, at which most freight travels. Most also have an express service, usually achieved by fewer transshipments at depots or terminals, priority pickup and delivery, more direct door to door etc. These generally attract a loading of 15% up to 50% or more, but the proportion of goods moving this way is typically less than 15%. At the other end of the scale, some transport services offer a “deferred” or lower priority where despatch of goods can be deferred for up to a specified period (commonly a week) for rates often around 25% less. The hope is that they can fill otherwise unused space at a less popular time. Again relatively little freight is carried this way (perhaps 20%) Although with better planning, it is likely that more could use such services without adverse consequences.

All rates shown are expressed as dollars of the day, without any adjustment for inflation or changes in value of Australian currency.

A.2 Specific assumptions

A.2.1 Road

- All rates are exclusive of GST.
- All rates include an appropriate fuel levy, as quoted by their respective transport providers. The average fuel surcharge at the time of this survey was around 7%, only two thirds of that of 12 months ago.
- All rates are expressed in \$ per tonne and cents per net tonne kilometre.
- Distances for c/ntk equivalent rates use actual distance for that mode – road uses road distance, rail uses rail distances etc.
- Palletised freight assumes vehicle configuration typically used on the route (relevant mix of semitrailer, b-double, double road trains). Tautliner and pantechon trailers.
- Standard road industry transit times for general freight (eg sometime next day for east coast short haul legs). General freight rates (rather than road express) were used for comparison, as this is the road market that most directly competes with rail. There is little differentiation between general and express service levels for the large contracted movements being considered here.
- Contract rates for regular and substantial freight movements.

A.2.2 Rail

- All rates are exclusive of GST.
- All rates include applicable fuel surcharges.
- Intermodal freight (containerised goods and breakbulk freight on container flats).
- Mix of container sizes and weights as typically carried on the route.



- Standard rail industry transit times for general freight (eg. 15 - 24 hours for short haul legs).
- Pricing is based on average net tonnes of 15 tonnes per 20', 19.5t per 40', and 23t per Trailerrail or similar trailer.
- Generally carried on intermodal trains (Superfreighter type services).
- Rates from Perth do not include the \$100 - \$200 per TEU imbalance charge for empty return containers. This will have the effect of slightly increasing from Perth rates (around \$5 - 10 per loaded tonne) in the unusual circumstance where a freight forwarder has more freight from Perth than to Perth.

A.2.3 Sea

Containerised freight

- All rates are exclusive of GST.
- Rates based on total all up cost for the movement from despatch origin to delivery destination (door to door), including road pickup, stevedoring, sea freight, wharfage, pilotage and similar charges.
- Rates include road pickup and delivery, and insurance.
- Rates based on the mix of container sizes and weights typically sent on the route
- Contract rates for regular and substantial freight movements.
- Typical maritime industry transit times for origin destination and route, considering frequency of sailing, sailing time and terminal time.
- All rates expressed in \$ per tonne and cents per net tonne kilometre.
- Distances for c/ntk use rail distances throughout.

A.3 Fuel surcharge

- Fuel surcharges can vary significantly within a 12 month period. Average road fuel levies are now around 12 – 15%, as high as seen, up from around 10% 12 months ago. Some operators have consistently greater fuel surcharges than others. Rail fuel surcharges have decreased to around 7.5%.
- Road fuel surcharges are slightly above rail, although fuel makes a substantially greater component of operator costs.
- Sensitivity to fuel price changes is proportional to the fuel component in total costs, with modes increasing from sea, through rail and road to air. Air passenger transport has continued to apply fuel surcharges this year, and increases appear likely in the short term.
- Fuel surcharges are nearly universally applied and recovered from customers.
- Rates quoted include fuel surcharges.



A.4 Dry bulk freight (including wheat and grain)

- Unpackaged, dry bulk materials.
- Sea rates based on typical Tasmanian wheat movements in last 10 years, of parcels of around 10,000 tonnes Victoria – Devonport. Continuous conveyor loader and conveyor or grab discharge to port elevators and silo storage.
- Rail rates based on top load, bottom discharge rail wagons loaded to maximum achievable, given typical wagon tare weights and axle load limits on the corridor.
- Typical tipper road vehicles with configuration as typically used on the route (semitrailer, b-double, double road train).
- Contract rates for regular freight movements.
- Transit times based on typical corridor and transport mode performance (eg dedicated vehicle utilisation for road, rail typical for origin / destination etc).
- All rates expressed in cents per net tonne kilometre.



Appendix B Bass Strait shipping information



Bass Strait Shipping

Excerpts from published information

ANL

Source: <http://www.anl.com.au/services/tasmania/> viewed 13 November and 9 December 2007.

Tasmanian ANL TasFast Shipping Service

ANL has a dedicated **Bass Strait Service** operating between **Melbourne** and **Bell Bay**. The service is operated by a geared container vessel, the '**ANL Bass Trader**'. Three sailings per week are offered in either direction.

Sailings from **Bell Bay** are:

- Tuesday
- Thursday
- Saturday

Sailings from **Melbourne** are:

- Monday
- Wednesday
- Friday

All mainland destinations are serviced by either road or sea. The service provides connections to all **ANL** international destinations.

Specialized 2 pallet wide high cube and bulk containers are available.

For further information please contact:

ANL TasFast Shipping office
Melbourne on 03 9687 6466 or 1800 265 827.
ANL Tasmania office
Bell Bay on 03 6380 2300.

Vessel	Manager	Flag	Built	DWT	GRT	LOA	Trade	Vessel Type
ANL Bass Trader	ASP Ship Management	AUS	1995	13,292	7,260	125	Coastal	Container

Hobart Direct Calls

ANL wishes to advise that we will commence a fortnightly service to Hobart commencing on the ANL Bass Trader V 806S ETD Melbourne 14th September ETA Hobart 16th September. These calls will continue on a fortnightly basis through until the end of December 2007. This will necessitate some changes to the schedules which are detailed in the link below. The Hobart calls will allow clients to deliver cargo on Friday in Melbourne for loading onto the direct service to Hobart with an early morning arrival in Hobart on Sunday mornings. On departure Hobart the Bass Trader will return to Bell Bay for a Monday morning arrival and pm departure for Melbourne.

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Current schedules are available from http://www.anl.com.au/pdf/anl_schedule_tasfast.PDF, updated daily. (Example below.)



**ANL CONTAINER LINE PTY LIMITED
VESSEL SCHEDULES**

FOR ALL ENQUIRIES AUSTRALIA WIDE.

TELEPHONE 1800 265 827 www.anl.com.au
W.A CALLERS (08) 9432 1900 SUN Dec 9 2007 09:18
FAX 1800 243 243 Fresh daily on the Web

ANL TASFAST SHIPPING

ANL BASS TRADER

	Monday 3-Dec	Tuesday 4-Dec	Wednesday 5-Dec	Thursday 6-Dec	Friday 7-Dec	Saturday 8-Dec	Sunday 9-Dec
Melbourne					836S		
Bell Bay						836N	
Burnie							836N

	Monday 10-Dec	Tuesday 11-Dec	Wednesday 12-Dec	Thursday 13-Dec	Friday 14-Dec	Saturday 15-Dec	Sunday 16-Dec
Melbourne	837S		838S		839S		
Bell Bay		837N		838N		839N	

	Monday 17-Dec	Tuesday 18-Dec	Wednesday 19-Dec	Thursday 20-Dec	Friday 21-Dec	Saturday 22-Dec	Sunday 23-Dec
Melbourne			840S		841S		
Bell Bay				840N		841N	
Hobart	839N						

	Monday 24-Dec	Tuesday 25-Dec	Wednesday 26-Dec	Thursday 27-Dec	Friday 28-Dec	Saturday 29-Dec	Sunday 30-Dec
Melbourne					842S		
Bell Bay						842N	
Hobart	841N						
Burnie							842N

Cargo Reveal and Delivery Times

Melbourne	0700 - 1600	Monday to Friday
Bell Bay	0700 - 1630	Monday to Friday
Burnie	0800 - 1600	Monday to Friday (Berth No.6)

NOTE: Cargo cutoff for same day shipment is 3 hours prior to departure

Cargo Bookings & Equipment Releases

Melbourne	Lee Pratten	1800 265 827
Bell Bay	Annie Larter	03 6380 2300
Hobart	Annie Larter	03 6380 2300
Sydney	Audri da Silva	02 9325 7333
Brisbane	Lam Lam Tran	07 3233 2211
Adelaide	Michael Adey	08 8347 5400
Fremantle	John Mackay	08 9432 1900
Burnie	Annie Larter	03 6380 2300

ALL DATES ARE ACCURATE AT THE TIME OF PRINTING AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

For further details please contact our Customer Service Centre on:

Imports 1800 245 245
Exports General 1800 246 246
Exports Reefer 1800 248 248

Source: http://www.cma-cgm.com/ProductsServices/ContainerShipping/VesselFleet/Vessel_An_l_Bass_Trader_91323_99.aspx

ANL BASS TRADER

[Back to List](#)

Delivery Date

23/11/01

Service

TASFAST SERVICE

Deployment

MELBOURNE / BELL BAY

SINCLAIR KNIGHT MERZ



Previous Name	Pegasus Pennant
Flag	AUSTRALIA
Built	1996
Cargo Gear	2 x 36 T
Nominal Teus	642
Teus 14TH	448
Reefer Point	60 reefer CEE type 17 440v 32 AMP
S.DWT	9821
S.Draft	7,80
L.O.A	125.3
Beam	20
GT	7260
NT	3734
Suez GT	
Suez NT	
Speed	16
Builder	Dae Sun Shipbuilding, Busan, Sth Korea
Propelling Engine	Man B&W type 8S35MC
Classification	LR
Port of registry	Australia
Call sign	3fwz5
Bowthruster	-
Imo Number	9132399
Managing Owners	ANL
Operator	ANL



Patrick Shipping

Source: <http://www.patrick.com.au/IRM/Content/shipping/shipping.aspx>

BASS STRAIT

Vessel Schedule:

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Melb	Mersey	Tamar	Mersey	Tamar	Mersey	Tamar	Closed
Devonport	Tamar	Mersey	Tamar	Mersey	Tamar	Mersey	Closed
King Island	R & D	Closed	R & D	Closed	R & D	Closed	Mersey

Vessel Cargo Reveal and Delivery:

	Melbourne			Devonport			King Island		
	Open	Cut Off	Close	Open	Cut Off *	Close	Open	Cut Off	Close
Mon	0800	1600	1630	0800	1515	1550	0830	1520	1530
Tue	0800	1600	1630	0800	1515	1550			
Wed	0800	1600	1630	0800	1515	1550	0830	1520	1530
Thu	0800	1600	1630	0800	1515	1550			
	0800	1600	1630	0800	1515	1550	0830	1520	1530
Sat	0800	1330	1330	0800	1430	1450			
Sun							0800	1420	1500

Note : Hazardous cargo must be received by :

Mon - Fri	1300
Sat	1100

* Cargo must be received by cut off for current day's sailing

Vessel Arrival & Departure Times:

	Melbourne		Devonport		King Island	
	Vessel Arrive	Vessel Depart	Vessel Arrive	Vessel Depart	Vessel Arrive	Vessel Depart
Mon	0800	1630	0800	1600		
Tue	0800	1630	0800	1600		
Wed	0800	1630	0800	1600		
Thu	0800	1630	0800	1600		



Fri	0800	1630	0800	1600	
Sat	0800	1430	0800	1900	
Sun					0800 1500

Note : See 'Vessel Cargo Receipt and Delivery' for terminal operating hours and cargo cut off times.

Straitlink:

Southbound Straitlink Service To Evans Street Rail Yard Hobart

Receival Day	Melbourne Cut off	Arrives Hobart	Available Hobart
Mon	1600	Wed	0930
Tue	1600	Thu	0930
Wed	1600	Fri	0930
Thu	1600	Sat	0930
Fri	1600	Mon	0930
Sat	1330	Tue	0930

Northbound Straitlink Service From Evans Street Rail Yard Hobart

Receival Day	Hobart Cut off	Arrives Melbourne	Available Melbourne
Mon	1600	Wed	1030
Tue	1600	Thu	1030
Wed	1600	Fri	1030
Thu	1600	Sat	1030
Fri	1600	Mon	1030
Sat	1030	Tue	1030



Toll Shipping

Source: <http://www.tollshipping.com.au/> Viewed 13 November 2007

Toll Shipping is a part of the **Toll Group** – Toll is one of the Asian region's leading providers of integrated transport and logistics services, operating a network of over 400 sites throughout Australia and the region.

Toll Shipping

Toll Shipping operates the most comprehensive shipping services between Tasmania and mainland Australia. Twin, purpose-built, roll on/roll off vessels, and modern terminals fully operated by Toll Shipping, facilitate a two-way, six days per week service across Bass Strait. The dedicated terminals at Melbourne's Webb Dock and McGaw Wharf in Burnie utilise cutting-edge Ro/Ro cargo handling technology, including Mafi roll trailers, which ensures that almost any types of cargo can be efficiently handled. These include the full range of 6.10 metre and 12.20 metre containers, road trailers, industrial mobiles and heavy lifts, and trucks, light commercial vehicles and cars.

The service and the terminal facilities have been carefully designed to provide a seamless interface with land-based modes of transport. A fleet of B-Double road trailers is operated in Tasmania and on the mainland to support the full-load, inter-modal logistics service provided to manufacturers. Additionally, an on-wharf rail link in Burnie, together with proximity to key road arteries in Melbourne and Burnie provide an inter-modal service capability extending throughout Australia, for all customers.

Innovative solutions for food manufacturers have also been created to meet the exacting requirements for refrigerated transport services of food and other perishable products. These solutions form a crucial link in the integrated supply chain between production and delivery to customers.

Toll move and distribute approximately 150,000 twenty-foot container equivalents and 20,000 cars annually in Bass Strait for Tasmanian and mainland Australian distribution.

- Please be advised, commencing Sunday 16/07/2006 the Schedule will be:

- **Standard Terminal Schedule**

	Burnie	Melbourne
Monday - Friday	07:00 to 16:50	07:00 to 16:50
Saturday	07:00 to 15:50	07:00 to 14:50
Sunday	07:00 to 13:50	Closed
Public Holidays	07:00 to 13:50 There will be two breaks of 30 minutes each at 09:30 & 12:00hrs	07:00 to 13:50 There will be two breaks of 30 minutes each at 09:30 & 12:00hrs

- Please note ships start discharge at 7:00 am

- **Standard Sailing Schedule**

	Burnie	Melbourne
Monday - Friday	17:00	17:00
Saturday	16:00	16:00

- **Standard Cut-Off Times for Same Day Shipment**

	Burnie	Melbourne
Monday - Friday	15:00	15:00
Saturday	13:30	13:30

Contact personnel:

Divisional General Manager	Tony Stewart
General Manager Bass Strait Operations	Ross Duncan

MELBOURNE
PO Box 420, Port Melbourne VIC 3207



120-178 Williamstown Rd, Port Melbourne VIC 3207
Tel: (03) 9299 8400 Fax: (03) 9299 8431

BURNIE
PO Box 1035 Burnie Tasmania 7320
McGaw Wharf, Burnie Tasmania 7320
Tel: (03) 6431 4555 Fax: (03) 6431 3420



TT Line freight services

Source: <http://www.spiritoftasmania.com.au/>

Spirit of Tasmania Freight Services

With an 8pm departure time and 7am arrival time, Spirit of Tasmania I & II are the fastest freight transportation services on Bass Strait. These pick-up and delivery times are the most flexible in the industry.

[Request a quote for carriage of freight](#)

Freight Services

Freight forwarders now have the option of delivering their freight to the wharf as late as 30 minutes prior to departure (on a pre-arranged/booked basis) on the day of sailing, with same day shipment.

The specialised roll on/roll off service, with modern facilities both on board and ashore, allow TT-Line's freight service to be tailored for individual freight forwarders who have 'just in time' freight.

With the integration of the passenger service, freight enjoys the benefit of a fast, efficient and reliable service. In fact, TT-Line's Spirit of Tasmania I & II are the only vessels currently operating across Bass Strait, which have been fitted with stabilisers, further enhancing the quality and condition of the freight at the port of discharge.

TT-Line can even guarantee freight forwarders that their freight will be available for pick up within 90 minutes of the ships arrival.

Transport

Each vessel's stern and bow door operation provides a unique drive through service, which allows for a fast, reliable and efficient freight service.

TT-Line's freight service specialises in roll on/roll off freight and has the capability of accommodating all types of wheeled vehicles from 40 foot to 48 foot pantechincons to overdimensional wheel units. TT-Line's vessels easily accommodate B-Double configured freight units.

TT-Line also gives the option of driving your own truck on board the ship or in the terminal once you have vacated the ship. Alternatively, let one of TT-Line's qualified staff members to do it for you.

Please note, as TT-Line's freight is operated in conjunction with a passenger service, our capabilities of transporting dangerous/hazardous cargo is limited. Furthermore, TT-Line does not have the infrastructure to provide land transportation.

Quality

All freight is on wheels, with minimal or no reversing due to the convenience of TT-Line's unique below deck drive through design. Freight units are carried safely below deck and are not exposed to weather or salt air. Freight is carried with passenger ship comfort and reliability.

All freight is secured using lashings or 'elephant feet'.

Commitment

TT-Line's freight service has a permanent allocation of space on each and every sailing throughout the year to accommodate the demands of our regular freight-forwarding clients. TT-Line can, without hesitation, provide agreed guaranteed space allocation on all sailings to meet the necessary requirements and shipping patterns of any freight forwarder.

Performance Reporting



With more than 15 years experience in the trade, TT-Line has an impeccable record for performance and reliability.

TT-Line currently reviews its operations monthly against set Key Performance Indicators (KPIs). These KPIs are set against meeting TT-Line customer requirements.

TT-Line has established reporting requirements with our stevedores, P&O Ports Ltd. TT-Line constantly reviews set KPIs by benchmarking against European shipping companies of similar operations.

Spirit of Tasmania Terminals

Tasmania	The Esplanade (PO BOX 168E)
03 6421 7322	East Devonport
03 6421 7323	Tasmania 7310 <i>(North-east of the terminal)</i>
Victoria	Station Pier (PO BOX 323)
03 9206 6217	Port Melbourne
03 9206 6283	Victoria 3207 <i>(Off Beach St, turn-off just before Station Pier)</i>

Reservations and General Enquiries

TT-Line Company Freight Service
Telephone 1800 988 895
Fax (03) 9646 3867
Email: freight@spiritoftasmania.com.au



Flinders Island services

Southern Shipping

Source: <http://www.southernshipping.com.au/>

Welcome to Southern Shipping

Southern Shipping Company Pty Ltd is situated at Bridport, in North East Tasmania.



It is a sea freight and passenger service running the weekly government contracted sailing's between Bridport, Tasmania and Lady Barron, Flinders Island, with fortnightly sailing's to Cape Barren Island and Port Welshpool, Victoria on weekly basis.

Southern Shipping has two Roll On/Roll Off vessels, Matthew Flinders III and Southern Condor II. Both these vessels are berthed at Bridport

We have two depots, one in Launceston where the majority of our general cargo is delivered and from there it is securely packed into containers ready to be freighted by road to Bridport. Once containers are received at Bridport they are then loaded on to our vessels along with any other cargo which may be booked to go to the islands, such as Trucks, machinery, vehicles, livestock & fertilizer and much more.

About Us

Southern Shipping Co Pty Ltd is situated at the seaside village of Bridport, in the North East of Tasmania, and has been operating the service since December 1995. Southern Shipping provides a sea freight and passenger service running the weekly government contracted sailing's between Bridport, Tasmania and Lady Barron, Flinders Island, with a fortnightly sailing's to Cape Barren Island and Port Welshpool Victoria on an as required basis.

Southern Shipping Co first started with a 34.95m Roll On / Roll Off vessel [Matthew Flinders III](#). In May 2002 the 34.95m Roll On / Roll Off vessel named [Southern Condor II](#) became operational.

In 2005 the Matthew Flinders III was extended by 10 metres to cover the demands of the freighting service.

Southern Shipping Co has available on site to assist with the operation of loading and unloading the vessels a 50 tonne crane, side loader, container lift crane and forklifts.

Bridport Tasmania is the home port of both vessels and the major operational base for Southern Shipping Co Pty Ltd, with sailings, for stock, freight and passengers and bookings handled through the head office.

Services

Southern Shipping Company Pty Ltd offers a passenger and freight shipping service traveling between Bridport, North East Tasmania, Furneaux Group and to Port Welshpool, Victoria, an 'On demand service' as required.



Southern Shipping vessels travel to Flinders Island every Monday, (Tuesday if public holiday) departing Bridport on the afternoon high tide.

If you & the family are going to the Island for a holiday in your car; Southern Shipping can take you there.

Southern Shipping will deliver anything from a small box or parcel to a truck or heavy machinery to sheep, cattle or horses.

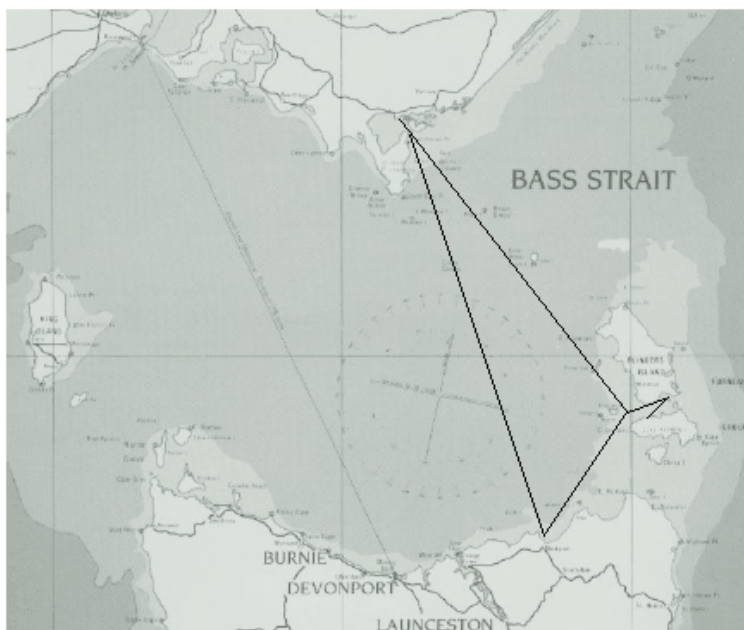
Southern Shipping vessel are designed with a draft of only 1.2 – 2.0 metres so we are able to service many of the other islands within the Furneaux Group.

Routes & Timetables

As shown on the map below is our traveling routes between ports.

Southern Shipping Company departs Bridport every Monday (Tuesday if Public Holiday), departing anytime from 1400 hours Monday – 0200 Tuesday depending on high tides.

If demand warrants, often during peak periods a second voyage will be scheduled.



For more information on departures times and bookings please [contact](#) our office.

Bookings

Maximum of 12 day passengers, day accommodation only

- No meals, refreshments or sleeping facilities are provided
- Sailing times are from
Bridport to Flinders Island 8.5 hours and
Port Welshpool to Flinders Island 20 hours.
- For travel between March & October bookings will need to be made and paid for 3-4 weeks in advance
- For passengers wishing to travel between November and February, demands are high so book well in advance!



Appendix C B-double truck cost model

A cost model of moderate detail was submitted separately as part of this project, and a high level summary of the assumptions and major cost components is given here.

C.1 Assumptions amend basis

- 26 m b-double with 20' A trailer and 40' B trailer
- Vehicle carrying capacity 39 t
- Days worked per year 300
- Annual kilometres 250,000
- Vehicle purchase (prime mover, A and B trailers) \$390,000 total
- Service life:
 - Prime mover 4 years
 - Trailers 8 years
- Residual value:
 - Prime mover 40%
 - Trailers 20%
- Interest rate 9%
- Fuel 65 litres / 100 km (1.54 km / l) \$1.45 / litre retail equivalent
- Maintenance \$1,650 / 10,000 km (whole vehicle)
- Tyres:
 - new steer, retreads all others
 - 2.5 retreads / case
 - 75,000 km / tyre
- Downtime / maintenance allowance 30%
- Drivers:
 - Two, both working 46 hrs / week
 - TWU Grade 8 + 30% over award loading
 - Single relief driver, 60 hrs / wk



C.2 Costs components

Fixed costs	\$	% of total
Depreciation	\$60,000	8.83%
Interest	\$42,900	6.31%
Registration	\$8,000	1.18%
Insurance	\$16,000	2.35%
Admin, sundries	\$7,000	1.03%
Subtotal	\$133,900	19.70%
Running		
Fuel	\$210,000	30.89%
Lubricants	\$12,000	1.77%
Maintenance	\$19,000	2.80%
Tyres	\$18,500	2.72%
Subtotal	\$259,500	38.18%
Wages		
Drivers	\$188,500	27.73%
Relief driver	\$10,000	1.47%
Oncosts, compliance	\$37,000	5.44%
Uniforms	\$500	0.07%
Subtotal	\$236,000	34.72%
Total	\$629,400	92.59%
Profit margin	\$50,352	7.41%
Grand total	\$679,752	100.00%

C.3 Cost summary

This provides the following cost summary:

Cost per kilometre	\$2.72
Cost per tonne.kilometre:	\$0.073
Empty running:	30%
Effective cost per tonne kilometre:	\$0.104



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