Tasmanian Freight Survey

Data Summary 2013

Department of Infrastructure, Energy and Resources

Tasmania
Explore the possibilities

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Introduction

The **Tasmanian Freight Survey** is undertaken by the Infrastructure Strategy Division of the Department of Infrastructure, Energy and Resources (DIER) to inform planning for Tasmania's future freight transport system. The 2011-12 Survey is the fourth time that the survey has been conducted, with previous surveys held in 2002-03, 2005-06 and 2008-09.

Around 150 interviews were conducted, allowing DIER to capture data from many businesses across Tasmania; to understand freight movements to and from businesses; the frequency of trips; and the types of vehicles used. Survey results can be compared to previous years' results to better understand changes in freight demanding industries, such as the recent decline in the forestry task, and major structural changes to the freight system such as the withdrawal of a direct international shipping service from the Port of Launceston (Bell Bay).

The Survey provides a summary of large freight movements across the major parts of Tasmania's land transport network. The Survey provides information on:

- the location of freight trips, including:
    - movements between and through major sea and air ports; and
    - between industrial areas and across network segments (road and rail).
- freight tonnage;
- commodity type; and
- mode and vehicle type.

Data from the Survey is used for a number of different purposes, including:

- detailed freight movement analysis and modelling for projects including funding submissions and State transport policies;
- developing the State Road Hierarchy;
- developing regional integrated transport plans, including the
    - Southern Integrated Transport Plan;
    - Northern Integrated Transport Plan; and
    - Cradle Coast Integrated Transport Plan
- assessing the potential impact of road development proposals on freight movement.

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Statewide Land Freight Task – Overview

In 2011-12, Tasmania's land freight network (road and rail) carried a total combined mass of nearly 23 million tonnes. The land freight task travelled over 1.85 billion tonne kilometres in 2011-12 and most (82%) of this was carried on Tasmania's road network. Rail is also an important part of the State's freight system and carries 18% of the total task in terms of tonne kilometres travelled[1].

Table 1 - Freight Movements by Road Owner

Road ownership	Total length (km)	Tonne kilometres travelled	% of total tonne kilometres travelled
National Land Transport Network – Road	404	872 million	47%
State Roads[2]	3,592	512 million	28%
Local Government Roads[3]	16,826	105 million	6%
Roads under other ownership[4]	28,200[5]	39 million	2%
Total Road	***49,021***	***1528 million***	***82%***
National Land Transport Network – Rail	432	258 million	14%
State Rail[2]	200	71 million	4%
Total Rail	***632***	***329 million***	***18%***

Tasmania's sections of the National Land Transport Network[6] (National Network) carry 60% of Tasmania's overall freight task, in terms of tonne kilometres travelled (Table 1). The road component of the National Network makes up a small proportion of the State's total road network in terms of length, but it includes the State's key road links between Tasmania's three northern ports (Bell Bay, Burnie and Devonport) and the four major urban centres (Hobart, Launceston, Burnie and Devonport). A large proportion of the heavy freight movements travel on the National Network for at least part of their journey, and most of Tasmania's highest freight volume roads are on the National Network.

[1] Tonne kilometres are a commonly used measure for freight transport, and one tonne kilometre represents the transport of one tonne of freight over one kilometre.
[2] Excludes State-owned sections of the National Network.
[3] Excludes local government owned sections of the National Network.
[4] Owners include Forestry Tasmania, TasPorts, Hydro Tasmania and private owners.
[5] Includes 26,000 km of authorised access or privately owned roads.
[6] The National Land Transport Network is a single integrated network of land transport linkages of strategic national importance, which is funded by the State and Federal Governments. The National Network in Tasmania comprises road and rail connections between Tasmania's key urban areas, ports and airports.

Statewide Land Freight Task – Overview (*continued)*

In terms of inter-regional links, Tasmania's highest tonnage roads, as listed below, are on the National Network.

- The Bass Highway, a key road for freight in the north-west, carried up to 3.6 million tonnes between Devonport and the Illawarra Main Road, and up to 3.3 million tonnes between Burnie and Devonport.
- The Midland Highway, a key link between northern and southern Tasmania, carried up to 2.2 million tonnes.
- The East Tamar Highway, a key link in northern Tasmania – carried up to 2.1 million tonnes.
- The National Network also includes key urban links, such as the Brooker Highway in Hobart and the Southern Outlet in Launceston (Figure 1), which carried 1.8 million tonnes and 2.2 million tonnes respectively.

Tasmania's State Road Network is also important for carrying a large proportion of the statewide freight task, especially from Tasmania's forestry and agriculture regions (Table 1). Key links in this network include the:

- Bridport Main Road, the Tasman Highway (between Scottsdale and Derby), the Esk Main Road, Illawarra Main Road, Evandale Main Road and the Frankford Main Road/Birralee Main Road/West Tamar Highway/Batman Highway (connecting Bass and East Tamar Highways) in the north;
- Ridgley Highway, Murchison Highway, Bass Highway (between Burnie and Smithton) and Mersey Main Road in the north-west; and
- Lyell Highway, Tasman Highway, Huon Highway, the Southern Outlet and Boyer Secondary Road in the south (Figure 1).

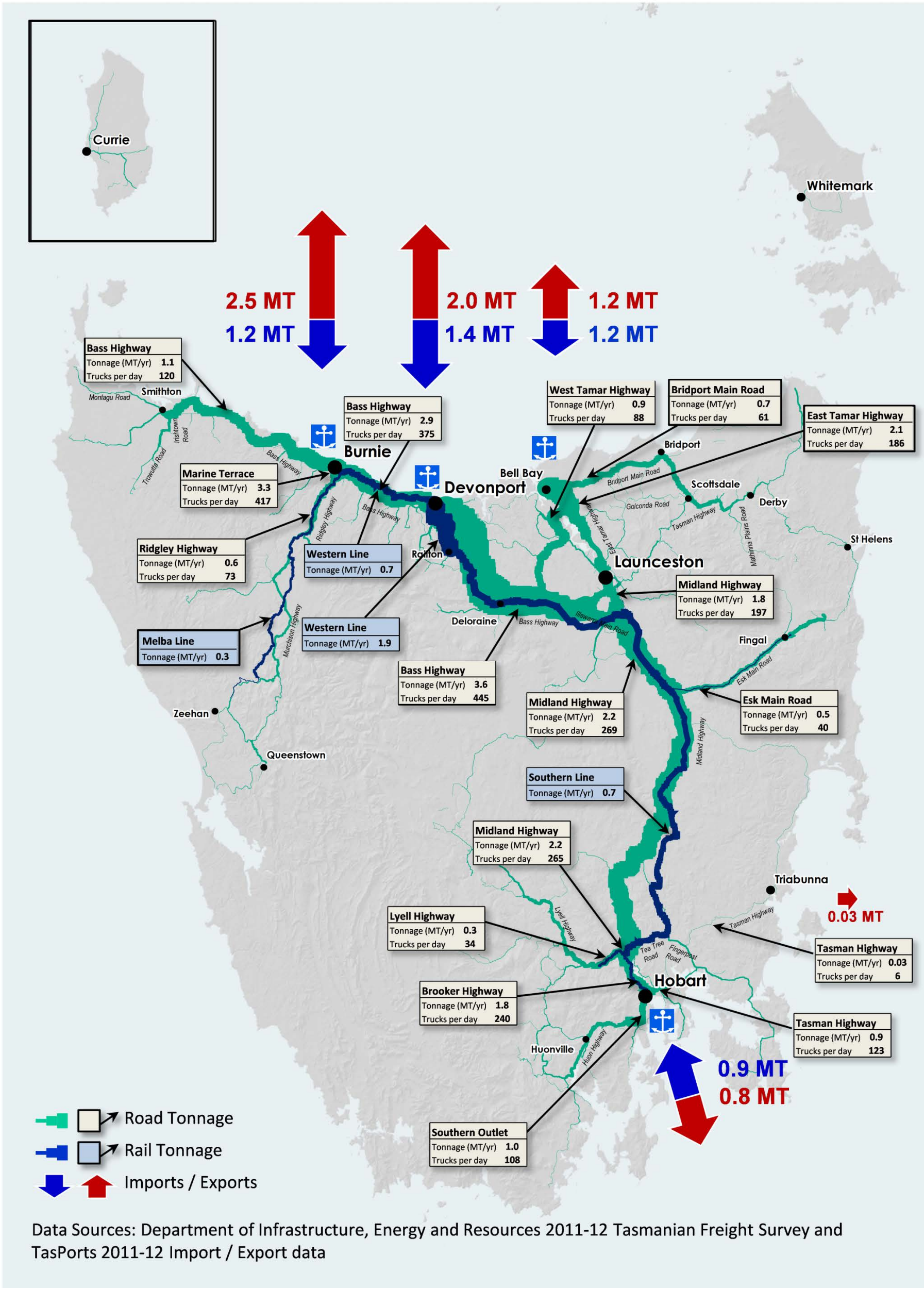
Local government owned roads carry a smaller proportion of the State's overall freight task, but are important for the 'last mile'[7] TEUs from freight producers to the State and National Networks, and to freight demanders. Key regional links provided by local government include Trowutta Road and Irishtown Road in the north-west.

Some urban roads managed by local government and other authorities carry high tonnages of freight. These include roads around sea ports (e.g. Marine Terrace at Burnie and Mobil Road at Bell Bay). Key urban roads in Launceston include Bathurst, Wellington, Goderich, Cimitiere and Lower Charles Streets and Invermay, Remount and Vermont Roads. In the south, Macquarie and Davey Streets in Hobart and Main Road in Glenorchy carry high tonnages. High freight urban roads in the Devonport area include Tarleton and Wright Streets and Formby and Devonport Roads.

The majority of the task moves on sealed roads, but in some areas, unsealed roads are important for freight movement, especially for forestry.

[7] The last mile refers to first and final leg of freight movements, which are often made on local roads.

Figure 1- Statewide Freight Movements: Overview Map



*Excludes shipping movements from minor/private ports e.g. Port Latta

Movements in and out of Tasmania

Due to Tasmania's physical separation from interstate and international markets, Tasmanian businesses and industry rely on sea connections to interstate and international ports for the transport of their heavy freight task.

Overall freight movements into and out of TasPorts operated ports in Tasmania during 2011-12 totalled 11.3 million tonnes and included the movement of 457,000 twenty foot equivalent units (TEUs)[8]. In addition to TasPorts operated ports, the privately operated Port Latta was estimated to have exported up to 2.4 million tonnes of bulk material[9] in 2011-12 which, when combined with TasPorts operations, increases the total freight into and out of Tasmania to 13.7 million tonnes during 2011-12. Over 6.5 million tonnes of freight was shipped from Tasmania during 2011-12, and over 4.7 million tonnes came into Tasmania through TasPorts operated ports. In terms of containers there were approximately 230,000 inward TEU movements and 227,000 outward TEU movements.

The major ports in terms of total tonnage and container movements were located in the north-west region. The Port of Burnie (Figure 2) was Tasmania's largest port, handling over 3.7 million tonnes (including 242,000 TEUs). Approximately 2.5 million tonnes were shipped out of Burnie, with both bulk and containerised goods significant components. Major bulk goods included ores and concentrates from the mines located in the north-west, logs and woodchips. Major containerised goods included processed timber products such as newsprint and sawn timber; processed metal outputs such as zinc; dairy products and processed and fresh vegetables. Over 1.2 million tonnes were shipped to Burnie, mainly as containerised freight with major components including mixed consumer goods, groceries and other food or beverages.

The Port of Devonport (Figure 3) was the second largest port with over 3.3 million tonnes (including 200,000 TEUs) coming in or out of the port in 2011-12. Close to 2.0 million tonnes were shipped out of Devonport, dominated by bulk shipments of cement which exceeded 1.1 million tonnes. Devonport was also important for the shipment of fresh and processed agricultural products out of Tasmania to interstate and international markets. Major components into Devonport included mixed consumer goods, groceries and other food or beverages. Devonport also receives the largest volume of fuel of the ports in the north and north-west regions. A significant volume of goods are transported through Devonport by both containers and trailers.

The Port of Launceston (Figure 4) in the northern region handled over 2.3 million tonnes in 2011-12, consisting almost entirely of bulk goods such as mineral ores and woodchips. Volumes through this port declined following the cessation of container shipments to the port in the second half of 2011, with less than 6,000 TEU movements through the port in 2011-12. Freight tonnage in and out of the port was evenly split at just under 1.2 million tonnes. The key export commodity was woodchips, and the major commodity into the port was mineral ores for processing within the Launceston's Bell Bay industrial precinct. These figures show a decrease from 2008-09, when the Port of Launceston was the highest

[8] TasPorts Annual Report 2011-12

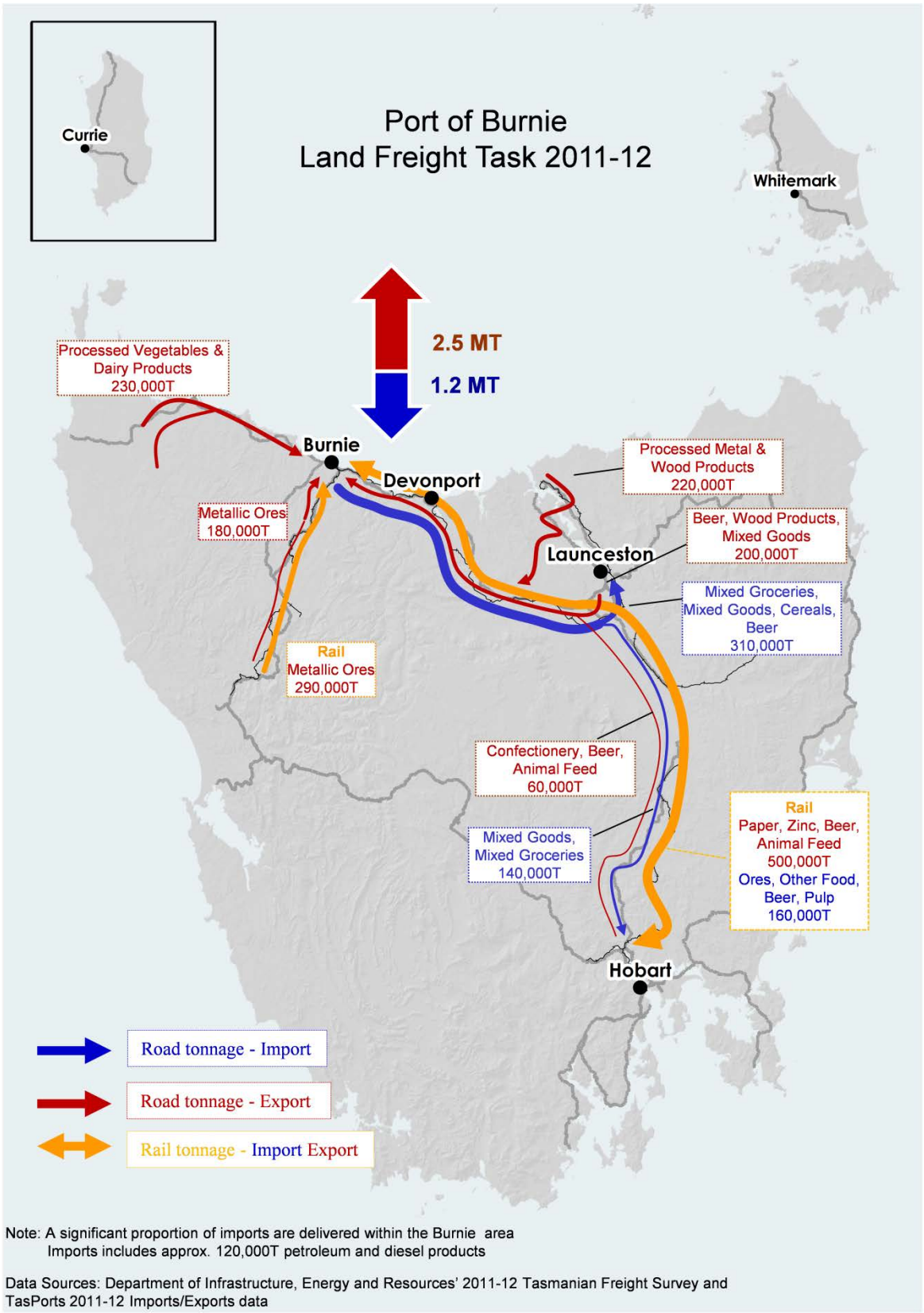
[9] Grange Resources Annual Report 2012

tonnage port in Tasmania with around 4.7 million tonnes moving through the port. Since 2008-09 there has been a large decrease in forestry related freight such as woodchips and sawn timber as well as containerised goods, which in 2008-09 totalled over 90,000 TEU.

The Port of Hobart (Figure 5) moves lower volumes of freight than the three northern ports. All goods shipped through the port were in bulk. Approximately 250,000 tonnes of logs, veneer and zinc were exported from Macquarie Point wharf during 2011-12. Selfs Point wharf was important for the shipment of petroleum, diesel and other petroleum products into southern Tasmania, with around 320,000 tonnes imported. At the Nyrstar wharf at Lutana, nearly 1.2 million tonnes of freight was shipped, including mineral concentrates into the port and acid, fertiliser and other concentrates out of the port.

The Port of Hobart's Triabunna wharf on the east coast of Tasmania only exported around 30,000 tonnes of woodchips in 2011-12, down from 0.8 million tonnes in 2008-09, a major reduction due to the cessation of woodchip operations at Triabunna in 2011.

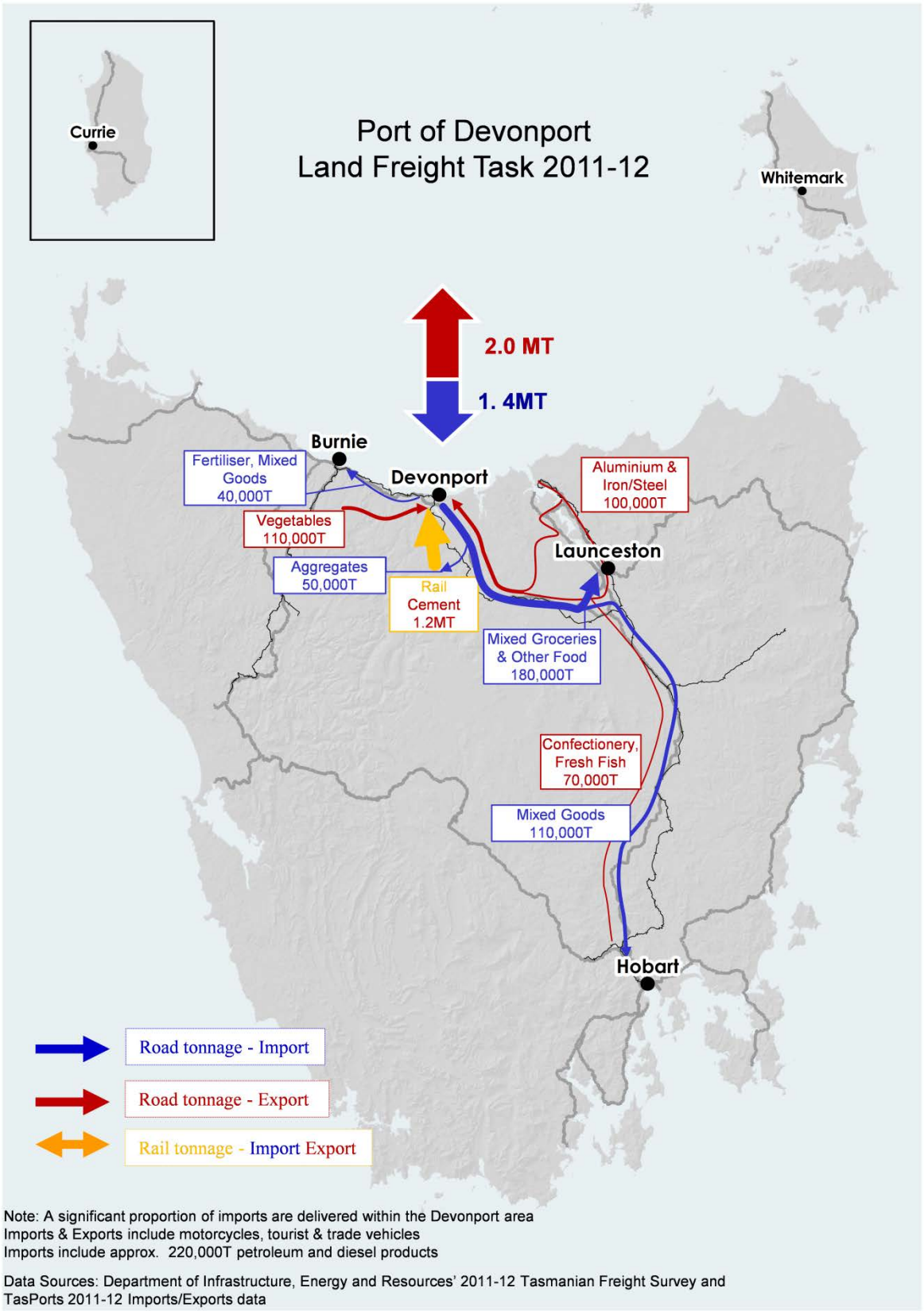
Figure 2 - Burnie Port: Land Freight Task



Note: A significant proportion of imports are delivered within the Burnie area
Imports includes approx. 120,000T petroleum and diesel products

Data Sources: Department of Infrastructure, Energy and Resources' 2011-12 Tasmanian Freight Survey and TasPorts 2011-12 Imports/Exports data

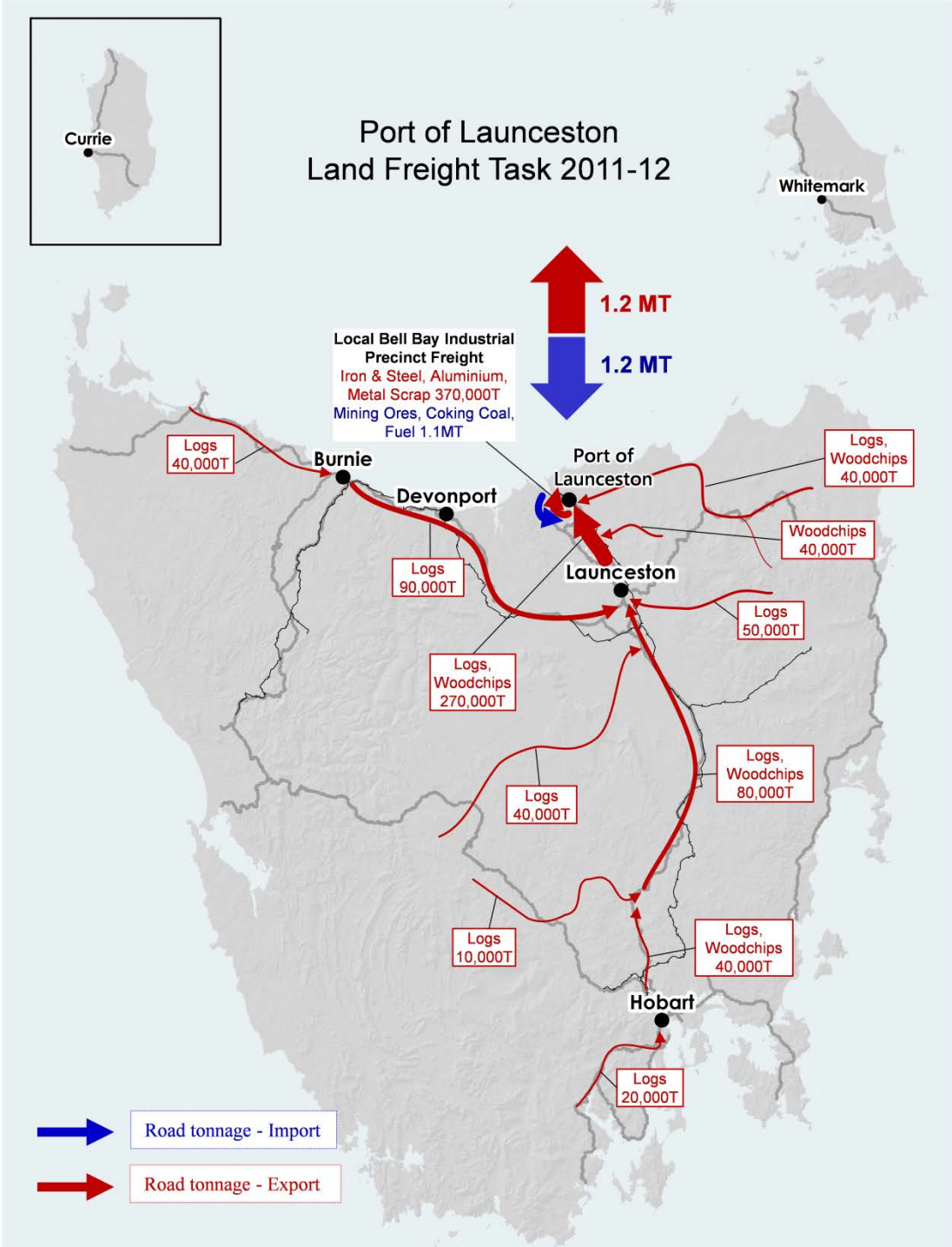
Figure 3 - Devonport Port: Land Freight Task



Note: A significant proportion of imports are delivered within the Devonport area
Imports & Exports include motorcycles, tourist & trade vehicles
Imports include approx. 220,000T petroleum and diesel products

Data Sources: Department of Infrastructure, Energy and Resources' 2011-12 Tasmanian Freight Survey and TasPorts 2011-12 Imports/Exports data

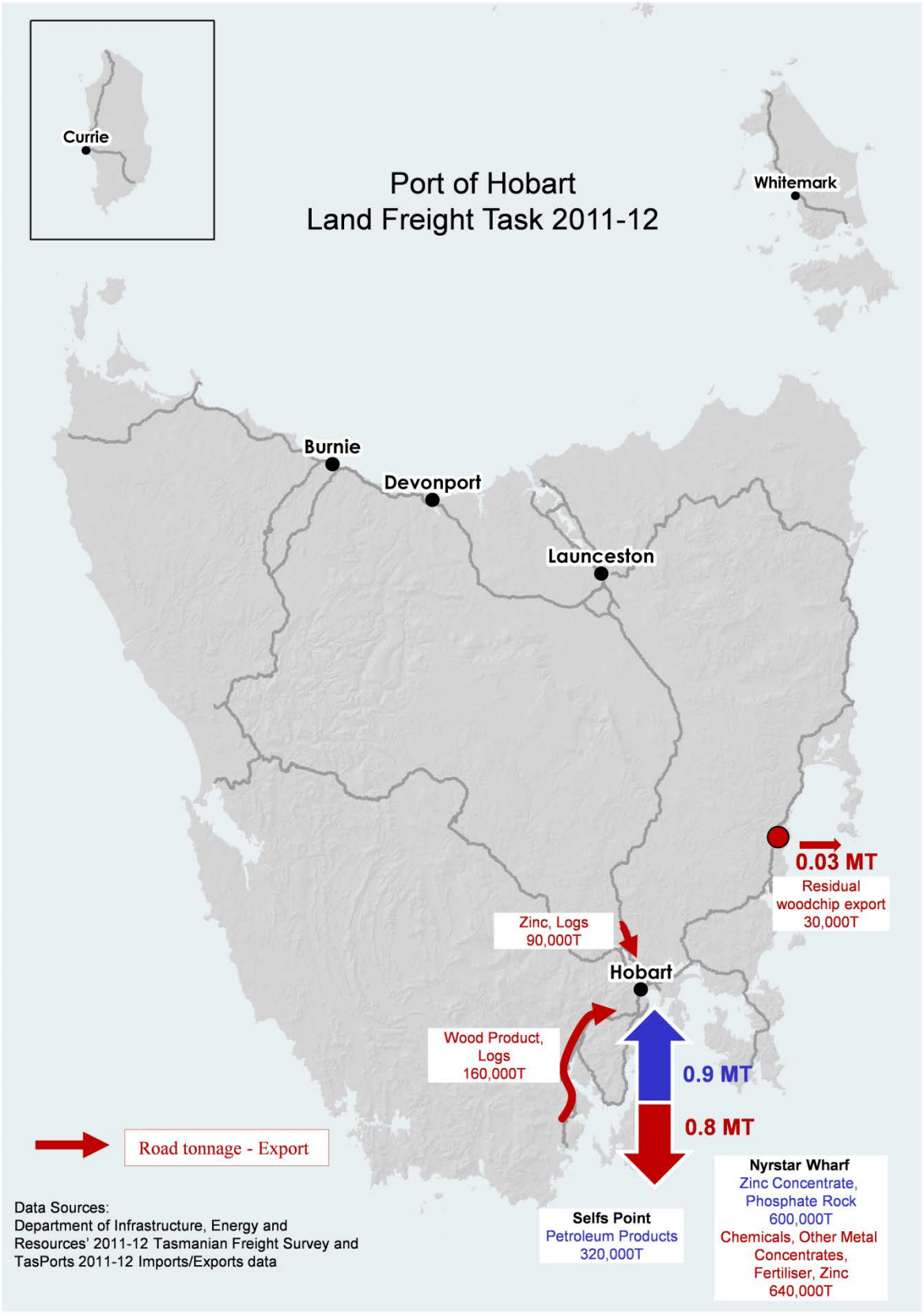
Figure 4 - Bell Bay Port: Land Freight Task



Note: A significant proportion of port throughput has an origin or destination within the Bell Bay area.
Imports include approx. 100,000T petroleum and diesel products

Data Sources: Department of Infrastructure, Energy and Resources' 2011-12 Tasmanian Freight Survey and TasPorts 2011-12 Imports/Exports data

Figure 3 - Hobart Port: Land Freight Task



Intra-regional Freight Task – Southern, Northern and North-West Regions

The intra-regional freight task involves the localised movement of freight within a particular region in Tasmania, and is a key component of Tasmania's heavy freight task. The combined intra-regional task in Tasmania's three regions was approximately 16.8 million tonnes in 2011-12, comprising nearly three quarters of the statewide freight task by mass.

The north-west region[10] had the largest intra-regional freight task in Tasmania, with an estimated 6.7 million tonnes of freight moved within the region in 2011-12. The northern region[11] also had a significant intra-regional freight task of 5.8 million tonnes, while the southern region[12] had a smaller intra-regional freight task of 4.3 million tonnes.

Across all three regions, a large component of intra-regional freight movement was related to construction with aggregate materials - such as stone, sand and clay - contributing 2.0 million tonnes (46%) of the southern and 2.4 million tonnes (41%) of the northern intra-regional task. In the north-west the construction task was less significant with just 1.6 million tonnes (23%) of the intra-regional task.

Agricultural products - such as raw milk, fresh vegetables and live animals – comprised the most significant group of commodities moved within the north-west region, contributing 2.1 million tonnes (31%) of intra-regional freight movements in the region (Figure 6). Mining ores made up approximately 8% of the overall mass of the freight movements in the region; however, the significance of these movements was increased by the relatively long intra-regional distances the mining ores were transported. Another major task in the region was the movement of cement; although the majority of this was only transported a relatively short distance from production site to port.

In the northern region, apart from the construction task, a major component of the intra-regional task related to metal processing at Bell Bay and coal production in the Fingal Valley. In combination, these mining ores, basic metal products and coal freight tasks contribute 1.6 million tonnes of the northern region's intra-regional freight task. In terms of tonnage this represents 28% of the task, however because the majority of these movements are very short (e.g. from port or mine to processing facility) they represent just 10% on a tonne-

[10] For the purposes of this analysis, the north-west region includes the local government areas of Circular Head, Waratah-Wynyard, West Coast, Burnie, Central Coast, Kentish, Devonport, Latrobe and King Island.
[11] The northern region includes the local government areas of Meander Valley, West Tamar, George Town, Launceston, Dorset, Northern Midlands, Break O'Day and Flinders Island.
[12] The southern region includes the local government areas of Central Highlands, Glamorgan-Spring Bay, Southern Midlands, Derwent Valley, Brighton, Glenorchy, Clarence, Hobart, Sorell, Tasman, Kingborough and Huon Valley.

kilometre basis. Forestry related freight movements (logs and wood products) make up 13% (730,000 tonnes) of intra-regional movements in the northern region (Figure 7). The significance of forestry movements was increased by the relatively large distances logs were transported, resulting in forestry representing 32% of the northern intra-regional task on a tonne-kilometre basis.

In southern Tasmania a large percentage of the overall intra-regional freight task was related to the forestry industry, with the movement of logs (920,000 tonnes) and other wood products (160,000 tonnes) together making up 25% of the southern region's intra-regional tonnage or 51% on a total tonne-kilometre basis (Figure 8).

Figure 4 - Intra-regional Task: North-West Region

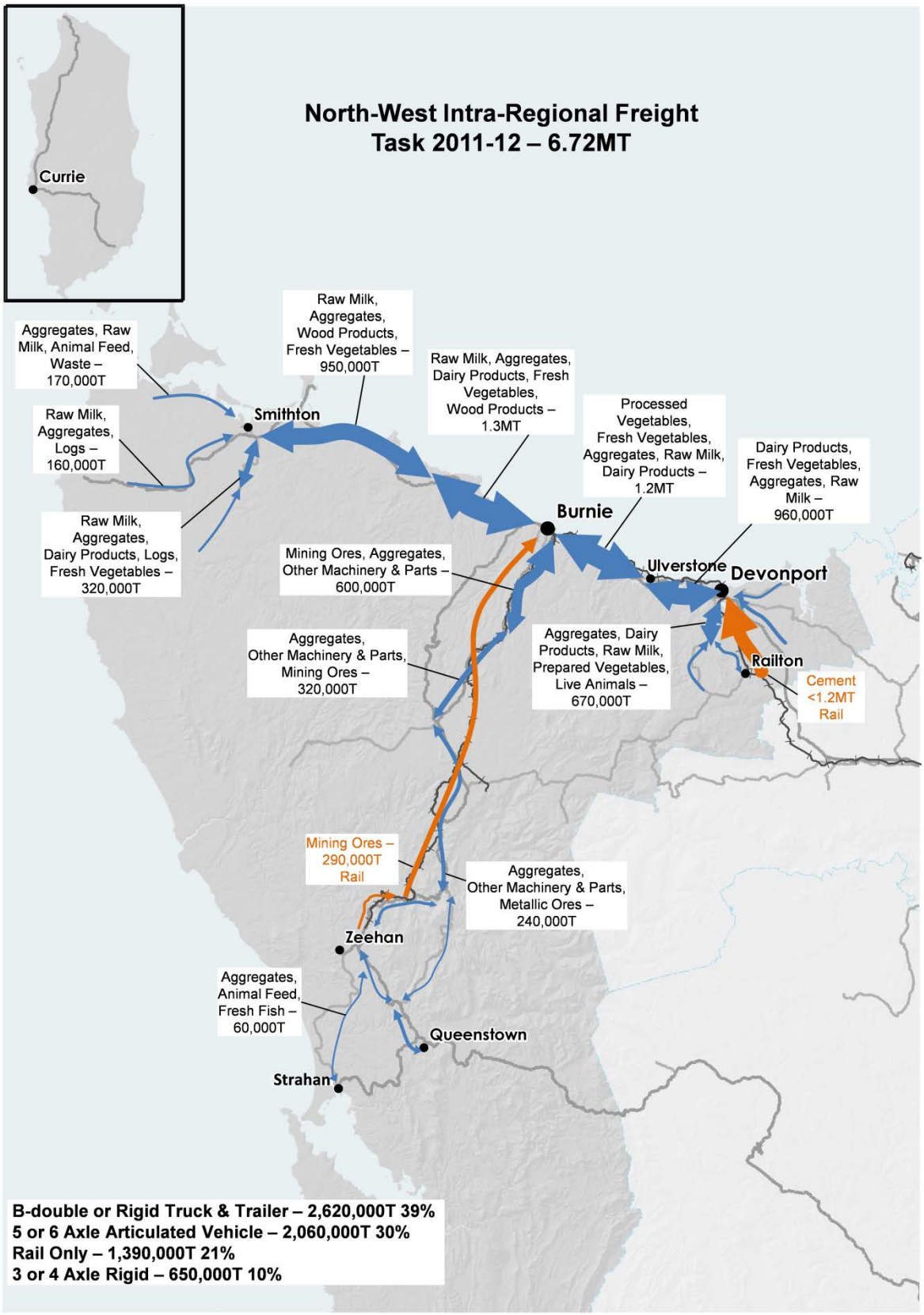


Figure 5 - Intra-regional Task: Northern Region

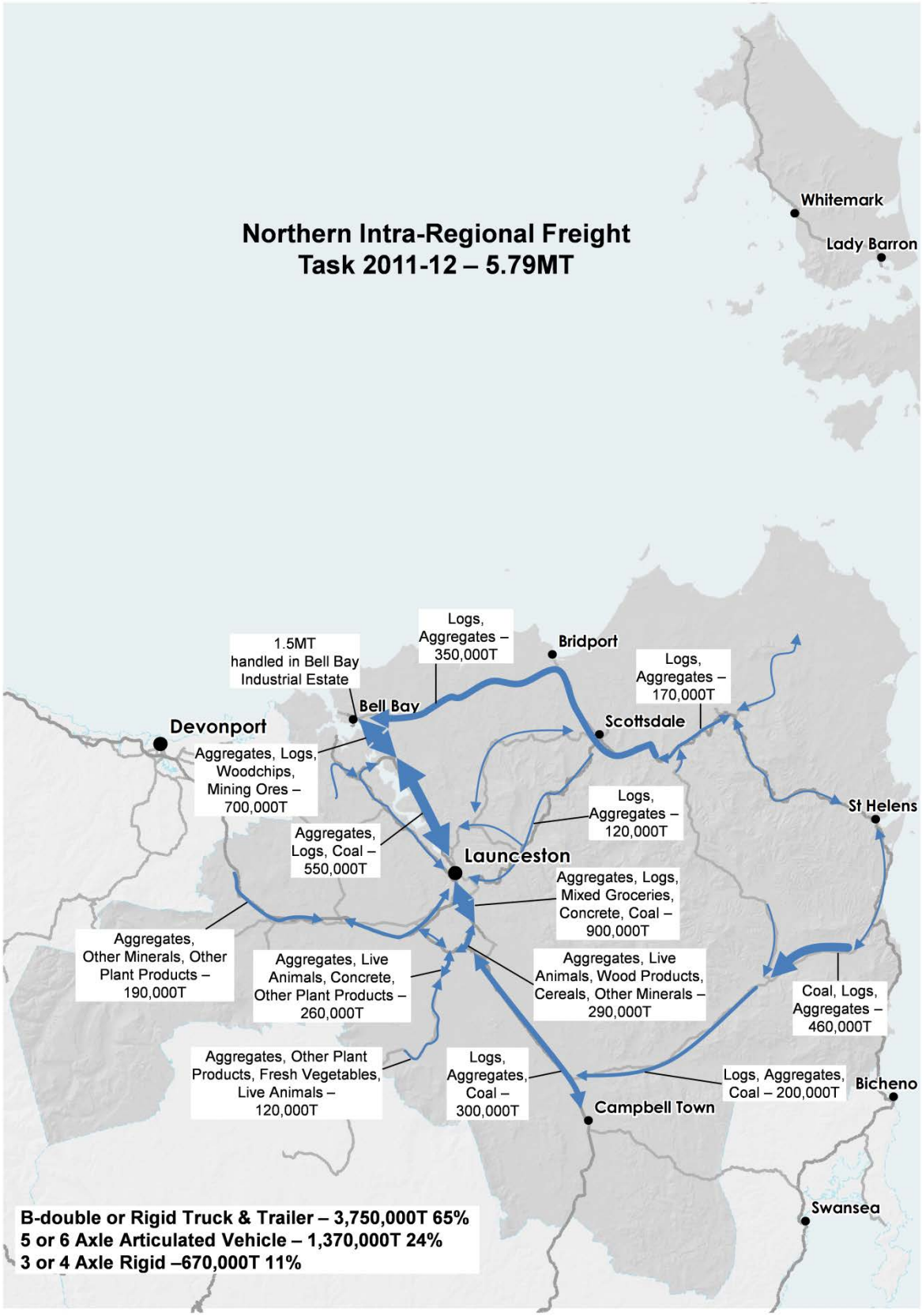
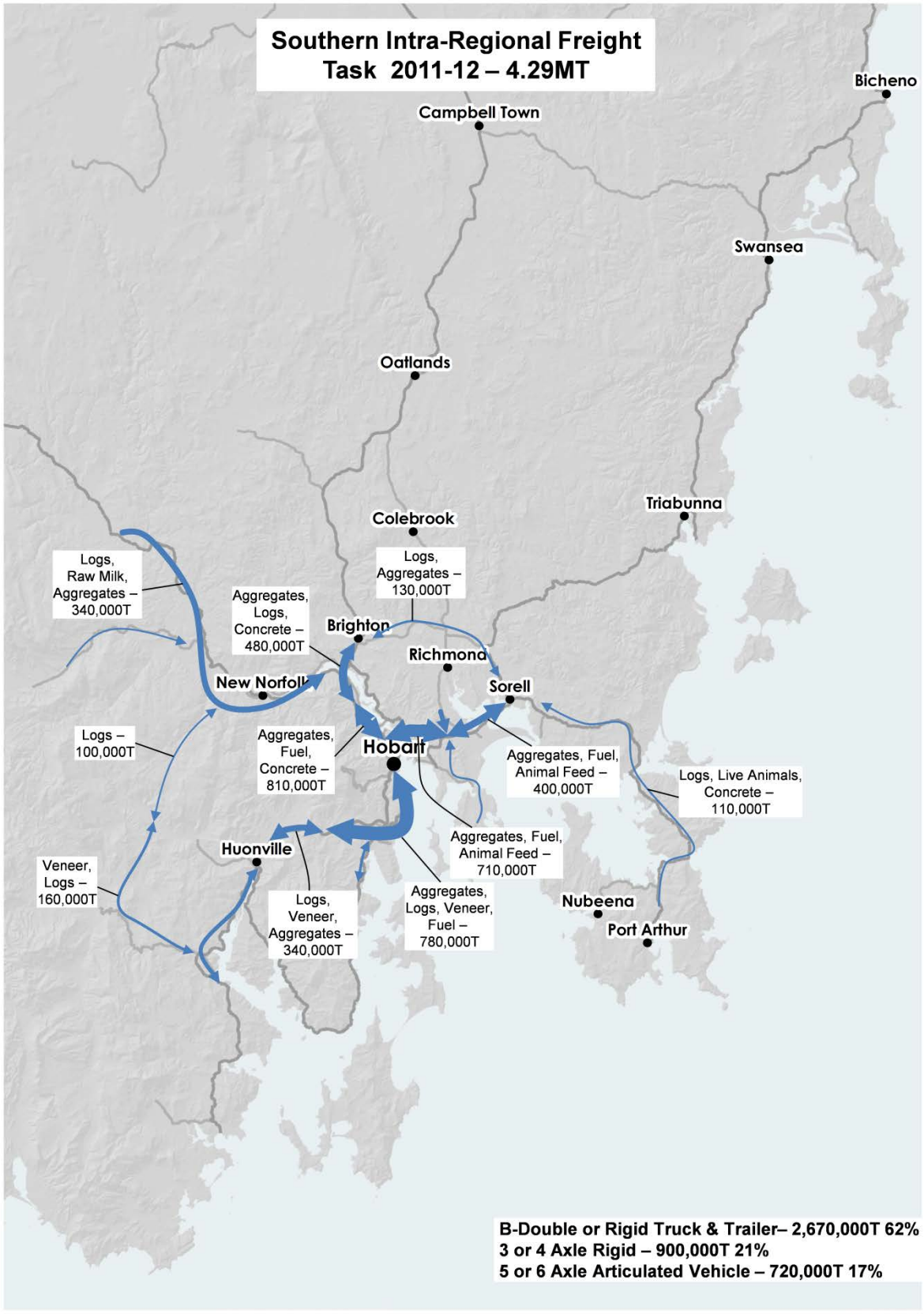


Figure 6 - Intra-regional Task: Southern Region



Inter-regional Task

The inter-regional freight task moves from one region to another region. While the majority of Tasmania's freight task (by tonnage) moved within each of Tasmania's three regions, around 26% of the freight task moved between two regions.

In terms of freight tonnage moved between Tasmania's three regions, the north-west region was the major destination with over 2.5 million tonnes of freight moved from the north and south. The northern region received almost 1.9 million tonnes, with 1.4 million tonnes moving to southern Tasmania. The southern region used the ports in north and north-west for import of many goods and some manufacturing inputs and for shipment of manufactured goods out of Tasmania.

Looking at the origins of the inter-regional freight task, the northern region moved around 2.5 million tonnes to other regions, a little over 2 million tonnes moved from the north-west, and around 1.3 million tonnes moved from the south.

From the northern region, the major movements were:

- agricultural freight (including fresh vegetables and raw milk) by road and coal by both road and rail to the north-west (Figure 7); and
- mixed groceries, coal and forestry freight to the southern region (Figure 10).

From the north-west region, the major movements were:

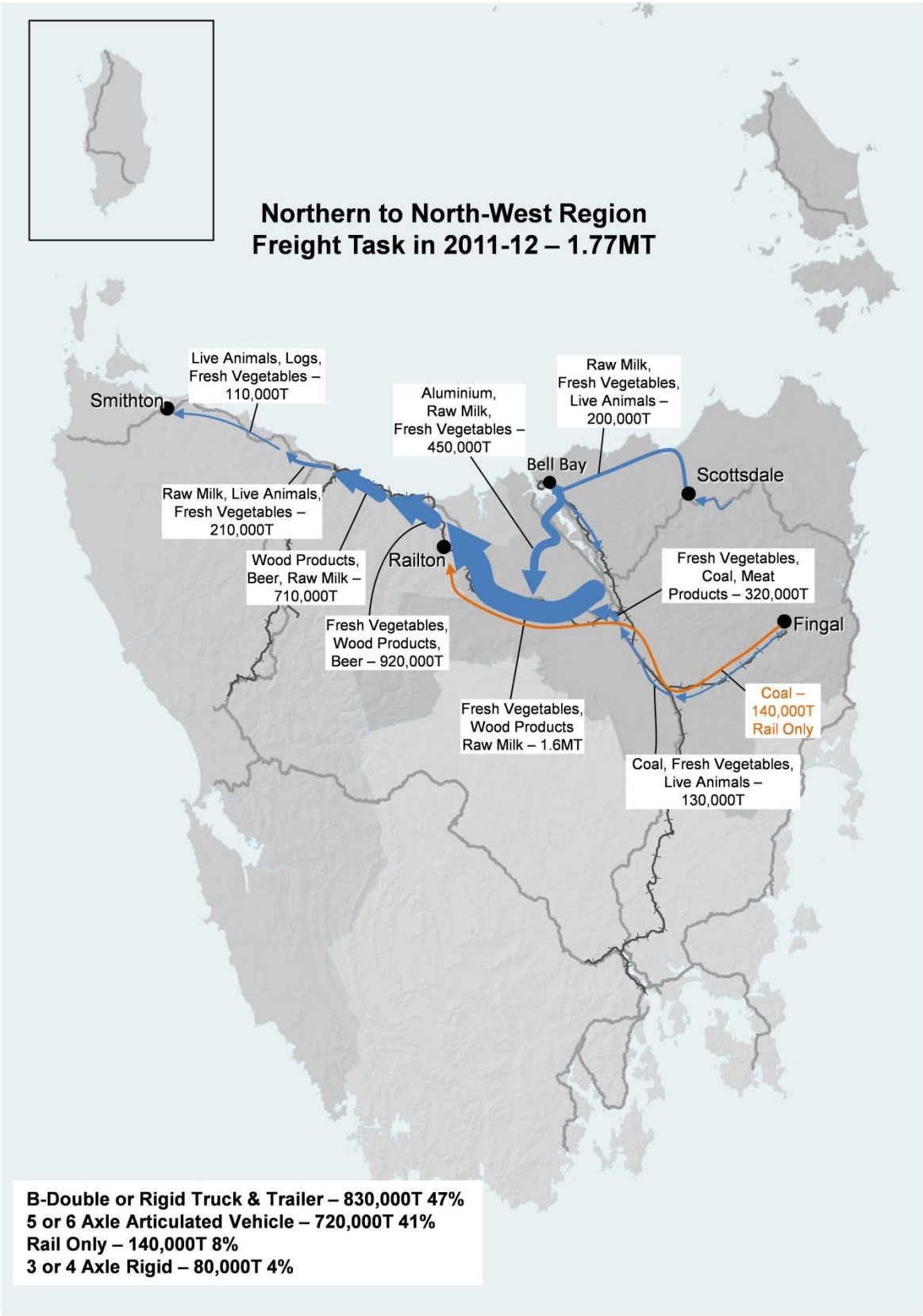
- mixed groceries, fuel, and forestry freight to the north (Figure 9); and
- movements from Port of Burnie to Hobart, including mixed groceries and consumer goods, with some of this task being moved by rail (Figure 12). These form the majority of the north-west to southern region inter-regional freight task.

Other significant tasks from the north-west to the south include cement and mining ores.

From the southern region, the major movements were:

- manufacturing outputs to the north-west, including paper and newsprint, which are mostly moved by rail, as well as chocolates and confectionery, fresh fish (Figure 11); and
- forestry freight movement to the northern region, including hardwood logs, along with coal (Figure 12).

Figure 7 - Northern to North-West Region Inter-regional Freight Task



* Rail Only tonnages refer to task that only travelled on rail – some freight tasks travel on both road and rail.

Figure 8 - Northern to Southern Region Inter-regional Freight Task

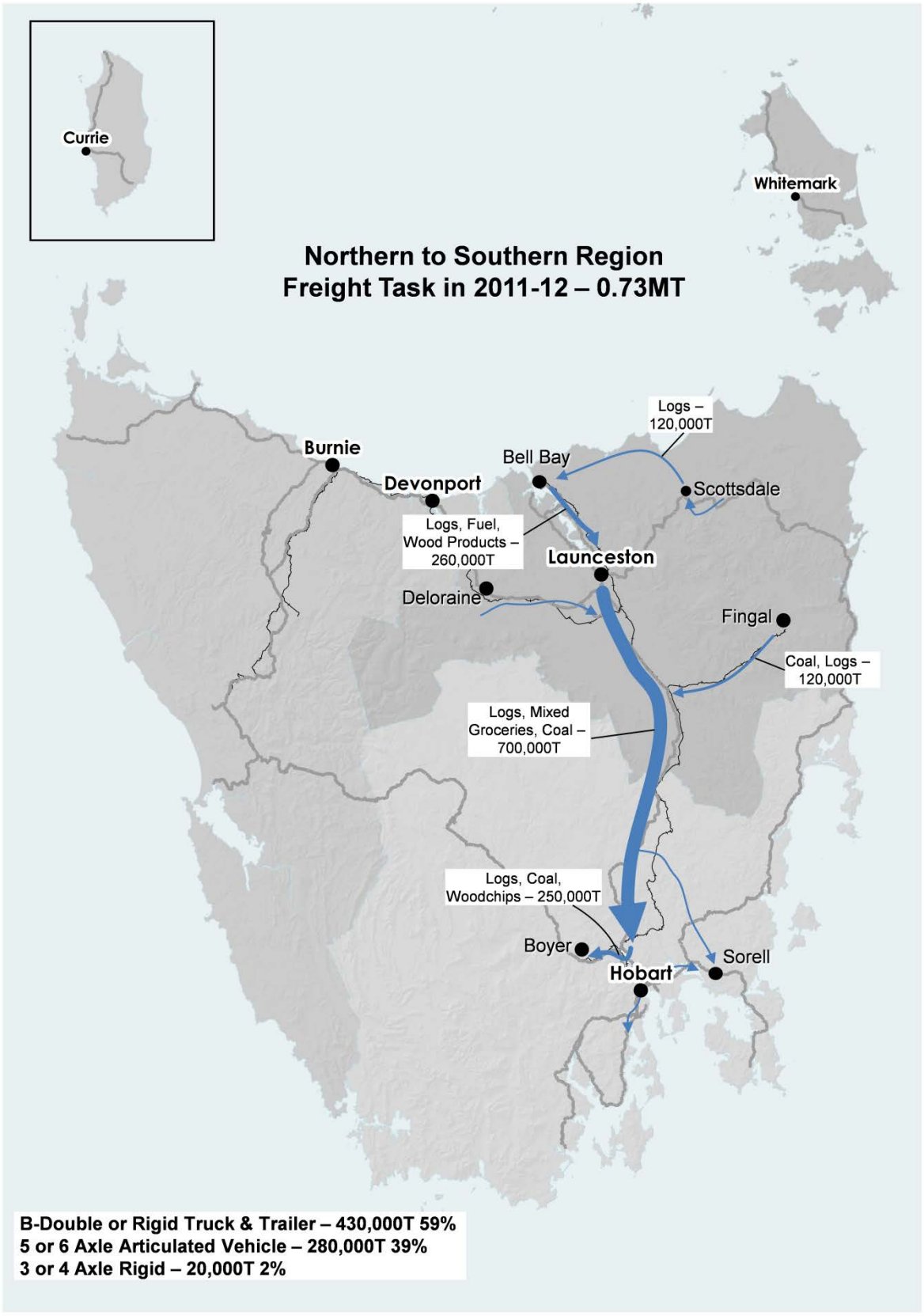


Figure 9 – North-West to Northern Region Inter-regional Freight Task

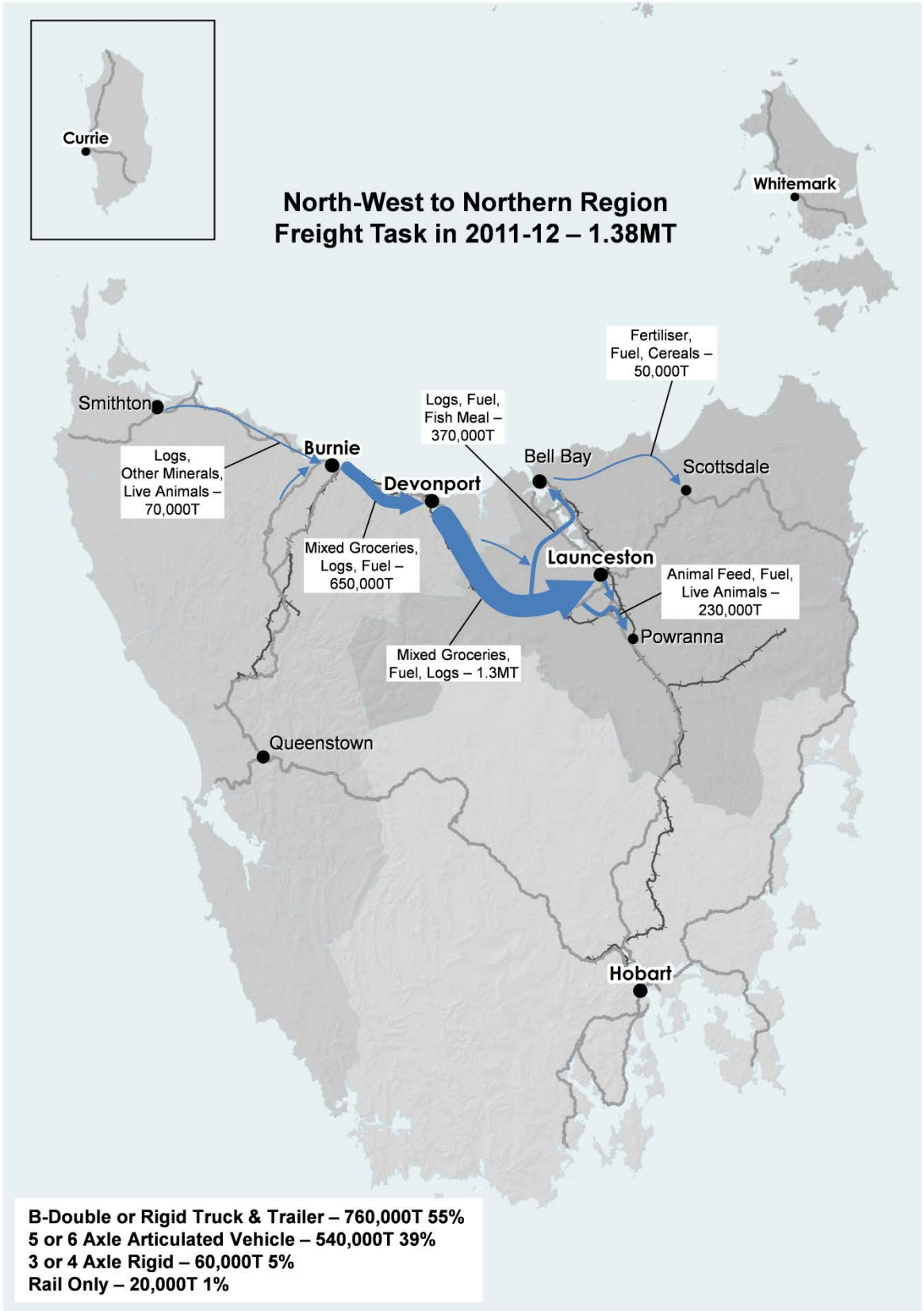
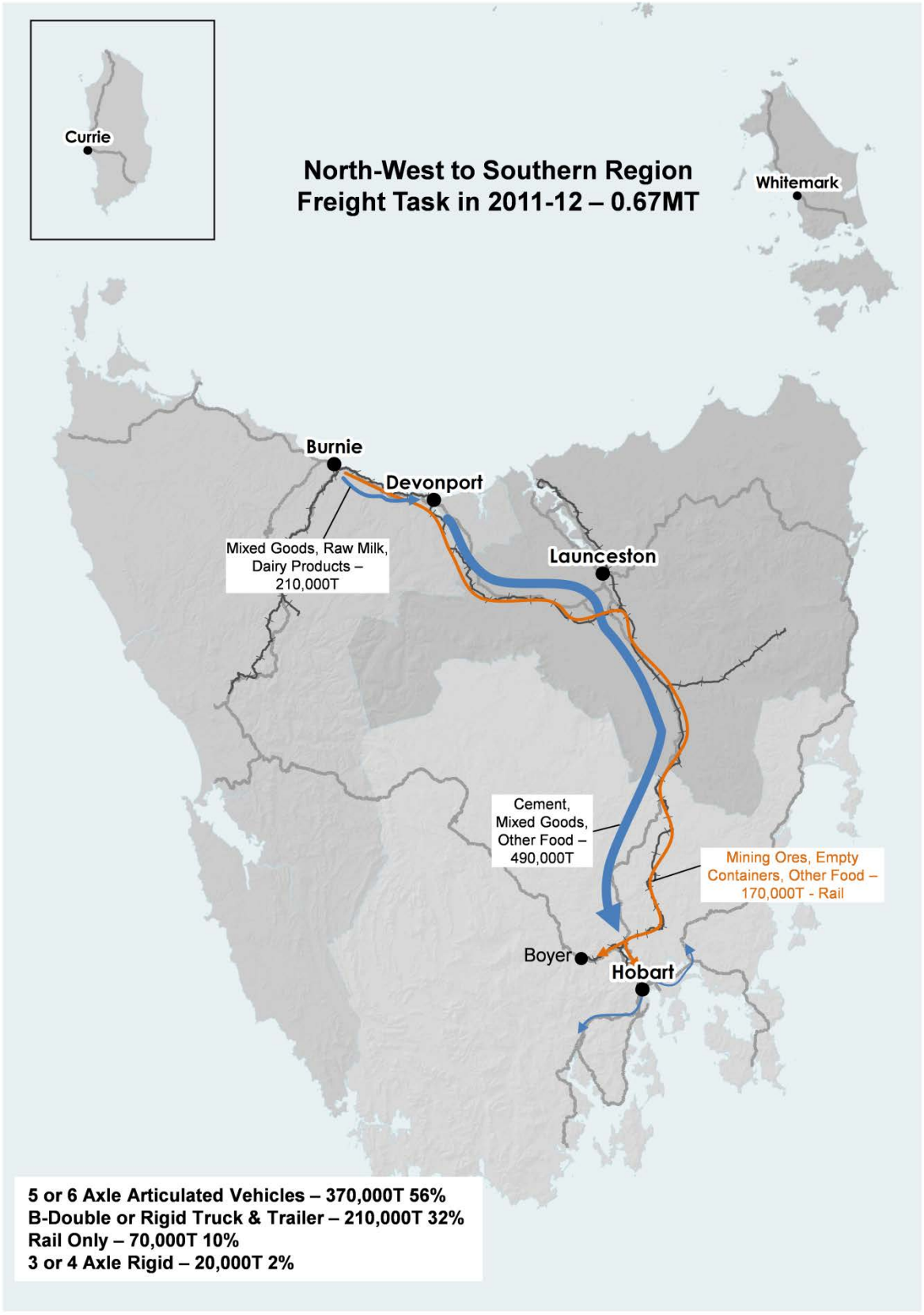
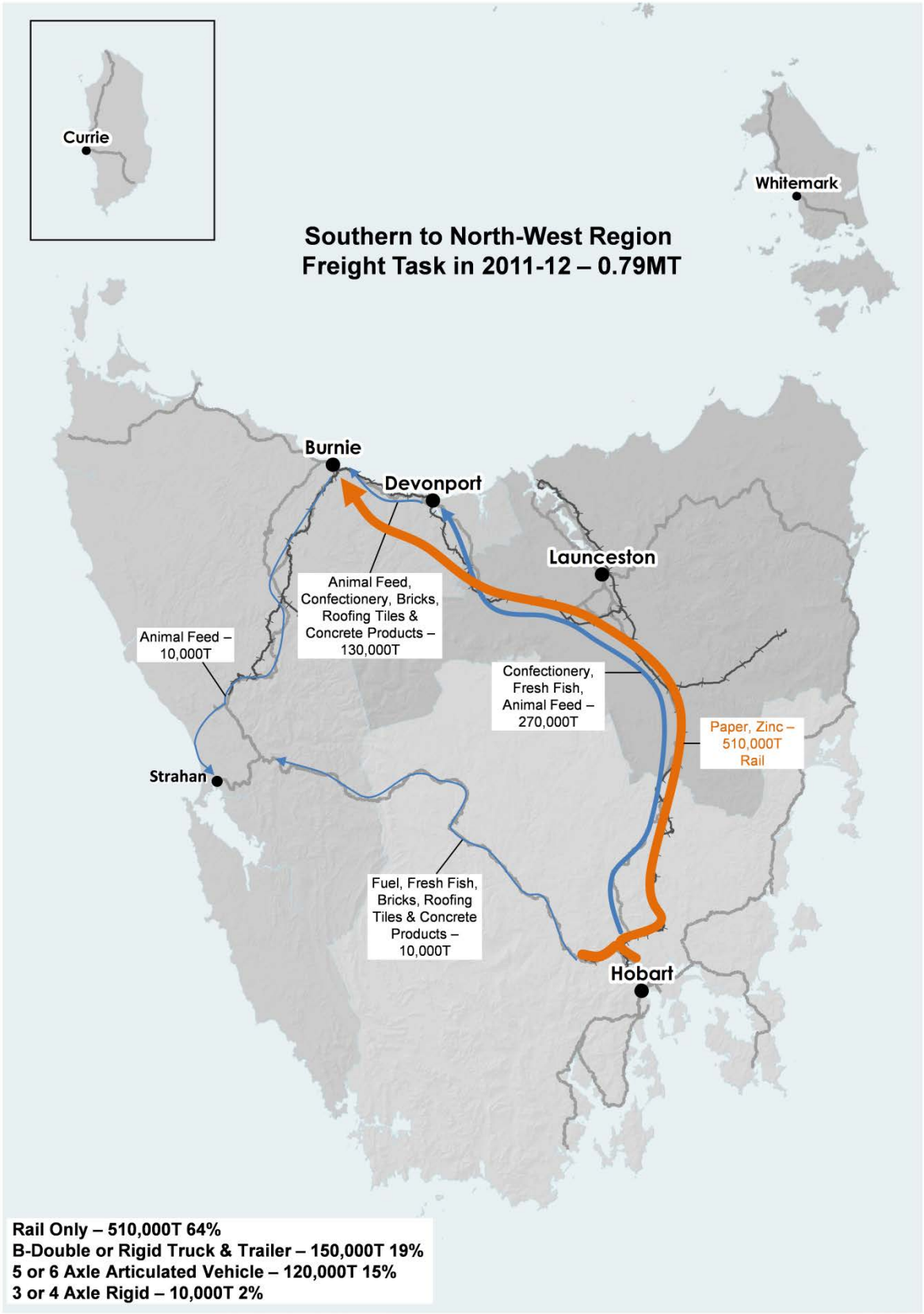


Figure 10 – North-West to Southern Region Inter-regional Freight Task



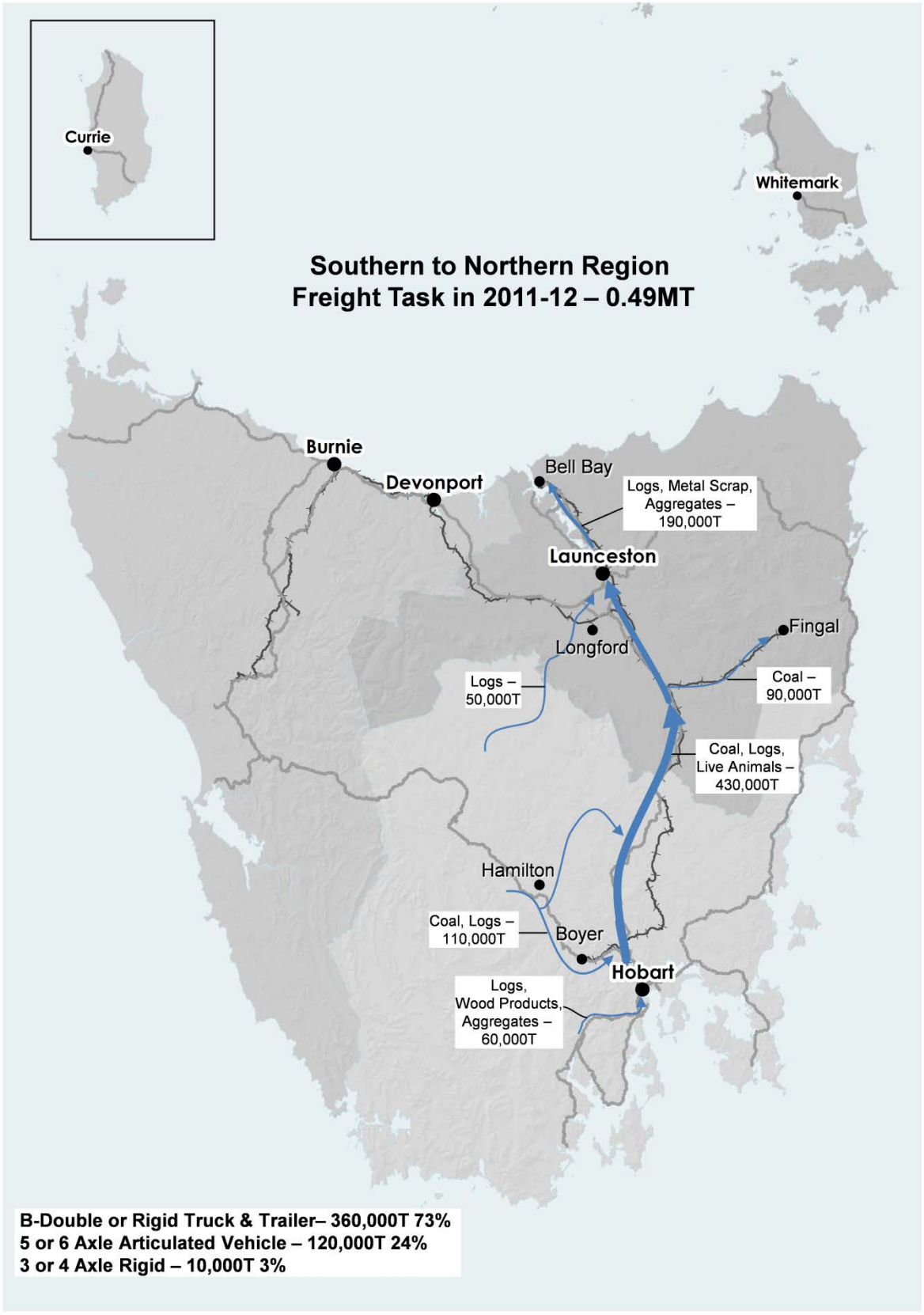
* Rail Only tonnages refer to task that only travelled on rail – some freight tasks travel on both road and rail.

Figure 11 - Southern to North-West Region Inter-regional Freight Task



* Rail Only tonnages refer to task that only travelled on rail – some freight tasks travel on both road and rail.

Figure 12 - Southern to Northern Region Inter-regional Freight Task



Major Freight Demanding Industries

Forestry

The forestry related freight task was approximately 3.4 million tonnes in 2011-12, including both harvested logs and processed wood products such as sawn timber, woodchips and paper. This represents 15% of Tasmania's land freight task, and is a drop from 9.3 million tonnes in 2008-09 when it represented 32% of the State's task. This reduction is greater than the decrease for all commodities transported on the State road and rail network between 2008-09 and 2011-12.

The transport of harvested logs to processing and export sites represented close to 65% of the forestry task (2.2 million tonnes). In 2008-09 the hardwood log tonnage far exceeded softwood logs however, as a consequence of the large reduction in hardwood pulpwood transported for sale as export woodchips, in 2011-12 the softwood and hardwood log task was evenly split.

Close to 75% of the log task was processed or exported from within the region where it was harvested. The southern region produced the highest volume of logs of the three regions (975,000 tonnes), and was also the major destination region for logs (960,000 tonnes) with 82% transported intra-regionally (i.e. within the southern region only). Over half a million tonnes of softwood logs moved to Boyer in 2012 and Newood received over 150,000 tonnes. The closure of the Triabunna woodchip mill in the first half of 2011 resulted in a reduction of almost one million tonnes of logs transported on the Tasman Highway northwards to Triabunna. Around 100,000 tonnes of logs were exported from the Port of Hobart. There is also a significant inter-regional log task (around 160,000 tonnes) from the southern region – mostly from the Central Highlands and Derwent Valley area to the northern region. This closely matches the inter-regional task from the northern and north-western region to the southern region. The major destination for processed forestry products from the south is the Port of Burnie, with around 250,000 tonnes of paper/newsprint (moved by rail). Sawn timber is either sold locally or transported to either the Port of Burnie or Devonport. Veneer produced at Newood is transported to Hobart Port for direct export.

The northern region produced the second highest volume of logs (640,000 tonnes), but also received significant inter-regional inputs (around 400,000 tonnes) from the south and north-west. The main destination for the log task in the northern region is Bell Bay, with around 380,000 tonnes of hardwood logs for chipping prior to export and an additional 380,000 tonnes of softwood logs for processing into sawlogs moving to the Bell Bay area in 2011-12 (Figure 14).

The north-west produced around 550,000 tonnes of logs in 2011-12. Closure of the woodchip mill at Hampshire in 2011 resulted in a large reduction in transport of both hardwood logs and woodchips on Ridgley Main Road between Burnie and Hampshire. Close to 50% of the north-west log task moves inter-regionally, mostly to Bell Bay in the northern region. Smithton and Burnie are also important destinations for logs within the north-west (Figure 13; Figure 14). The Bass Highway is the key road in the north-west for both the inter- and intra-regional forestry freight, including the processed task of veneer and sawn timber travelling from Smithton to the Ports of Burnie and Devonport.

Agriculture

Agricultural freight was a major component of Tasmania's freight task at around 4.7 million tonnes. This represents 21% of the statewide freight task in terms of tonnage (or 25% of tonne-kilometres). The majority of the agricultural freight task involved movements of commodities to and from farms, including vegetables (810,000 tonnes), raw milk (790,000 tonnes), fertilisers and pesticides (480,000 tonnes), live animals (350,000 tonnes) and animal feed (280,000 tonnes).

Major movements of processed agricultural products were beer, ale and stout (410,000 tonnes), dairy products (310,000 tonnes), prepared and preserved vegetables (260,000 tonnes), meat and meat products (140,000 tonnes) and chocolates and confectionery (70,000 tonnes).

The north-west was the key region in the state for agriculture, with 55% (2.6 million tonnes) of the total agriculture task originating there, and a further 20% transported to the north-west from the north and south of the state. Over 80% of the north-west task remains within the region, with the major commodities being raw milk, vegetables, processed vegetables and dairy products. The statistics reflect that the north-west possesses highly productive farmland, several key sites for processing of vegetables, dairy and meat, as well as all major ports used for transport of agricultural products out of Tasmania.

The northern region produced close to 30% of the state agricultural task (1.3 million tonnes). Major commodities transported from farms in this region were raw milk, vegetables and live animals. Over 50% of the northern region's agricultural task was transported to the north-west for processing or to ports for shipment out of the state. The northern region also produced significant tonnages of beer and meat produces from processing sites in Launceston and the Northern Midlands, and was a major source of agricultural lime.

There were lower volumes of agricultural freight in the south (800,000 tonnes), but the region has several production facilities which were important for the production of farm inputs (fertiliser and animal feed), beer, chocolate and dairy products. The major farm outputs were live animals and fresh/chilled fish.

Generally, the highest volumes of agricultural freight move on the state's key inter-regional links, such as the Bass and Midland Highways. Many regional roads are also important for moving agricultural products from farms to processing locations, including Trowutta Road, and Montagu Road in the far north-west, and Devonport Road, Mersey Main Road and Sheffield Road south of Devonport. Key roads in the north are Mole Creek Road and the road network connecting the productive far north-east to the north-west, which includes the Tasman Highway, Bridport Main Road, East Tamar Highway, Frankford Road and Birralee Road. In the southern region key regional roads include the Lyell Highway, Tea Tree Road, Fingerpost Road, Southern Outlet, Huon Highway and Brooker Highway.

Construction Materials

The transport of construction materials made up over a quarter of the state's freight task by tonnage (6.3 million tonnes). This includes aggregates (stone, sand and clay) (5.1 million

tonnes), premixed concrete (1 million tonnes) bricks, tiles and concrete products (160,000 tonnes) and bitumen (70,000 tonnes).

In general, construction materials are transported relatively short distances on road using either a 3-axle rigid truck or a rigid truck and trailer combination. As a consequence there were a high percentage (94%) of intra-regional movements undertaken, and in terms of tonne kilometres the construction materials task makes up 13% of the statewide freight task.

The northern region had the largest construction material task (2.6 million tonnes), followed by the southern region (2.0 million tonnes), with around 1.7 million tonnes moving around the north-west (Figure 16).

The majority of the construction material task is moved by road, and urban roads carry the highest tonnages of the task. Key roads include the Bass Highway in the north-west; the East and West Tamar Highways and Midlands Highway in the north; and the Midland Highway-Brooker Highway corridor, the Tasman Highway, Southern Outlet and Huon Highway in the south.

Consumer Goods

The movement of consumer goods is an important part of the statewide freight task. This Survey recorded 2.0 million tonnes of consumer goods movements on the Tasmanian road and rail network. Commodity classes included in the consumer goods classification were petroleum and diesel, mixed groceries, other food (not elsewhere included), mixed consumer goods, other alcoholic beverages, grain mill products, motor vehicles and parts, and petroleum gases. The majority of the consumer goods are derived from outside Tasmania, with less than 50,000 tonnes shipped out of Tasmania[13].

Petroleum and diesel represents 38% (760,000 tonnes) of the consumer task, with shipments to the major ports of each region. The Port of Hobart (Selfs Point) received the largest volume of diesel and petroleum into the state, and over 90% of this was distributed within the southern region. In the north-west petroleum and diesel was shipped into the Ports of Devonport and Burnie. From the north-west around 46% of petroleum and diesel was transported to sites within this region and over 50% was transported to sites in the northern region. Shipments of petroleum and diesel into the Port of Launceston in the northern region were lower than other regions. Close to 50% of this fuel was transported to sites in southern Tasmania, 30% to the north-west region and only around 20% remained in the northern region.

Most of the remaining consumer goods task was shipped into Burnie and Devonport from interstate or overseas via Melbourne. Approximately 380,000 tonnes or 57% of the north-west non-fuel consumer task is transported to the northern region, a further 180,000 tonnes (27%) to the southern region, and only around 15% transported intra-regionally in the north-west.

[13] Several locally produced goods, such as chocolate and beer have been discussed within the 'agricultural products' grouping for this summary report, but could equally have been considered consumer goods which would have boosted the Tasmanian output of consumer goods.

The consumer goods task generally makes a higher number of trips on the network than other freight, as consumer goods are generally moved from a port to a distribution centre, then onto retailers. The large inter-regional movement of consumer goods from the north-west to northern region is a consequence of the presence of several of the major distribution centres being located in or just south of Launceston[14].

Approximately 500,000 tonnes of the non-fuel consumer goods freight task originated in the northern region, with 46% transported within the northern region, 36% to the south and 18% to the north-west. Of the 130,000 tonnes of the consumer goods task (excluding fuel) originating in the southern region, over 80% are transported to destination sites within the southern region.

Consumer freight is highly reliant on the north-south corridor (including the Bass, Midland and Brooker Highways), with most distribution centres located close to this key north-south corridor. The Bass Highway (between Devonport and Launceston) carries the highest tonnage of consumer goods (820,000 tonnes), with the Midland Highway carrying the second highest volume (420,000 tonnes). From the major distribution centres, consumer goods move on a variety of regional and urban roads to major shopping centres and town centres across the state.

Mining

Tasmania produced approximately 3 million tonnes of metal ores or concentrates in 2011-12, with the vast majority extracted from the West Coast region where most of Tasmania's major mines are located. Most of the mining products were used or processed interstate or overseas, except zinc concentrates, which were processed in Hobart. Two other major metal processing sites are located at Bell Bay. Most metal concentrates processed at the three processing sites in Tasmania were derived from outside the state and shipped to ports adjacent to the processing plants.

Approximately 2.4 million tonnes of ores and concentrates were moved to an export port using a pipeline (Savage River mine site to Port Latta) and 0.9 million tonnes were moved direct from port to processing site by conveyor or private road. Around 1.4 million tonnes of ores and concentrates were transported over the State road or rail land transport network. With approximately 0.8 million tonnes or 60% of concentrates moved a relatively short distance by road (less than 5km) from port to processing site and approximately 350 thousand tonnes carried on rail, the mining task had a limited impact on the State road network. Approximately 60% of the ore and concentrate moving more than 5km on the land freight network was transported by rail.

In 2011-12 Tasmania's metal processors had an output of around 0.8 million tonnes of basic metal products. Most of this output was for export or interstate consumption and over 90% was shipped out of ports in the north or north-west. Processed metal from southern Tasmania was transported a short distance via road to the railhead at Macquarie Point for

[14] When goods are transported via a distribution point those goods will effectively be captured twice in the Freight Survey. A large proportion of consumer goods originating in the northern region fall into this category, having been originally transported from a port in the north-west region to a distribution centre the northern region and finally on to a retailer in the north, south or even back in the north-west.

transport by rail to Burnie Port, with a small proportion exported from the Port of Hobart. Metal production out of Bell Bay (aluminium or ferro-and-silico manganese) was shipped from multiple ports in 2011-12, with around 360,000 tonnes from the Port of Launceston, 100,000 tonnes from the Port of Burnie and 90,000 tonnes from the Port of Devonport.

The majority of Tasmanian coal extraction occurred in the Fingal Valley in 2011-12, supplemented with coal from the Derwent Valley. The processed (washed) coal amounted to over 300,000 tonnes and was all consumed by manufacturing facilities within Tasmania, predominantly in the north-west and to a lesser extent southern Tasmania. Approximately 45% of processed coal was transported using rail.

Tasmania has a major cement manufacturing plant at Railton. Most of the production is transported in bulk via rail to the Port of Devonport then shipped to Victoria and New South Wales.

Figure 13 – Statewide Hardwood and Softwood Log Task

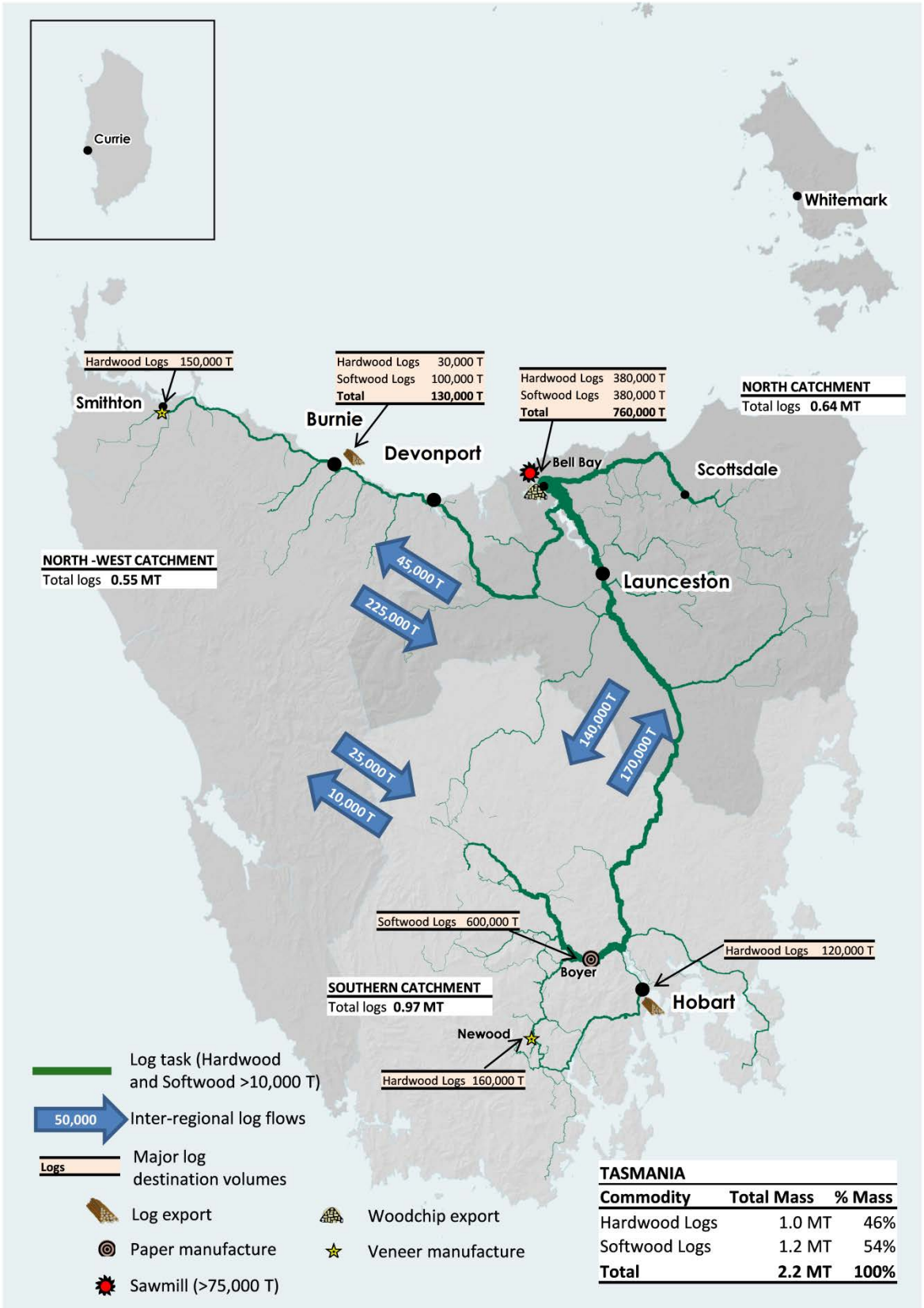


Figure 14 - Statewide Forestry Processing Task

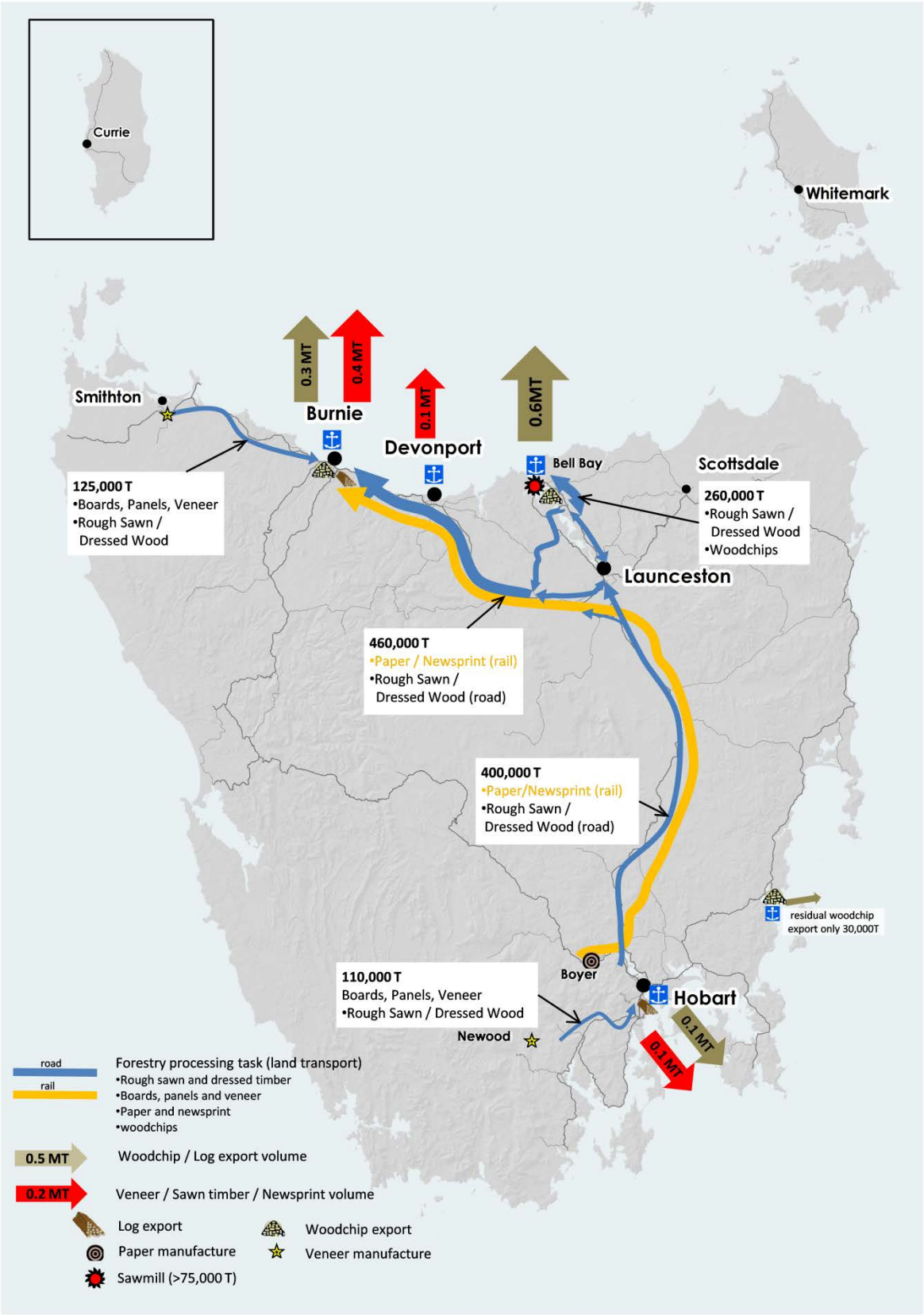


Figure 15 – Statewide Agricultural Freight Task

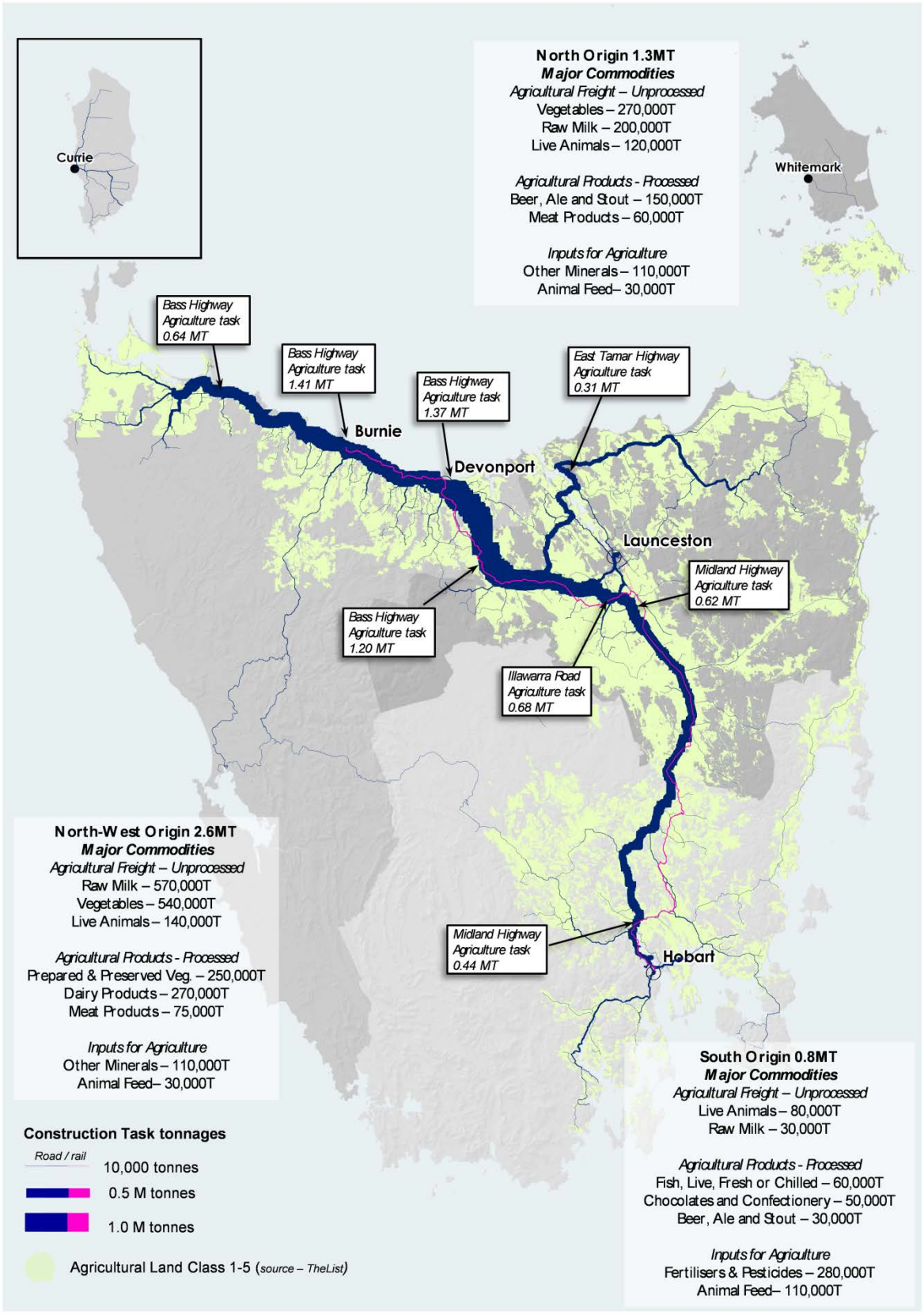


Figure 16 - Statewide Construction Materials Freight Task

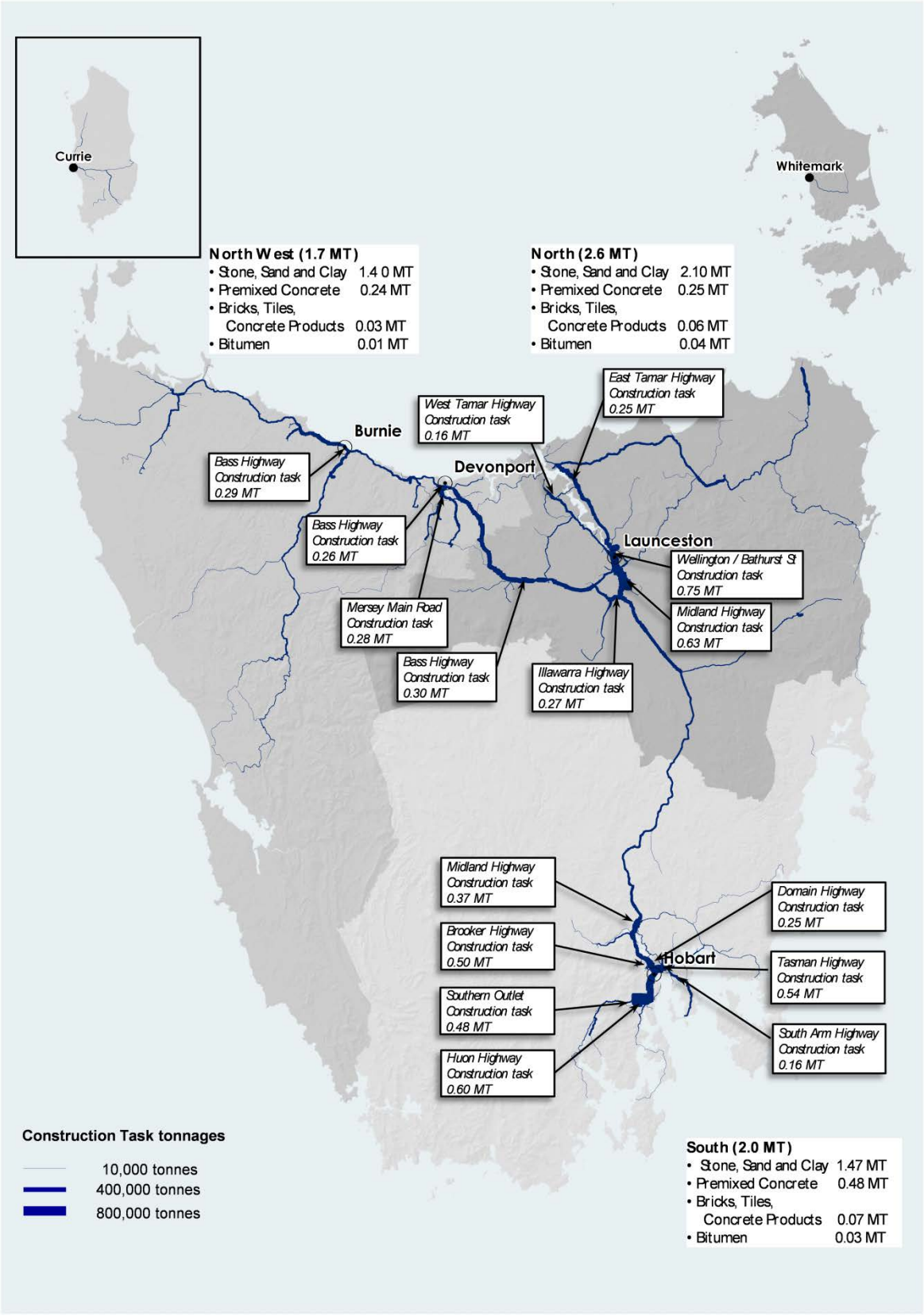


Figure 17 - Statewide Consumer Freight Task

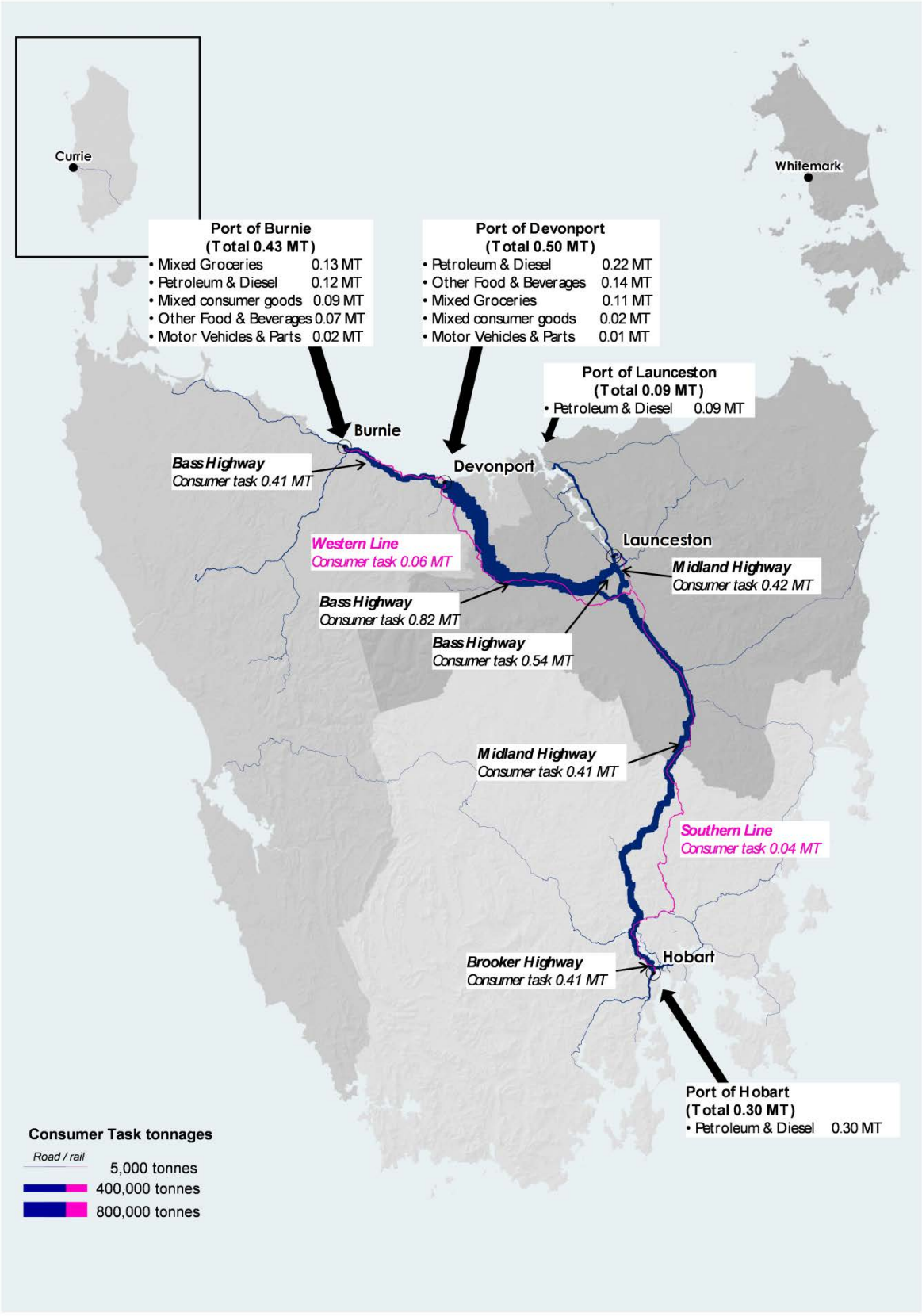
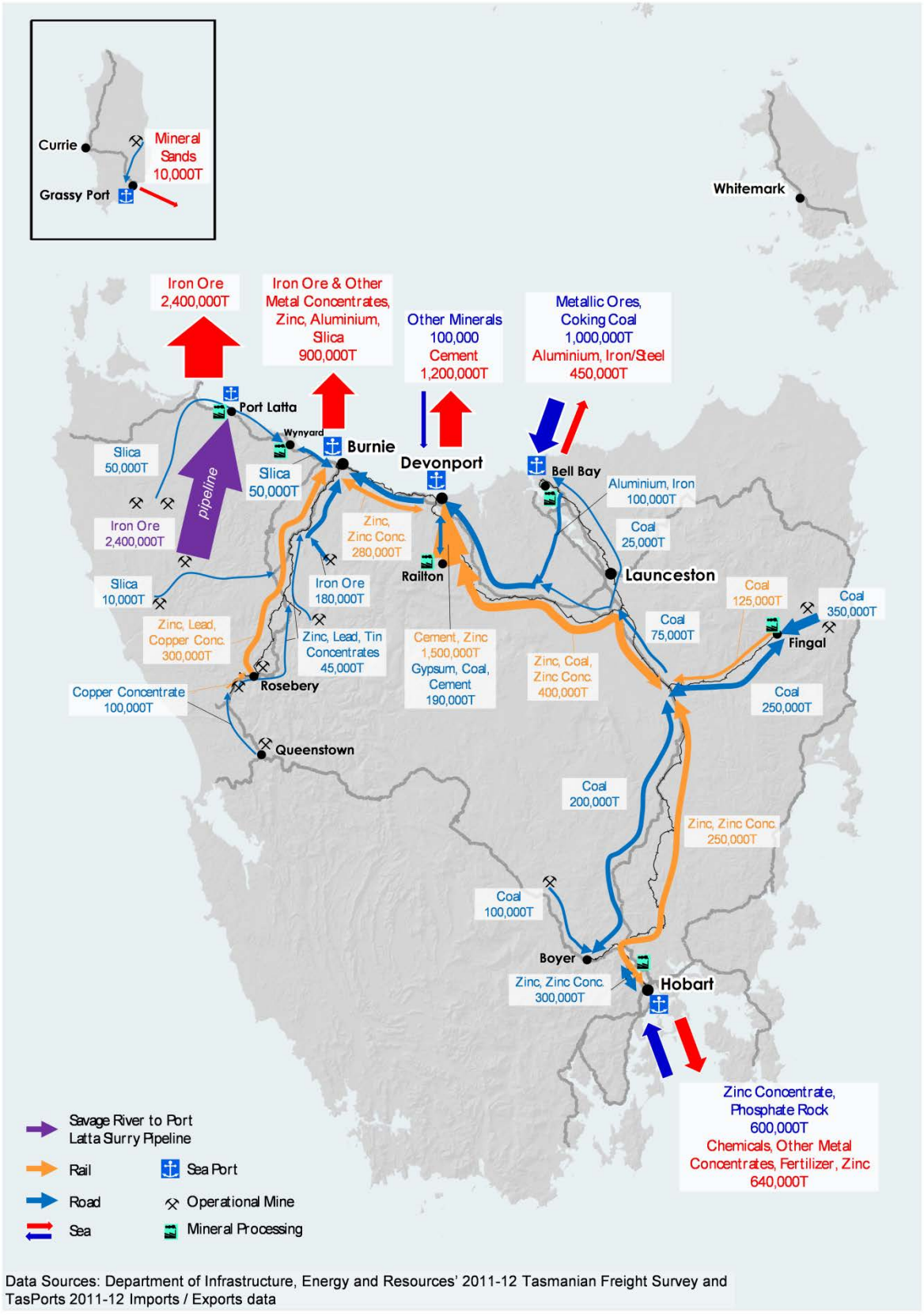


Figure 18 – Statewide Mining Freight Task



Data Sources: Department of Infrastructure, Energy and Resources' 2011-12 Tasmanian Freight Survey and TasPorts 2011-12 Imports / Exports data

Freight Volumes by Mode (including truck type)

Trucks carry the majority of the State's land freight task by tonnage (90%) and in terms of tonne kilometres[15] travelled (82%). Heavier trucks, including B-doubles, rigid truck and trailer combinations and semi-trailers[16], carry a large proportion of the statewide task – 80% of overall tonnage and 78% in terms of tonne kilometres travelled.

Table 2 - Freight Volumes by Vehicle Type

Vehicle Class	Total statewide tonnage	% Total task (by tonnage)	Total statewide tonne kms	% Total task
Rigid Trucks	2,419,000	11%	80 million	4%
GA Articulated Trucks	6,323,000	28%	543 million	29%
B-double or Rigid Truck & Trailer	11,788,000	52%	905 million	49%
Rail (road/rail & rail only)[17]	2,326,000	10%	328 million	18%
Total freight task	***22,655,000***		***1,856 million***	

Figure 19 shows the proportion of the statewide freight task that is carried by B-doubles and rigid truck and trailer combination vehicles. This shows that on Tasmania's major road corridors, including the Bass and Midland Highways, about half of the freight task by mass is carried by these vehicles.

General access articulated trucks carry around 28% of the freight task on major road corridors, but also carry a significant proportion of freight on regionally significant routes, including the East Tamar Highway in the north, and Frankford Road in the north-west (Figure 20).

Rail is an important part of the State's freight system, and while it only carries around 10% of the statewide freight task in terms of volume, it carries about 18% of the total task in terms of tonne kilometres travelled. Freight tasks carried by rail are generally longer distance than those carried by road.

[15] Tonne kilometres are a commonly used measure for freight transport, and one tonne kilometre represents the transport of one tonne of freight over one kilometre.
[16] Many of these vehicles are High Productivity Vehicles (HPVs), that is, specialised truck and trailer combinations that provide the ability to shift more freight per vehicle trip. B-doubles are an example of a high productivity vehicle.
[17] The total includes approximately 201,000T of freight that is carried on both road and rail. To avoid double counting, the total freight task figure does not include the rail component of the road/rail task.

Figure 19 - Tonnes Carried by B-double or Rigid Truck & Trailer Combinations Compared to the Overall Task

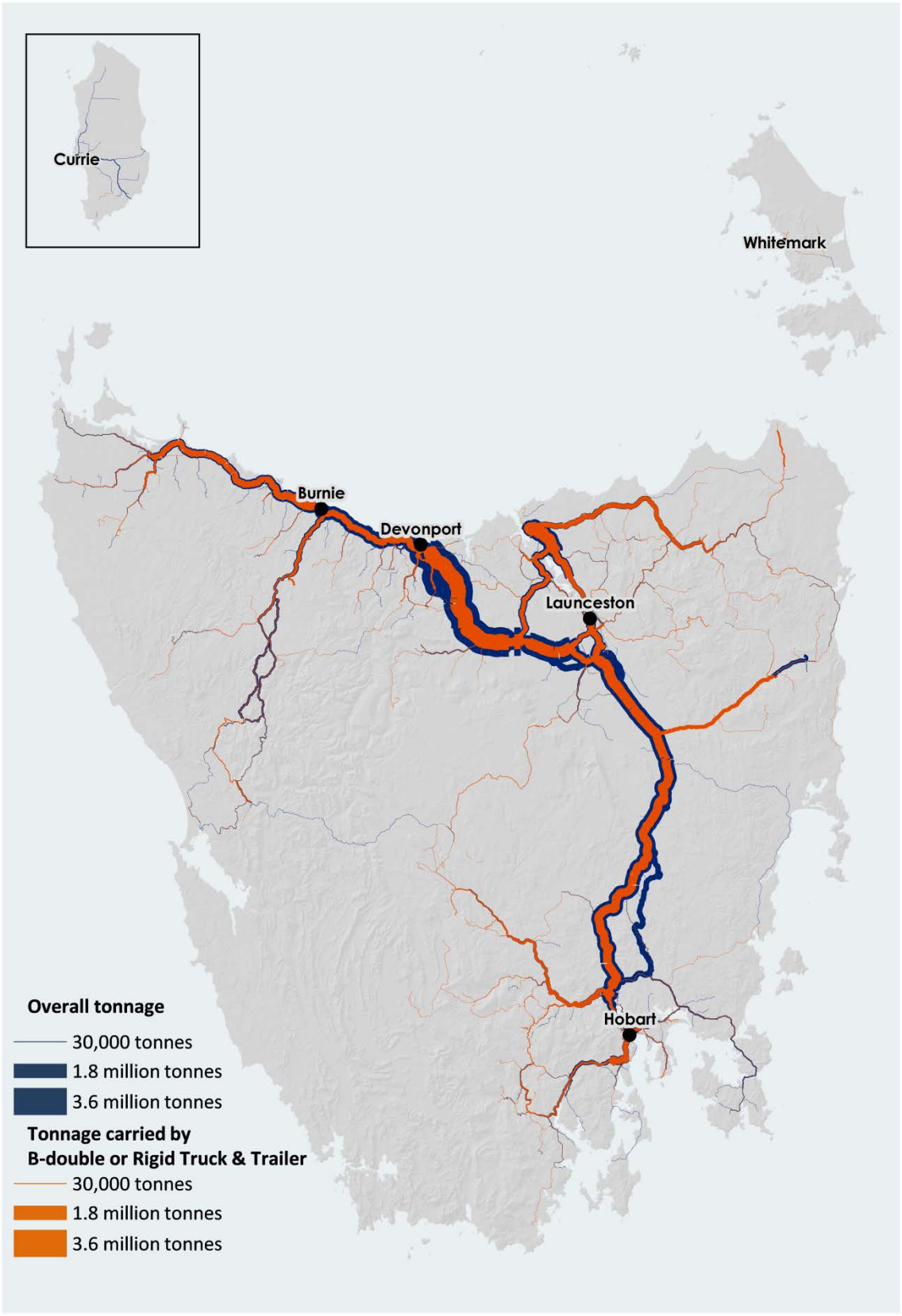
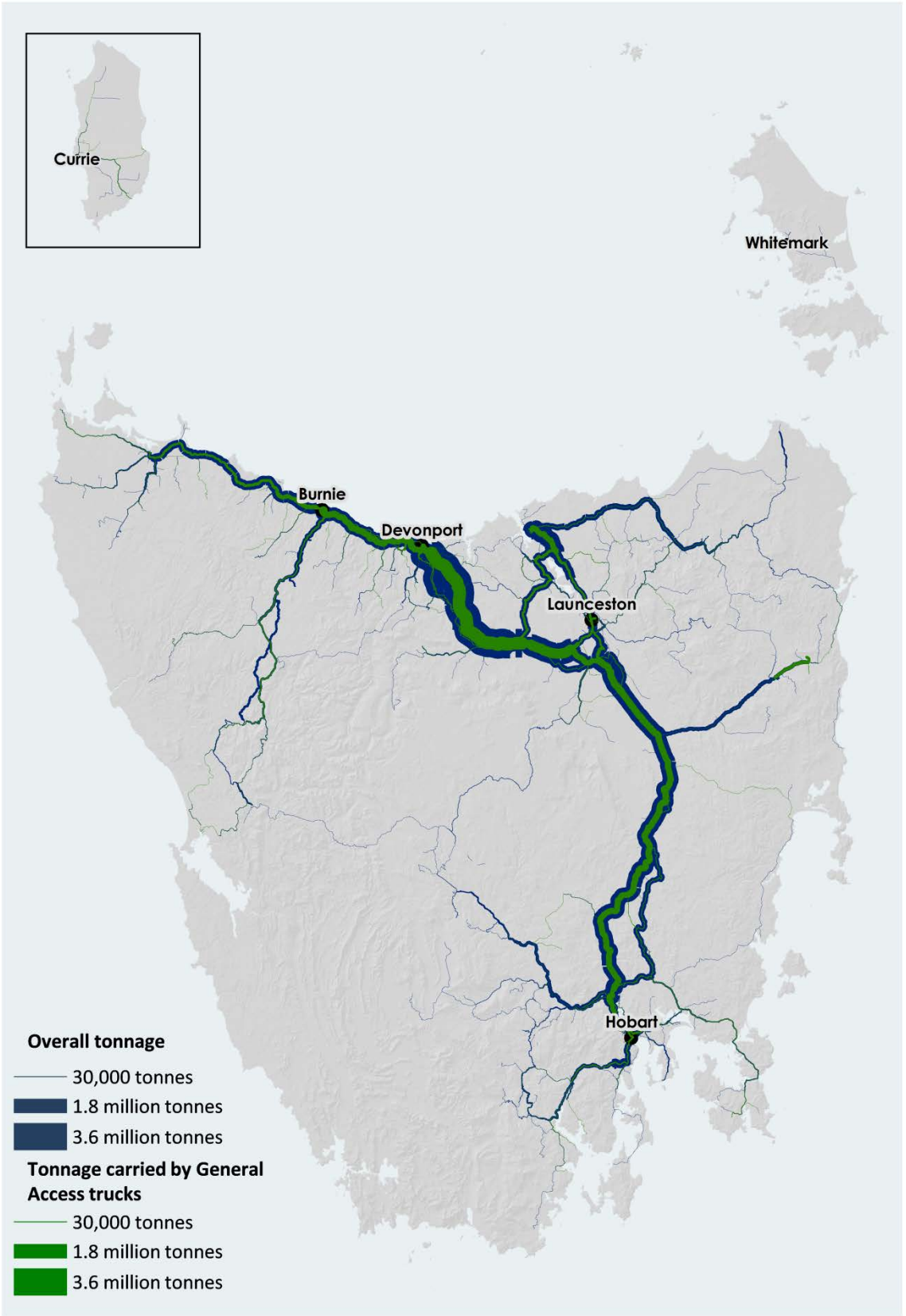


Figure 20 – Tonnes Carried by General Access Trucks Compared to the Overall Task



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