

1. Summary

This report was commissioned by the Taranaki Regional Council to provide evidence of the Port's value to the Taranaki region.

The key findings of the report are:

- Effective sea ports are crucial for the growth of an export focused New Zealand economy as over 99 percent of New Zealand exports and imports by volume go through ports. Port Taranaki is the third largest export port by volume behind Tauranga and Lyttleton, and is the sixth largest exporter by value, behind Tauranga, Auckland, Lyttleton, Napier and Dunedin.
- Port Taranaki plays an important role in the Taranaki region, particularly as the region is relatively isolated and industry is largely export focused. Port Taranaki supports exporters and importers, reducing cost and improving access and options. It also acts as an attractor of export focused, port dependant or transport related businesses.
- In relation to quantifiable economic impacts (total impact):
 - Port operation contributes \$25.5 million to regional GDP and employs 138 FTEs.
 - Port dependent activity contributes \$465 million to regional GDP and employs 1,270 FTEs.
 - Industries that utilise the Port collectively contribute \$2.5 billion to regional GDP and employ 11,700 FTEs.
- Port Taranaki also plays an important role in place-shaping, particularly as the region has developed around the port. The urban environment and transport links are tied to Port Taranaki, meaning it has a key role in shaping and defining the urban form of New Plymouth.
- Being owned by Taranaki Regional Council, the Port has a strong corporate citizenship role and provides an annual dividend to the Council, which supports lower rates.
- Looking ahead, the Port will continue to play a valuable role in generating economic activity and in supporting and enabling industry growth, particularly around the oil and gas sector and primary industries.
- The port can also play an increasingly important role in encouraging and enabling regional economic development through corporate citizenship and place-shaping initiatives.



The Economic Impact of Port Taranaki

1. Summary	3
2. Introduction.....	6
3. Ports as a strategic regional asset.....	8
3.1 Regional role.....	8
3.2 National role.....	9
4. Port Taranaki.....	11
4.1 Background.....	11
4.2 Regional context.....	11
4.3 Port Taranaki throughput volumes.....	12
4.4 Port Taranaki throughput values.....	15
4.5 Major industries.....	18
5. Port Taranaki Quantifiable Economic Impact	19
5.1 Port operations.....	19
5.2 Port-related business activity.....	19
5.3 Port-related sub-groups.....	20
5.4 Summary.....	22
6. Port Taranaki Associated Activity	23
6.1 Total impact of associated activities.....	23
6.2 Oil and gas.....	24
6.3 Chemicals and metal product manufacturing.....	28
6.4 Transport and storage.....	29
6.5 Primary production and food processing.....	30
7. Other Port Benefits	35
7.1 Corporate citizen.....	35
7.2 Regional rates relief and economic development outcomes.....	37
7.3 Economic development opportunities.....	37
8. Appendix	40
8.1 Approach to valuing the economic impact of Port Taranaki.....	40
8.2 EIA comparisons.....	46
8.3 Port trends.....	48



Tables

Table 4.1. Overseas Cargo for year ended March 2012	12
Table 4.2. Exports by value, 2012	16
Table 4.3. Imports by value, 2012	17
Table 4.4. Port Taranaki coastal trade key industries by value	17
Table 5.1. Port expenditure	19
Table 5.2. Port impacts	19
Table 5.3. Port-dependent activity	20
Table 5.4. Impact on port services and agents	20
Table 5.5. Impact on the transport and storage industry	21
Table 5.6. Impact on the fishing and seafood processing industry	21
Table 5.7. Boatbuilding industry economic impact	22
Table 5.8. Economic Impact of Port Taranaki	22
Table 6.1. Port Taranaki associated activity	23
Table 6.2. Summary of oil and gas industry, 2012	25
Table 6.3. Impact of the oil and gas industry on Taranaki Region economy, 2011	25
Table 6.4. Oil and gas companies related to Port Taranaki	26
Table 6.5. Chemical and metal product manufacturing industry summary	28
Table 6.6. Chemical and metal product manufacturing economic impact	28
Table 6.7. Transport and storage industry summary, 2011	29
Table 6.8. Transport and storage industry economic impact	29
Table 6.9. Primary sector summary indicators, 2011	30
Table 6.10. Primary sector economic impact	31
Table 6.11. Dairy processing industry summary	32
Table 6.12. Dairy processing economic impact	32
Table 6.13. Meat processing industry summary	33
Table 6.14. Meat processing economic impact	33
Table 6.15. Meat processing and related companies	34
Table 8.1. Port-related companies	41
Table 8.2. Comparison with earlier Port EIAs	46
Table 8.3. Comparison of EIA with Port of Tauranga and Ports of Auckland	47

Figures

Figure 4.1. Volume of product throughput, 2011	13
Figure 4.2. Volumes by transport type	14
Figure 4.3. Port Taranaki container volumes	15
Figure 4.4. Port Taranaki trade type by volume	15
Figure 7.1. Port Taranaki sponsorship	35
Figure 7.2. Port Taranaki dividends	37
Figure 8.1. Port Taranaki employees	48
Figure 8.2. Port Taranaki revenue	48
Figure 8.3. Port Taranaki operational expenditure	49
Figure 8.4. Port Taranaki capital expenditure	49



2. Introduction

This report has been commissioned by Taranaki Regional Council to quantify Port Taranaki's contribution to the Taranaki economy and to identify and present its strategic value to the economic development of the region.

It updates an earlier (2007) report on the Economic Impact of Port Taranaki, which was commissioned by Venture Taranaki.

Port Taranaki is a key strategic asset for the Taranaki region. It is a major export port in New Zealand and supports export industries including oil and gas, petrochemicals, logging and food processing. This report determines the economic impact of port activity on the region. It identifies economic activity through port operations and port related businesses. It looks at the contribution of industries in the Taranaki that use port services. It also looks at the value of the Port in relation to its role as an infrastructure provider and corporate citizen.

Format

This report is split into eight chapters. The first two chapters provide a summary and introduce the report.

Chapter 3 looks at the strategic role of the port in relation to economic growth and development at a national and a regional level.

Chapter 4 looks at the history and current activity of Port Taranaki.

Chapter 5 determines the quantifiable economic impact of Port Taranaki, in terms of its own business activity and port dependent businesses. These include port operations, port services and agents, transport and storage, fishing and seafood processing and boatbuilding.

Chapter 6 looks at the value of industries that use Port Taranaki, and explores the positive relationship between the Port and those industries. These include oil and gas, chemicals and metal product manufacturing, transport and storage, and primary production and food processing.

Chapter 7 looks at the wider contributions of Port Taranaki to regional economic development, around corporate citizenship, regional rates relief and economic development opportunities.

Chapter 8 contains the Appendix, which includes the approach used to value the Port's activity and the methodology behind the economic impact assessment.

Consultation

BERL met with the following clients and stakeholders to better understand the value and relationships of Port Taranaki.

- Mike Nield Taranaki Regional Council
- Chris Greenough Kotahi (Fonterra)
- Tracy Whelan AWE
- Arun Chaudhari Port Taranaki
- Paul Campbell Port Taranaki
- Glen Murdoch ANZCO Foods
- Stuart Trundle Venture Taranaki
- Harry Duynhoven Mayor, New Plymouth
- Frank Versteeg New Plymouth District Council
- Maureen Crombie New Plymouth District Council
- Anthony Wilson New Plymouth District Council

Photographs

Unless otherwise credited, the photographs used in this report were taken by Pip Guthrie and supplied by Port Taranaki.



3. Ports as a strategic regional asset

Ports play an important role in a regional economy, particularly export focussed regions such as the Taranaki. An efficient port supports exporters and importers, reducing cost and improving access and options. Ports can act as an attractor of export focused, port dependant or transport related businesses.

Ports can also play an important role in place-shaping. Particularly because many cities/settlements have developed around a port, which means that many ports are situated in the heart of built up urban areas, often with excellent road and rail links.

3.1 Regional role

Well-functioning ports are an enabling asset within a regional context. Ports can support business productivity and activity offering the benefit of economies of scale. They act as a hub of economic activity, facilitating the movement of goods produced within the region, but also across the hinterland.

An effective port can keep logistics costs competitive and broaden access to markets. They can also act to retain or attract export based industries that can benefit from being within close proximity to a port. Further, ports can be a crucial part of an industry's production process, for example, the fishing industry and, in the case of Taranaki, the oil and gas industry.

Finally, ports, due to their central location in relation to the main settlement, and their position on prime waterfront property, can often support urban design and place-shaping initiatives that can encourage economic and social wellbeing outcomes.

There are 13 functioning ports in New Zealand and all are majority owned by local government. There are issues around the viability and efficiency of these ports in light of changes in the shipping industry and the functioning of the New Zealand transport network.

The 'Connecting New Zealand' report states that the decision around the role and number of ports in New Zealand will continue to be made by port owners operating in a commercial environment.¹

The report also stated that the government's role should be to ensure the right price signals are in place and land-based infrastructure, such as road and rail, can meet the needs of the freight industry as it evolves.

BERL's view is that the strategic role a port plays in supporting export based businesses and the opportunity to maximise the economic and social benefits to the region is a major case for ownership of ports to remain in the hands of local government.

The Taranaki Region has significant oil and gas reserves and prospects. The oil and gas industry (in fact several industries if we include heavy engineering) has grown up around oil and gas exploration and extraction. A number of key industries rely on Port Taranaki for transport and support services. This is particularly so for the oil and gas

¹ Ministry of Transport (2011). Connecting New Zealand. A Summary of the Government's Policy Direction for Transport.

industry, but also for the primary industries (dairy, meat, forestry and fishing), and some manufacturing industries in the Region. Products from these industries are relatively bulky and/or difficult/costly to transport. Therefore many of them rely on, and benefit greatly from, their ability to transport their products to export markets through Port Taranaki.

Similarly, other bulky imports and exports (for example engineering material and machinery) could become more costly and even uneconomic if they had to be trucked or railed out of or into the Region, which may reduce the desirability of operating a business in the Region.

Finally, ports have an economic and social role in terms of place-shaping and community development. This is largely a legacy of cities and industry activity developing around ports.

3.2 National role

The Government's overall objective for transport is to have an effective, efficient, safe, secure, accessible and resilient transport system that supports the growth of our country's economy, in order to deliver greater prosperity, security and opportunities for all New Zealanders¹

As a nation dependent upon trade, ports are vital to the New Zealand economy. They account for 99.7 percent of New Zealand's exports and 99.5 percent of New Zealand imports. By value, New Zealand's sea ports account for 83.0 percent of exports and 78.4 percent of imports.

Ports also play a role as coastal feeders for container products, as well as in the movement of bulk goods such as cement and fuel.

At a national level, ports form a part of the national transport system, which includes, road, rail, air and sea ports. Road and rail provide the bulk of the domestic system, particularly for freight movement while sea and air are our links to global markets.

Transportation is a key connection between businesses and trade. To ensure New Zealand remains internationally competitive, New Zealand must improve the efficiency and free movement of goods across our transport network, which includes the links between rail, air and sea ports.

There are mounting pressures on business and trade, particularly when freight volume and movements are predicted to double in the next 30 years, fuel prices are expected to remain volatile, and where international responses to issues such as greenhouse gas emissions and transport security can impose additional costs on our exporters.

National Direction for Maritime Transport

The national direction for maritime transport has changed since the National Party took office in 2008.

The current Government's focus for the maritime sector is on port productivity issues, improving public information on the performance of maritime and freight transport, and improving the safety of the maritime sector.

The Productivity Commission released a report in April 2012 which evaluated the factors influencing the accessibility and efficiency of international freight transport services available to New Zealand firms, and opportunities to increase accessibility and efficiency of these services.

While port charges are not a large part of total freight costs, the potential impact of ports on the overall supply chain is larger than this would suggest. Ports can be a choke point, because delays or poor reliability in them can have cascading impacts on later stages in the supply chain. The Commission found that there was room for improvement in terms of improving workplace productivity and strengthening port governance.

To deliver the overall transport objective, the Government is focussing on three key areas: economic growth and productivity; value for money; and road safety.

The government is focussing on improving public information on maritime and freight transport. This will not only help improve investment decisions by port owners, but also improve future landside investment decisions.

In addition to the above, the Government has also commenced a Freight Information Gathering System, which provides information on international and domestic freight flows through New Zealand ports, and the transport modes used for those freight flows to inform future transport decisions.



4. Port Taranaki

Port Taranaki has been a part of Taranaki's development since 1881 when a breakwater was built to provide safe anchorage from the Tasman Sea.

Port Taranaki now offers nine fully serviced berths for a wide variety of cargoes and vessels. The Port can handle all forms of bulk products (liquid and dry), containerised, break-bulk products (general, refrigerated or palletised), and has specialist experience in the handling of heavy lift and project cargoes. All wharves are supported by covered and open storage areas.

Port Taranaki accounts for 9.3 percent of all seaport exports by volume and 6.5 percent by value. Port Taranaki is the third largest export port by volume² behind Tauranga and Lyttleton, and is the sixth largest exporter by value behind Tauranga, Auckland, Lyttleton, Napier and Dunedin.

4.1 Background

The Port has been a key piece of infrastructure in the Taranaki Region since the 1880's. Over the years it has developed in its role as an enabler for industry. It is likely that the Port will remain a key piece of transport infrastructure into the foreseeable future.

Port Taranaki was established in 1875. In 1881, work on a breakwater began to provide safe anchorage from the Tasman Sea. Port Taranaki is now well sheltered by two breakwaters that extend from either end of a naturally curved bay.

Since 1881, Port Taranaki has grown with the Taranaki Region and today handles large volumes of international and coastal cargoes, principally those of the farming, engineering and oil and gas industries. Port Taranaki is also a servicing base for sea transport and related industries and has, since the beginnings of major offshore and onshore oil exploration in the 1960s, been a provider of related maritime, support and heavy lift services.

4.2 Regional context

To put the Port's impact into context, in 2011 the Taranaki region had 47,990 FTEs, generating \$6.03 billion in GDP through 14,522 businesses.³ The Taranaki region accounts for 2.6 percent of New Zealand's employment, 3.1 percent of New Zealand's GDP and 2.9 percent of New Zealand businesses.

The geographic location of the Taranaki and the nature of industry in the Region make the Port vital to the regional economy. The Region is relatively isolated, being halfway down the West Coast of the North Island. Road and rail infrastructure are adequate, but cannot cater for significant increases in traffic volumes.

² Note that this does not include coastal shipping.

³ Information is obtained from the BERL Regional Database which is based on Statistics New Zealand data for the year ending March 2011.

Port Taranaki is located on the Western Seaboard of the North Island. It is linked to the Central North Island food bowl through SH3, the Marton - New Plymouth Line (MNPL), and to a number of New Zealand ports through coastal shipping.

SH3 is one of the eight national highways in New Zealand serving the West Coast of the North Island linking to SH1 in Hamilton and SH2 in Woodville. SH3 runs through New Plymouth to Port Taranaki.

MNPL is a secondary main line railway that links the Taranaki and Manawatu-Wanganui regions that connects to the North Island Main Trunk Railway (NIMT) at Marton. Port Taranaki is the end of the line for both SH3 and the MNPL.

It is currently serviced by the major shipping lines and goods can be delivered through the Port to most countries in the world. Coastal shipping services are provided by Pacifica, which calls into New Plymouth once a week. Bulk items such as fuel and cement are also delivered via coastal shipping.

4.3 Port Taranaki throughput volumes

Port Taranaki is one of 14 major sea ports in New Zealand, which together account for 99.7 percent of New Zealand's exports and 99.5 percent of New Zealand imports. By value, New Zealand's sea ports account for 83.0 percent of exports and 78.4 percent of imports. The total tonnes and value of cargo exported and imported for the year ending 2012 is shown in Table 4.1 below.

Table 4.1. Overseas Cargo for year ended March 2012

Overseas Cargo Year ended March 2012	Exports		Imports	
	Tonnes	\$m	Tonnes	\$m
Tauranga	9,660,143	13,503	3,483,817	5,196
Christchurch (Lyttelton)	4,084,458	5,415	1,492,151	3,260
Port Taranaki	2,968,798	2,760	671,643	342
Napier	2,649,431	3,627	474,405	574
Whangarei	2,614,038	716	6,045,267	6,084
Auckland	2,299,356	7,805	3,711,202	16,824
Dunedin (Port Chalmers)	1,733,070	4,257	267,513	426
Gisborne	1,709,596	262	0	0
Nelson	986,775	612	157,992	243
Wellington	1,065,554	1,022	1,190,375	2,739
Invercargill (Bluff)	950,574	1,263	1,406,216	753
Picton	495,708	57	0	0
Timaru	463,822	857	354,156	294
ALL SEAPORTS	31,905,287	42,451	19,336,634	36,940
ALL CARGO UNLOADED	32,008,202	51,125	19,432,417	47,108

Source: Statistics New Zealand Overseas Cargo Statistics

Port Taranaki transports over 3.6 million tonnes of goods annually, with a value of over \$3.1 billion dollars. By value, it is New Zealand's fourth largest port in terms of exports. The majority of exports are in oil and gas, dairy and meat products. These exports are in line with the most significant industries in the Taranaki Region.

Port Taranaki accounts for 9.3 percent of all seaport exports by volume and 6.5 percent by value. Port Taranaki is the third largest export port by volume behind Tauranga and Lyttleton, and is the sixth largest exporter by value behind Tauranga, Auckland, Lyttleton, Napier and Dunedin.⁴

By volume, Port Taranaki accounts for 3.5 percent of seaport imports and less than 0.9 percent of imports by value. Port Taranaki is the eighth largest importer by volume and the ninth largest importer by value.

Port Taranaki is predominantly an export port. The Port exports over four times more than it imports in terms of volume and its exports are valued at more than eight times greater than its imports.

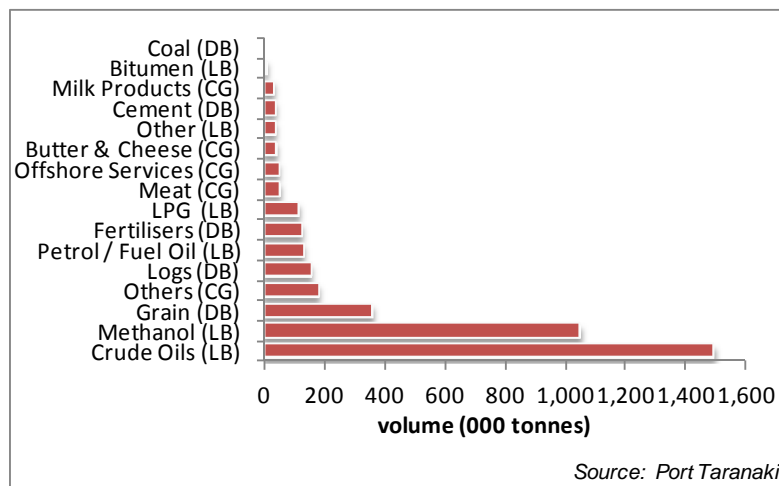
There is a wide range of cargo that goes through New Zealand ports, from general container goods, bulk cargo and bulk liquids. Some generalisations can be drawn on the types of cargo each Port handles. The main container ports are the Ports of Auckland and Port Tauranga.

The main ports for bulk cargo are spread throughout New Zealand depending on the places of production for exports and the main markets for imports. Port Tauranga, Northport, CentrePort and Port Otago are major log handling ports, while the Ports of Auckland handles vehicle imports and Port Taranaki handles oil and other bulk liquid exports.⁵

In 2011, the Port handled around 3.89 million freight tonnes of goods.⁶ Over two thirds of this freight is Liquid Bulk products related to the oil and gas industry.

Figure 4.1 shows the volumes of the major products going through Port Taranaki.

Figure 4.1. Volume of product throughput, 2011



Liquid Bulk products make up the top two products by volume. Crude oil is by far the most significant product transported through Port Taranaki, followed by methanol. Other container goods and meat are the most significant container goods and grain and logs are the main Dry Bulk products.

⁴ Note that this does not include coastal shipping.

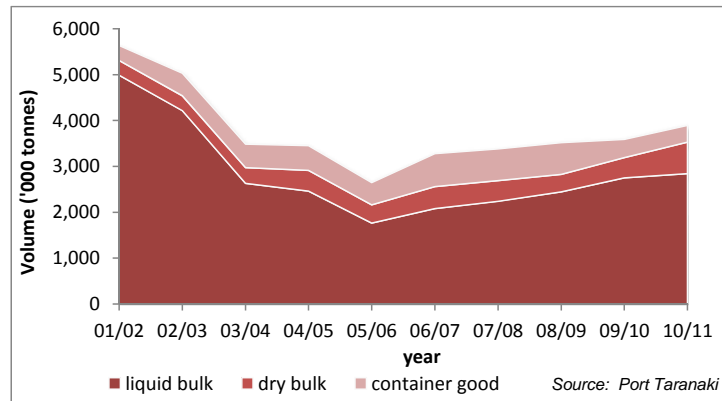
⁵ The New Zealand Productivity Commission (2012). International freight transport services inquiry. Accessed from: [http://www.productivity.govt.nz/sites/default/files/FINAL percent20International percent20Freight percent20Transport percent20Services percent20PDF percent20with percent20covers_1_0.pdf](http://www.productivity.govt.nz/sites/default/files/FINAL%20International%20Freight%20Transport%20Services%20PDF%20with%20covers_1_0.pdf).

⁶ Volume data includes coastal shipping, whereas the value data in the previous section does not.

Liquid Bulk is generally made up of the import, export and coastal movement of fuels (crude oils, methanol, and petrol/fuel oil) related to the energy sector. Dry Bulk products are generally related to imports to the primary sector (grains and fertilisers), the coastal shipping of cement, and the export of logs for the forestry sector.

Figure 4.2 shows the total freight (by volume) through Port Taranaki between 2001/02 and 2010/11. Note that throughput includes coastal shipping, which is not included in the import and export data. The figure also shows the volume breakdown by Liquid Bulk, Dry Bulk and Container Goods.

Figure 4.2. Volumes by transport type



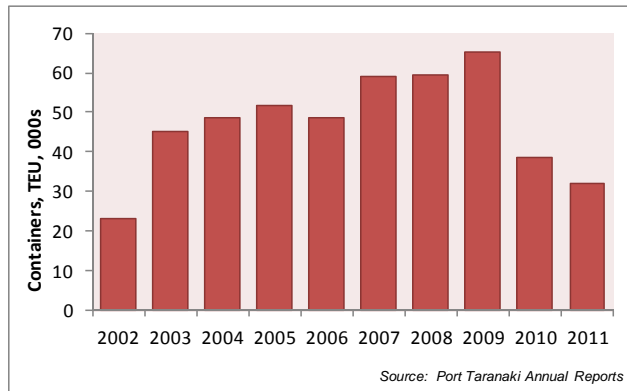
There has been increasing volume throughput since 2005/06, and the expectation is for volumes to continue to increase over the next few years.

Liquid Bulk volumes make up the largest group of products through the Port and tend to drive the change in volume. Liquid Bulk declined from 2001/02 to 2005/06. Since then, volumes have gradually increased. While growing, rapidly since 2005/06, Liquid Bulk volumes as a share of total volume throughput have declined from 88 percent of total port volumes in 2001/02 to 73 percent in 2010/11. There is strong upside to Liquid Bulk volumes in the future, with greater volumes of methanol and Liquid Petroleum Gas (LPG) likely as a result of increased oil production and gas supply.

Dry Bulk volumes have increased from six percent in 2001/02 to 18 percent in 2011/12. Driving this growth has been increased volumes of fertilisers, animal feeds and log exports. Looking ahead, dry bulk is expected to grow further with export shipments of coal to Asia expected from an arrangement with Bathurst Resources in Westport.

The volume of Container Goods has increased from six percent in 2001/02 to a high of 22 percent of export volumes in 2006/07. Since then, however, container volumes have dropped and in 2010/11 accounted for around nine percent of total throughput. This can also be seen in Figure 4.3 below.

Figure 4.3. Port Taranaki container volumes



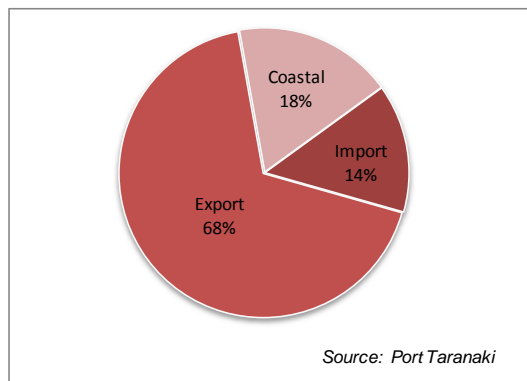
Overall container volumes have increased over the past ten years. Since 2002, container volumes increased steadily until 2009, from 23,098 to 65,168. There was a severe drop-off in container volumes in the last two years. Container volumes are almost half those experienced in 2009, with container volumes dropping from 65,168 in 2009 to 32,000 in 2011.

The recent decline in container volumes stems from Fonterra’s decision to rail two-thirds of its Whareroa plant product to Auckland and Tauranga. The Taranaki-based plant is Fonterra’s second biggest processing plant in New Zealand, with raw milk being railed into Taranaki from the Hawke’s Bay and the Manawatu-Whanganui regions.⁷

4.4 Port Taranaki throughput values

Freight throughput is either for export out of New Zealand, import into New Zealand, or coastal trade to or from another port in New Zealand. Figure 4.4 provides a breakdown of type of trade (imports, exports and coastal) for the June 2011 year.

Figure 4.4. Port Taranaki trade type by volume



⁷ Information from Fonterra’s website

<http://www.fonterra.com/wps/wcm/connect/fonterra.com/fonterra.com/home/fonterra+world+map?cats=Newpercent20Zealand,FlashMapContent®ion=NZ>.

Around 3.89 million freight tonnes went through Port Taranaki in 2011. Exports accounted for over two-thirds of the volume of freight through Port Taranaki. Coastal trade accounted for around 18 percent of freight volume, with Imports accounting for the remaining 14 percent.

Export volumes were dominated by Liquid Bulk products - crude oils (56 percent) and methanol (38 percent). Container goods were the other main export, with other container goods accounting for 2 percent of exports.

Imports were largely made up of Dry Bulk products – grains (64 percent), and fertilisers (22 percent). A further 6 percent of imports were petrol and fuel oil, while other Container Goods made up 6 percent of imports.

Coastal trade volume was largely the movement of logs (23 percent); LPG (14 percent); offshore services (14 percent); and petrol/fuel oil (14 percent). The other major product moved through coastal shipping was cement.

4.4.1 Export values

Table 4.2 shows the main exports by value by industry that go through Port Taranaki and the corresponding value of total exports in New Zealand. Each commodity's share of Port Taranaki exports and Port Taranaki's proportion of New Zealand exports in that industry are also shown.

Table 4.2. Exports by value, 2012

Exports (yr to March 2012)	Port Taranaki	% of Region	New Zealand	% of National
Oil and Gas industry	\$2,110,784,591	85.2%	\$2,446,090,275	86.3%
Dairy Industry	\$176,521,797	7.1%	\$13,261,613,538	1.3%
Meat Industry	\$27,478,633	1.1%	\$6,242,668,877	0.4%
Engineering Industry	\$21,103,500	0.9%	\$2,172,941,374	1.0%
Other Industries	\$141,776,981	5.7%	\$8,825,054,491	1.6%
Total	\$2,477,665,502		\$32,948,368,555	7.5%

Source: Statistics New Zealand

Port Taranaki exports by value amounted to around \$2.5 billion in 2012.⁸ The top three commodity groups (at the two-digit NZHSC level) account for around 93.4 percent of all port exports by value. The three groups are oil and gas (85.2 percent), dairy (7.1 percent) and meat (1.1 percent).

Port Taranaki accounts for 7.5 percent of all exports out of New Zealand by value. However, it accounts for 86 percent of all oil and gas exports by value.

4.4.2 Import values

Table 4.3 shows the top three imports by commodity type that go through Port Taranaki and by the proportion of Port Taranaki's imports. The table also shows the total imports for that commodity for New Zealand, which allows us to see the relative proportion that goes through Port Taranaki.

⁸ Note that export values only relate to the final port from which goods are exported. For example if dairy products were shipped from Port Taranaki to Port of Auckland then exported from there, the export value would be captured by Auckland. With the rationalisation of the major shipping lines in New Zealand, it is likely that the values identified for several ports will reduce.

Table 4.3. Imports by value, 2012

Imports (yr to March 2012)	Port Taranaki	% of Region	New Zealand	% of National
Other Industries	\$118,256,115	29.7%	\$17,545,513,546	0.7%
Fertiliser and Chemical Industry	\$112,548,827	28.3%	\$2,615,723,843	4.3%
Feed Industry	\$103,422,044	26.0%	\$925,754,973	11.2%
Engineering Industry	\$52,877,575	13.3%	\$7,551,398,448	0.7%
Oil and Gas Industry	\$11,003,728	2.8%	\$8,753,648,694	0.1%
Total	\$398,108,289		\$37,392,039,504	1.1%

Source: Statistics New Zealand

Close to \$400 million worth of goods were imported through Port Taranaki in 2012. The Port accounted for 1.1 percent of all merchandise imports into New Zealand.

The fertiliser and chemical industry accounted for around \$113 million, or 28 percent of imports. This was followed by the feed industry which accounted for 26 percent of all imports into Port Taranaki. The Taranaki region is one of the largest dairy areas in New Zealand which places high demand on feed imports. Feed imports into Port Taranaki account for 11 percent of all feed imported into New Zealand.

The engineering industry accounted for 13 percent of imports and was followed by the oil and gas industry which accounted for a further three percent of all imports. The remaining 30 percent is spread across various other industries.

Coastal shipping values

The export and import analysis above does not take into account the total activity through Port Taranaki. There is a large amount of activity moving goods around the country (coastal freight). Moreover, Port Taranaki has a unique role servicing the oil and gas industry, which has a major presence in the Region.

Coastal trade is mainly in Liquid Bulk cargo, consisting of 82 percent of LPG throughput, 75 percent of petrol/fuel oil throughput, 9 percent of other Liquid Bulk throughput and 40 percent of crude oil throughput. All logs and cement through the Port is 100 percent coastally shipped and also there is the servicing of the oil and gas rigs in the Taranaki basin.

Table 4.4. Port Taranaki coastal trade key industries by value

Coastal Trade Values (yr to March 2012)	Port Taranaki	% of Region
Oil and Gas industry	\$202,851,510	92.9%
Logging Industry	\$15,399,589	7.1%
Total	\$218,251,100	100.0%

Source: Port Taranaki and BERL

As there is no official value of coastal trade available, we have estimated it based on coastal volumes. Liquid Bulk items make up 35.4 percent of coastal trade. The volume of coastal trade of Liquid Bulk is 9.6 percent of the volume of Liquid Bulk exports. The export value of oil and gas is \$2.1 billion.

Taking a straight proportion, we estimate that coastal trade in Liquid Bulk is worth around \$203 million. A further 14 percent of coastal volume is logging. Based on the average grade domestic log price, coastal shipping of logging is worth approximately \$15.4 million.⁹

A further 14 percent is in other container goods. It is not possible to estimate the value of these other container goods as there is no breakdown of these goods.

This gives an order of magnitude of approximately \$218.3 million, which is consistent with the value of exports and imports when related to volumes and type of goods transported.

4.5 Major industries

From the volumes, values and types of goods going through the Port, we can see that there are some significant industries that utilise the services provided by the Port for the export and import of their goods and raw materials.

The main industry catered for, as we have alluded to throughout this report, is the oil and gas industry. Other major export industries are in food processing, mainly dairy and meat; and increasingly forestry. On the import side, significant industries are the fertiliser and chemicals, and engineering industries.

The industries that utilise the Port are the producers of the main commodities in the Taranaki Region. While the Port does not directly increase activity in the industries, the Port has an impact in terms of costs and/or production mix. There is a possibility that businesses operating at the margins may shift out, go out of business, or may not consider Taranaki as a place to locate a business, if the Port services were not available.

⁹ Ministry for Primary Industries (2012). Indicative New Zealand Radiata Pine Log Prices. Accessed: <http://www.mpi.govt.nz/news-resources/statistics-forecasting/forestry/indicative-new-zealand-radiata-pine-log-prices.aspx>.



5. Port Taranaki Quantifiable Economic Impact

Port Taranaki directly affects economic activity in the Taranaki region in two ways – operational expenditures by the Port and expenditure by businesses that are dependent on the Port for their existence.

Combining economic activity from the Port and Port related industry operations, you could argue that Port Taranaki contributes \$490 million to regional GDP and is responsible for the employment of 1,600 FTEs.

5.1 Port operations

The Port is a significant business in the Taranaki Region in its own right. In 2011, the Port employed 121 people, spent over \$35.4 million and paid a dividend to the Regional Council in the order of close to \$1.9 million.

Table 5.1 summarises Port Taranaki's expenditure for 2012.

Table 5.1. Port expenditure

Port Expenditure (2010/11)	
Payments to Suppliers and Employees	\$29,193,399
Capital Expenditure	\$3,780,000
Dividends to Council	\$1,850,000
Total	\$34,823,399

Source: Port Taranaki

In 2011/12, Port Taranaki had total expenditure of \$34.8 million. This was made up of around \$29.2 million in operational expenditure, \$3.8 million in capital expenditure and dividends of \$1.9 million.

From this expenditure, the total impact on output, GDP and employment was determined using multiplier analysis. The economic impact generated from Port operations is shown in Table 5.2.

Table 5.2. Port impacts

Port Operations	Direct	Total
Output	\$34,823,399	\$52,479,631
Value Added (GDP)	\$16,826,200	\$25,522,625
Employment (FTEs)	141	319

Source: BERL

Based on total expenditure in 2010/11 of \$34.8 million, Port Taranaki generated GDP of \$16.8 million and employed 141 FTEs in the Taranaki region. Adding the indirect and induced effects, GDP increased to \$25.5 million and employment increased to 349 FTEs. Further information on Port activity and trends is presented in the Appendix.

5.2 Port-related business activity

Port related business activity refers to economic activity where the Port is a key enabler of that activity. Without the Port, it is unlikely that the activity would occur.



Port-related activity can be broken down into four subgroups – Port services and agents, transport and storage, fishing industry and boatbuilding and repair industry. Detail on each of these subgroups is included in the Appendix.

The economic impact generated by Port-related activity is presented in Table 5.3.

Table 5.3. Port-dependent activity

Port Related Activity	Direct	Total
Output	\$644,303,931	\$951,398,525
Value Added (GDP)	\$312,337,855	\$464,827,878
Employment (FTEs)	646	1,272

Source: BERL

We estimate that Port-related activity generated output of \$644 million, contributing around \$312 million to GDP and employing 646 FTEs.

Adding indirect and induced benefits increased output to \$951 million, GDP to \$465 million and employment to 1,272 FTEs.

5.3 Port-related sub-groups

5.3.1 Port services and agents

Port services and agents provide shipping related services through the Port. They include shipping agents, stevedoring, chandlers, custom brokers and port servicing companies. Many of these companies provide offshore services to vessels and rigs in the oil and gas industry as well as general shipping clients.

Table 5.4 shows the economic impact of the Port on shipping agents and businesses that provide port services.

Table 5.4. Impact on port services and agents

Port Services	Direct	Total
Output	\$527,329,867	\$780,448,203
Value Added (GDP)	\$263,664,934	\$390,224,102
Employment (FTEs)	391	911
Agents	Direct	Total
Output	\$1,112,236	\$1,679,477
Value Added (GDP)	\$556,118	\$856,422
Employment (FTEs)	6	8

Source: BERL

The impact on port services is significant, with the majority of business directly attributable to the Port. Agents, on the other hand, generate activity through other avenues as well as the Port.

Port services derive \$527 million in activity via the Port. This activity generates \$264 million in regional GDP, directly employing 391 FTEs. Adding indirect and induced effects increases contribution to GDP to \$390 million and employment to 911.

The Port's impact on agents in the Region is \$1.1 million, which generates \$556 million in regional GDP and employs six FTEs. Adding indirect and induced effects increases contribution to regional GDP to \$1.7 million and employment to eight FTEs.

5.3.2 Transport and storage

The transport and storage industry has close relations to the Port, particularly in moving goods in and out of the Port. The Port therefore has a major impact on activity across a number of businesses in the transport and storage industry. Activity generated through the Port ranges from 100 percent (for some storage industries) down to less than five percent for some transport businesses.

Table 5.5 shows the economic impact of the Port on the transport and storage industry.

Table 5.5. Impact on the transport and storage industry

Road Transport	Direct	Total
Output	\$24,056,379	\$39,452,461
Value Added (GDP)	\$9,622,551	\$16,839,465
Employment (FTEs)	64	95

Storage	Direct	Total
Output	\$6,105,574	\$8,547,804
Value Added (GDP)	\$2,442,230	\$3,663,344
Employment (FTEs)	9	13

Source: BERL

The Port is directly responsible for \$24.1 million output in the transport industry. This activity generates \$9.6 million in regional GDP, directly employing 64 FTEs. Adding indirect and induced effects increases contribution to GDP to \$16.8 million and employment to 95.

The Port is also directly responsible for \$6.1 million output in the storage industry. This activity generates \$2.4 million in regional GDP, directly employing 9 FTEs. Adding indirect and induced effects increases contribution to GDP to \$3.6 million and employment to 13.

5.3.3 Fishing and Seafood processing industry

The fishing and seafood processing industry in the Taranaki Region is relatively small. The fishing and seafood processing industry in the Taranaki Region is reliant on the Port for docking and offloading catch. While not a significant industry (as there is only one processor in the Taranaki), it still makes a contribution to the regional economy.

Table 5.6 shows the economic impact of the Port on the fishing and seafood industry.

Table 5.6. Impact on the fishing and seafood processing industry

Fishing and Seafood Processing	Direct	Total
Output	\$17,949,442	\$25,742,469
Value Added (GDP)	\$5,564,327	\$9,037,388
Employment (FTEs)	16	27

Source: BERL

The fishing and seafood processing industry has direct expenditure of \$17.9 million. This contributes \$5.5 million to regional GDP and employs 16 FTEs. Adding indirect and induced effects, the contribution to GDP increases to around \$9.0 million and employs 27 FTEs.

5.3.4 Boatbuilding industry

Taranaki has a fledgling boatbuilding industry, based around Fitzroy Yachts, which operates on Port land and uses Port facilities to launch their boats. The BERL regional database shows that the boatbuilding industry employs 147 FTEs in three businesses in the Region.

Because of the inter-relationship between the Port and Fitzroy Yachts, we suggest that the industry, Fitzroy Yachts in particular, is reliant on the Port for its continued existence in the Taranaki Region.

There is a very strong chance, that if the Port services were not available to Fitzroy Yachts, that it would move its operations to an area that had the necessary infrastructure to support its activities.

Table 5.7 shows the economic impact of the boatbuilding industry in the Taranaki Region.

Table 5.7. Boatbuilding industry economic impact

Boatbuilding and Repair	Direct	Total
Output	\$67,750,433	\$95,528,111
Value Added (GDP)	\$30,487,695	\$44,207,158
Employment (FTEs)	160	218

Source: BERL

In 2012, it was estimated that the boatbuilding and repair sector generated direct output of around \$67.8 million. This resulted in a \$30 million contribution to GDP and employment of 160 FTEs.

Adding indirect and induced effects to the analysis generates around \$44 million in GDP and 218 FTEs.

5.4 Summary

The economic impact of the Port on the Taranaki Region is calculated by combining the Port and the Port related business activity. This is shown in Table 5.8 below.

Table 5.8. Economic Impact of Port Taranaki

Port Economic Impact	Direct	Total
Output	\$679,127,330	\$1,003,878,155
Value Added (GDP)	\$329,164,054	\$490,350,504
Employment (FTEs)	787	1,592

Source: BERL

Combining direct Port expenditure and the expenditure of industries dependent on the Port suggests gross output of \$680 million. This results in direct GDP and employment of \$329 million and 790 FTEs.

Applying regional multipliers to identify indirect and induced impacts results in total regional GDP of \$490 million and 1,600 FTEs employed.

6. Port Taranaki Associated Activity

For a number of industries in the Taranaki, port engagement is a crucial component of their activity.

The key industries that benefit from having port infrastructure are the oil and gas, chemicals, primary production and processing, and engineering industries.

These industries contribute \$2.5 billion to the Taranaki regional economy and are responsible for employing 11,700 FTEs.

6.1 Total impact of associated activities

Since the last economic impact assessment in 2007, the composition of throughput has changed. The oil and gas sector continues to be a major client and accounts for a significant proportion of activity through the Port. Growth out of Methanex could see the chemicals industry become bigger users, and forestry (logs) is currently growing at a rapid rate.

Conversely, container volumes have dropped dramatically with the consolidation of export activity by Fonterra out of Auckland and Tauranga. This has coincided with the loss of a key major shipping service, which has had a flow on effect to other exporters who have diversified risk by moving a portion of goods out of other ports in the North Island.

However, the Port still remains a viable export option and continues to support and be supported by the major industries in the region. As long as container services are provided on a reliable basis, the port provides competition to rail and ensures that transport prices remain competitive.

Transport, logistics and storage companies continue to benefit from Port activity, particularly related to the movement of oil and gas, fertilisers, logs and feed stock.

The combined output, value added and employment for the oil and gas, primary, dairy, meat, fertiliser and chemical, and engineering industries in the Taranaki Region are shown in Table 6.1.

Table 6.1. Port Taranaki associated activity

Associated Industries	Direct
Output	\$7,752,184,947
Value Added (GDP)	\$2,496,510,554
Employment (FTEs)	11,668

Source: BERL

The major industries using the Port account for around \$7.8 billion in output, generating \$2.5 billion in GDP and employing 11,668 FTEs in the Taranaki Region.

We can therefore infer that Port-associated industries account for 24.3 percent of the Region's employment and 41.4 percent of its GDP.

6.2 Oil and gas

Taranaki is the focus region for New Zealand's oil and gas production. There are approximately 20 oil and gas fields in production in the Taranaki region, the key ones being Pohokura, Kupe, Maui, Maari, Turangi, Tui, Kowhai, Kapuni, and Mangahewa.¹⁰

The oil and gas industry is the most significant industry in the Taranaki region. In 2012, the oil and gas industry contributed \$1.4 billion to the Taranaki Region's GDP, which is close to 23 percent of total regional GDP. The oil and gas industry employed 1,043 FTEs in 107 businesses.

Taranaki is also the focus province for oil and gas production in New Zealand. It has the advantage over other developing frontier oil and gas regions (such as Southland) of having established support services and good prospectivity available to developers.¹¹

Port Taranaki and the petroleum (oil, natural gas, LPG, etc.) and the petrochemical (methanol, urea, formaldehyde resins, etc.) industries have been inextricably linked for a long time. The Alpha well, one of the first in the world and probably the first in the former British Empire, was drilled by hand at Moturoa, New Plymouth, in 1865. The first New Zealand oil refinery was built in New Plymouth in 1913.



¹⁰ Venture Taranaki (2010). The Wealth Beneath Our Feet.

¹¹ Arete Consulting Ltd June 2006.

Since then, Port Taranaki has grown on the back of significant oil projects, Kapuni in the 60's and Maui in the 70's. The Port's Newton King Tanker Terminal was built specifically to service the oil and gas industry and also has storage facilities designed specifically for the oil and gas industry.

Table 6.2. Summary of oil and gas industry, 2012

	FTEs	GDP (\$m)	AUTs	Location Quotient
Oil and Gas				
Oil and Gas Extraction	473	1,339	20	30.99
Exploration and Other Mining Support Services	569	42	87	11.84
Total Oil and Gas	1,043	1,381	107	
<i>% of region activity</i>	<i>2.2%</i>	<i>22.9%</i>	<i>0.7%</i>	

Source: BERL regional database

Of more interest is the intensity of the oil and gas industry in the Taranaki Region when compared to all of New Zealand. Looking at location quotients, the oil and gas exploration industry has employment in the Taranaki Region that is 31 times higher than the national average.¹² For services to mining, the location quotient for the Taranaki Region is almost 12 times higher. This suggests the importance of the oil and gas industry within the Taranaki Region, but also the importance of the Taranaki Region to the national oil and gas industry.

Table 6.3 shows the economic impact of the oil and gas industry on the Taranaki Region's economy.

Table 6.3. Impact of the oil and gas industry on Taranaki Region economy, 2011

Oil and Gas	Direct	Total
Output	\$2,818,463,384	\$4,171,325,808
Value Added (GDP)	\$1,381,047,058	\$2,016,328,705
Employment (FTEs)	1,043	9,112

Source: BERL

Directly, the oil and gas industry generated \$2.8 billion in output, adding around \$1.4 billion to the Taranaki Region's GDP and employing 1,043 FTEs. Including indirect and induced impacts, the oil and gas industry contributed \$2.0 billion to regional GDP and employed 9,112 FTEs.

The Port plays a vital role in facilitating the operations of the oil and gas industries. It provides key infrastructure that enables the oil and gas industry to operate and has developed specialist services and infrastructure to meet their demands. This is reflected in Port throughput. In relation to the Port:

¹² The location quotient is a ratio that helps analysts examine the relative concentration of industry employment in a particular area relative to another larger, or base, area. In this case, New Zealand is the base area. The measure provides a potentially valuable insight into a local labour market's industry structure, relative to the larger base area.

When the ratio is larger than 1.0, the percentage of those employed in the industry locally is higher than the percentage of those employed in the larger area. Likewise, when the ratio is smaller than 1.0, the percentage of people employed in this industry locally is smaller than the larger area.

- 73 percent of volume throughput is oil and gas related.
- 85 percent of exports by value are oil and gas.
- Close to three percent of imports by value are oil and gas related.
- The Port accounts for close to 87 percent of all oil and gas exports out of New Zealand.

All onshore liquids go through Port Taranaki as does all Maui condensate. Most offshore oil is shipped to its destination directly from the platform through an FPSO (Floating Production Storage and Offloading vessel), while offshore gas is piped through to onshore production stations. However, all offshore platforms are serviced through Port Taranaki.

We suggest that Port Taranaki and the oil and gas industry are inextricably linked. The oil and gas industry increases the viability of Port Taranaki and the Port ensures the viability of the oil and gas industry.

Table 6.4. Oil and gas companies related to Port Taranaki

AWE	OMV
BP Oil (NZ) Ltd	Origin Energy Ltd
Chevron	Shell (Petroleum Mining) Company Ltd
Coastal Oil Logistics Greymouth Petroleum Ltd	Shell Todd Oil Services
Liquigas Ltd	TAG Oil Ltd
Methanex New Zealand Ltd	Todd Energy
New Zealand Oil Services Ltd	Z Energy Ltd

Source: Port Taranaki

The Taranaki Region has developed the infrastructure, industry and experience to support the oil and gas industry. Some of this infrastructure, such as the Maui Pipeline, cannot be replicated outside the Region without considerable effort and cost.



6.3 Chemicals and metal product manufacturing

The other main industries that tend to utilise port services are the chemical and metal product manufacturing industries. In 2012, around \$112.5 million of fertiliser and chemical product was shipped through the Port. In 2012 there was also \$52.7 million of metal products transported through Port Taranaki. Further, the metal product manufacturing industry does a significant amount of work for the oil and gas industry.

Major businesses in the chemicals industry include Ravensdown Fertilisers, Methanex and Ballance Agrinutrients

Table 6.5 shows the economic activity in these two industries in 2011.

Table 6.5. Chemical and metal product manufacturing industry summary

	FTEs	GDP (\$m)	AUTs	Location Quotient
Chemical Manufacturing	406	72	14	
<i>% of region activity</i>	<i>0.8%</i>	<i>1.2%</i>	<i>0.1%</i>	
Metal Product Manufacturing	1,521	161	123	2.22
<i>% of region activity</i>	<i>3.2%</i>	<i>2.7%</i>	<i>0.8%</i>	

Source: BERL regional database

Chemical manufacturing employed 406 FTEs and produced \$72 million in GDP through 14 businesses. Metal product manufacturing employed more than 1,500 FTEs and produced GDP of \$161 million through 123 businesses. Together, these two industries account for 4.0 percent of regional employment, 3.9 percent of regional GDP, and 0.9 percent of the region's businesses.

Engineering firms in the Taranaki evolved from performing some of New Zealand's largest heavy engineering projects which are primarily linked the growth of major oil, gas and petrochemical developments. The importance of the metal product manufacturing industry to the region is represented by its location quotient of 2.22, which suggests that relative to national employment, the Taranaki has over twice as much of its employment in that industry.

Table 6.6 presents the economic impact of the chemical and metal product manufacturing industries on the regional economy in 2011.

Table 6.6. Chemical and metal product manufacturing economic impact

Chemical Manufacturing	Direct	Total
Output	\$193,281,042.93	\$278,324,702
Value Added (GDP)	\$71,513,986	\$111,561,817.98
Employment (FTEs)	406	792
Metal Product Manufacturing	Direct	Total
Output	\$446,697,861.40	\$674,513,771
Value Added (GDP)	\$160,811,230	\$258,906,080
Employment (FTEs)	1,521	2,236

Source: BERL

Chemical manufacturing in the Taranaki Region is estimated to directly produce \$193.3 million in output, with a resultant contribution to GDP of \$71.5 million and employment of 406 FTEs. Metal product manufacturing has a direct output of \$446.7 million, producing GDP of \$160.8 million and 1,521 FTEs.

Adding indirect and induced effects to the equation, the two industries collectively produce \$952.8 million in output, resulting in a GDP contribution of \$370.5 million and the employment of 3,028 FTEs.

6.4 Transport and storage

Transport and storage companies benefit from transporting the goods imported and exported through the Port. Because of the Port, these goods do not need to be delivered to another Port (Auckland, Wellington or Tauranga) and those goods exported out of and imported into the Region do not need to be trucked or, to a lesser extent, railed.

Port activity supports a significant proportion of many transport companies' business in the Region. It is unlikely that these companies would generate the same level of business if all goods were exported or imported through another port.

Table 6.7 gives an overview of the transport and storage industry in Taranaki in 2011.

Table 6.7. Transport and storage industry summary, 2011

	FTEs	GDP (\$m)	AUTs	Location Quotient
Transport and Storage				
Road Freight Transport	1,003	109	129	1.54
Warehousing and Storage Services	79	9	18	
Total Transport and Storage	1,081	118	147	
<i>% of region activity</i>	<i>2.3%</i>	<i>2.0%</i>	<i>1.0%</i>	

Source: BERL regional database

In 2011, the road freight transport and storage industry employed 1,003 FTEs, generating \$109 million through 129 businesses. The industry directly accounted for 2.3 percent of employment, 2.0 percent of GDP and 1.0 percent of businesses in the Taranaki Region.

The transport and storage industry in the Taranaki Region has a higher location quotient than nationally at 1.54. This suggests that more than fifty percent more of the Region's population are employed in the industry compared to nationally. Table 6.8 shows the economic impact of the transport and storage industry on the Taranaki Region's economy.

Table 6.8. Transport and storage industry economic impact

Transport and Storage	Direct	Total
Output	\$295,042,878	\$478,728,384
Value Added (GDP)	\$118,017,151	\$204,387,541
Employment (FTEs)	1,081	1,611

Source: BERL

The transport and storage industry had output of \$295 million, generating \$118 million in regional GDP and employing 1,081 FTEs. Adding indirect and induced effects increased output to \$479 million, GDP to \$204 million and employment to 1,611 FTEs.

6.5 Primary production and food processing

A change in circumstances has seen the volume of primary exports through Port Taranaki drop. This is largely a result of a change in Fonterra's freight strategy, which has seen two-thirds of their product freighted out of Taranaki by rail rather than going out direct through Port Taranaki.

This has had a flow on effect to the other primary sectors, namely meat, where the risk around certainty of service has seen a larger portion of their exports also leave Taranaki by rail rather than directly via the Port.

Primary production and food processing is a significant grouping of industries in the Taranaki region. According to the BERL Regional Database for 2011, the primary and food processing sectors in Taranaki Region together accounted for \$765 million in GDP, which is equivalent to 12.7 percent of total regional GDP. The GDP split is almost 50/50 between primary production and food processing.

A summary of the primary production and food processing sectors is presented in Table 6.9.

Table 6.9. Primary sector summary indicators, 2011

	FTEs	GDP (\$m)	AUTs	Location Quotient
Primary Sector				
Agriculture	3,098	296	3,953	1.53
Aquaculture	3	0	2	0.17
Forestry and Logging	28	15	175	0.22
Fishing Hunting and Trapping	10	1	23	0.25
Total Primary	3,140	313	4,153	
<i>% of region activity</i>	<i>6.5%</i>	<i>5.2%</i>	<i>28.6%</i>	
Food Product Manufacturing	4,477	452	71	2.36
<i>% of region activity</i>	<i>9.3%</i>	<i>7.5%</i>	<i>0.5%</i>	
Meat Processing	1,428	251	15	
<i>% of region activity</i>	<i>3.0%</i>	<i>4.2%</i>	<i>0.1%</i>	
Dairy Processing	2,026	356	10	
<i>% of region activity</i>	<i>4.2%</i>	<i>5.9%</i>	<i>0.1%</i>	
Total Primary and Food Processing	7,617	765	4,224	
<i>% of region activity</i>	<i>15.9%</i>	<i>12.7%</i>	<i>29.1%</i>	

Source: BERL regional database

In 2011, the primary production and food processing industries employed 7,617 FTEs, which is 16 percent of the Taranaki Region's total employment. These industries accounted for 4,224 businesses, around 29 percent of all businesses in the Taranaki Region.

Within these sectors, primary industries account for 41 percent of FTE employment but 98 percent of business units (mainly farms). There were 3,098 FTEs employed in the agriculture sector (farmers or horticulturalists of some description) in 4,153 businesses. The agriculture sector has a location quotient of close to 1.53, suggesting that the industry is quite significant to the Region.

The Taranaki region has a large food processing sector. The food processing sector employs 4,477 FTEs, 9.3 percent of the Region's employment, within 71 food processing business units. Their relative importance is apparent when you consider the location quotient of 2.36, which suggests that in the Taranaki Region, the food processing industry employs over twice as many people relative to national levels.

Meat and dairy processing account for most of the food processing in the Region. Over 77 percent of both employment and GDP in the food product manufacturing sector are in the meat and dairy processing industries.

Traditionally, the majority of Port throughput of primary products has been dairy and meat related. More recently, however, there has been increasing throughput of logs. As shown in Table 6.9, forestry is a relatively small industry in Taranaki. The majority of the increase in log throughput has been from the Whanganui district.

6.5.1 Primary production

The primary production sector has some involvement in the Port in terms of imported grains and use of fertilisers. However, its main relation is through the processing of its products (especially milk and meat), where a large proportion is exported through Port Taranaki.

The region alone accounts for 15 percent of all herds (1,744) and 11 percent of all cows (486,915) in New Zealand.¹³

The primary sector also includes forestry and logging, and commercial fishing. The Port has seen a large increase in log export throughput and is making space to enable increased activity in this area. Commercial fishing and seafood processing, while relatively small, is inextricably linked to the Port and is included in the Port-related impacts in section 5.2.

The primary sector accounts for 6.5 percent of regional employment, 5.2 percent of regional GDP and 28.6 percent of regional businesses. Of most importance is the agriculture sector with over 98.7 percent of employment in the primary sector and a location quotient of 1.53.

The economic impact of the primary sector on the Taranaki region is presented in Table 6.10.

Table 6.10. Primary sector economic impact

Primary Sector	Direct	Total
Output	841,999,755	1,305,091,344
Value Added (GDP)	312,685,743	546,948,546
Employment (FTEs)	3,140	4,821

Source: BERL

The primary sector had output of \$841 million, generating \$312 million in regional GDP and employing 3,140 FTEs. Including indirect and induced effects the primary sector employs 4,821 FTEs generating \$547 million in regional GDP from economic activity of over \$1.3 billion.

¹³ New Zealand Dairy Statistics 2010-2011 (Livestock Improvement Corporation).

6.5.2 Dairy processing

Dairy processing is a major industry in the Taranaki Region. Fonterra Co-operative Limited is the major processing business in the dairy industry in the Taranaki. Fonterra operates three major plants. The Whareroa (near Hawera) milk processing plant which boasts the Southern Hemisphere's largest milk processing operation, the cheese factory at Eltham (Central Taranaki) under the Fonterra Brands banner, and the by-products manufacturing plant at Kapuni (South Taranaki), where lactose-based products are made.

Table 6.11 shows the significance of the dairy processing industry in the Taranaki region.

Table 6.11. Dairy processing industry summary

	FTEs	GDP (\$m)	AUTs
Dairy Processing	2,026	356	10
<i>% of region activity</i>	<i>4.2%</i>	<i>5.9%</i>	<i>0.1%</i>

Source: BERL regional database

In the Taranaki Region, there are 2,026 FTEs employed in dairy processing across ten major business units. Dairy processing contributes around \$356 million to regional GDP, which is 5.9 percent of total regional GDP.

Investment decisions in dairy processing are based on costs. Dairy factory locations are based on the proximity to their main resource – dairy farms. Therefore, the Port is unlikely to have much economic impact on the dairy industry other than in terms of reducing transportation costs for production in the Region.

The dairy processing industry exports the vast majority of its production, primarily by sea. However, there has been a major transition in how Fonterra moves its goods to market. Port Taranaki used to be a major supplier of transportation services to the industry up until 2010, where Fonterra began railing product to larger facilities in Auckland and Tauranga and to access more regular and favourable shipping services.

Fonterra still exports some products through Port Taranaki. However, less than two percent of all New Zealand dairy exports are through Port Taranaki. In relation to the industry's interaction with the Port:

- Milk products and butter/cheese accounts for around 22 percent of the Port's container throughput by volume.
- Only 7.1 percent of Port Taranaki exports by value are dairy related.

Table 6.12 shows the economic impact of the dairy processing sector on the Taranaki economy in 2011.

Table 6.12. Dairy processing economic impact

Dairy Processing	Direct	Total
Output	\$2,739,384,072	\$4,930,891,330
Value Added (GDP)	\$356,119,929	\$1,353,255,732
Employment (FTEs)	2,026	10,842

Source: BERL

The dairy processing sector generates output of around \$2.7 billion. This contributes around \$356 million to the Taranaki Region's GDP and employs over 2,000 FTEs. Adding indirect and induced impacts, the dairy processing sector generates around \$4.9 billion of economic activity, around \$1.3 billion in regional GDP and employs almost 11,000 FTEs.



6.5.3 Meat processing

Meat processing is the second largest food processing industry in the region. PPCS Richmond operates a significant slaughter and meat-processing facility at Hawera, which boasts the group's largest beef-killing operation. In addition, Riverlands operates a similar beef-only processing operation at Eltham. There are a number of smaller processing and packing operations handling deer, pig and sheep meat processing within the area.

There is also secondary processing of meat products in the region through the Itoham (NZ) Ltd plant at Waitara (North Taranaki). This plant processes meat products into a variety of patties and small goods for export to a number of countries around the world.

Tegel Foods operates a fully integrated meat bird industry, covering breeding, hatching, growing and processing, all based around the Tegel processing plant and feed mill at Bell Block (on the northern outskirts of New Plymouth).

Economic activity in the meat processing industry in the Taranaki Region is shown in Table 6.13.

Table 6.13. Meat processing industry summary

	FTEs	GDP (\$m)	AUTs
Meat Processing	1,428	251	15
<i>% of region activity</i>	<i>3.0%</i>	<i>4.2%</i>	<i>0.1%</i>

Source: BERL regional database

In 2011, the meat processing industry contributed \$251 million to GDP and employed over 1,400 FTEs. The sector directly accounted for 4.2 percent of GDP and 3.0 percent of employment in the Taranaki Region.

According to Statistics New Zealand, Port Taranaki exported close to \$6.7 million worth of meat products and a further \$20.8 million of meat-related products in 2012. In relation to Port Taranaki activity, the meat processing industry:

- accounts for 1.4 percent of volume throughput (all exported), and
- is the third largest export by value, accounting for around 1.1 percent of export value through the Port.

Table 6.14 shows the economic impact of the meat processing industry on the Taranaki Region in 2011.

Table 6.14. Meat processing economic impact

Meat Processing	Direct	Total
Output	\$866,519,049	\$1,343,104,526
Value Added (GDP)	\$251,290,524	\$459,861,659
Employment (FTEs)	1,428	3,141

Source: BERL

The meat processing sector generates GDP of \$251 million and employs over 1,400 FTEs. Adding indirect and induced effects, the industry generates GDP of \$459 million and employs over 3,100 FTEs.

Table 6.15 lists the meat processing and related companies that use Port Taranaki.

Table 6.15. Meat processing and related companies

AFFCO Limited	IBBCO Trading PTY Limited
Bernard Matthews Limited	Itoham (NZ) Limited
Canterbury Meat Packers Limited	Mathias Meats Limited
CMP Canterbury Limited	Pilot (NZ) Limited
Crown Marketing Limited	PPCS Limited
Crusader Meats International	Riverlands Limited
CTG Rendered Products	Taranaki Bio Extracts
Gardner Smith (NZ) Limited	Taylor Preston
	Tradeskins (NZ) Limited

Source: Port Taranaki

7. Other Port Benefits

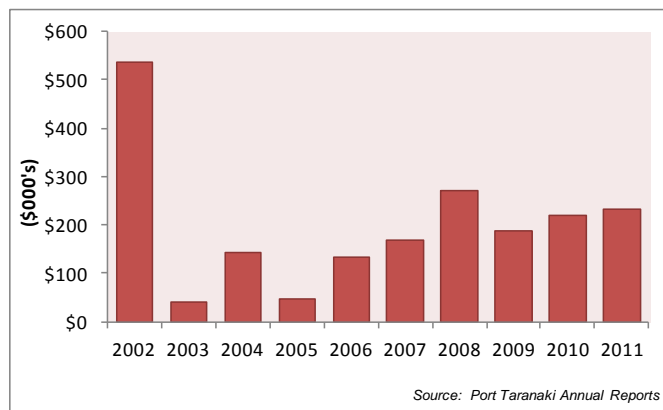
Port Taranaki provides benefits to the Taranaki economy that cannot be quantified and captured in the economic impact assessment. These intangible impacts are generally around social and environmental contributions that improve the quality of life in the community.

The port also plays an enabling role, providing benefits such as improving the productivity of business and increasing the region's attractiveness to potential businesses.

7.1 Corporate citizen

Port Taranaki is a regionally focussed, socially responsible organisation. As well as providing monetary sponsorship, it is closely linked to the viability of a number of social events and community groups in the Region. The amount spent on sponsorship by the Port since 2002 is shown in Figure 7.1.

Figure 7.1. Port Taranaki sponsorship



Between 2002 and 2011 the Port has provided close to \$2 million in sponsorship, or an average of \$198,000 annually. Port Taranaki is a major sponsor of the Taranaki Rugby Football Union, and supports a number of events that add to the vibrancy and economic wealth in the region.

The Port provides favourable rentals to community groups located on its property such as the East End Surf Lifesaving Club and the New Plymouth Yacht Club. The Port also ensures access to Ngamotu beach, which is within its breakwaters and adjacent to its operational area. The popularity of Ngamotu Beach is testament to Port Taranaki's commitment to safe working practices and regard for the environment.

In addition to the above, Port Taranaki has continued to provide and maintain access to public areas including the boat ramp, jetties, and car/trailer parking at the Lee Breakwater for public enjoyment.

As noted in their 2011 Annual Report, Port Taranaki:

- sponsored the following sporting activities:
 - Taranaki Rugby Football Union

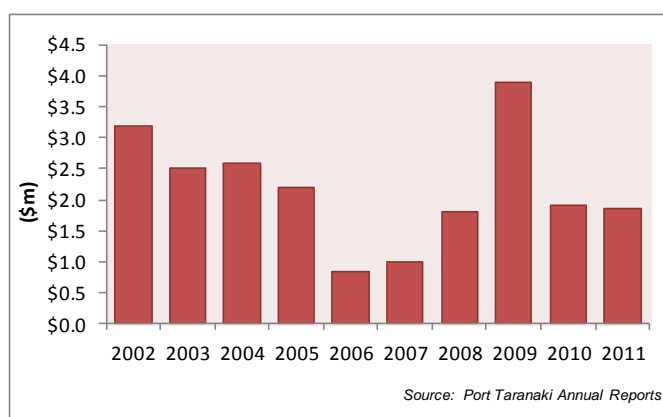
- Port Taranaki Open Golf Tournament
 - Flannagan Cup Open Water Swim
 - Icebergs Swimming Club
 - New Plymouth Surfriders Club (juniors)
 - New Plymouth Yacht Club (juniors)
 - Taranaki Multisport & Triathlon Club
 - Taranaki Race Walking Club
 - Taranaki Secondary Schools Rowing Regatta 2010
 - Taranaki Surf Life Saving organisations, and
 - Taranaki Windsurfing Club national competition.
- Sponsored the:
 - Department of Conservation's "Seaweek"
 - 1st Mikotahi Sea Scouts, and
 - Taranaki Toastmasters' Convention.
 - Continued to consult with the New Plymouth District Council and Ngati Te Whiti on the development and management of recreational areas in the vicinity of Ngamotu Beach.
 - Facilitated a port stay for the sail training vessel Spirit of New Zealand.
 - Provided the venue for community activities including beach volleyball, triathlons, and school events.
 - Continued to provide the regular meeting venue for the Moturoa Toastmasters' Club.
 - Conducted port tours and made presentations to various community groups including students from St Josephs, St Johns, St Pius X, and Westmount schools.
 - Hosted four people aboard the tug Tuakana as part of a prize offered by the company through Puke Ariki.



7.2 Regional rates relief and economic development outcomes

The Regional Council is the 100 percent owner of the Port. The Port pays a dividend to the Regional Council each year. Rather than going out of the region to a foreign owner, this dividend tends to get redistributed back into the regional economy through the Council's role of providing regional services and infrastructure. Dividends for the last ten years are shown in Figure 7.2.

Figure 7.2. Port Taranaki dividends



Over the last ten years, Port Taranaki has returned close to \$22 million to the Taranaki Regional Council in the form of dividends, at an average of \$2.2 million each year. Dividend payments have been relatively similar other than in 2006, 2007, and 2009. The lowest dividend payment was in 2006 of \$840,000, followed by \$1 million in 2007. In 2009, there was a significant payment of \$3.9 million. In the latest year, the dividend was around \$1.9 million.

To address the variability of dividends, the Regional Council maintains a dividend equalisation reserve. When dividends are lower, the reserve is used to maintain rate levels. If dividends are higher, then the reserve is replenished.

7.3 Economic development opportunities

7.3.1 Business productivity and development

Oil and gas development in New Zealand

Taranaki's position as the centre of oil and gas exploration and production in New Zealand, and the capability and expertise developed with Port Taranaki to handle and service the industry, puts Taranaki in a great position to capitalise on the increasing activity in this area. This growth is being driven by the higher value of oil and gas and the increased focus in New Zealand at a political level to effectively realise the value of our natural resources. Examples include the proposal to develop a rapid response base at Port Taranaki to address maritime emergencies that could emerge out of oil and gas extraction; acting as the service centre to support oil exploration and extraction off the West Coast of New Zealand.

Food exports to Australia

Port Taranaki is unique in that it is the only deep-water port on the West Coast of the North Island. It is the closest Port to the Eastern Seaboard of Australia. This provides the region with a competitive edge in terms of time sensitive delivery to Australia. Taranaki is also a major food processing region and is connected to the Central

North Island, which accounts for a significant proportion of food production and processing in the North Island of New Zealand. This suggests that there is potential for the Taranaki to be a food export hub, delivering time sensitive perishable goods to Australia.

7.3.2 *Place-shaping*

Urban form and place-shaping are two important concepts in regional economic development. It is widely accepted that we operate in a global economy with an increasingly mobile global workforce. Having a built environment that can attract and retain that global population is critical to achieving growth and wellbeing outcomes.



Port Taranaki plays a key role in this area. Ngamotu beach is an excellent example of enabling public access to a popular swimming beach that is actually within the Port breakwaters.

Similarly, the coastal walkway, which is considered one of the more successful public investments to encourage liveability in New Plymouth is connected and enhanced by developments on port land, particularly around the marina and the eastern reclamation area. This area is developing as a social and recreational hub for the region. The area has a surf and yacht club, a range of dining and recreation options and a working marina.

The Port also owns a significant amount of industrial and commercial property near the port as well as residential property investments within New Plymouth. Its actions around how this property is used can support place-shaping outcomes.



All work is done, and services rendered at the request of, and for the purposes of the client only. Neither BERL nor any of its employees accepts any responsibility on any grounds whatsoever, including negligence, to any other person.

While every effort is made by BERL to ensure that the information, opinions and forecasts provided to the client are accurate and reliable, BERL shall not be liable for any adverse consequences of the client's decisions made in reliance of any report provided by BERL, nor shall BERL be held to have given or implied any warranty as to whether any report provided by BERL will assist in the performance of the client's functions.



8. Appendix

8.1 Approach to valuing the economic impact of Port Taranaki

8.1.1 The economic role of ports

Ports are a centre for trade and transportation. They enable industries access to domestic and international markets, and create business for those industries that provide services. The economic contribution of the port can be divided into two areas:

- those that provide port services(the port and port related industries), and
- those that use port services (port associated industries).

8.1.2 The Port and port related businesses

Both the Port Authority and Port-related businesses provide port services.

Port Taranaki, both through its operations and its role as regional infrastructure, has a quantifiable impact on economic activity in the Taranaki Region. The port is an important generator of income, jobs, and economic output. It is a business in its own right which employs people and generates economic activity from its operations.

Port-related industries are businesses that are reliant on the Port for either all or part of their business activity and existence. These businesses carry out port operations and are typically involved in the transportation or handling of cargo.

There are a number of port-related businesses. These include shipping agents, transport and storage companies, custom brokers, freight forwarders, dredging, offshore services and port servicing companies and government border agencies such as customs and quarantine services.

8.1.3 Methodology

The operational expenditure generated by the Port and those companies that are directly dependent on the Port for their business - constitute the quantifiable economic impact of Port Taranaki.

The direct impact is those initial revenues or employment generated by the port and port related industries. For the Port, these are the people employed, operational expenditures and capital expenditures.

For port related industries, we updated those companies that provide Port-related services from the 2006 EIA. BERL contacted them and asked them:

- a) what portion of their business was driven by the Port, and then
- b) how many people they employed.

For those companies we did not contact, we estimated the employees directly related to the Port in discussion with the Port.

From this, we estimated employment due to the Port, which allowed us to determine GDP and output. We then used multiplier analysis to identify the indirect and induced effects.



Table 8.1. Port-related companies

<p>Agents</p> <p>Alpha Customs Services Ltd Cape Shipping Services Hooker Pacific ISS Mackay Phoenix Shipping Agencies Quadrant Pacific Worldfreight Customs and Forwarding Ltd</p> <p>Port Services</p> <p>C3 Limited Kingston Providores New Plymouth Stevedoring Services</p> <p>Surveying Companies</p> <p>ETL Group Intertek Testing Services SGS New Zealand</p> <p>Offshore Services</p> <p>Fugro BTW Halliburton NZ M I Swaco NZ Offshore Services Offshore Marine Services Offshore Solutions Limited Programmed Total Marine Services Swire Pacific Offshore New Zealand Ltd Teekay Shipping Management</p> <p>Storage</p> <p>BLM Holdings Bulk Storage Terminals Downer Limited FBT Group Fonterra Golden Bay Cement J Swap Pacific Terminals Technix Group Ltd Westpack</p>	<p>Transport</p> <p>BF Hughes Transport Clark and Rogers Ltd FBT Group Field Transport GJ Sole Limited JD Hickman KiwiRail Mainfreight Group McCarthy Transport New Plymouth Customs Agency (Hookers) Q Transport R&L Freight Rural Fuels Symons Transport Transpacific Uhlenberg Transport</p> <p>Other</p> <p>Blackstock's Road sweeping Customs/Immigration Drainage Plus Ian Roebuck Cranes Ministry of Primary Industries Molten Metals New Plymouth Underwater Services Pestaway NZ Ltd Port Health Specialised Container Services Titan Cranes</p>
--	---

Source: Port Taranaki

Similar to the 2006 EIA, the levels of activity of businesses related to the Port ranged from 100 percent down to less than five percent.¹⁴

The direct expenditure and employment from the port and port-related industries is then entered into an input-output model of the regional economy to estimate the direct economic impact of the Port in terms of output (GDP) and Full

¹⁴ We accept that this is not a definitive list of companies that have port-related activity. However, it does cover the most obvious ones and we believe it is close to capturing most of them. In any event, it is likely that the results can be considered an underestimate.

Time Equivalent (FTE) employment. The direct impact is the 'new money' brought into the Taranaki region due to the Port.

The effect of the 'new money' has two flow-on effects throughout the wider economy. The first flow-on effect is from businesses involved with the Port increasing their demand for materials and services from their supplier firms, who in turn make further purchases from their suppliers. For example the Port relies on transport operators to move goods to and from the port. These transport operators then rely on local mechanics to service their fleet. This is the indirect impact.

The second flow-on effect caused by the 'new money' entering the economy is the spending of people employed by the direct and indirect expenditure. For example, transport operators may need additional staff when container throughput increases. The expenditure of this additional staff will generate additional activity elsewhere in the regional economy. This is the induced impact.

The indirect and induced impacts are calculated using employment, value-added (GDP) and gross output multipliers as discussed in the Appendix.

The above impacts of the event sum as the total effect on the Taranaki economy and is presented in Chapter 5.

8.1.4 Port associated industries

Port users or associated industries are those businesses that use the Port to receive imports or ship exports. Indirectly, Port Taranaki acts as an enabler as it provides industries with access to its markets both domestic and internationally. The Port supports the major industries in the Taranaki region, by providing services to the oil and gas, primary production, dairy and meat processing, chemical and engineering industries.

Industries that utilise Port services benefit from additional/specialist transport options and/or reduced transport costs, improving their ability to operate effectively and move goods to market.

Port Taranaki is the key transport component for the operations of a number of industries in the Taranaki region. These industries benefit financially, operationally and strategically from having easy access to Port Taranaki. However, it is difficult to imply that the Port has an economic impact on these industries or if it has, how much, as causality and additionality are not assured.

However, we can say that these industries benefit from the Port by using it to transport their goods to market or import raw materials. In the case of the oil and gas industry, the Port is used as a service base as well.

The level of reliance on Port Taranaki differs between industries. For the oil and gas industry, the reliance is very high – to the point where some operations would clearly not be possible without the Port. For other industries it is a matter of cost or convenience where, if it were cheaper to transport goods out of a different port or by a different method, they would.

We argue that the Port has significant relationships with these industries. The Port acts as an enabler or as a service, facilitating but not generating, activity. Our approach is therefore to consider the impact of these industries on the Taranaki Region, and then realise the level of importance of the Port to their activity.¹⁵

¹⁵ This is where our impact analysis differs from earlier EIAs of Port Taranaki and the recent EIA of Port of Tauranga. The comparison with these other EIAs is discussed in 8.2.

Industries covered are based on the volumes and values of their goods that go through Port Taranaki. The major industries utilising Port services are the oil and gas, primary, dairy, meat, fertiliser and chemical, and engineering industries.

8.1.5 Multiplier analysis

A multiplier analysis uses multipliers derived from inter-industry input-output tables for the Taranaki Region, and for New Zealand. The Taranaki regional input-output tables have been derived from the national input-output tables and other data by Butcher Partners, Canterbury - a recognised source for regional input-output tables and multipliers.¹⁶

Multipliers allowed us to identify the direct, indirect and induced effects in terms of output (GDP) and Full Time Equivalent (FTE) employment.

Measures

Gross Output Multipliers – gross output is the value of production, built up through the national accounts as a measure, in most industries, of gross sales or turnover. This is expressed in \$ million at constant prices. Gross output is made up of the sum of:

- Compensation of employees (i.e. salaries and wages);
- Income from self-employment;
- Depreciation;
- Profits;
- Indirect taxes less subsidies;
- Intermediate purchases of goods (other than stock in trade); and
- Intermediate purchases of services.

Value added multipliers – value added multipliers measure the increase in output generated along the production chain, which, in aggregate, totals Gross Domestic Product (GDP). Value added is made up of the sum of:

- Compensation of employees (i.e. salaries and wages);
- Income from self-employment;
- Depreciation;
- Profits; and
- Indirect taxes less subsidies.

¹⁶ For a discussion on regional input output tables and the validity and reliability of the Butcher input output tables see *Statistics New Zealand (2003) Regional Input Output Study*.

Employment Impact multipliers – Employment impact multipliers determine the number of Full Time Equivalent (FTE) roles that are created for every \$1 million spent in an industry for one year. It provides a measure of total labour demand associated with gross output.

An FTE is the percentage of time an employee works represented as a decimal. A full-time position is 1.00; a part time position is 0.50.

Direct, indirect and induced effects

The underlying logic of multiplier analysis is relatively straightforward. An initial expenditure (**direct** effect) in an industry creates flows of expenditures that are magnified, or “multiplied”, as they flow on to the wider economy. This occurs in two ways:

1. The industry purchases materials and services from supplier firms, who in turn make further purchases from their suppliers. This generates an **indirect** effect.
2. Persons employed in the direct development and in firms supplying services earn income (mostly from wages and salaries, but also from profits) which, after tax is deducted, is then spent on consumption. There is also an allowance for some savings. These are the **induced** effects.

Hence, for any amount spent in an area (**direct** effect), the actual output generated from that spend is greater once the flow on activity generated (**indirect** and **induced** effects) is taken into account.

Leakages

Generally the more developed, or self-sufficient, an industry in a region is, the higher the multiplier effects. Conversely, the more reliant an industry is on supply inputs from outside the region, the lower the multipliers. These outside factors can be referred to as “leakages”.

To put this another way, if a house was purchased in Taranaki, and all the materials and labour were sourced in Taranaki, and all the materials and labour that went into making the housing materials were made in Taranaki and so forth, and then the labour spent their wages or salaries in Taranaki, again on goods or services produced solely in Taranaki, then all the multiplier effects would be captured by Taranaki. Where inputs or outputs come from outside Taranaki, leakages are said to exist, and the multiplier effect reduces.

Limitations of multiplier analysis

Partial equilibrium analysis

Multiplier analysis is only a “partial equilibrium” analysis, assessing the direct and indirect effects of the development being considered, without analysing the effects of the resources used on the wider national and regional economy.

In particular, it assumes that the supply of capital, productive inputs and labour can expand to meet the additional demand called forth by the initial injection and the flow on multiplier effects, without leading to resource constraints in other industries. These constraints would lead to price rises and resulting changes in overall patterns of production between industries.

To assess inter-industry impacts in full would require economic modelling within a “general equilibrium” framework. Applying such models becomes more relevant where the particular development is considered significant within the overall economy.



Additionality

Related to partial equilibrium, using multipliers for economic impact assessments assumes that the event is something that would not have been undertaken anyway and that it will not displace existing activity. That is, the event is additional to existing activity. If it does either of the above, then the economic impact is less than that determined by the multiplier and it would be necessary to subtract both the activity that would have occurred anyway and the displacement effect.

Impact

Again related to "partial equilibrium", multiplier analysis assumes that an event will not have an impact on relative prices. However, in a dynamic environment, it can be assumed that a large event would have an impact on demand and supply and hence prices. Hence, the larger the event and the more concentrated it is in a single industry or region, the more likely it is that the multipliers would give an inaccurate analysis of impacts. For example, if multiplier analysis was used to determine the effect of residential building construction nationally it would likely be inaccurate as residential building construction accounts for over 6 percent of GDP.

Aggregation

Industries outlined in input output tables are aggregates of smaller sub-industries. Each sub industry has unique inputs and outputs. The higher the level of aggregation the less accurate these inputs and outputs become. Thus, if determining the multiplier effect of a very specific event using highly aggregated data, there will be a lower level of accuracy. Similarly if an event encompasses a range of industries and multipliers from a single industry are applied the accuracy levels will diminish.

Regions and boundaries

The smaller or less defined a region and its boundaries the less accurate the multiplier analysis will be. Similarly, the easier it is to move across boundaries the less accurate the analysis will be. For example, at the national level the multipliers will be very accurate as it is easy to determine the inputs and outputs crossing through the New Zealand borders.

Similarly it would also be fairly easy to determine a north island/south island split. As smaller regions without obvious geographic boundaries are selected then a higher level of assumptions need to be made and the multipliers become less accurate. For example, an individual could work in the Auckland Region but live in the Waikato Region and spend a large proportion of his/her recreation money in the Bay of Plenty Region.

For any regional analysis the level of accuracy will have to be accepted. As a rule of thumb, the larger and more defined the region, the more accurate the analysis will be.

8.2 EIA comparisons

The following attempts to compare Port Taranaki's current economic impact to earlier EIAs in 1994, 1997, and 2006. We also compare Port Taranaki's current economic impact to the economic impact of Port of Tauranga on the Bay of Plenty Region, and the Ports of Auckland on the Auckland Region.

The results from the various EIAs are not directly comparable.

Comparison of the current economic impact to earlier EIAs of the Port is difficult due to significantly different methodologies. In this regard, we caution against directly comparing the two numbers. We have attempted to compare like with like and only used those parts of our analysis that are (relatively) consistent or comparable with the earlier studies. Even then, we struggle to arrive at any useful conclusions.

The major difference in approach is that our analysis does not suggest that a portion of activity in key industries that use the Port is due to the Port. We argue that these industries are likely to continue to produce at similar levels, regardless of involvement with the Port. Hence, our total economic impact is significantly lower than the other reports.

However, we have considered those key users of the Port as being associated with the Port and have measured their impact on the Region. We can therefore compare as if we had included them in the impact – but suggest that they are associated with, rather than products of, Port activity.

We have not included the associated activity of impending oil and gas and marina projects in the comparison to ensure consistency.

8.2.1 Past Port Taranaki EIAs

Port Taranaki undertook EIAs in 1994, 1997 and 2006. The major difference between the current and 2006 EIA and the earlier ones is that the earlier analyses identified a portion of industry activity as a ratio of exports, which were counted as an impact of Port activity. In our comparison we assume that these are associated effects rather than economic impact effects and so we believe they were overstated in previous EIAs.

The main results are compared to the current EIA in Table 8.2.

Table 8.2. Comparison with earlier Port EIAs

	Regional GDP (\$m, 2012)			Regional Employment (FTEs)		
	Port Related Impacts	Associated Effects	Total	Port Related Impacts	Associated Effects	Total
Port Taranaki 1994	26	1,299	1,325	205	7,980	8,185
Port Taranaki 1997	21	1,450	1,471	210	9,300	9,510
Port Taranaki 2006	26	3,905	4,576	228	35,377	35,605
Port Taranaki 2012	26	3,355	3,386	319	34,642	34,961

Source: BERL, Port Taranaki

The only comparisons that can be made are on Port-related impacts that result from the direct operation of the Port. As expected these have not changed significantly (in real terms) between 1994 and 2012.

The reason that associated effects are higher in 2006 and 2012 is because the 2006 and 2012 figures include total activity in the main industries, whereas the earlier studies only took a portion of those industries. On the other hand,

the earlier studies included all industries related to the cargo and multiplied out the effects, whereas the 2006 and 2012 studies did not incorporate multiplier effects.

The economic impact of Port Taranaki has decreased since 2006. The port related impacts of Port Taranaki on GDP has remained at relatively the same level as 2006. However, employment at the port has increased since 2006.

The use of the port by port-associated industries has decreased since 2006, with a decline in the ports GDP and employment contribution from associated industries down in 2012.

8.2.2 Ports of Tauranga and Ports of Auckland EIA comparison

Two of New Zealand's major ports, Ports of Tauranga and the Ports of Auckland have had an economic impact assessment completed. The Ports of Tauranga released an EIA in 2006, while released an EIA in 2012. Both had a relatively similar methodology to this EIA.

A comparison of our results with those of the Port of Tauranga and Ports of Auckland is shown in Table 8.3.¹⁷

Table 8.3. Comparison of EIA with Port of Tauranga and Ports of Auckland

	Regional GDP (\$m, 2012)			Regional Employment (FTEs)		
	Port Related Impacts	Associated Effects	Total	Port Related Impacts	Associated Effects	Total
Comparison with Port of Tauranga EA						
Port Taranaki 2012	490	3,355	3,845	1,592	34,642	36,233
% of taranaki totals	8.1%	55.6%	63.8%	3.3%	72.2%	75.5%
Port of Tauranga 2006	446	4,129	4,575	2,199	46,297	48,496
% of BoP totals	3.5%	32.6%	36.1%	1.8%	37.9%	39.7%
Ports of Auckland 2011	299	12,188	12,486	2,818	184,503	187,321
% of Auckland totals	0.4%	18.1%	18.5%	0.5%	29.9%	30.4%

Source: BERL, Port of Tauranga, Ports of Auckland

Port Taranaki has a higher economic impact relative to the size of the Region. The economic impact of the Port on Region GDP is 8.1 percent in the Taranaki compared to only 3.5 percent in Tauranga, and 0.4 percent in Auckland. In employment, Port Taranaki accounts for 3.3 percent of regional employment compared to 1.8 percent for the Ports of Tauranga and 0.5 percent for the Ports of Auckland.

The numbers suggest a higher reliance of economic activity in the Taranaki Region on the Port. This is to be expected considering the smaller, export-oriented economy and the industry mix.

In terms of associated effects, Port Taranaki's area of activity is slightly higher at 55.6 percent than the Port of Tauranga with 32.6 percent and the Ports of Auckland with 18.1 percent in the case of GDP. In the case of employment, again, Port Taranaki's area of activity is higher than Port Tauranga and the Ports of Auckland.

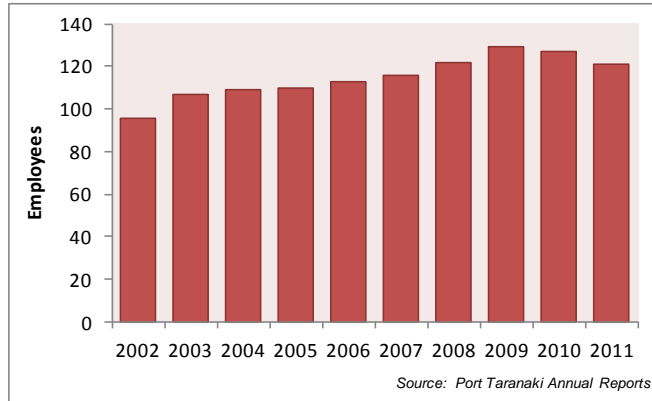
¹⁷ Note that the GDP is in nominal values and so are not directly comparable. However, the proportions of the total are directly comparable.

8.3 Port trends

This section looks at some of the trends in key Port measures.

Port employment has remained relatively constant over the last eleven years as shown in Figure 8.1.

Figure 8.1. Port Taranaki employees

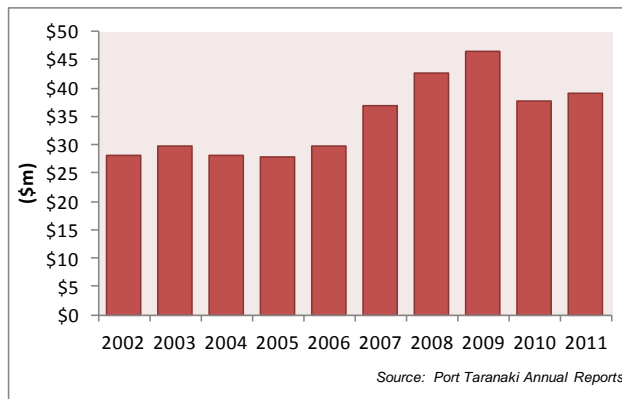


As at June 2011, Port Taranaki employed 121 people. There has been a rapid increase in employment between 2002 and 2003, where the number of employees increased from 96 to 107. From 2003 to 2007 there have been slight increases each year. From 2007 employment increased rapidly again peaking in 2009 at 129 employees. Since 2009, employment has declined.

Employment at the Port has been more consistent than revenue, which is shown in Figure 8.2 in the following section.

Port Taranaki has significant revenues. This is shown for the last ten years in Figure 8.2.

Figure 8.2. Port Taranaki revenue

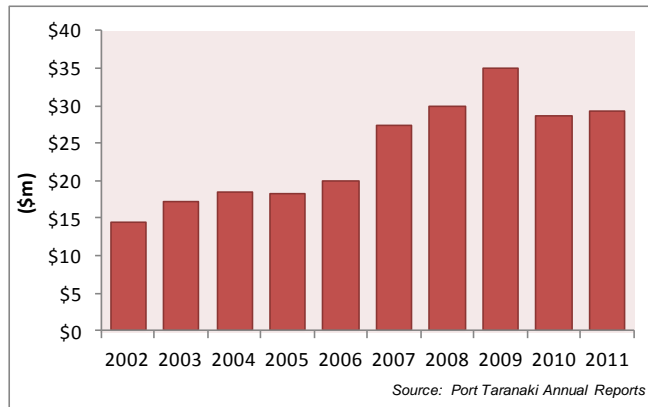


Revenue in the year to June 2012 was \$39.2 million. This is significantly higher than the \$28.3 million in revenue in 2002. However, revenue has declined since its peak in 2009 of \$46.6 million.

Figure 8.3 shows the Port's operational expenditure between 2002 and 2011.



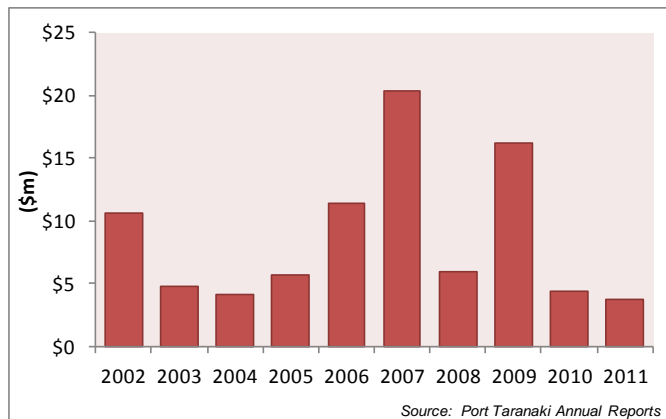
Figure 8.3. Port Taranaki operational expenditure



In the latest year, payments to suppliers and employees were \$29.2 million. In 2002 operational expenditure was much lower than currently, with operational expenditure of \$14.4 million. There has been a gradual increase in operational expenditure from 2002 to 2006. In 2007, operational expenditure rapidly increased to \$27.3 million, and again in 2009 to \$35.0 million. Since 2009, operational expenditure has declined.

Figure 8.4 shows the Port's capital expenditures over the last ten years.

Figure 8.4. Port Taranaki capital expenditure



Over the last ten years, the Port has spent \$277.5 million on capital items. This is an average of \$27.7 million each year.

The distribution of capital expenditures has not been very smooth. There were peaks in 2002, 2006, 2007 and 2009. Conversely, there was low expenditure in 2004, 2010 and in the latest year, 2011.