

# Bay of Plenty Regional Freight Study

Bay of Plenty Regional Land Transport Strategy Supporting Paper No.03

Prepared for the Bay of Plenty Regional Council  
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# Executive summary

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## E1 - Introduction

The Bay of Plenty forms part of the rapidly developing Golden Triangle in the upper part of the North Island in New Zealand. Its population represents about 6.3% of the national total and this has been growing rapidly particularly in Tauranga and the Western Bay of Plenty. Freight flows impacting on the Bay of Plenty (travelling to, from or within the region) are very substantial, in 2006-07, amounting to about 32 m tonnes, about 14% of the total for the country as a whole and about 120 tonnes per person. This figure compares to a national average of about 59 tonnes per person.

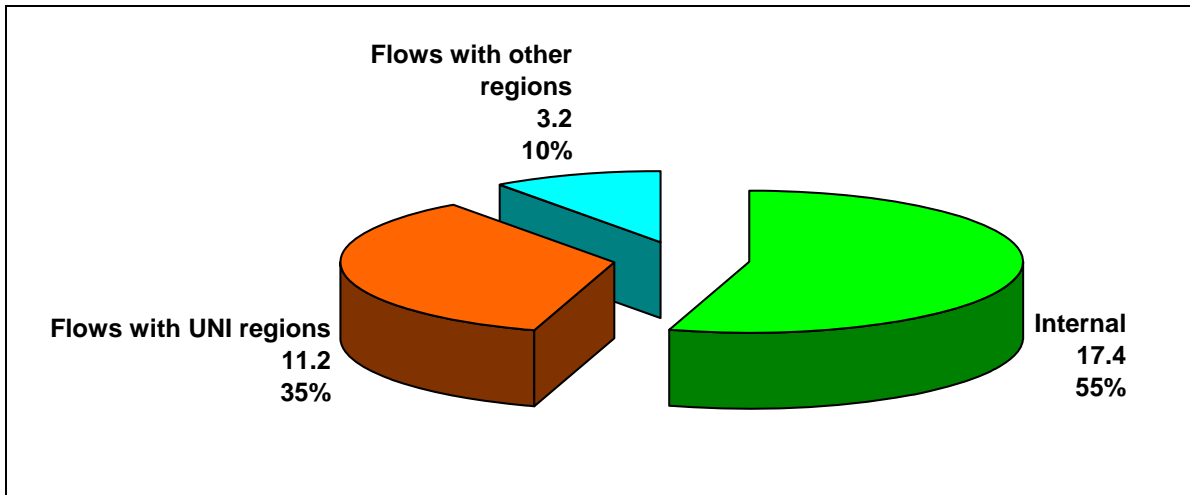
The high volumes of freight reflect in part, the presence of the port of Tauranga in the region, which in 2007 handled about 12-13 m tonnes of imports and exports for a wide hinterland and the very substantial production of a range of basic commodities within the region.

Freight flows both within and to and from the region are high and these together with increases in private car traffic are putting pressure on the regional transport network. The importance of an efficient freight industry in supporting economic growth has also been recognised by the Government in the 2009 GPS which attaches considerable weight to improving conditions for freight vehicles and improving the productivity of the industry to support more general economic growth.

In response to these growing pressures and challenges and to provide information to assist in the preparation of the next Regional Land Transport Strategy, Environment Bay of Plenty therefore commissioned Richard Paling Consulting to undertake the Bay of Plenty Regional Freight Study, and this forms the content of this report. This covers the main modes of freight movements within the region and on the corridors connecting it to the rest of New Zealand, particularly to the other regions in the Upper North Island and provides an analysis of both the 2006-07 position and the anticipated future position. Much of the analysis is based on the National Freight Demands Study (NFDS) which sets out the position for 2006-07. While there have been a number of changes since the date of this report, a number of which are identified in this report, the comprehensive 2006-07 position identified in the NFDS has been taken to be broadly representative of the current position.

## E2 - Freight flows in 2006-07

Of the total volumes of freight handled, about 55% travels entirely within the region, 35% moves to or from the other regions in the Upper North Island (UNI) – Auckland, Waikato and Northland, and the balance of about 10% travels to or from the rest of New Zealand. This is illustrated in Figure E1.



*Figure E1 Breakdown of Bay of Plenty freight flows 2006-07 total flows (million tonnes and per cent of total)*

The relatively high share of the flows of freight external to the Bay of Plenty that goes to or from the other three UNI regions, reflects the integration of the four regional economies in the “Golden Triangle” plus Northland.

The main commodity movements identified in the NFDS that contribute to the overall flows in 2006-07 are set out in Table E1 and Figure E2.

*Table E1 Total Bay of Plenty freight movements in 2006-07 for identified commodities (million tonnes)*

<b>Commodity group</b>	<b>Total flow</b>
Dairy Products	1.9
Logs and Timber Products	8.6
Meat and Livestock	0.3
Horticulture	0.8
Petroleum	1.3
Coal	0.9
Aggregate	3.1
Limestone, Fertiliser, Cement and Concrete	2.1
Other Minerals and Metals	0.9
Retailing and Couriers	1.5
<b>Total</b>	<b>21.4</b>

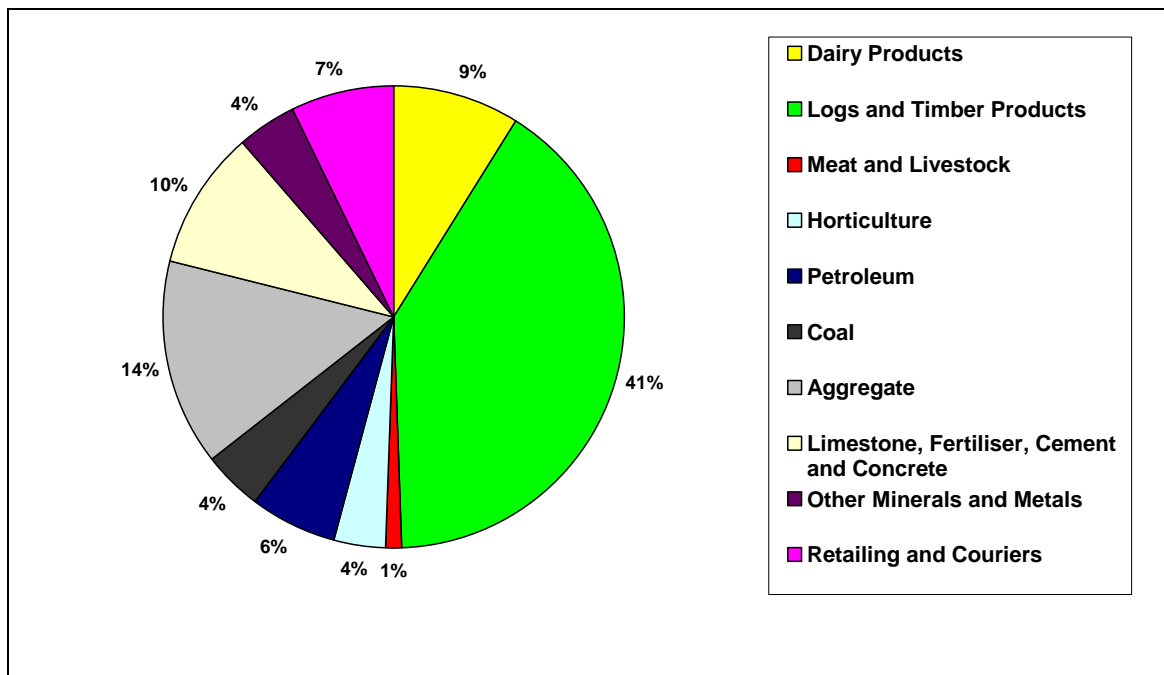


Figure E2 Breakdown of Total Bay of Plenty freight movements in 2006-07 for identified commodities (million tonnes)

In general, the flows of freight are dominated by flows of bulk products, especially logs and timber, aggregates and other building materials, milk and dairy products, retail and courier goods and petroleum. Movements through the port represent a significant proportion of these movements.

The freight traffic impacting on the Bay of Plenty is primarily transported using road transport but the shares of other modes are important for particular movements and commodities. The overall modal share by broad type of movement is set out in Table E2.

Table E2 Total flow and Modal Splits in 2006-07 total flows (million tonnes)

Area	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Mode Split	M tonnes	Mode Split	M tonnes	Mode Split
Internal	17.4	1.4	8%	0.0	0%	16.0	92%
UNI Regions	11.2	3.3	29%	0.5	4%	7.4	66%
External Regions	3.2	0.2	6%	0.1	3%	2.9	92%
<b>Total</b>	<b>31.8</b>	<b>4.8</b>	<b>15.2%</b>	<b>0.6</b>	<b>1.7%</b>	<b>26.4</b>	<b>83.0%</b>

Overall rail carries about 15% of the freight traffic impacting on the Bay of Plenty and coastal shipping about 2%, although these shares vary by the geographical type of movement. Coastal shipping and rail shares are relatively high for the movements with other UNI regions. These reflect:

- The movements of petroleum and cement from Northland by coastal shipping
- Large rail movements to and from Auckland carrying retail and manufactured goods, particularly through the Metroport Inland Port in Southdown
- Rail movements between the Waikato and Bay of Plenty primarily carrying more basic products, mainly logs and timber products to Bay of Plenty and coal in the reverse direction

### E3 - Other contributions to current freight patterns

As well as using the data from the NFDS, other factors contributing to current freight patterns and issues in the region were also investigated. The key findings from this were:

- Traffic through the Port of Tauranga has grown overall by about 20% from 2002, although there have been fluctuations from year to year and current (2009) total flows are slightly less than those on 2008. This reflects a decline in manufactured imports and exports, which is also reflected in container movements through Metroport. This has been partly offset by increases in exports of logs and timber products and imports of coal. Imports and exports through the Port of Tauranga are set out in Figure E3.



Figure E3 Import and export traffic through the Port of Tauranga (million tonnes)

- Heavy vehicle traffic on the state highway network in and around the Bay of Plenty has remained broadly constant since 2003 with the exception of State Highway 2 in Te Puke, where there has been more significant growth, probably reflecting growth in the movements of kiwifruit. This is set out in Figure 7.4.

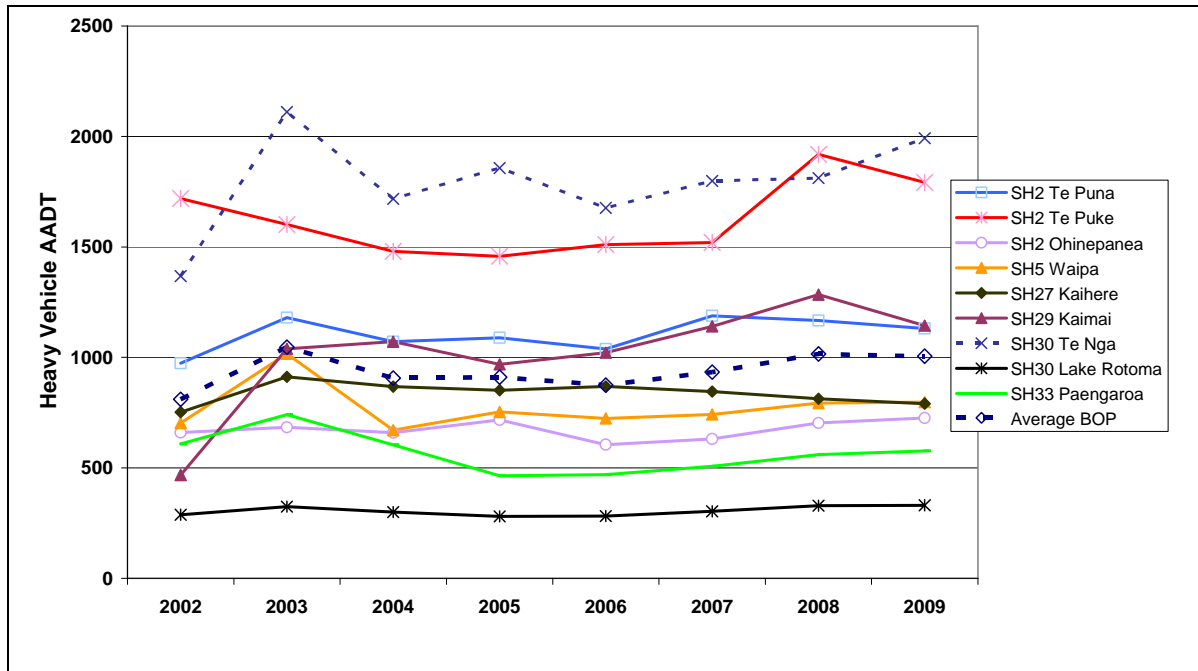


Figure E4 Heavy vehicle flows on state highways in Bay of Plenty region 2002-2009 (AADT)

- Milk and kiwifruit, two of the main agricultural commodities have had different fortunes with milk production remaining broadly constant and kiwifruit growing fairly substantially over recent years.

#### E4 - Future growth patterns

There is forecast to be substantial growth in the freight movements impacting on the Bay of Plenty, driven in part by the growth in log and timber products and in part by growth in the demand for aggregates and building materials. At a more local level the growth of the kiwifruit production will also have some impacts. There is also forecast to be growth in the movement of retail goods, but the scale of this is expected to be attenuated by changes in distribution patterns with more direct delivery to destinations in the South Island and to some extent, the lower North Island rather than routing through distribution centres in Auckland. Growth in freight in the Bay of Plenty is also expected to be affected by the decline in coal imports transported from Tauranga to Huntly.

The NFDS made forecasts for 2031, reflecting a 25 year forecasting horizon. However, given the economic downturn it is considered that these forecasts are now probably more applicable to 2035, although to maintain consistency with the NFDS and the UNIFS work currently being undertaken concurrently these are still labelled as “2031”. A set of forecasts have also been made for 2040 a forecasting year used for the RLTS, and in developing these it has been assumed that growth over the five year period from 2035 to 2040 would represent 20% of the growth forecast for 2006-07 to 2031 made in the NFDS.

The growth by geographical type of traffic is set out in Table E3.

*Table E3 Forecast growth of Bay of Plenty traffic movements 2006-07 to 2031 and 2040 all commodities (million tonnes)*

Type of Movement	2006-07	2031	Growth to 2031	2040	Growth to 2040
Internal	17.4	29.1	67%	31.4	80%
To and from other Upper North Island Regions	11.2	15.2	36%	16.0	43%
To and from other Regions	3.2	4.3	35%	4.5	41%
Total	31.8	48.6	53%	51.9	64%

Growth of the shorter distance movements within the Bay of Plenty is expected to be particularly large, with increases in the longer distance inter-regional movements being more modest. As indicated above, growth of freight movements to and from the other UNI regions is affected by the decline in coal traffic and the change in patterns of retail distribution.

The growth by commodity over the period to 2031 (2035) and 2040 is set out in Table E4.

*Table E4 Forecast growth of freight movements to 2031 and 2040 for identified commodities (million tonnes)*

Commodity Group	2006-07	NFDS Growth to 2031		Growth to 2040	
	M tonnes	M tonnes	Per cent	M tonnes	Per cent
Dairy Products	1.9	0.0	0%	0.0	0%
Logs and Timber Products	8.6	4.3	50%	5.2	60%
Meat and Livestock	0.3	0.0	0%	0.0	0%
Horticulture	0.8	2.0	260%	2.4	311%
Petroleum	1.3	0.5	38%	0.6	46%
Coal	0.9	-0.9	-100%	-0.9	-100%
Aggregate	3.1	3.0	99%	3.7	119%
Limestone, Fertiliser, Cement and Concrete	2.1	1.6	76%	1.9	90%
Other Minerals and Metals	0.9	0.0	0%	0.0	0%
Retailing and Couriers	1.5	0.8	53%	0.9	61%
<b>Total</b>	<b>21.4</b>	<b>11.3</b>	<b>53%</b>	<b>13.6</b>	<b>64%</b>

The forecast shares of freight traffic by mode for the Bay of Plenty region are set out in Table 7.5 and Figure 7.5

*Table E5 Forecasts of growth to 2040. Total flows by Mode (million tonnes)*

Year	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Modal share	M tonnes	Modal share	M tonnes	Modal share
2006-07	31.8	4.8	15%	0.6	2%	26.4	83%
NFDS to 2031	48.6	6.9	14%	1.3	3%	40.4	83%
2040	52.0	7.3	14%	1.5	3%	43.2	83%

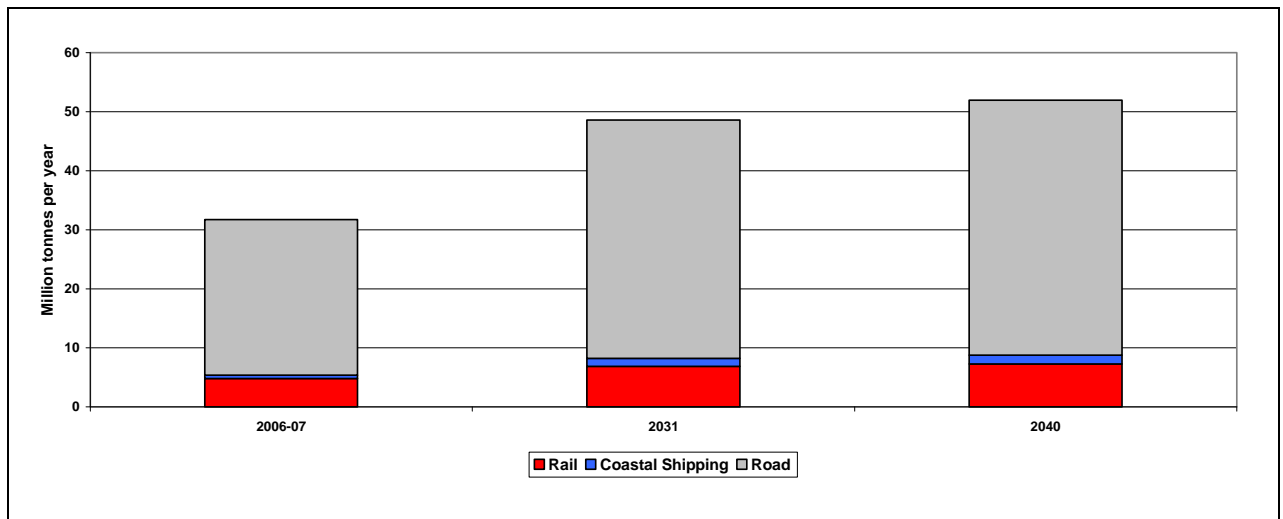


Figure E5 Forecasts of freight traffic impacting on Bay of Plenty to 2040 – total flows (million tonnes)

Over the forecast periods, the shares of the three modes in total freight movements are expected to remain broadly constant with the rail share decreasing slightly and that of coastal shipping increasing also slightly. Although the rail share is forecast to decline, the underlying growth in the level of demand means that the volumes transported by rail are forecast to increase substantially by over 50%, despite the reduction in coal traffic and limited growth in the movements of imports of retail and manufactured goods between Tauranga and Auckland.

## E5 - Overall picture

Current freight flows in the Bay of Plenty are dominated by the shorter distance movements internal to the region and with a high proportion of basic materials particularly logs and timber products, aggregates and other building materials and milk and dairy products. A substantial amount of freight activity is focussed round the Port of Tauranga and in addition to movements of basic materials, this generates high volumes of traffic in manufactured and retail goods with Auckland.

Over time, the volumes of traffic are forecast to grow substantially by almost two-thirds to 2040. This is mainly driven by growth in the forestry and horticultural sectors and in movements of aggregates and other building materials, although there is expected to be a decline in coal traffic and more limited growth in the movement of manufactured imports with changes in national distribution patterns. The overall modal shares of this traffic are expected to remain broadly unchanged with a slight fall for rail and a slight increase for coastal shipping, although because of the substantial growth in the market as a whole, the volumes carried by each of these modes are expected to grow strongly.

In general, the performance of the different components of the transport network in the region is considered to be satisfactory or where problems exist, proposals for their alleviation are well advanced with, for example, the planned construction of the Tauranga Eastern Link and schemes for the provision of additional passing loops on the key rail lines. However, with the growth of traffic and the possible introduction of larger international vessels with substantial exchanges of containers in a single call, there is going to be increased pressure on the transport network especially at peak times. Proposals are being considered to develop an inland holding area for export logs and other timber products to reduce the



pressure on space in the port. The growth of kiwifruit exports would also be largely loaded directly onto vessels without intermediate storage in the port. Both of these and the need to accommodate the requirements for larger international container vessels will increase pressure on the transport network and enhance the need to ensure that the transport network is developed and managed to be able to offer a high level of reliability for these flows at peak times.

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# Part 1: Introduction

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## 1.1 Background to the study

The Bay of Plenty forms part of the rapidly developing Golden Triangle in the upper part of the North Island in New Zealand. Its population represents about 6.3% of the national total and this has been growing rapidly, particularly in Tauranga and the Western Bay of Plenty.

The Bay of Plenty is a major producer of a number of bulk products, including logs and timber, milk and dairy products and kiwifruit. In Tauranga it contains the country's largest port in terms of the volumes handled importing and exporting large quantities both of containerised and bulk cargoes, especially timber reflecting its location as one of the centres of the log and timber industries. In terms of container traffic, the port provides an alternative to Auckland for many importers and exporters in Auckland, especially in the south of the city where they are served by the rail connected inland port at Metroport in Penrose.

As a result of these factors the freight flows both within and to and from the region are high and these together with increases in private car traffic are putting pressure on the regional transport network. The importance of an efficient freight industry in supporting economic growth has also been recognised by the Government in the 2009 GPS which attaches considerable weight to improving conditions for freight vehicles and improving the productivity of the industry to support more general economic growth.

In response to these growing pressures and challenges and to provide information to assist in the preparation of the next Regional Land Transport Strategy, Environment Bay of Plenty therefore commissioned Richard Paling Consulting to undertake the Bay of Plenty Regional Freight Study, and this forms the content of this report. This covers the main modes of freight movements within the region and on the corridors connecting it to the rest of New Zealand and provides an analysis of both the current and the anticipated future position. While considering all freight movements, the report takes particular account of the movements within the region itself and those linking it with the other Upper North Island regions of Waikato, Auckland and Northland, which together with Bay of Plenty are currently the subject of a separate parallel study, the Upper North Island Freight Study (UNIFS).

## 1.2 Structure of this report

Section 1 of this report sets out the background to the study and Section 2 outlines the approach taken. Current freight movements as derived from the National Freight Demands Study (NFDS) and other sources of published information are set out in Section 3 and the main forecasts for the future for 2031 again as derived from the NFDS are given in Section 4. Section 5 deals with other issues impacting on the movement of freight gained from meetings with key stakeholders and Section 6 briefly extends the forecasts developed in Section 4 to 2040 to align with RLTS time horizons. The findings are summarised in an overall assessment in Section 7.



## Part 2: Approach to the study

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Much of the analysis set out in this report and in the companion UNIFS is based on the findings of the National Freight Demands Study, a major study undertaken in 2008 for the Ministries of Transport and Economic Development and for Land Transport New Zealand.<sup>1</sup> The approach taken in this study was to identify in detail the freight movements for 17 key commodities for which data could be assembled from a variety of sources. By comparing the totals derived from this analysis with alternative estimates about the total scale of freight activity in the country, it was estimated that totals for the identified commodities represented about two-thirds of total freight movements. The totals from the detailed commodity analysis were therefore factored up to give appropriate national totals. For subsequent presentation, these 17 identified commodities were grouped into ten categories as follows:

- Dairy Products
- Logs and timber products
- Meat and livestock
- Horticulture
- Petroleum
- Coal
- Aggregate
- Limestone, fertiliser, cement and concrete
- Other minerals and metals
- Retailing and couriers

In the material presented below in this report, it should therefore be noted that some of the tables labelled as *"selected"* or *"identified commodities"* refer only to the commodities identified above, which represent the movements of 21.4 m tonnes for 2006-07 in Bay of Plenty. In other cases the tables labelled as *"total flows"* refer to the total freight task for the region estimated at 31.8 m tonnes in 2006-07.

Following the more detailed analysis undertaken in the subsequent study into coastal shipping, *"Coastal Shipping and Modal Freight Choice"*<sup>2</sup>, which identified some minor changes in the volumes carried by coastal shipping, the estimates and forecasts of the volumes carried by coastal shipping have been reviewed. This only affects the movement of general cargo by coastal shipping which was possibly over-estimated slightly in the initial NFDS report (although the volatility of the industry makes this difficult to confirm). The changes are relatively minor, reducing the total volume carried by about 0.1 m tonnes out of an estimated total of 4 m tonnes and slightly affecting the balance of traffic. These revised estimates have been included in this analysis.

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<sup>1</sup> National Freight Demands Study 2008, Richard Paling Consulting, IPC & Associates, John Bolland Consulting and Murray King Francis Small for Ministry of Transport, Ministry of Economic Development and NZTA

<sup>2</sup> *"Coastal Shipping and Mode Freight Choice"*, 2009, Rockpoint Corporate Finance in association with Richard Paling Consulting and IPC & Associates



The information from the NFDS is primarily based on a snapshot of the position in 2006-07, and forecasts for 2031. To take account of recent trends and developments, this has been supplemented by a review of more recent regional statistics and discussions with key stakeholders in the freight sector in the region to identify recent trends and issues both current and emerging. The opportunity has also been taken to extend the forecast period to 2040 to tie in with the 30 year time horizon of the RLTS.

While there have been a number of changes since the National Freight Demands Study was undertaken, a number of which are identified in this report, the comprehensive 2006-07 position identified in the NFDS has been taken to be broadly representative of the current position.

## Part 3: Current freight movements

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### 3.1 Introduction

The current volume of freight travelling to, from or within the Bay of Plenty in 2006-07 amounted to about 32 m tonnes, representing about 14% of the total transported within the country as a whole. The volume transported also represented about 120 tonnes per person. This represents about 175% of the national average of 68 tonnes per person and demonstrates the intensity of freight activities in the region. This is, to a large extent driven by the movement of a range of bulk commodities particularly logs and timber products and reflects the presence of New Zealand's largest port by volume of goods transported.

The analysis of the freight patterns in the region has been undertaken looking at three main types of traffic:

- Internal movements
- Movements to and from the other regions in the Upper North Island (UNI) representing the "Golden Triangle" of Auckland Waikato and Bay of Plenty plus Northland
- Movements to and from other areas in New Zealand

The volumes of traffic in each of these categories for 2006-07 is set out in Table 3.1 and Figure 3.1.

*Table 3.1 Freight traffic impacting on Bay of Plenty Region in 2006-07 - total flows (million tonnes)*

Type of flow	Tonnes (millions)	Per cent of total
Internal	17.4	55%
Movements to and from other Upper North Island (UNI) regions	11.2	35%
Movements to and from other regions	3.2	10%
<b>Total</b>	<b>31.8 (1)</b>	<b>100%</b>

Notes (1) Based on the total flows of freight impacting on the region

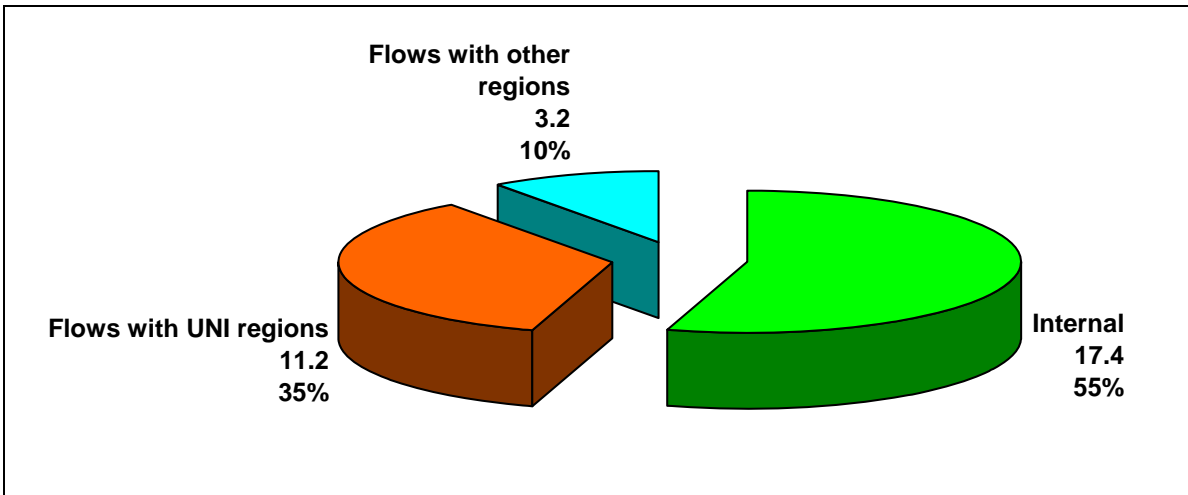


Figure 3.1 Breakdown of Bay of Plenty Freight Flows 2006-07 Total Flows (million tonnes and per cent of total)

The majority of freight traffic is relatively short distance travelling wholly within the region. There is also a considerable degree of interaction with the other UNI regions, but movements to and from the rest of New Zealand are relatively small at about 10% of the total.

## 3.2 Internal freight movements

### 3.2.1 Flows by commodity

The breakdown of internal movements by commodity for the main groupings identified in the NFDS is set out in Figure 3.2.

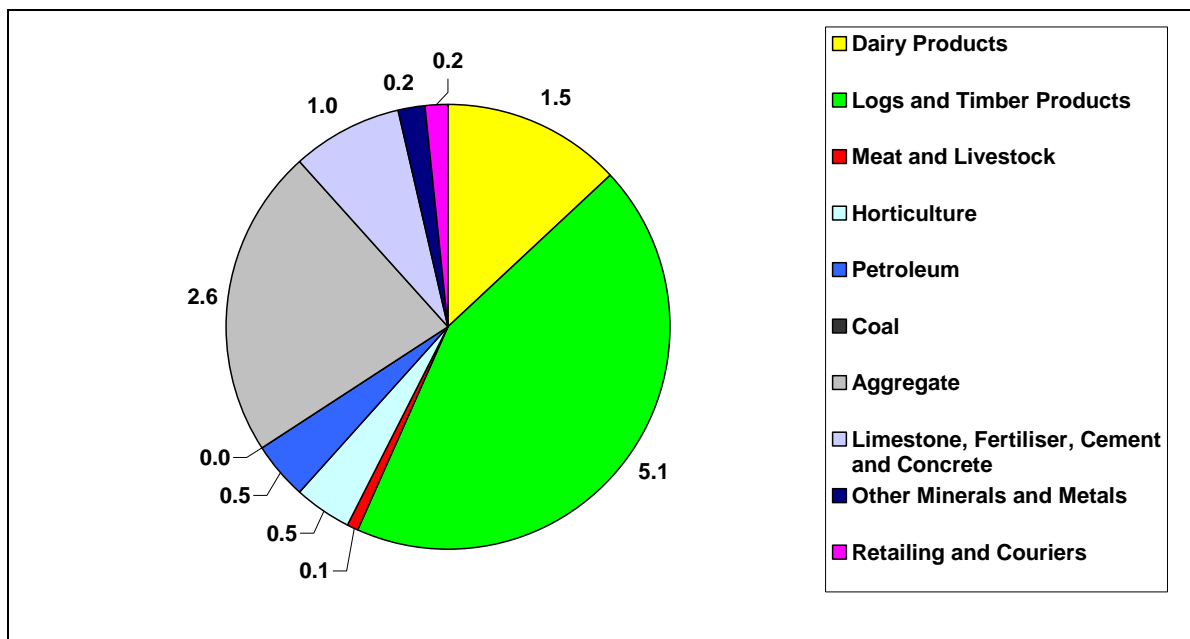


Figure 3.2 Internal freight flows within the Bay of Plenty 2006-07: identified commodities only (million tonnes)

The identified flows are dominated by the movements of basic agricultural and mining commodities, primarily logs and timber, aggregates and dairy products (including liquid milk). Within the Bay of Plenty region itself, the major sources of logs are Whakatane and Rotorua districts with smaller volumes being harvested in Western Bay of Plenty. A large proportion of the timber harvested is exported through Tauranga.

Liquid milk production is concentrated in Rotorua and Whakatane which make up almost 75% of total regional production.

### 3.2.2 Modal Split for internal movements

The modal split for freight movements within Bay of Plenty region is set out in Table 3.2. For comparison purposes, material is also included for the other Upper North Island regions.

Table 3.2 Modal Split for internal movements within the Bay of Plenty and within other upper North Island regions 2006-07 : total flows million tonnes)

	Bay of Plenty	Auckland	Waikato	Northland
Total Flows	17.4	33.7	23.8	10.8
Flows by Rail	1.36	0.05	0.15	0.08
Rail Modal Share	7.8%	0.1%	0.6%	0.7%

Although as is the case for all other regions in New Zealand, internal freight movements are dominated by road, the share of rail at about 8% is relatively high, reflecting to a large extent the volumes of logs transported between Murupara and Kawerau and the Port of Tauranga. For this traffic, the volumes involved and the particular patterns of movement with a high concentration of flows between a very limited number of points supports the use of rail. The rail heads at Murupara and

Kawerau are largely supplied by road vehicles using private off road highways which allows the use of high capacity freight vehicles with weights up to 60 tonnes.

The rail share can be compared with those for other neighbouring regions in the Upper North Island where these represent much less than 1% of regional movements. It is possibly noteworthy that the rail movements within the Bay of Plenty region represent almost half of the internal rail movements within regions in the whole of New Zealand.

### 3.3 Inter-regional movements with other regions in the Upper North Island

#### 3.3.1 Overall flows by commodity

The breakdown of the flows of the identified commodities between Bay of Plenty and the other Upper North Island regions is set out in Table 3.3 and Figure 3.3.

Table 3.3 *Movements between Bay of Plenty and other Upper north island regions by commodity : selected commodities 2006-07 (million tonnes)*

	Dairy Prods	Logs & Timber Products	Meat & Live-stock	Horti-culture	Petrol-eum	Coal	Aggre-gate	Limestone, Fertiliser, Cement & Concrete	Other Min'ls and Metals	Retail and Couriers	Total
Northland	0.0	0.2	0.1	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.8
Auckland	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.4	1.3	1.9
Waikato	0.4	2.2	0.1	0.0	0.1	0.9	0.4	0.7	0.2	0.0	4.9
Total	0.4	2.4	0.1	0.2	0.4	0.9	0.4	0.9	0.6	1.3	7.5

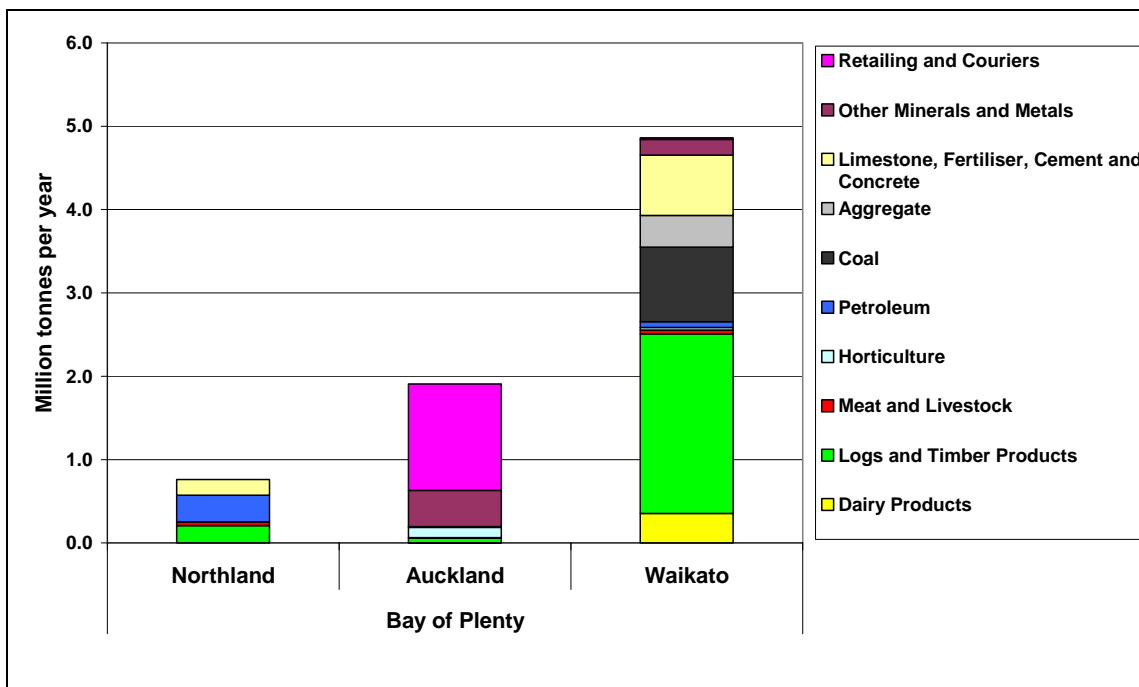


Figure 3.3 *Movements between Bay of Plenty and other Upper North Island regions by commodity : selected commodities 2006-07 (million tonnes)*

The key flows which can be identified in the table and figure include:

- Petroleum and cement and some logs and timber products from Northland
- Retail goods and steel (included in other minerals) to and from Auckland
- Dairy products and logs and timber from Waikato
- Coal to Waikato
- Fertiliser and cement from Bay of Plenty to Waikato

In general, movements to and from Auckland are dominated by manufactured products and movements to and from Waikato and also Northland are focussed mainly on more basic products.

### 3.3.2 Modal Split

Because of the particular routes on which flows are concentrated and the type of commodities carried, modes other than road have fairly high shares of the movement of freight to and from the other regions in the Upper North Island. This is illustrated in Table 3.4 and Figure 3.4

*Table 3.4 Modal Splits for flows with the UNI regions 2006-07 total flows (million tonnes)*

Region	Total	Rail		Sea		Road	
	M tonnes	M tonnes	Mode Split	M tonnes	Mode Split	M tonnes	Mode Split
Northland	1.1	0.0	2%	0.5	41%	0.6	57%
Auckland	2.8	1.5	52%	0.0	0%	1.3	47%
Waikato	7.2	1.8	25%	0.0	0%	5.4	75%

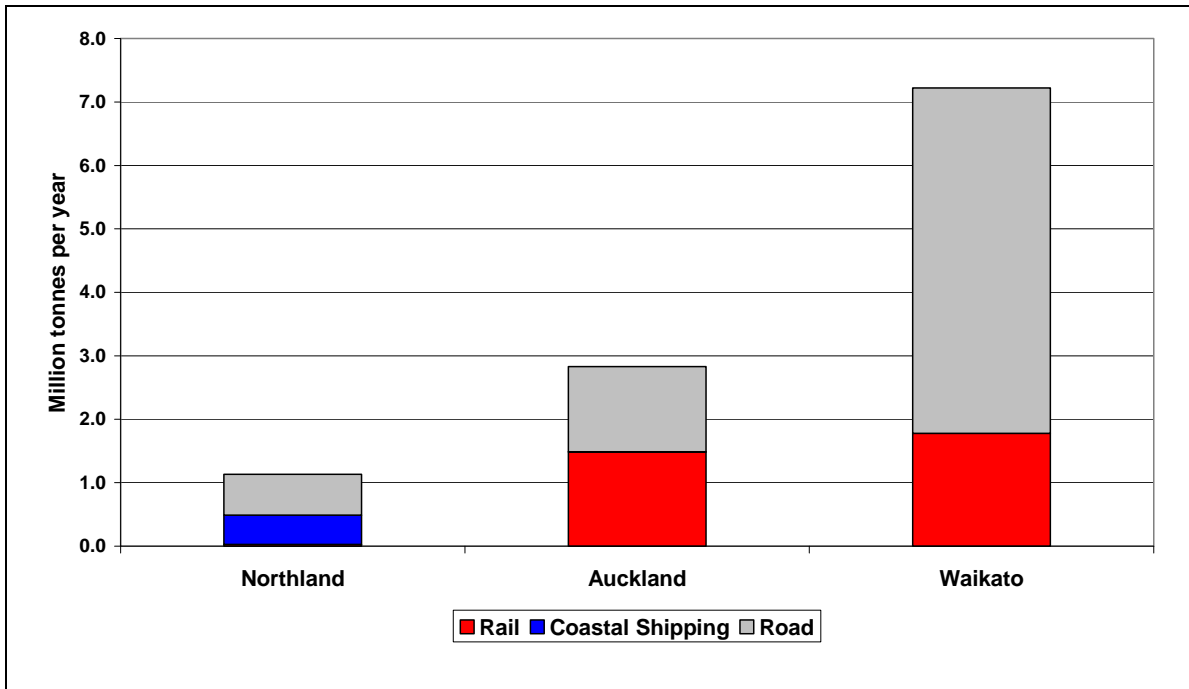


Figure 3.3 Modal Splits for freight movements between Bay of Plenty and other Upper North Island regions : All flows 2006-07 (million tonnes)

Road is the dominant mode for movements between the Bay of Plenty and Northland and Waikato. However, the successful development of the Metroport facility in South Auckland which acts as a rail supported inland port for Tauranga and the use of rail for the export of steel through Tauranga means that for movements between Auckland and Bay of Plenty including retail products imported or exported, rail is the dominant mode. For the longer distance movements to and from Northland, coastal shipping has a significant share of the market mainly for cement and petroleum from Whangarei. The rail movements between Bay of Plenty and Waikato mainly comprise logs and timber, coal and dairy products.

### 3.4 Flows with other regions in New Zealand

#### 3.4.1 Total external flows

External flows to other parts of New Zealand outside the Upper North Island represent about 10% of total flows impacting on the Bay of Plenty and about 25% of all inter-regional flows. These relatively low shares emphasise the importance of links with the other UNI regions and the levels of integration of the regional economies.

Table 3.5 Freight flows between Bay of Plenty and external regions 2006-07 all commodities (million tonnes)

Origin-Destination Elsewhere in New Zealand	Million Tonnes
Gisborne/Hawkes Bay	1.0
Taranaki/Manawatu-Wanganui	1.5
Wellington	0.4
Canterbury	0.3
Other South Island	0.1
Total	3.2
<i>Total for UNI Regions</i>	<i>11.2</i>

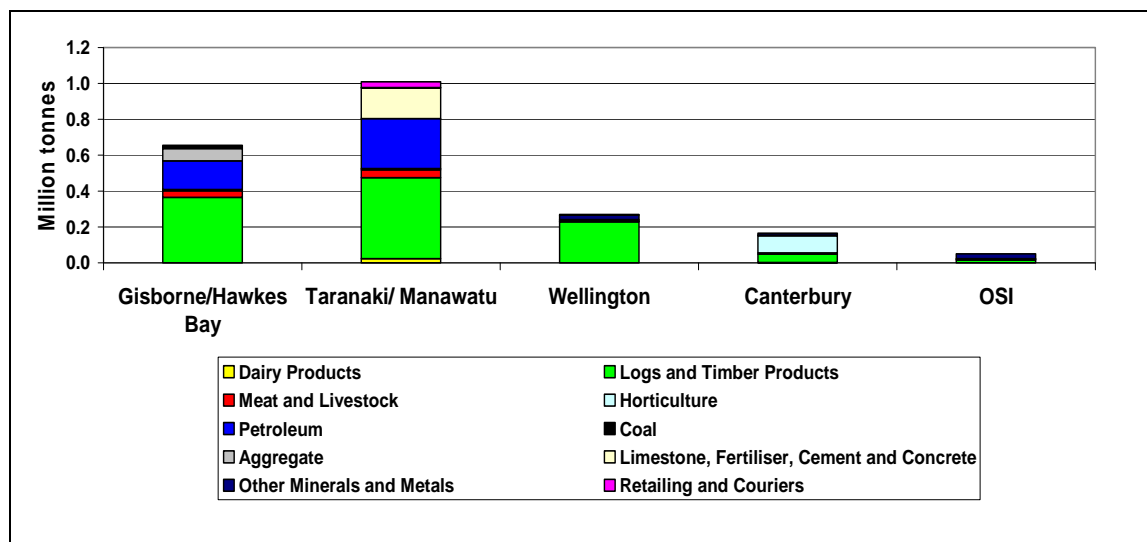


Figure 3.5 Freight movements between Bay of Plenty and regions outside the Upper North Island : selected commodities 2006-07 (million tonnes)

A high share of this inter-regional traffic is in logs and timber products, reflecting the role of Tauranga as an export port and also more local movements between sources of supply and processing facilities in neighbouring regions. The movement of other products largely reflects the role of Tauranga as a major port for imports and exports with a large catchment area over the central North Island regions, handling products such as petroleum, fertiliser and meat.

### 3.4.2 Modal Splits for external traffic

The modal splits for the traffic external to the Upper North Island are set out in Figure 3.6.



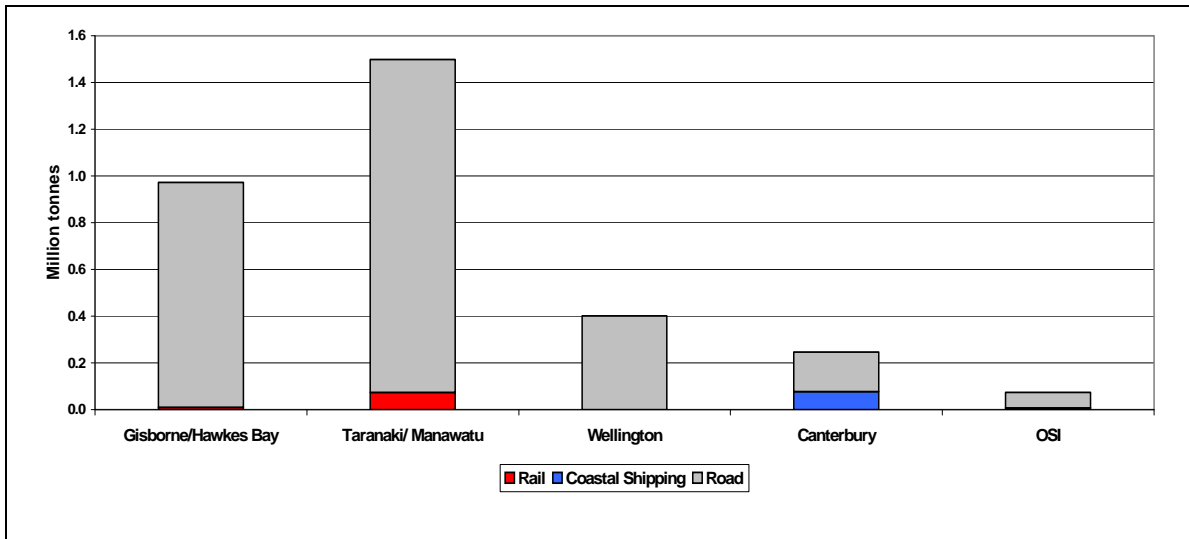


Figure 3.6 Modal Splits for external flows 2006-07 all commodities (million tonnes)

### 3.5 Overall flows and Modal Splits in 2006-07

The total flows and overall modal splits for 2006-07 are summarised in Table 3.6.

Table 3.6 Total flow and Modal Splits in 2006-07 total flows (million tonnes)

Area	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Mode Split	M tonnes	Mode Split	M tonnes	Mode Split
Internal	17.4	1.4	8%	0.00	0%	16.0	92%
UNI Regions	11.2	3.3	29%	0.5	4%	7.4	66%
External Regions	3.2	0.2	6%	0.1	3%	2.9	92%
<b>Total</b>	<b>31.8</b>	<b>4.8</b>	<b>15.2%</b>	<b>0.6</b>	<b>1.7%</b>	<b>26.4</b>	<b>83.0%</b>

Overall rail carried about 15% of the total tonnage of freight impacting on the Bay of Plenty Region, coastal shipping about 2% and road the balance of 83%. At 29%, rail had a relatively high share of the movements with the other UNI regions.

The overall pattern of freight flows by area is set out in Figure 3.7.

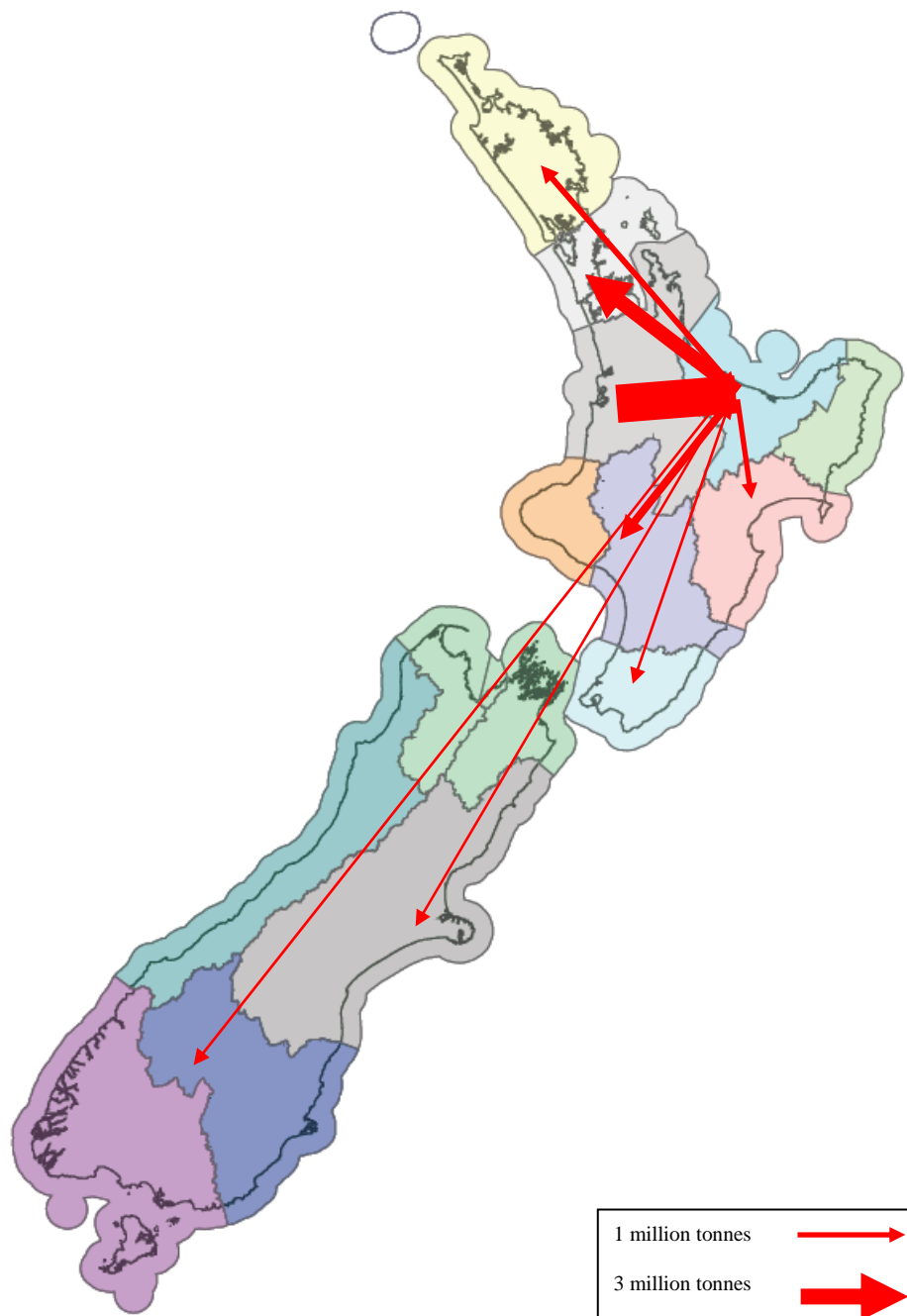


Figure 3.7 Pattern of total freight flows to and from Bay of Plenty 2006-07 (million tonnes)

### 3.6 Analysis of other data

#### 3.6.1 Introduction

While the NFDS provides a basic picture of the movements of freight in 2006-07, the opportunity was taken to supplement this with a further analysis of additional information and views collected from a review of published information and from a series of discussions with key stakeholders in the region.

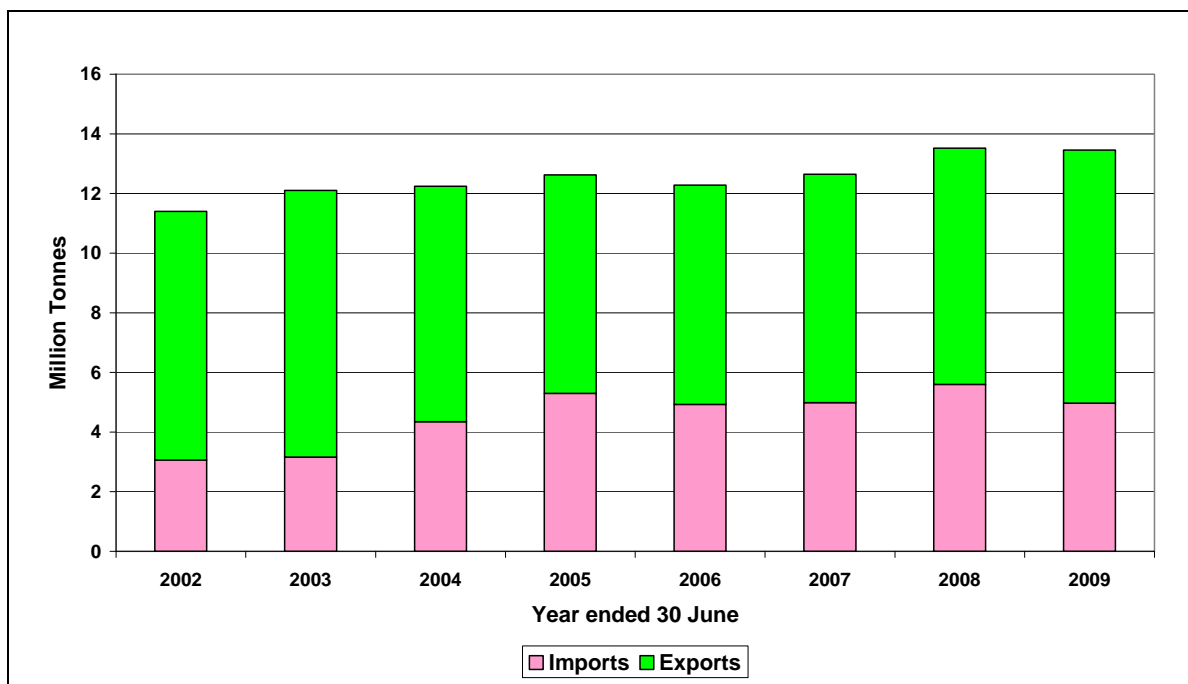
### 3.6.2 Port traffic

The volume of traffic through the Port of Tauranga over recent years is set out in Table 3.7 and Figure 3.8.

*Table 3.7 Changes in international imports and exports through Port of Tauranga 2002-2009 (million tonnes)*

Year	Imports	Exports	Total
2002	3.06	8.34	11.40
2003	3.16	8.94	12.10
2004	4.35	7.89	12.24
2005	5.30	7.32	12.62
2006	4.93	7.35	12.28
2007	4.98	7.66	12.65
2008	5.60	7.92	13.52
2009	4.98	8.48	13.46

Source : Port of Tauranga, Port Trade and Statistic Information, August 2009



*Figure 3.8 International traffic through the Port of Tauranga (million tonnes)*

The breakdown of traffic by commodity is set out in Table 3.8.

Table 3.8 Exports and imports through the Port of Tauranga by commodity 2003-2009 (million tonnes)

Commodity	2003	2004	2005	2006	2007	2008	2009
<b>Exports</b>							
Logs	3.89	2.88	2.30	2.22	2.34	2.45	3.09
Other forest products	2.37	2.12	2.12	1.94	1.97	2.11	2.00
Dairy Products	0.76	0.82	0.78	0.84	0.78	0.46	0.58
Meat	0.18	0.21	0.23	0.31	0.38	0.32	0.38
Kiwifruit	0.51	0.60	0.65	0.66	0.62	0.78	0.75
Other horticultural	0.09	0.09	0.08	0.12	0.09	0.11	0.09
All other	1.14	1.17	1.17	1.24	1.48	1.68	1.58
<b>Total</b>	<b>8.94</b>	<b>7.89</b>	<b>7.32</b>	<b>7.34</b>	<b>7.66</b>	<b>7.92</b>	<b>8.46</b>
<b>Imports</b>							
Oil Products	0.85	0.97	1.12	1.08	1.15	1.17	1.10
Cement	0.12	0.12	0.15	0.17	0.16	0.16	0.14
Fertilisers	0.48	0.52	0.61	0.45	0.58	0.53	0.41
Chemicals salt and bulk liquids	0.29	0.36	0.31	0.29	0.30	0.36	0.34
Grain	0.22	0.21	0.23	0.26	0.24	0.28	0.24
Palm Kernel	0.00	0.00	0.00	0.00	0.15	0.46	0.43
Coal	0.04	0.66	0.88	1.13	0.93	0.39	0.66
Other goods	1.20	1.61	2.08	1.66	1.56	2.31	1.72
<b>Total</b>	<b>3.20</b>	<b>4.45</b>	<b>5.38</b>	<b>5.05</b>	<b>5.06</b>	<b>5.68</b>	<b>5.05</b>
<b>Total Imports plus exports</b>	12.13	12.34	12.70	12.39	12.73	13.60	13.51
<b>Total TEUs (000s) (1)</b>	349.8	394.4	438.2	423.1	466.2	582.1	546.5

Note (1) TEU = twenty foot equivalent units a standard measure used to combine containers of different sizes

The volumes of both imports and exports have fluctuated over the period. This reflects:

- Changes in both the volumes of commodities harvested or produced, particularly for logs and timber which accounts for 60% of exports and which have been affected by the costs and availability of shipping services to the main markets and changes in the level of demand in these.
- The demand for imports of basic commodities such as coal.
- The growth of imports of palm kernels from nothing in 2006 to 0.4-0.5 m tonnes in 2008 and 2009.
- Changes in the patterns of shipping services, particularly affecting the balance between the ports of Auckland and Tauranga and which has affected the volumes of dairy products and other containerised cargo through the port.
- The effects of the economic downturn particularly for manufactured goods reflected in the reduction of TEU's in 2009 and also for fertiliser bases.

It should be noted that the numbers of TEU's handled includes transshipment containers, estimated at 129,000 in 2008, and empty containers, estimated at about 130,000 in 2008<sup>3</sup>.

The breakdown of traffic by commodity in 2009 for exports and imports is set out in Figures 3.9 and 3.10.

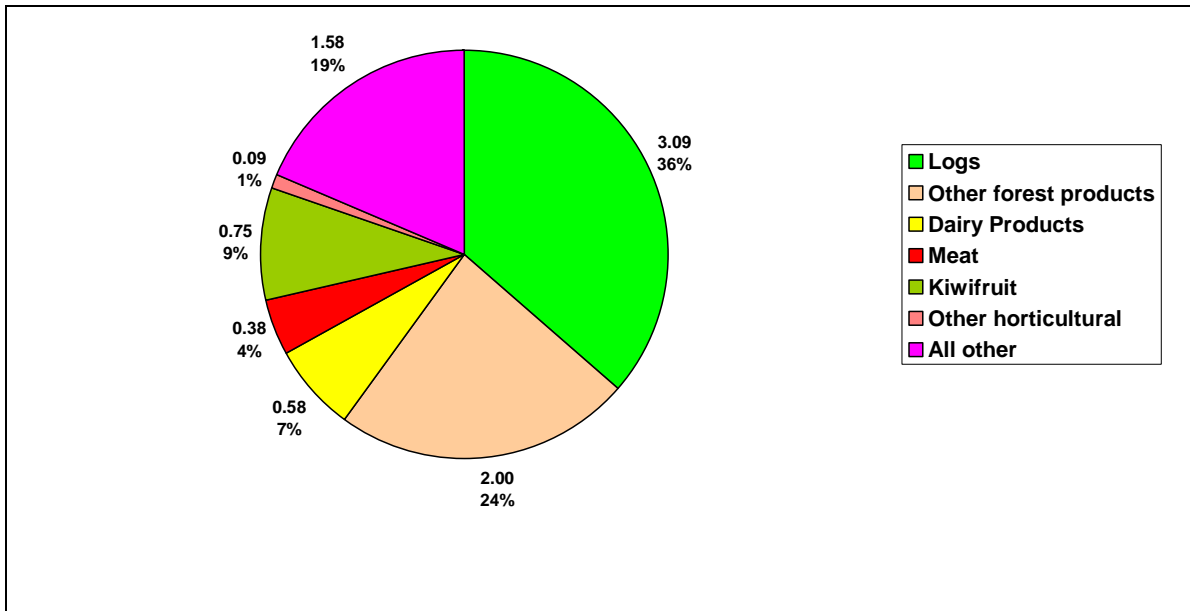


Figure 3.9 Breakdown of Port of Tauranga exports by commodity 2009 (million tonnes)

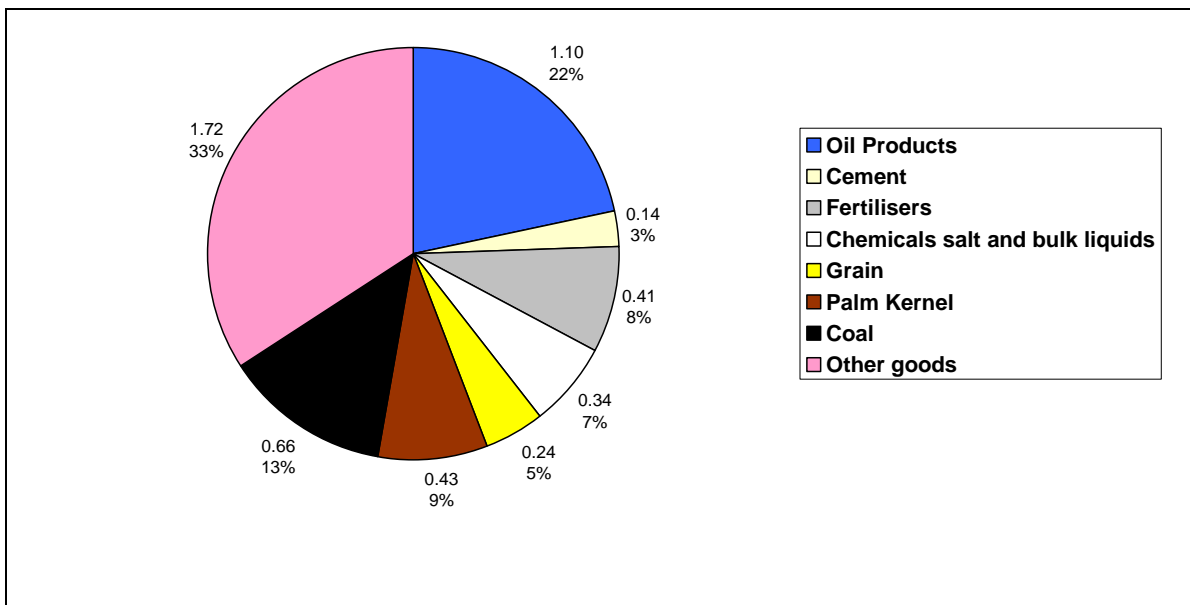


Figure 3.10 Breakdown of Port of Tauranga imports by commodity 2009 (million tonnes)

<sup>3</sup> "Coastal Shipping and Mode Freight Choice", 2009, Rockpoint Corporate Finance in association with Richard Paling Consulting and IPC & Associates

In both directions, the volume of trade is dominated by basic products although there are substantial movements of "other goods" which include imported and exported manufactured goods. For exports, the basic products include logs and timber products, dairy products meat and horticultural products. Imports are dominated by oil products, coal, agricultural inputs of fertilisers and palm kernel, although there are substantial volumes of "other goods" which make up about a third of the total.

A significant proportion of the container traffic is handled by the Metroport inland port in Auckland and transferred to and from Tauranga by rail. The volumes of containers handled in this way are set out in Table 3.9.

*Table 3.9 Container Volumes through Metroport 2003-2009 (TEUs)*

<b>Year</b>	<b>Containers Handled at Metroport</b>
2003	82,500
2004	132,000
2005	134,000
2006	119,147
2007	138,200
2008	170,000
2009	140,000(1)

Notes (1) Consultants estimates

As in the case of the overall shipping totals, the volumes handled through Metroport have generally been growing but have fluctuated from year to year. This reflects both changes in shipping patterns and also most recently the general economic downturn which has had a particular impact on the volumes of manufactured goods imported or exported to and from the Auckland region which represent a high proportion of Metroport traffic .

### 3.6.3 Road traffic flows

Information is available on the movement of heavy vehicles on the state highway network within the Bay of Plenty are set out in Table 3.10 and in Figure 3.11.

*Table 3.10 Heavy vehicle flows on state highways in Bay of Plenty 2002-2009 AADT*

<b>SH</b>	<b>Count Location</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
SH2	Te Puna	974	1180	1072	1089	1038	1189	1167	1131
SH2	Te Puke	1719	1601	1480	1458	1510	1521	1918	1792
SH2	Ohinepanea	660	684	659	717	605	631	704	726
SH5	Tarukenga	506	724	583	606	543	567	573	556
SH5	Waipa	703	1016	671	753	724	742	794	798
SH2 9	Kaimai	468	1039	1072	969	1022	1141	1284	1144
SH3 0	Te Nga	1368	2111	1718	1857	1676	1799	1812	1992
SH3 0	Lake Rotoma	288	325	300	281	282	304	329	331
SH3 3	Paengaroa	609	741	605	464	470	507	560	577
<b>Average flow all sites</b>		<b>811</b>	<b>1047</b>	<b>907</b>	<b>910</b>	<b>875</b>	<b>933</b>	<b>1016</b>	<b>1005</b>

Source : Transit/NZTA Traffic Counts

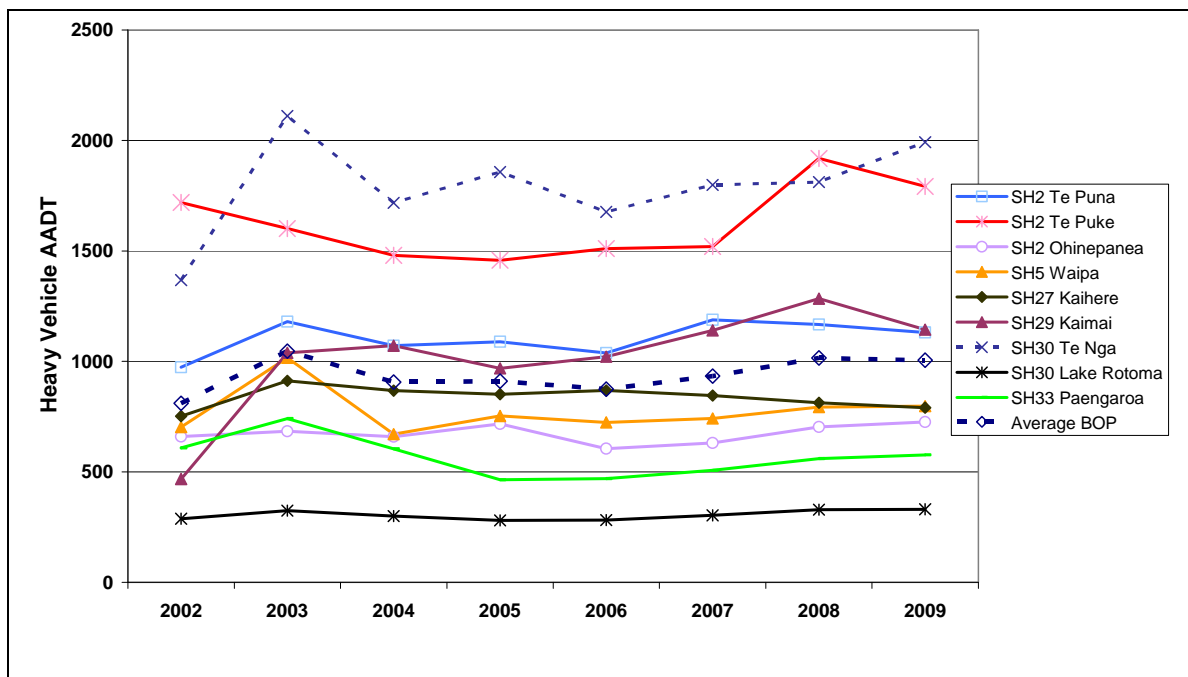


Figure 3.11 Heavy vehicle flows on state highways in Bay of Plenty Region 2002-2009 (AADT)

As the analysis earlier in this section has indicated, much of the freight within and to and from the Bay of Plenty region is composed of basic commodities, in particular logs and timber and milk and dairy products. Although the period from 2003-2008 was one of economic growth, movements of these bulk commodities were very much affected by other factors. These included the weather (where drought conditions can have a significant impact on the production and movement of liquid milk) and the availability of shipping capacity which has had an impact on the trade in logs and hence on the volumes harvested. As a result, with the possible exception of the flows through Te Puke possibly reflecting growth in the kiwifruit harvest, heavy vehicle movements on the individual components of the state highway network in the Bay of Plenty and on the network as a whole typically increased only very modestly.

### 3.6.4 Agricultural production

#### Milk

Liquid milk is a major contributor to the total volumes of freight transported in the Bay of Plenty and recent production figures are set out in Table 3.11.

Table 3.11 Liquid milk production in the Bay of Plenty (million litres)

Local Authority Area	2003-04	2006-07	2007-08	2008-09
Western Bay of Plenty	248.9		234.7	230.9
Tauranga	10.8		17.2	9.8
Kawerau/Whakatane	366.6		372.0	366.8
Opotiki	92.8		87.6	88.0
Rotorua	493.9		451.4	501.8
Total	1213.0	1235.0	1162.9	1197.1

Source : LICs

While there have been fluctuations from year to year, in general the flows have been broadly constant over the period, and this position is expected to remain broadly the same over the future. It is likely that there will be some shifts within the region with possibly some dairy conversion in the south being matched by loss of production as land is transferred to more urban uses in the north particularly around Tauranga.

### **Kiwifruit**

The volumes of Kiwifruit harvested in New Zealand are set out in Table 3.12 and Figure 3.12.

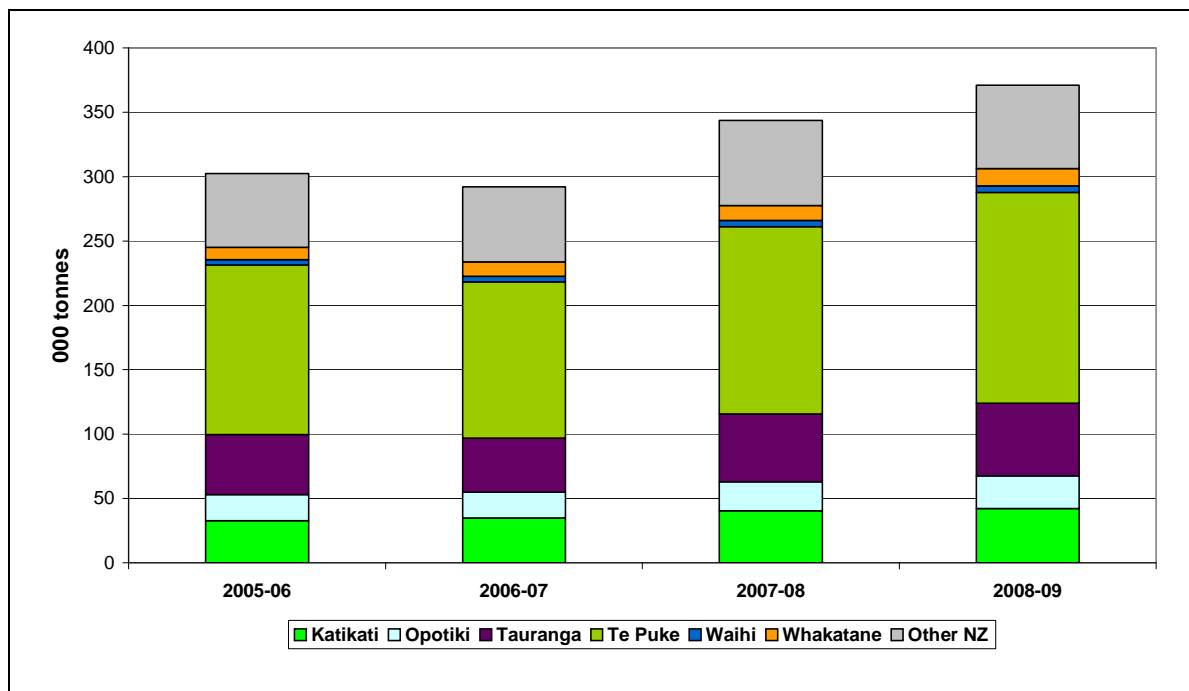
*Table 3.12 Kiwifruit production in New Zealand by area 2005-06 to 2008-09 (000 tonnes)*

<b>/Area of Production</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Northland	12	13	16	13
Auckland	11	12	14	16
Bay of Plenty				
Katikati	33	35	41	42
Opotiki	20	20	22	25
Tauranga	47	42	53	56
Te Puke	132	121	146	164
Waihi	4	4	5	5
Whakatane	9	11	11	13
Total BOP	245	234	277	306
Waikato	8	9	11	10
Poverty Bay	6	6	6	6
Hawke's Bay	3	4	3	3
Lower North Island	2	2	2	1
South Island	14	12	13	16
<b>Total</b>	<b>288</b>	<b>280</b>	<b>330</b>	<b>355</b>
BOP as percentage of national total	81%	80%	81%	83%

Source : Zespri



Table 3.12 Estimated kiwifruit production in New Zealand (million tonnes)



Total production is dominated by the Bay of Plenty which provides over 80% of the harvest. There has also been considerable growth over the period with output in Bay of Plenty rising by 25% between 2005-06 and 2008-09 and this is expected to continue with the development of new varieties. The majority of kiwifruit are produced relatively close to the port of Tauranga, particularly in Te Puke, Tauranga and Katikati, which account for about 86% of total production.

Kiwifruit are all transported by road. While kiwifruit are transported from districts across the whole of the region the movement of the crop in the peak season is reported to have a significant impact on the road network into Tauranga from the Te Puke area in the east, the major production area and where the major packhouses are located.

## Part 4: Potential future growth as forecast in NFDS

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### 4.1 Introduction

The NFDS includes forecasts of the volumes of freight moved for 2031. The overall totals were built up from separate forecasts for each of the individual commodities examined which were then combined and factored up using a process similar to that used for the base year of 2006-07 to give overall totals. Forecasts were also made for rail and coastal shipping based on broadly maintaining constant shares of the commodity movements currently handled.

In general, the forecasts for 2031 are based on a “business as usual” assumption with overall distribution patterns remaining broadly the same in the future as for now, but with the volumes transported affected by levels of production and demand. A key factor which affects the forecasts for 2031 for retail products is the anticipated change in delivery and distribution patterns. These would involve the increased use of the direct delivery of imported goods closer to the region of consumption for the South Island and to a lesser extent the lower North Island instead of importing through Auckland or Tauranga and routing through an Auckland distribution centre. This has the result of reducing the growth in the flows of retail products between Tauranga and Auckland.

The forecasts also assumed that the patterns of ports served by international shipping services would remain effectively the same in the future as at the present day and that there would be no large scale rationalisation of these which would limit the options for those importing or exporting goods. The possible rationalisation of shipping services could lead to an increase in traffic through the port of Tauranga especially for cargoes to or from areas further south in the North Island and this could provide opportunities for increased movements by rail or possibly coastal shipping. There is also the potential for rebalancing the level of traffic between Auckland and Tauranga, although at this stage the direction or magnitude of any changes are uncertain. The possible impacts of these changes in shipping patterns have therefore been excluded from the forecasts, although these are discussed later in this report.

On the basis of these individual forecasts and assumptions, the Study predicted a total growth in the freight task of about 75% nationally over the period, equivalent to average annual increases of about 2.25% over the period. However, these forecasts did not take into account the effects of the recent economic downturn which has resulted in a hiatus in economic growth and in the volumes of freight transported, particularly as reflected in the movement of goods by road and through the port of Tauranga as discussed in the previous section.

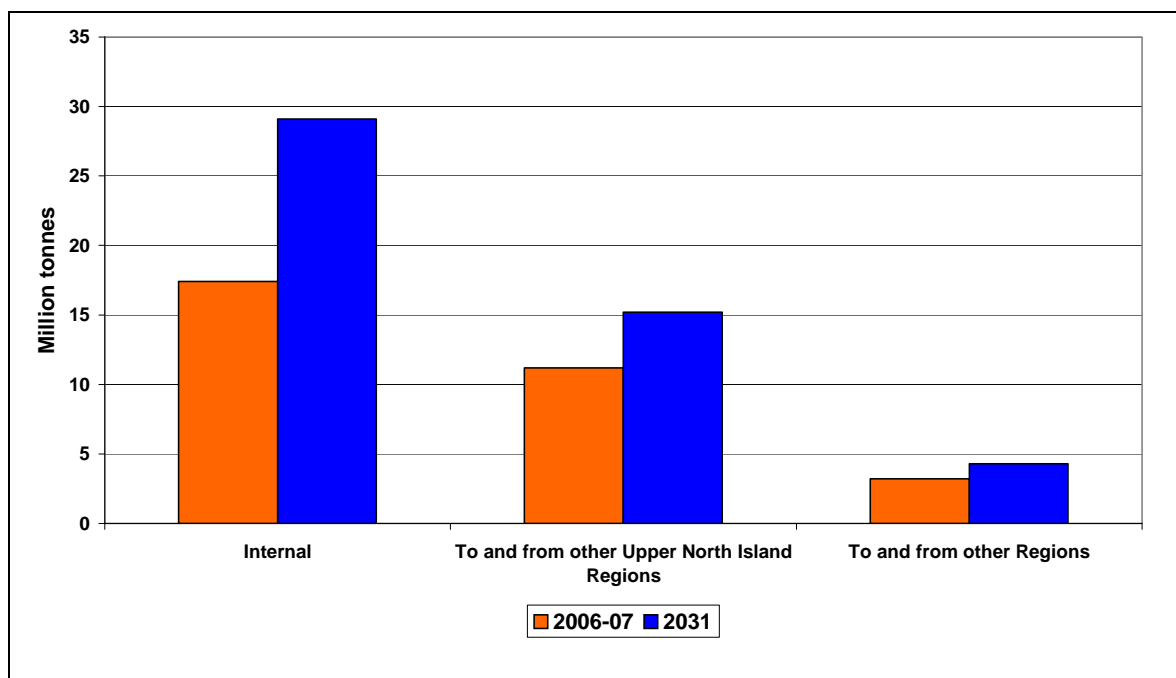
Given the uncertainty as to when and to what extent economic and traffic growth is likely to resume, it is considered that the forecasts made for 2031 are therefore more likely to be applicable to a later date say 2035. However to maintain consistency with the NFDS and with the parallel Upper North Island Freight Study these are reported as 2031 forecasts in the material that follows.

### 4.2 Total flows

The forecast growth over the period 2006-07 to 2031 in the total freight flows impacting on Bay of Plenty is set out in Table 4.1.

*Table 4.1 Forecast growth of Bay of Plenty traffic movements 2006-07 to 2031 : all commodities (million tonnes)*

Type of Movement	2006-07	2031	Growth
Internal	17.4	29.1	67%
To and from other Upper North Island Regions	11.2	15.2	36%
To and from other Regions	3.2	4.3	35%
Total	31.8	48.6	53%



*Figure 4.1 Growth in total Bay of Plenty freight movements by type 2006-07 to 2031 (million tonnes)*

The highest rate of growth is forecast for internal movements with a smaller growth of about a third for movements both to the other Upper North Island regions and to the rest of New Zealand. The details of these forecasts are discussed in the following sections.

### 4.3 Internal flows

The growth in internal freight movements is set out in Figure 4.2.

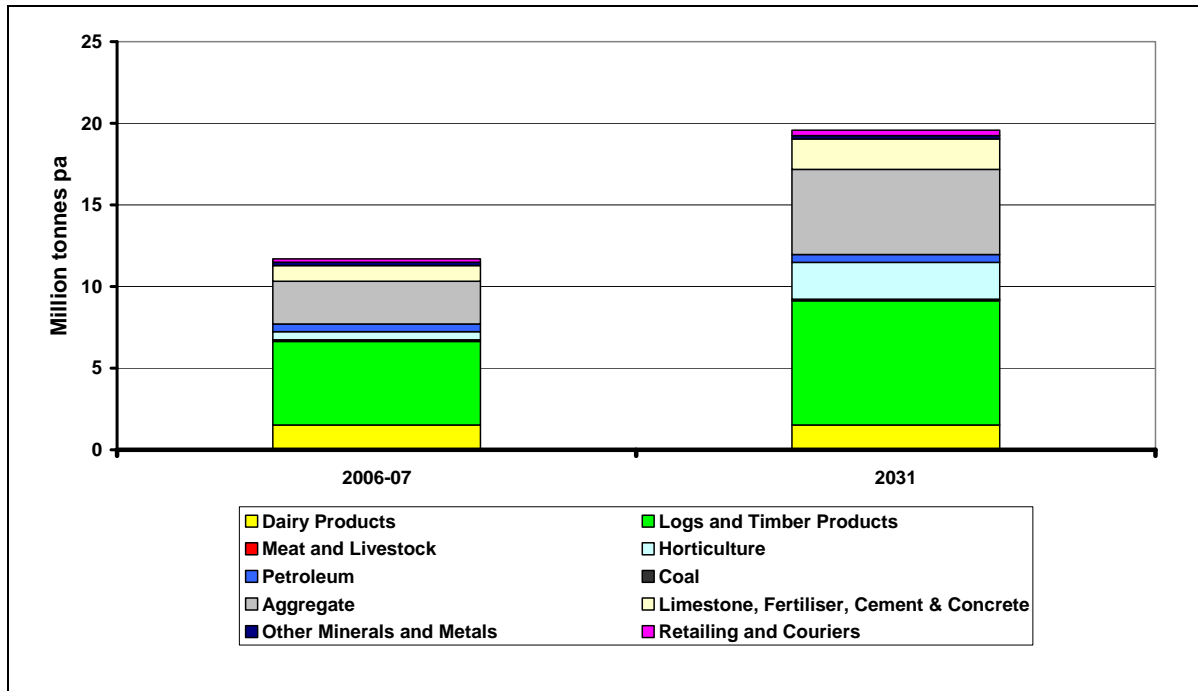


Figure 4.2 Growth in internal freight movements : 2006-07 to 2031 - selected commodities (million tonnes)

The main points which emerge from this figure are:

- Growth in logs and timber
- Growth in horticulture, mainly driven by kiwifruit
- Constant level of dairy activity
- Increases in movements of aggregates and limestone, fertiliser and other building materials

#### 4.3.1 Changes in Modal Splits for internal traffic

Changes in the volumes of internal freight transported by road and rail are set out in Table 4.2 and the change in modal split is illustrated in Figure 4.3.

Table 4.2 Change in modal split for internal traffic 2006-07 to 2031 all commodities

Year	Total	Rail		Road	
	Million tonnes	Million tonnes	Per Cent of Total	Million tonnes	Per Cent of Total
2006-07	17.4	1.4	8%	16.0	92%
2031	29.1	2.9	10%	26.2	90%

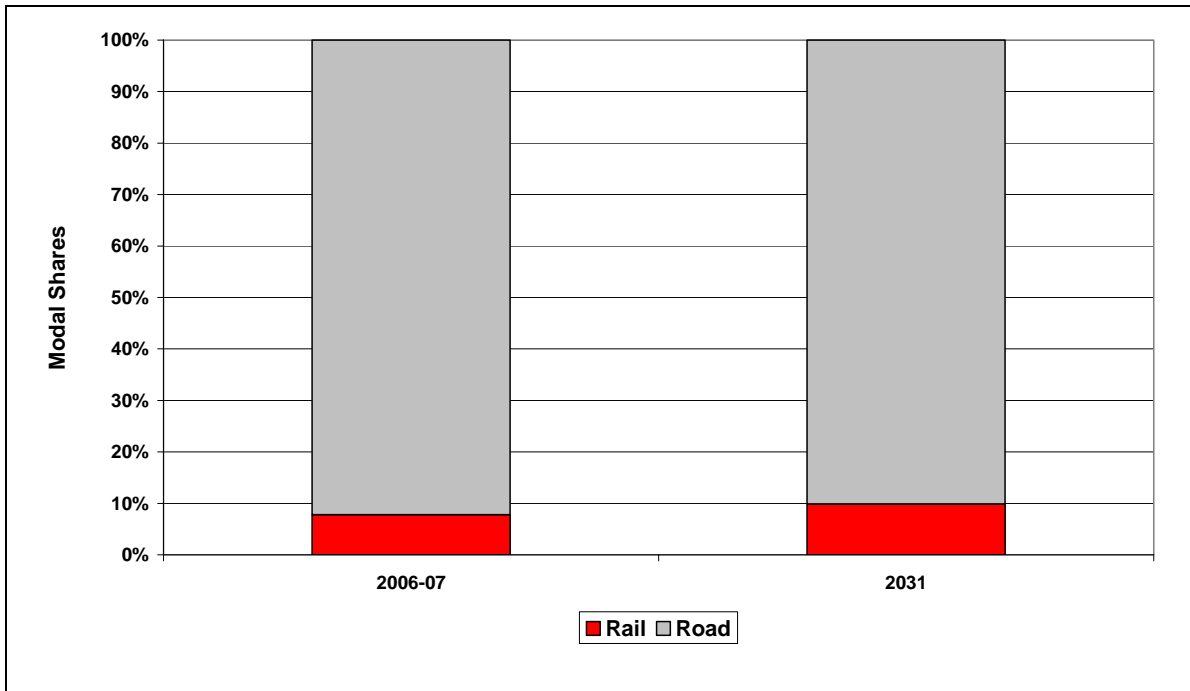


Figure 4.3 Change in Modal Split for internal flows - all commodities 2006-07 to 2031

There is forecast to be some increase in the rail share reflecting the high growth of logging traffic where rail is a significant contributor.

For internal freight traffic, the overall position is one of substantial growth with volumes increasing by two thirds and with rail traffic increasing its modal share. Although the increase in modal share is small, the underlying growth in the overall market would therefore imply a substantial growth of rail traffic within the region.

#### 4.4 Flows with Upper North Island regions

##### 4.4.1 Total flows

The total freight flows to and from the Upper North Island Regions are forecast to increase by about 36% over the period from 2006-07 to 2031. The breakdown of this by corridor and commodity for the identified commodities is set out in Figure 4.4.

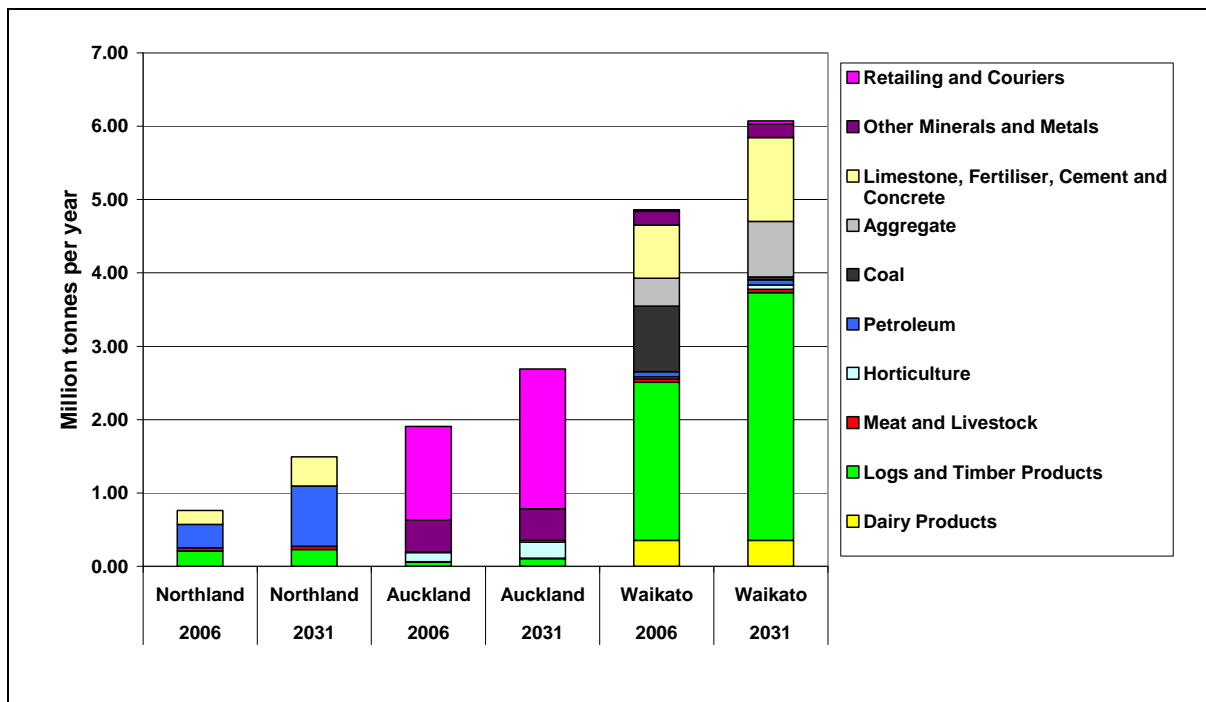


Figure 4.4 Growth in freight movements with the UNI regions 2006-07 to 2031 - selected commodities (million tonnes)

The changes in the volumes of identified commodities moved between the Bay of Plenty and the other regions in the Upper North Island are set out in Table 4.3.

Table 4.3 Changes in flows of identified commodities between Bay of Plenty and UNI regions 2006-07 to 2031 (million tonnes)

Commodity	Change (million tonnes)
Dairy Products	0.0
Logs and Timber Products	1.3
Meat and Livestock	0.0
Horticulture	0.1
Petroleum	0.5
Coal	-0.9
Aggregate	0.4
Limestone, Fertiliser, Cement and Concrete	0.6
Other Minerals and Metals	0.0
Retailing and Couriers	0.6
<b>Total</b>	<b>2.7</b>

The main points which emerge from Table 4.3 are:

- Growth in movements of log and timber products, petroleum movements (from Northland rather than direct imports) cement and fertiliser
- Decline in coal movements with reduction in imports from Tauranga to Huntly This in itself reduces the UNI inter-region forecast growth by about 25%.
- Growth in retail and courier products but the effects are limited by the anticipated changes in distribution patterns.

#### 4.4.2 Modal Splits

The change in modal splits for movements to and from the Upper North Island regions is set out in Figure 4.5 for the position as a whole and in Figure 4.6 for a more detailed breakdown.

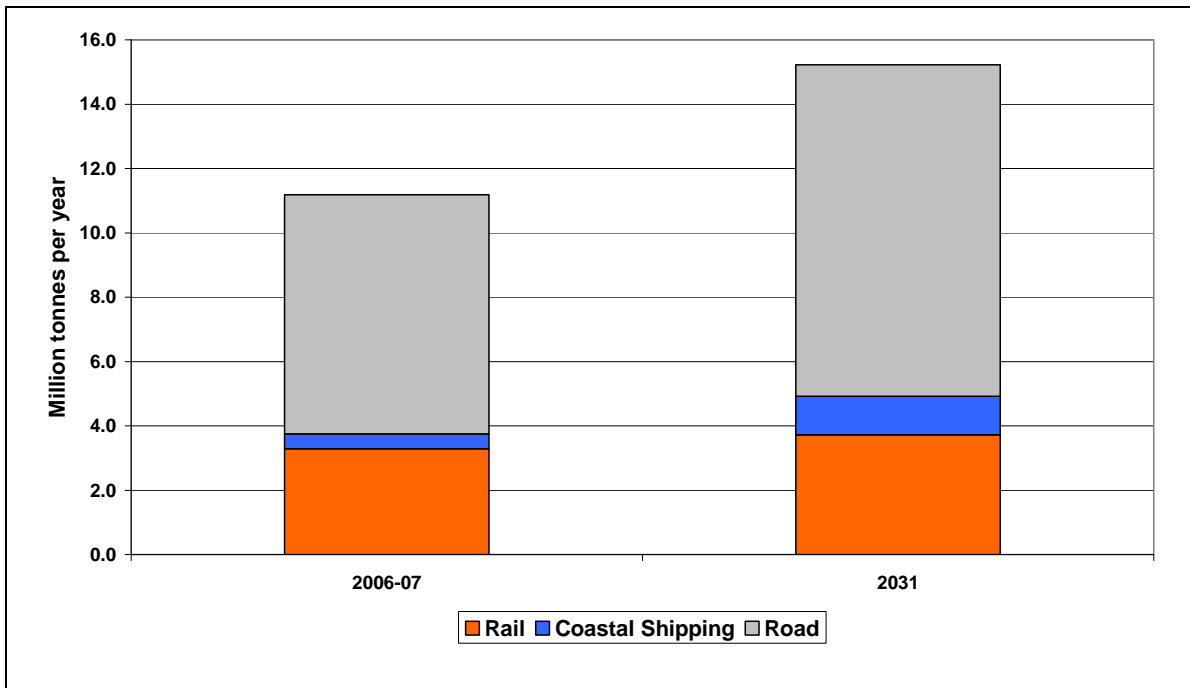


Figure 4.5 Changes in Mode Split for flows with Upper North Island regions 2006-07 to 2031 all commodities (million tonnes)

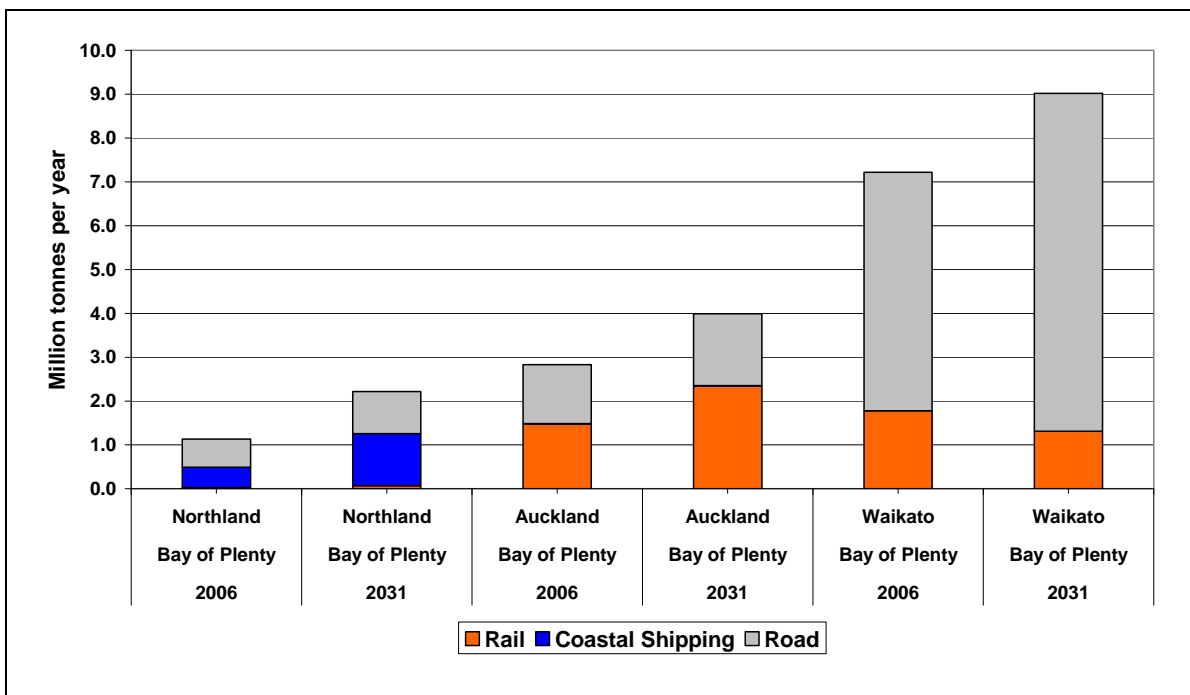


Figure 4.6 Changes in Modal Split by Upper North Island Region 2006-07 to 2031 : all commodities (million tonnes)

The main features which emerge are:

- Some growth in coastal shipping is anticipated with the expansion of petroleum and cement shipments from Northland.
- While limited overall growth is forecast for rail, this reflects in part the anticipated decline in coal traffic between Tauranga and Huntly with imports being replaced by locally produced outputs. There is however forecast to be growth in rail traffic over the longer movements between Bay of Plenty and Auckland and in logs and timber traffic from the Waikato.

The contributions of each mode to growth are set out in Figure 4.7.

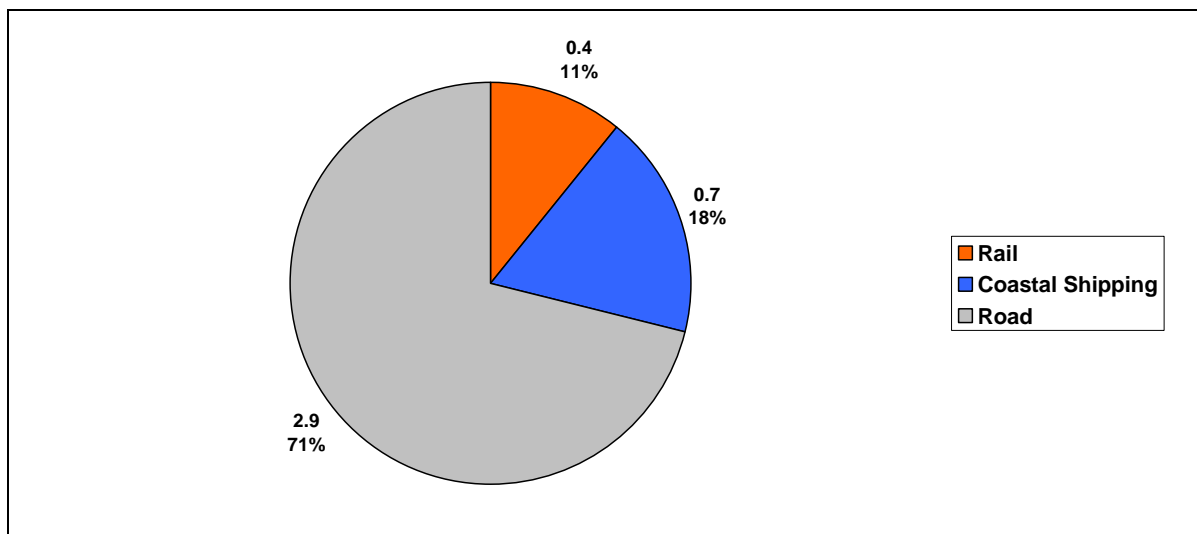


Figure 4.7 Contribution by Mode to Growth in freight movements with Upper North Island regions - all commodities 2006-07 to 2031 (million tonnes and per cent of total growth)

Road transport is responsible for 71% of the forecast growth in freight movements with the UNI Regions. Coastal shipping with the growth in movements of petroleum and of cement is forecast to provide 18% of the growth with rail, which is affected by the reduction in coal traffic from Tauranga to Huntly contributing 11%.

## 4.5 Other external flows

### 4.5.1 Total flows

Freight flows with other parts of New Zealand in the central and lower North Island and South Island are forecast to increase by about 35% over the period from 2006-07 to 2031. The breakdown of this growth by broad corridor is set out in Table 4.4.



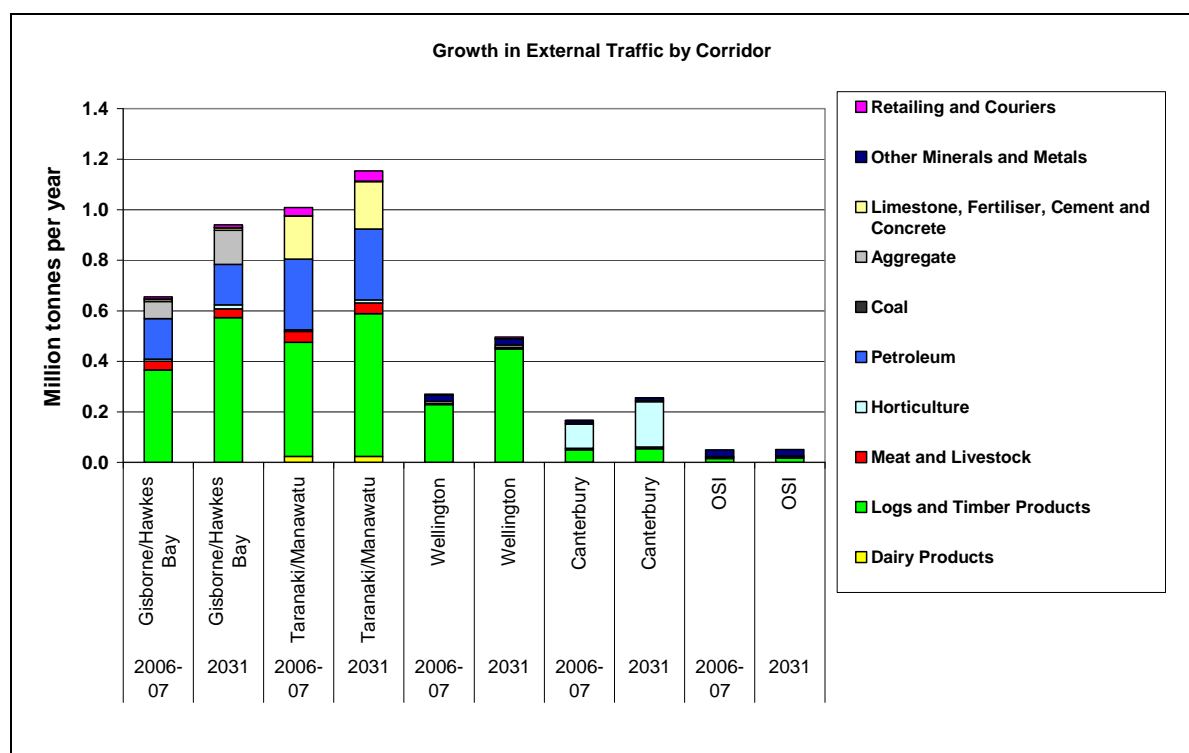
**Table 4.4 Forecast Growth in freight traffic between Bay of Plenty and external regions 2006-07 to 2031. All commodities (million tonnes)**

Origin-Destination Elsewhere in New Zealand	2006-07	2031	Growth (million tonnes)
Central North Island (CNI)	2.5	3.1	0.6
Wellington	0.4	0.7	0.3
Canterbury	0.3	0.4	0.1
Other South Island	0.1	0.1	0.0
<b>Total</b>	<b>3.2</b>	<b>4.3</b>	<b>1.1</b>

The growth is dominated by the shorter distance movements to and from the regions immediately to the south of Bay of Plenty in the Central North Island. Changes in the volumes of freight to and from more distant origins and destinations are relatively small.

#### 4.5.2 Growth by regional groups and commodity

The forecast growth of external traffic by regional groups and commodity is set out in Figure 4.7



**Figure 4.7 Growth in external traffic by corridor and commodity 2006-07 to 2031. Selected commodities (million tonnes)**

The key points that emerge from this include:

- As indicated earlier, most of growth is with the adjacent regions in the central North Island and to a lesser extent Wellington. Growth in movements to and from South Island is very small.
- The growth in traffic is largely driven by the movements of logs and timber products to and from other areas in the North Island.

- Flows of petroleum to central North Island regions are high but broadly unchanged.
- There is some growth in movements of horticultural products in both directions between Bay of Plenty and Canterbury.

#### 4.5.3 Modal Splits for external traffic

The forecast modal splits for external traffic are set out in Table 4.5.

Table 4.5

Year	Total	Rail		Coastal Shipping		Road	
	Million tonnes	Million tonnes	Modal Split (% of total)	Million tonnes	Modal Split (% of total)	Million tonnes	Modal Split (% of total)
2006-07	3.2	0.2	6%	0.1	3%	2.9	92%
2031	4.3	0.3	6%	0.2	3%	3.9	91%

In general, the forecast position is for the modal split to remain generally unchanged.

#### 4.6 Overall changes in forecast Modal Split

The overall changes in the volumes of traffic impacting on the Bay of Plenty and their modal split is set out in Table 4.6.

Table 4.6

Year	Total	Rail		Coastal Shipping		Road	
	Million tonnes	Million tonnes	Modal Split (% of total)	Million tonnes	Modal Split (% of total)	Million tonnes	Modal Split (% of total)
2006-07	31.8	4.8	15%	0.6	2%	26.4	83%
2031	48.6	6.9	14%	1.3	3%	40.4	83%

This indicates some increase in the share of coastal shipping, but the volumes are low, only accounting for about 2-3% of the freight traffic impacting on the region. There is forecast to be some decline in the share of rail traffic, reflecting in part the forecast cessation of the coal traffic between Tauranga and Huntly. However, even though the rail modal share is forecast to decline, there is forecast to be a substantial increase in the volumes of freight carried by rail of almost 45% and accommodating this may be challenging.

The road share of the total freight task remains broadly unchanged.



## Part 5: Results of the interview programme

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### 5.1 Introduction

In order to supplement the information in the NFDS and other published statistical material, a range of interviews were conducted with key stakeholders within the freight sector in the region. While the opportunity was taken where possible to collect further statistical information, the main purpose of these discussions was to develop a broad understanding of current and emerging trends and issues, against which the longer terms forecasts could be assessed.

The agencies with which meetings were held included NZTA, regional and local Councils, economic development agencies, representatives of key industries including timber, kiwifruit and farming and the main modes, road, rail and sea. The list of persons and agencies met is set out in Appendix A.

### 5.2 Key findings

#### 5.2.1 Transport infrastructure

In general, the transport infrastructure in the region as it currently exists or for which reasonably firm plans have been made for its development appears to be able to meet the current and anticipated future needs for freight movements in the region. The key development proposed is probably the construction of the Tauranga Eastern Link which will provide an improved connection to the east of Tauranga and the links between the port and the town and the areas producing logs and timber, kiwifruit and milk and dairy products.

For the highway network, there are currently issues of delay and congestion on SH2 to Te Puke and beyond. However, these should be addressed to a large extent by the construction of the Tauranga Eastern Link which has now been nominated as one of the RoNS.

The other major outstanding issue is the choice of route between Tauranga and Hamilton and whether this should be via State Highway 2 through the Karangahake Gorge or via State Highway 29 across the Kaimai hills. The route through the Karangahake Gorge is shorter and flatter and so is favoured by the road transport industry but the movements of heavy freight vehicles through the gorge itself are not considered to be desirable on safety and environmental terms.

The alternative through the Kaimai hills is longer and involves substantial changes of gradient but is considered by the regional and government agencies to be a more suitable route for heavy vehicles. With the progressing of the Waikato Expressway this would provide a much higher quality route via SH1 to Auckland, although the option of travelling via State Highway 24 and Matamata would also provide an alternative route, but may be less desirable on strategic terms than the option via State Highway 1.

With the development of more sophisticated methods of collecting road user charges and the potential to link this to some form of GPS tracking, it may in theory at least be possible to charge differential road user charges to alter the cost balance and so attract users to the State Highway 1 alternative. There are however, a number of issues with this, and such an approach may not in practice be feasible in the short-medium term.

The road network, particularly in the east also suffer from issues with network resilience reflecting limited alternatives available for parts of the infrastructure which are particularly vulnerable to either slips, flooding or earthquake damage.

Significant increases in movements by rail were anticipated, primarily relating to the movement of logs and timber products but also in the movements of import and export traffic between the port of Tauranga and Auckland.

The rail network similarly was considered to be well positioned to handle current and likely future flows using either existing infrastructure or by making relatively small scale improvements to overcome capacity bottlenecks. The key rail links are between the port of Tauranga and Auckland via Hamilton and the link from Murupara and Kawerau. The issues surrounding these appear to have been considered in some detail, and it was considered widely that the way in which any future potential shortfalls in capacity would be addressed was well understood and that no significant problems or issues were anticipated.

The Port of Tauranga provides the focus for much of the freight activity in the region particularly for the movement of bulk and containerised products. The volumes of cargo through the port have been growing steadily, and the port is developing proposals to extend the facilities at both Sulphur Point for containerised traffic and at Mount Maunganui for bulk traffic, primarily logs and timber products. The port is also currently seeking resource consent to dredge the channel to the sea allowing the movement of very large container vessels with a capacity of up to 7000 TEU's. The use of these with very large cargo exchanges and potentially concentrations of traffic over short periods would put pressure on the facilities both within the port and on the land based transport links.

Currently there is no firm timetable for the entry of these large vessels into the New Zealand market, nor identification or agreement as to which ports these might use. However, it is likely that Tauranga would attract at least some of this traffic and it is believed that there is the potential for the arrival of these vessels within about five years. The measures proposed by the port would help meet the issues that would arise both by increasing the depth of the approach channel to the container berths at Sulphur Point and to providing some additional space for holding containers adjacent to the wharf.

The port facilities in Tauranga are also supported by the existing inland port at Metroport in Penrose in Auckland and by the recently acquired facilities of Tapper Transport also in Penrose.

There are also proposals for the development of port facilities at Opotiki including the rerouting and dredging of the existing river channel and its entry to the sea. The proposals are primarily related to the development of the aquaculture industry centred in the area, but the improved facilities could also provide opportunities for barging of logs and possibly aggregates along the coast to Tauranga. The distance between Opotiki and Tauranga at about 145 kms is however fairly short. This may limit the use that may be made of these services, given the need for additional handling of the logs, although the competitive position would be improved if the logs could be loaded directly onto export vessels at Tauranga avoiding the need for intermediate storage at the port.

### 5.2.2 High productivity vehicles

The proposals to allow the use of heavier and longer vehicles could have an impact on transport patterns in the Bay of Plenty. On the one hand, it would allow existing flows currently travelling by road to be handled by fewer vehicles and on the other, it would make road more competitive to other modes, particularly rail, and thus increase the road share of the freight market. Given the high proportion of bulky products in the freight mix in the region carried by both road and rail, the impacts of the new regulations on both types of actions could potentially be significant.

As yet however, the details of the changes and in particular the increased road user charges which would be levied for the use of the larger vehicles have not been released. In addition, the attitudes of the TLA's who control the local road networks to the use of heavier vehicles on their roads have not been finalised. While some activities are understood to be ready to take advantage of the revised limits, particularly for the movement of liquid milk, much of the rest of the road transport industry is in a state of "wait and see" until more details have been confirmed.

### 5.2.3 Development aspirations potentially impacting on freight movements

From the discussions, a number of key development issues and aspirations which would potentially impact on the movement of freight were identified for the major centres within the region. These can be summarised as follows:

#### ***Kawerau***

Kawerau is at the centre of the log and timber processing activities within the Bay of Plenty. As a consequence, potential growth prospects for the area are very much based around the forestry industry and other supporting activities such as specialised engineering which have grown up in parallel. Proposed development areas which would serve this increase in activity have been identified. These would attempt to take advantage of local skills and the ready availability of a number of key resources such as power and water and would aim to enhance the role of Kawerau as the main area for industrial growth in the eastern Bay of Plenty.

There are also proposals for the development of biofuels, but these would depend critically on world markets which are currently very volatile and may not be realised in the short-term.

There may also be the potential to develop an inland log storage area connected to the port by rail.

The likely increases in the volumes of logs and timber products moved and the possible development of the inland log storage area will increase the importance of the reliability of the local transport network, both road and rail. While substantial volumes of forestry traffic are conducted on off-highway roads. For one of the major producers Timberlands Kaingeroa, these and rail movements represent about 78% of the freight task but considerable volumes are transported on the state highway and to a lesser extent on the local road network mainly to give access to local processing facilities particularly at Rotorua and Whakatane and to a lesser extent to the port. Because of the substantial use of off highway roads, the funding of the local roads which provide key links in the overall transport chain has proved a source of contention between the timber companies and local Councils.

## ***Rotorua***

Although there is likely to be growth in the harvest of logs in the Rotorua area, the main focus of development is connected with the growth of tourism. As a result, the main freight impacts will be in the increase in flows of the goods required to service this sector, rather than in the movement of bulk commodities, which may largely use off-highway roads. The current links into the city on the main state highway network are expected to provide sufficient capacity. The planned construction of the Waikato Expressway will improve the linkages to Auckland and the Tauranga Eastern Link will help provide improved connections into Tauranga.

The development of international air services to Australia may provide some opportunity to develop air freight services, although the scope of this is likely to be limited because the size of the aircraft and limited number of flights mean Auckland is likely to remain as the main international gateway for air freight to and from the area.

## ***Tauranga***

The main focus of freight related activity in Tauranga is the port and this position is likely to continue into the future. With the likely growth in population in the area, and the proximity of the port, there is expected to be growth in the local industrial base. To support this growth a number of new development sites have been identified at Te Puke West (70 ha), Rangiuru also near Te Puke (200-400 ha) and at Te Maunga in the vicinity of the Bay Park Raceway. All of these are well served either by the Tauranga Eastern Link or by roads relieved by this. Development is also proposed for the Tauriko area (280 ha).

## ***Whakatane***

The main change anticipated in the Whakatane area which will have potential freight impacts is some expansion of the kiwifruit harvest in the area. The linkages to Tauranga will be important to support this, but no immediate issues with this have been identified other than the possibility of a disturbance in the Whakatane Fault, which if severe enough could potentially sever a number of road transport links both on and off the main state highway network in the area.

## ***Opotiki***

The main potential growth drivers for freight activity in Opotiki are increases in logging activity, aquaculture and the linked possibility of port development in the town. Kiwifruit production is also expected to grow but as indicated earlier from a relatively small base.

As well as serving the aquaculture industry, a port facility in Opotiki could potentially serve other bulk traffic passing between Opotiki and Tauranga, although the distance is relatively short and there may be little or no cost saving compared with movement by road. A factor in this would be the handling of the logs in Tauranga and whether direct discharge from barges to vessels would be possible.

The road links from Opotiki to the rest of the Bay of Plenty are also regarded as vulnerable to a range of natural disasters.

#### 5.2.4 **Changes in freight patterns with increased activity away from the port**

A key feature of the freight movements in the Bay of Plenty is the high volume of basic products of which logs and timber, and kiwifruit form an important component and which are likely to grow strongly in volume terms over the future. These will pose particular issues for the use of the transport network.

As highlighted above in the section dealing with the development aspirations of Kawerau, there are proposals to support the increases in the volumes of log traffic through the port with the increased use of a remote storage area at Kawerau with logs despatched on a just-in time basis. In addition, kiwifruit market is also likely to be accompanied by increased direct movements between the packhouses and the wharf for loading with no intermediate storage in the port area. The effectiveness of both these operations depends on the ability of the transport network to deliver reasonably fast but more importantly reliable delivery times. Similar considerations are also likely to apply to the movement of container traffic between Auckland and Tauranga where the introduction of larger vessels, potentially calling less frequently is likely to lead to increased peakiness of container flows through the port and the resulting issues of storage and landside distribution.

Concurrently with these emerging issues for the movement of bulk products, will be the increased use of the road network by private cars and other freight vehicles which will impact on its performance. There will therefore be a need to take account of all these factors in the planning and operation of the highway network to ensure that as far as possible the reliability desired for the movements to the port can be achieved.





## Part 6: Growth to 2040

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### 6.1 Introduction

For the purposes of the RLTS, forecasts are required for a thirty year time horizon or 2040. The forecasts made by the NFDS are for a 25 year period from 2006-07 to 2031, but as has been discussed in Section 4, following the economic downturn these forecasts may be considered to be more applicable to 2035. To get 2040 forecasts it is therefore necessary to adjust the earlier 2031 forecasts by five years.

Given the uncertainties surrounding forecasting over a period as long as this, a simple approach has been taken. This assumes that growth over the period from 2035 to 2040 is equal to 20% of that originally forecast for the 25 year period from 2006-07 to 2031 and that adding this increment to the earlier 2031 forecasts will provide a reasonable prediction for 2040.

### 6.2 Forecasts of growth to 2040

The forecast growth in total freight movements impacting on Bay of Plenty to 2040 is set out in Table 6.1.

*Table 6.1 Forecasts of growth to 2040 : Total flows by Mode (million tonnes)*

Year	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Modal share	M tonnes	Modal share	M tonnes	Modal share
2006-07	31.8	4.8	15%	0.6	2%	26.4	83%
NFDS to 2031	48.6	6.9	14%	1.3	3%	40.4	83%
2040	52.0	7.3	14%	1.5	3%	43.2	83%

Over the period to 2040, the total volume of freight to, from or within the Bay of Plenty is expected to increase by about 65%. Rail freight traffic is expected to increase by about 50% (reflecting in part the cessation of the coal traffic between Tauranga and Huntly) and coastal shipping by about 65%. The net effect of these changes is to leave the road share broadly constant with this traffic also growing by about 65%.

The position is summarised graphically in Figure 6.1

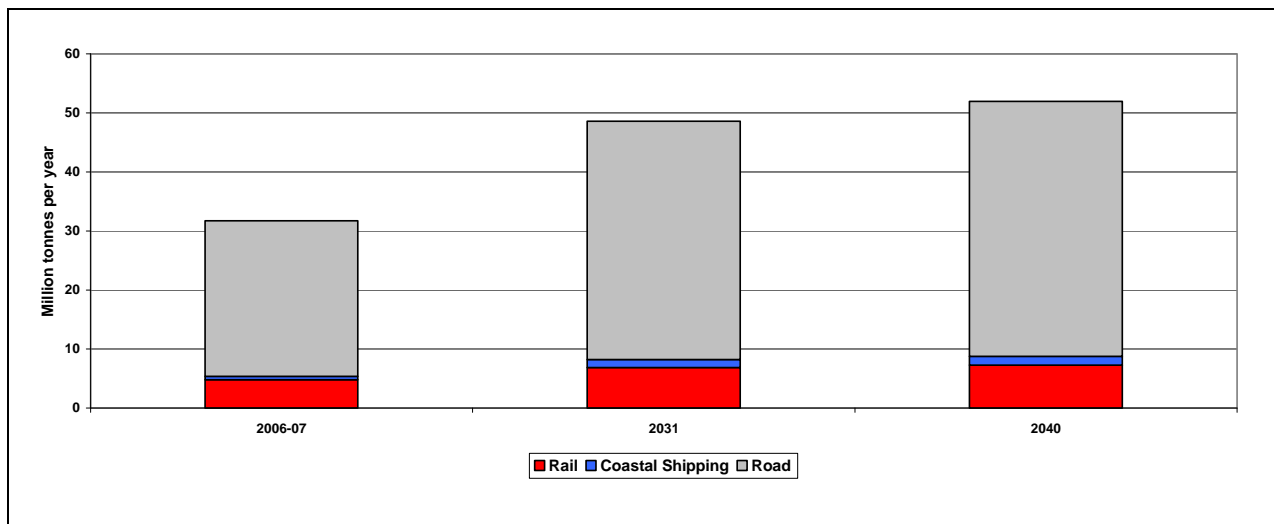


Figure 6.1 Forecasts of freight traffic impacting on Bay of Plenty to 2040 – total flows (million tonnes)

The forecasts by broad type of movement are set out in Table 6.2.

Table 6.2 Forecasts of growth to 2040. Total flows by type of movement (million tonnes)

Type of movement	Year	Total	Rail		Coastal Shipping		Road	
		M tonnes	M tonnes	Modal share	M tonnes	Modal share	M tonnes	Modal share
Internal	2006-07 NFDS	17.4	1.4	8%	0.0	0%	16.0	92%
	to 2031	29.1	2.9	10%	0.0	0%	26.2	90%
	2040	31.4	3.2	10%	0.0	0%	28.2	90%
	Inc to 2040	181%	234%	130%	0.0	0%	176%	0.975
Inter-Regional within UNI Regions	2006-07 NFDS	11.2	3.3	29%	0.5	4%	7.4	66%
	to 2031	15.2	3.7	24%	1.2	8%	10.3	68%
	2040	16.0	3.8	24%	1.3	8%	10.9	68%
	Inc to 2040	143%	116%	81%	288%	201%	146%	102%
Other Regions	2006-07 NFDS	3.2	0.2	6%	0.1	3%	2.9	92%
	to 2031	4.3	0.3	6%	0.1	3%	3.9	91%
	2040	4.5	0.3	6%	0.2	4%	4.1	91%
	Inc to 2040	142%	146%	103%	187%	132%	140%	99%

The key points emerging from this table are:

- Internal flows are forecast to increase, strongly reflecting the growth of logs and timber, aggregates and building materials and horticulture, mainly kiwifruit. The rail modal share is forecast to increase, mainly reflecting the growth of log and timber movements, where rail is heavily involved in the transport of the product
- Flows with the other UNI regions are forecast to grow less quickly, reflecting the cessation of the coal traffic and also the anticipated changes in distribution patterns, with more direct delivery to areas away from the Upper North Island reducing the volumes imported through Tauranga to national distribution centres in Auckland. While there is forecast to be some overall growth in rail

traffic to 2040, its share of the total is forecast to decline. The share of coastal shipping is expected to increase with the growth of petroleum and cement movements from Northland. The share of road is expected to remain broadly unchanged.

- Other external movements are expected to grow by about 45%, below the average for the region as a whole. The rail share is forecast to grow slightly and that of coastal shipping by slightly more, although the volumes by both these modes are expected to remain small.

The growth of traffic by the identified commodities is set out in Table 6.3.

*Table 6.3 Forecast growth of freight movements to 2040 for identified commodities (million tonnes)*

Commodity Group	2006-07	NFDS Growth to 2031	Growth to 2040	
	M tonnes	M tonnes	M tonnes	Per cent
Dairy Products	1.9	0.0	0.0	0%
Logs and Timber Products	8.6	4.3	5.2	60%
Meat and Livestock	0.3	0.0	0.0	0%
Horticulture	0.8	2.0	2.4	311%
Petroleum	1.3	0.5	0.6	46%
Coal	0.9	-0.9	-0.9	-100%
Aggregate	3.1	3.0	3.7	119%
Limestone, Fertiliser, Cement and Concrete	2.1	1.6	1.9	90%
Other Minerals and Metals	0.9	0.0	0.0	0%
Retailing and Couriers	1.5	0.8	0.9	61%
Total	21.4	11.3	13.6	64%

The major growth is forecast to be contributed by logs and timber products, horticulture, aggregates and fertiliser and building materials. The movements in the Bay of Plenty would therefore remain dominated by the movements of these bulk products.



## Part 7: Overall assessment

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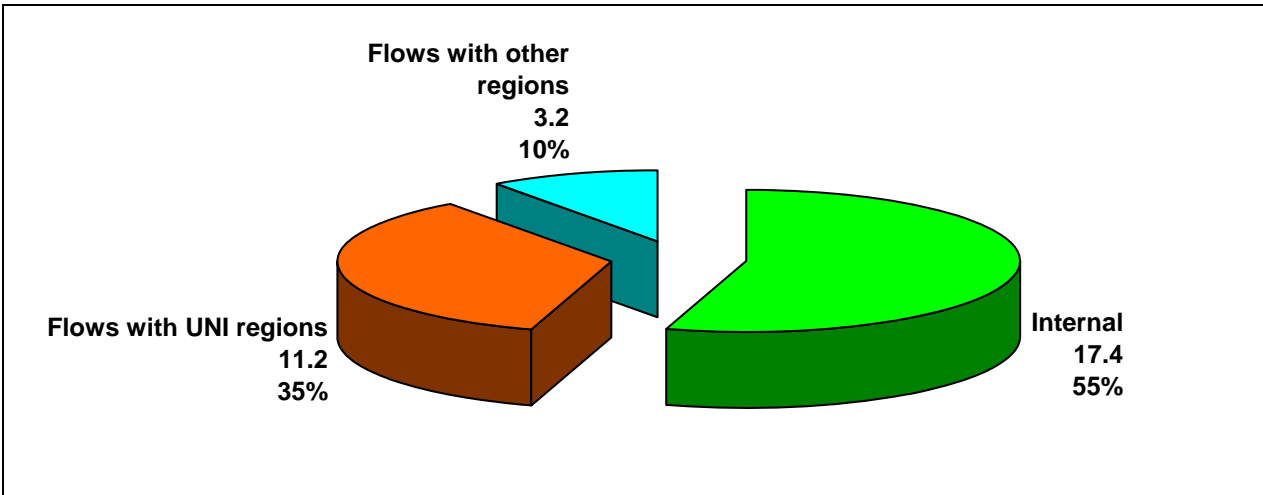
### 7.1 Introduction

The current freight volumes impacting on the Bay of Plenty (travelling to, from or within the region) are very substantial. In 2006-07, the total amounted to about 32 m tonnes, about 14% of the total for the country as a whole and about 120 tonnes per person. This figure compares to a national average of about 68 tonnes per person.

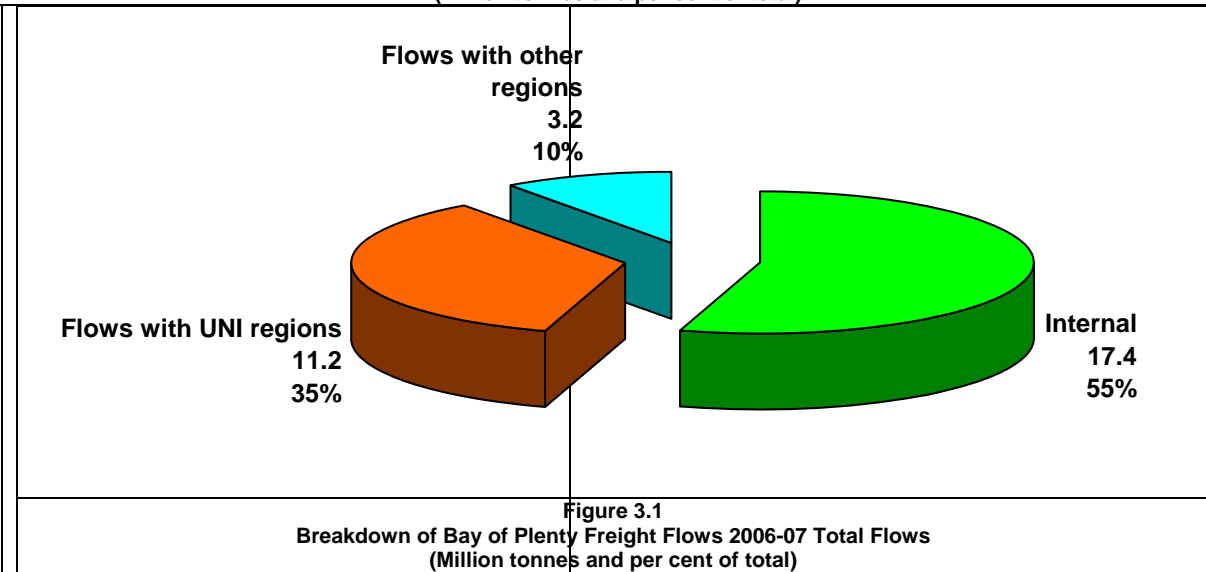
The high volumes of freight reflect in part the presence of the port of Tauranga in the region which in 2007 handled about 12-13 m tonnes of imports and exports and the very substantial production of a range of basic commodities within the region. These include logs and forest products, milk and dairy products, aggregates and other building materials and horticultural products primarily kiwifruit.

### 7.2 Freight flows in 2006-07

Of the total volumes of freight handled, about 55% travels entirely within the region, 35% moves to or from the other regions in the Upper North Island (UNI) – Auckland, Waikato and Northland, and the balance of about 10% travels to or from the rest of New Zealand. This is illustrated in Figure 7.1.



**Figure 7.1**  
Breakdown of Bay of Plenty Freight Flows 2006-07 Total Flows  
(Million tonnes and per cent of total)



**Figure 3.1**  
Breakdown of Bay of Plenty Freight Flows 2006-07 Total Flows  
(Million tonnes and per cent of total)

The relatively high share of the flows of freight external to the Bay of Plenty that go to or from the other three UNI regions reflects the integration of the four regional economies in the “Golden Triangle” plus Northland.

The main commodity movements identified in the NFDS that contribute to the overall flows in 2006-07 are set out in Table 7.1 and Figure 7.2.

<b>Table 7.1</b> <b>Total Bay of Plenty Freight Movements in 2006-07 for Identified Commodities</b> (million tonnes)	
<b>Commodity Group</b>	<b>Total Flow</b>
Dairy Products	1.9
Logs and Timber Products	8.6
Meat and Livestock	0.3
Horticulture	0.8
Petroleum	1.3
Coal	0.9
Aggregate	3.1
Limestone, Fertiliser, Cement and Concrete	2.1
Other Minerals and Metals	0.9
Retailing and Couriers	1.5
<b>Total</b>	<b>21.4</b>

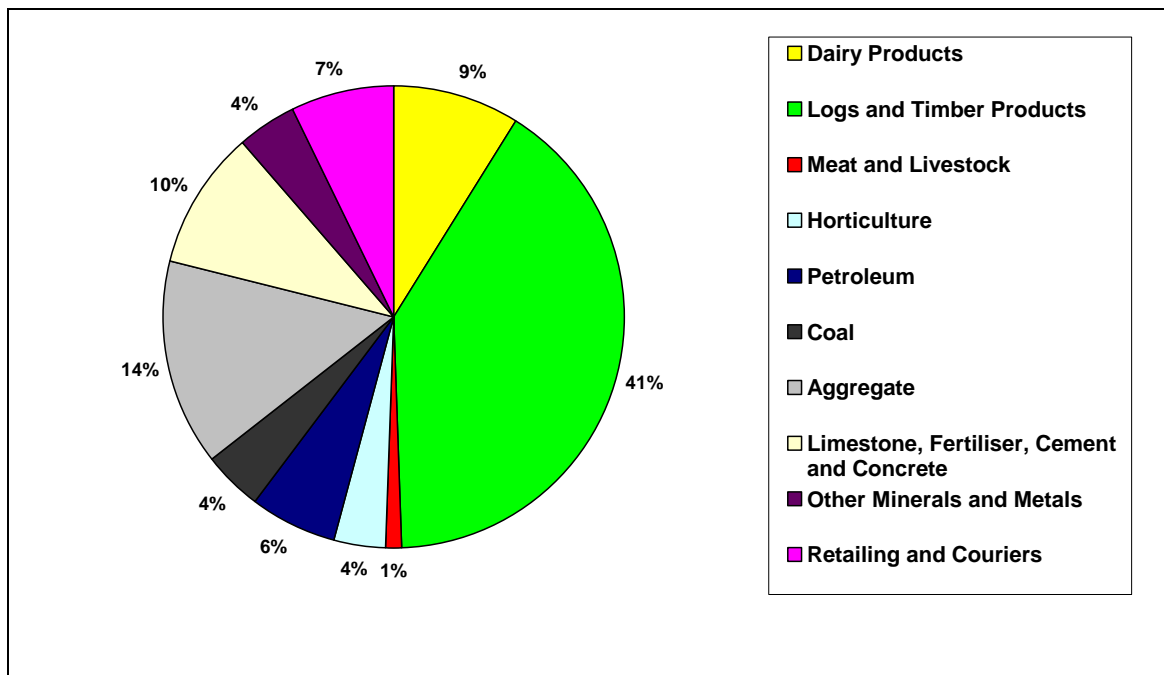


Figure 7.2 Breakdown of total Bay of Plenty freight movements in 2006-07 for identified commodities (million tonnes)

In general, the flows of freight are dominated by flows of bulk products, especially logs and timber, aggregates and other building materials, milk and dairy products, retail and courier goods and petroleum. Movements through the port represent a significant proportion of these movements.

The freight traffic impacting on the Bay of Plenty is primarily transported using road transport but the shares of other modes are important for particular movements and commodities. The overall modal share by broad type of movement is set out in Table 7.2.

Table 7.2 Total flow and Modal Splits in 2006-07 total flows (million tonnes)

Area	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Mode Split	M tonnes	Mode Split	M tonnes	Mode Split
Internal	17.4	1.4	8%	0.0	0%	16.0	92%
UNI Regions	11.2	3.3	29%	0.5	4%	7.4	66%
External Regions	3.2	0.2	6%	0.1	3%	2.9	92%
<b>Total</b>	<b>31.8</b>	<b>4.8</b>	<b>15.2%</b>	<b>0.6</b>	<b>1.7%</b>	<b>26.4</b>	<b>83.0%</b>

Overall rail carries about 15% of the freight traffic impacting on the Bay of Plenty and coastal shipping about 2%, although these shares vary by the geographical type of movement. Coastal shipping and rail shares are relatively high for the movements with other UNI regions. These reflect:

- The movements of petroleum and cement from Northland by coastal shipping.
- Large rail movements to and from Auckland carrying retail and manufactured goods, particularly through the Metroport Inland Port in Southdown.



- Rail movements between the Waikato and Bay of Plenty primarily carrying more basic products, mainly logs and timber products to Bay of Plenty and coal in the reverse direction.

### 7.3 Other contributions to current freight patterns

As well as using the data from the NFDS, other factors contributing to current freight patterns and issues in the region were also investigated. The key findings from this were:

- Traffic through the Port of Tauranga has grown overall by about 20% from 2002 although there have been fluctuations from year to year and current (2009) total flows are slightly less than those on 2008. This reflects a decline in manufactured imports and exports, which is also reflected in container movements through Metroport. This has been partly offset by increases in exports of logs and timber products and imports of coal. Imports and exports through the Port of Tauranga are set out in Figure 7.3.

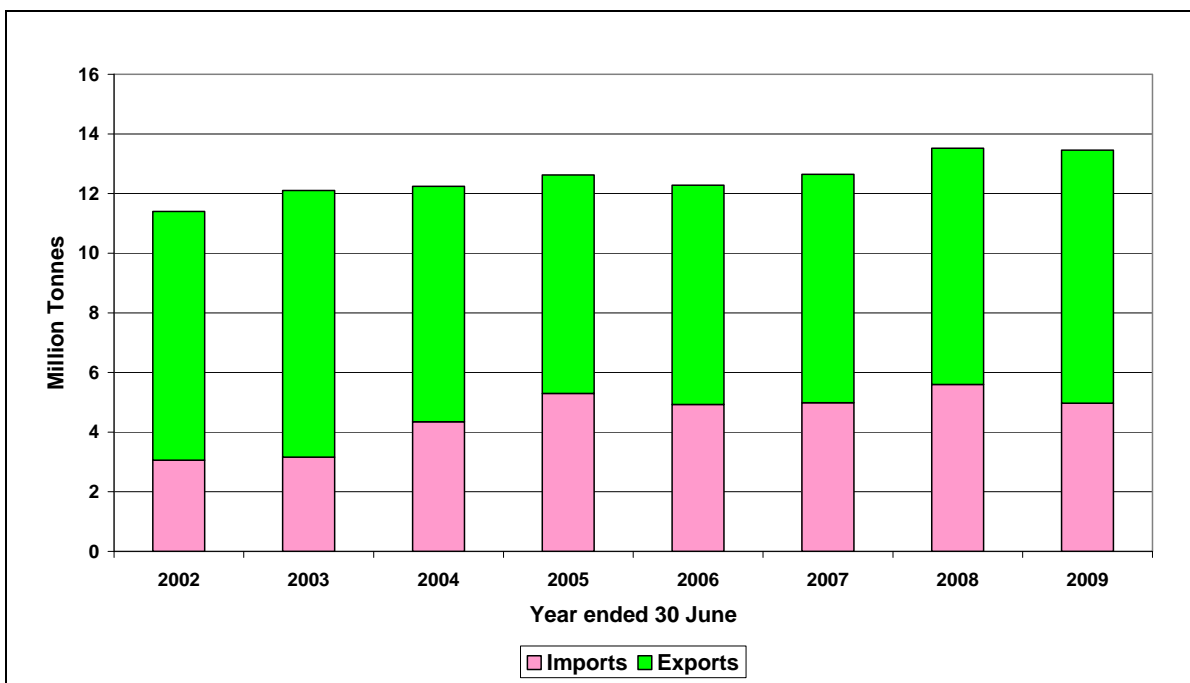


Figure 7.3 Import and export traffic through the Port of Tauranga (million tonnes)

- Heavy vehicle traffic on the state highway network in and around the Bay of Plenty has remained broadly constant since 2003 with the exception of State Highway 2 in Te Puke, where there has been more significant growth, probably reflecting growth in the movements of kiwifruit. This is set out in Figure 7.4.

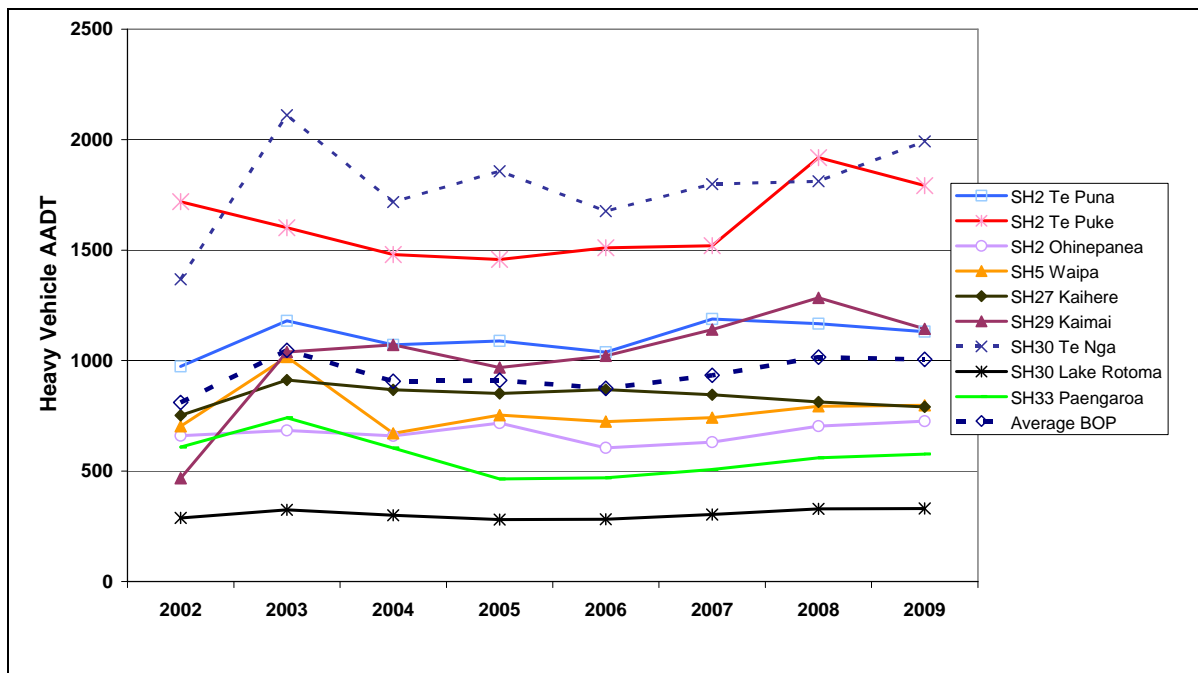


Figure 7.4 Heavy vehicle flows on state highways in Bay of Plenty region 2002-2009 (AADT)

- Milk and kiwifruit, two of the main agricultural commodities have had different fortunes with milk production remaining broadly constant and kiwifruit growing fairly substantially over recent years.

## 7.4 Future growth patterns

There is forecast to be substantial growth in the freight movements impacting on the Bay of Plenty, driven in part by the growth in log and timber products and in part by growth in the demand for aggregates and building materials. At a more local level, the growth of the kiwifruit production will also have some impacts. There is also forecast to be growth in the movement of retail goods, but the scale of this is expected to be attenuated by changes in distribution patterns with more direct delivery to destinations in the South Island and to some extent, the lower North Island rather than routing through distribution centres in Auckland. Growth in freight in the Bay of Plenty is also expected to be affected by the decline in coal imports transported from Tauranga to Huntly.

The NFDS made forecasts for 2031, reflecting a 25 year forecasting horizon. However, given the economic downturn it is considered that these forecasts are now probably more applicable to 2035, although to maintain consistency with the NFDS and the UNIFS work currently being undertaken concurrently these are still labelled as "2031". A set of forecasts have also been made for 2040 a forecasting year used for the RLTS, and in developing these it has been assumed that growth over the five year period from 2035 to 2040 would represent 20% of the growth forecast for 2006-07 to 2031 made in the NFDS.

The growth by geographical type of traffic is set out in Table 7.3.

*Table 7.3 Forecast growth of Bay of Plenty traffic movements 2006-07 to 2031 and 2040. All commodities (million tonnes)*

Type of Movement	2006-07	2031	Growth to 2031	2040	Growth to 2040
Internal	17.4	29.1	67%	31.4	80%
To and from other Upper North Island Regions	11.2	15.2	36%	16.0	43%
To and from other Regions	3.2	4.3	35%	4.5	41%
<b>Total</b>	<b>31.8</b>	<b>48.6</b>	<b>53%</b>	<b>51.9</b>	<b>64%</b>

Growth of the shorter distance movements within the Bay of Plenty is expected to be particularly large, with increases in the longer distance inter-regional movements being more modest. As indicated above growth of freight movements to and from the other UNI regions is affected by the decline in coal traffic and the change in patterns of retail distribution.

The growth by commodity over the period to 2031 (2035) and 2040 is set out in Table 7.4.

*Table 7.4 Forecast growth of freight movements to 2031 and 2040 for identified commodities (million tonnes)*

Commodity Group	2006-07	NFDS Growth to 2031		Growth to 2040	
	M tonnes	M tonnes	Per cent	M tonnes	Per cent
Dairy Products	1.9	0.0	0%	0.0	0%
Logs and Timber Products	8.6	4.3	50%	5.2	60%
Meat and Livestock	0.3	0.0	0%	0.0	0%
Horticulture	0.8	2.0	260%	2.4	311%
Petroleum	1.3	0.5	38%	0.6	46%
Coal	0.9	-0.9	-100%	-0.9	-100%
Aggregate	3.1	3.0	99%	3.7	119%
Limestone, Fertiliser, Cement and Concrete	2.1	1.6	76%	1.9	90%
Other Minerals and Metals	0.9	0.0	0%	0.0	0%
Retailing and Couriers	1.5	0.8	53%	0.9	61%
<b>Total</b>	<b>21.4</b>	<b>11.3</b>	<b>53%</b>	<b>13.6</b>	<b>64%</b>

The forecast shares of freight traffic by mode for the Bay of Plenty region are set out in Table 7.5 and Figure 7.5.

*Table 7.5 Forecasts of growth to 2040. Total flows by Mode (million tonnes)*

Year	Total	Rail		Coastal Shipping		Road	
	M tonnes	M tonnes	Modal share	M tonnes	Modal share	M tonnes	Modal share
2006-07	31.8	4.8	15%	0.6	2%	26.4	83%
NFDS to 2031	48.6	6.9	14%	1.3	3%	40.4	83%
2040	52.0	7.3	14%	1.5	3%	43.2	83%

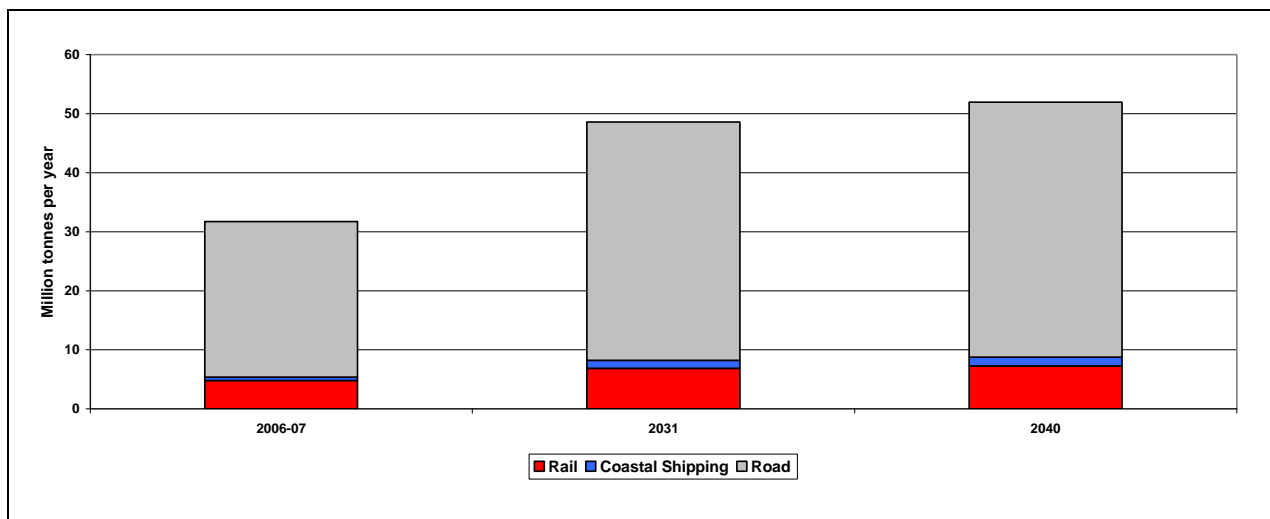


Figure 7.5 Forecasts of freight traffic impacting on Bay of Plenty to 2040 – total flows (million tonnes)

Over the forecast periods, the shares of the three modes in total freight movements are expected to remain broadly constant with the rail share decreasing slightly and that of coastal shipping increasing also slightly. Although the rail share is forecast to decline, the underlying growth in the level of demand means that the volumes transported by rail are forecast to increase substantially by over 50%, despite the reduction in coal traffic and limited growth in the movements of imports of retail and manufactured goods between Tauranga and Auckland.

## 7.5 Overall picture

Current freight flows in the Bay of Plenty are dominated by the shorter distance movements internal to the region and with a high proportion of basic materials particularly logs and timber products, aggregates and other building materials and milk and dairy products. A substantial amount of freight activity is focussed round the Port of Tauranga and in addition to movements of basic materials, this generates high volumes of traffic in manufactured and retail goods with Auckland.

Over time, the volumes of traffic are forecast to grow substantially by almost two-thirds to 2040. This is mainly driven by growth in the forestry and horticultural sectors and in movements of aggregates and other building materials, although there is expected to be a decline in coal traffic and more limited growth in the movement of manufactured imports with changes in national distribution patterns. The overall modal shares of this traffic are expected to remain broadly unchanged with a slight fall for rail and a slight increase for coastal shipping, although because of the substantial growth in the market as a whole, the volumes carried by each of these modes are expected to grow strongly.

In general, the performance of the different components of the transport network in the region is considered to be satisfactory or where problems exist, proposals for their alleviation are well advanced with for example the planned construction of the Tauranga Eastern Link and schemes for the provision of additional passing loops on the key rail lines. However, with the growth of traffic and the possible introduction of larger international vessels with substantial exchanges of containers in a single call, there is going to be increased pressure on the transport network especially at peak times. Proposals are being considered to develop an inland holding area for export

logs and other timber products to reduce the pressure on space in the port. The growth of kiwifruit exports would also be largely loaded directly onto vessels without intermediate storage in the port. Both of these and the need to accommodate the requirements for larger international container vessels will increase pressure on the transport network and enhance the need to ensure that the transport network is developed and managed to be able to offer a high level of reliability for these flows at peak times.

## **Appendix A: Agencies and persons contacted**

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### **Local Authorities**

#### ***Environment Bay of Plenty***

Mike Calvert, Senior Transport Planner

Cheryl MacGregor, Senior Adviser, Regional Development

#### ***Kawerau District Council***

Tom McDowall, Manager, Operations and Services

Sue Cammell, Economic Development Officer

#### ***Opotiki District Council***

John Forbes, Mayor

Miles McConway, Acting Chief Executive

Jim Finlay, Engineering Services Manager

### **NZTA**

Dennis Crequer, Special Projects Manager

Janeane Joyce, Acting Integrated Planning Manager

### **Economic Development Agencies**

#### ***Priority One***

Andrew Coker, Chief Executive'

#### ***TOI EDA***

John Galbraith, Consultant

#### ***Rotorua First***

Grant Kilby, Chief Executive

### **Industry Representatives**

#### ***Timberlands Kāingaroa***

Trish Fordyce, Legal and Contracts Manager

#### ***Tauranga Kiwifruit Logistics Ltd***

Ian Mearns, General Manager

#### ***Federated Farmers***

Richard Powdrell

### **Transport Modes**

#### ***Kiwirail/Ontrack***

Stephen Collett

Soren Low, National Manager Service Delivery (by phone link)

#### ***NZ Road Transport Association Region 2***

Charlene Kerr, Area Manager

***Port of Tauranga***

Graeme Marshall, Commercial Manager

Toni Henderson , Customer Relationship Coordinator

Maurice Hume, Property Services Manager

Grant Macvey, Business Development Cargo Services