

## 12 Public Transport

### 12.1 Source Information

Heavy Traffic Report

Sept 2001

NRC

### 12.2 Introduction

This section covers public transport services in the Northland Region. However, there is now a more up to date report available from the Northland Regional Council Passenger Transport Plan.

There are 27 registered bus companies operating commercial services into and around Northland. These operators cater for commercial passenger services, contracted work services, intercity or inter-town passenger services, private hires or local tour groups.

The previous heavy traffic volumes study (September 2001) completed a physical traffic count of the bus services on major highways entering and leaving Whangarei, these are the only figures available are for these roads.

<u>State Highways</u>	<u>Trips per day</u>
State Highway 1 South	32
State Highway 1 North	16
<u>Arterial Routes</u>	N/A

### 12.3 High Impact Areas

The significance is:-

- The cumulative effects on arterials.

### 12.4 Changes Since 2001

It is understood that the western side of Northland has reduced access to public transport with trial services being removed to these areas.

Whangarei city has regained its public bus service and successfully is increasing patronage.



## 13 Northland Heavy Traffic Count

### 13.1 Source Information

SH Physical Traffic Count	Dec 2004 Data	Transit
WDC Physical Traffic Count	May 2003 Data	WDC
KDC Physical Traffic Count	Feb 2005 Data	Opus

### 13.2 Introduction

The traffic count is the physical traffic count on the road, thus this is an overall representation of the heavy traffic volume. However, this does not identify peak or short-term uses.

### 13.3 Findings

The main volumes are:-

**SH1N – 12 to 2,500 truck movements per day.**

(SH14 to Kamo has something like on 2,500 truck movements per day. Between Whangarei and One Tree Point south of Whangarei there is 1,200 movements per day. North of Whangarei has 800 movements per day. One Tree Point to SH12 intersection on SH1N has 1,200.)

**SH10 – 120 to 420 truck movements per day.**

**SH11 – 152 to 220 truck movements per day.**

**SH12 – 46 to 280 truck movements per day.**

(Dargaville South 122 to 280, Dargaville North to Kaikohe 46 to 280 truck movements per day.)

**SH14 – 550 to 120 truck movements per day.**

**SH15A – 390 truck movements per day.**

There is a high heavy traffic volume through Whangarei. All data is total heavy traffic movements (i.e. the sum of both directions).

### 13.4 High Impact Areas

The significance is:-

- This is a good indication of the cumulative effects of heavy traffic movements;
- The Whangarei area will see a future increase in heavy traffic movement associated with solid waste, stock effluent, fertiliser and TDC which will be required to be managed. This could be compounded with the unknown future use of the old Port Whangarei;

- Traffic volume on the state highway between Whangarei and One Tree Point is increasing;
- The state highway between Whangarei and Auckland is obviously a vital heavy transport route with no practical viable alternative;
- Heavy Traffic through the Whangarei State Highway is at a high level.

### **13.5 Changes Since 2001**

Traffic volumes in general are increasing significantly in the following areas of the state highway:-

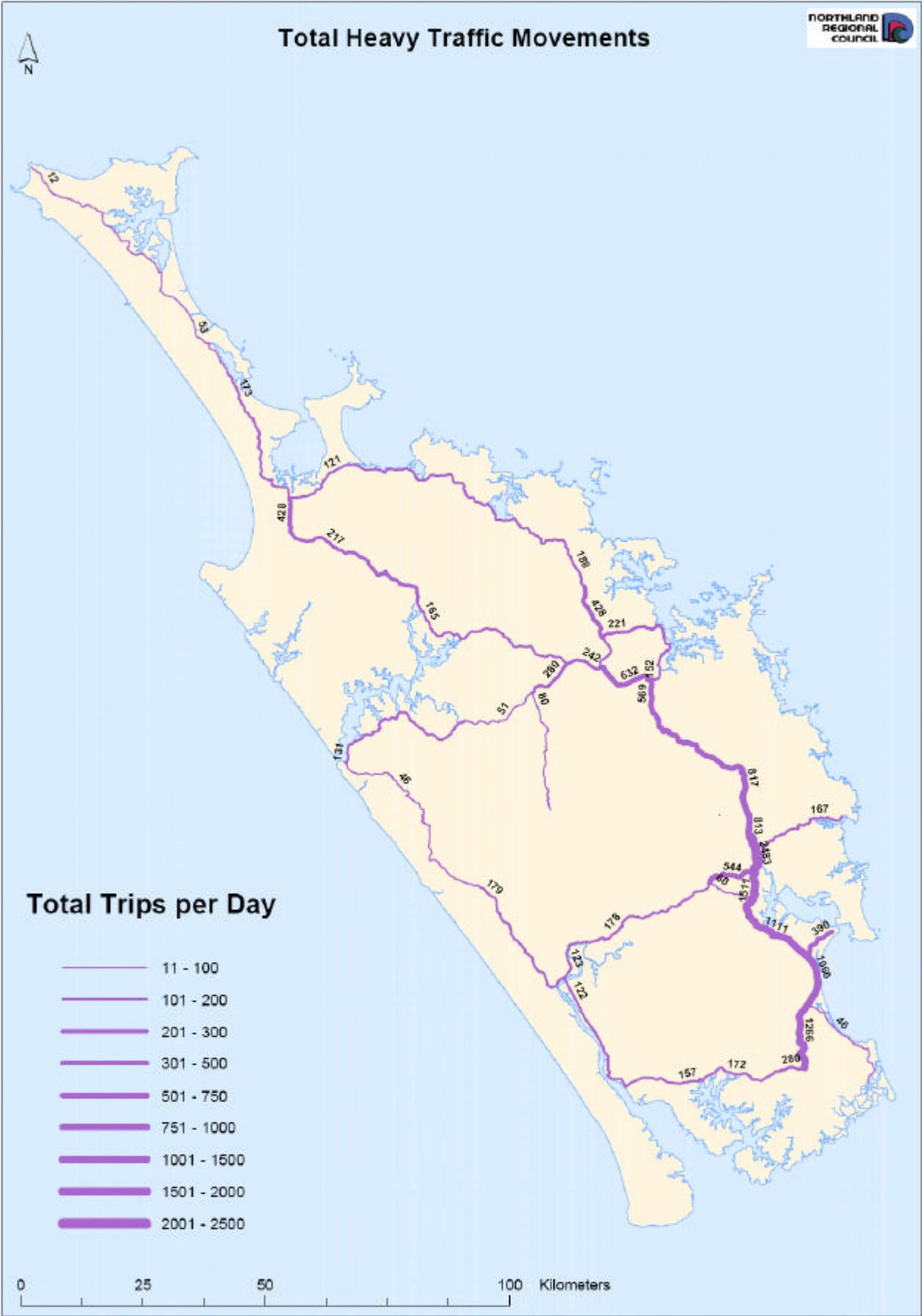
- SH10 Kerikeri area.
- SH10 Coopers Beach area.
- SH1N and SH14 Whangarei area.
- SH1N Whangarei to Wellsford and particularly the Whangarei to One Tree Point length.

## 13.6 Route Data

NORTHLAND REGIONAL COUNCIL HEAVY TRAFFIC VOLUMES				
Jul-05				
Description	Trips/Day		Month/Week of Peak	Comments
	Peak	Non-Peak		
<b>STATE HIGHWAYS</b>				
<b>WAITIKI LANDING - AWANUI</b>				
SH1N	Cape Reinga - Waitiki Landing	12		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Waitiki Landing - Pukenui	53		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Pukenui - Awanui	173		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>AWANUI - PAKARAKA</b>				
SH1N	Awanui - Kaitaia	428		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Kaitaia - Maungamuka Bridge	217		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Maungamuka Bridge to Ohaewai Jcn	165		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Ohaewai Jcn to Pakaraka Intersection	242		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>PAKARAKA - WHANGAREI</b>				
SH1N	Pakaraka - Kawakawa	632		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Kawakawa - Russel Rd Intersection	569		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Russel Rd - Hikurangi North	817		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Hikurangi North - Kauri			AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Kauri - Kamo	813		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Kamo - SH14 Intersection	2483		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>WHANGAREI - ONE TREE POINT</b>				
SH1N	SH14 Intersection - Rewarewa Rd	1212		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Rewarewa Rd - Portland Intersection	1511		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Portland - Oakleigh Intersection	1168		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Oakleigh - One Tree Point Intersection	1111		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>ONE TREE POINT - WELLSFORD</b>				
SH1N	One Tree Point - Waipu	1066		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Waipu - SH12 Intersection	1266		AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	SH12 Intersection to Kaiwaka			AADT Dec 2004 TRANSIT NZ traffic volumes
SH1N	Kaiwaka - Ross Rd			AADT Dec 2004 TRANSIT NZ traffic volumes
<b>AWANUI - PAKARAKA</b>				
SH10	Awanui - Taipa	121		AADT Dec 2004 TRANSIT NZ traffic volumes
SH10	Taipa - Waipapa	188		AADT Dec 2004 TRANSIT NZ traffic volumes
SH10	Waipapa - Kerikeri			AADT Dec 2004 TRANSIT NZ traffic volumes
SH10	Kerikeri - Puketona Intersection	428		AADT Dec 2004 TRANSIT NZ traffic volumes
SH10	Puketona - Pakaraka	195		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>KAWAKAWA - PUKETONA</b>				
SH11	Kawakawa - Paihia	152		AADT Dec 2004 TRANSIT NZ traffic volumes
SH11	Paihia - Puketona	221		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>OHAIWAI - DARGAVILLE</b>				
SH12	Ohaewai - Kaiakohe	280		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Kaiakohe - Taheke	51		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Taheke - Omapere	131		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Omapere - Kaihu	46		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Kaihu - Dargaville	179		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>DARGAVILLE - BRYDERWYN</b>				
SH12	Dargaville - Ruawai	122		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Ruawai - Paparora	157		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Paparora - Maungtoroto	172		AADT Dec 2004 TRANSIT NZ traffic volumes
SH12	Maungtoroto - Brynderwyns	280		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>WHANGAREI - DARGAVILLE</b>				
SH14	Whangarei - Maungatapere	544		AADT Dec 2004 TRANSIT NZ traffic volumes
SH14	Maungatapere - Tangowahine Valley Rd	178		AADT Dec 2004 TRANSIT NZ traffic volumes
SH14	Tangowahine Valley to Dargaville	123		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>ONE TREE POINT ROAD</b>				
SH15A	SH1N - Marsden Point	390		AADT Dec 2004 TRANSIT NZ traffic volumes
<b>MAIN ARTERIALS</b>				
<b>MAUNGAKAHIA ROAD</b>				
	Kaikohe - Twin Bridges	80	23	FNDC traffic count 22/05/05 - 30/05/05
	Twin Bridges - Parakau			
	Parakau - Maungatapere			
<b>OTAIKA VALLEY ROAD</b>				
	Maungatapere - Portland	80	18	WDC traffic count 09/03/03 - 15/03/03, 100M from SH14
	<b>PAPAROA - OAKLEIGH ROAD</b>			will be done approx 3 weeks, no results yet
	<b>MANGAWHAI/COVE ROAD</b>	46	35	WDC traffic count 05/02/03 - 10/02/03, 20M North of bridge 56
	<b>NGUNGURU RD</b>	167	65	WDC traffic count 11/05/03 - 17/05/03, 60M from Sands Rd
	<b>POTO ROAD</b>			



13.6 Map of Total Heavy Traffic Movements





## 14 The Role of Shipping (including Marsden Point Port)

### 14.1 Source Information

The information has been supplied by Northport, Atlas Quarries, Golden Bay Cement and the Forestry Industry.

### 14.2 Introduction

The new port has been in operation since 2003 with a focus on pulp log and chip handling. The third berth is now under construction. Shipping is an important freight as it is high volume and generally the goods have to be handled quickly due to the high shipping standing charges. This often means high demand for trucking at peak periods. Improved bulk storage at the Port may minimise or reduce peak trucking. In some cases shipping maybe interchangeable with rail. Should something happen to make rail or shipping less attractive then this would have a significant impact. Coastal barging is still a possibility.

### 14.3 Findings

#### 14.3.1 Marsden Point Port

The following figures have been obtained from Northland Port Corporation for their 2004-2005 finance year depicting tonnage moved through the port during this period.

<u>Product</u>	<u>To</u>	<u>From</u>	<u>000's</u>	<u>One way trips per Annum</u>
Input Fertiliser	Whangarei	Marsden	174 tonnes	6,214
Export Kiwifruit	Marsden	Various	5.6 pallets or approx 5.6 tonnes	233
Export Meat	Marsden	Dargaville	7.3 tonnes	365
Export Meat	Marsden	Moerewa	7.3 tonnes	365
Export Woodchip	Marsden	Portland	202 tonnes	7,481
Export Logs	Marsden	Various	400 tonnes	14,285
Export Sawn Timber	Marsden	Various	14.4 m3 or approx 14.4 tonnes	533
Export Triboard	Marsden	Kaitaia	71.2 m3 or approx 71.2 tonnes	1,780
Veneer	Marsden	Kaitaia	40.7 m3 or approx 40.7 tonnes	1,017
Import Cement	Whangarei	Marsden	305 tonnes	10,892
Export Cement	Marsden	Portland	Nil	Nil
Coal	Marsden	Marsden	Nil	Nil

Importation of bulk materials is currently causing peak road transport usage while raw materials are being transferred to Portland or Whangarei. However, as the infrastructure develops around the port, bulk storage may become more common and thus less

concentrated trucking may result. There is some seasonal shift but this is not currently significant. Large scale log export has the potential to be seasonal.

### **Third Berth Construction**

The capacity of the Port should be considered now that the third berth is being constructed.

### **Port Ownership**

Ports of Auckland own 21% of NorthPort, this maybe a sign of future development and a shift for freight from Auckland to Marsden Point.

### **Containerisation**

Although Marsden Point Port does not have advanced container handling facilities, the installation has been constructed for this as a future possibility.

### **Coal Power Station**

The proposed Coal Power Station is likely to provide a significant increase in volumes in coal for Marsden Point.

#### **14.3.2 Golden Bay Cement**

Golden Bay Cement export one to two 4,000T ship loads of cement per week via coastal shipping to other New Zealand ports from there own port located at Portland.

300,000T of raw materials are imported via Marsden Point and trucked by road to Portland for processing.

#### **14.3.3 Marsden Point Oil Refinery**

The main relevance for including New Zealand Refining Company (NZRC) is to recognise that they use coastal tankers for distribution of fuel around New Zealand in addition to the dedicated pipeline to Auckland. The Refinery is talking about increased capacity as their next project. The expansion is unlikely to have any impact on the Northland Transportation system.

However, a rail link to Marsden Point would mean NZRC would have an alternative means of distribution.

#### **14.3.4 Coastal Barging**

Coastal barging has been proposed by the forestry industry, but this has not yet eventuated. However, Atlas Quarries are barging 150,000 tonnes per year of aggregate on the Kaipara Harbour to Helensville.

#### **14.3.5 Old Port Whangarei**

Port Whangarei is now closed as a commercial facility, ownership rests in private hands. The future use is unknown but could have a significant impact on heavy transport.

#### 14.4 High Impact Areas

The high impact areas are largely covered by other sections. However, the most dominant issue is the bulk carting of import raw materials in concentrated short periods over SH1N the busiest State Highway in Northland.

The One Tree Point Road (SH15A) and State Highway 1N intersection has real potential for capacity and safety issues. Transit has a project in progress to upgrade this intersection.

A major sustained upturn in forestry has the potential to double the heavy traffic volume on SH15A. Current volume is 390 AADT which equates to approximately 200 trucks per day one way. A sustained upturn in forestry could result in an additional 200 logging trucks per day one way. As a comparison currently SH1N has approximately 600 trucks one way either side of One Tree Point Road.

State Highway 15A currently has a heavy traffic volume of 390 AADT. This equates to approximately 200 one way truck movements per day. This does not take into account peak cartage of raw materials from Marsden Point to Portland and the fertiliser works. Short duration peak cartage can add another 600 one way trips per day.

#### 14.5 Changes Since 2001

- Marsden Point Port is now open and in operation and Port Whangarei is effectively closed to heavy traffic;
- Cement trucked from Golden Bay Cement in Portland to the Whangarei Port is now trucked directly to Marsden Point. Raw material imports were transported from Port Whangarei to Portland and now transported from Marsden Point to Portland;
- Frozen meat from Richmonds in Dargaville now travels direct to Marsden Point by road for loading shipside;
- Woodchip from Marusumi Chip Mill was carried by rail to the Whangarei Port but is now transported by truck to Marsden Point;
- Fertiliser raw materials and some processed was trucked from Port Whangarei only a few kilometres to the processing and storage facilities, now this is transported from Marsden Point to Whangarei on SH1N often in concentrated periods;
- Export logs are less than half what they were;
- Atlas Quarries carry 150,000m<sup>3</sup> per year via barge down the Kaipara Harbour to Helensville.



## 15 The Role of Rail

### 15.1 Source Information

Toll Holdings have provided summary information that has been cross checked with other industry data.

### 15.2 Introduction

In the past year, there has been continued speculation as to the future of the rail line servicing Whangarei, Dargaville and Otiria. The Government is in the process of either selling off or closing non-profitable areas of the rail system, the Northland network is presently considered to be 'marginal'. Closure would have a significant effect on the long-term Northland transportation system. The future viability of rail is thus of regional importance. A critical factor for rail viability is the establishment of a rail link to the Marsden Point Port. The following provides an indication of the expected impact of the rail closure (if this was to occur) and highlights why the retention of rail is important in reducing the potential heavy vehicle load on state highways and local roads within the region.

### 15.3 Findings

Freight Type	Route Location	Rail Units	Truck Trips (equivalent)
General containers out of Northland	5 days/week for 52 weeks (20 ft, 25 tonne)	55 – 60 (per day)	55-60 (out) 55-60 (in)
Logs out of Northland	tonnes/day to Central North Island	400T (per day)	16 (out)
Containers of wood chip	from TDC Sawmill to CNI (20ft, 12.5 tonne)	10 (per day)	5 (out) 5 (in)
Logs into Marasumi Chip Mill at Portland	From various	800T (per day)	32 (in) 32 (out)
<b>Total SH1N</b>	<b>Whangarei to Auckland</b>		<b>86</b>

On average 55 to 60 general containers per day are transferred outside the region five days per week for 52 weeks of the year, the majority are 20 foot containers with a total weight of 25 tonnes. 90% of the general containers coming into the region are unloaded and 10% loaded whereas 90% of the containers leaving the region are loaded and 10% unloaded.

Should rail become unavailable then the following would be the effect:-

- General containers, each would warrant a truck trip, 55 to 60 one way and return per day.
- Logs to the CNI, 16 x 25T loads, and trucks would most likely be back loaded to Northland from Mahirangi or Woodhill with existing log freight.
- Wood chip containers from TDC sawmill is 5 loaded truck trips south and 5 unloaded north per day. This volume is likely to increase as the mill doubles its capacity.

- 32 logging trucks in an out of Marasumi Portland per day from various locations. It is assumed that one third come from the southern area.
- In total this would increase the existing heavy traffic volume on SH1N south of Whangarei by 86 truck trips.

### **15.3.1 Fonterra**

Fonterra have an excellent rail facility that is used to export finished product. Further investigation is required to determine if this would be shipped via Marsden Point if a rail link was provided. AFFCO Moerewa and Richmond in Dargaville is in similar circumstances to Fonterra.

### **15.3.2 Golden Bay Cement**

Golden Bay export cement via coastal shipping twice per week between 4,000 and 5,000T per load. This could potentially be transported by rail. Importation of 300,000 tonnes of raw materials via Marsden Point Port could also be viable via a rail link.

Golden Bay cart lime rock from Wilsonville at Hikurangi to the Portland manufacturing plant. This length of State Highway is under considerable pressure. Rail is in good proximity to the Portland Plant and only a short distance from the Wilsonville quarry.

### **15.3.3 Forestry Land Ports**

Recently land ports have started to develop such as Otiria, Dargaville and Whangarei Rail Yards. These ports were used as export log storage for the final cartage by rail to Port Whangarei. This no longer occurs for two main reasons. Firstly, the industry is in decline, secondly without the rail link to Marsden Point it is more economically likely that logs be trucked by road.

The centralised processing of logs is considered to be more productive over the more traditional method of in forest log making. In-land ports have the opportunity to act as centralised log processing yards. In order to make this work several conditions need to be supplied. Of relevance to this study is an allowance to cart increased log lengths on road. This has already occurred.

Secondly, an in-land log port often has a price storage advantage over the more expensive dock side storage, however, when ship loading, bulk volumes need to be transported in short periods, this is more viable by rail. The lack of a rail link to Marsden Point means the extra log value from centralised processing cannot be recovered, thus the allowance of on increased road log length and the potential increase in log value recovery has not been fully realised. It is highly unlikely that the rail will again be used to transport logs without the rail link to Marsden Point. This is due to the higher cost associated with double handling to transport the logs from the forest to the rail by truck, then by rail to some location presumably in Whangarei and then again by truck from Whangarei to the Marsden Point Port.

#### **15.3.4 Marusumi Chip Mill**

Prior to the closure of Port Whangarei, the Marusumi Chip Plant at Portland was efficiently transferring chip by rail. With the closure of the port the chip is now transported by truck on road to Marsden Point. With a Rail link Marusumi may revert back to transporting chip by rail. Currently 200,000 tonnes of chip is exported from Marsden Point.

#### **15.3.5 Aggregate Supply to Auckland**

Auckland aggregate supplies are becoming more and more expensive. Atlas Quarries are already viably barging aggregate to the Auckland markets. Transport of aggregate by rail maybe a viable option in the future.

#### **15.3.6 Rail Condition and Limitations**

Obviously rail is a complex matter. Assessment of the current condition of the rail network was not part of this brief, however we understand that the network is run down and has speed and safety limitations. We also understand that there are load restrictions due to geometric constraints at tunnels. However, for the purposes of this review, this is obviously a matter that requires further consideration.

#### **15.3.7 Potential Coal Power Station**

A rail link to Marsden Point would provide an alternative to shipping for Coal.

#### **15.3.8 NZRC**

A rail link to Marsden Point would provide an alternative for distribution of products by rail throughout New Zealand.

### **15.4 High Impact Areas**

Should the rail network become unavailable then based on the current freight figures this would increase the number of truck trips on SH1N south of Whangarei by approximately 86 trips per day, this equates to a 14% increase. The state highway would most likely cope with this increase; however there would be adverse implications at intersections such as Portland/SH1N and Rewarewa Rd/SH1N.

A significant proportion of the freight was carried by rail to Port Whangarei, most of this volume has now transferred to road transport and either exported via Marsden Point Port or Auckland or Tauranga. Toll advise that 6,000 tonnes per week was lost once Port Whangarei was closed. This is approximately half the total previous volume transported by rail prior to the closing of Port Whangarei.

An alternative approach is to identify what maybe transported by rail; this would show an entirely different perspective. There is significant opportunity for increased freight on rail; however it must be able to compete with other forms of transport. Furthermore, this increase in freight on rail is unlikely to occur without the rail link to Marsden Point. Not part of this study but worth noting is the economic advantage provided by an efficient rail system,

this means rail, shipping and road transport can compete and the free market will determine the most efficient transportation option.

## **15.5 Changes Since 2001**

The main change since the last review is the decline of the forestry pulp log export and the relocation of Port Whangarei to Marsden Point. The impact of the Whangarei Port closure is that there has been a significant reduction in log transport by rail. Even if the logging industry is increased it is unlikely that any significant pulp log export traffic would be by rail although there is significant potential for the utilisation of rail for log transport. The main reason for this is that the new Marsden Point Port is disconnected from the rail network. Pulp log exports were at a 900,000 tonnes over Port Whangarei in 2003, a significant portion of this was delivered by rail. The forestry log industry must have the potential for something like 2 million tonnes per year of pulp log export.

Furthermore, no longer is woodchip transported by rail, currently 200,000 tonnes per year is delivered by road from the chip mill at Portland to Marsden Point Port.

Now that Marsden Point Port is fully functioning and Port Whangarei is closed, approximately 430,000 tonnes of bulk materials are road transported to Whangarei, often in peak short durations. The Whangarei processing facilities have on site rail options.

It is interesting to note that AFFCO, Fonterra, Golden Bay Cement, and Ballance Fertiliser are all well connected by rail network. There are also other good rail loading facilities around the North.

The NZ Railways Corporation formation of Ontrack has yet to have full effect on the management of the rail asset.

In summary, rail has become less viable since the last review; this is mainly due to the closing of Port Whangarei. 6,000 tonnes per week has been the loss to rail due to the Port Whangarei closure.

## **16 Summary of Emerging Issues**

### **16.1 Introduction**

The intention of this section is to identify issues that maybe of significance to the region for input into the Northland Regional Land Transport Strategy review.

### **16.2 Traffic Compatibility**

The compatibility of roads for recreational (cycling and walking) and vehicular traffic including heavy traffic is an obvious matter for consideration. Light tourist type verses heavy traffic is another. These are compatibility issues for the roading network.

### **16.3 Reliability of Roads and Access to Northland**

Northland is vulnerable to the loss of State Highway access between Whangarei and Auckland. The main access to Northland is currently via State Highway 1N. Alternative access is poor with the most viable alternative option through Mangawhai or through the Paparoa Road depending on where the access is obstructed.

In general there are very few alternatives to the State Highways. There are too few alternatives to state highway secondary roads, the few existing secondary roads generally have very poor alignment and often contain bridge weight restrictions. Long delays on state highways occur during temporary road closures, this is a problem for perishables meeting tight export timeframes.

### **16.4 Change in Mode**

Market conditions can change causing a change of modes (e.g. Coastal shipping verses rail). The NZRC transport oil via a pipeline to Auckland. Any over capacity is provided by road.

### **16.5 Four Laning One Tree Point to Whangarei**

The change in the location of the port from Port Whangarei to Marsden Point has changed freight patterns. Industry based in Whangarei reliant on the port (i.e. TDC Sawmill, Ballance Fertiliser, Marasumi Chip Mill, Forestry, etc.) increases the heavy traffic on this length. This is likely to be a capacity and safety issue.

### **16.6 Truck Facilities**

With increasing traffic volume truck facilities will become more significant for safety and capacity reasons. Well located road layout and facilities with weigh pits, pull offs, passing lanes, intersections, and service areas will be required.

### **16.7 Weekend Recreational Northland Drift**

In the past Aucklanders have recognised the Coromandel area as a popular weekend destination. Northland is also experiencing increased weekend traffic peaks from Auckland. This is causing congestion between Whangarei and Auckland which is impacting on road freight during these periods.

## **16.8 Marine Farms**

Improved access to remote areas may be required to service any marine farm industry expansion. The likely new areas tend to be in remote locations with only local road access, and improved road standards in these locations may be required.

## **16.9 Over Dimension Loads**

House-moving is an industry unseen as this mostly occurs late at night and care needs to be taken to ensure restrictions are not unnecessarily introduced. For example a large house jammed tight on the Brynderwyn Hills would cause a significant disruption.

The placement of traffic facilities can unnecessarily restrict access and safety of motorists competing with house movers.

## **16.10 Value of Cargo**

Although the volume of trucks is significant, the value of cargo becomes significant when considering delays. For example, an out-break of pests in Auckland makes export of some Northland products almost impossible if Auckland was closed to transit freight. The last fruit fly scare almost closed down fruit and produce export from Northland.

## **16.11 Rail**

A rail system is obviously a critical issue for Northland. Even with the apparent run down condition and relatively low usage, there is potential to increase volumes on rail. However, to achieve this it is most likely that the rail link to Marsden Point would be required.

There is opportunity for increased freight on rail; however it must be able to compete with other forms of transport. Not part of this study but worth noting is the economic advantage provided by an efficient rail system, this means rail, shipping and road transport can compete, the market will determine the most efficient system.

## **16.12 Shipping**

Shipping was not part of the previous study, however there is obviously a close link between ship, road and rail transportation. For example Northland is experiencing peak use of the highways while loading and unloading ships at Marsden Point. Because we have no rail link to Marsden Point some products are being exported from outside the Northland Region.