
6 Dairy Industry

6.1 Source Information

Fonterra Northland – Transport Division as per the previous heavy traffic report, however summary information was provided from Fonterra that confirmed insignificant change.

6.2 Introduction

Within Northland approximately 1.8 million tonnes of milk are transported from an estimated 1500 dairy farms annually. This is accomplished using 45 truck and trailer tanker units. This milk is transported from the various farms to either the Kauri or Maungaturoto processing sites. Fonterra advise that the trend of fewer larger suppliers continues.

6.3 Findings

The Transport Division of Fonterra Northland has an accurate computerised recording system for the daily operation of their milk tankers from both the Kauri and Maungaturoto sites. This system plots the route travelled by the tanker including its projected loading.

Fonterra operates to a seasonal calendar that shows tanker movement during the peak season. These figures will also include product movement of buttermilk, cream and whey.

The cartage of milk powder produces has been reflected under 'general freight' as this section deals primarily with tanker movement.

6.4 High Impact Areas

The following portions of state highways and arterial routes have been identified as high impact areas. For the purposes of this study, the peak season trips per day have been used. The highest levels are SH1N from Waipu south along SH12 to the Maungatoroto Site and between Whangarei and the Kauri site.

Over time there has been a trend to centralise processing at Kauri. Should the Maungatoroto site close then this would have a localised impact on transportation patterns that would put more pressure on SH1N between Whangarei and One Tree Point.

The significance is:-

- cumulative effects on arterials;
- the potential conflict on local roads with residents, school busses and logging trucks but this is mostly well managed by the community;
- Fonterra advise that the running and maintenance cost of the trucks are 3 times that of other regions, the most significant anomaly is tyre costs. This suggests that the standard of roading may impact on the running costs.

6.5 Changes Since 2001

Fewer but larger, dairy suppliers.

6.6 Route Data

The following data has not been updated and extracted directly from the previous heavy traffic report. Fonterra are working on upgrading this data. From a transportation system perspective there is likely to be little change.

Route Description	Milk Tanker Trips per day - Peak Season
Te Kao – Awanui	5
Awanui – Kaitaia	5
Kaitaia – Mangamuka	10
Mangamuka – Okaihau	13
Okaihau – Ohaeawai	38
Ohaeawai – Pakaraka	38
Pakaraka – Moerewa	38
Moerewa – Waiomio	38
Waiomio – Ruapekapeka	38
Ruapekapeka – Hikurangi	68
Hikurangi – Kauri	68
Kauri – Whangarei	100
Kaitaia – Kaeo	5
Kaeo – Pakaraka	18
Hokianga – Kaikohe	8
Kaikohe – Kawakawa	8
Aranga – Dargaville	9
Dargaville – Tangiteroria	20
Tangiteroria - Maungatapere	23
Maungatapere - Whangarei	23
Dargaville – Ruawai	32
Ruawai – Matakoho	48
Matakoho - Paparua	48
Paparua – Maungaturoto	57
Maungaturoto – Brynderwyn	146
Whangarei – Oakleigh	58
Oakleigh – Ruakaka	47
Ruakaka – Waipu	43
Waipu – Brynderwyn	46
Brynderwyn – Wellsford	40
Wellsford – Warkworth	22

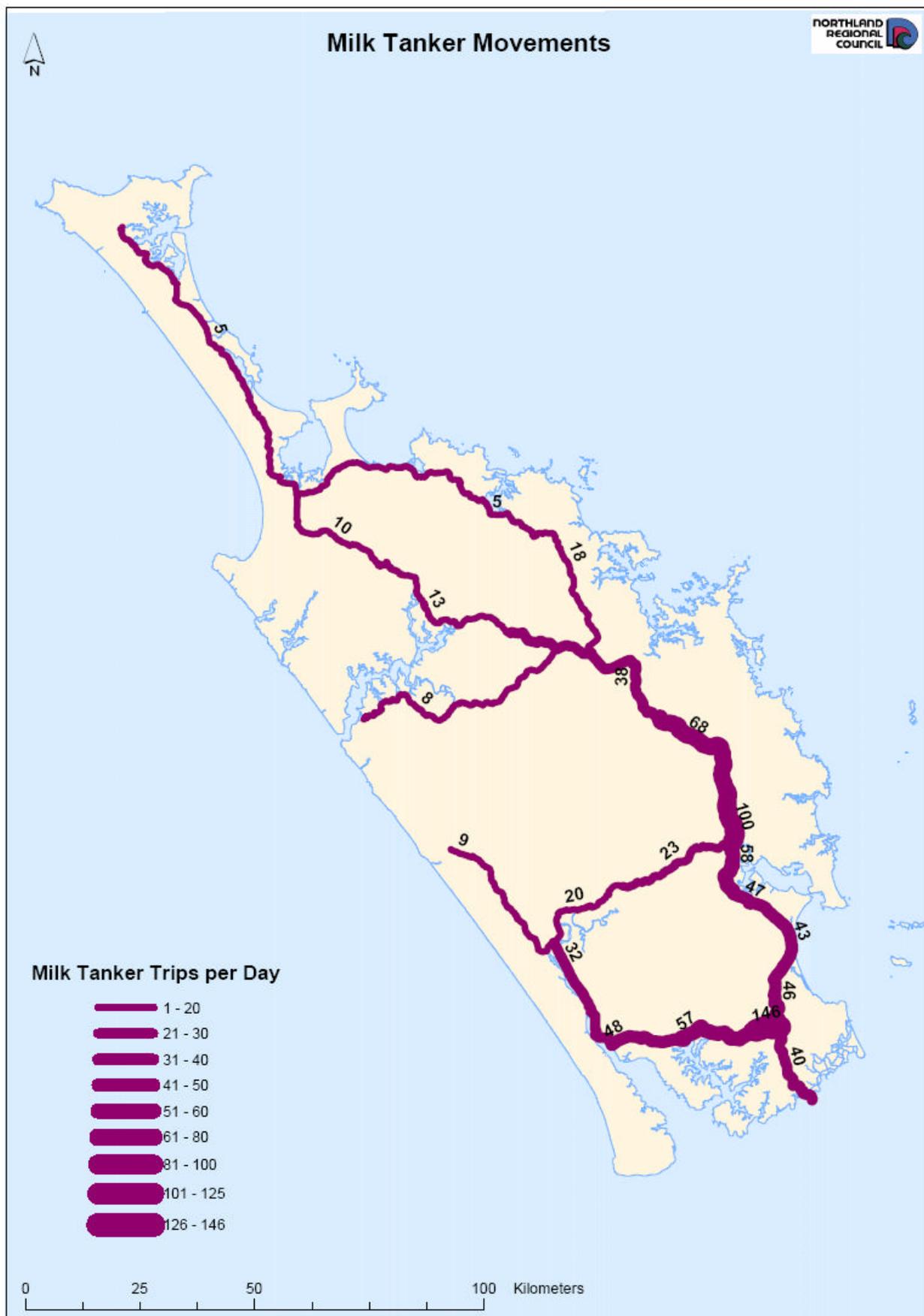
Note:-

1. There are 30 truck movements of cream and buttermilk between Kauri and Maungaturoto during a 24 hour period in peak season.

2. There are 60 truck movements of Whey between Maungaturoto and the farms in Waipu during a 24 hour in peak season.

These truck movements have been included in the above figures.

6.7 Map of Milk Tanker Movements



7 Horticulture

7.1 Source Information

The information has been sourced from Kiwi Fruit and Avocado pack sheds in the district. Not all packing sheds responded; however, they provided an indication of their market share thus enabling the volumes to be extrapolated.

7.2 Introduction

The Kiwi Fruit industry has been more or less static for sometime. However, significant volumes of avocados have been planted over the last 5 years or so. The area planted in avocados exceeds that planted in the Bay of Plenty (this is a recognised avocado growing area). The Far North has significant avocado plantings also. The avocado industry is now very export focussed thus freight travels south for export.

Kumara growing is concentrated in the Ruawai/ Dargaville area.

7.3 Findings

Avocados

Whangarei sends most of the fruit south to Auckland and beyond with a high proportion exported. Approximately 2,600 tonnes are shifted between October and January.

The Far North fruit shifts another 2,500 tonnes between October and January.

Avocados are shipped via refrigerated containers in 20T truck and trailer loads, this amounts to on average 3 or 4 truck and trailers per day and are exported via Auckland.

Kiwifruit

Await advice from Packers.

Citrus

Not researched.

Kumara

Approximately 2,800 acres in Ruawai/ Dargaville are planted each year. The produce is stored and trucked to Auckland for Export via Ports of Auckland. The volume of trucking is 3 truck and trailers per day Monday to Friday 52 weeks a year. The route is SH12 from Dargaville to SH1N to Auckland.

7.4 High Impact Areas

The significance is:-

- Produce is perishable, often refrigerated and relies on the reliability of the State Highway network to deliver perishables for export to tight timeframes.
- Cumulative effects on arterials particularly SH1N south of Whangarei.
- Most produce is exported from Ports outside the Northland Region.

7.5 Changes Since 2001

Primary produce of kiwi fruit, avocado and kumara were not specifically defined in the last review. The avocado industry is growing significantly as an industry in Northland base in Whangarei and the Far North.

7.6 Route Data

The primary routes are mainly SH1N and SH12 south of Dargaville.

8 Solid Waste Disposal

8.1 Source Information

The information has been provided directly for the Local Authorities Solid Waste Managers.

8.2 Introduction

There is a growing trend to cease the operation of localised land fills and to dispose of solid waste in a more sustainable manner. The three local authorities are progressing in this area and are trending towards recycling. However, solid waste is being carried further and further on the roading networks to achieve sustainable disposal.

8.3 Findings

8.3.1 Far North District Council

50% of the Far North District Council Solid waste is currently disposed at Pohe Island in Whangarei. Pohe Island is due to close in 2006 and it is likely that waste will be redirected to Redvale in Silverdale north of Auckland. From the south of the Far North District approximately 50,000m³ per year are disposed at Pohe Island, in the North of the District the waste is taken to the Ahipara Land Fill. The Far North estimates that an equal volume of waste is disposed of by private and commercial collections and disposed of outside the District. Thus the total volume of solid waste from the District could be approaching 200,000m³ pa.

There are currently 1,250 truck trips per year or approximately 6.25 per day. However, if we were to consider the full volume from the Far North area then there is the potentially 25 truck trips per day.

8.3.2 Whangarei District Council

The Whangarei District Council estimates that they will send 7 loads of refuse and 2 loads of vegetation per day for 5.5 days per week from the Rewarewa Road Transfer station to Redvale.

8.3.3 Kaipara District Council

Awaiting information requested from Kaipara District Council.

8.4 High Impact Areas

The high impact areas are associated with the localised effects of the location of collection points.

The significance is:-

- Cumulative effects on arterials, particularly SH1N Whangarei south, this could add another 15 to 20 trips per day or approximately an additional 3%.

- Localised concentration of traffic movement at intersections in the Rewarewa Road (Whangarei) vicinity.

8.5 Changes Since 2001

Solid waste disposal was not specifically considered in the last review.

The shift to recycling and improved solid waste disposal is producing a new heavy traffic pattern, at this time it may increase the heavy traffic south of Whangarei by 20 trips. This route has an existing 600 truck trips per day, thus is a 3.3% increase.

8.6 Route Data

Route	Trips One way
Kaitaia Area to Kaikohe (not yet happening)	6
Kaikohe Area to Whangarei	12
Whangarei to Silverdale	22
Dargaville to Silverdale (estimate)	3
Total South of SH12/SH1N Intersection	25

9 Heavy Industry

9.1 Source Information

The information has been provided either directly from industry or from publicly available information.

9.2 Introduction

Northland has its share of manufacturing. This report is not exhaustive but is intended to cover the main industries. Please note that timber manufacturing is covered in the forestry section.

9.3 Findings

9.3.1 Cement

Golden Bay Cement source raw material from the Wilsonville Quarry at Hikurangi and transport to Portland unprocessed rock in 150 (peak) and 100 (average) truck loads per day.

From Portland to Auckland they carry 60 loads per day of finished product.

From Marsden Point to Portland they carry raw materials of 600 (peak) and 110 (average) truck trips per day when unloading ships.

The bulk of the cement is shipped via Golden Bay's owned and operated coastal shipping. On average two coastal ships per week transport 4,000 tonnes per ship. They have no current reliance on rail although the rail is in good proximity to the manufacturing plant.

9.3.2 Imerys Tableware

Imerys transport 3 return truck container trips between Matauri Bay via SH10, SH1N and SH15A to Marsden Point per day or approximately 800 full loads (@ 37 tonnes per load) to Whangarei per year.

9.3.3 Potential Coal Power

The potential coal power station at Marsden Point is likely to be transported by ship to Marsden Point and via conveyor to the power station. Some by-product will need to be disposed of. A rail link to Marsden Point could be an alternative means of transport of coal.

9.3.4 Fertiliser

Ballance Agri Nutrients Ltd has a production facility in Port Road Whangarei producing in excess of 100,000 tonnes per year of fertiliser for agriculture in the North. The raw materials are shipped in to Marsden Point and trucked to Port Road with large fleets of trucks often in short concentrated bursts. This equates to approximately 3,600 trips per year, delivery is concentrated to match ship unloading. Fertiliser is distributed for application mainly during the spring.

Ravensdown Fertiliser Co-op Limited import approximately 60,000 tonnes per year to the region by ship to Marsden Point, 40,000 tonnes is trucked to the Whangarei Dyer Street Depot, 12,000 tonnes to Dargaville, 4,000 tonnes to Wellsford and 4,000 tonnes to Kaikohe. An addition 15,000 tonnes pa is trucked via SH1N from south to the Whangarei Depot. Fertiliser is distributed for application mainly during spring.

Both Ravensdown and Ballance truck from Marsden Point to Whangarei often in short concentrated bursts shifting 4,000 to 5,000 tonnes each time (each truck carries 28 tonnes). High trucking volumes are experienced similar to the Golden Bay raw material situation.

9.3.5 Aggregate

Atlas Quarries at Piora has approximately 560 exits from the quarry per week or 112 per day, with 90 (80%) heading south and 22 heading North on SH1N. They also barge 150,000 tonnes per annum south via the Kaipara Harbour.

Winstone Aggregates Whangarei has approximately 500 exits from the quarry per week or 100 per day with the majority heading North on SH1N. There is potential for an increased volume heading south on SH1N to service developments in the Marsden Point Ruakaka area.

McBreen Jenkins Puketona on SH11 and Turiwiri Quarries at Dargaville and Bellinghams in the Far North did not provide data. Puketona is estimated to be less than half the size of Atlas, with Turiwiri and Bellinghams smaller again.

9.3.6 United Carriers

United carriers are the largest single road freight operator in Northland with 180 trucks on the road. On average there are 60 trips per day between Auckland and Whangarei. Included in this, are two container trucks per day.

9.3.7 NZRC

The New Zealand Refining Company is located at Marsden Point adjacent to the new port. The refinery has always been serviced by shipping and the pipeline through to Auckland. Processed products are transferred throughout New Zealand by Coastal shipping and the pipeline to Auckland. A rail link to Marsden Point would mean NZRC would have an alternative means of distribution.

9.4 High Impact Areas

The highest impact area is between Rewarewa Road on SH1N in Whangarei and One Tree Point Road. SH1N through Whangarei is also another high impact area.

The significance is:-

- Cumulative effects on arterials especially in Whangarei northern area and to One Tree Point Rd;
- High numbers of trucks over short periods due to carting bulk;

- Intersection capacity;
- Atlas have achieved barging of aggregate in the Kaipara, alternative transport would most likely be by road, however this maybe uneconomic;
- A rail link to Marsden Point could result in a significant reduction of truck movements.

9.5 Changes Since 2001

The main change since the last report is Ballance and Ravensdown now transport bulk from the Marsden Point Port along SH15A and SH1N and down Rewarewa Road in short concentrated bursts.

As Marsden Point and Ruakaka develop more construction heavy traffic can be expected.

As the Port develops more infrastructure (i.e. bulk stores), may influence traffic patterns to change to more opportunity trucking thus spreading peak trucking.

10 Tourism Buses

10.1 Source Information

Annual Accommodation Figures Sept 2005 Destination Northland

10.2 Introduction

Northland is promoted as one of the major tourist attractions in New Zealand for both the local and overseas markets, and therefore there are an increasing number of tourists travelling on the roads in the region. According to information received from Destination Northland, these numbers will continue to increase.

10.3 Findings

The September 2001 Heavy Traffic Report indicated a tourist mix comprised of:-

- 62% travelling by coach on organised tours;
- 30% travelling by motor car, camper van, or as back packers; and
- 8% travelling by air travel and boat.

From the available figures, Destination Northland estimate, that an average of 1,200,000 tourists per annum visit Northland. If this be the case then the breakdown of vehicles used are as follows:-

- Total tourists = 1,200,000
- Tourists travelling on coaches = 744,000 per annum (62%)
- Tourists travelling by car, camper van etc. = 360,000 per annum (30%)
- Tourists travelling by air and boat = 96,000 (8%)

For organised tours by coach, the number of coaches per day is estimated at²:-

- 744,000 passengers per annum
- 14,308 passengers per week
- 2,043 passengers per day
- 54 coach trips per day (assume a loading figure of 75% per coach).

From the figures provided, the tourist season runs from October through to April with January being the peak month. The lowest months of the season are June through to August.

Those figures as shown in the physical traffic count for tourist coaches conducted in May 2001 (see section on Physical Traffic Count), totalled 22. If an average is taken of tourist travel for the month of May over the past five years, as supplied by Destination Northland, the following figure is arrived at: -

- 148,758 tourist / 5 years = 29,752 average tourists for month of May

² Figures based on passengers per annum / 52 weeks / 7 days / 50 seater coach

- 29752 tourists / 31 days = 960 tourists per day
- 960 tourists per day / 38 tourists per coach = 25 coaches per day

<u>Projected per day</u>	<u>Actual per day</u>	<u>Variance</u>
25	22	-3

From the above calculations it is apparent that the historical data supply by Destination Northland is reasonably accurate based on the comparison made against the number of coaches that were physically counted.

In accordance with the information supplied by Destination Northland, 40% of all coaches travelling on State Highway 1 and State Highway 10 return via State Highway 12, through Dargaville and out through Brynderwyn.

10.4 High Impact Areas

From the information received by Destination Northland, it is apparent that a majority of the Tourist Buses travel via State Highways 1 and 10, with 60% returning in the same direction and the remaining 40% returning via State Highway 12. The table below will show this movement during both peak and off peak periods.

<u>State Highways</u>	<u>Trips per Day</u> <u>Peak season</u>	<u>Trips per Day</u> <u>Off peak season</u>	<u>Off</u>
State Highway 1	54	25	
State Highway 10	54	25	
State Highway 12	22	10	
Arterial routes	n/a	n/a	

10.5 Changes Since 2001

Since current actual tourist bus data has not been supplied it is difficult to access the change.

10.6 Map of Tourist Bus Movements



11 School Buses

11.1 Source Information

Multi Serve Education Trust

July 2004

Actual information

11.2 Introduction

The majority of the school buses operate under contract to the Department of Education. The Department of Education has in turn sub-contracted the administration of the scholar services to Multi Serve.

11.3 Findings

92 schools are serviced by over 250 school bus trips twice per day, comprising of over 10,000km of travelling twice per day. Trip length varies from 22km to over 150km. A majority of these trips are operated during peak periods from 7.30am to 9.00am and 3.00pm to 5.00pm.

<u>Area</u>	<u>Trips Twice per Day</u>
Whangarei	70
Kaikohe / Bay of Islands	11
Kaitaia / Far North	27
Dargaville	16
Bay of Islands	14
Bream Bay Area	13
Smaller Communities typical volumes	5-10

11.4 High Impact Areas

The significance is:-

- Compatibility with other traffic on rural roads with regard to road safety;
- Concentrations at centralised locations (e.g. School bus hub at the Whangarei Girls High School);
- Cumulative effects in Whangarei contributing to morning and afternoon peaks;
- Contributing to increased bus movements is inter-zone movement

11.5 Changes Since 2001

Minor changes in distribution of students requiring school bus services. There has been an increase in demand for services with the development of the school bus hub at the Whangarei Girls High school.