

# Environmental Scan

**September 2015**

**Fifth Edition**



Kaipara te Oraoanani  
**KAIPARA  
DISTRICT**  
The Oceans Two Harbours

## **A. Executive summary**

This Environmental Scan was completed in September 2015. The purpose of this document is to provide a facts based overview of the legal, social, economic, physical and technical environment in which the Council operates. While the information presented in this document is intended to inform decision-making, this document does not include any detailed analysis or make recommendations.

The key findings which are highlighted within this Environmental Scan are:

### ***Social***

- The District had a population of 20,500 as at 30 June 2013;
- The population is largely rural, living in small settlements dotted in amongst the rolling hills;
- The District's population grew by 10.5% between 2006 and 2013;
- Auckland's population growth is far exceeding that of the rest of the country. This, together with growing economic and social disparity, has the potential to create two New Zealands; Auckland and the rest. Currently, 34 out of every 100 people in New Zealand live in Auckland, however this will increase to 37 in 2028 and 40 in 2043.
- Evidence is growing to suggest that Auckland's growth is overflowing into eastern parts of Kaipara and northern parts of the Waikato. Hence most of Kaipara's population growth has and is expected to continue to occur in the east of the District around Mangawhai, Kaiwaka, Maungaturoto and Paparoa. By contrast, the population in the remainder of the District is projected to remain stable or even decline in places. This has implications for how Council allocates its spending on infrastructure. While capital works in growth areas such as Mangawhai and Kaiwaka will need to be future-proofed to accommodate growth, Council must also consider how to sustain future maintenance and overall viability of existing facilities in areas experiencing stable or declining populations such as Dargaville;
- Mangawhai's population is anticipated to increase from 2,600 in 2013 to 3,530 in 2028 and 3,860 by 2043. Comparing occupied dwelling growth to unoccupied growth suggests that the proportion of permanent residents in Mangawhai is increasing. This may change demands on Council's infrastructure;
- Dargaville's population is anticipated to decline into the future;
- Kaipara has an aging population, the result of the large babyboomer cohort reaching retirement age and the social trend towards couples having fewer children. This trend is being exacerbated by the tendency of young adults to leave the District, coupled with the attractiveness of the District as a retirement destination. This sees population growth of the post-reproductive age group. These two factors result in a reduction in the breeding population as young families establish outside the District;

- The above observations on population aging are not true of the District's Maori population which is comparatively youthful. Since 2006 the District's Maori population increased 7.6%. Kaipara's Maori population is increasing both in real terms and in terms of the proportion of the District's population which it comprises (currently 23.1%). Maori participation in Council, the community and the District's future will therefore become increasingly important over time.
- While non-Maori in Northland had the same mortality rates as nationally, life expectancy for Northland Maori was considerably lower at just 70 years for females and 64 years for males. Northland Maori exhibit a higher rate of mortality than for Maori nationally.
- The incidence of poverty-related diseases in Northland are amongst the highest in New Zealand e.g. meningococcal disease, rheumatic fever, pneumonia, lung infection, ear infection, dental diseases and skin infections;
- New Zealand's child well-being is one of the lowest in the Organisation for Economic Co-operation and Development (OECD) and Northland is even worse than New Zealand as a whole. Infant mortality in Northland is 8.1 per 1,000 births, compared to 5.4 per 1,000 births for the rest of New Zealand. Northland also had the highest injury-related child death rate per head of the population in the country;
- The proportion of students who are achieving at or above the National Standards across the three core curriculum areas of reading, writing and mathematics is lower in Northland than in any other regions;
- Kaipara performed worse in education than Northland overall. Just 68.7% of people aged 15 years and over in the Kaipara District have a formal qualification, compared with 72.6% of people in Northland and 79.1% of people in New Zealand. Furthermore, just 58.1% of Kaipara's Maori aged 15 years and over have a formal qualification, compared with 61.15% for Maori in Northland and 66.7% for Maori in New Zealand.
- A total of 15,657 criminal offences were recorded in Northland for the 2013/2014 year, representing a 2.3% increase on the 2012/2013 year. Northland's overall crime rate for the 2013/2014 year was 1,001.2 recorded offences per 10,000 people making Northland the second worst region for criminal activity behind the Eastern Police District. The Whangarei Police Area, which is roughly comprised of the Kaipara and Whangarei Districts, had a 2013/2014 crime rate of 959.1 offences per 10,000 people;
- Most of Kaipara scores between 8 and 9 on the Deprivation Index (a score of 10 means that the area is in the most deprived 10% of areas in New Zealand). Deprivation appears worse in urban areas than in rural. The Far North was considerably more deprived than Whangarei with Kaipara featuring between these two extremes;
- Just 66% of households in Kaipara District have access to the internet, compared with 76.8% of households nationally. Similarly, only 79.6% of households were seen to have access to a mobile phone, compared with 83.7% nationally;

### ***Economic***

- Kaipara's economy is securely founded on its primary industries, particularly dairy and forestry, supported by a strong manufacturing sector. In 2014, the primary sector (agriculture, forestry and fishing) accounted for 27.4% of the Kaipara's GDP while manufacturing contributed a further 18.5%. Kaipara's economy has been seen to be extremely export orientated;
- Kaipara's economy continued to grow at a moderate pace during the middle stages of 2015, with Infometrics' provisional estimate of GDP showing growth of 2.8% of GDP over the year to June. This compares to 3.1% growth for New Zealand and 2.9% growth for Northland;
- The dairy pay-out has fallen significantly with Infometrics' forecasts suggesting that a second consecutive season of farmgate milk prices below \$5.00/kgms (before dividends) looks likely;
- The key constraints to economic development in Northland are:
  - insufficient transport networks, particularly the need to improve key freight roads and rail infrastructure;
  - insufficient communications networks, particularly the need to improve broadband coverage and eliminate 'black spots' in the mobile phone network;
  - a lack of skilled labour within the region; and
  - of particular concern to the dairy and horticultural industries, however also relevant to some manufacturing and processing operations; the need for better water management to mitigate the risk of floods and droughts.
- Kaipara's unemployment rate was 7% during the year to June 2015;
- The median household income in Kaipara was \$42,400 in 2013. This was lower than in Whangarei (\$52,000), Northland (\$46,900) and New Zealand (\$63,800) however slightly higher than in the Far North (\$42,200). Median household incomes in Northland were the lowest of all New Zealand regions. There is also considerable disparity between Kaipara's communities with households in some such as Te Kopuru (\$30,200) and Ruawai (\$30,800) earning substantially less than others such as Maungaru (\$55,900), Kaipara Coastal (\$47,600) and Maungaturoto (\$45,000);
- The average house price in Kaipara increased by 4.2% in the year to June 2015. However Kaipara's median house price remained comparatively low at \$309,875 in the year to June 2015. This compares with \$494, 525 in New Zealand and \$307,575 in Northland;
- Kaipara house sales increased 24% in the year to June 2015, This compares with 12% in Northland and 8.3% in New Zealand;
- By comparing income to accommodation costs we see that home owning is relatively affordable in Kaipara with an affordability score of 6.7 compared to New Zealand 8.4 and Auckland 9.8. However renting is no more affordable in Kaipara (scoring 0.29) than in Northland (0.29) and only slightly more affordable than New Zealand overall (0.32) while Auckland was less affordable (0.373);

### ***Customer expectations***

- Living up to customer expectations can be a challenge for Kaipara District Council as it has a small and relatively poor rating based coupled with a large district and extensive roading network;
- The March 2015 Communitrak Survey reveals that overall Council is satisfying the majority of its customers across most of its services, however there is still room for improvement;
- Approximately 72% of ratepayers in the Kaipara District (excluding Mangawhai) reside within the District and 28% outside the District. For Mangawhai, 41% reside within the District and 50% in Auckland;
- An analysis of unoccupied versus occupied dwellings shows that Mangawhai's population may increase by 112% (more than double) during holiday periods;

### ***Physical***

- The Kaipara District has a large roading network (1,574 kms) of which 72% or 1,126 kms are unsealed and 448 kms are sealed. Also part of Kaipara's roading infrastructure are 353 bridges, 1,136 streetlights, 88 kms of footpaths and more than 6,600 road traffic signs;
- Roading maintenance requirements are likely to increase as Northland forestry volumes are predicted to increase and truck movements to Northport continue to grow as the port increases its freight handling;
- Increasing forestry harvest volumes will require strengthening of approximately 90 kms of Kaipara's roading network (2 kms of sealed and 88 kms of unsealed);
- Kaipara's road crash rate is one of the highest of all territorial authorities at 359 per 100,000 persons. Alcohol was a factor in 50% of Kaipara's serious and fatal crashes;
- The One Network Road Classification (ONRC) project is likely to lead to a review of the way in which the New Zealand Transport Authority (NZTA) subsidises local roads, including possible changes to the current levels of service supported by NZTA. It is not yet certain if this will result in an increase or decrease in the support received by Council beyond 2018. The ONRC project is therefore an identified opportunity for Council and one which it should continue to monitor and engage with;
- The Puhoi to Warkworth motorway extension project is progressing, as are other upgrades to State Highway 1 between Whangarei and Auckland. Tentatively, construction of the Puhoi to Warkworth motorway could start in late 2016 with the road completed and open by 2022;
- The region's rail network is currently underutilised and unlikely to greatly increase its contribution to freight handling unless a rail link is provided to Northport. However this is currently seen as a long term (20 years) ambition by the present government. Services on the Dargaville Branch were suspended in October 2014 due to poor track conditions and low freight;

- Aside from Mangawhai, much of Council's water and wastewater network is aged or aging and will require substantial renewal works over the next 30 years;
- There is the risk that drinking water standards will be raised in future. Any raising of drinking water standards may be unaffordable for Kaipara to implement;
- The tendency of Dargaville and Baylys' main water source at Waiparataniwha Stream to dry up in droughts, makes it hard to provide security of supply to these communities and industries located in these communities (including Silverfern Farms' Dargaville meatworks which is a major local employer). This is a concern for the coming 2015/2016 summer season as a strengthening El Nino weather pattern is already threatening to bring what could be Northland's fifth drought in seven years;
- Kaipara is regularly affected by droughts and flooding. These events endanger the provision of Council services such as drinking water (threatened during droughts) and roads (which can be damaged by heavy rainfall events or closed by floods) and threatens the profitability of Northland's primary industries;
- Climate change is expected to increase the extremes of wet and dry in Northland's climate. Flooding could become up to four times as frequent by 2090;
- The Ministry for the Environment (MFE) is recommending planning for future sea-level rise of at least 0.5 metres, along with consideration of the consequences of a mean sea-level rise of at least 0.8 metres (relative to the 1980/1999 average) by the 2090s. This has implications for Council's stopbanks and flood protection works;

### **Legal**

- The government has recently reviewed New Zealand's health and safety in employment legislation. This has led to the passing of the Health and Safety Reform Act. This Act will come into force on 4 April 2016, when it will amend a number of other acts, repeal the Health and Safety in Employment Act 1992 and the Machinery Act 1950 and create a new Act to be called the Health and Safety at Work Act. This change in workplace health and safety legislation will have implications for Council which, as an organisation, employs both staff and contractors. A particular concern for Council has been how this new legislation will alter the way Council works with community volunteers. However, amendments to the Health and Safety Reform Bill before its adoption have taken coverage of volunteers back to what is under the current law. This distinguishes between casual volunteers and volunteer workers. The new reforms should therefore have a minor impact on the way Council works with volunteers;

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## **C. Overview of Environmental Scan**

### **1 Introduction**

Environmental scanning is the process of continually updating or acquiring information on events occurring outside the organisation to identify and interpret potential trends. An Environmental Scan looks at what changes are likely to affect the future internal and external operating environment for the Kaipara District Council (Council). The Environmental Scan can occur by evaluating and highlighting medium and long term trends and anticipating what might transpire in the future, this foresight can then be used in strategic planning.

This fifth edition of the Environmental Scan is to be followed by later editions annually, which will ensure up to date information on key indicators is always available. While this edition does repeat some of the information included in the last edition; much of the information contained in the past edition, though still up-to-date, has not been re-included with the intention of keeping this document a reasonable length.

### **2 Environmental Scan process**

Council experiences changes in a large number of areas. Environmental trends typically arise from the sources listed below. Providing an explanation for the trend and assessing its implications is also an important part of environment scanning

- Social;
- Economic;
- Customer Expectations;
- Physical;
- Technical; and
- Legal.

## D. The Kaipara District

Kaipara District Council is one of the few councils that stretches from the west coast to the east coast; from Ripiro Beach on the west to Mangawhai Heads on the east.

The Kaipara District is located in the low hills around the northern shores of the [Kaipara Harbour](#); a large natural harbour which opens to the [Tasman Sea](#). Kaipara District Council shares management of the harbour with various other organisations, most notably [Auckland Council](#) in the south of the harbour.

The roughly triangular District stretches from a thinning of the [North Auckland Peninsula](#) south of [Kaiwaka](#) in the southeast, to the [Waipoua Forest](#) in the northwest, from there extending down the west coast to the Kaipara Harbour entrance at Pouto. The region is bisected by the Northern [Wairoa River](#) and its tributaries, which flow into the northern end of the Kaipara Harbour.

The District includes the towns of Te Kopuru, [Dargaville](#), [Ruawai](#), Matakohē, [Paparua](#), [Maungaturoto](#), [Kaiwaka](#) and [Mangawhai](#), as well as the rural area which surrounds them.

The population is largely rural, living in small settlements scattered amongst the rolling hills or nestled on the shores of the harbour.

The nearest city is [Whangarei](#), which by road is 57.5 kilometres northeast of Dargaville, 54.8 kilometres north of Paparua, 61.1 kilometres north of Maungaturoto and 72.2 kilometres Northwest of Mangawhai.



### 3 Social

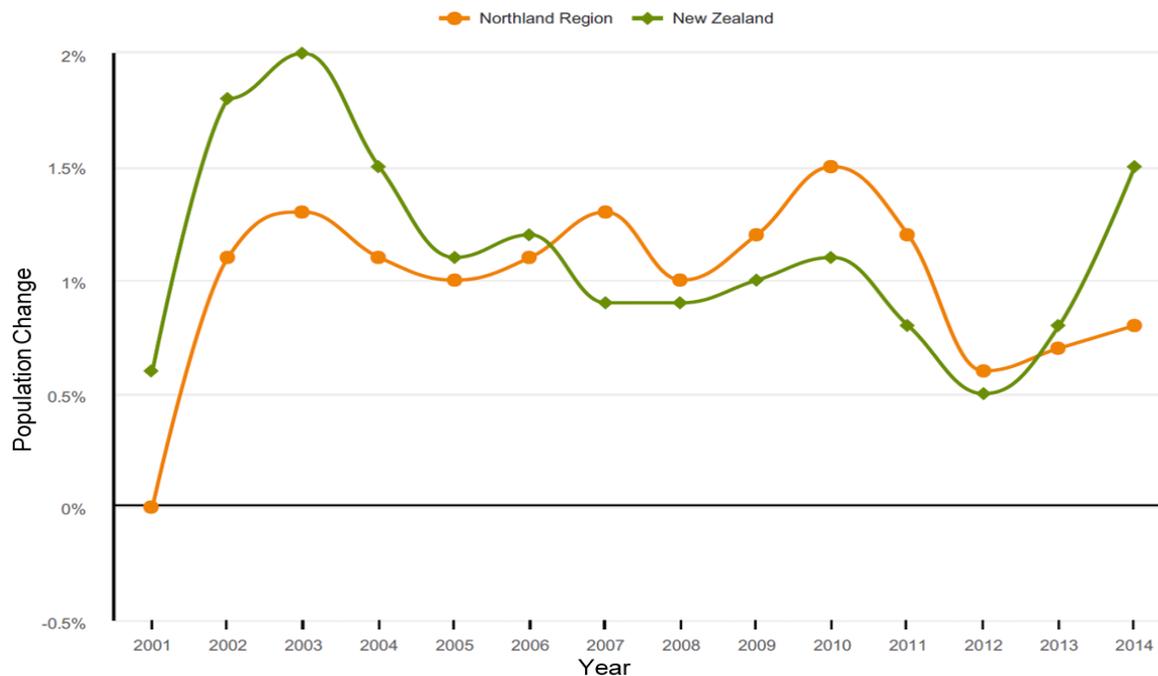
#### 3.1 Population

##### 3.1.1 Population change nationally and regionally

New Zealand's population is estimated to have grown by 86,900 people, or 1.9%, in the year to 30 June 2015, the fastest rate since 2003. This came from net migration (arrivals minus departures) of 58,300, and natural increase (births minus deaths) of 28,700. New Zealand's estimated resident population was 4.6 million at 30 June 2015 (source: Statistics New Zealand).

The following figure shows how population growth rates in Northland and New Zealand have fluctuated between 2001 and 2014.

Figure 3.1 : Population growth rates 2001/2014



Over the past decade New Zealand's population has grown by around 1% per year from just under 4.1 million people in 2004, to slightly more than 4.5 million in mid-2014.

When all parts of Northland (those which are growing and those which are declining) are considered together the medium projections suggest the region is expected to achieve only moderate population growth between 2013 and 2028 (around 8.7%) relative to New Zealand as a whole (around 16%).

Statistics New Zealand predicts that of New Zealand's 67 territorial authority areas, 51 are projected to have more people in 2028 than in 2013. However, only 30 are projected to have more people in 2043 than in 2028. This represents the slowing of population growth in many regions and the beginning of population decline in some.

The low, medium, and high growth projections all indicate:

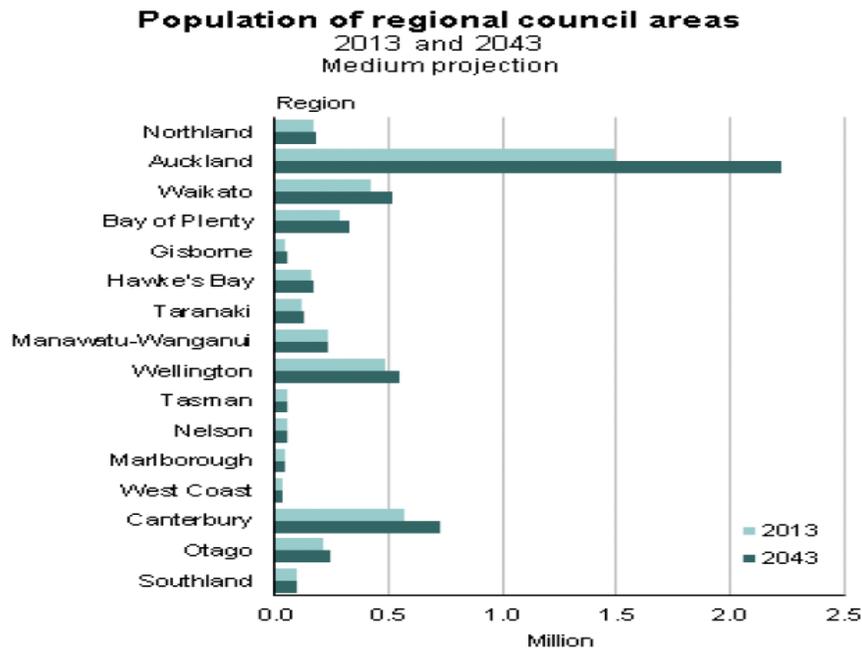
- The population growth rate will slow in all regions, cities, districts, and Auckland local board areas between 2013 and 2043.
- All areas will be home to more people aged 65+ in 2043.
- Deaths will increase relative to births in all areas, as the population ages.

The medium projection indicates:

- All regions will have more people in 2043 than in 2013, although 26 territorial authority areas will have less.
- Deaths will outnumber births in two-thirds of territorial authority areas by 2043.
- 51 territorial authority areas will have fewer children in 2043 than in 2013.
- Three-fifths of New Zealand's population growth between 2013 and 2043 will be in Auckland.

The following graph shows projected population change for New Zealand's regions from 2013 to 2043 under Statistics New Zealand's medium series projections.

Figure 3.2: Projected population change from 2013 to 2043



Source: Statistics New Zealand

From this we see that New Zealand’s population is unevenly distributed, with more than 76% of New Zealanders living in the North Island and nearly half of them living in three regions; Auckland, Waikato and Bay of Plenty. In fact, at the time of the 2013 Census around 43% of New Zealanders lived within the triangle of Auckland, Hamilton and Tauranga (the so called ‘Golden Triangle’) and this geographic area accounted for nearly two thirds (64%) of New Zealand’s overall population growth between 2001 and 2013 (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

As the above graph shows, the growth paths of New Zealand’s regions and even New Zealand’s cities appear quite different from each other. Rural areas and smaller provincial cities are scarcely growing while middle tier cities are growing only modestly. Auckland, on the other hand, has and is projected to continue growing strongly (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Statistics New Zealand predicts that Auckland will continue to be New Zealand's fastest growing region, and account for three-fifths of the country's population growth between 2013 and 2043. From an estimated population of 1.5 million in 2014, Auckland is projected to reach 2 million in the early 2030s. That means out of every 100 people in New Zealand, 34 currently live in Auckland, but this will increase to 37 in 2028 and 40 in 2043 (Source Statistics New Zealand).

Natural increase (births minus deaths) is projected to account for three-fifths of Auckland's growth, and net migration the remaining two-fifths. Interestingly the number of people moving into the city from other New Zealand regions is less than the number of Aucklanders moving away. Auckland's net migration gains are therefore due to positive international rather than internal migration.

Auckland also has a higher proportion of people in the main childbearing ages (15 to 44 years) than other regions. As a result, Auckland has a higher birth rate and lower death rate than most other regions. This trend is anticipated to strengthen as it is understood the internal migrants leaving Auckland are mostly in the post childbearing (near retirement) age groups, while migrants to Auckland (both internal and international) tend to be younger.

By comparison many other regions, particularly in the North Island, are characterised by aging populations.

The above trends of older people leaving Auckland coupled with younger people leaving the regions for Auckland will likely result in Auckland remaining relatively youthful while the regions become demographically older. Councils (such as Kaipara) in regions which attract retirees and experience a net loss of youth will need to prepare for this change in population age structure or take steps to counter these trends e.g. by implementing measures to create jobs and retain youth.

Based on current trends it is apparent that New Zealand is on a divergent growth path and that this path risks the creation of two New Zealand's – Auckland and the rest. In general, Aucklanders will be younger, wealthier, better skilled, and more ethnically diverse than the rest of New Zealand. Within such differences are the seeds for a growing divide in values and expectations. Even now there is building pressure on local government across New Zealand to continue to afford to maintain infrastructure and to sustain local institutions. Local government is becoming increasingly indebted and is proving less and less able to maintain infrastructure. It appears likely that these problems will be exacerbated in towns and small cities which have rapidly aging populations living on Government transfers such as New Zealand Superannuation (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Kaipara is among the districts vulnerable to these trends. Kaipara will need to find ways of addressing these issues, including possibly collaborating with other councils to advocate for national policy solutions.

New Zealand's natural increase is projected to decrease from 164,000 during 2009/2013 to 80,000 during 2039/2043 (medium projection). At the regional level, Auckland and Canterbury are the only regions that will have more births in 2039/2043 than in 2009/2013. Fewer births will be the main reason for the decreasing number of children, caused by an assumed continuation of the trend towards smaller families and, in nearly all regions, fewer women in the childbearing age.

At present, a variation of around 40% can be seen in fertility rates between the least fertile region (in terms of producing children) which is Otago, with an estimated 10 year average total fertility rate of 59 (births per 1,000 women aged 15 to 39 years), and the most fertile regions of Northland and Gisborne with rates of 96 and 97 (births per 1000 women aged 15 to 39 years) respectively. Fertility rates in cities appear to be lower, with Auckland having a rate close to the national average and Wellington and Canterbury having rates around 10% lower (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

All 16 regions will experience more deaths in 2039/2043 than in 2009/2013 (despite continued increases in life expectancy) due to the increasing number of people reaching older ages (source: Statistics New Zealand).

The demographic dominance of the aging babyboomer generation and their entry into retirement are well-known. However, the aging of New Zealand is not uniform geographically. Auckland is younger and aging much slower than the rest of New Zealand, while provincial regions in both the North and South Islands are already much older and are aging more quickly than the national average. This process is as expected on account of migration; the loss of young people from smaller communities, towns and cities to Auckland and beyond, matched by the migration of older people from the larger cities to warmer regions where housing is less expensive (such as Kaipara). Such trends, of course, have been occurring for decades but what makes them more compelling now are the numbers. The numbers of young people are dwindling making their loss more damaging to local communities. The numbers of older people moving to the regions are expanding thus making a larger impact on the communities they are shifting to. Recent population projections by Statistics New Zealand suggest that by 2040 almost one-half of the population of some districts will be aged over 65 years. Such a dominance is unprecedented in New Zealand's history and points to some significant changes in how local communities will need to work and plan (source: The Salvation Army Social Policy and Parliamentary Unit May 2015). This will include the kinds of services and infrastructure local authorities provide and the way they undertake consultation.

The proportion of New Zealand's population aged 65 years and over is projected to increase from 14% in 2013 to 24% in 2043.

By 2023, five districts are expected to have more deaths than births: Thames-Coromandel, Hauraki, Horowhenua, Kapiti Coast, and Timaru. By 2033, they will be joined by another 12 areas: Kaipara, Wanganui, Masterton, Carterton, Tasman, Marlborough, Kaikoura, Waimate, Waitaki, Central Otago and Gore Districts and Nelson City. Deaths will therefore outnumber births in one-quarter of territorial authority areas by 2033 (medium projection). By 2043, 43 of the 67 territorial authorities could have natural decrease. All these areas have an older-than-average age structure, with relatively high proportions of the population aged 65 years and over (Source: Statistics New Zealand).

Nationally the median age (half the population is younger, and half older, than this age) is projected to increase from 37 years in 2013 to 43 years in 2043. At the subnational level in 2013, the median age ranged from 32 years in Hamilton City to 51 years in Thames-Coromandel District. By 2043, the median age is projected to

range from 37 years in Palmerston North City to 60 years in Thames-Coromandel District. A median age of 50 years or older is projected for 15 territorial authority areas in 2043, including Kaipara.

The oldest median ages are generally in areas experiencing low fertility and/or a net outflow of young adults (aged 15-29 years) and a net inflow of people aged 35-74 years. The youngest median ages are generally in areas experiencing high fertility and/or a net inflow of young adults (such as cities with major tertiary education facilities) (Source: Statistics New Zealand).

### **3.1.2 Population change in the Kaipara**

Population growth is an indicator of a district's attractiveness as a place to live and work. A strong local economy with plentiful job opportunities will help a district retain its population and attract new residents from other districts and abroad.

The Kaipara District had an estimated population of 20,500 people as at 30 June 2013. This represents an increase of 10.5% since 2006 (an average increase of 1.5% per annum). The medium series projections for the District indicate growth will continue but slow to about 0.6% per annum over the period 2013 to 2028 before becoming stable. Population decline is projected to begin from 2033 at a rate of 0.2% per annum (source: Statistics New Zealand).

When considering population and demographic trends for the District it needs to be remembered that the Kaipara District spans a large area of rural Northland and includes many individual towns and communities. Hence demographic and population trends vary greatly across the District. This gives the need to consider such trends at a community by community level. While some communities are expected to grow, possibly with the influx of retirees, other areas are experiencing population decline. In general it is anticipated that most growth will continue to occur in eastern areas of the District (those closest to Auckland), particularly Mangawhai and Kaiwaka. By contrast, western areas are projected to experience continuing population loss unless changes to underlying social or economic trends occur.

The following tables show Statistics New Zealand's 2013 base high, medium and low population projections for the various communities in Kaipara. These different projection series consider the effects of different rates of births, deaths and migration. At the time of release, Statistics New Zealand considers the medium series to be the most reliable.

Table 3.1: Population projections 20013/2043 (2013 Census base)

Year at 30 June Area	High Projection						
	2013	2018	2023	2028	2033	2038	2043
Estimated Population							
Kaipara District	20,500	21,900	22,800	23,600	24,100	24,500	24,700
Te Kopuru	510	520	530	550	560	580	590
Kaipara Coastal	3,190	3,220	3,260	3,280	3,250	3,190	3,080
Maungaru	1,820	1,880	1,940	2,000	2,050	2,070	2,080
Dargaville	4,610	4,700	4,750	4,770	4,750	4,670	4,560
Maungaturoto	810	820	830	830	820	820	810
Ruawai	470	460	470	470	490	500	510
Kaiwaka	640	690	740	780	820	850	880
Rehia-Oneriri	5,840	6,440	6,830	7,180	7,490	7,730	7,950
Mangawhai	1,430	1,840	2,040	2,240	2,430	2,590	2,750
Mangawhai Heads	1,170	1,410	1,560	1,700	1,820	1,920	2,020
Total Mangawhai	2,600	3,250	3,600	3,940	4,250	4,510	4,770

Year at 30 June Area	Medium Projection						
	2013	2018	2023	2028	2033	2038	2043
Estimated Population							
Kaipara District	20,500	21,500	21,900	22,200	22,200	22,000	21,500
Te Kopuru	510	510	500	500	500	490	490
Kaipara Coastal	3,190	3,170	3,140	3,090	3,000	2,860	2,680
Maungaru	1,820	1,850	1,870	1,880	1,880	1,860	1,810
Dargaville	4,610	4,600	4,530	4,430	4,270	4,060	3,800
Maungaturoto	810	800	790	770	740	720	690

Ruawai	470	450	440	430	430	420	410
Kaiwaka	640	680	710	740	760	780	790
Rehia-Oneriri	5,840	6,320	6,570	6,780	6,920	6,990	7,000
Mangawhai	1,430	1,770	1,900	2,020	2,120	2,190	2,250
Mangawhai Heads	1,170	1,360	1,450	1,510	1,560	1,590	1,610
Total Mangawhai	2,600	3,130	3,350	3,530	3,680	3,780	3,860

Year at 30 June Area	Low Projection						
	2013	2018	2023	2028	2033	2038	2043
Estimated Population							
Kaipara District	20,500	21,100	21,000	20,700	20,200	19,450	18,450
Te Kopuru	510	490	480	460	440	420	390
Kaipara Coastal	3,190	3,110	3,020	2,910	2,760	2,560	2,310
Maungaru	1,820	1,810	1,790	1,770	1,720	1,660	1,570
Dargaville	4,610	4,500	4,320	4,100	3,830	3,510	3,140
Maungaturoto	810	790	750	710	670	630	580
Ruawai	470	440	410	390	370	350	320
Kaiwaka	640	670	690	700	710	720	720
Rehia-Oneriri	5,840	6,200	6,320	6,390	6,390	6,310	6,170
Mangawhai	1,430	1,710	1,770	1,820	1,840	1,830	1,800
Mangawhai Heads	1,170	1,310	1,330	1,340	1,330	1,290	1,250
Total Mangawhai	2,600	3,020	3,100	3,160	3,170	3,120	3,050

Source: Statistics New Zealand.

It needs to be remembered that these projections are not exact forecasts and will be particularly affected by social and economic trends that may affect people's desire to live in an area or their ability to find employment there.

The population changes anticipated for Kaipara's communities have implications for the way Council budgets for infrastructure and services. In those communities experiencing growth Council will need to plan for sufficient new infrastructure to support development. By contrast, those communities with declining or stable populations may find it difficult to fund renewals and maintenance to existing infrastructure. Council will need to consider how it will address these challenges.

Two main trends appear to be effecting populations in the Kaipara District. Firstly is the "Auckland Effect" which results in population gain in eastern areas due to a spill-over effect from Auckland's growth, and population decline in western areas as youth and businesses relocate to the big city as part of a trend towards centralisation. Secondly "Population Aging" is attributing to short term population increase in many areas as retirees seek to find rest in the Kaipara, coupled with long term population decline as fewer people of reproductive age and more elderly will ultimately result in fewer births and more deaths. This latter trend is likely the reason for the onset of population decline beyond 2033 in many parts of Kaipara as this is when the District's large elderly population will begin reaching the end of their natural lives.

### ***The Auckland effect***

There is growing evidence to suggest that as Auckland is becoming increasingly crowded and as land prices and traffic congestion continue to rise, both residents and industry are beginning to locate in neighbouring regions. Given Auckland's projected growth, it is anticipated this trend will strengthen.

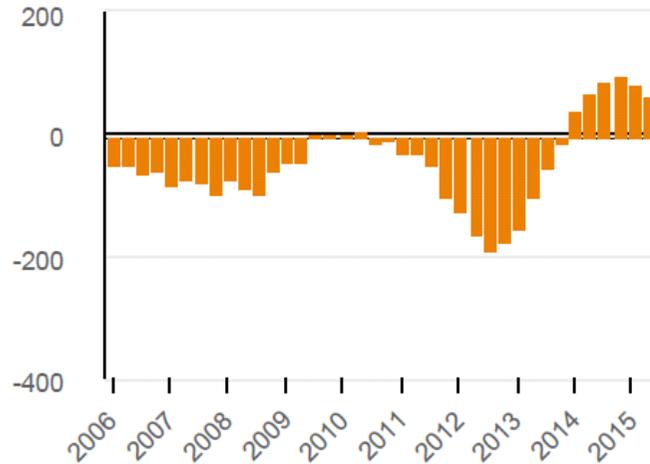
This trend is evidenced by population growth in both Whangarei and communities in the southeast (Auckland most part) of Kaipara over the period 2006/2013. By comparison, northern and western parts of the Kaipara (further from Auckland) have had more or less stable populations while the Far North District experienced population decline over this period.

Furthermore, it can be seen that all of Northland's population growth over the seven years 2006/2013 was due to natural increase, with a net migration outflow, however more recent trends show net migration into both Northland and the Kaipara District has turned positive since 2013. In the year to June 2015, Kaipara experienced a permanent and long term net migration gain of 66 persons. This compares with a gain of 70 persons in the year to March 2014, and a nine year average decrease of -39 persons per annum. This changing trend is plotted below (source: Infometrics).

Figure 3.3 : Net migration

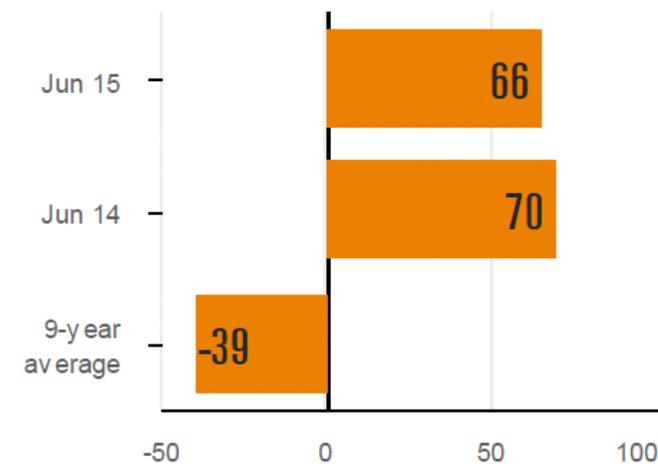
### Net migration

Annual number of persons, Kaipara District



### Net migration

Annual number of persons, Kaipara District



This spill-over effect may also be evidenced by property prices with Quotable Value noting the benefit to satellite towns on Auckland’s periphery. Property values in the Franklin District increased 8.5% during 2014 (compared with an average of 9.8% in Auckland), while those in Kaipara District rose 4% during 2014.

However it must be remembered that this Kaipara rate is a district average and includes both stable areas such as Te Kopuru and growth areas such as Mangawhai. The increase is therefore anticipated to be lower in areas such as Te Kopuru and higher in areas such as Mangawhai. It has been observed that Mangawhai residential and rural sales have doubled in the two years since 2012. Figures provided by the Real Estate Institute show that residential sales volumes have increased from 79 in the first four months of 2012 to 151 for the same four month period in 2014. The value of Mangawhai residential sales has increased 111% from \$25.3 million in the January to August 2012 period to \$53.5 million in the January to August 2014 period. Mangawhai rural sales have increased by a similar dollar value and percentage.

Interviews with builders and real estate agents suggest that the newcomers to Mangawhai generally fall into three categories; those who are retired or getting ready to retire and are selling out of Auckland, young couples who commute to work daily to Warkworth, Albany or the upper North Shore, and holiday-makers. However reversing a trend of several years ago, the majority of the newcomers now appear to be permanent residents.

Maungaturoto real estate agents report that the market in Maungaturoto has been steadily increasing. They say they are seeing people choosing to leave Auckland city as the prices south of Wellsford are becoming increasingly inflated.

A clear turn-around has been documented in Auckland's internal (within New Zealand) migration trends. Long-standing net gains between Auckland and other regions of New Zealand from internal migration were reversed during the late 1990s. Between 1986 and 1991 Auckland gained 5,260 people more than it lost to the rest of New Zealand. Between 1991 and 1996 this gain persisted, at 5,170. However, between 1996 and 2001 the Auckland population experienced a net loss of 2,350 people from internal migration.

This turn-around was cemented over the next five years. According to the 2006 Census, 59,300 people moved into Auckland region over 2001 and 2006, however 75,960 moved out, a net loss of 16,660.

At the same time that the residential appeal of Auckland to New Zealanders from elsewhere has declined, the drift north has become more generalised, encompassing localities throughout Northland, Bay of Plenty and Waikato regions. The areas recording the strongest gains are firstly Rodney, Franklin and Papakura, confirming decentralisation within Auckland Region; secondly Tauranga, Western Bay of Plenty and Thames-Coromandel indicating the appeal of coastal localities; and thirdly Hamilton, Whangarei, and Tauranga indicating the growing appeal of northern North Island secondary cities.

While the figures may be relatively small in terms of their consequences for Auckland, and are currently more than offset by gains from natural increase and international migration, they are highly significant for their impact on generally "small scale" destination regions and localities (Source: Phil McDermott Consultants May 2007).

However, while the above has identified the trend for Auckland's growth to spill over into those parts of the District which are close to Auckland, those parts of the District which are further from Auckland may be experiencing population decline as a result of Auckland's growth.

This is because large cities tend to attract business and residents away from smaller towns and rural areas. Thus, distant and more peripheral towns and communities often remain stagnant or even fade away. This certainly appears to be the case across New Zealand with the increasing dominance of Auckland, and the slow demise of most other regions, especially those in the North Island.

This appears to be because businesses are increasingly attracted to larger centres, such as Auckland, because of better public infrastructure and deeper labour markets. At the same time, residents are increasingly attracted to larger centres due to the better employment opportunities and to some extent social opportunities they offer. In the case where businesses and employers relocate to larger centres, those residents who were working for these businesses may also be forced to move to larger centres to find work. In addition, smaller communities tend to lose younger people continuously because of the attraction of the bright lights of the city and the promise of further education, better employment opportunities and higher wages.

Recognising the growing dominance of Auckland at the expense of many of New Zealand's regions, together with the preference of international immigrants to settle in Auckland, the Government has proposed a number of immigration reforms. These are intended to encourage international immigrants to settle in and establish businesses in the regions rather than in Auckland. These reforms include:

- Skilled migrant workers who take jobs in the regions will have their immigration bonus points bumped up from an extra 10 to an extra 30 points.
- New migrants settling in the regions and benefiting from these extra bonus points will have to stay in the regions for at least 12 months, rather than just three as is currently the case.
- Those who set up businesses outside Auckland will be given 40 extra points, doubled from the current 20.
- Employers will be able to contact Work and Income directly to check whether New Zealanders are available to fill a particular vacancy before they lodge a visa application with Immigration New Zealand. This is intended to prevent immigrants taking jobs from New Zealanders.
- A pathway to residence will be provided for a limited number of long term migrants on temporary work visas in the South Island.

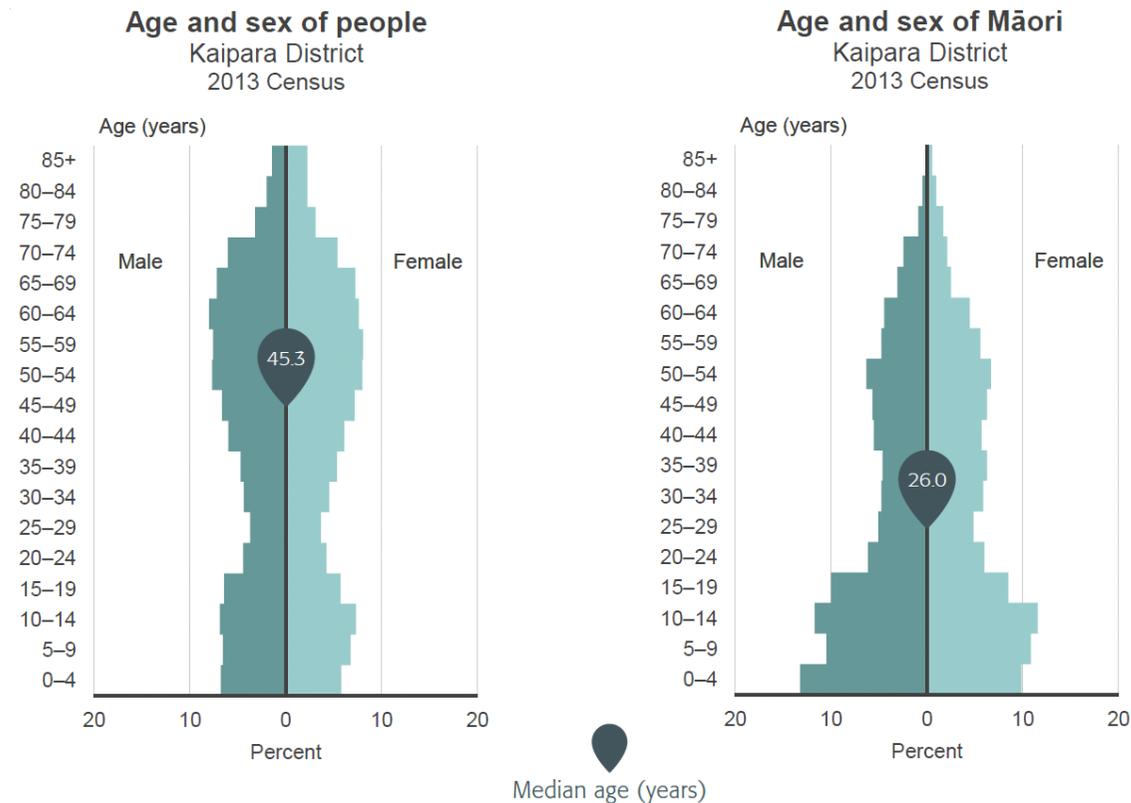
These incentives, together with Kaipara's proximity to Auckland, may result in more immigrants settling in Kaipara.

### ***Population aging***

As with most rural areas of the North Island, the slowing of growth in many Kaipara communities is at least partly due to less births and increasing deaths resulting from population aging (source: NIDEA 2014). Population aging across New Zealand and the developed world resulting in a gradual end to population growth and the beginning of population decline is the result of the large baby boomer cohort reaching retirement age, together with the social trend towards couples having fewer children.

The figure below shows an age pyramid for the Kaipara District's population and a second pyramid specifically for the District's Maori population.

Figure 3.4 : Age pyramid Kaipara District



These figures show that the District has disproportionately fewer people aged between 20 and 40 than it does children and people aged over 40. This is thought to be influenced by youth leaving the District in search of tertiary education, then gaining employment and settling outside the District. At the same time, the trend for people over 40 or nearing retirement to seek a better lifestyle in the country appears to be contributing to the abundance of people in the District aged over 40. Over all the median age for the District was 45.3 years.

The District's Maori population is comparatively youthful with a median age of just 26. The trend towards bigger families among Maori contributes to the large proportion of children in the Maori population and influences the proportion of children in the District's population as a whole. That the District's Maori population had fewer older and

elderly persons than the District as a whole may be related to Maori having lower life expectancy than non-Maori (refer to section 3.4 for more on life expectancy) (source: Statistics New Zealand).

Statistics New Zealand predicts that by 2043 Kaipara will have the fourth highest percentage of the population aged over 65 out of New Zealand's districts. This will have implications for the District, socially, economically (consider fewer people of working age and the difference in disposable income between people in employment and those on a pension) and in terms of long term population change.

In general it is considered that the District's growing retired population will; oppose rate increases because of their fixed incomes (pensions), have more time to volunteer in community projects and participate in Council business, want to live in towns rather than rural areas due to easier access to services such as libraries and healthcare. The District's retired population are also likely to be in favour of works to improve mobility for pedestrians and mobility scooters and are likely to support Council advocating for better healthcare services in the District.

### 3.1.3 Ethnicity of Kaipara's population

The table below shows the ethnic make-up of Kaipara's population in the different communities as at 2013. Four of the Census Area Units (Te Kopuru, Ruawai, Dargaville and Kaiwaka) have a relatively large Maori population while the opposite is true for Mangawhai and Mangawhai Heads. Since 2006 the District's Maori population increased 7.6% while Kaipara's population as a whole increased by just 4.5%. That the District's Maori population is growing at a faster rate than the population in general suggests that the proportion of the District's population who identify as being Maori will increase over time (source: **Census 2013**).

**Table 3.2 : Ethnic make-up of Kaipara District**

Census Area Unit	European	Maori	Pacific	Other	Total
Te Kopuru	67.1%	40.6%	3.2%	3.9%	465
Kaipara Coastal	77.0%	22.9%	2.1%	4.2%	2,955
Maungaru	84.6%	17.2%	1.1%	2.7%	1,695
Dargaville	68.5%	29.8%	5.5%	4.3%	4,251
Maungaturoto	78.5%	21.9%	2.8%	2.0%	753
Ruawai	75.2%	33.8%	0.7%	2.8%	435
Kaiwaka	70.8%	33.9%	2.6%	5.2%	576
Rehia-Oneriri	83.2%	17.3%	2.0%	3.4%	5,418
Mangawhai	90.5%	9.5%	1.6%	4.1%	1,329
Mangawhai Heads	90.1%	9.7%	1.7%	3.0%	1,086
Total Mangawhai	90.3%	9.6%	1.6%	3.6%	2,415
Kaipara District	84.2%	23.1%	2.9%	3.7%	18,963

That Kaipara's Maori population is comparatively large and growing (both as a proportion of the population and in real terms) has implications for how Council may choose to consult and engage with its communities. Consultation with iwi will be important for Council especially in communities such as Te Kopuru, Ruawai, Dargaville and Kaiwaka. Council may also want to consider opportunities to better involve iwi in local government including giving consideration to Maori world views when making decisions.

At the national level, estimates based on the 2006 and 2013 Census confirm population growth across all ethnic populations since 2006. Even the broad European ethnic population has increased to 3.31 million despite its older age structure.

The June 2013 estimates put the national Maori ethnic population at 692,000, the broad Asian population at 541,000, and broad Pacific population at 344,000. An estimated 53,000 people identified with Middle Eastern, Latin American, or African ethnicities.

### **3.2 Dwelling growth**

Dwelling growth can be an indicator of where population changes are occurring. Unlike measuring the usually resident population, dwelling growth is also able to show trends in the non-resident/holiday population as well.

The 2013 Census shows that the total number of dwellings in the Kaipara District has increased by 21.8% since 2006. The number of occupied dwellings has increased 16.4% and the number of unoccupied dwellings has increased 39.2%. As with population growth, dwelling growth was not spread equally across the District with total dwellings in the Mangawhai area (including Mangawhai Heads and Mangawhai Village) growing 57% from 2006 to 2013 while Ruawai saw an increase of just 2.2%. The following table compares changes in the number of dwellings across the District.

**Table 3.3 : Dwelling in Kaipara District**

Area	Occupied dwellings			Unoccupied dwellings			Total dwellings		
	2006	2013	% change 06-13	2006	2013	% change 06-13	2006	2013	% change 06-13
504400 Te Kopuru	186	192	3.2%	24	27	12.5%	209	219	4.5%
504501 Kaipara Coastal	1,133	1,224	7.4%	407	483	15.8%	1,540	1,707	10.8%
504502 Maungaru	638	666	4.2%	69	72	4.3%	707	738	4.4%
504600 Dargaville	1,747	1,818	3.9%	129	174	26.1%	1,876	1,992	6.2%
504700 Maungaturoto	288	285	-1%	22	39	44.4%	310	324	4.7%
504800 Ruawai	177	186	5.1%	32	27	-18.2%	208	213	2.2%
504900 Kaiwaka	186	213	12.7%	6	33	83.3%	191	246	28.5%
505010 Rehia-Oneriri	1,792	2,202	18.6%	542	786	31%	2,335	2,988	28.0%
505021 Mangawhai	302	582	48.1%	105	315	66.7%	407	897	120.4%
505022 Mangawhai Heads	372	570	34.8%	772	975	20.8%	1,144	1,545	35.1%
Mangawhai Area (505021 + 505022)	674	1,152	71.0%	877	1,290	47.1%	1,551	2,442	57.5%
<b>Total Kaipara District</b>	<b>6,821</b>	<b>7,938</b>	<b>16.4%</b>	<b>2,106</b>	<b>2,931</b>	<b>39.2%</b>	<b>8,927</b>	<b>10,869</b>	<b>21.8%</b>

Interestingly, the percentage increase in occupied dwellings in the Mangawhai Area (71%) is larger than the percentage increase in unoccupied dwellings for this area (47.1%), indicating that the percentage of permanent residences to holiday homes is increasing. This will have implications for Council's services and infrastructure as a permanent population has different, more constant demands than a holidaying population which fluctuates throughout the year.

The trends suggest Mangawhai is transitioning from a coastal holiday destination to a town and a service centre in its own right.

### 3.3 Deprivation

The New Zealand Deprivation index (released May 2014) is an updated version of the 2006 indexes of socio-economic deprivation. The index uses data from the 2013 Census to map the level of deprivation across New Zealand. In undertaking this analysis, each Census Meshblock is given a deprivation score based on the following variables:

- Access to the internet;
- Household income;
- Unemployment;

- Single parent families;
- No qualifications;
- Dwellings not owner-occupied;
- Access to car;
- Occupancy; and
- Means tested benefit status.

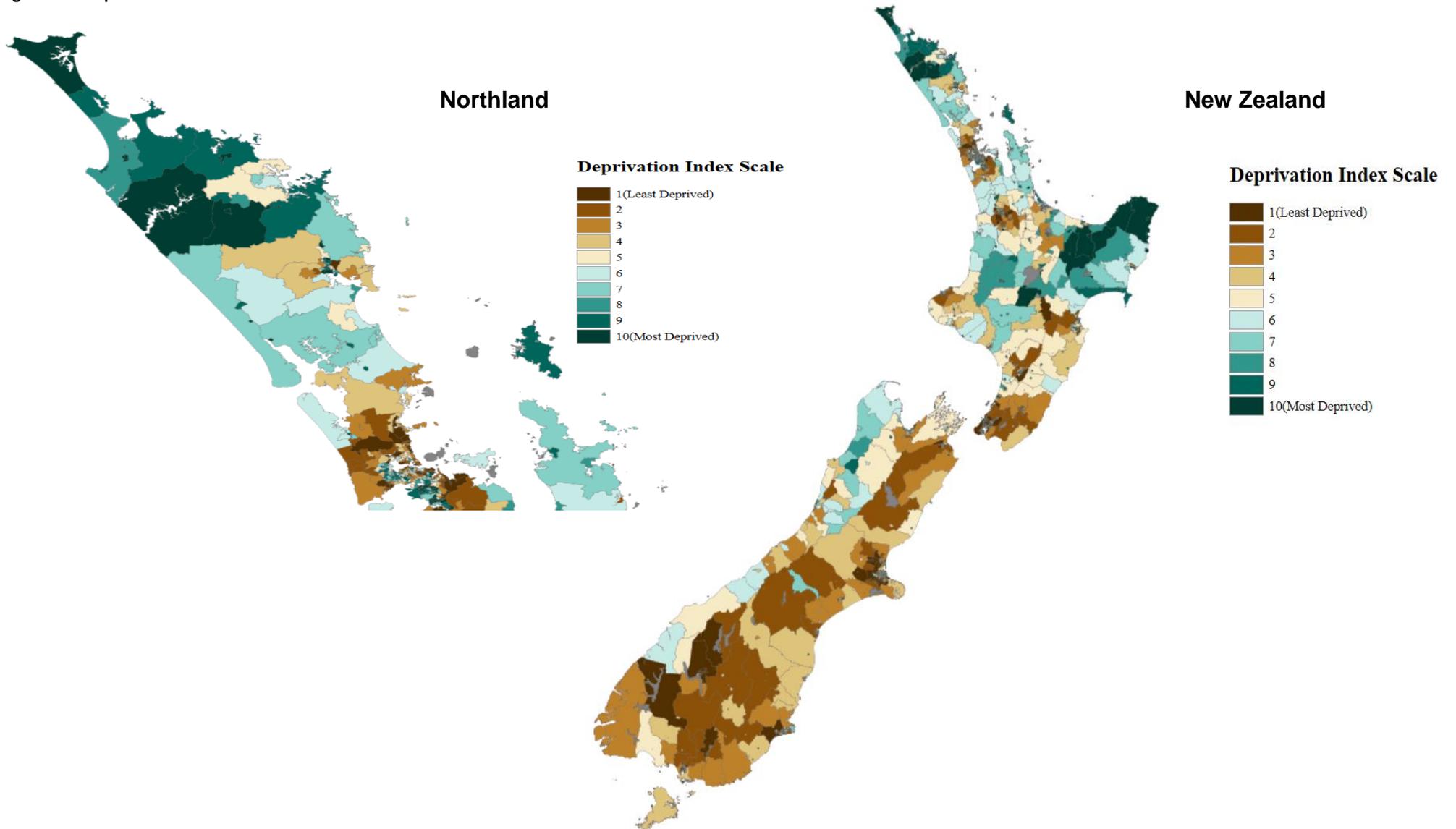
One noteworthy change in the index from 2006 was the inclusion of 'lack of access to the internet at home for those aged less than 65' variable, recognising the growing importance of the internet for various social activities.

These variables are used to describe the underlying concept of deprivation. All the variables are designed to reflect 'a lack of something'.

A value of 10 on the Deprivation Index indicates that the area is in the most deprived 10% of areas in New Zealand. The scale reflects a continuum from 'least deprivation' to 'most deprivation', rather than from 'affluence' to 'deprivation'.

The index shows that, in Kaipara, deprivation appears worse in urban areas than in rural. The Deprivation Index also shows that deprivation is worse in the Far North than in Whangarei with Kaipara featuring between these two extremes, as is shown in the figure below.

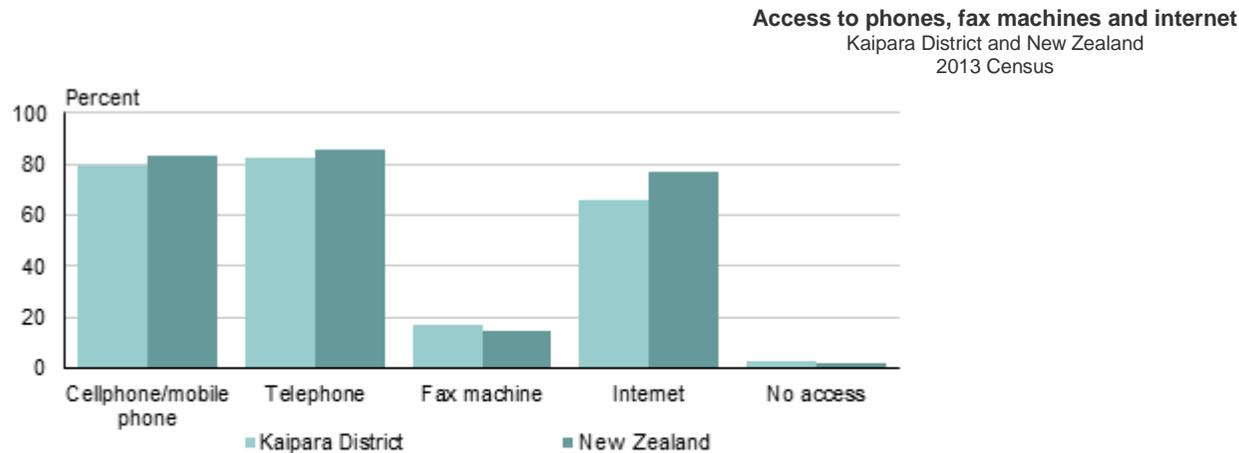
Figure 3.5 : Deprivation Index scale



One indication of deprivation can be the percentage of a region’s population who are reliant on a benefit for all or part of their income. About 46% of Northland’s working age population derive some of their income from benefits compared to 37% across New Zealand as a whole, while only around 47% of Northland’s working age population derive some of their personal income from wages or salaries compared to 57% across New Zealand as a whole (source: Tai Tokerau Northland Regional Growth Study). This has social and labour market implications.

Data from the 2013 Census shows that just 66% of households in Kaipara District have access to the internet, compared with 76.8% of households nationally. Similarly, only 79.6% of households were seen to have access to a mobile phone, compared with 83.7% nationally (source: Statistics New Zealand).

**Figure 3.6 : Access to internet and telephones**



Note: Households can access more than one type of telecommunication device. Therefore percentages do not add up to 100.  
Source: Statistics New Zealand

This comparative lack of internet access among the District’s population reduces access to information and can make it harder to study, up skill and operate a business. There may also be social implications due to the lack of access to social media which is increasingly becoming recognised as part of the fabric of modern society.

However, on the whole a lack of access to the internet is considered to be more an indicator of deprivation (families cannot afford it) rather than a driver, save where it occurs due to lack of infrastructure e.g. lack of ultrafast broadband coverage.

The lesser extent to which Kaipara’s people have access to the internet has implications for Council as it endeavours to move towards more online services. Council must be sure to provide alternatives to online services such as via telephone, post and service centres to remain accessible to those in the community who do not have internet.

### 3.4 Health

The following table presents the number of new claims made to the Accident Compensation Commission (ACC) per 10,000 head of population between 2010 and 2014 (June years). These figures reveal a level of disparity between the regions with some regions such as Canterbury and Otago being considerably safer places to live than regions such as Gisborne and Northland (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Table 3.4 : New claims to ACC per 10,000 head of population 2010 - 2014

Year ending June	2010	2011	2012	2013	2014	Average 2010-2014
Northland	205	110	114	96	91	123
Auckland	77	62	63	53	50	61
Waikato	106	83	96	61	64	82
Bay of Plenty	133	117	123	102	79	111
Gisborne	164.3	117.0	130.2	190.3	142.2	149
Hawkes Bay	79.6	63.5	78.2	49.5	43.7	63
Taranaki	90.6	101.9	86.9	63.6	48.7	78
Manawatu-Wanganui	74.4	65.4	75.0	61.2	48.0	65
Wellington	66.5	62.4	77.3	42.9	52.0	60
M-N-T-WC	140.9	123.4	172.1	97.5	70.2	121
Canterbury	65.6	50.9	54.7	44.5	33.7	50
Otago	84.7	69.9	52.1	47.8	33.8	58
Southland	111.2	96.7	66.0	69.6	34.7	76
New Zealand	90	73	78	59	53	71

An analysis of workplace accidents reveals that predominantly urban regions such as Auckland and Wellington have rates of work related injury claims that are around one-half to two-thirds of those arising in rural regions, where physical and outdoor work is more commonplace. Northland was second worst for workplace accidents, trailing the Gisborne - Hawkes Bay area. Northland, Waikato, Bay of Plenty and Gisborne are considerably more dangerous places to work than elsewhere in New Zealand. This higher incidence is perhaps due to a concentration of the forestry industry in these regions; a sector with a high injury rate (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Northland also had higher rates of premature deaths than New Zealand as a whole. For example, 47% of deaths in Northland occur before the age of 75, compared with 39% for New Zealand.

Not surprisingly, life expectancy is lower in the Northland region where a newborn girl can expect to live 81.2 years, and a newborn boy can expect to live 76.3 years, compared with New Zealand where a newborn girl can expect to live 82.2 years and a newborn boy can expect to live 78.0 years. However presentation of these figures for Northland's population as a whole fails to reveal the true picture of disparity in the region. Closer analysis reveals that non-Maori in Northland had the same mortality

rates as nationally. However, life expectancy for Northland Maori was just 70 years for girls and 64 years for boys. Furthermore, Northland Maori exhibit a higher rate of mortality than for Maori nationally.

The incidence of poverty related diseases in Northland are amongst the highest in New Zealand e.g. meningococcal disease, rheumatic fever, pneumonia, lung infection, ear infection, dental diseases and skin infections.

Many of Kaipara's people are therefore less healthy than those in other New Zealand regions. This is largely unnecessary and appears to be related to poverty. Council will need to consider this when advocating for better health care services in the District.

### ***Child death rates***

New Zealand's child well-being is one of the lowest in the Organisation for Economic Co-operation and Development (OECD) and Northland is even worse than New Zealand as a whole. Infant mortality is 8.1/1,000 births in Northland, compared to 5.4/1,000 births for the rest of New Zealand (source: Socio-Economic Profile of the Whangarei District).

Information made available by Safe Kids Aotearoa using data from 2006 to 2010 reveals that Northland had the highest injury related child death rate per head of population in the country (this study defined a child as 14 years and under). 41 Northland children died of injuries (note that these rates are for injuries not illnesses) in the five years from 2006 until 2010. 35 of these 41 children were from the poorest areas of Northland (source: Safe kids Aotearoa; Dargaville and District News 01 July 2015).

The study also shows that the number of children that died in the Northland District Health Board region between 2006/2010 was comparable to District Health Boards (DHBs) double or triple the size. Canterbury DHB also had 41 deaths over the same period despite covering more than three times the number of people. Just behind Northland in terms of rate of death from injury was Hawke's Bay DHB, with 38 deaths, and Lakes Region DHB with 25.

Nationally, more than half of injury related child deaths were the result of sudden unexpected death of an infant, known as SUDI. In Northland suffocation, which includes SUDI, was also the leading cause of death though it accounted for just 16 of the 41 deaths. Zero to four year olds were the most at risk in Northland, accounting for 72% of the deaths. 7% of the deaths in Northland were the result of assault and 5% were self-inflicted. Boys and Maori were both over represented in the statistics. 61% of the children who died as result of injury were boys and 68% (28 of the 41 fatalities) were Maori (Source: Safe kids Aotearoa; Dargaville and District News 01 July 2015).

Council will need to consider this when advocating for better health care and social services in the District.

*Note: There is normally a four year time lag with fatality data due to Coroner's inquest and legal procedures.*

## Smoking

The following table shows that Northland had a higher smoking rate than other comparable regions and the national average. 17% of Northlanders were regular smokers and a further 25% were former smokers (source: Census 2013). The reason for this is not known. It should be considered when comparing this data that statistics for Northland as a whole may not accurately reflect the situation for Kaipara District. This is because Kaipara's socio-economic conditions (to which smoking is strongly linked) can differ markedly from those in Whangarei and Far North Districts.

**Table 3.5 : Regional smoking rate**

Regional Council of Usual Residence	Regular Smoker			Ex-Smoker			Never Smoked Regularly			Not Elsewhere Included		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Northland Region	8%	9%	17%	13%	12%	25%	21%	25%	46%	6%	6%	12%
Auckland Region	6%	5%	12%	9%	8%	17%	27%	34%	61%	5%	5%	10%
Waikato Region	8%	8%	16%	11%	11%	22%	25%	29%	54%	5%	5%	9%
Taranaki Region	8%	8%	16%	11%	11%	23%	24%	28%	52%	5%	5%	9%
Manawatu-Wanganui Region	8%	8%	16%	11%	11%	22%	24%	28%	52%	4%	5%	9%
<b>Total New Zealand</b>	<b>7%</b>	<b>7%</b>	<b>14%</b>	<b>11%</b>	<b>10%</b>	<b>21%</b>	<b>26%</b>	<b>31%</b>	<b>56%</b>	<b>5%</b>	<b>5%</b>	<b>9%</b>

## 3.5 Education

An analysis of education data reveals there is considerable disparity in achievement between New Zealand's regions. Overall, it appears the more remote regions of Northland, Gisborne and the West Coast consistently see a relatively small share (below 36%) of their school leavers exit with University Entrance. Only just ahead of these regions is Waikato, with an average achievement rate of 38%. At the other end of the spectrum Auckland, Wellington, Nelson and Otago; all had achievement rates of over 50%.

Northland, Waikato and Gisborne all had relatively low rates of participation in early childhood education, low levels of achievement against national standards and poor university entrance pass rates (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The proportion of students who are achieving at or above the National Standards across the three core curriculum areas of reading, writing and mathematics is lower in Northland than in any other region. Though education and skills levels in Northland are rising, they nonetheless remain below national levels, notably amongst Maori learners. Northland sits below the national average on all key indicators of educational attainment, including the proportions of the population with higher qualifications (12.4% compared to the national average of 20%) and with no qualifications (27.4% compared to 20.4% nationally).

An analysis of the number of people aged 15 years and over who have a formal qualification reveals startling under performance in the Kaipara District. Just 68.7% of people aged 15 years and over in the Kaipara District have a formal qualification, compared with 72.6% of people in Northland and 79.1% of people in New Zealand. Furthermore, just 58.1% of Kaipara's Maori aged 15 years and over have a formal qualification, compared with 61.15% for Maori in Northland and 66.7% for Maori in New Zealand.

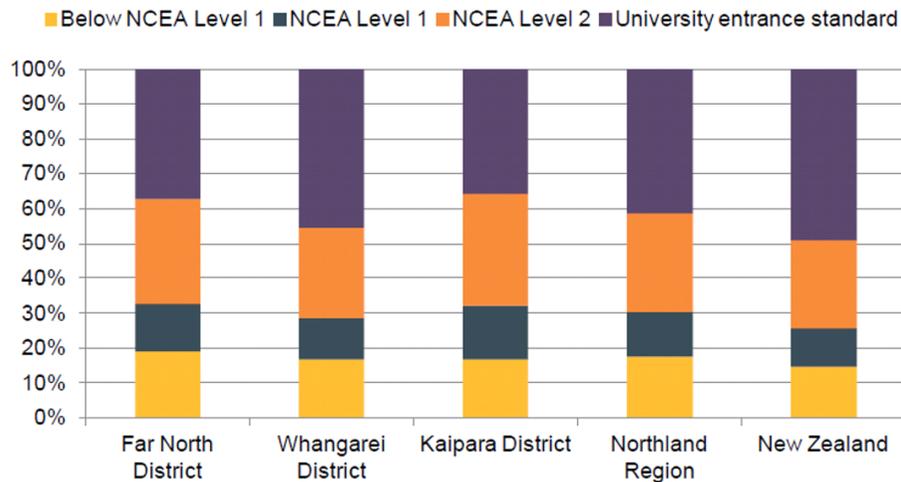
Comparable formal qualification figures for Kaipara's neighbours' populations were 70.7% of people in the Far North, 59.4% of the Far North's Maori, 74.9% of people in Whangarei District and 63.8% of Whangarei's Maori.

There was also considerable disparity between centres within Kaipara District. Just 61.9% of people aged 15 years and over in Dargaville have a formal qualification, compared with 68.7% in Maungaturoto, 77.6% in Mangawhai and 75.4% in Mangawhai Heads.

The following figure shows that Kaipara and the Far North have lower proportions of school leavers with university entrance than Whangarei.

Figure 3.7 : Achievement levels among school leavers 2013

**Achievement levels among all school leavers, 2013  
(percentage of all students)**

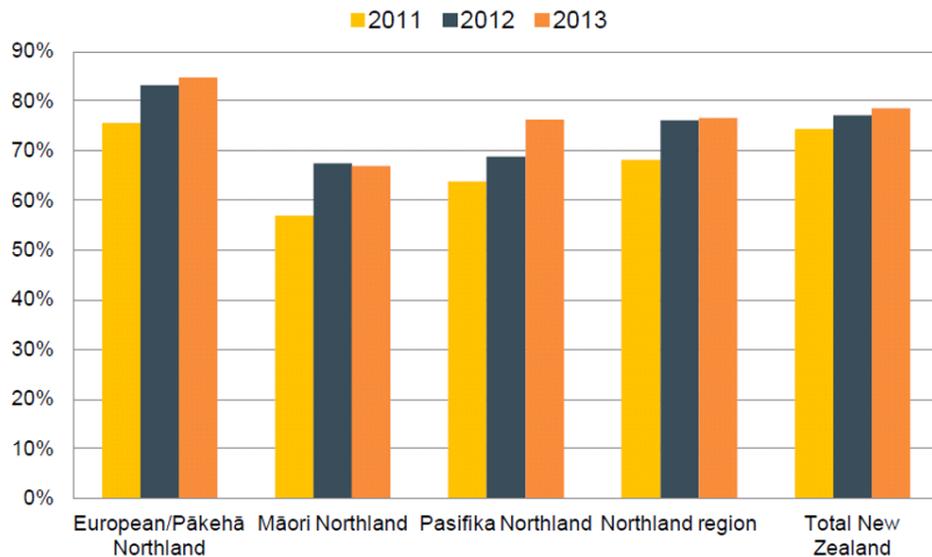


Source: Education Counts

The proportion of 18 year olds in Northland with a minimum of at least NCEA Level 2 was close to but still below the national average at 76.7% compared to 78.6% nationally in 2013, as is shown by the figure below. However Northland's lower regional average appears to be the effect of the high proportion of Maori in Northland's population. A third of Northland's Maori 18 year olds did not hold at least an NCEA Level 2 qualification or equivalent in 2013. By comparison Northland's European/Pākehā students were achieving above the national average, as is shown below (source: Tai Tokerau Northland Regional Growth Study).

Figure 3.8 : Percentage of 18 year olds with NCEA level 2 or equivalent

**Percentage of 18-year-olds with a minimum of NCEA level 2 or equivalent, by Northland ethnic group (2011 - 2013)**



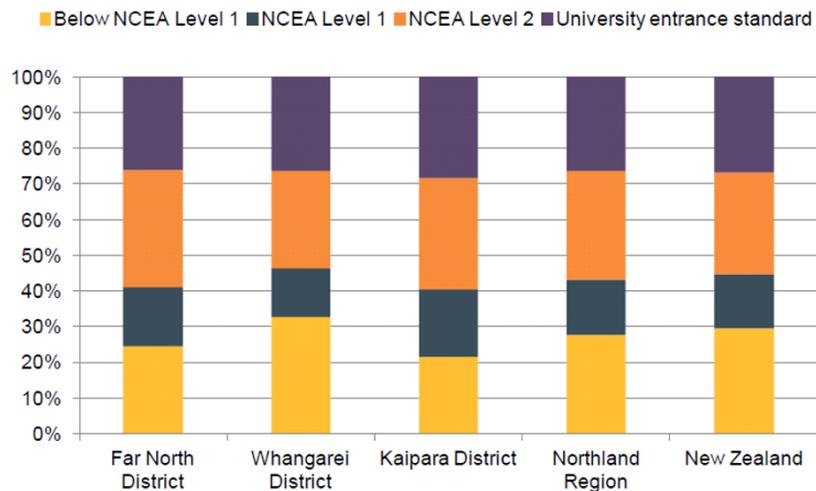
Source: Education Counts

Although overall Maori educational achievement levels are improving faster than that of other students, a significant proportion of rangātahi are continuing to leave school with no qualifications or NCEA level 1.

The lower levels of educational attainment for Maori relative to non-Maori is more of a constraint on the productive potential of Northland than many other regions, given Maori comprise a larger and growing proportion of the region's population and are likely to comprise a larger share of Northland's future workforce (source: Tai Tokerau Northland Regional Growth Study).

Figure 3.9 : Achievement levels of Maori school leavers 2013

**Achievement levels of Māori school leavers, 2013  
(percentage of all Māori school leavers)**



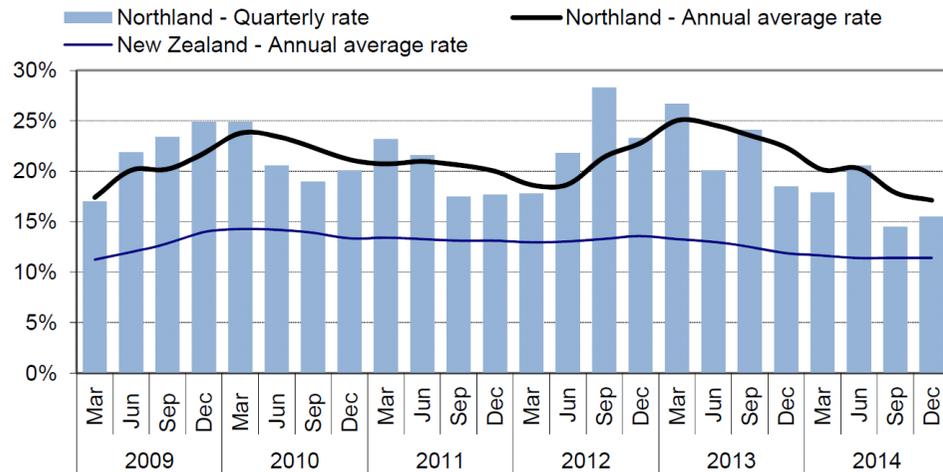
Source: Education Counts

Engagement in early childhood education has been found to provide a strong foundation for later learning, and positively impact literacy, numeracy and problem-solving skills. The proportion of Northland's children who participate in early childhood education has increased between 2010 and 2013 by 3.4%, but at 92.1% still remains below the New Zealand average of 95.6%. However, participation has been increasing at the fastest rate across New Zealand i.e. the region is catching up. Following a national trend, the rate of participation for Maori children (87.5%) is below the rate for European/Pākehā children (96.9%). However as the participation rate for Maori increased at a faster rate (4.5%) than Northland overall (3.4%) over 2010 to 2013, Northland Maori might also be seen to be catching up (source: Tai Tokerau Northland Regional Growth Study).

Overall, there appears to be a clear link between poor educational outcomes in early childhood and poor educational outcomes later on. Furthermore, there appears to be some relationship between educational outcomes at school and employment post-school, with higher levels of secondary qualifications linked to improved labour force status and incomes. However, the relationship between poor employment outcomes and youth offending does not appear strong (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The annual average youth (aged 15-24) Not in Employment Education or Training (NEET) rate in Northland was 17.1% in the year ended December 2014. This is the lowest annual average youth NEET rate recorded in Northland since the series began in 2004. As shown below Northland's NEET rate has been steadily declining since the record high of 25% was recorded in March 2013.

**Figure 3.10 : Not in Employment Education or Training (NEET) rate**



Source: Statistics New Zealand

While Northland's NEET rate remains well above the average New Zealand rate, Northland's annual average NEET rate is no longer the highest among the 12 regions for which it is calculated. Manawatu-Wanganui and Gisborne/Hawkes' Bay now have higher NEET rates of 17.5%. Otago has the lowest NEET rate of 6.7% (source: Northland Economic Quarterly)

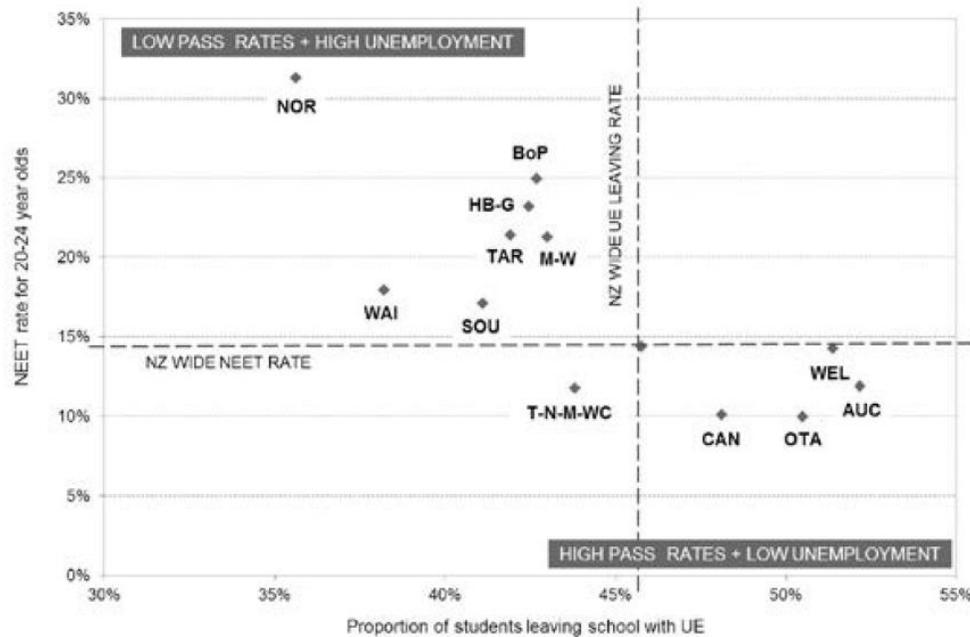
Evidence has shown that NEET youth are more likely to come from households where there are NEET adults. NEET spells of six months or more are associated with poor labour market outcomes and higher social costs over the long term.

These statistics reflect fundamental issues of a lack of engagement of youth, particularly Māori youth, with education, training and employment opportunities in the region (source: Tai Tokerau Northland Regional Growth Study).

The following figure draws a comparison between University Entrance (UE) pass rates and the percentage of youth not in employment, education or training (NEET). This figure clearly shows the extent to which Northland is lagging behind New Zealand's other regions in this area.

Figure 3.11 : Comparison between University Entrance pass rates and NEET

**A comparison of UE pass rates and NEET rates for 20-24 year olds<sup>32</sup>**



The percentage of youth leaving school without completing their final year is also high in Northland. In 2013, 25.6% of Northland students left education before their seventeenth birthday, compared to 17.3% nationally.

There also appears to be disparity between regions in terms of student behaviour. Some regions such as Northland and Manawatu-Wanganui have rates of stand-downs, suspensions, exclusions and expulsions that are 1.5 to 3 times the national average. Other regions such as Gisborne, Wellington, Tasman and West Coast have rates that are 0.5 to 0.7 times this national average (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

### 3.6 Crime

A total of 15,657 criminal offences were recorded in Northland for the 2013/2014 year, representing a 2.3% increase on the 2012/2013 year. Northland's overall crime rate for the 2013/2014 year was 1,001.2 recorded offences per 10,000 people making Northland the second worst region for criminal activity behind the Eastern Police District (roughly comprised of the Hawkes Bay and Gisborne regions) (1,136.7 offences per 10,000 people). The Whangarei Police Area, which is roughly comprised of the Kaipara and Whangarei Districts, had a 2013/2014 crime rate of 959.1 offences per 10,000 people while the Far North Police Area had a 2013/2014 crime rate of 1,071.9 offences per 10,000 people. These rates compare with the national 2013-2014 crime rate of 787.5 offences per 10,000 people.

Looking at types of offences; Northland, together with the Tasman Police District, recorded the least homicides (just two each) for 2013/2014. For Northland this was a reduction from seven in the 2012/2013 year.

However, Northland's rate of acts intended to cause injury was the second highest in the country at 115.3 offences per 10,000 people, trailing the Eastern Police District (168.1 offences per 10,000 people) but only slightly higher than the rate for Counties Manukau (113.4 per 10,000 people) which placed third. Though Northland's rate has reduced by 23.6% since the previous year, it is still well above the national average rate of 87.8 offences per 10,000 people.

Following a 23.8% decrease on the previous year, Northland's 2013/2014 rate of sexual assault and related offences (11.6 offences per 10,000 people) is now only the second highest in the country trailing the Eastern Police District (14.5 offences per 10,000 people) and only slightly ahead of the Waikato Police District (11.4 offences per 10,000 people). These figures compare with a national average rate of just 8.5 offences per 10,000 people.

The number of dangerous or negligent acts endangering persons in Northland has almost halved from 46 in the 2012/2013 year to 25 in the 2013/2014 year. This placed the rate of dangerous or negligent acts endangering persons in Northland (1.6 offences per 10,000 people) below the national average (1.8 offences per 10,000 people).

Northland's rate of abduction, harassment and other related offences against a person (44.5 per 10,000 people) has reduced 8.2% since the 2012/2013 year but is still the second highest, trailing the Eastern Police District (51.1 offences per 10,000 people) and still well above the national average rate of 32 offences per 10,000 people.

Northland's rate of robbery, extortion and related offences was close to the national average (5.1 offences per 10,000 people compared to 4.9 offences per 10,000 people). However Northland had the highest rates (196.5 offences per 10,000 people) for unlawful entry with intent/burglary and breaking and entering. This followed a 26.2% increase on the 2012/2013 year, placing Northland well above the national average of 115.7 offences per 10,000 people. Northland also had the second worst rate

(309.8 offences per 10,000 people) for theft and related offences, despite a 30.5% reduction on the 2012/2013 year. This compared with a national average rate of 272.2 offences per 10,000 people. Over all, Gisborne, Hawkes Bay and Northland were found to be the region's most prone to burglaries, while the safest regions in terms of burglaries were Otago, followed by Taranaki (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Despite a decrease of 11.8% from the 2012/2013 year, Northland still had the worst rate of illicit drug offences in the country at 57.7 offences per 10,000 people. This compares with a national average rate of 35 offences per 10,000 people. Analysis by the Salvation Army Social Policy and Parliamentary Unit reveals that remote regions such as Gisborne, Northland and West Coast have high rates of drug related crime. Perhaps this could be expected given that this is where cannabis is most likely to be cultivated. At the other end of the scale, urban areas tend to have lower overall rates of drug offences with rates at around half of what they are in the remoter regions.

Northland still has the worst rate (20.5 offences per 10,000 people) of prohibited and regulated weapons and explosives offences in the country, placing it slightly ahead of the Eastern Police District (20.4 offences per 10,000 people). This compares with a national average rate of 12.4 offences per 10,000 people and follows a 17.3% decrease on the 2012-2013 year.

The Salvation Army Social Policy and Parliamentary Unit has undertaken statistical analysis to determine if there is a link between rates of youth unemployment and youth offending. This analysis found that Auckland, Canterbury and Otago both experience comparatively low rates of youth unemployment and youth offending, while Northland, Hawkes Bay-Gisborne and Southland experience the exact opposite; high rates of youth unemployment alongside high rates of youth offending. However, on the whole, it was found that high rates of youth unemployment do not consistently lead to high rates of youth offending, as is testified to by regions such as Nelson-Tasman-Marlborough-West Coast and to some extent Waikato. Hence Northland's higher rates of youth offending cannot be explained by the comparatively high rate of youth unemployment (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

From the above it is apparent that many of Kaipara's people are less educated than those in other New Zealand regions. This will need to be addressed if Kaipara is to have an economically and socially healthy future. Council will need to consider this when advocating for better support for education in the District.

### **3.7 Notifications (reports of concern) to Child, Youth and Family**

Northland had an average rate of 315 Child, Youth and Family (CYF) substantiations per 10,000 children for the period 2010/2014. This was the highest rate of CYF substantiations of any region in New Zealand for this period. The Bay of Plenty was a close seconded with a rate of 310 while the Waikato at third place was considerably below this with a rate of 239. The average rate for New Zealand as a whole was 200 substantiations per 10,000 children (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

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The data below relates to notifications made to CYF for each financial year (from 01 July 2007). The data includes family violence referrals from Police as well as from education providers, members of the public and other sources (note that Northland is referred to as the Te Tai Tokerau Operational Area).

Table 3.6 : Regional notification to Child, Youth and Family

**Notifications at a regional level** (Note that 'Tai Tokerau' is Northland)

Region	Operational Area	F2009	F2010	F2011	F2012	F2013	YTD 01Jul2013 - 31Mar2014*
Auckland Region	Te Tai Tokerau	4,884	6,059	6,299	7,116	8,222	6,203
Auckland Region	Waitemata	14,530	19,765	21,879	22,147	20,288	13,852
Auckland Region	Counties / Manukau	23,276	23,235	26,798	26,016	25,049	16,816
Midlands Region	Waikato	7,656	8,845	15,743	17,248	15,464	12,440
Midlands Region	Bay Of Plenty	10,016	12,376	15,936	15,494	15,546	11,843
Central Region	Western	5,148	6,980	8,301	8,426	8,078	6,120
Central Region	Eastern	8,608	9,139	11,671	10,713	11,315	9,511
Central Region	Lower North Island	6,371	8,562	8,978	9,658	8,319	6,139
Central Region	Greater Wellington	9,372	10,259	12,260	12,523	10,547	7,818
Southern Region	Upper South	3,579	3,582	5,031	5,578	5,611	4,288
Southern Region	Canterbury	10,340	10,601	11,906	11,536	13,210	10,336
Southern Region	Otago / Southland	5,606	4,792	5,496	6,177	6,381	4,465
Contact Centre / Adoptions		562	726	811	775	629	345
<b>National</b>		<b>110,797</b>	<b>124,921</b>	<b>151,109</b>	<b>153,407</b>	<b>148,659</b>	<b>110,176</b>

\* From July 2010 the family violence referrals requiring no CYF action have been recorded separately.

Table 3.7 : Regional notifications at site level

**Notifications at site level**

Operational Area	Sub Site	F2009	F2010	F2011	F2012	F2013	YTD 01Jul2013 - 31Mar2014*
Te Tai Tokerau	Kaitaia	851	1,080	1,216	1,619	1,798	1,237
Te Tai Tokerau	Kaikohe	1,438	1,621	1,754	1,944	2,145	1,442
Te Tai Tokerau	Whangarei	2,146	2,798	2,658	2,782	3,471	2,879
Te Tai Tokerau	Dargaville	449	560	671	771	808	645

Table 3.8 : Notifications that required further action – site level

**Notifications that required further action - site level**

Operational Area	Sub Site	F2009	F2010	F2011	F2012	F2013	YTD 01Jul2013 - 31Mar2014
Te Tai Tokerau	Kaitaia	443	400	553	692	781	485
Te Tai Tokerau	Kaikohe	769	664	630	745	858	538
Te Tai Tokerau	Whangarei	1,322	1,472	1,628	1,926	2,176	1,215
Te Tai Tokerau	Dargaville	398	369	379	469	472	369

These figures show that in the year to March 2014 there were 645 notifications made to CYF's Dargaville site. Of these notifications, over half (369) required further action by CYF.

These figures suggest social problems within many Northland communities. Council will need to consider this when advocating for better social support services in the District.

## 4 Economic

### 4.1 National economy

Infometrics' provisional estimate of GDP showed that economic growth over the year to June 2015 came in at 3.1%. Residential construction activity is still rising, and surging net migration and service sector demand are also pushing up economic activity, but there has been a clear cooling of demand across parts of the primary sector and for business investment. Provincial centres are likely to struggle over the coming quarters until dairy prices recover, while cities' larger exposures to the service sector will mean that any slowdown in urban economic activity happens with more of a lag. The silver lining is that the weaker New Zealand dollar is good news for exporters of goods and services which are still commanding healthy world prices such as wine, fruit, beef, lamb, and tourism.

However, with dairy prices having fallen below their 2009 trough, business confidence, particularly in provincial areas, is falling. At best, New Zealand faces a two-speed economy over the next 18-24 months, with much of the country risking a recession while Auckland rumbles on and is only modestly affected. However, there is a mounting threat that, even with all the positives Auckland has going for it, Auckland will be dragged down by the dairy drop-off as well. Given these concerns, Infometrics expects the Reserve Bank to cut the official cash rate further in the coming months back to 2.5% by October (source: Infometrics Quarterly Economic Monitor June 2015).

The value of retail spending in the June 2015 quarter was up 2.3% from a year earlier, according to data from Marketview. Statistics New Zealand data shows that total retail sales volumes were up 5.9% over the same period. Although sales growth appears robust at first glance, growth has cooled markedly since the March 2015 quarter. With the outlook for economic growth deteriorating, a lower dollar pushing up prices, and consumer confidences sinking lower, Infometrics expects overall retail sales volume growth to become more subdued over the rest of 2015. But even so, rising levels of international visitors to New Zealand will still ensure spending on accommodation and food and beverage services is healthier. Nationwide house price inflation lifted from 9% to 9.3% per annum in June 2015. Annual house price inflation in the Auckland region is at an 11-year high of 17% per annum, and there are clear signs that the demand in Auckland is continuing to spread out into Waikato and Bay of Plenty. Hauraki, the Waikato district, Western Bay of Plenty, and Tauranga are four areas where house price growth is strengthening.

However, if Auckland is excluded from the numbers, estimates show house price inflation around the rest of the country eased slightly from 4.5% to 4.4% per annum in June 2015. Prices are weakening around the East Cape area of the North Island, Nelson/Marlborough, much of Southland, and parts of Canterbury. Trends in Canterbury reflect the improving housing supply situation in Christchurch, with slowing price growth in the city rippling through into surrounding areas.

The national unemployment rate inched up to 5.9% in June 2015 (seasonally adjusted). In the June 2015 year, Auckland accounted for 44% of the lift in employment nationally. In Canterbury, employment growth eased to 4.3% per annum (from 6.1% growth in December last year). Both these results are indicative of economic growth

drivers transitioning away from dairy and the Christchurch rebuild to an Auckland-centric economy. Although the level of employment will remain elevated, waning confidence and a less optimistic outlook for business activity indicate that growth in employment will ease over the year ahead.

Job growth in the Auckland region over the decade 2004 to 2014 has made up nearly 65% of all the job growth nationally. This job growth is matched by similar rates of growth in both the working age population and the labour force. This growth has perhaps subdued income growth in a labour market, which remains quite competitive and continues to have higher than average rates of joblessness (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Within economic theory, and in particular in urban economic theory, the economics of agglomeration (the trend for cities to grow bigger because their greater scale attracts further investment) is understood and well canvassed. Agglomeration most often works to the advantage of large cities in that big cities attract more business and so become even bigger. Thus, distant and more peripheral towns and communities often remain stagnant or even fade away. This appears to be the case across New Zealand with the increasing dominance of Auckland, and the slow demise of most other regions, especially those in the North Island (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The Government plans to address this growing disparity through its Business Growth Agenda which contains a number of key themes which may assist regional New Zealand. The first of these is opening new export markets, and continuing to negotiate Free Trade Agreements to increase market access for exporters. Secondly, the Government is working to build more infrastructure, with improved transport linkages between main centres and regional economies through the Roads of National Significance (RONS) programme. The Government is also looking to spend close to \$2 billion linking towns and cities to Ultra-Fast Broadband and reducing mobile 'black spots'. Lastly the Government is taking a real focus on skills to help people embrace new technologies, new opportunities, and let their lives be positively shaped by the pace the world is advancing, instead of being left behind (source: Hon Paula Bennett: Speech to LGNZ Annual Conference).

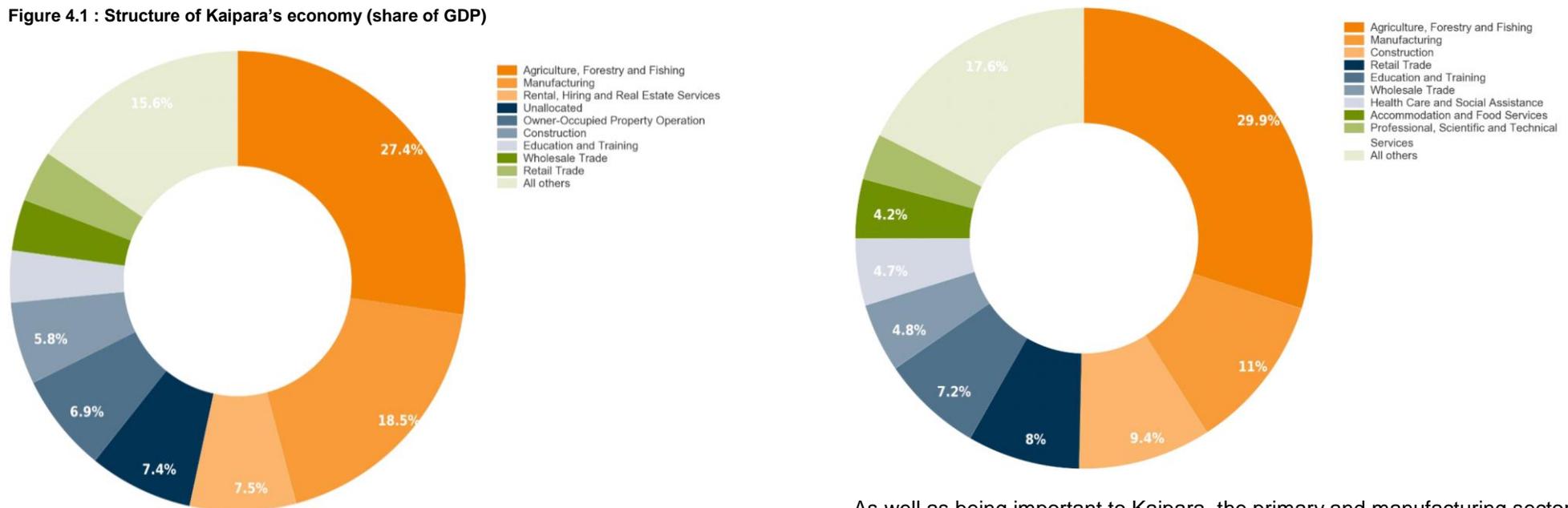
However, whether these and other central government initiatives will be sufficient to address the continuing overcrowding of Auckland and continuing decline of the regions (particularly those in the North Island) remains to be seen. If this trend is allowed to persist it will have considerable consequences for Kaipara as the District borders Auckland. Overflow from Auckland may see industry and business establishing in eastern Kaipara, particularly around Maungaturoto and Kaiwaka which have links to the state highway network. At the same time, the drivers of Agglomeration may result in the continued decline of northern and western parts of the District as industry and business relocate to larger centres. This is of concern for Kaipara's strong manufacturing sector.

## 4.2 Structure of local economy

From a review of the literature it is evident that Kaipara’s economy is based firmly on its primary industries, particularly dairy and forestry, supported by a strong manufacturing sector. It is evident that in good growing seasons the District as a whole is able to prosper with GDP growth far exceeding that in other districts. Conversely, drought years and years with lower dairy pay-outs have the opposite effect.

In 2014, the primary sector (agriculture, forestry and fishing) accounted for 27.4% of the Kaipara’s GDP while manufacturing contributed a further 18.5%. The structure of Kaipara’s economy is further described by the following figures.

**Figure 4.1 : Structure of Kaipara’s economy (share of GDP)**



The figure opposite shows the extent to which the different industries in the Kaipara contributed to the total number of filled jobs. This figure shows that the primary and manufacturing sectors were also the greatest contributors to employment at 29.9% and 11% respectively.

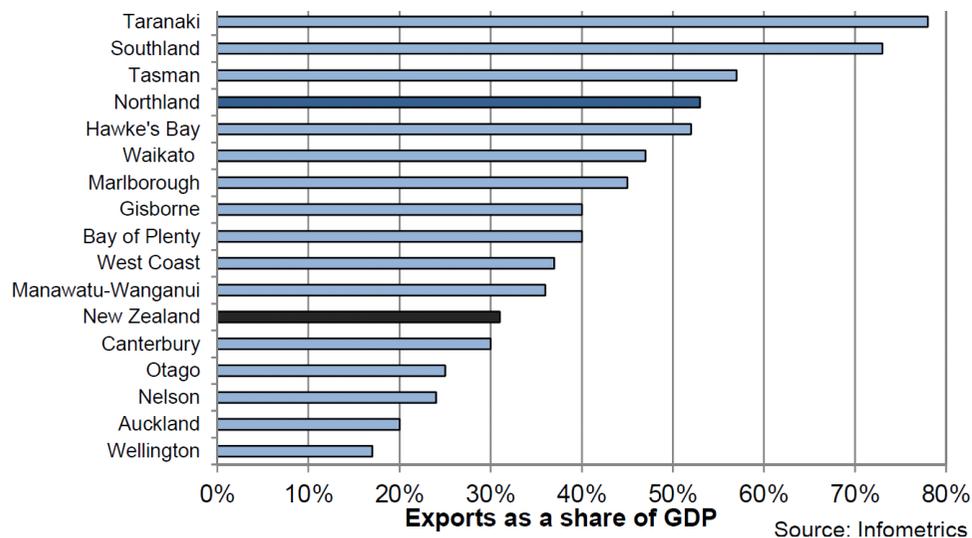
**Figure 4.2 : Industries in Kaipara contributed to total number of filled jobs**

As well as being important to Kaipara, the primary and manufacturing sectors are also the two largest contributors to the Northland economy, with agriculture, forestry and fishing contributing 10.4% of the region’s GDP and manufacturing contributing a further 24.1%. The greater contribution of manufacturing to the Northland economy is due to the presence of the Marsden Point oil refinery within the region.

Not surprisingly, considering its reliance on the primary and manufacturing sectors, Kaipara’s economy is extremely export orientated. The export orientation of a district or region can be measured by an estimate of the value of exports to GDP. In 2014 the value of Kaipara’s exports comprised 87% of its GDP. By comparison, in 2014 Northland’s export orientation was 53%, Far North’s was 37% and Whangarei’s was 56%, all considerably lower than that of Kaipara but still higher than the national level of 31%.

As the following graph shows, only three regions, Taranaki, Southland and Tasman, had a higher level of export orientation than Northland. The importance of exports to the Northland economy is significantly larger than in Auckland and Wellington where exports represent 20% or less of GDP (source: Northland Economic Quarterly).

**Figure 4.3 : Export orientation**



Despite being very export orientated, Kaipara’s economy is somewhat more diverse than the national economy, though less diverse than the regional economy. Kaipara had a Herfindahl-Hirschman Index (a diversity rating where a score of 0 = total diversity) of 41. This compares with a score of 24 for Northland and 56 for New Zealand as a whole.

With a score of 24, the Northland economy is neither highly diversified nor highly concentrated in particular industries relative to New Zealand as a whole. There are however some spatial differences in the concentration of industries across the region, with the Far North and Kaipara having comparative advantages in primary industries and Whangarei having advantages in some manufacturing industries and support services.

The Far North and Kaipara have concentrations in forestry and wood products, livestock farming and horticulture. The Far North also has revealed advantages in fishing, while Kaipara also has advantages in dairy farming. Petroleum, non-metallic mineral manufacturing, wood product manufacturing, dairy product manufacturing and transport equipment manufacturing are concentrated in Whangarei, along with infrastructure services and health care (source: Tai Tokerau Northland Regional Growth Study).

Kaipara's dependence on the primary and manufacturing sectors, coupled with its strong export orientation, will have implications for the way Council plans and delivers infrastructure and services. In particular, expenditure on roads should give consideration to the importance of heavy commercial vehicles to Kaipara's economy. Similarly, the needs of primary production and manufacturing operations should be considered when developing regulatory provisions.

#### **4.3 Performance of local economy**

Kaipara's economy continued to grow at a moderate pace during the middle stages of 2015, with Infometrics' provisional estimate of GDP showing growth of 2.8% of GDP over the year to June 2015. This growth was relatively broad-based across most indicators that Infometrics follows, while traffic flows in the district rose 3.8% over the same period. By comparison the New Zealand economy grew by 3.1% over the same period, while the Northland economy grew by 2.9%. Kaipara's poorer performance relative to the regional and national economy likely reflects the lower dairy pay-out and Kaipara's comparative reliance on the dairy industry (source: Infometrics Quarterly Monitor June 2015). The following table gives a summary of Kaipara's economic performance over the year to June 2015.

Table 4.1 : Summary of Kaipara's economic performance over year to June 2015

Indicator	Kaipara District		Northland Region		New Zealand	
<i>Annual average % change</i>						
Gross domestic product	↑	2.8%	↑	2.9%	↑	3.1%
Traffic flow	↑	3.8%	↑	4.1%	↑	3.3%
Residential consents	↑	10%	↑	5.1%	↑	7.9%
Non-residential consents	↓	-37%	↓	-14%	↑	17%
House prices*	↑	4.2%	↑	4.5%	↑	9.3%
House sales	↑	24%	↑	12%	↑	8.3%
Guest nights	↑	9.0%	↑	6.9%	↑	5.3%
Retail trade*	↓	-2.9%	↑	2.7%	↑	2.3%
Car registrations	↑	17%	↑	16%	↑	15%
Commercial vehicle registrations	↑	26%	↑	22%	↑	13%
Job Seekers	↓	-3.4%	↑	0.4%	↓	-3.4%
<i>Level</i>						
Unemployment rate		7.0%		8.9%		5.7%
International net migration		66		561		58,256

\* Annual percentage change (latest quarter compared to a year earlier)

Since 2009 economic activity has grown faster in Kaipara than elsewhere in Northland. Over the period 2009-2014, GDP in the Kaipara district grew by 1.9% per annum compared to 0.6% in Whangarei and -0.4% in the Far North (source: Northland Economic Quarterly).

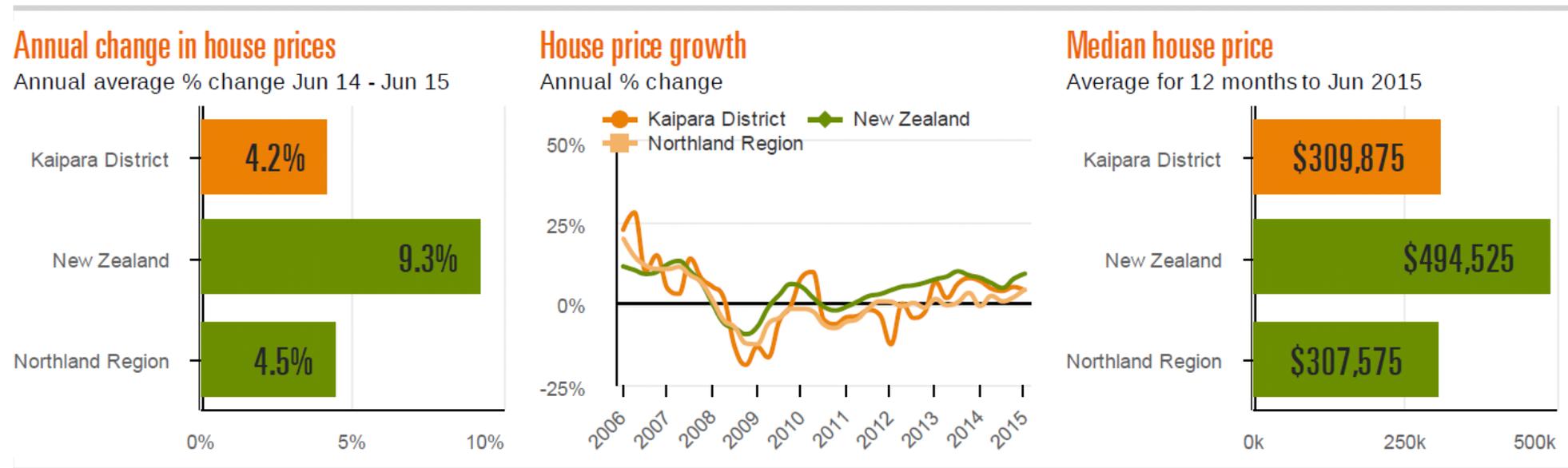
Against this backdrop, job opportunities in Kaipara improved over the year to June 2015. The number of people receiving jobseeker benefits fell 3.4% in the year to June 2015, while the District's unemployment rate is sitting at 7%, compared with a peak of almost 8% in 2013.

Kaipara's service sector also saw a boost over the year to June 2015, particularly among accommodation and hospitality providers. Total guest nights in Kaipara increased by 9% in the year to June 2015. This compared with an increase of 5.3% in New Zealand and 6.9% in Northland. Visitors stayed a total of 131,698 nights in Kaipara District during the year to June 2015, which was up from 120,847 a year ago. In the year ended December 2014, the Northland Region ranked sixth in New Zealand by total guest nights behind Auckland, Canterbury, Queenstown, Wellington and Rotorua.

Kaipara's residential construction and real estate sectors are showing particular strength at present, as low interest rates and increasingly unaffordable housing in Auckland push up housing demand in the District. The number of residential building consents over the past year has climbed by 10%. The looming tightening of regulations governing investor property purchases in Auckland, as well as the prospect of further declines to mortgage rates, are likely to continue supporting housing demand in Kaipara over the coming months.

Median house prices in the Kaipara District rose 4.2% in the year to June 2015. This was lower than the 9.3% increase nationally, however it must be remembered that this national figure continues to be driven by the Auckland market, where annual house price inflation is at an 11 year high of 17%. Kaipara house sales increased 24% in the year to June 2015. However Kaipara's median house price remained comparatively low at \$309,875 in the year to June 2015. This compares with \$494,525 in New Zealand and \$307,575 in Northland. These figures are summarised in the following graphs.

Figure 4.4 Annual and median house prices



Despite positive growth in most parts of Kaipara’s economy, it is going to be a sluggish season for dairy farmers and businesses heavily reliant on the sector. Low dairy prices will see dairy farmers trim production targets and cut back on non-essential expenditure.

A glut in the supply of dairy products in global markets continues to subdue dairy prices, with Infometrics’ most recent forecasts suggesting that a second consecutive season of farmgate milk prices below \$5.00/kgms (before dividends) could be on the cards. Businesses and households whose incomes are reliant on the dairy sector are likely to see a significant reduction in discretionary expenditure by dairy farmers.

Kaipara District’s total dairy pay-out for the 2014 season is estimated to have been approximately \$265 million. Kaipara District’s dairy pay-out for the current season is expected to be approximately \$139 million, \$126 million lower than last season, assuming that production levels from last season are maintained.

Dairy usually contributes around 14.2% of Kaipara’s GDP. By comparison dairy accounts for about 2.7% of Whangarei’s GDP and about 4% of Far North’s GDP. However the effects of the lower pay-out will have an even bigger impact on districts such as Waimate, Westland, South Taranaki and Otorohanga, where dairy contributed to more than 20% of GDP (source: Infometrics).

The decline in global dairy prices has been the result of milk supply from the United States, Europe, and Australia continuing to grow, at a time when there are lingering concerns regarding the pace of growth in demand from China as well as Russia's retaliatory ban on dairy imports from Western nations in response to Western sanctions on Russian businesses. The result of all this has been that there is now plentiful milk available for global trade. Furthermore, Chinese dairy demand is currently being partly met by temporarily running down milk powder stocks in China. In this context, any recovery to dairy export prices over the coming months will be extremely subdued (source: Infometrics).

Luckily for farmers, Chinese milk powder stockpiles have a finite size. Hence, over the medium term, ongoing growth in demand for protein in emerging nations is expected to continue pushing up global dairy demand.

However, supply-side driven weakness to global dairy prices is of greater concern. The key lifts in supply from other dairy-producing nations at present are coming from Europe and the United States. Milk production in the European Union rose by 5% in the six months to June 2014 from a year earlier, while production in the United States over the three months to August 2014 was up 3% from a year earlier. To put the magnitude of these increases in perspective, a 5% lift in Europe's annual production is equivalent to around one-third of New Zealand's annual milk production, while a 3% boost in annual United States milk production is equivalent to around 12% of New Zealand's total annual milk production. Overseas farms are also becoming more efficient at producing milk while the move of many New Zealand farms towards intensification is threatening New Zealand's traditional advantage of low input farming systems utilising clover and ryegrass (source: Infometrics).

Although Infometrics expects a gradual lifting of demand-side constraints to support some stabilisation of dairy prices moving into 2015 and beyond, it is anticipated that ongoing strength in global dairy supply will remain a limiting factor that prevents global dairy prices from returning to their lofty heights of the 2013/2014 season anytime soon.

Nevertheless, there are other parts of Kaipara's economy that have a brighter outlook, such as meat and horticulture exporters as a result of the lower New Zealand dollar. Weaker log prices will put some downward pressure on the total forestry harvest, but there is a silver lining for timber processors as the lower New Zealand dollar has lifted their competitiveness.

#### **4.4 Obstacles to economic development**

At a summary level, the Tai Tokerau Northland Regional Growth Study has identified the following constraints to economic development in Northland:

- Insufficient transport networks, particularly the need to improve key freight roads and rail infrastructure;
- Insufficient communications networks, particularly the need to improve broadband coverage and eliminate 'black spots' in the mobile phone network;
- A lack of skilled labour within the region; and

- Of particular concern to the dairy and horticultural industries, however also relevant to some manufacturing and processing operations; the need for better water management to mitigate the risk of floods and droughts.

The Upper North Island Industrial Land Demand Study 2015 supports these findings, identifying that nearly all firms in all industries require industrial land that has access to transport and telecommunications infrastructure, and a skilled workforce.

From a review of the literature, each of these constraints listed for Northland are equally if not of greater relevance to the Kaipara District. Council needs to be aware of these constraints when advocating for improved infrastructure and services (e.g. faster broadband) or when planning infrastructure projects (e.g. upgrading key freight routes to accommodate High Productivity Motor Vehicles (HPMV)).

Regarding **road and rail transport**: Northland's transport constraints are well-known. There are areas of low resilience along State Highway 1 and other key tourism and freight routes. In particular, two stretches of State Highway 1 between Whangarei and Auckland, the Dome Valley and Brynderwyn Hills, are steep, include tight corners, have a high crash rate and have speed limits restricted to 80 kms per hour. Diversion routes and alternative freight routes do not always have sufficient capacity to take heavy vehicles. The region has a relatively poor road safety record and the interaction of increasing flows of heavy freight traffic and visitor traffic impacts on the visitor travel experience. Northland's rail network (the alternative to moving heavy freight by road) is underutilised and the current standard of the line will restrict growth in some kinds of containerised freight due to some tunnel clearances. Furthermore, the lack of a rail link to the deep water port at Marsden Point has the effect of increasing road freight volumes to and from the port, limiting opportunities for rail and preventing the port from reaching its full freight handling potential.

Further investment is required in much needed road enhancements to ensure that the network will be able to cater for forecast growth in freight and visitors and provide for the dual needs of tourism and primary industries for transport and safety. This will require improvements to the low resilient areas of the key State Highway 1 freight route and the possible development of alternative freight routes (such as the Mangakahia/Otaika route). Moreover, with key industries in the region such as forestry relying on heavy road transport, further upgrading of the routes to High Productivity Motor Vehicle (HPMV) status is desirable.

Although rail freight is currently small, there is the potential for more freight to be moved by rail in future and so relieve pressure on the region's roads. Desired improvements to the network include addressing tunnel clearances (important for some containerised freight) and construction of a link to Marsden Point (very important for existing forestry exports but would also allow the port to expand its container and general freight handling). Maintaining the line and the Marsden Point route designation will keep the long term option of growth in rail freight open.

Regarding the need for **education and skills**: there is potential for significant employment growth across industries, particularly primary industries, in Northland. Significant impediments to achieving this growth include a shrinking working age population, perceptions that there are few attractive jobs and career paths in these industries (particularly the lack of career progression opportunities in primary industries and processing/manufacturing), and many young people in Northland being

disengaged from education and employment. Furthermore, there can be a lack of information about skill requirements for and likely occupational demands of growth industries, which can make it difficult to plan for the training and development of the future workforce.

Although a range of education initiatives are being pursued in Northland, a much more focused, substantive and longer-term approach needs to be made for and within specific industries (particularly forestry, agriculture and processing/manufacturing); that is, the creation of skills investment programmes for key industries. These programmes need to be based on real opportunities and real jobs, identify initiatives to improve both the supply of skills and the quality of demand for skills, and take a systemic approach when identifying interventions to include all levels of the education system, pastoral care and whānau support, and welfare and immigration. This will require the involvement of and commitment by a combination of major businesses in those industries, iwi, education providers and central government representatives and a genuine commitment of resources over the long term.

Estimated labour productivity (or GDP/FTE) in Northland is close to national levels. In 2013, Northland's estimated average labour productivity was \$104,500, which was only slightly below the national average of \$109,000.

This suggests that the workforce is as good as anywhere else in the country at creating value, and that Northland's low level of wealth is more to do with the significant under-utilised pool of people (source: Tai Tokerau Northland Regional Growth Study).

Regarding **digital connectivity**: despite growth in the proportion of households with internet and broadband access, Northland is falling behind other regions on the use of internet and uptake of broadband. Relatively high proportions of Northlanders perceive that the cost is too high or have limited interest in using the internet. Information and Communications Technology (ICT) and broadband infrastructure in Northland needs to be further enhanced as it provides a platform to add value to primary and other industries in the region by enabling improved performance measurement, resource management, and connections to markets. The opportunity is to finalise a digital development strategy, delivered through a regional digital office, to deliver programmes to youth, communities and businesses to showcase the benefits of adoption and stimulate demand, build levels of digital literacy and competence to enable the use of productivity enhancing applications, and position the region to get access to increased investment in broadband roll-out (source: Tai Tokerau Northland Regional Growth Study).

The Regional Economic Activity Report identifies broadband upgrades as being vital to expanding business in Northland. Improved Broadband will not only assist the efficiency of local businesses but also allow larger companies currently based in Auckland to move outside the metropolis.

Regarding **improved water management and storage**: fresh water resources are essential for the growth of Northland. Decreased water quality or quantity will limit the potential of a range of industries, such as dairy and horticulture as well as processing. Northland is a region that has a number of challenges associated with water. Floods and droughts are common occurrences and are likely to become more frequent in the future due to climate change (see Section 6.1.2 Climate Change). Damaging

floods pose a risk to the region's infrastructure, particularly its roads, while droughts threaten town water supplies, agricultural production and some industrial operations. The impacts of these events can be exacerbated or minimised by land use changes and water management practices.

The frequency with which drought conditions occur in Northland is cause for concern. In 2014 the third drought in four years was declared in the Northland region with much of Northland's west coast from Cape Reinga to Pouto Point being classified a localised drought area. The classification covered an estimated 400 Northland dairy farms and 700 sheep and beef units.

The Northland Rural Support Trust estimated that the 2013 drought cost the Northland Region \$500 million. This cost represents losses due to the need to buy in feed and water for the stock, selling stock off and drying off dairy herds earlier than expected. In times of drought the assimilation quality of the rivers and stream, which is relied on by those that discharge their waste to streams, is drastically compromised and creates significant water quality effects for downstream users and on the coastal environment.

Water storage and irrigation are ways of mitigating the impact of droughts and floods. In relation to water storage, Northland presently has a relatively small number of dams and weirs (source: Tai Tokerau Northland Regional Growth Study).

The topography of Northland does not lend itself easily to large-scale storage or irrigation schemes. Further investment needs to be undertaken on collaborative processes to understand each catchment and how each can be managed, as well as detailed research on the demand for and supply of water, and the benefits and costs of different options to improve irrigation and water storage.

At a district level, droughts and damaging floods are a constant risk to the primary industries upon which Kaipara's economy is founded. However droughts and floods also pose a risk to Council which manages a number of land drainage schemes and is responsible for repairing the District's roads. Furthermore, the nature of Dargaville's town water supply is such that water restrictions are often required during dry summers. This places restrictions on industries such as Silverfern Farms' Dargaville meatworks which has to alter its production schedule in response to water shortages.

Recognising the need for better water management in Northland, the Government has allocated \$75,000 from the Ministry for Primary Industries' Irrigation Acceleration Fund towards a study to investigate the potential of irrigation in Northland. Some of this funding has been taken up by Kauri Coast Water; a community driven intuitive working with Northland Regional Council to explore better water management options for the western Kaipara District. This project is presently in its early stages.

#### 4.5 Opportunities for economic development

According to the Tai Tokerau Northland Regional Growth Study the highest rated opportunities for economic growth in Northland are:

The visitor industry:

- The Twin Coast Discover Project;
- Development of new visitor experiences and supportive infrastructure.

Dairy and related processing:

- Improving on farm management through an expansion of productivity initiatives;
- Realise the dairy potential of Māori land;
- Proposed innovation centre concept for dairy and primary industries.

Education and Skills:

- Skill-based investment programmes to support key industries.

Road and rail transport:

- Future-proof key road freight routes.

Forestry and related wood processing:

- Growing the wood processing industry;
- Saw and pulp mill facility at Ngawha;
- Development of indigenous wood processing industry (e.g. Totara).

Aquiculture:

- Kingfish farm facility;
- Scaling up existing aquiculture production.

Marine manufacturing:

- Invest in lift and retrieval facilities in Whangarei.

Horticulture:

- Develop an horticulture strategic action plan;
- Development of the manuka honey industry.

Digital connectivity:

- Build digital competence and use of Broadband.

Water Management:

- Improving water allocation and quality through water storage and management.

International education:

- Grow the scale and value of international education.

Each of these opportunities is explained and assessed in detail in the Tai Tokerau Northland Regional Growth Study. A summary of the opportunities for dairy, horticulture and forestry and wood processing has been included here as these are of particular relevance to the Kaipara District.

### ***Dairy***

The dairy industry is significant for Northland and especially the Kaipara. There is potential to grow the industry by:

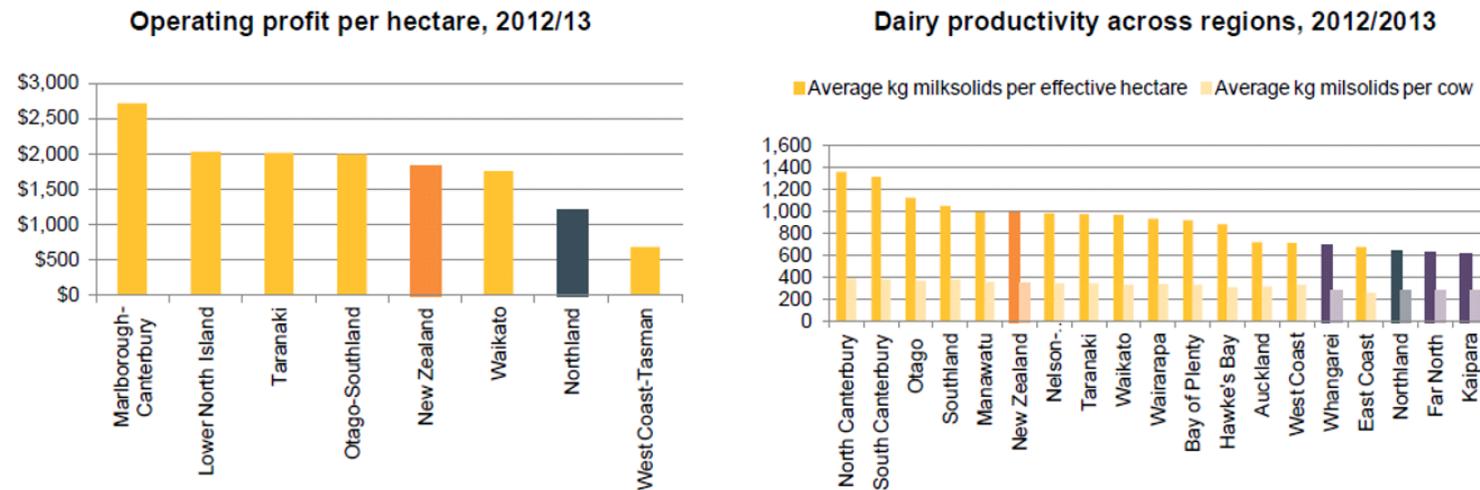
- Improving the productivity of existing dairy farms. Moving the middle 50% of farms to the upper quartile of performance could deliver an additional \$50 million of value per annum;
- Collaboration/consolidation of small farms and land use change on Maori owned land. The impacts will depend on the scale to which this occurs;
- Continued investment in research and development in pastures, added-value products and processing, and the potential development of an agricultural innovation centre for the region.

To realise this potential, industry development will need to go hand in hand with improved water and environmental management.

The region's pastoral industry roadmap notes that, on average, pastoral production and profitability in Northland are 30-40% lower than comparable regions. Dairy farms in Northland produce less milk solids per effective hectare (645 kg compared to 988 kg) and per cow (282 kg compared to 346 kg) than farms nationally (source: Livestock Improvement Corporation & Dairy NZ, 2013). Northland farmers are also less likely than farmers nationally to carry out regular herd testing to inform their decision-making and herd management. Not surprisingly, the operating profit per hectare from Northland's dairy farms is relatively low, at \$1,214 per hectare, compared to \$1,830

nationally (source: Dairy NZ, 2014). These trends are shown on the following graphs and reveal that Kaipara farms are, in particular, among the least productive in the country.

Figure 4.5 : Dairy farms operating profit and dairy productivity 2012/2013



This current under performance provides an opportunity to increase production on existing farms. Dairy production in Northland could grow from 92 million kgs to around 100 million kgs of milk solids within the next 10 years if farm performance is brought up to national standards (source: Tai Tokerau Northland Regional Growth Study).

**Horticulture**

Northland has a unique horticulture industry with some advantages over and differences to the rest of New Zealand. Almost all of the nation's kumara crop, a third of the avocado crop and a quarter of citrus produced in New Zealand are grown in Northland.

The horticulture sector is well-placed to take advantage of growing demands for produce in Asia and to be a major supplier to Auckland, especially as more of Pukekohe's arable land is taken for housing development.

The Tai Tokerau Northland Regional Growth Study considers that the industry needs to create scale and stability in production through co-ordination or consolidation, continue to invest in research and development in new varieties and disease and pest management (with the broader industry nationally), and address water management and capability issues. There is not a clear pathway forward at this point for the industry in the region, in contrast to other sectors.

As such, the proposal is for the industry, supported by local and central government agencies, to identify appropriate interventions as part of a strategic action plan for the industry in Northland. The action plan should identify options for key sub-sectors to achieve scale, increase value-add through research and development, and to develop a future pool of leaders and workers. The benefits will depend on the growth in horticulture that results.

A longer term opportunity exists to grow the apiculture sector within the industry, and specifically manuka honey production, beyond its current niche or boutique status. This could include the establishment of a collective vertically integrated honey company and/or brand for the region. Iwi involved are to develop a full business case for this proposal.

### ***Forestry and wood processing***

The forestry and wood processing industry in the Northland region has growth potential based on the region's resource and capability advantages, demand from Auckland for structural timber to meet housing needs, and strong demand from growing economies in Asia (particularly China) for lumber and wood products. Forestry and wood processing companies have access to a bulk export port and are relatively close to the Auckland market. Furthermore, because of the temperate climate, Northland's wood tends to be of higher density and stiffness than other regions, making it more suitable for structural products.

These advantages are not reflected in the performance of the industry, which has experienced low GDP and employment growth.

Although it will be challenging, the region needs to move beyond being primarily a radiata pine log exporter and invest in further processing and higher value species. This can be achieved by:

- Industry representatives finalising an action plan that focuses on how current regional processing capability should be reconfigured, for example through a combination of lower-grade processed products and higher end engineered wood products, given expected supply constraints and known transport constraints. Redirecting 1-1.2 million m<sup>3</sup> of log export to wood processing could add \$250 million per annum to regional GDP;
- The potential development of a complementary saw and pulp mill near Kaikohe, utilising low-cost heat and energy from Ngawha. Further investigation of this concept is required. A large-scale facility could generate around \$40 million in regional GDP and create several hundred jobs;
- The development of a totara processing industry in the region, subject to an acceptable business case. The industry has the potential to grow to \$70 million in revenue once fully established.

Work has also commenced on the development of a regional forestry strategy and action plan by an advisory group of industry representatives, with a focus on partnerships, value-added processing and infrastructure.

#### 4.6 Income and affordability

The 2013 census shows median personal income in the Kaipara District was \$22,600 per annum. This compares with \$21,500 in the Far North, \$25,300 in Whangarei, \$23,400 in Northland, \$29,600 in Auckland and \$28,500 in New Zealand (source: Statistics New Zealand). It should be noted however that while Aucklanders generally enjoy higher incomes than all other New Zealanders, with the exception of Wellingtonians, these incomes have fallen in real terms, or as in the case of individual incomes, risen by just less than half the national average (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

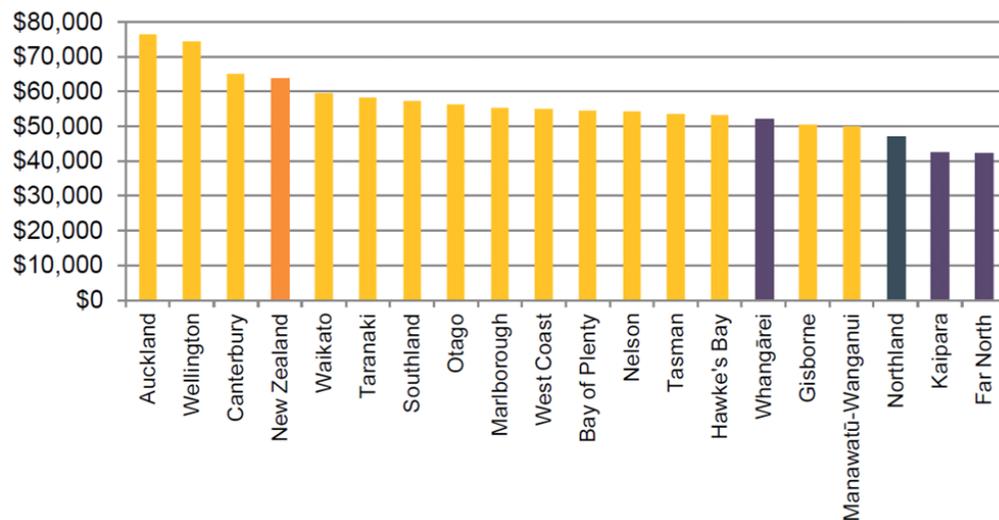
Annual median earnings in Northland (of those employed or working proprietors) were also lower than the New Zealand median (\$46,560 compared to \$53,120), however were towards the middle of New Zealand regions. The region's moderate earnings for those in employment but relatively low average personal incomes appears to be because of the low proportion of people deriving incomes from wages and salaries relative to those receiving benefits (source: Tai Tokerau Northland Regional Growth Study).

Median household incomes (a measure of the combined incomes of all people sharing a particular household or place of residence) are a better affordability measure for local government than personal incomes as council rates are usually charged per property.

Northland's annual median household income in 2013 was \$46,900 compared to \$63,800 nationally. Though Northland's median household income has increased over time, it is still well below the national average and is presently the lowest of New Zealand's regions, as shown in the following graph (source: Tai Tokerau Northland Regional Growth Study).

Figure 4.6 : Annual median household income 2013

**Annual median household income, 2013**



As can be seen above, the Auckland region had the highest median household income in the country with \$76,500 per annum. Wellington (\$74,300) and Canterbury (\$65,000) also featured in the top three.

The following table lists the median household incomes for the Northland councils and the area units of the Kaipara District. This table shows there is considerable disparity between Kaipara’s communities with some such as Te Kopuru (\$30,200) and Ruawai (\$30,800) earning substantially less than others such as Maungaru (the rural area east of Dargaville)(\$55,900), Kaipara Coastal (the rural area in the west of the District from Pouto to Aranga)(\$47,600) and Maungaturoto (\$45,000). This disparity between communities will have

implications for Council’s efforts to keep rates fair and affordable across the District.

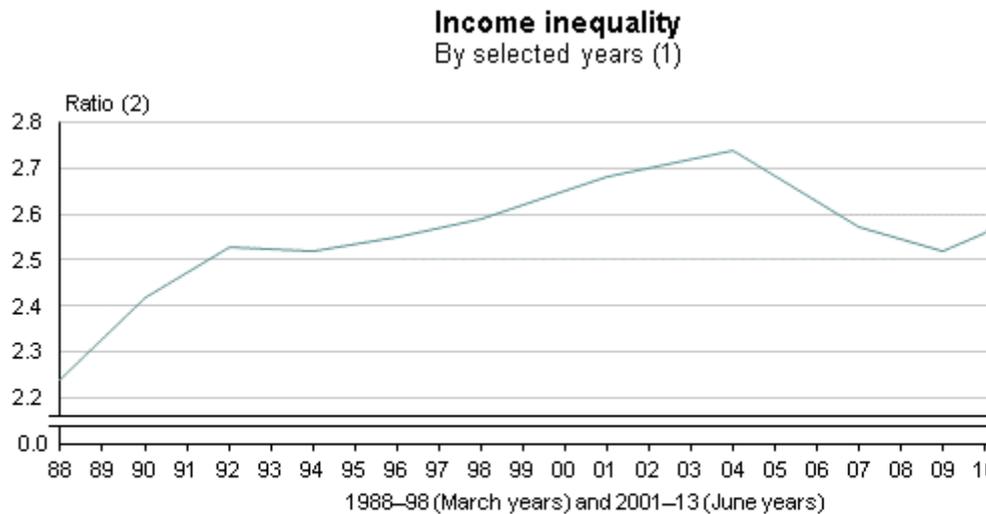
Table 4.2 : Median household income

Median Household Income	
Northland Region	\$ 46,900
Far North District	\$ 42,200
Whangarei District	\$ 52,000
Kaipara District	\$ 42,400
Te Kopuru	\$ 30,200
Kaipara Coastal	\$ 47,600
Maungaru	\$ 55,900
Dargaville	\$ 35,500
Maungaturoto	\$ 45,000
Ruawai	\$ 30,800
Kaiwaka	\$ 44,400
Rehia-Oneriri	\$ 44,900
Mangawhai	\$ 42,900
Mangawhai Heads	\$ 39,700

Statistics New Zealand reports that between 1988 and 2013, income inequality between New Zealand households with high incomes and those with low incomes widened. In 2013, the disposable income of a high income household was over two and a half times larger than that of a low income household. That

is to say, between 1988 and 2013, the income inequality ratio increased from 2.24 to 2.62. The income inequality ratio peaked at 2.74 in 2004. This income inequality trend is shown in the chart below.

Figure 4.7 : Income inequality trend

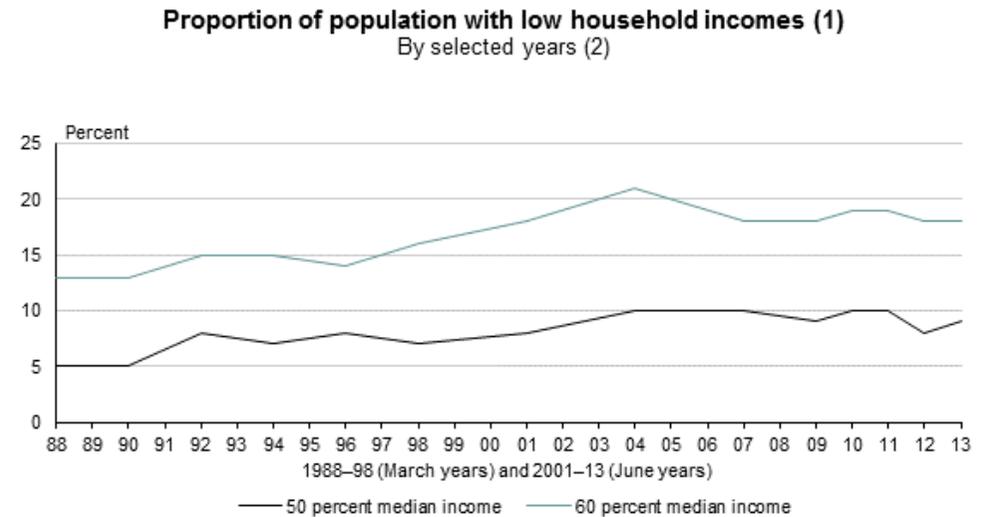


Source: Ministry of Social I

1. No data reported for 1989, 1991, 1993, 1995, 1997, 1999, 2000, 2002, 2003, 2005, 2006, and 2008.
2. High-income to low-income households (before housing costs).

disposable incomes below 60% and 50% of median income was 18% and 9%, respectively. The proportion of the population with low household disposable incomes increased steadily from 1998 to a peak in 2004, as is shown on the following graph.

Figure 4.8 : Proportion of population low household incomes



Source: Ministry of Social Development

1. Household disposable income (before housing costs) below 60 and 50 percent of median income for that year.
2. No data reported for 1989, 1991, 1993, 1995, 1997, 1999, 2000, 2002, 2003, 2005, 2006, and 2008.

The proportion of the population living in households with low incomes has also increased since 1988. In 2013, the proportion of the population with household

For lower income households, high housing costs relative to income are often associated with severe financial difficulty, and can leave households with insufficient income to meet other basic needs such as food, clothing, transport, medical care and education. Affordable housing is therefore important for people's well-being. High outgoings to income ratios are not as critical for higher income earners, as there is sufficient income left for their basic needs.

The affordability of housing in the Kaipara District and the country as a whole can be investigated by comparing median house prices with average annual earnings. Infometrics presents a housing affordability index which is the ratio of the median house price to average annual earnings. A higher ratio, therefore, suggests that median houses cost a greater multiple of typical incomes, which indicates lower housing affordability. This index shows that housing is relatively affordable in Kaipara with a score of 6.7 compared to New Zealand 8.4 and Auckland 9.8.

The affordability of rental homes is similarly important, especially as many lower income households cannot afford to buy their own home. Average weekly rent in the Kaipara was \$242 in 2014. This compares to \$334 in New Zealand, \$250 in the Far North, \$281 in Whangarei, \$267 in Northland, and \$424 in Auckland.

The affordability of renting can be investigated by comparing average weekly rents with average weekly earnings (which are calculated from average annual earnings). Infometrics presents a rental affordability index which is the ratio of the average weekly rent to average weekly earnings. A higher ratio, therefore, suggests that average rents cost a greater multiple of typical incomes, which indicates lower rental affordability.

This index shows that renting is no more affordable in Kaipara (scoring 0.29) than in Northland (0.29) and only slightly more affordable than New Zealand overall (0.32) while Auckland was less affordable (0.373).

The following table offers some indications of the levels of rates paid to city, district and regional councils on a regional basis. The noticeable trends in this table are as follows:

- per capita rates are highest in Otago and Nelson, Tasman and Marlborough and lowest in Auckland
- rates have risen the most – on both a per capita and total basis in Nelson-Tasman and Bay of Plenty followed closely by Northland
- rates have risen the least – especially on a per capita basis in Auckland.

**Table 4.3 : Local government rates on a regional basis 2004/2013**

**Local government rates on a regional basis 2004-2013**  
Rates on a per capita basis in nominal dollars

	2004	2008	2013	Change in per-capita rates 2004-2013	Change in rates revenue 2004-2013
Northland	586	891	1,062	81%	100%
Auckland	637	811	908	43%	62%
Waikato	694	947	1,187	71%	90%
Bay of Plenty	614	835	1,144	86%	104%
Gisborne	693	846	1,058	53%	57%
Hawkes Bay	654	805	953	46%	54%
Taranaki	594	803	1,016	71%	81%
Manawatu-Wanganui	655	862	1,120	71%	73%
Wellington	775	954	1,187	53%	64%
Marlborough	770	965	1,188	54%	64%
Nelson	615	913	1,183	92%	113%
Tasman	596	895	1,131	90%	109%
West Coast	643	867	1,127	75%	85%
Canterbury	564	747	990	75%	89%
Otago	736	930	1,248	70%	82%
Southland	640	841	1,123	75%	79%
New Zealand	652	849	1,044	60%	75%
Rest of NZ excluding Auckland	659	867	1,113	69%	81%

#### 4.7 Local government financial position

New Zealand's councils own a broad range of community assets worth more than \$120 billion. These include 90% of New Zealand's road network, the bulk of the country's water and wastewater networks, and libraries, recreation and community facilities.

Local government expenditure is approximately \$8.5 billion dollars, representing approximately 4% of Gross Domestic Product (GDP) and 11% of all public expenditure.

There has been a general deterioration of New Zealand's local government operating position over the decade 2004 to 2013. Between 2004 and 2008 local government generated an average annual surplus of \$90 million but over the following five years this position deteriorated to an average annual deficit of \$433 million. Granted, most of this deficit can be attributed to Auckland Council, but even if Auckland is excluded the remaining local authorities racked up an average annual deficit of \$178 million, compared with an average annual surplus of \$124 million over the previous five years (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The size of the operating deficits in Auckland and the extent to which these weigh on nation-wide figures is significant. Deficits generated by Auckland Council and its subsidiaries were around 10% of its operating revenue and, somewhat coincidentally, were of the size which could be eliminated if Auckland rate payers paid the same per capita rates bill as other New Zealand rate payers (refer to previous section). Also of note is the size of the operating deficit in Northland, which is over 10% of operating revenue and comes at the end of significant rates increases (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The estimates of operating surpluses or deficits are simply the differences between operating revenues and operating expenditures on an annual basis. These estimated operating surpluses and deficits are set out in the following table.

**Table 4.4 : Local government operating revenues and surpluses 2004/2013**

**Local government operating revenues & surpluses 2004-2013**

\$ millions nominal

	Operating revenue 2004	Operating revenue 2013	Average operating surplus/deficit 2004-2008	Average operating surplus/deficit 2009-2013
Northland	153	283	5	-30
Auckland	1,333	2,433	-34	-254
Waikato	421	703	10	-41
Bay of Plenty	290	494	12	-11
Gisborne	60	72	-1	-3
Hawkes Bay	175	255	19	2
Taranaki	134	193	-1	-13
Manawatu-Wanganui	270	368	17	-18
Wellington	589	926	-8	-26
Marlborough	52	95	8	4
Nelson	49	89	7	2
Tasman	51	90	0	-5
West Coast	49	72	3	-7
Canterbury	594	1,157	36	-15
Otago	263	424	13	-12
Southland	114	168	3	-8
New Zealand	4,626	7,875	90	-433
Rest of NZ excluding Auckland	3,293	5,442	124	-178

This increasing indebtedness overall is reflected in rising rates of per capita debt both in Auckland and elsewhere. In Auckland, on a per capita basis, council indebtedness increased more than five-fold between 2004 and 2013, from \$813 per person to \$4,248 per person. Across the rest of New Zealand such indebtedness grew three-fold from \$805 per person in 2004 to \$2401 in 2013.

As expected, interest costs have increased as a share of Council's expenses in line with these debt increases. In Auckland interest costs accounted for 5.4% of rates revenue in 2004, and by 2013 this share had risen almost three and a half times to 18.5%. For the rest of New Zealand this increase was a more modest 70% rise, from 5.4% of rates revenue in 2004 to 11.9% in 2013. Although Auckland is the run-away winner in the share of rates spent on interest, other regions also well ahead of the pack include Bay of Plenty and Tasman (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Local government debt by region and the burden of this debt on ratepayers is shown in the table below.

**Table 4.5 : Local government debt burden 2004 and 2013**

<b>Local government debt burden 2004 and 2013</b>				
	<b>Per-capita liabilities 2004 \$s</b>	<b>Per-capita liabilities 2013 \$s</b>	<b>Interest expense as % of rates revenue 2004</b>	<b>Interest expense as % of rates revenue 2013</b>
Northland	858	2,422	5.5%	10.6%
Auckland	813	4,248	5.4%	18.5%
Waikato	709	2,494	4.5%	9.6%
Bay of Plenty	1,135	3,615	9.0%	13.6%
Gisborne	909	966	6.8%	4.0%
Hawkes Bay	657	903	5.5%	3.6%
Taranaki	744	2,196	5.6%	11.8%
Manawatu-Wanganui	958	1,938	5.8%	8.6%
Wellington	1,125	2,521	8.1%	8.3%
Marlborough	334	914	0.4%	2.0%
Nelson	993	1,806	6.1%	6.0%
Tasman	1,366	3,644	8.4%	13.9%
West Coast	821	2,885	5.7%	8.7%
Canterbury	473	2,745	2.6%	10.9%
Otago	571	2,150	2.1%	6.8%
Southland	702	885	4.5%	2.6%
New Zealand	807	3,020	5.4%	11.9%
Rest of NZ excluding Auckland	805	2,401	5.4%	9.1%

The table below reports the total liabilities (effectively total monies owed, including both non-current liabilities such as debts, as well as current liabilities such as employee entitlements and trade payables) of councils in 2004 and 2013 while the table following it offers estimates of the burden of these liabilities on residents and ratepayers. Over this period consumer prices rose by just under 26%, so the four fold increase in total liabilities identified in the table below, and the three fold increase in the per-capita burden of this debt need to be seen in this context. The table below indicates that across the whole local government sector total liabilities, as a proportion of operating revenue, more than doubled from 70% in 2004 to 169% in 2013. As with other local government financial indicators Auckland has contributed to the majority of this shift. In Auckland total liabilities as a proportion of operating revenue increased more than three-fold from 79% in 2004 to 258% in 2013. A similar increase occurred in Canterbury, although much of this was due to the 2010 and 2011 earthquakes. Outside of Auckland local government indebtedness as a proportion of operating revenue doubled from 67% in 2004 to 129% in 2013, clearly indicating a structural shift in local councils' finances.

**Table 4.6 : Local government liabilities 2004 and 2013**

**Local government liabilities 2004 and 2013**

	<b>Total liabilities 2004 \$ millions</b>	<b>Total liabilities 2013 \$ millions</b>	<b>Liabilities as % of operating revenue 2004</b>	<b>Liabilities as % of operating revenue 2013</b>
Northland	127	396	71%	151%
Auckland	1,055	6,272	79%	258%
Waikato	269	1,051	64%	149%
Bay of Plenty	289	1,008	100%	204%
Gisborne	42	45	69%	63%
Hawkes Bay	98	142	56%	56%
Taranaki	79	248	59%	129%
Manawatu-Wanganui	219	448	81%	122%
Wellington	509	1,223	86%	132%
Marlborough	14	41	27%	43%
Nelson	43	87	88%	98%
Tasman	60	177	117%	196%
West Coast	26	95	52%	133%
Canterbury	244	1,526	41%	132%
Otago	111	446	42%	105%
Southland	66	85	58%	50%
New Zealand	3,251	13,312	70%	169%
Rest of NZ excluding Auckland	2,196	7,040	67%	129%

Table 4.7 : Local government debt burden 2004 and 2013

**Local government debt burden 2004 and 2013**

	Per-capita liabilities 2004 \$s	Per-capita liabilities 2013 \$s	Interest expense as % of rates revenue 2004	Interest expense as % of rates revenue 2013
Northland	858	2,422	5.5%	10.6%
Auckland	813	4,248	5.4%	18.5%
Waikato	709	2,494	4.5%	9.6%
Bay of Plenty	1,135	3,615	9.0%	13.6%
Gisborne	909	966	6.8%	4.0%
Hawkes Bay	657	903	5.5%	3.6%
Taranaki	744	2,196	5.6%	11.8%
Manawatu-Wanganui	958	1,938	5.8%	8.6%
Wellington	1,125	2,521	8.1%	8.3%
Marlborough	334	914	0.4%	2.0%
Nelson	993	1,806	6.1%	6.0%
Tasman	1,366	3,644	8.4%	13.9%
West Coast	821	2,885	5.7%	8.7%
Canterbury	473	2,745	2.6%	10.9%
Otago	571	2,150	2.1%	6.8%
Southland	702	885	4.5%	2.6%
New Zealand	807	3,020	5.4%	11.9%
Rest of NZ excluding Auckland	805	2,401	5.4%	9.1%

The table below reports the distribution of grants, subsidies and donations received by councils between 2004 and 2013 and on a regional basis.

**Table 4.8 : Distribution of grants, subsidies and donations to local government 2004/2008**

<b>Distribution of grants, subsidies &amp; donations to local government 2004-2008</b>					
	<b>Annual average subsidies 2004-2008</b>	<b>Annual average subsidies 2009-2013</b>	<b>Share of total subsidies 2004-2008</b>	<b>Share of total subsidies 2009-2013</b>	<b>Share of population 2013</b>
Northland	45.9	29.8	6.6%	3.0%	3.7%
Auckland	198.2	411.5	28.6%	42.0%	33.9%
Waikato	58.2	47.6	8.4%	4.9%	9.6%
Bay of Plenty	35.5	29.8	5.1%	3.0%	6.3%
Gisborne	11.9	10.4	1.7%	1.1%	1.0%
Hawkes Bay	25.1	26.8	3.6%	2.7%	3.5%
Taranaki	17.2	17.8	2.5%	1.8%	2.5%
Manawatu-Wanganui	64.6	42.4	9.3%	4.3%	5.2%
Wellington	71.6	83.7	10.3%	8.5%	10.9%
Marlborough	7.7	5.8	1.1%	0.6%	1.0%
Nelson	3.7	3.9	0.5%	0.4%	1.1%
Tasman	6.5	5.7	0.9%	0.6%	1.1%
West Coast	10.6	9.5	1.5%	1.0%	0.7%
Canterbury	66.6	158.5	9.6%	16.2%	12.7%
Otago	39.5	26.7	5.7%	2.7%	4.7%
Southland	28.0	17.9	4.0%	1.8%	2.1%
New Zealand	693.6	980.9	100.0%	100.0%	100.0%

Two things are immediately apparent from the data in the above table. The first is the extent to which Auckland and Canterbury have been the only beneficiaries of changes in the value and distribution of grants and subsidies from central government to local government. The average annual value of such subsidies and grants rose by \$287 million between the 2004/2008 period and the 2009/2013 period, from \$694 million to \$981 million. From this increase Auckland received an increase of \$211 million each year, while Canterbury gained a further \$92 million annually. In other words, the remainder of New Zealand got less, even in nominal terms, and in fact 10 of the 16 regions received reductions of 10% or more. Such reductions are in nominal terms so the real reductions will be in the order of 35%.

The second apparent point from data offered in the above table is the inequity in the new distributions, even on a population basis, yet alone on a needs or income basis. Auckland and Canterbury comprise 47% of the country's population yet are receiving 58% of grants and subsidies. While many regions are close to parity between the shares of grants and subsidies and population, Waikato and Bay of Plenty are the outright losers. Combined these regions make up 16% of the national population and

yet receive only 8% of the subsidies and grants (source: The Salvation Army Social Policy and Parliamentary Unit May 2015). Consider also that Auckland and Canterbury, together with Wellington, have the top three highest household incomes in the nation.

The local government debt and liability figures presented earlier in this section offer some stark insights into the vulnerable status of local government in many regions, especially in regions, which according to indicators offered elsewhere in this document, are not doing well. This is especially the case for Northland and Waikato, and also to some extent for Bay of Plenty and Manawatu-Wanganui. The apparent favoured status of Canterbury is most likely a consequence of the earthquake recovery and re-build, although closer analysis is required to confirm this (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

Auckland's situation, at least in local government terms, is compelling although not from an equity perspective. While median incomes in the region are generally higher than in other parts of New Zealand, the per capita rates take is significantly less. There are probably a number of reasons for this including the fact that Aucklanders pay their water charges directly rather than through rates, as is often the practice in other regions. It does, however, seem that some of this lower level of local taxation is a matter of local choice. This local choice appears to have two consequences; rising debt and a growing expectation of higher subsidies from central government. The data offered above suggests that both these consequences are playing out.

The preference given to Auckland in terms of central government subsidies is difficult to explain against the Government's growth model and other priorities. This preference appears to be carried over into funding from the New Zealand Land Transport Fund where, in 2013/2014, Auckland received nearly 37% or \$1.1 billion of the Fund's \$2.9 billion budget. At the same time Auckland accounted for around 31% of the national vehicle fleet. These priorities are at the expense of other regions, as is demonstrated by declining subsidies (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

While these funding shifts are no doubt decided by funding policies, from the distributions being achieved it would appear that neither the policies nor these distributions are addressing the challenges faced by regions with dispersed, aging and often poorer populations. This failure is leading to continuing under-investment in infrastructural renewals alongside rising levels of debt, as well as growing problems with debt servicing. As many local populations age further the ability of these regions to sustain themselves socially and fiscally is in some doubt, and it appears that the present policies that direct subsidies and grants from central to local government are not addressing this challenge. Auckland's fiscal position appears amongst the worst of local governments in New Zealand, although for different reasons to those of other regions (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

One outcome of the current struggle which parts of Kaipara, Northland and many other North Island regions are having with aging populations, minimal population growth and high levels of dependency, is that their ability to support local infrastructure and services is diminishing. While it is difficult to identify the exact causes of this trend it must in part be due to aging infrastructure and the inability of local households to afford the costs of maintaining this infrastructure. For example, in a 2014 report the Office of the Auditor-General (OAG) warned that:

*“Managing the funding and timing for infrastructure development in areas of growth is challenging. For most of the last hundred years, as a country, we have built for growth. Now, up to nine regions face declining forecasts. For places in these regions managing networked infrastructure services in conditions of economic and population decline while standard and service-level expectations increase might be more than challenging. Although New Zealand has seen population movements before, today’s population and economic changes could present funding and infrastructure challenges with which we have little experience.”*

The OAG found that over the 2013/2014 financial year 21 local authorities spent less than their depreciation allowance on asset renewal and other capital expenditures and that six of these councils spent less than 40% of this depreciation allowance. The OAG also estimated overall that asset renewals on roads was around 91% of depreciation, while that on wastewater assets was 58% and on stormwater assets just 32%. Renewal spending on community and social assets was expected to fall from 85% of depreciation in 2012/2013 to 45% in 2021/2022. Over this 10 year period the ‘renewals/depreciation gap’ - the difference between depreciation expenses and renewals expenditure, was estimated at between \$6 billion and \$7 billion (source: The Salvation Army Social Policy and Parliamentary Unit May 2015).

The Expert Advisory Group on Local Government Infrastructure Efficiency (EAG) also recognised ‘that significant issues are aging infrastructure, affordability against rising standards and customer expectations, as well as changing demographics affecting the ability of the community to pay’. In considering New Zealand’s demographic change the EAG commented that:

*“Although it may be a generalisation, we consider the situation paints an emerging picture of “two New Zealand’s.” One is urban, more wealthy and younger, and able to afford high standards of environmental health and public facilities. The other is rural, poorer and older, facing population decline and a future of living with lower standards and lesser service. Of course this does not apply across the board, much less within each council area. Nevertheless, it is a broad reflection of the demographic reality that is fast emerging and which we consider to be so profound that it needs to be a basic premise of local government decision-making in all aspects of infrastructure delivery.”*

Overall, the above discussion provides a wakeup call for local government to consider its financial position and long term sustainability. Rising debt burdens and infrastructure renewal commitments coupled with the decreasing ability of many communities to raise funds is a worrying trend which the local government sector will need to address. Kaipara District Council is in no way immune to this trend with many of its communities already facing these challenges. The above also draws attention to the disparity between regions when receiving grants and subsidies from central government. It is apparent that some regions, particularly Auckland, are receiving greater assistance from central government at the expense of other regions. Northland council’s might consider advocating collectively to central government to request greater financial assistance for the region’s needs.

## 5 Customer Expectations

Kaipara District Council's customers have varying expectations of the quality and variety of services they expect from their Council. Living up to these expectations can be a challenge for Kaipara District Council as it has a small and relatively poor rating based coupled with a large district and extensive roading network. Council will need to work in partnership with its communities and manage available funds prudently if it is to provide the services its community's desire while keeping rates affordable.

To assess its performance at meeting the community's expectations, Council is provided with an annual Communitrak Survey. The March 2015 survey reveals there is low satisfaction with some Council services. A summary of these results is included below.

**Table 5.1 : Overall satisfaction with Council services and facilities (excluding Council roads)**

	Very / Fairly Satisfied %	Not very satisfied %	Don't know %
Litter and graffiti control	82	11	7
Council controlled local parks and sportsfields	74	11	15
Refuse bag collection service	72	14	14
Dog and stock control	66	19	15
Public toilets	61	23	16
District libraries	60	8	32
Footpaths	52	27	21
Council's recycling services <sup>†</sup>	51	23	27
Stormwater services <sup>†</sup>	46	21	32
Wastewater, ie, sewerage system	43	9	48
Water supply	34	13	53
Building and resource consent services	34	20	46
Council's efforts to attract and expand business in the District <sup>†</sup>	23	38	40

<sup>†</sup> does not add to 100% due to rounding

The main areas of concern about services or facilities (excluding Council roads) were:

- Council efforts to attract and expand business in the District; 38% of all residents are not very satisfied (41% in 2014);

- Footpaths; 27% of all residents are not very satisfied (26% in 2014);
- Council's recycling services; 23% of all residents are not very satisfied (24% in 2014);
- Public toilets; 23% of all residents are not very satisfied (19% in 2014).

The following table presents customer satisfaction with Council's roads as at March 2015.

**Table 5.2 : Satisfaction with Council's roads**

	Very / Fairly Satisfied %	Not very satisfied %	Don't know %
The alignment of Council roads	75	15	10
The safety of Council roads	67	30	3
The surface of Council roads	46	52	2
<b>Council roads overall<sup>†</sup></b>	<b>67</b>	<b>32</b>	<b>2</b>

<sup>†</sup> does not add to 100% due to rounding

The main areas of concern with Council's roads were:

- The surface of Council's roads; 52% of all residents are not very satisfied (50% in 2014);
- The safety of Council's roads; 30% of all residents are not very satisfied (25% in 2014).

At a national level, the inaugural New Zealand Local Government Survey of close to 3,000 citizens and businesses across New Zealand found that:

- public and business satisfaction with local government services is generally good;
- there is low awareness of the wide range of services local government provides; and the services tend to be under-valued, especially as they affect people's daily lives;
- local government is seen to play an important role in developing the prosperity and well-being of New Zealand, although there is a sense that local government can achieve more than it does;
- local government performance factors such as financial management and community leadership are viewed as current weaknesses, although local engagement is generally working; and
- local government does not enjoy a strong reputation with the public and businesses.

On a comparable basis, New Zealand local government service satisfaction is rated similarly to countries such as the United Kingdom and Australia. The Local Government Survey will be conducted annually and is available at [www.lgnz.co.nz](http://www.lgnz.co.nz).

### 5.1 Absentee ratepayers

Absentee ratepayers can make up a significant part of some communities in holiday areas, especially Mangawhai. These areas are important as they are those in which our District's growth is predicted to occur.

It is also useful to acknowledge that the absentees create different sorts of demand on Council services. They will often have higher service level expectations and result in 'larger' numbers of people being present during the peak periods which puts different demands on Council's services.

By linking the location of a property to the location given by the owner's postal address it is possible to gain an indication of what percentage of Kaipara's residents live permanently in the District and what percentage are non-resident. This analysis is shown in the table below. The three columns give the number and percentage of properties in; the Kaipara District, Mangawhai Area and Rest of Kaipara excluding Mangawhai, owned by people in different areas of New Zealand and overseas. Note that this analysis includes all properties - rateable and non-rateable. Dummy and parent properties (also known as Header Properties) were removed where they could be easily identified. This analysis was undertaken in 2013 and has not been updated since:

Table 5.3 : Ratepayer postal address summary

Summary of Ratepayer Postal Address						
	Total Kaipara		Mangawhai		Rest of Kaipara (excluding Mangawhai)	
	Number of Properties	% of total	Number of Properties	% of total	Number of Properties	% of total
Mangawhai	1,568	10%	1,556	38%	12	0%
Rest of Kaipara	8,201	54%	129	3%	8072	72%
Far North	115	1%	13	0%	102	1%
Whangarei	711	5%	91	2%	620	6%
Wellsford	67	0%	35	1%	32	0%
Warkworth	124	1%	43	1%	81	1%
Rest of Auckland	3,723	24%	2,001	49%	1,722	15%
Waikato	246	2%	51	1%	195	2%
Wellington	141	1%	23	1%	118	1%
Rest of NZ	158	1%	29	1%	129	1%
Overseas	211	1%	76	2%	135	1%
<b>Total</b>	<b>15,265</b>	<b>100%</b>	<b>4,047</b>	<b>100%</b>	<b>11,218</b>	<b>100%</b>

Based on the above, approximately 72% of ratepayers in the Kaipara District (excluding Mangawhai) reside within the District and 28% outside the District. For Mangawhai, 41% reside within the District and 59% in Auckland.

An analysis of unoccupied versus occupied dwellings shows that Mangawhai's population may increase by 112%, more than double, during holiday periods.

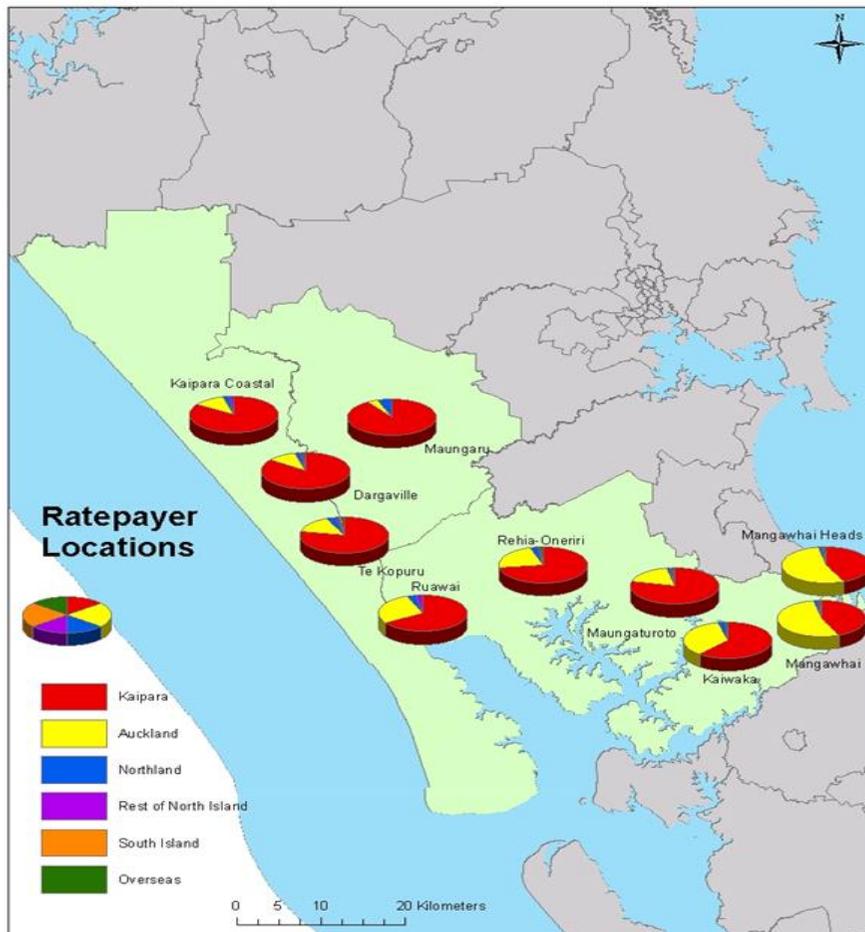
The proportion of unoccupied to occupied dwellings in the District (excluding Mangawhai) has been increasing by around 1.6% per year based on historical figures from 2006 to 2013. This suggests the District's absentee population may also be increasing.

By comparison, the proportion of unoccupied dwellings in Mangawhai has been decreasing by 0.5% per year since 2006. This suggests more people are moving permanently to Mangawhai (source: Statistics New Zealand – June 2014).

It is anticipated these trends will continue and intensify as the nation's aging population results in more holiday homeowners retiring permanently to their holiday houses in areas such as Mangawhai while the ongoing trend towards centralisation will result in more properties in rural areas being owned by outside investors.

The figure below shows how percentages of resident and non-resident ratepayers vary across the Statistics New Zealand CAUs in the District.

**Figure 5.1 : Percentages of resident and non-resident ratepayers**



This analysis reveals that the percentage of Kaipara property owners with an Auckland postal address is greater in eastern areas. Council will need to consider these trends when planning consultation (e.g. notices in local papers may fail to be seen by absentee ratepayers). Council will also need to keep these trends in mind when considering statistics which are based on the usually resident population of a community (e.g. median household income) as these statistics will fail to consider those who own property in an area but whose permanent place of residence is elsewhere.

## **6 Physical**

### **6.1 Weather and climate**

Extreme weather events, such as droughts and storms regularly endanger essential services and the prosperity of Northland's primary industries. In addition to being hit by four droughts in the past six years, Northland was also hit by severe flooding in July 2014. Both the lack and abundance of rain can therefore pose significant problems for Council infrastructure with heavy rain causing slips on the roading network and droughts causing water restrictions.

The 2015/2016 summer may bring Northland its fifth drought in seven years. MetService has warned the country will start to feel the effects of an intensifying El Nino weather pattern in the lead up to Christmas, with the most effect to be felt in January and February (source: Northern Advocate 31 July 2015).

The country has already seen solid signs of El Nino so far this winter with more frequent southerly outbreaks than usual which have resulted in below average temperatures since the middle of June 2015.

El Nino will likely continue into early 2016, and there is every indication it will remain strong for the rest of the year.

MetService warns rainfall in Northland is likely to drop from an average 260 mm in summer to about 180 mm, which would be a significant decrease at a dry time of the year. Council and farmers are advised to monitor this El Nino as it develops so as to be ready well in advance if a drought eventuates.

In the past few seasons, high dairy pay-outs have allowed farmers to purchase the feed needed in the face of droughts, however, with the current low pay-outs any drought could be disastrous for many.

If a drought does eventuate, Council may find it difficult to ensure supply of potable water to some towns in the District, particularly Dargaville.

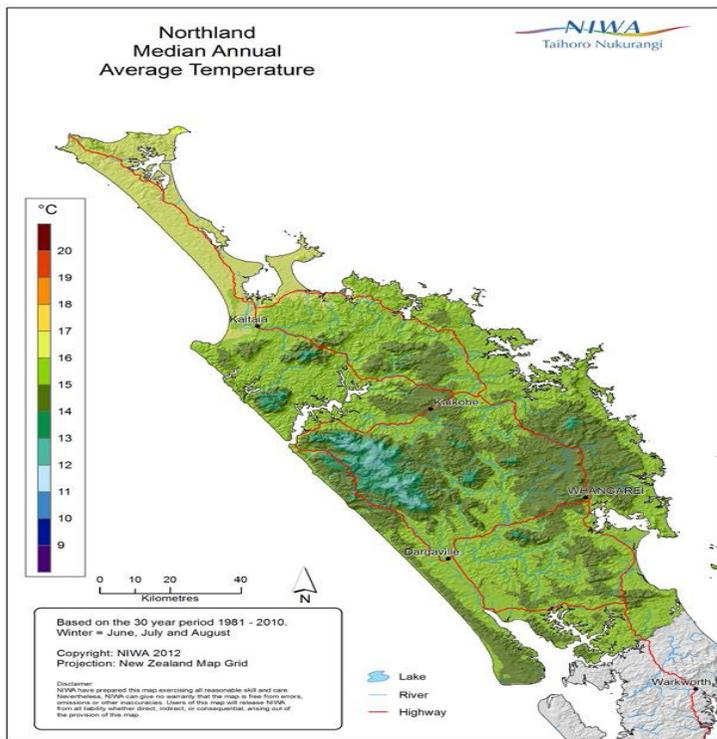
#### **6.1.1 Present weather and climate**

Northland, with its northern location, low elevation and close proximity to the sea is characterised by a mild, humid, and rather windy climate. Summers are warm and tend to be humid, while winters are mild, with many parts of the region having only a few light frosts each year. Rainfall is typically plentiful all year round with sporadic very

heavy falls. However dry spells do occur, especially during summer and autumn. Most parts of Northland receive about 2,000 hours of sunshine per year. It can be very windy in exposed areas and occasionally Northland experiences gales (source NIWA).

Mean annual temperatures in Northland are typically between 14°C and 16°C, with a mean annual temperature range (difference between summer and winter) averaging just 8.1°C. The mean annual temperature for the region north of Auckland City is the highest for any part of New Zealand (source NIWA). The figure below shows the median annual average temperature as it varies across Northland.

**Figure 6.1 : Northland median annual average temperature**

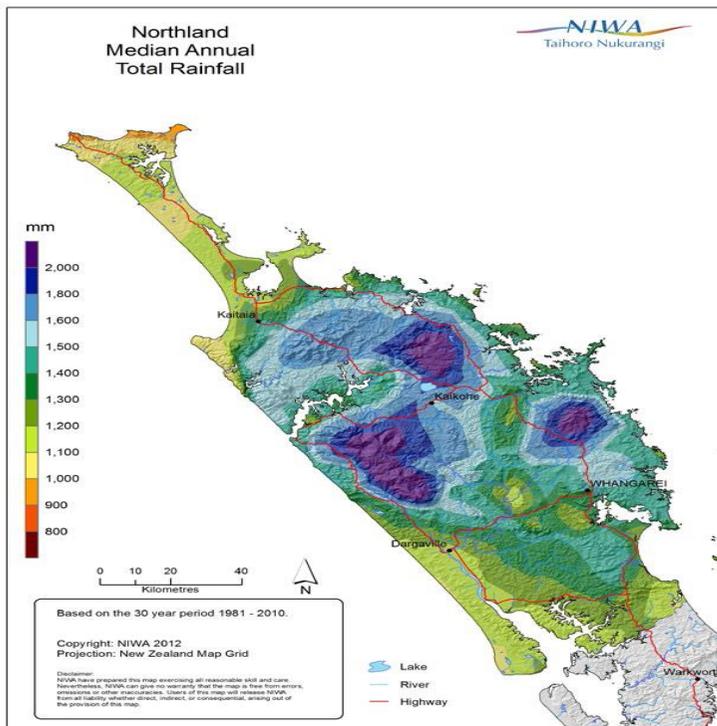


The airflow over Northland is predominantly from the southwest. This is particularly so in winter and spring, but in summer the proportion of winds from the easterly quarter, especially in eastern districts, about equals that from the southwest.

Inland and sheltered areas of Northland are among the least windy in the country, with mean annual wind speeds at Kaikohe and Kerikeri of about 10 km/hr. Spring is generally the windiest season while summer and autumn are the seasons when the greatest numbers of light wind days are recorded.

Northland's proximity to the sea and low altitude causes winds to be very moist with abundant rainfall throughout the region. Rainfall distribution patterns are related to topography with rainfalls ranging from about 1,000 mm in low-lying coastal areas, to approximately 2,000 mm at higher elevations. The following figure shows the distribution of median annual rainfall based on the 1981/2010 period.

**Figure 6.2 : Northland median annual total rainfall**



Seasonal influences on rainfall distribution are also quite well defined. The table below lists monthly rainfall norms and percentages of annual totals for the period 1981/2010 for selected weather stations.

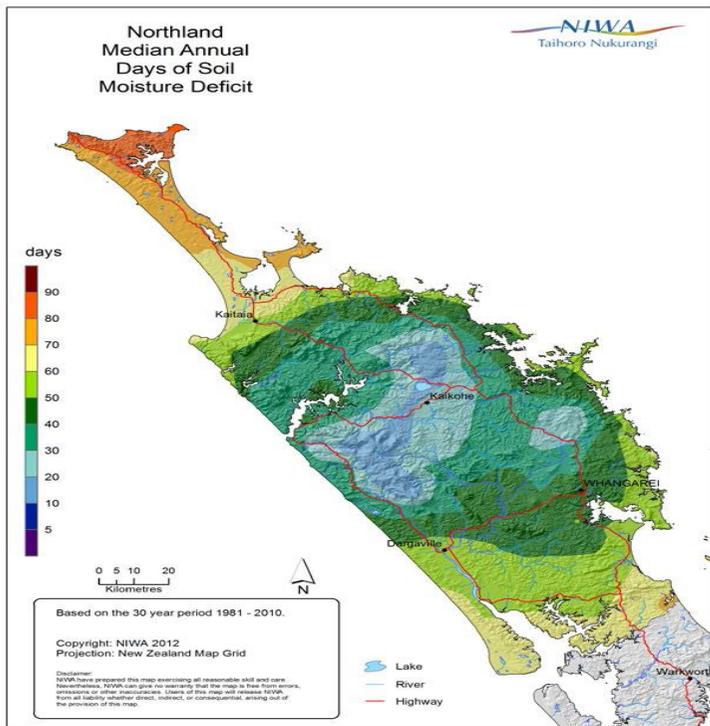
This table clearly shows that rainfall is greater during the winter, June to August, period.

**Table 6.1 : Monthly rainfall norms and % of annual totals**

Location		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Cape Reinga Aws	a	58	65	56	109	96	103	128	95	85	61	57	76	988
	b	6	7	6	11	10	10	13	10	9	6	6	8	
Kaitaia Observatory	a	85	93	81	96	135	151	169	144	128	99	87	100	1367
	b	6	7	6	7	10	11	12	11	9	7	6	7	
Kaitaia Aero Ews	a	69	121	86	119	138	125	136	104	93	93	73	99	1253
	b	5	10	7	9	11	10	11	8	7	7	6	8	
Kaeo Northland	a	88	102	120	140	144	169	200	170	148	113	102	100	1596
	b	6	6	8	9	9	11	12	11	9	7	6	6	
Rawene 2	a	78	72	89	98	128	145	164	142	118	91	83	91	1299
	b	6	6	7	8	10	11	13	11	9	7	6	7	
Opononi	a	86	65	93	94	124	144	133	116	105	93	92	88	1234
	b	7	5	8	8	10	12	11	9	8	8	7	7	
Kaikohe Aws	a	110	106	109	140	139	152	188	159	124	100	96	109	1532
	b	7	7	7	9	9	10	12	10	8	6	6	7	
Kerikeri Airport	a	122	117	138	145	154	185	205	182	162	127	114	123	1775
	b	7	7	8	8	9	10	12	10	9	7	6	7	
Russell	a	91	87	116	117	130	144	172	146	121	97	89	90	1400
	b	7	6	8	8	9	10	12	10	9	7	6	6	
Waipoua Visitor Centre	a	89	82	103	97	146	177	166	153	132	110	93	94	1443
	b	6	6	7	7	10	12	11	11	9	8	6	7	
Whangarei Airport	a	78	98	117	103	110	132	169	127	110	84	76	97	1300
	b	6	8	9	8	8	10	13	10	8	6	6	7	
Dargaville 2	a	64	69	102	107	97	121	141	109	109	82	63	74	1137
	b	6	6	9	9	9	11	12	10	10	7	6	7	

The figure below shows region-wide variability in days of soil moisture deficit per year (days when there is not enough soil moisture to sustain plant growth without irrigation) for the period 1981/2010. The figure shows that, in an average year, there is between 60 and 70 days of soil moisture deficit for most areas of the Kaipara. The area around Mangawhai appears to be particularly dry. It should be noted however, that this model does not take soil type into account. Free-draining sandy soils such as those in the western Kaipara will therefore likely have more days of soil moisture deficit than indicated by this figure.

**Figure 6.3 : Northland median annual days of soil moisture deficit**



From this we see that Kaipara has a pleasant climate with reasonably consistent warm temperatures and plentiful rain and sunshine. However, rainfall is not consistent throughout the year with the risk of both floods and droughts. This creates problems for Kaipara's primary industries and for Council which has a role in supplying potable water, flood protection (together with Northland Regional Council), land drainage and repairing storm damage to roads.

### 6.1.2 Climate change

As New Zealand, and particularly Northland, has a temperate maritime climate (its air temperature is moderated by the surrounding ocean which heats up and cools down slowly) it is expected climate change will have a lessor effect here than in continental countries such as Australia.

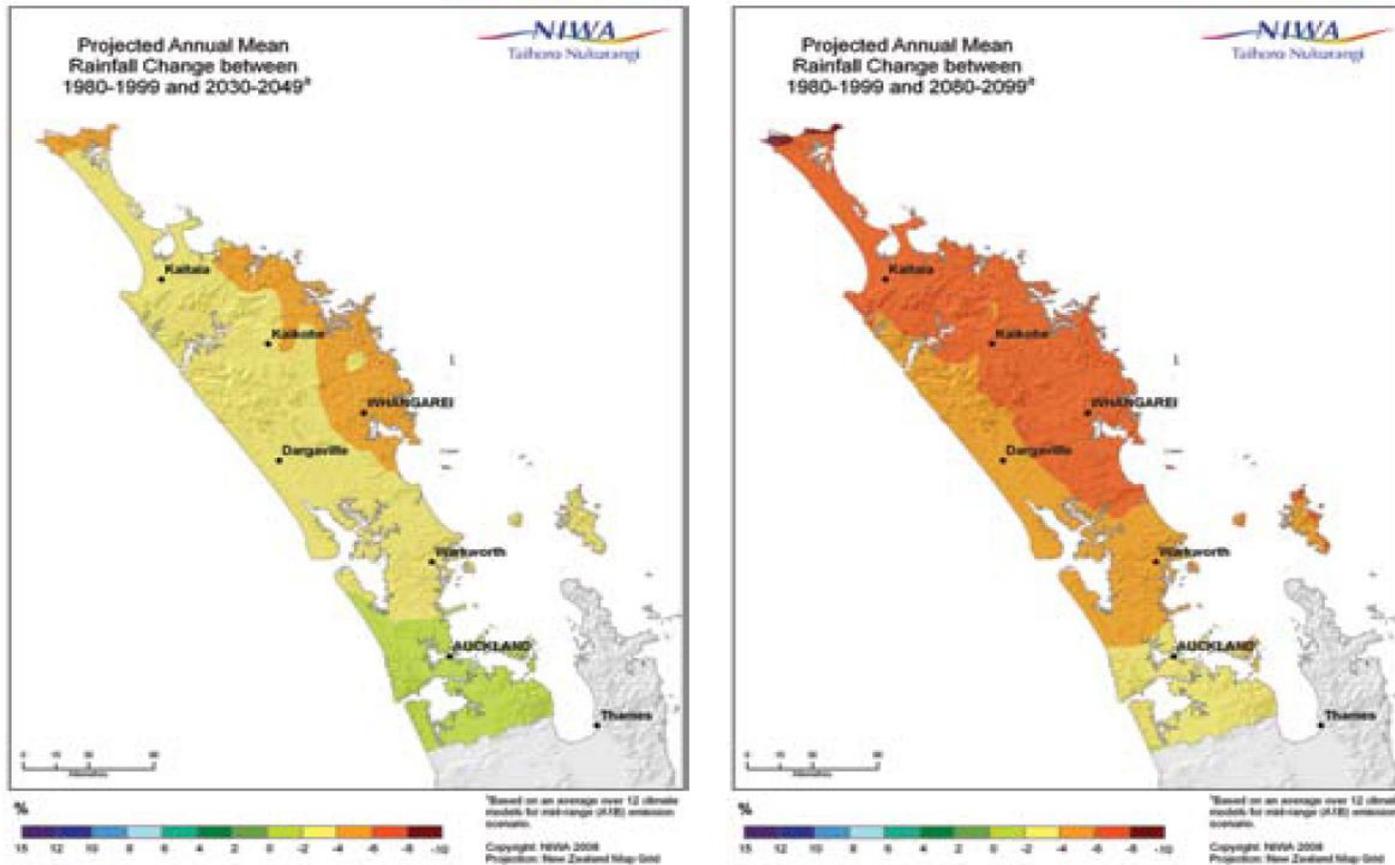
It should be noted that projections of climate change depend on future greenhouse gas emissions which are uncertain. Also, global climate models used to predict future climate vary in their sensitivity to these emissions. The combination of these factors means that projections of future climate are usually expressed as a range of likely values. The information presented below is mostly from "middle-of-the-range" climate change projections.

Northland temperatures are likely to be around 0.9°C warmer by 2040 and 2.1°C warmer by 2090, compared to 1990. To put this in perspective, consider that average temperatures were only 4°C cooler than the present during the last ice age (20,000 years ago); hence slight variations in average temperature can have a large effect on the Earth's climate. By the end of the century, Northland is projected to have about 45-70 extra days per year where maximum temperatures exceed 25°C (source: Ministry for the Environment (MFE)).

New Zealand tide records show an average rise in relative mean sea level of 1.7 mm per year over the 20th century. Sea-levels are expected to continue to increase into the future. The Ministry for the Environment (MFE) recommends planning for future sea-level rise of at least 0.5 m, along with consideration of the consequences of a mean sea-level rise of at least 0.8 m (relative to the 1980/1999 average) by the 2090s. Coastal roads and infrastructure are expected to face increased risk from coastal erosion and inundation, increased storminess and sea-level rise (source: MFE). This also has implications for Council's stopbanks and flood protection works. The height of these may need to be increased to allow for sea-level rise and the increasing severity of storm surges and rain fall events.

Changes in rainfall are also expected for Northland, with the possibility of more extremes of wet and dry. The maps below show the projected trend in annual average rainfall that could be expected by 2050 and 2100, compared to the average for 1980/1999 (source: Ministry of Primary Industries (MPI)). Average annual rainfall is likely to decrease by up to 4% in Auckland and western Northland, and by 5%-10% in the north and east of the region. With this comes a consequent increase in drought risk (source MPI).

Figure 6.4 : Projected annual mean rainfall change



There is already large natural variability in extreme rainfall frequency in Northland from year to year and decade to decade. With climate change, Northland is expected to have more frequent and intense heavy rainfall events during the 21st century in addition to this natural variability (source: MFE).

The intensity of ex-tropical cyclones is likely to increase and when these occur there will be an increased risk of damage from heavy rain and strong winds. More heavy rainfall will increase the risk of flooding, which could become up to four times as frequent by 2090. Changes to flood plains resulting from a higher number of floods may damage infrastructure (source: MFE).

It can also be noted that the number of storms crossing the Tasman Sea is expected to increase in summer and decrease in winter by the end of the century. The intensity of these storms is likely to decrease in both summer and winter (source: MFE).

More frequent, intense rainfall will require ongoing improvements in erosion control and better drainage particularly in the vegetable growing areas where crops are grown in loose (ploughed) soil (source MPI). There will also be consequences for local and regional infrastructure including: land drainage; flood protection; community water schemes; culverts and bridges; erosion control; farm dams; water reticulation and irrigation (source MPI).

By 2090, the time Northland spends in drought is likely to range from minimal change through to more than double, depending upon the climate model and emissions scenario considered. More frequent droughts are likely to lead to further water shortages, increased demand for irrigation and increased risk of wild fires (source: MFE).

Over the 21<sup>st</sup> century, lower river flows are anticipated in the east and north of the North Island as well as in the northeast of the South Island (source: New Zealand Climate Change Centre).

Agriculture may be hindered by the negative effects of climate change such as prolonged drought, increased flood risk, or greater frequency and intensity of storms. However, if these adverse effects can be mitigated, such as by providing dams for flood protection and irrigation, then farmers will likely benefit from faster growth of pasture and better crop growing conditions (source: MFE).

Production of some crops, such as kiwi fruit, is likely to become uneconomic in Northland by 2050 due to a lack of winter chilling. However, warmer temperatures, a longer growing season and frosts becoming rare could provide opportunities to grow new, sub-tropical crops such as avocados and citrus (source: MFE).

Northland could experience increases in temperate pasture yield, although high summer temperatures could become increasingly limiting over time. The extent to which any production gains are realised in pastoral systems will depend strongly on changes in pasture composition (source MPI). Sub-tropical grasses such as kikuyu and paspalum are already widespread and will likely become more so (source MPI).

Animal health effects could include increased heat stress on cattle and increased incidence of diseases such as facial eczema. Lower winter rainfall in eastern Northland could improve conditions for rearing young livestock during the cold months (source MPI).

There may be an increase in the occurrence of summer water-borne and food-borne diseases such as Salmonella. There could also be an increased risk from some vector-borne diseases such as Dengue fever and the Ross River virus (source: MFE). Increased problems with insect pests are also likely (source MPI).

Overall, the extent to which any change in the region's climate affects the Kaipara and its people will depend on their ability to adapt to a changing environment. As shown above, climate change will bring both challenges and potential opportunities for the District.

## 6.2 Coastal

Kaipara's coastal resources can be broadly grouped into two types; the exposed west and east coasts and the sheltered Kaipara and Mangawhai Harbours.

The west coast beaches are challenged by their remoteness and dangerous swimming conditions making them less suitable for holidaymakers and tourists. However, for those with local knowledge or for the more experienced, these beaches offer numerous recreation opportunities. Kaipara's Ripiro Beach runs continuously almost the entire length of the District from Pouto to Maunganui Bluff. This long, wide, continuous beach also serves as a road, is part of the Kaipara Missing Link Cycleway and provides recreational opportunities e.g. for horse trekking and fishing.

The East Coast of the District is comparatively limited in geographic extent, extending from Bream Tail in the north to the District boundary (just north of Te Arai Point) in the south. This area is characterised by its distinctive and popular surf and white sandy beaches. The coast is recognised as an area of significant and outstanding landscape value and also for its ecological values.

The Kaipara Harbour is New Zealand's largest estuarine ecosystem and one of the largest harbours in the southern hemisphere. It has high ecological importance as a major nursery for commercial and recreational fish species, potentially affecting the fish stocks of much of the upper North Island's west coast.

The key challenge facing the harbour is management of sediment and, to a lesser extent, nutrients and pathogens washing into streams and rivers across its 640,000 hectare catchment. The high sediment loads entering the harbour are causing it to become increasingly shallow, congested with mangroves and difficult to navigate as well as smothering benthic biota (living things on the seabed) and reducing water clarity. Better land use management is needed to protect the harbour. Council is currently addressing this through its support of, and involvement with the Integrated Kaipara Harbour Management Group (IKHMG). The IKHMG was initiated by Te Uri o Hau on behalf of Ngati Whatua to achieve "a healthy and productive Kaipara Harbour". The IKHMG has been proactive in promoting this goal, however the scale of the harbour's catchment leaves much work to be done.

The Mangawhai Harbour is recognised for its cultural, landscape, ecological and heritage values. Activities on the Harbour include farming, urban and rural residential living and recreation. The Mangawhai Harbour experiences pressures from stormwater and recreational use, and these are likely to increase as the area's population grows. Key issues will be managing the health of the harbour and the stability of the harbour entrance (which is characterised by an active sand spit), as well as protecting the area's natural character from development pressures.

## 6.3 Infrastructure

### 6.3.1 Roothing

#### *Summary*

Kaipara District Council has its origins in the once local Roothing Boards which were responsible for constructing and maintaining the District's roads. Today Council's primary role remains as a rooding authority. 68% of Council's capital expenditure is spent on rooding. For each \$100 of general rate funds approximately \$46 is spent on rooding.

The Kaipara District Council has a large rooding network (1,574km) of which 72% or 1,126 kms are unsealed and 448 kms are sealed. The extent of unsealed roads in the District is likely to remain significantly unchanged over the foreseeable future as NZTA priorities have made subsidised seal extensions almost impossible to attain. Also part of Kaipara's rooding infrastructure are 353 bridges, 1,136 streetlights, 88 kms of footpaths and more than 6,600 road traffic signs.

Overall, the Northland region has close to 750 kms of State Highways, which are sealed, and around 5,880 kms of local roads, of which 40% are sealed (source: Tai Tokerau Northland Regional Growth Study).

The key interregional traffic and freight routes for the region comprise:

- State Highway 1 linking Whangarei to Kaitaia and south to Auckland. State Highway 1 is the key route carrying 10,000 to 20,000 vehicles per day in some areas of the highway near Whangarei;
- State Highway 12 on the west linking Kaikohe and Dargaville and down to State Highway 1 at Brynderwyn.

These routes are supported by State Highway 14 between Dargaville and Whangarei and State Highway 10 between Pakaraka and Kaitaia. A further supporting route is the Mangakahia/Otaika route which utilises local roads to link State Highway 1 just south of Whangarei with Kaikohe.

Kaipara's rooding network, together with the wider Northland network, faces a number of challenges which contribute to the high cost of rooding maintenance. These include:

- the isolated and rural nature of much of the District and its difficult topography;
- unstable geology combined with regular high intensity rainfall events;
- scarcity and high costs of rooding materials, typically aggregates;
- lower quality/strength of locally available rooding aggregates;

- uncertainly on the impact of the ONRC;
- uncertainly on how the new Health and Safety Act will impact on Council and its service providers; and
- the comparatively high and growing number of heavy vehicle movements due to increasing freight volumes, typically logs.

Roading maintenance requirements are likely to increase as Northland forestry volumes are predicted to increase and truck movements to Northport continue to grow as the port increases its freight handling.

Most of the effects on the roading network of increased forestry traffic will not start to be realised until 2035. However in the short term the amount of harvest is set to increase over the next five years requiring strengthening of approximately 90kms of Kaipara's roading network (2 kms of sealed and 88 kms of unsealed). These road sections are above Council's normal managed strengthen programme and additional budgets to strengthen the unsealed road network that will be utilised by the forestry industry have been programmed over the next six years. However beyond 2035, the impact of forestry on the District's roads will increase considerably (source: MWH, Forestry Roads: Kaipara District Council Forestry Routes Submission, 2014).

Increasing the number of heavy vehicle movements will have a greater effect in Northland than in many other parts of the country as the region's roads are made of a softer roading aggregate and generally have poor quality subgrades.

### ***Resilience***

Recent extreme weather events affecting Northland have drawn attention to the serious lack of resilience in the region's roads. Notable incidents include three heavy rain events in February, March and July 2007 that caused flooding and slips, blocking local roads and State Highways. Other heavy rain events and flooding occurred in April 2008, January 2011, March 2012 and July 2014. The July 2014 event lasted for four days and, at one stage, saw the Far North severed from the rest of the country for heavy vehicles.

The land form of Northland and the Kaipara District is predominantly rolling hill country and this has implications on the maintenance of roads. In Kaipara, the landform overlays an Onerahi Chaos base-layer consisting of variable areas and densities of clay and other material. This means that engineering solutions which may be appropriate in one location may not be effective in another location a short distance away. Uneven subsidence, often but not exclusively restricted to shoulder and road edge areas, is a common issue in the Kaipara District that results as a consequence of the base geological layer and this has adverse implications for the life of a road. The uneven subsidence is not predictable and is further compounded by rainfall events, the effects of which are also unpredictable.

Resilience issues are well recognised in the Northland region, and investments in road improvements have been or are being made across the network, particularly State Highway 1.

Still, there remain several areas of low resilience in the region. Particular low resilient areas on State Highway 1 are the Brynderwyn Hills, where landslides occur in heavy rain, and Te Hana, where there is a single bridge which can be impacted by flooding or structural problems.

There are several other areas of resilience risk on State Highway 1, including Kamo Bypass, Otiria Stream (Moerewa) and Kawakawa; on State Highway 10 at Bulls Gorge and Kaingaroa Bridge; and on State Highway 12 through Dargaville and at Mangatōa.

Apart from delays, when the roads are closed at key points, the diversion routes do not have sufficient capacity to take heavy vehicles. This was amply demonstrated in 2014 when State Highway 1 and State Highway 12 were closed, preventing access to the Far North for heavy vehicles. Local roads also experience closures from flooding and road crashes (source: Tai Tokerau Northland Regional Growth Study).

NZTA has developed a national approach to the assessment and mitigation of resilience issues, largely based on the likelihood of an event occurring and the potential disruption which would result. The criteria used to assess each route place a greater emphasis on the economic impacts of network disruption (compared to possible social impacts), which to a large extent relate to the volumes of freight traffic on the route. State Highway 1 from Whangarei to the Brynderwyns and from the Brynderwyns to the Puhoi Tunnels (Te Hana Bridge) achieves a high rating. Other areas of low resilience currently only achieve a low rating on these criteria. NZTA is also working with the NRC and local councils on the Flood Mitigation Group to identify and initiate flood mitigation work.

Low resilience and quality of roads has real effects on the efficiency of freight movements in the region. For example, Fonterra has noted that the standard of Northland's roads results in the costs of maintaining their tankers can be up to three times the costs experienced in other regions. Resilience also impacts on road safety and maintenance costs (source: Tai Tokerau Northland Regional Growth Study).

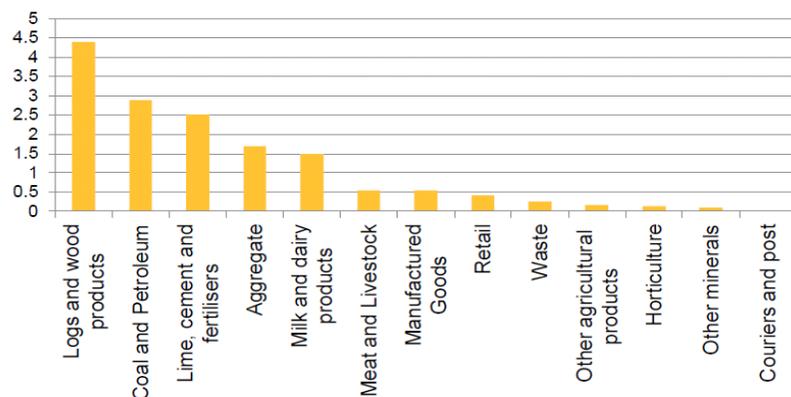
The draft Regional Land Transport Plan 2015-2021 shows that the three Northland districts spend considerably more per kilometre of sealed local road than the national median in order to maintain a fit for purpose level of service (NRC 2014). Central government is also investing in the road network, with \$255 million allocated for maintenance, operations and renewals of the network over 2012/2015, again to maintain an appropriate level of service. Other significant investments by central government include:

- Development of the Puhoi-Wellsford Road of National Significance, at a cost of around \$1.75 billion (see the subsection on this project later in this document);
- Additional investment for key road improvements announced last year included \$10 million-\$13.5 million for realigning State Highway 1 north of Whangarei, including a new southbound passing lane and extension of the northbound passing lane, and \$15 million-\$20 million for improvements on the loop road north to Smeaton's Hill (section of State Highway 1 south of Whangarei) (source: Tai Tokerau Northland Regional Growth Study).

### Road freight

Northland is responsible for about 7% of national road freight, much of which is generated by its primary industries. As shown in the figure below, most of Northland's freight flows comprise logs and wood products, petroleum (reflecting Refining NZ), lime, cement and fertiliser, aggregates and dairy products.

Figure 6.5 : Freight volumes to, from and within Northland, 2012 (million tonnes)



Source: Deloitte et al, 2014 and MartinJenkins calculation

The table below shows that most road freight movements are within the region, though limited quantities of freight are also transported to and from Auckland and to the Waikato and Bay of Plenty (source: Tai Tokerau Northland Regional Growth Study).

Table 6.2 : Northland road freight flows by origin or destination in 2012

Northland Road Freight Flows by Origin or Destination in 2012 (m tonnes)			
Within Northland	From Northland	To Northland	Total
11.85	1.61	1.31	14.77

Source: Deloitte, Richard Paling Consulting, Murray King & Francis Small Consulting, & Cooper Associates (2014).

In 2012, around 14.8 million tonnes of freight was transported within, to and from Northland by road. Assuming an average payload of around 12 tonnes, this freight volume represents around 1.2 million heavy commercial vehicle (HCV) movements in the region per annum. This is consistent with figures on average daily HCV movements on parts of the network.

HCVs account for a relatively high proportion of traffic in some areas of Northland and typically represent about 7-15% of total traffic on State Highway 1 and State Highway 12 (NZTA, 2013). In contrast to total traffic volumes, HCV flows have generally been growing on State Highway 1, particularly around the Port Marsden Highway (26% growth per annum between 2009 and 2013) and at the Kamo Bypass (11% growth per annum). HCV flows on State Highway 12 have declined towards the south but grown north of Dargaville (for example, 15% per annum growth near Kaihu). This reflects the expansion of forest harvesting in the area. In some areas of State Highway 1 there is an average of 50-100 HCVs an hour using the road, particularly around Whangarei and the Port. This reflects that the majority of Northland's logs are exported through North Port near Whangarei which presently has no rail access.

Growth in HCV movements in Northland has been driven by increasing freight volumes. Estimated total freight within, to and from Northland has increased by almost 5 million tonnes between 2007 and 2012. This represents strong growth of around 6.6% per annum. This is largely due to the significant increase in log and wood product freight over the five year period.

According to the 2014 National Freight Demand Study, freight in Northland is forecast to increase by almost 40% in the region over the 30 years between 2012 and 2042, or by a more moderate rate of around 1.1% per annum (as shown in the table below). From this it is reasonable to assume a similar rate of growth in HCV movements in the region, unless there are significant changes in freight transport mode e.g. a revival of rail.

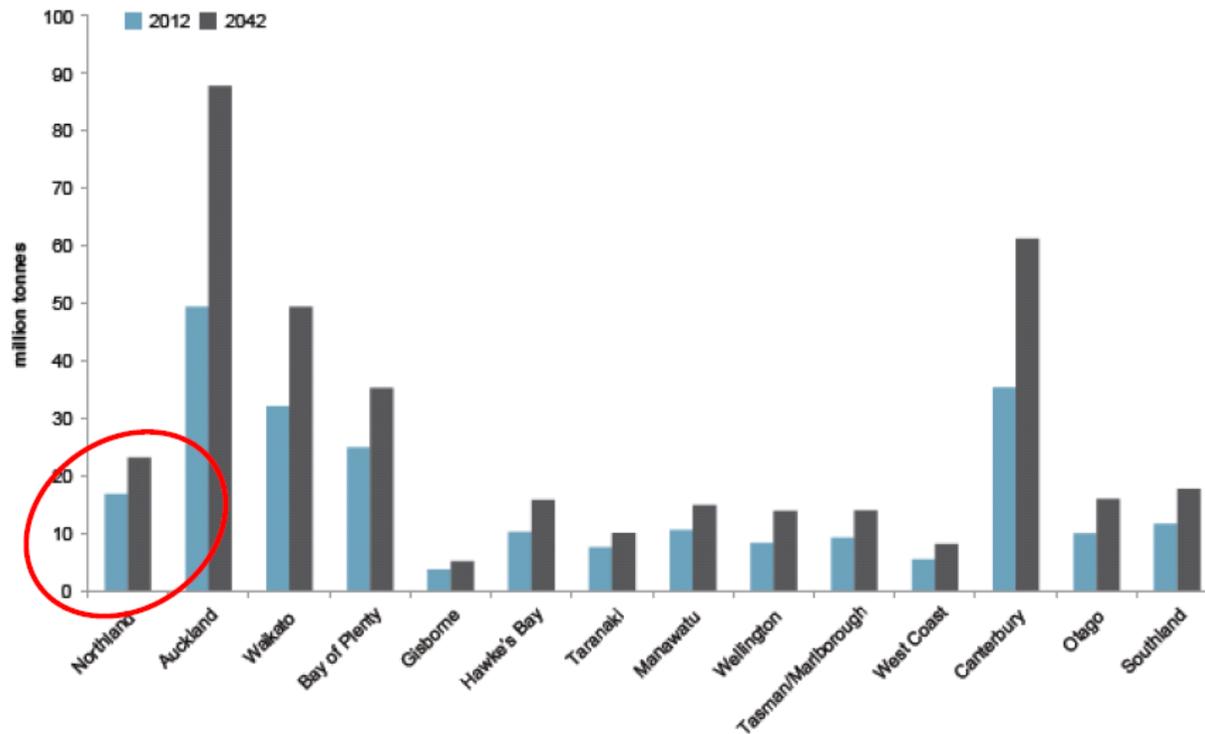
Table 6.3 : Northland total freight flows, 2007, 2012 and 2042 forecast (m tonnes)

	Internal	From Northland	To Northland	Total
2007	7.28	5.08	0.8	13.16
2012	11.99	4.89	1.33	18.11
Forecast 2042	16.34	6.89	2.00	25.23

Source: Deloitte, Richard Paling Consulting, Murray King & Francis Small Consulting, & Cooper Associates (2014).

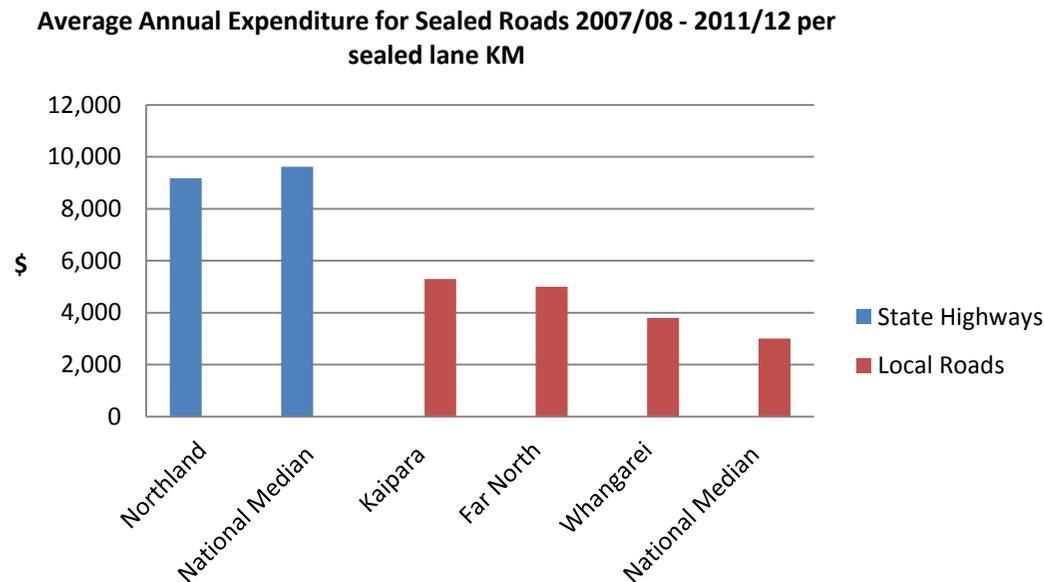
The figure below compares current and projected freight volumes in Northland to other regions in New Zealand.

Figure 6.6 : Regional freight task (current and projected)



This increase in the freight task will require extra resources to ensure levels of service on key freight routes are maintained. This will be a challenge as it already costs more than the national average to maintain Northland’s sealed local roads. The figure below shows how Northland’s districts compare to the national median for expenditure on a kilometre of sealed local road. As can be seen, the three districts of Northland (Kaipara, Far North and Whangarei) spend substantially more than the national median level of spend. By contrast spending on State Highway maintenance in the region is below the national median level of spend.

Figure 6.7 : Average annual expenditure for sealed roads



As has been shown previously, logs and forestry products are the single largest component of road freight in Northland. Understanding forestry harvest trends is therefore important for transport planning in the District and wider region.

The Northland Forest Industry and Wood Availability Forecast 2009, has identified that there are 164,214 ha of forests within Northland of which 38,328 (23%) are located within the Kaipara District. The Ministry of Primary Industries has predicted an increase in Northland forestry production in the order of 75% for the period 2012/2040.

Harvesting in the Kaipara District for the year ended 2012 totalled 588,517 m<sup>3</sup> (source Statistics NZ) equating to 20,649 truck and trailer loads carrying logs originating in the Kaipara District and using local roads that eventually connect to the State Highway network.

The 75% increase in tonnage harvested that is predicted will add potentially a further 15,486 truck movements that will increase at an incremental rate from the 2012 baseline figure of 20,649 to around 36,135 for the year 2040. This is to be carried on approximately 455 kms of Kaipara local roads before it is carried onto the State Highway network (source: Forestry Roads Kaipara District Council Forestry Routes Submission 2014).

The exact timing of harvesting will largely be dependent on the market and demand for timber predominantly in China and Asia. Commercial lots are more predictable than private lots which may depend on individual owners' perceptions of the market or current financial need to harvest.

That said, most of the new growth will not be ready for harvest until 2035 onwards, so significant effects on the roading network for the increased truck movements will not start to be realised until 2035. However in the short term the amounts of harvest is set to increase over the next five years requiring strengthening of 90 kms of Kaipara's roading network (2 kms of sealed and 88 kms of unsealed). These road sections are above Council's normal managed strengthen programme and additional budgets to strengthen the unsealed road network that will be utilised by the forestry industry have been programmed over the next six years. (source: MWH, Forestry Roads: Kaipara District Council Forestry Routes Submission, 2014).

Sealed road sections identified for intervention are generally bridge approaches and are assumed to be a dressing and seal coat on existing weak pavements which cannot be overlaid due to bridge deck heights. The treatment of these sections remains as full construction.

The development of rail (see Section 6.3.2 Rail) could assist in reducing the freight burden on roads, especially for logs and other forestry products. However this is currently viewed as a longer term ambition by the present government. There has instead been a recent move towards permitting 50 tonne vehicles on roads (subject to some restrictions on certain bridges) and up to 66 tonne vehicles (the High Performance Motor Vehicle project) on designated State Highways and local roads. With such a significant proportion of freight being logs, these higher payload carrying vehicles are increasingly preferred over the standard gross vehicle weight of 44 tonnes.

It should be noted that though heavier, these 50MAX vehicles do not necessarily do greater damage to road pavements as they have more wheels and so do not necessarily have a higher axle loading than regular trucks. 50MAX vehicles do however place greater loads on bridges, some of which are currently not strong enough handle the extra weight. The use of HPMVs is therefore limited to specific routes reflecting constrained weight limits on some bridges.

NZTA has been working closely with councils to identify and implement a fit for purpose network of roads for HPMV and 50MAX vehicles. This includes a report identifying the additional maintenance and operational costs that will be required over the next few years due to additional forestry loadings.

However, whilst these vehicles contribute to Northland's economic growth and productivity, they do have an impact on road safety, bridge life and resilience.

Dust issues on unsealed roads are also exacerbated by the increasing size, capacity, and frequency of heavy vehicles using Northland's roads. NRC has found that, at times, dust produced by HCVs breaches national environmental standards on some roads.

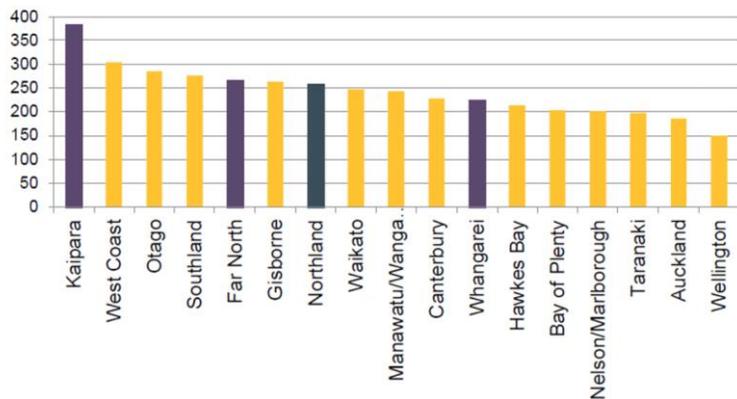
Another issue is the interaction of HCVs and visitor traffic. Northland has a main tourist route – the Twin Coast Discovery Route – which goes up and down both coastlines. Some of this route is also on the main freight route and much of it is on secondary freight routes. Although traffic flows on some roads are relatively low, HCVs can result in a reduced travel experience and lead to concerns about safety, which may be a factor influencing tourist traffic. This issue has been recognised with the construction of a number of passing opportunities on State Highway 1 facilitating overtaking and so helping to reduce driver frustration and improve the level of service on this route. However, the combination of the forecast growth in visitor numbers and forecast growth in HCVs will exacerbate perceptions and driver experience. The abundance of HCVs on key touring routes has an even greater impact on the safety and comfort of cyclists.

**Road safety**

Road safety is a key issue for Northland as the area has a relatively poor road safety record. The number of serious and fatal road injuries has generally been between 120 and 140 per annum over the last five years (with the exception of a dip in 2011). A similar proportion of these accidents occur on both local roads and State Highways (source: Tai Tokerau Northland Regional Growth Study).

Northland’s per capita level of road accidents (serious and non-serious) is relatively high at 259 per 100,000 persons. Kaipara’s rate is one of the highest of all territorial authorities at 359 per 100,000 persons. The number of serious road crashes (involving death or injury) per capita in Northland has also tended to be at the high end relative to other regions over the last 10 years. Generally Northland has been one of the three highest regions for serious road crashes. The following figure shows how the Northland region and its constituent districts placed among other New Zealand regions in terms of road accidents.

**Figure 6.8 : Accidents per 100,000 population, by region 2013 (Source NZTA)**



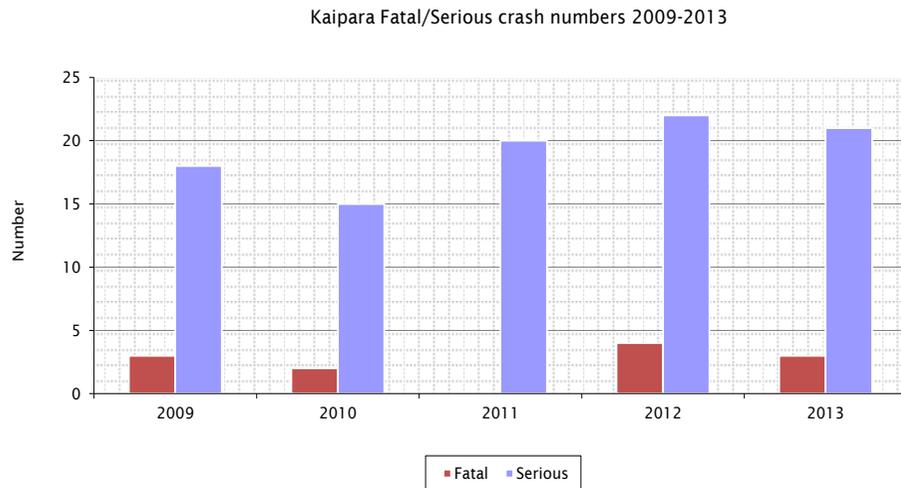
There were 231 crashes causing serious or fatal injuries in Kaipara between 2004 and 2013. This compares to 525 in Far North and 456 in Whangarei over the same period.

The following table and associated graph show the number and severity of crashes in Kaipara in 2013 and previous years (source: NZTA).

**Table 6.4 : Number and severity of crashes in Kaipara 2004/2013**

Area	Crash Severity	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Grand Total
Far North District	Fatal	12	11	13	13	8	13	10	6	7	10	103
	Serious	45	46	44	60	41	40	36	42	40	28	422
	Minor	171	125	172	177	136	142	135	125	148	116	1,447
	Non-injury	336	341	331	360	373	346	342	283	265	290	3,267
	Total	564	523	560	610	558	541	523	456	460	444	5,239
Kaipara District	Fatal	5	5	5	4	4	3	2		4	3	35
	Serious	20	20	16	19	25	18	15	20	22	21	196
	Minor	65	62	71	79	52	70	57	44	33	47	580
	Non-injury	112	83	132	123	128	115	109	114	90	91	1,097
	Total	202	170	224	225	209	206	183	178	149	162	1,908
Whangarei District	Fatal	6	6	12	11	15	14	8	1	5	6	84
	Serious	57	42	40	36	41	32	37	22	34	31	372
	Minor	154	179	158	152	173	158	147	112	136	139	1,508
	Non-injury	564	536	552	606	571	602	549	456	435	381	5,252
	Total	781	763	762	805	800	806	741	591	610	557	7,216
<b>Grand Total</b>		<b>1,547</b>	<b>1,456</b>	<b>1,546</b>	<b>1,640</b>	<b>1,567</b>	<b>1,553</b>	<b>1,447</b>	<b>1,225</b>	<b>1,219</b>	<b>1,163</b>	<b>14,363</b>

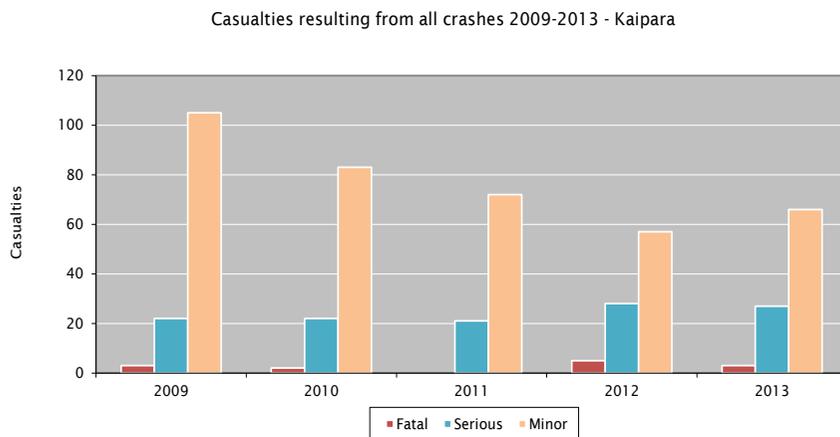
**Figure 6.9 : Number and severity of crashes in Kaipara 2004/2013**



Three people were killed in motor vehicle accidents in Kaipara in 2013. A further 27 were seriously injured and a further 66 received minor injuries.

The following figure compares the numbers of fatally, seriously and minor injured casualties as they have varied over the period 2009/2013.

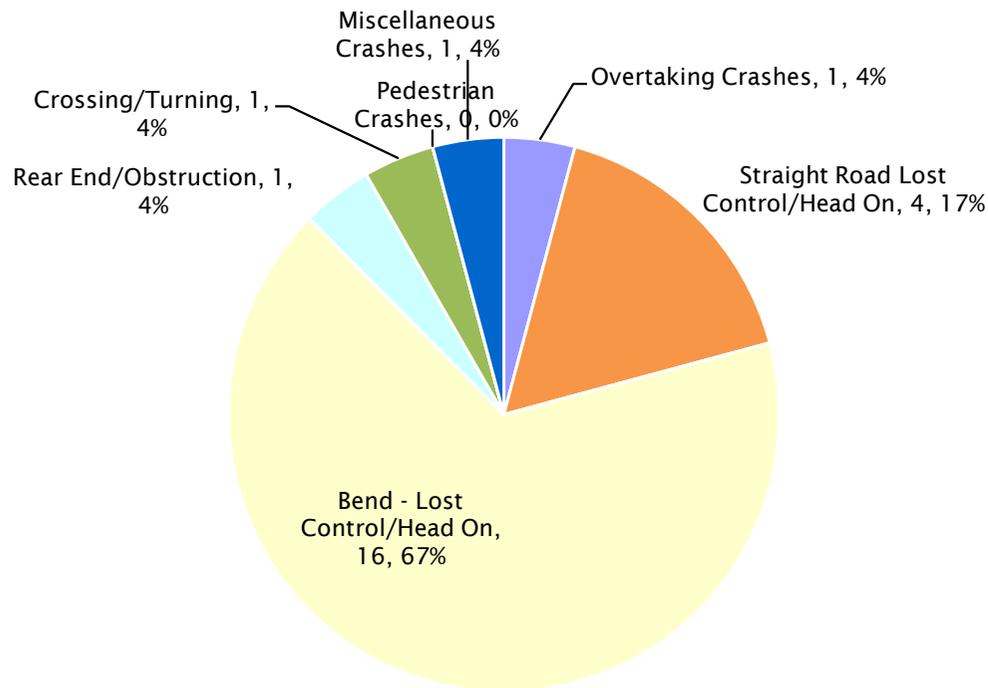
**Figure 6.10 : Casualties resulting from all crashes 2009/2013 - Kaipara**



The following figure gives a breakdown of the circumstances under which Kaipara serious and fatal crashes occurred between 2009 and 2013. The figure shows that the majority of serious crashes occurred as a result of drivers losing control of their vehicles or veering off course.

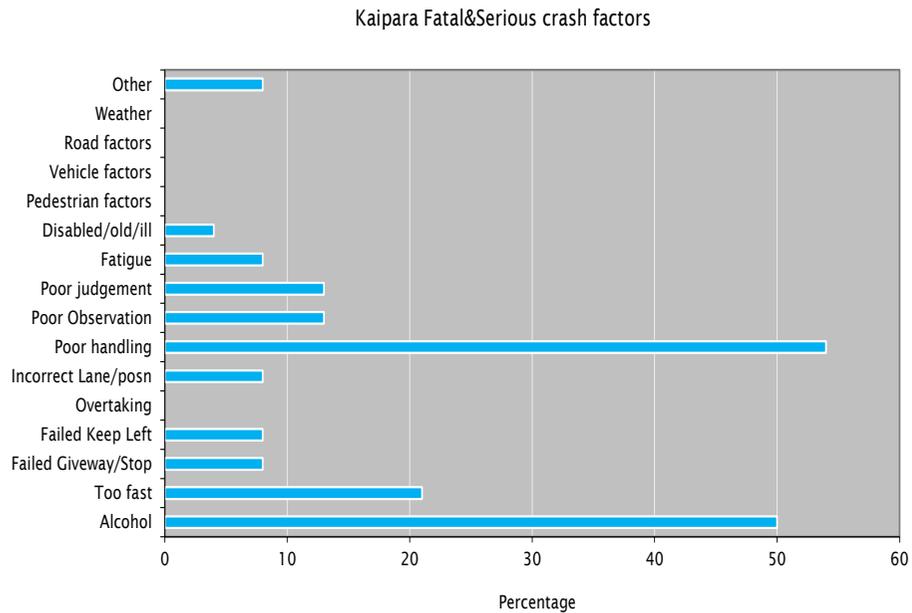
Figure 6.11 : Fatal and serious crash type - Kaipara

Fatal&Serious crash type - Kaipara



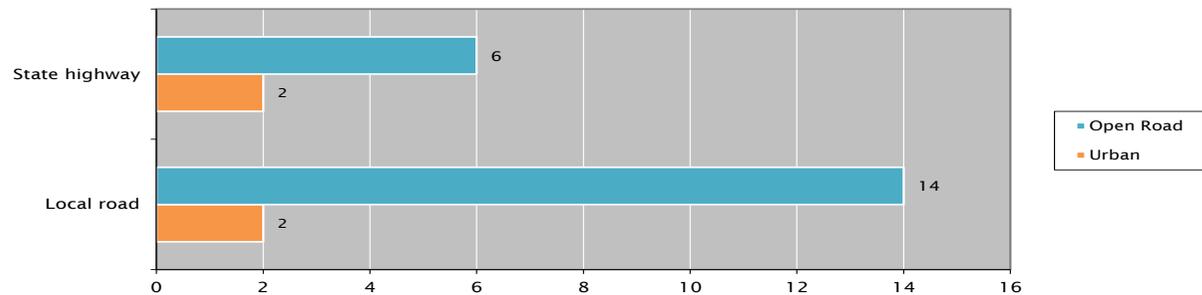
As the following figure shows, the primary factors contributing to crashes in Kaipara were poor handling (which was a factor in 54% of serious/fatal crashes) and alcohol (a factor in 50% of serious/fatal crashes). Excessive speed was also a common factor, contributing to 21% of serious/fatal crashes.

Figure 6.12 : Fatal and serious crash factors - Kaipara



The following figure shows how the number of serious/fatal road accidents on Kaipara District Council administered local roads compared to those on State Highways in the District. From it we see that serious/fatal crashes are more common on local roads than State Highways and more common in rural areas than in urban. This later trend may be because urban areas tend to have lower speed limits than in rural areas.

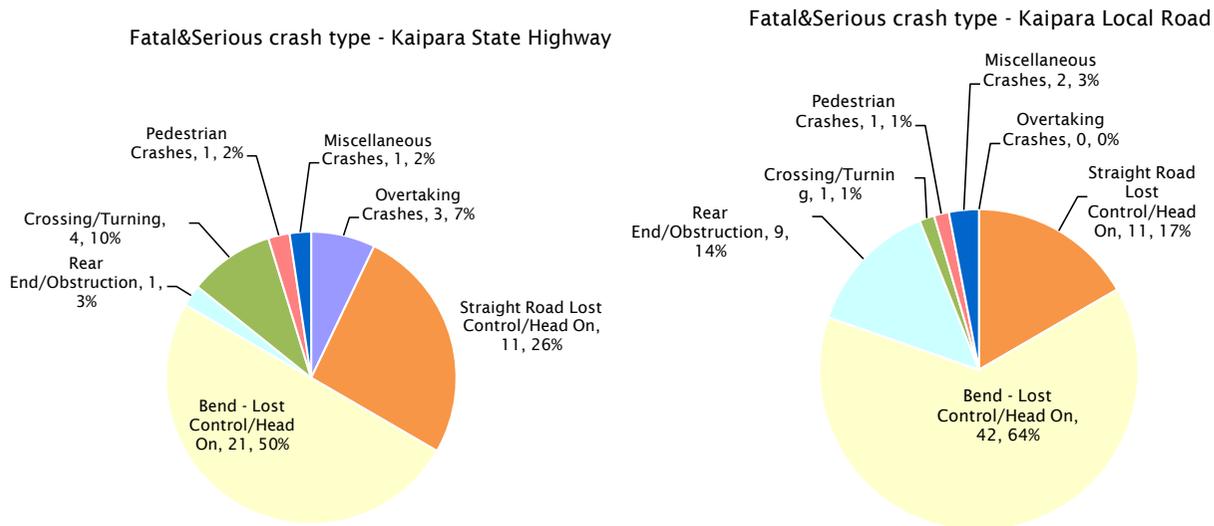
Figure 6.13 : Fatal and serious crash numbers - Kaipara



Analysis of the causes of serious and fatal crashes on both local roads and State Highways shows that crashes on local roads are more likely to be the result of losing control on a corner (64% of crashes) than crashes on State Highways (50%). Local roads also have a higher incidence of rear end/obstruction crashes (14%) compared to State Highways (3%). A higher percentage of crashes on State Highways were caused by drivers losing control on straights (26%) than on local roads (17%).

These differences are shown by the figures below.

**Figure 6.14 : Fatal and serious crash type Kaipara State Highway and Kaipara local road**



Increasing the safety of rural roads and roadsides to reduce the incidence of loss of control and head-on crashes is a high strategic priority identified in Safer Journeys. Locally rural road loss of control/head-on crashes are of concern due to the number of deaths and/or serious casualties resulting from these crashes, which reflects a high level of collective risk, and also when viewed against the local road use, which reflects a high level of personal risk (source: NZTA).

**National financing**

NZTA has announced that it will work in partnership with Local Government New Zealand (LGNZ) to invest \$13.9 billion in the nation’s roads through its 2015-2018 National Land Transport Programme (NLTP). This represents a partnership between local authorities who invest local funding on behalf of ratepayers and NZTA which invests national funding from taxes, charges and fees through the National Land Transport Fund (NLTF). The \$13.9 billion investment includes \$2.72 billion from local government, with \$10.5 billion from the NLTF and the remainder from the Crown. The \$13.9 billion investment marks a 15% increase compared to the 2012-2015 NLTP.

The plan incorporates an update of Funding Assistance Rates (FAR) and the establishment of the One Network Road Classification (ONRC) system. The 2015-2018 NLTP has been prepared with input from 16 regional transport committees and Auckland Transport developing and submitting regional land transport programmes outlining activities to be prioritised for NLTP funding (source: LGNZ press release 30 June 2015).

### ***One Network Road Classification***

The ONRC involves categorising roads based on the functions they perform as part of an integrated national network. The classification will help local government and the NZTA to plan, invest in, maintain and operate the road network in a more strategic, consistent and affordable way throughout the country.

The ONRC project has three elements. The first is classifying roads into categories based on their function in the national network. This was completed in December 2013 following extensive engagement with road controlling authorities and other stakeholders.

The second element is the Customer Levels of Service (CLOs), which will define what the fit for purpose outcomes are for each category in terms of mobility, safety, accessibility and amenity. The CLOs is currently in development and is being worked on at a national level.

The third element is the development of the performance measures and targets, which effectively determine how the categories and customer levels of service translate into specific maintenance, operational and investment decisions.

The ONRC project is likely to lead to a review of the way in which NZTA subsidises local roads, including possible changes to the current levels of service supported by NZTA. It is not yet certain if this will result in an increase or decrease in the support received by Council beyond 2018. The ONRC project is therefore an identified opportunity for Council and one which it must continue to monitor and engage with.

### ***Puhoi to Warkworth motorway extension***

The Puhoi to Warkworth motorway extension project will extend the four-lane Northern Motorway (State Highway 1) from the Johnstone's Hill tunnels to just north of Warkworth. This will reduce travel times to Auckland and support the growth of Warkworth as a satellite town to ease pressure on the Auckland housing market. Warkworth, together with Pukekohe, have been identified as rural satellite towns in the Proposed Auckland Unitary Plan. Warkworth has potential to function as an employment and service hub for the north and has the ability to accommodate significant growth over the long term.

Building a safer, more reliable State Highway 1 connection for motorists, freight and tourism will also encourage economic growth north of Warkworth, particularly in centres such as Wellsford, Kaiwaka, Mangawhai and Maungaturoto. Flow-on effects are also likely to be felt in other Northland centres however particularly in Whangarei and the Marsden Point area as these growth areas are currently heavily reliant on State Highway 1 to provide a link to Auckland.

In September 2014, a Board of Inquiry confirmed approval of NZTA's application for designation and resource consents for the Puhoi to Warkworth motorway extension. This designation has been included in the Proposed Auckland Unitary Plan. However no designation has yet been made for the proposed second extension to Wellsford. NZTA is currently not in a position to designate this next stage of the project, however if this next stage proceeds it will be NZTA's intention for a designation to be included in the Auckland Unitary Plan.

At this stage options to progress the second stage of the motorway extension project from Warkworth to Wellsford are being considered as part of a long term strategy to identify a programme of improvements for the entire Auckland to Northland State Highway corridor.

At present, the Government has given approval to allow NZTA to finance, design, build, manage and maintain the Puhoi to Warkworth motorway through a Public Private Partnership (PPP).

The next steps in the PPP procurement process for the project will see a shortlist of PPP consortia expected to be identified by the third quarter of 2015, which will be followed by the selection of a 'preferred bidder' by mid-2016, and the awarding of the PPP contract in the last quarter of 2016. These timeframes are indicative only and may be subject to change.

Tentatively, construction of the Puhoi to Warkworth motorway, under a PPP arrangement, could possibly start in late 2016 with the road completed and open by 2022 (source: NZTA Press Release 27 May 2015)

### **6.3.2 Rail**

Northland has two rail lines; the North Auckland Line and the Dargaville Branch. Of these, the North Auckland Line augments State Highway 1 by providing an alternative route for heavy freight between the Far North, Whangarei and Auckland. The Dargaville Branch formally provided an alternative freight route to State Highway 14 and to some extent State Highway 16 by linking Dargaville to the North Auckland Line and therefore Whangarei and Auckland. However services on the Dargaville Branch were suspended in October 2014 due to poor track conditions and low freight volumes. This means that the forestry traffic the line was carrying is now adding to road freight volumes on State Highway 14. The North Auckland Line continues to be used for freight services.

The North Auckland Line is 281 kms in length (152 kms of which are in Northland), originating in West Auckland and terminating west of Kawakawa at Otira.

The track runs through hilly terrain for a large part of its length and has numerous curves. There are 13 tunnels and 106 bridges along its length.

The National Freight Demand Study estimates that in 2012 the North Auckland Line carried 140,000 tonnes of freight within Northland, 70,000 tonnes of freight from Northland to Auckland and beyond and 20,000 tonnes of freight from Auckland to Northland; 230,000 tonnes of freight in all (source: Tai Tokerau Northland Regional Growth Study).

These flows are very small when compared with the road freight volumes of close to 18 million tonnes, representing 1.3% of freight volume. A reduction in rail freight has occurred over the last decade with the closure of Port Whangarei and the opening of Northport, which has no rail link (there was around 1 million tonnes of rail freight in 2000).

Freight figures from Kiwi Rail suggest a higher level of freight flows, 330,000 tonnes, on the line in 2013. Most of the freight (63%) is logs and wood chip (some of which goes to Tokoroa), dairy product such as milk powder and butter (23%), and refined china clay and general freight (14%) (Source: Tai Tokerau Northland Regional Growth Study). Although rail freight flows are currently very small, there is the potential for more logs, wood chip and dairy freight to be moved by rail in future, particularly given the expected growth in those industries, particularly forestry. However, rail's contribution to the total freight effort is likely to remain proportionately low without a link to Northport (the destination of most of Northland's logs).

Movement of freight on the rail line is also constrained by the low standard of the line. It is understood this is due to deferred maintenance and a lack of improvements/realignments since the line was first constructed. In particular, five of the tunnels between Auckland and Whangarei are too restrictive to allow hi-cube shipping containers (larger than normal shipping containers) from being carried. Low floor wagons could be used to transport hi-cubed containers in the interim (until the floors of these tunnels can be lowered), though the increased weight and capacity of these containers would also require several bridges to be upgraded. Feedback from Kiwi Rail suggests that providing for low floor wagons and strengthening bridges to cope with increased weight would cost significantly less than upgrading the tunnel profiles to allow for hi-cube shipping containers. This would facilitate increased freight but the decision to do so will depend on freight demand and the estimated costs and benefits.

There are speed restrictions in several places (40-50 km/h and down to 10-15 km/h at certain tunnels and bridges). This makes travel times much longer than using road transport, however this is not a concern for some kinds of non-time-dependent bulk freight such as logs.

A branch line to link Marsden Point with the rail network has been proposed and considered several times in the past. In 2009, a preferred Oakleigh (south of Whangarei) to Marsden Point route over 19 kms was designated for rail, through a joint venture arrangement between Northland Regional Council and Kiwi Rail. This designation protects the rail line route from development that would compromise the route in future. According to the Tai Tokerau Northland Regional Growth Study this is currently regarded as a very long term (20 years) option, and its viability is subject to greatly increased freight demands and the potential role of Northport in container freight.

It is possible that, over the long term (20 years), Northport will expand its capability as a container port to support what is likely to be more limited freight capacity in Auckland in future. Maintaining the line (even if mothballed at a future date) and the Marsden Point rail link route designation will keep this option open (source: Tai Tokerau Northland Regional Growth Study).

The Tai Tokerau Northland Regional Growth Study notes that a number of separate studies have been undertaken on different parts of the transport network in recent years (including a social impact assessment of the northern rail line; a review of how to turn rail into a self-sustaining business; a transport and advocacy strategy for the Far North; the upper North Island freight study; the upper North Island port study). However what is missing is a full assessment of likely future freight and passenger (including tourism) flows on different routes and modes in Northland, based on likely scenarios. It is noted that such a study was undertaken in 2002 and updated in 2007, and both reports made several recommendations for a regional integrated transport network (road and rail as part of an integrated network). Considerable changes in the network have occurred since the last study, hence it may be prudent to revisit this matter (source: Tai Tokerau Northland Regional Growth Study).

In conclusion, the contribution of rail in reducing heavy vehicle movements on Northland's roads, and therefore lowering road maintenance cost and improving travel times and road safety, needs to be considered when assessing land transport in the region.

### **6.3.3 Wastewater**

Council operates wastewater schemes in the Dargaville, Te Kopuru, Glinks Gully, Maungaturoto, Kaiwaka and Mangawhai communities. The assets that form Kaipara's wastewater systems include treatment plants (6), pump stations (32), rising mains (31 kms) gravity lines (107 kms), manholes (approximately 1,565) and connections (4,323). The condition of Kaipara's wastewater assets is not well-documented. There is a programme of data cleansing and condition assessments planned over the next three years. This has already begun for critical assets including those aboveground. The least knowledge is in respect to underground assets. It is known that there are sections of the older schemes that have old asbestos cement pipes in poor condition. Other known issues are:

- Dargaville has over 10,000 m of pipes aged over 60 years;
- Maungaturoto, Te Kopuru and Kaiwaka have most of their pipes aged over 30 years.

While Dargaville has the biggest backlog, renewals will also be due in other schemes in 10 plus years. For some communities where population is in decline, funding these renewal programmes may be very difficult.

Stormwater infiltration is another issue and places capacity challenges on network pipes and treatment plants. Dargaville has the greatest level of infiltration and also has the greatest risk of flooding which would further increase infiltration risks.

There is also the risk of unplanned sewage discharges from pump stations occurring during power failures. This creates environmental risk as overflows of raw sewerage can go into waterways.

Trade waste going into the Dargaville sewerage treatment plant also creates greater work for the retention ponds. This means that they require more de-sludging at a cost to all properties connected to the system.

Aside from Mangawhai, much of Kaipara's wastewater infrastructure is aging or aged, so significant expenditure on renewal work will be needed over the next 30 years. There is a backlog of renewal work for Dargaville and the quickly approaching renewal wave needed for all other schemes except Mangawhai, will be a challenge of affordability for these communities.

Looking at the individual schemes, Dargaville is serviced by a wastewater treatment plant, 40 kms of wastewater pipelines, 15 pump stations and 6 kms of rising main pipes that pump wastewater from pump stations to the treatment plant.

Dargaville's wastewater system and pipelines are aged and there is a significant amount of deferred renewal work to be addressed.

Te Kopuru's wastewater treatment system and pipelines are also old and there is a backlog of renewal work to be done. Te Kopuru's small population makes affordability a challenge. A full upgrade and replacement may hence be uneconomic and unaffordable under the current funding model.

Glinks Gully's wastewater scheme is designed to service a peak population of 72, and the system connects to 18 septic tanks serving 24 houses located on private properties. The wastewater treatment system and pipelines are aging, and replacement work will be needed in the future. The small population and small number of properties may make a full upgrade and replacement uneconomic e.g. a \$420,000, 30 year capital expenditure programme for 24 properties.

Maungaturoto township is serviced by a treatment plant constructed in 1992, comprising 11 kms of wastewater pipelines, 3 pump stations and 1.2 kms of rising main pipes that pump wastewater from pumping stations to the treatment plant. The system is also aging and there are deferred renewal works to be addressed. Maungaturoto Station Village is serviced separately by a small scheme comprised of a series of septic tanks which discharge to a wetland which then drains to a stream.

Kaiwaka's wastewater system consists of 4 kms of gravity pipeline, 71 manholes, 1 pumping station and a single treatment plant. Kaiwaka's wastewater system is aging, and will need replacing in the future.

The Mangawhai Community Wastewater Scheme (MCWWS) is a 'state of the art' collection, treatment and reuse system. Mangawhai's wastewater system and reticulation network is fairly new.

In future the following technological improvements are anticipated to improve options for wastewater management in the Kaipara:

- Improvements to membrane filtration resulting in very high quality wastewater treatment;
- Improved technology and techniques in pipeline rehabilitation;
- Low pressure wastewater systems which eliminate the need for deep pipe systems; and

The following trends should be considered when making wastewater management decisions in the Kaipara:

- Membrane filtration and other treatment technology becoming more affordable;
- Higher environmental standards for discharge from wastewater systems into waterways; and
- Increased interest and affordability in stand-alone private wastewater systems and storage in non-urban areas.

#### **6.3.4 Drinking water supply**

Council operates community water supply schemes in the Dargaville (including Baylys), Glinks Gully, Ruawai, Maungaturoto and Mangawhai communities.

The assets associated with the five water supply schemes in Kaipara include:

- 15 water source points;
- 4 water treatment plants;
- 7 pump stations;
- 17 storage facilities;
- 175 km of reticulated piping;
- 3,583 connections; and
- 3,828 points (fire hydrants, valves, meters).

The condition of these assets is largely unknown. While most of the critical assets have been condition-assessed over the last two years, the pipe network remains to be done. Currently, Council does not know the material of 40,000 m of pipes, nor does it know the size of 30,000 m of pipes. Furthermore, some 20,000 m of pipes in Dargaville are over 50 years old, 19,000 m of pipes in Maungaturoto are over 40 years old and all other schemes have pipes as old as 40 years however not at the quantity of the others. The exception is Mangawhai where the pipe network is newer.

There is a backlog of renewal work to be done, mainly pipes, especially in Dargaville and Maungaturoto. What is more, level of service related work is currently underway, planned or to be investigated, to bring water treatment plants up to the standard needed to comply with Drinking-water Standards for New Zealand 2005 (Revised 2008). Most upgrades relate to increased monitoring of water quality.

Compliance with the drinking-water standards represents a significant cost. There is the risk that drinking water standards will be raised in future. Any raising of drinking water standards may be unaffordable for Kaipara. Current standards are already challenging. Two of the schemes (Glinks Gully and Mangawhai) do not currently meet the drinking-water standards.

The tendency of Dargaville and Baylys' main water source at Waiparataniwha Stream (near Kaihu) to dry up in droughts, makes it hard to provide security of supply to these communities and industries located in these communities (including Silverfern Farms' Dargaville meatworks which is a major local employer). This is a concern for the coming 2015/2016 summer season as a strengthening El Nino weather pattern is already threatening to bring another drought on Northland.

There is a storage dam (located off Opanake Road) built for the Dargaville water supply, however this is not connected directly to the water supply network. The water is instead released into a stream which connects to the Kaihu River, from which Dargaville draws its water. The cost of connecting this dam directly to the Dargaville system is around \$2.8 million. There are no plans to build this connection in the short or medium term. This means that security of supply for Dargaville will require a different solution including demand management and conservation.

Climate change may bring with it lesser rainfall over summer, with increased rainfall at other times of the year. This may result in more severe security of supply issues in Dargaville, and perhaps for those homeowners and businesses who have their own rainwater collection systems.

The Northland District Health Board has submitted to Council that they would like to see Council increase the public water supply to more properties. Council has no plans to do this, and in fact is not increasing connections at the periphery of towns because of supply and demand issues.

Looking closer at the individual schemes; the Glinks Gully scheme supplies water to 85 properties in what is a small community with a suspected declining population. The scheme is old and in need of asset renewal work, and the water plant will not produce water to the drinking-water standard at the time it will be legally required. While the scheme will continue to comply with its 'Take Consent', maintaining this aging system for a small number of users may mean high costs.

The Dargaville water supply is used by both Dargaville and Baylys communities. It services about 4,683 people and there are 2,782 connections to the system (most use water treated by the system, but there are some connections to the raw water lines as well). There is a significant amount of deferred renewal work to be addressed in this scheme. Furthermore, the tendency of the main water source at Waiparataniwha Stream to dry up in droughts makes it hard to provide security of supply.

The Ruawai Water Supply system has 251 connections and services approximately 500 people. Much of Ruawai's water supply infrastructure is aged and renewals have commenced. Ruawai's relatively small population may make affordability challenging.

The Maungaturoto water supply services approximately 895 people. There are in total 447 connections; 410 from the Township and 37 from the Railway Village. One of these connections is Fonterra's Maungaturoto Dairy Factory which uses the majority of the water from this scheme. Key issues are the age of the infrastructure, a backlog of deferred renewals and affordability.

Mangawhai has a small water scheme with only 18 connections. The scheme primarily provides potable water to Mangawhai Camp Ground, Wood Street shops and community housing. Maintaining water services for a small number of users means high costs, with relatively little benefit for the wider community.

Mangawhai's water supply does not comply with the Drinking-water Standards for New Zealand 2005 (Revised 2008). The cost to upgrade the water supply to meet these new high standards, which require increased treatment and monitoring of water quality, is currently being investigated.

In future the following technological improvements are anticipated to improve options for water supply management in the Kaipara:

- Technological improvements in treating raw water;
- Improved technology in water monitoring;
- Improved technology for conserving, purifying, recycling, reclaiming and desalinating water; and
- Improved technology in stand-alone (private) systems.

The following trends should be considered when making water supply management decisions in the Kaipara:

- Higher standards for drinking water quality and monitoring (as part of national drinking water standards);
- Water conservation becoming more of a focus, and water being used more efficiently;
- Recycling and reuse of water;
- Rainwater harvesting;
- Water becoming more regulated; and
- Increased interest in stand-alone private water systems and storage.

### 6.3.5 Renewable energy

The Kaipara District is fortunate to have the opportunity to develop renewable energy resources. These include opportunities for large windfarms (potentially supplying up to 300 megawatts) at Glinks Gully (Red Hill), Rototuna (Pouto Peninsular) and Pouto. The District also has the opportunity to develop tidal power.

Meridian Energy has spent five years investigating the potential for a windfarm on the Pouto peninsular. The planning for this project is now well-advanced, although final project size has not yet been determined. A portion of the windfarm site has been purchased and the project has support from Te Uri o Hau. Meridian Energy has stated that the windfarm is a desirable project in its portfolio however the timing is not right to progress for consent as the demand for electricity on the national market is currently insufficient to warrant new generation construction. This trend looks set to continue for the foreseeable future. This project may become a reality as Auckland's growth fuels demand for energy and as changing social and political views increasingly favour renewable sources for electricity generation.

Changing social and political views are also contributing to an increase in the use of electric cars. While electric cars remain something of a novelty, their use is growing. Auckland Council and Northpower are now among agencies who have taken to using electric cars as part of their company vehicle fleet.

Northpower has installed a public electric vehicle fast-charge station at the Alexander Street substation in Whangarei. Furthermore Auckland Council has installed an electric vehicle charger outside the public library in Wellsford to provide a recharge station along the route between Auckland and Whangarei.

Over 2015 Northpower plans to start dotting electric vehicle charging stations in townships throughout Kaipara and Whangarei, creating something of an 'electric vehicle loop' so their customers can easily use their electric vehicle as a prime mode of transport. Northpower hopes to have destination chargers in places such as Dargaville and Ngunguru (and others), along with bailout points (emergency stop points) at the likes of their Ruakaka substation. It is anticipated, there will be more charge stations placed throughout the Northpower network over time as electric vehicle take-up grows.

However, the move could be a brave one given that electric car technology is rapidly evolving, and some systems do not require a plug-in point. Time will tell how successful the uptake of this technology will be.

### 6.3.6 Information technologies

A smaller proportion of households in Northland have internet than in other regions. As shown in the table below, just 68% of households in Northland had internet access in 2013, while nationally close to 77% of households had internet access. This means that over 17,300 households in the region did not have access to the internet at the time of the 2013 Census. Access in the Far North was the lowest in the region at 64%. Positively, there has been a large increase in the proportion of Northland households with internet access over 2006/2013, however this increase merely mirrors national changes (source: Tai Tokerau Northland Regional Growth Study).

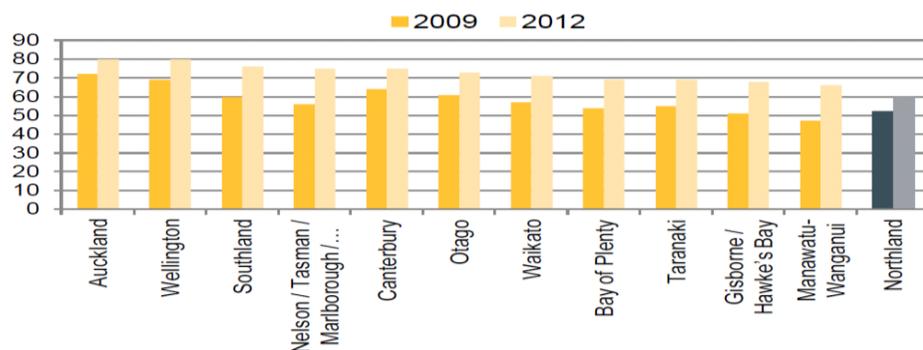
**Table 6.5 : Percentage of households who have access to the internet**

Year	Northland	New Zealand	Far North	Whangārei	Kaipara
2013	68.0%	76.8%	63.8%	71.5%	66.0%
2006	51.8%	60.5%	49.3%	54.4%	48.9%

Source: Statistics New Zealand, Census

Broadband is particularly important for a remote and generally rural region like Northland as it helps residents and businesses maintain connections with other people, customers and suppliers. Despite this, broadband uptake in Northland has been low, with just 60% of households having broadband access in 2012, compared to the New Zealand average of 75%. Like all New Zealand regions, uptake has increased overtime, but Northland has the lowest uptake of all regions. This is of concern given the remoteness of the area. Furthermore, in 2009 Northland was not the lowest performer, the East Coast and Manawatu-Wanganui having a lower percentage of households with broadband, however these regions have since surpassed Northland, leaving Northland on the bottom (as shown in the following figure) (source: Tai Tokerau Northland Regional Growth Study).

**Figure 6.15 :Percentage of households with broadband access, 2009 and 2012.**



Source: Statistics New Zealand. Household use of ICT survey

Northland households were also significantly less likely than households in other New Zealand regions to use multiple devices to access the internet (24% compared to 40% nationally), or to use an internet-enabled mobile phone to access the internet (21% compared to 34%) in 2012.

Evidence exists to suggest that a lack of infrastructure is contributing to Northland’s poor internet uptake. Following establishment of Whangarei’s ultra-fast broadband (UFB) network (which now represents 1.6% of New Zealand’s total UFB coverage) in May 2014, Whangarei now has the highest UFB uptake rate nationally (8-10%). The Northpower Fibre network provides coverage to over 19,000 Whangarei homes and businesses. This suggests that similar uptake rates could be experienced by other centres in the region if the infrastructure is provided.

Another constraint appears to be the cost of being connected to the internet. Of households that did not have internet access in Northland in 2012, the most common reason was that the costs were too high (43% compared to 36% nationally), followed by not being interested (42%). Northland had one of the highest proportions of residents without internet access who identified cost as the key issue. A study of the affordability of broadband indicates that there are several areas of Northland where broadband cost comprises a significant proportion of income, although local providers have disputed the numbers.

The 2013 census showed that there were over 3,500 families in the region with school aged children without computer and internet access in the home. The evidence shows that material deprivation (including lack of access to computers and the internet) reduces children's learning at home and their competency during the initial years of compulsory education, which affects later educational attainment levels.

Recognising these issues, Northland's four local authorities (Far North District Council, Whangarei District Council, Kaipara District Council and Northland Regional Council), Northland Inc. and Te Tai Tokerau Iwi Chief Executives' Consortium have partnered to submit a Registration of Interest and Support to the Ultra-Fast Broadband 2 (UFB2), Rural Broadband Initiative 2 (RBI2) and Mobile Black Spot Fund (MBSF) programmes. This has now entered the second stage of the process, developing a Digital Enablement Plan (DEP). This strategy has a vision of Northland in 2025 being digitally connected, using globally competitive digital technologies, with digitally savvy and literate businesses, entrepreneurs and workers. The DEP captures key projects and ideas Northlanders have to take advantage of increased Broadband capacity.

Studies of the impact of broadband in other New Zealand regions estimate that regions benefit by 4-9% higher GDP over 15 years. Research also shows that New Zealand businesses that make more extensive use of internet services are more productive than average businesses (source: Tai Tokerau Northland Regional Growth Study).

Small and Medium Enterprises (SMEs) in the Northland region are currently the least likely nationally to have a website (9% compared to 22%) and amongst the least likely to use a social media site (3% compared to 9%).

Conversely, in 2012, Northland SMEs were more likely than businesses nationally to be using cloud services (19% compared to 16%). Northland businesses that do have a website are more likely than businesses in other regions to also have social media sites (29% compared to 16%). This suggests that there is a small group of more technology-savvy businesses in the Northland region.

Northland businesses and industry representatives also identified that there are primary sector organisations and farmers leading technology uptake. For example, several Northland farmers use DairyNZ platforms that collect and analyse data to inform improvements to farm management. These platforms also establish the foundations for further technology development, for example, to provide customers with information on food provenance and quality assurance in the future. Information and

communications technology (ICT) and broadband infrastructure also provide an opportunity to add value to Northland's primary industries through improved performance measurement, resource management and innovation (source: Tai Tokerau Northland Regional Growth Study).

Businesses in some industries, such as dairy and tourism, have demonstrated the productivity benefits from better information management and use of ICT. In general, however, Northland continues to trail behind other regions of New Zealand in ICT, internet and broadband use.

Increasing ICT and broadband infrastructure may also facilitate more businesses to establish outside the Auckland metropolis. For example, the Ministry of Social Development is establishing a new national back office in Northland. This will employ 70 staff to electronically process information on behalf of Work and Income offices nationally. Because of the nature of this operation, its office can be located anywhere in the country providing it can be connected to the rest of the Ministry by the internet (source: Tai Tokerau Northland Regional Growth Study).

Progress with the Rural Broadband Initiative (RBI) is expected to connect 86% of rural homes and businesses outside of UFB areas with broadband at peak speeds of at least 5Mbps by 2016.

The Ministry of Business, Innovation, and Employment (MBIE) reported in mid-2014 that:

- 21,000 Northland households and premises had access to new wireless broadband services through the RBI;
- 12,500 households and premises had access to new or improved fixed line broadband services with three quarters of fixed line upgrades complete (source: Tai Tokerau Northland Regional Growth Study).

The Government has committed an additional \$150 million in contestable funding to further improve connectivity in rural communities by 2016.

96% of state and state-integrated schools in Northland had access to fibre by mid-2014. By the end of 2015 all rural public hospitals and integrated family health centres will also have access to UFB (source: MBIE, 2014).

## **7 Legal**

### **7.1 Health and Safety Reform Act**

The Health and Safety Reform Bill (the Bill) was passed on 27 August 2015. This Bill represents a major change to New Zealand's health and safety system and will repeal the Health and Safety in Employment Act 1992 and the Machinery Act 1950 when it comes into effect on 4 April 2016.

This omnibus Bill will reform New Zealand's workplace health and safety system by creating a new Act and amending several others. Parts 1 to 5 of the Bill will become the Health and Safety at Work Act, to provide a new framework for ensuring the health and safety of workers and workplaces. Part 6 of the Bill will amend several Acts, relating variously to hazardous substances, accident compensation, and protecting employees from discrimination for raising health and safety issues.

The legislation will be underpinned by regulations, approved codes of practice that provide detailed guidance, and safe work instruments.

Current health and safety legislation is based on the employee/employer relationship. The Bill will broaden this to include "workers" and "persons conducting a business or undertaking" (PCBUs). The proposed definition of "worker" is somebody who "carries out work in any capacity for a PCBU". It would include employees, contractors, trainees, those gaining work experience, and volunteers.

Importantly for Council, the new legislation does not take coverage of volunteers away from what it is under the current law which distinguishes between casual volunteers and volunteer workers. This recognises that volunteers contribute greatly to New Zealand communities and ensures the new law will not negatively affect volunteering.

Under the Bill a Person Conducting a Business or Undertaking (PCBU) has the primary duty to ensure the health and safety of its workers and others, so far as is reasonably practicable. A purely volunteer organisation where volunteers work together for community purposes and which does not have any employees is known as a volunteer association under the Bill. A volunteer association is not a PCBU so the Bill will not apply to it.

A volunteer organisation which has one or more employees is a PCBU and will have the same duties as a PCBU to ensure, so far as reasonably practicable, the health and safety of its workers and others. There are some exclusions to this, depending on whether the PCBU has casual volunteers or volunteer workers. This is the same approach as taken by the current law. What the volunteer organisation will have to do is what is reasonably practicable for it to do, and what is within its influence and control.

PCBUs will owe a duty to ensure, so far as reasonably practicable, the health and safety of volunteer workers (as if they were any other worker). This ensures that these volunteers are afforded the protection of having the appropriate training, instruction or supervision needed to undertake their work safely; just like any other worker.

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PCBUs will have a duty to others (such as customers or visitors) to ensure that their health and safety is not put at risk from the PCBU's work, so far as is reasonably practicable. This duty also applies to casual volunteers.

People volunteering for the following activities will not be volunteer workers under the new law:

- Participation in a fundraising activity;
- Assistance with sports or recreation for an educational institute, sports or recreation club;
- Assistance with activities for an educational institution outside the premises of the educational institution;
- Providing care for another person in the volunteer's home.

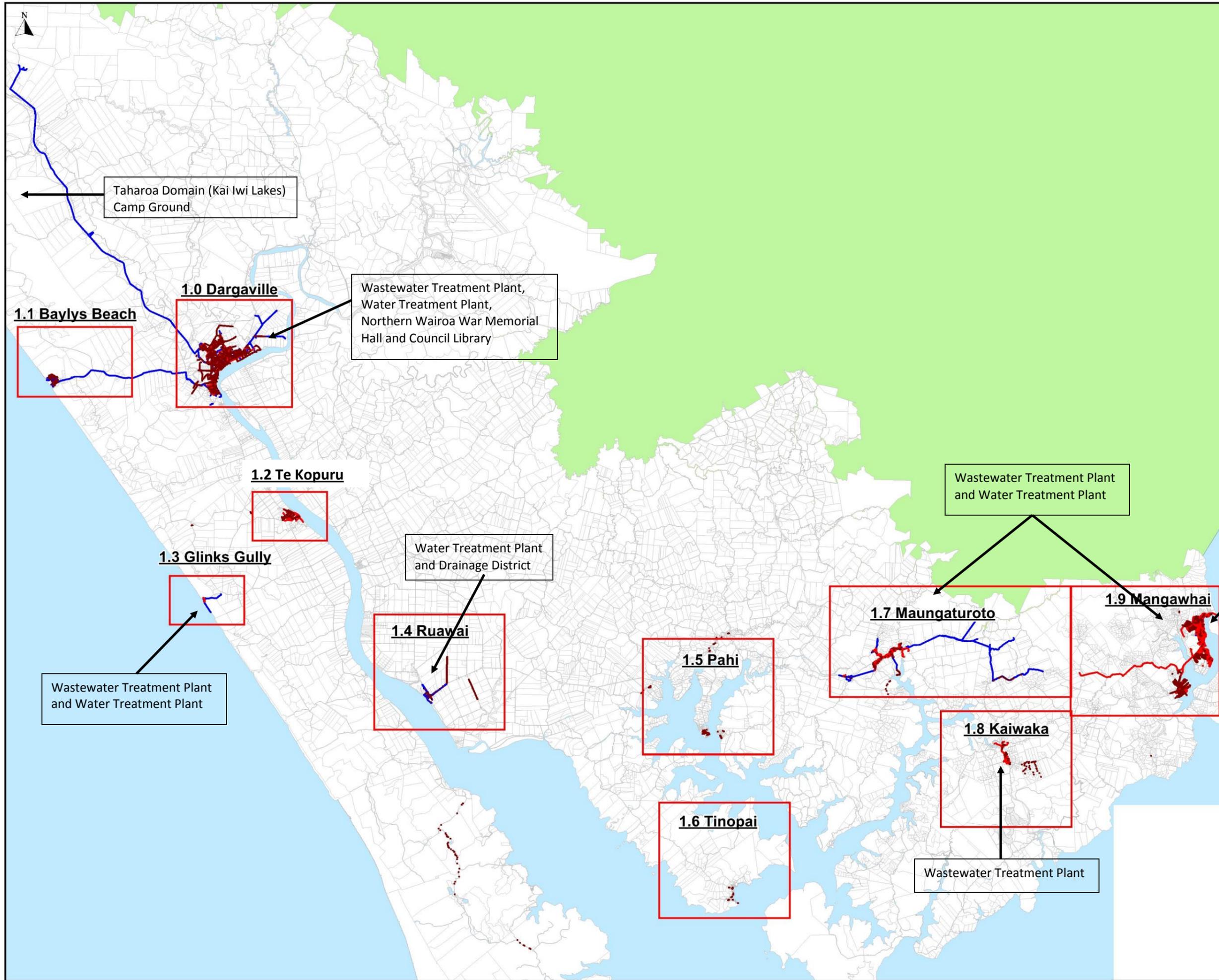
This approach follows the existing Health and Safety in Employment Act 1992. Although casual volunteers and volunteers doing these activities will not be "volunteer workers" for the purposes of the Bill, their health and safety will still be covered by the PCBU's duty to other persons affected by the work of the business or undertaking.

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**8 Technical**

Please see attached map.

# Kaipara District Council- All Supply Networks



## Legend

- Pipes**
- Water Distribution
  - Stormwater Collection
  - Wastewater Collection

- Zones**
- Parcel Boundaries

Mangawhai Camp Grounds

Wastewater Treatment Plant and Water Treatment Plant

Water Treatment Plant and Drainage District

Wastewater Treatment Plant and Water Treatment Plant

Wastewater Treatment Plant

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Rev	Drw	Chk	Apd		Date



**KAIPARA DISTRICT COUNCIL**

Title: Figure 0.0

Scale	NTS	Rev
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