



Environmental Scan

March 2020

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Introduction

An Environmental Scan looks at what changes are likely to affect the future internal and external operating environment for Manawatū District Council (Council). It looks at where the community is heading and what we, as Council, should be doing about it. It should lead to a discussion with elected members about what tools Council has available to influence the direction the community is taking.

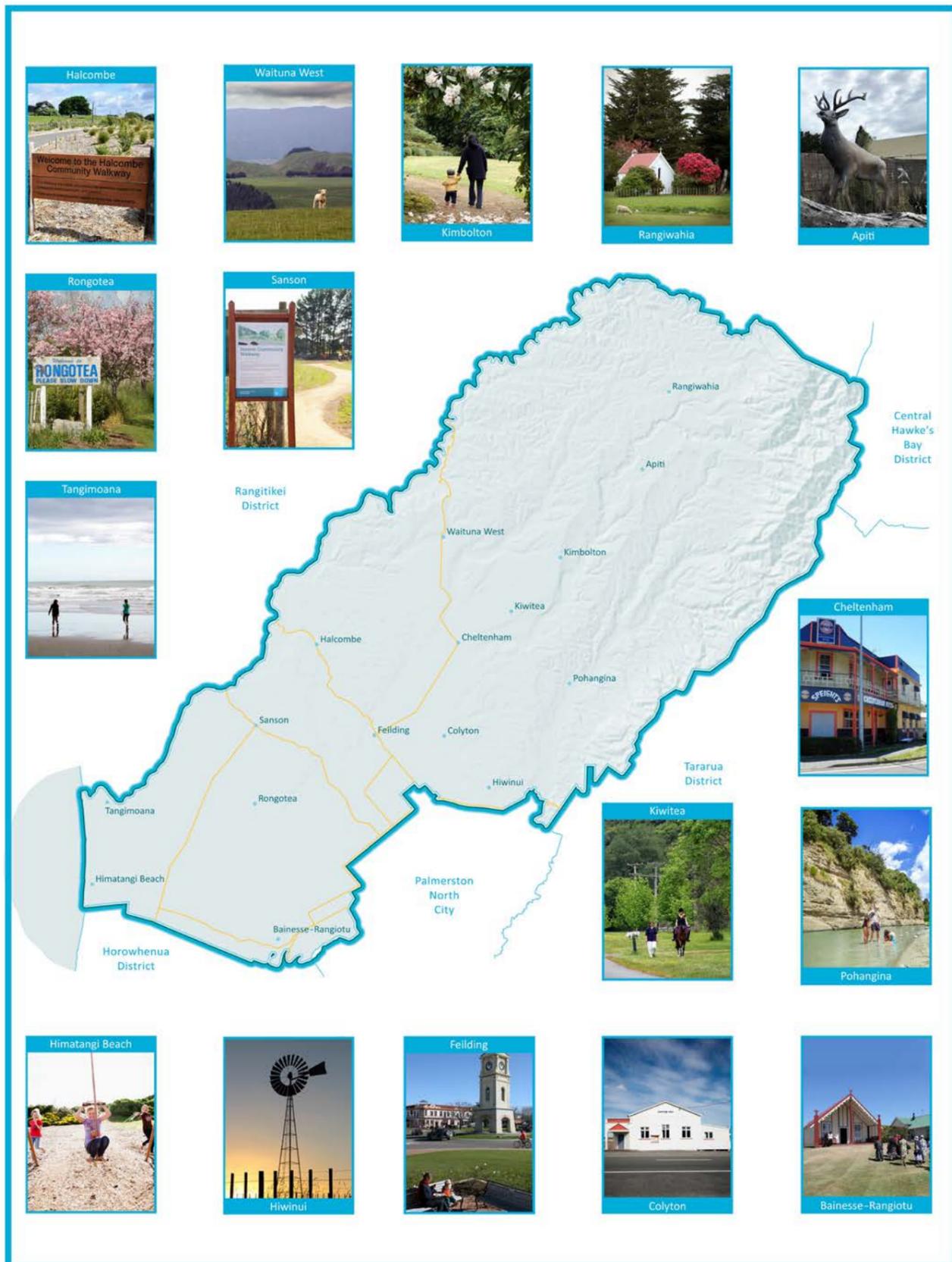
The purpose of local government, as set out in the Local Government Act 2002 includes reference to the role of local authorities in promoting the social, economic, environmental and cultural wellbeing of their communities. The indicators included in this report have been grouped into each of the wellbeings under the headings of "Social and Cultural Profile," "Economic Profile" and "Environmental Profile." However, it is recognised that the many of these indicators have impacts across multiple wellbeings.

Council has used the most up-to-date data available to prepare this Environmental Scan. In some cases this data is historic trend data, sometimes it is current at the time the Environmental Scan was finalised, and in some cases Council has used data and trends to prepare future forecasts. Council does not intend to update the Environmental Scan over time, but the forecasting assumptions contained within Council's Ten Year Plan will be continually updated up until adoption.

6 March 2020



MANAWATU DISTRICT - OUR COMMUNITIES



Introduction

The Manawātū District covers 256,693 hectares and stretches from Rangiwāhia in the north to Himatangi Beach in the south. It shares a boundary with Palmerston North City in the south-east. The western boundary of the District follows the Rangitikei River and the eastern boundary is the Ruahine Ranges. Within the Manawātū District are a range of natural features, including the Ruahine Ranges, Pohangina Valley and the West Coast beaches and sand dunes. Research has recognised the Manawātū dunefield as the best representative example of Holocene dune development in New Zealand, and one of the best examples of parabolic dune development in Australasia (Manawātū District Council, 2020).

Population and Household Growth

The estimated resident population of the Manawātū District as at 30 June 2019 was 31,732. The proportion of the total population in Feilding (consisting of the Maewa, Feilding North, Feilding West, Feilding Central, Feilding East, Rakiraki and Oroua Bridge Area Units) was estimated as 17,307, or 54.5% of the total District population.

The District's population is forecast to have increased to 32,555 people by 2021 and 36,478 by 2031 (the period of the 10 Year plan). These forecasts are based on the assumption that the population will grow in line with the Statistics New Zealand high projections. Updated estimates and projections released from the 2018 Census (in March and December 2020 respectively) will provide a clearer picture of current population and future projections.

The proportion of total residents living in Feilding is forecast to decrease slightly over time from 54.4% in 2021 to 54% by 2031 and 53.8% by 2051. This is not consistent with what our Council anticipates based on current development trends.

The total population of the Manawātū District (based on Statistics New Zealand high projections) is forecast to increase to 42,525 people by 2051 (an increase of 34% over the 32 years from 2019 to 2051).

The total number of dwellings in the Manawātū District as at 30 June 2019 was estimated as 12,693. The total number of dwellings within Feilding as at 30 June 2019 was estimated at 6,923 (54.5% of all dwellings in the District). The number of dwellings in the Manawātū District is forecast to increase to 15,199 by 2031 (an increase of 2,506 dwellings, or 19.7% from 2019 estimates) and 17,719 by 2051 (5,026 new dwellings from 2019 to 2051, an increase in 39.6% of total dwellings). These estimates are based on the assumption that average household size will be consistent with Statistics New Zealand projections by Territorial Authority and that the average household size from 2039 to 2051 will remain at 2.4 (the average size as at 2038).

Growth Planning

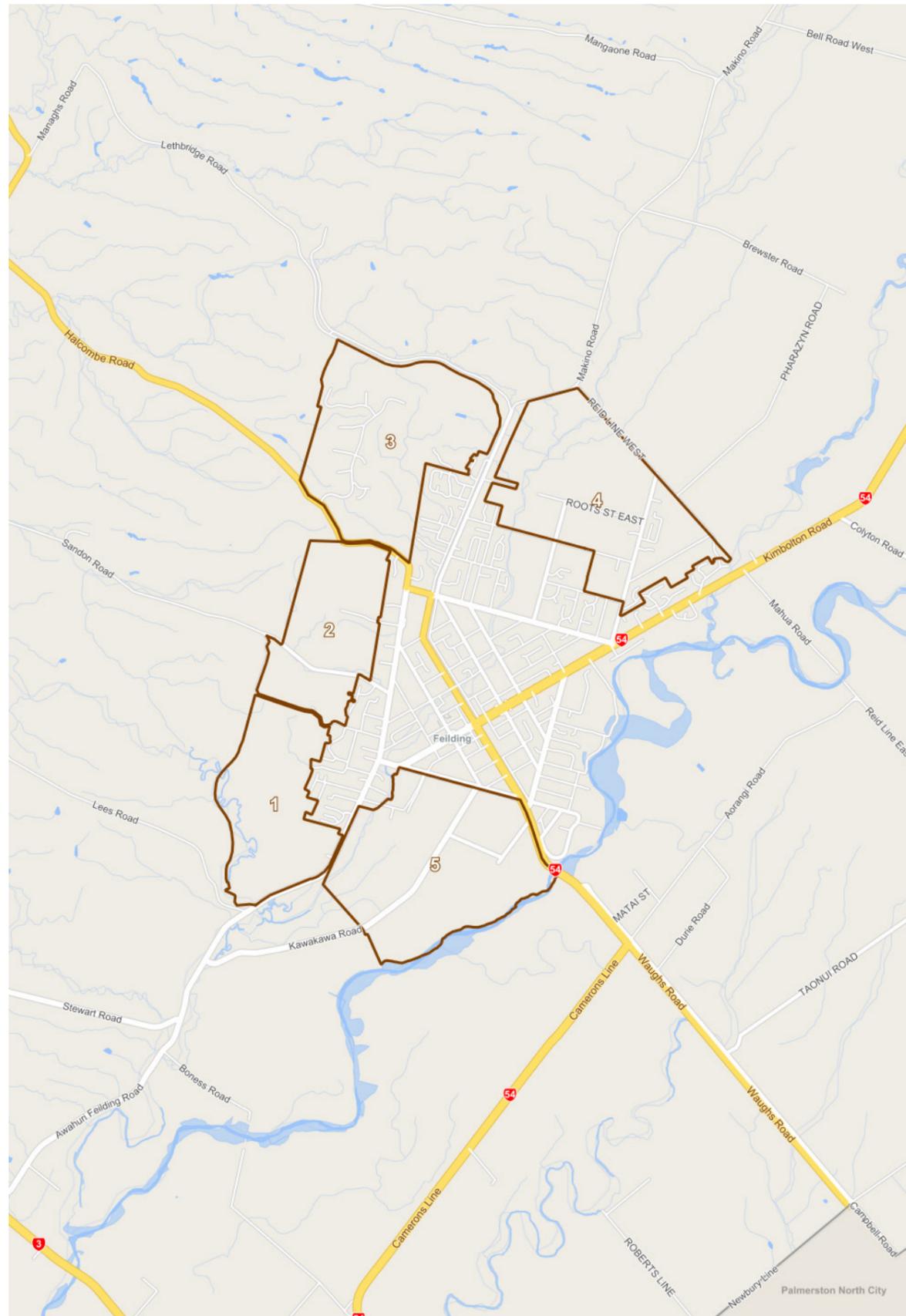
Manawātū District Council undertook the Feilding Urban Growth Framework Study in 2013 to identify where Feilding could grow into the future, the urban growth framework identified 5 growth precinct's suitable for growth. The District Plan has given effect to the Feilding Urban Growth Framework through the following plan changes.

Precinct 5 was re-zoned from Rural to Industrial Zone in 2015.

Precinct's 1,2, and 3 were re-zoned from Rural to Deferred Residential Zone in 2014. The Deferred Residential Zoning is intended to be uplifted once a review of the District Plan's hazards chapter has been undertaken.

Precinct 4 has been recently rezoned to Residential Zone in 2020. It is noted that Precinct 4 is envisioned to provide the majority of Feilding's residential growth over the next 10 years.

Map 1: Growth Precincts Around Feilding. Feilding Urban Growth Framework Study 2013



Iwi and Māori context

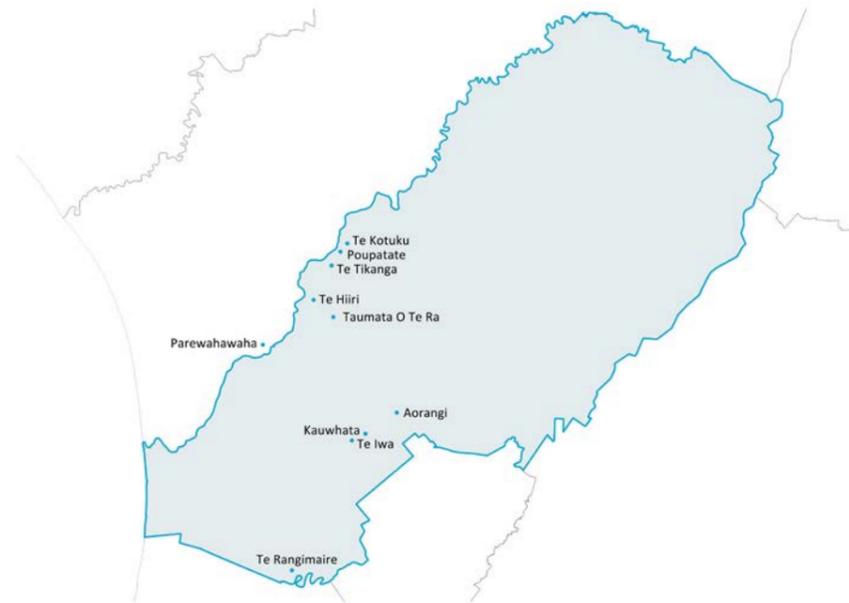
The local Māori landscape comprises a wide range of collectives who express an identified interest in the Manawatū District. Marae, pā, hapū, iwi, and organisations within the District are listed below:

Table 1: Marae, pā, hapū, iwi and organisations within the District

Marae/Organisation	Hapū	Iwi
Aorangi	Ngāti Tahuriwakanui	Ngāti Kauwhata
Kauwhata	Ngāti Hinepare	Ngāti Kauwhata
Te Iwa Tekau mā Iwa	Ngāti Tūroa	Ngāti Kauwhata
Kōtuku	- Ngāti Waewae	Ngāti Raukawa Tūwharetoa
Poupatate	Ngāti Pīkiahū	Ngāti Raukawa
Te Tikanga	Ngāti Pīkiahū Ngāti Waewae	Ngāti Raukawa Ngāti Tūwharetoa
Te Hiri	Ngāti Rangatahi Ngāti Matakore	Ngāti Raukawa Ngāti Maniapoto
Taumata o te Rā	Ngāti Manomano	Ngāti Raukawa
Paranui	Ngāti Tūranga	Ngāti Raukawa
Motuiti	Ngāti Rākau	Ngāti Raukawa
Te Rangimārie	Te Rangitepaia Ngāti Hineatue	Rangitāne ki Manawatū
Parewahawaha	Ngāti Huia Ngāti Pare Raukawa	Ngāti Raukawa Ngāti Raukawa
Ngā Kaitiaki o Ngāti Kauwhata	-	Ngāti Kauwhata
Te Rūnanga o Raukawa Inc	- - -	Ngāti Kauwhata Ngāti Raukawa Ngāti Maniapoto
Te Roopū Hokowhitu Charitable Trust	- - - -	Ngāti Kauwhata Ngāti Raukawa Ngāti Tūwharetoa Ngāti Maniapoto
Te Rūnanga o Ngā Waiariki Ngāti Apa	-	Ngāti Apa
Te Maru o Ruahine Trust	-	Ngāti Hauiti
Rauhuia Environmental Services	-	Ngāti Hauiti
Muaūpoko Tribal Authority Incorporated	-	Muaūpoko
Te Rūnanga o Toa Rangatira Incorporated	-	Ngāti Toa

In March, Treaty Settlement hearings for hapū and iwi located in the Manawatū District will commence. This will include Ngāti Kauwhata, Ngāti Raukawa, and Ngāti Matakore. The length of this process can vary between iwi, however, the anticipated duration of this process is expected to last somewhere between 3-5 years.

Map 2: Map of Marae in the Manawatū District



Strategic Direction of Adjoining Territorial Authorities

Table 2 summarises the strategic direction of adjoining territorial authorities. Like the Manawatū District Council’s Long Term Plan 2018-2028, the Rangitikei District Council has a vision statement and list of outcomes sought. The Palmerston North City Council (PNCC) and Tararua District Council have an overarching vision and list of key priorities or goals they want to achieve. The Horowhenua District Council does not have a vision statement, but a list of outcomes they seek to achieve through their Long Term Plan.

Table 2 - Strategic direction of adjoining territorial authorities

Council	Vision	Priorities/Strategies	Outcomes
Palmerston North City Council (PNCC)	Small city benefits, big city ambition	Goals and Strategies Goal 1: An innovative and growing city City Development Strategy Economic Development Strategy Goal 2: A creative and exciting city Creative and Liveable Strategy Goal 3: A connected and safe community Connected Community Strategy Goal 4: An eco-city Eco City Strategy	

Goal 5: A driven and enabling Council (No external strategies)		
Rangitikei District Council	Make it a place that we all want to call home	<ol style="list-style-type: none"> 1. Infrastructural service levels 2. Economic development 3. Future-looking community facilities 4. Earthquake-prone buildings 5. Communication/engagement and collaboration 6. Rates level/affordability/value 7. Environment/climate change 8. Regulatory performance 9. Community resilience
Tararua District Council	A growing and prosperous District providing a wide range of employment opportunities that is underpinned by highly efficient, capable, and affordable infrastructure	Priorities: <ol style="list-style-type: none"> 1. Continued investment in core infrastructure 2. Promoting and facilitating economic development 3. Continued financial viability through sustainable growth and investment
Horowhenua District Council		<ol style="list-style-type: none"> 1. Thriving communities 2. An exuberant economy 3. Stunning environment 4. Enabling Infrastructure 5. Partnership with Tangata Whenua 6. Vibrant cultures
Horizons Regional Council		<ol style="list-style-type: none"> 1. Natural hazard resilience 2. Healthy ecosystems 3. Human wellbeing 4. Connected communities 5. A robust economy 6. Confidence in decision making

Common Themes

The following are themes that are common across more than one neighbouring territorial authority in Table 1 above:

1. Economic development (PNCC, Rangitīkei District Council, Tararua District Council and Horowhenua District Council)
2. Community Safety, resilience or connectedness (PNCC, Rangitīkei District Council, Horowhenua District Council and Horizons)
3. Environment or sustainability (PNCC, Rangitīkei District Council, Horowhenua District Council and Horizons)
4. Infrastructure (Rangitīkei District Council, Tararua District Council and Horowhenua District Council)
5. Rates affordability or financial viability (Rangitīkei District Council and Tararua District Council)

The Community Outcomes contained in the Manawatū District Council's Long Term Plan 2018-2028 also include reference to economic development, the natural environment and infrastructure. The Community Outcomes do not currently address the themes of community safety, resilience or connectedness, other than in relation to the resilience of the built environment and connection via quality infrastructure, services and technology. However our recently adopted Community Development Strategy commits to a future focus on these matters.

The environmental community outcome in the Manawatū District Council's Long Term Plan 2018-2028 is more focussed on the protection of natural and physical resources than environmental sustainability. However, the imminent development of the Environmental Sustainability Strategy reflects a common future focus with our neighbouring territorial authorities.

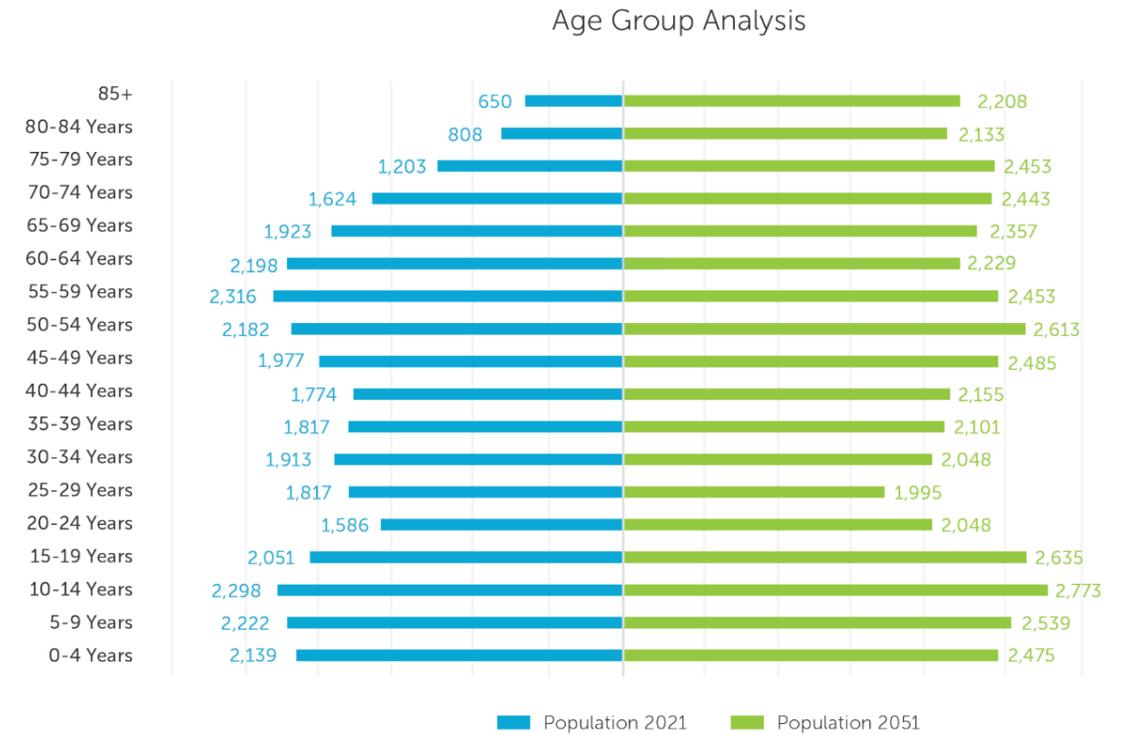
The community outcome "Manawatū District Council is a customer-focussed and efficient organisation" is related to rates affordability and financial viability, but less explicitly than some of our neighbouring territorial authorities.

Social and Cultural Profile

Demographics

The interim population household demographics have been estimated as follows (Figure 1):

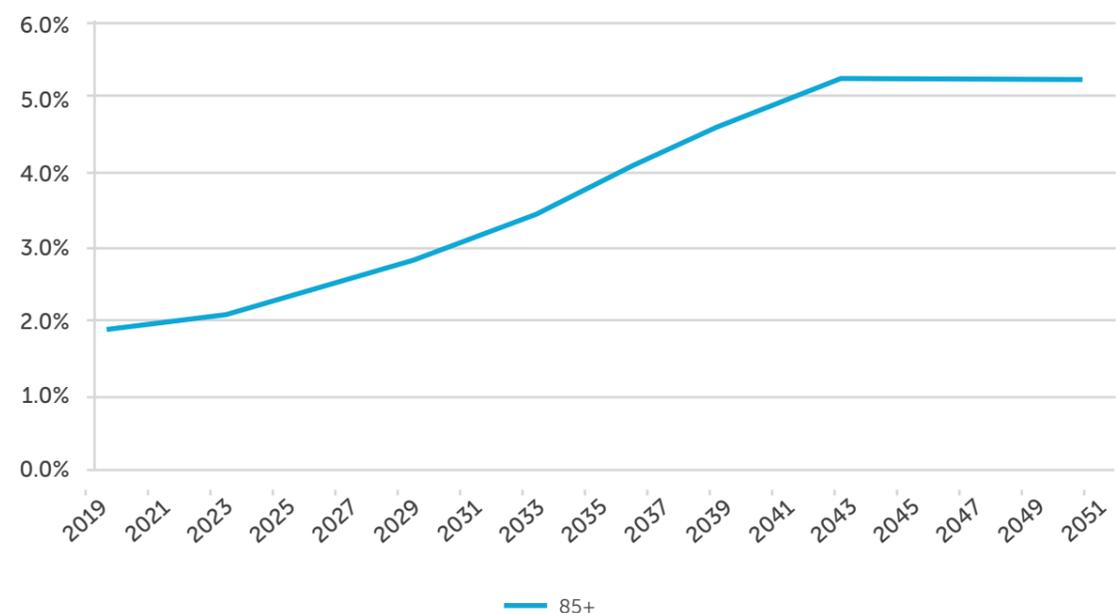
Figure 1 - Age group projections 2019-2051



As at 30 June 2019, it was estimated that 5,754 residents were aged 65+ (18.1% of the total resident population). By 2051 the number of residents aged 65+ is forecast to increase to 11,595 residents, which is equivalent to 27.5% of the total resident population in the Manawatū District.

Also of interest is the projected increase in the percentage of residents aged 85+ from 1.9% (597 residents) as at 30 June 2019 to 6.4% (2,722 residents) by 2051 (Figure 2).

Figure 2 - Percentage of the District's residents aged 85+



Demographic projections are District-wide as opposed to being at the area unit level. Demographic percentages from the Statistics New Zealand high series have been applied to the calculated population assumptions to determine age group proportions. Due to the unlikelihood of the magnitude of increases in the proportion of the 85+ population continuing, the age group ratios have been extrapolated from 2043 to 2051.

Ethnicity

Census ethnicity data from 2013 and 2018 has been compared to see how the ethnic profile of the Manawatū District has changed (Table 3). This table also compares the ethnic profile of the District with New Zealand as a whole. When compared with national data, the Manawatū District is predominantly bi-cultural, that is, predominantly European and Māori. The data also suggests an almost doubling in the proportion of residents identifying as Pacific Peoples or Asian. However, comparisons are difficult for the following reasons:

1. Responses total to over 100% due to the identification of some respondents with more than one ethnicity.
2. Ethnicity identification in 2018 was more defined than in 2013. That is, those selecting "other" reduced significantly between 2013 and 2018, which may have influenced in part the increase in the proportion identifying as "Pacific Peoples" or "Asian."

Another thing to note is that there is a larger Māori population in Feilding than in other areas of the District.

Table 3: Change in ethnic profile 2013 to 2018 by location

Location	District		Feilding		Northern and Eastern Rural		Southern and Western Rural		New Zealand	
	2013	2018	2013	2018	2013	2018	2013	2018	2013	2018
European	86.4%	89.2%	83.6%	87.0%	90.6%	93.2%	88.7%	91.4%	70.0%	70.2%
Māori	14.3%	16.5%	17.8%	19.4%	9.2%	11.5%	10.6%	14.1%	14.1%	16.5%
Pacific People	1.8%	2.6%	2.1%	2.5%	0.8%	1.4%	0.9%	1.3%	7.0%	8.1%
Asian	1.8%	2.6%	2.4%	3.2%	0.8%	1.3%	1.2%	2.1%	11.1%	15.1%
Middle Eastern Latin	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.5%	0.5%	1.1%	1.5%
Other	2.6%	1.7%	2.3%	1.4%	2.7%	1.8%	2.9%	1.9%	1.6%	1.2%

Health

Subnational data on smoking and other health indicators will not be released by Statistics New Zealand until May 2020. This data is therefore not able to be considered in this Environmental Scan, but will be considered for the 10 Year Plan, once it is available.

Water Security

Due to the Havelock North drinking water outbreak (2016) and resulting changes to the drinking water standards there has been a heightened regulatory and political focus on secure water and resilient potable water supplies. The Feilding township is currently heavily reliant on the Oroua River Almadale abstraction and is supplemented by two secure bores located on the true left of the Oroua River. This current configuration creates a level of risk due to low flow restrictions, inability to treat surface water during flood events, insufficient firefighting flows for Precinct 5 (the industrial precinct) and vulnerability associated with having to pipe water across the Oroua River.

Due to the unsecure nature of the Almadale abstraction, associated risk, and the fact the reservoir and trunk main into Feilding is in need of a significant upgrade and seismic strengthening, a strategic water assessment was completed ahead of the 2018 – 2028 Long Term Plan. This assessment concluded that if the Almadale Water Treatment plant and associated abstraction was decommissioned and water sourced from a secure bore on the true right of the Oroua River significant savings and increased resilience would be achieved (Manawatū District Council, 2018).

The 2018-2028 Long Term Plan included the Feilding Water Strategy as a key project with a total budget of \$7,963,959, inflated over the 10 year period. Through the 2018-2028 Long Term Plan, Council agreed to proceed with the recommended option of constructing a new bore, treatment plant and reservoir, rather than renewing the various components of the Almadale Water Treatment Plant (Manawatū District Council, 2018).

With the reservoir nearing completion and a site purchased for the new bore and treatment plant progress towards realising the Feilding Water Strategy is well underway.

Following completion of the Feilding Water Strategy physical works, the Manawatū District water will be sourced completely from secure groundwater sources, rather than being a combination of a surface water take from the Oroua River and groundwater bores. The new network will be more resilient than the current network as the pipeline from the new Feilding bore will not need to cross the Oroua River, and will not be limited by the river turbidity and surface water low flow restricted abstraction limits.

While the Almadale surface water abstraction is relatively isolated the decommissioning will reduce the risk of accidental or malicious contamination.

Education

In May 2019 the Ministry of Education released its National Education Growth Plan 2030 which is the Ministry's new approach for coordinating its response to population growth across New Zealand. The Taranaki, Whanganui and Manawatū region has been identified as an area which is experiencing steady growth. The Ministry has developed catchment plans for New Plymouth and Palmerston North and is currently working with Council's Policy Planners to develop a growth plan for the wider Manawatū.

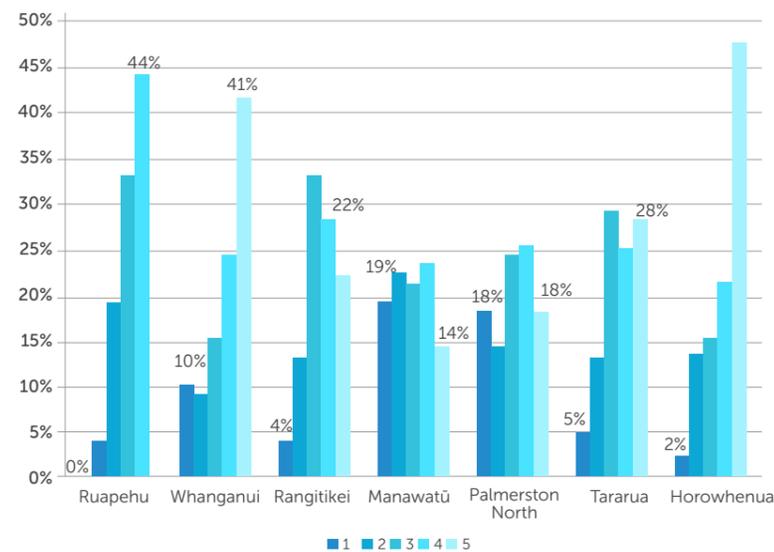
Initial indications from school enrolment data has identified that there are several schools within the District that have reached capacity with enrolment plans being put in place to manage this. This includes Feilding High School, Colyton School, Kopane School, Mount Biggs School, Newbury School, Hiwinui School, Manchester Street School and Halcombe School. The Ministry has noted that there are a number of schools in the District who have spare capacity to accommodate projected future growth. The Ministry is aware of the predicted growth in the north-western area of Feilding (Precinct 4) and has factored in the impact that this may have on schools located close to this intended growth area.

In spite of the current numbers in many of the local schools the Ministry's view is that the predicted growth in the Manawatū District within the next 10 to 20 years will not have a huge impact on the capacity available within the schools that currently exist. The Ministry will continue to keep a close watching brief on school enrolment data and if need be, introduce further enrolment plans to manage this.

Deprivation

The following chart illustrates the scale of deprivation across the region where 5 indicates the proportion of households living in the most deprived conditions and 1 indicates the proportion of least deprived households.

Figure 3 - Regional variation in socioeconomic deprivation



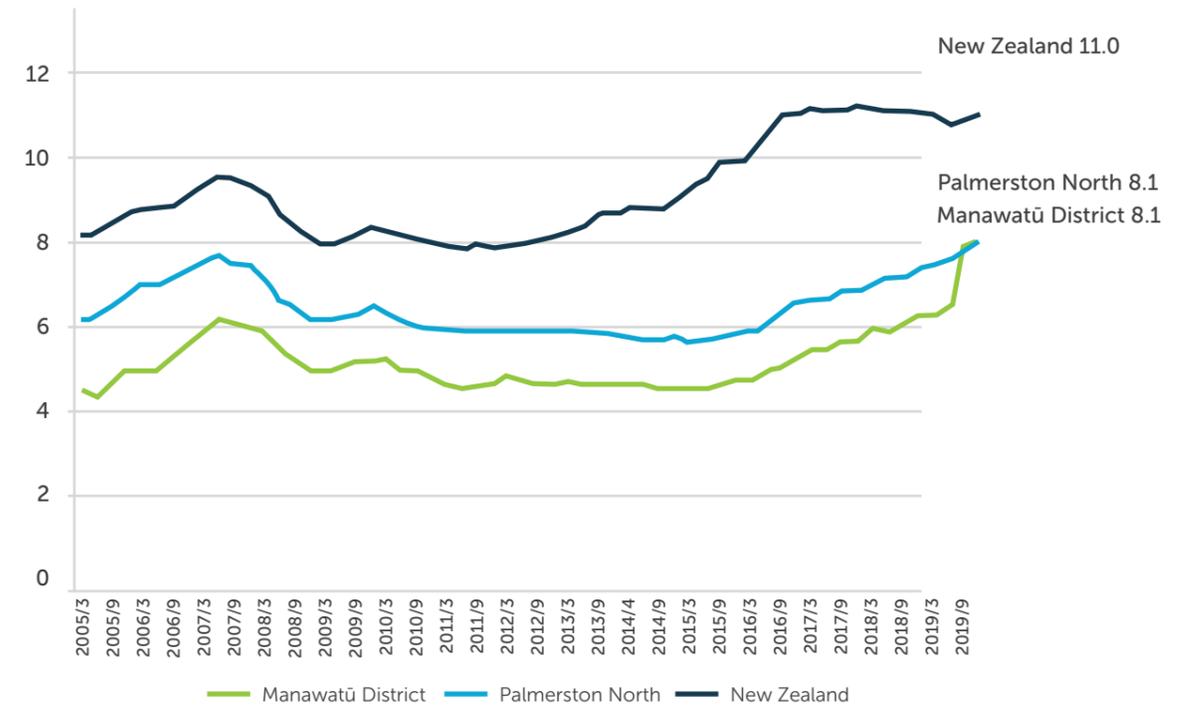
While deprivation levels are low in the Manawatū comparison with Horowhenua, Ruapehu and Whanganui, increasing costs of housing disproportionately impact on low income households within every community.

Housing Affordability

Housing affordability in the Manawatū District continues to compare well with New Zealand but has deteriorated rapidly over the past four years. Specifically, house prices in the Manawatū District have increased by 74.5% over the four years to December 2019. This compares to 27.0% growth in house prices across the country over the same period. While this is positive for many, indicators reflect the impact of increasing house values on the affordability and availability of housing for New Zealand families.

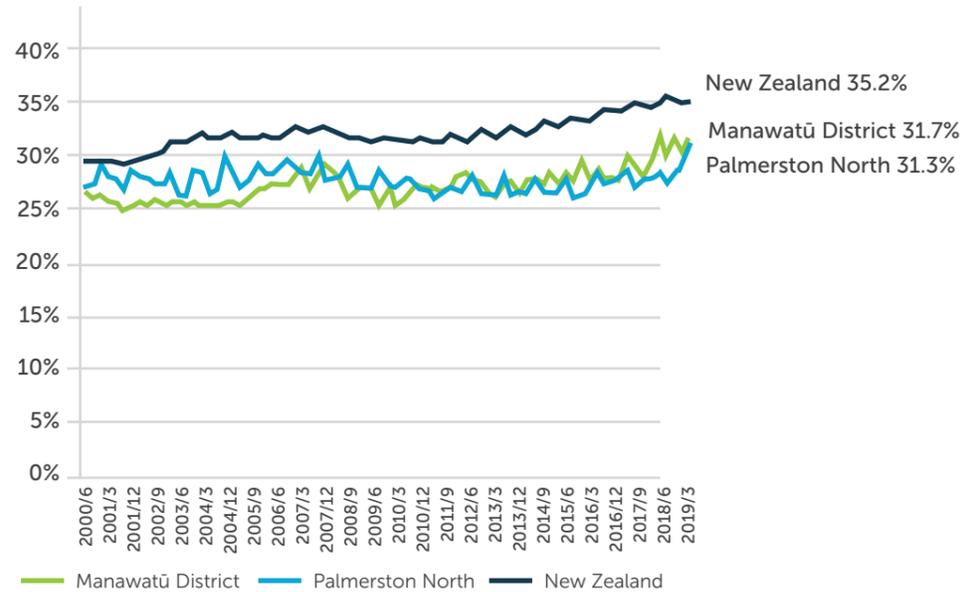
The average house in the District would have cost 4.6 times the average wage in December 2014. Today, the average residential property costs 8.1 times the average wage. Affordability of houses in the District are now on a par with neighbouring Palmerston North.

Figure 4 - Ratio of average house price to average annual income



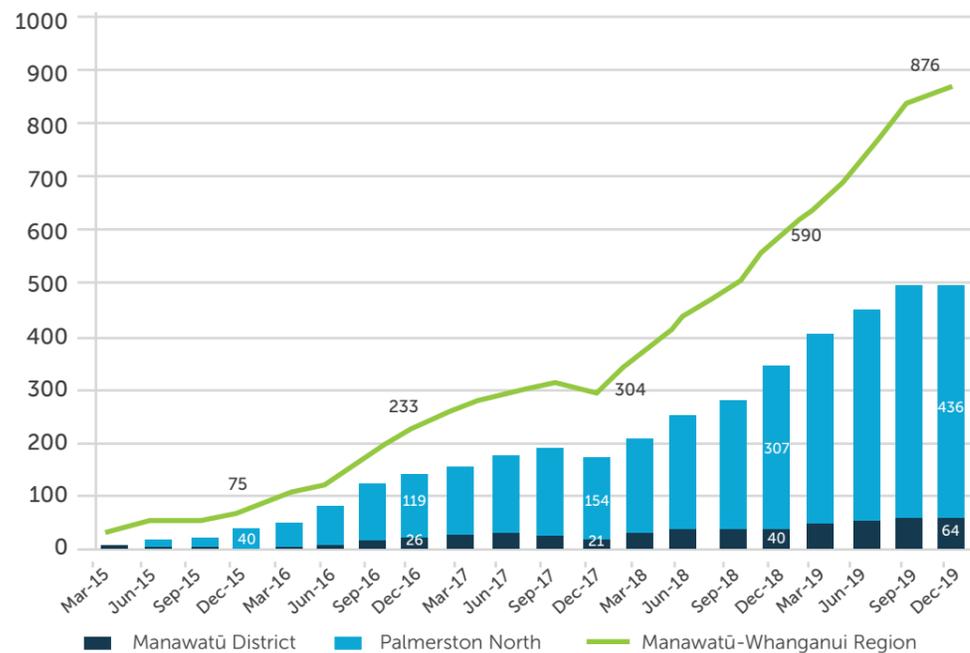
Rental affordability in the Manawātū District compares well with New Zealand but has deteriorated from 30.0% two years ago to 31.7% in December 2019. As at December 31, average rent in the District was \$339 versus \$365 in neighbouring Palmerston North.

Figure 5 - Average rent as a Percentage of average household income



The declining affordability of housing is reflected in the exponential growth of families registered for social housing. The number of families eligible for social housing in the District increased from 2 in December 2014 to 64 in December 2019. In Palmerston North, eligible families increased from 20 in December 2014 to 436 in December 2019. Across the region, registered families increased from 51 to 876 over the same period¹.

Figure 6 - Social housing register



¹ Eligibility for social housing is based on both the lack of availability and affordability of rental properties.

While affordability is a significant issue, availability is also impacting on the ability of families to secure housing. Anecdotal evidence suggests that in-part, the decline in affordability and availability of rental properties is in response to elevated central government regulations where landlords are increasing rents to cover costs of compliance or withdrawing properties from the rental market. Alongside rapid house price growth, these factors place additional upward pressure on the cost of rental properties and downward pressure on the supply of rental properties to the market.

Affordable Housing Units²

Using the Statistics New Zealand medium population projections for the Manawātū District, the Manawātū Community Trust has calculated that they will need to build at least 48 new affordable housing units if it is to meet the increased demand that will come with an aging population. At a minimum, 31 new units will be needed just to maintain the current ratio of affordable housing units to total Manawātū households (1.85%). To keep up with the growth in the number of one-person 65+ age group households would require 295 units by 2033 (an additional 90 units).

The Manawātū Community Trust has a target of reaching 253 units by 2033 (an additional 48 units). The remaining 42 units will need to be delivered by the private sector or other providers. The Manawātū Community Trust has secured an interest-bearing loan from Council to assist in building the new units. In addition, the Trust will also fundraise, look at cost-effective building methods, considering partnerships with other providers and industry and will explore ways to access other forms of finance.

Public Transport Provision

The current Feilding Around Town/Feilding to Palmerston North bus service consists of weekday services, Saturday services, public holiday services and weekday school services (that only operate during school term). The service operates Monday-Saturday travelling around Feilding and then to Palmerston North via key destinations such as Palmerston North Airport and Hospital. The current timetable is scheduled to provide passenger connections to Massey University and Palmerston North urban routes. In addition, two morning and two afternoon services run during school term to provide direct services to Palmerston North Girls High School and Palmerston North Boys High School (Horizons Regional Council, 2019d).

Services do not operate on Sunday. Public holiday services run to the Saturday timetable, with the exception of Good Friday, Easter Sunday, Christmas Day and Anzac Day which have no services operating (Horizons Regional Council, 2019d).

Horizons is currently undertaking a mid-term review of the Feilding public transport service. The purpose of the review is to identify operational efficiencies and/or improvements to provide a service that meets the community's needs by enabling transport choice (Horizons Regional Council, 2019d).

A Feilding Public Transport Services Advisory Group (Advisory Group) has been established to support this review. A detailed investigation of the shortlisted options is currently being undertaken prior to consulting with the community. These detailed investigations will give the community a better understanding of their costs, timetable possibilities and pros and cons. The agreed shortlisted options are as follows (Shirley, Meeting minutes, shortlist confirmation and updated timeline, 2019b):

² All information for this section was sourced from the Manawātū Community Trust submission to MDC's Long Term Plan 2018-28 (May 2018)

1. Around town service (option 4)

Figure 7 - Around town service (option 4)



The following variations of this option are also being assessed:

- Option 4a: Option 4 with Lethbridge Street extension included
- Option 4b: Option 4 with Monmouth Street included
- Option 4c: Option 4 with Lethbridge Street and Monmouth Street included

2. Commuter (options 8 and 9b are being explored further as part of the shortlist investigation phase)

Figure 8 - Commuter (options 8 and 9b)



The option of running smaller buses for the around town service is being considered and costed in the detailed shortlist phase. Also being considered are increased frequency and Sunday services. Consultation is scheduled to commence in February 2020 (Shirley, Advisory Group meeting minutes, 2019a).

The intention will be that the around town and commuter services operate separately from one another however the timetables will be developed to ensure maximum efficiency and seamless connections between the two services (Shirley, Advisory Group meeting minutes, 2019a).

Based on the project timeline, any minor approved changes will be implemented from June 2020 (Year 3 of Horizons 2018-2028 Long Term Plan). Any larger changes that require investment and time to complete will be implemented in year 1 of Horizons 2021-2031 Long Term Plan (Shirley, Meeting minutes, shortlist confirmation and updated timeline, 2019b).

Town Centre Refresh

The Feilding Town Centre Refresh 2020 is a vision to enliven the town centre, using feedback from community consultation. Community priorities included encouraging business, making open spaces accessible and interesting, ensuring getting around is easy and safe for pedestrians and vehicles, and valuing our heritage buildings (Manawatū District Council, 2019b). Thoughtful action on this project will ensure development reflects the vision of the community, promoting a vibrant atmosphere and attracting and retaining businesses in the Feilding town centre.

This project will be informed by a car parking survey which was conducted in late 2019 within the shopping core



and peripheral commercial areas. Findings of this survey included that within 28 zones of on-street parking, between 12 and 19 zones reached utilization levels of 85% or more on both weekdays and weekends, which causes users to perceive the parking spaces as full. Within the Friday survey, parking around Manchester Square exceeded 100%, where parking outside marked parking spaces was observed. It was also noted that the overspill in parking around Manchester Square and on-street loading and deliveries could have a negative impact on safety and efficiency (WSP, 2019).

Options suggested to improve parking issues include paid parking or enforcing of time limits through ticketing. It is recognised that free parking in the town centre is highly valued by locals and a marketing feature for Feilding so other options suggested include making access to the town centre more convenient and attractive for non-car based forms of transport, and collaborating with business owners to direct long-term parking for commuting and business purposes away from the main shopping area to ensure these parks are available for short term users (WSP, 2019).

New Communication Modes

The public information space is becoming crowded with niche channels for both disseminating information and receiving input from local communities. People are increasingly using personal devices and engaging on digital platforms where they can interact with like-minded people.

As a result, getting messages to and from people requires a paradigm shift from traditional forms of public communication. Traditional channels (eg. newspaper and radio) now reach a limited sector of the community who still engage with these forms of communication. The challenge for Council is to find channels that will attract a wider, previously unreached audience who will engage with what Council is doing, without losing those with whom Council already has an established relationship.

For the foreseeable future Council needs to retain a range of traditional broadcast channels such as radio and print media as well as finding creative ways to use digital forms of communication to engage with an increasingly "digital native" population.

Inequity of Technology – Rural vs Urban

MBIE's Rural Broadband Initiative phase two³ (RBI2) aims to reduce the number of rural households and businesses that cannot access broadband speeds of at least 20 Mbps download – this was assessed at 90,000 nationally in 2017. Towns and settlements in the Manawatū District that are programmed for installation of ultra-fast broadband by December 2022 are Bunnythorpe, Feilding fringe, Himatangi Beach, Kimbolton, Rongotea and Sanson (Crown Infrastructure Partners Ltd., 2020a).

The Mobile Black Spots Fund (MBSF) is an initiative to improve the availability of mobile services on state highways and improve visitor experience at tourist destinations. The MBSF will cover 4 tourist sites and 67kms of state highway in the Manawatū-Whanganui region however none of these are located in the Manawatū District (Crown Infrastructure Partners Ltd., 2020b).

These initiatives are intended help to bring equality to internet access between rural and urban areas, but a discrepancy may be seen where many rural areas are waiting until 2022 to have access to broadband and mobile reception, when some parts of New Zealand are already being introduced to 5G (the next generation of mobile broadband technology with exponentially faster upload and download speeds). This is currently limited to selected areas of the South Island, but further rollouts are being announced in March 2020 (Spark NZ Website, 2020).

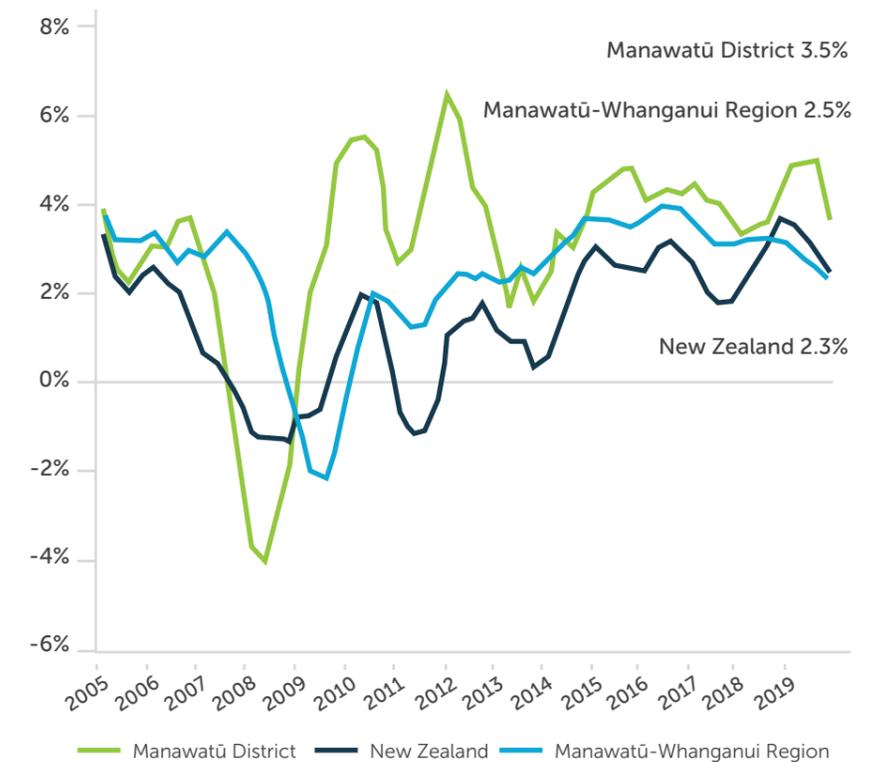
³ The first phase of the Rural Broadband Initiative ran from 2011 - 2016 and brought ultra-fast broadband to many rural locations across NZ such as schools, medical facilities and libraries, followed by business and homes.

Economic Profile

Economic growth

The Manawatū District economy grew by 3.5% to a total value of \$1.04b to the year ended December 2019. This is an estimated increase of \$36m when compared with the year ended December 2018. This District growth rate of 3.5% significantly exceeds the regional and national growth rate of 2.5% and 2.3% respectively, for the year ended December 2019.

Figure 9 - Annual GDP average percentage change



The strong economic performance of the Manawatū District was driven by population growth, favourable trade conditions, high employment, house price growth, robust consumer and tourism spending and high levels of investment flowing into the District.

The 10 year annual average GDP growth for the District was 3.9% versus 1.8% for the Manawatū-Whanganui Region and 2.8% for New Zealand.

The value of construction investment reached \$106m to the year ended December 2019. This is stable from the strong levels of investment posted to the year ended December 2018.

There was a total of 191 new dwellings consented to the year ended December 2019. This is strong but a reduction on the 205 dwellings consented over the year to December 2018. In contrast, the total value of residential consents increased by 2.1% to a total of \$91.64m over the year to December 2019.

There was \$14.4m of commercial construction consented over the year to December 2019. This is a \$1.89m reduction on the level of investment from the previous year. This temporary contraction is explained by a lull in consents approved for the redevelopment of Ohakea.

Specifically, \$3.1m of consents were approved over 2019 versus \$6.7m in 2018. The ramping up of construction at Ohakea to meet the 2023 deadline for the relocation of Air Force Squadron No. 5 from Whenuapai to Ohakea will see the value of construction investment surge from 2020 to 2023.

The Covid-19 Virus

The combined effects of the global spread of Covid-19 and drought conditions pose a short-term risk to the domestic and local economy.

Over the longer term, the fundamentals of the District and national economy remain solid. However 2020 has brought with it significant challenges to the global economy that will inevitably impact on New Zealand, and in particular on regional economies dependent on tertiary education, tourism, merchandise export trade and imports of inputs to production and consumer goods from China. In a nutshell, Covid-19 is imposing a simultaneous supply and demand side shock on the global economy, the full impact of which is not currently clear. In terms of agricultural production, the effects of Covid-19 are exacerbated by the current drought conditions experienced across the region and New Zealand, imposing restrictions on the ability of farmers to reduce stocking units due to the sharp slowdown of meat and meat product manufacturing. The impacts of the drought are also likely to be felt later in the year when dairy supply volumes are affected.

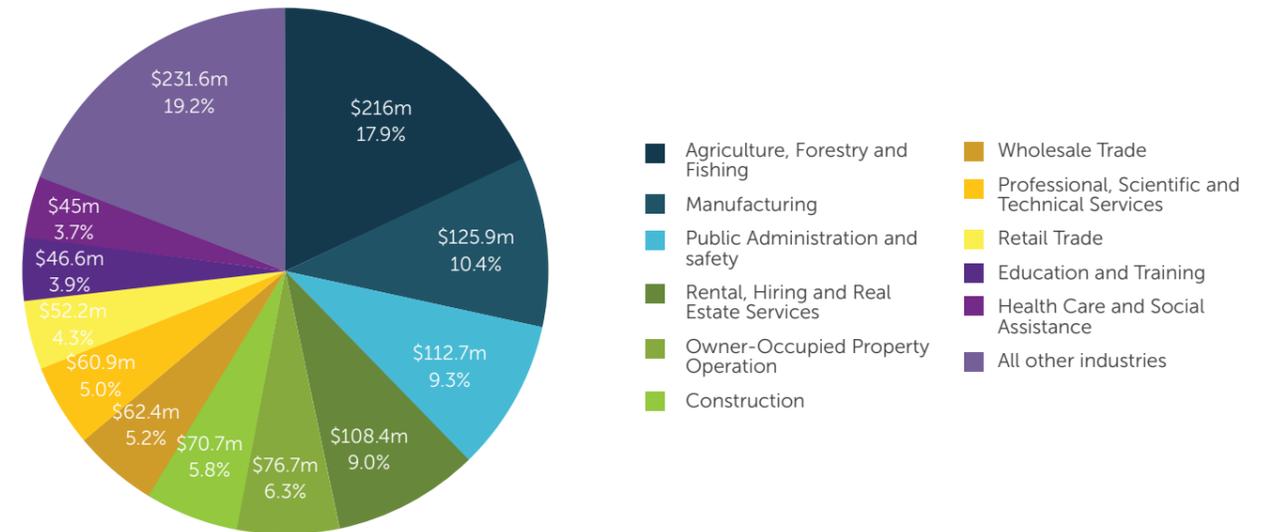
China is our largest market making up 27.9% of our merchandise export trade to December 2019. China is currently operating at approximately 30 per cent of normal capacity, meaning supply chains are significantly disrupted and demand for food products are constrained. As China recovers from the Covid-19 outbreak, we are likely to see a considerable recovery in demand for meat products. The risk is that the spread of Covid-19 to other parts of the globe will trigger a global recession, placing medium-term downward pressure on the incomes of our largest trading partners and reducing demand for New Zealand products over a longer period of time.

For 2020 however, we expect to see no or low growth in the economy in particular in regional economies that are dependent on tourism, international education, export trade and manufacturing. Due to the structure of the Manawātū District economy, we expect a downturn in 2020 with recovery in the second half of 2020 or 2021 driven by the recovery of global supply chains and international demand for our products alongside strong levels of central government investment flowing into the District and wider region. Maintaining capacity and capability, therefore sustaining household incomes, consumption activity and protecting jobs, will largely depend on the actions of central government and financial institutions. Central government will need to implement fiscal policy that maintains levels of employment and incomes. Measures could include changes to taxation policy settings, while financial institutions will need to implement flexibility in repayment schedules in particular in heavily indebted industries. Along with carefully constructed fiscal policy, monetary policy will need to be responsive to a downturn in consumption to support jobs and disposable incomes in the domestic economy.

Structure of the economy

Highlighting exposure of the District economy to the current supply and demand side shocks, the District economy relies heavily on the agriculture, forestry and fishing and manufacturing sectors. On the upside, the District economy also relies heavily on the government funded public administration and safety sectors which are less affected by global supply and demand conditions and supported by emergency conditions.

Figure 10 - Industry Structure – Year Ended March 2019



Agriculture, forestry and fishing directly contributed 17.9% of total GDP to the local economy. Other major contributors to the local economy include manufacturing and public administration and safety. In particular, meat processing makes up 40.1% of total manufacturing GDP while Defence contributed 81.2% of public administration and safety GDP.

The agriculture, forestry and fishing sector is the largest employer in the District. Dairy cattle farming is the largest subsector, directly contributing \$89.8m to the local economy and generating 680 jobs within the local industry. The manufacturing and public administration and safety sectors directly contributed a further 2,685 jobs to the local economy.

Primary Sector Security / Access to Markets

International events outside the control of industry and local government have the potential to significantly impact on the prosperity of the Manawātū District. The Infometrics economic profile for the year ended March 2019 estimates that export trade as a percentage of GDP has increased from 32.4% over the year to March 2018 to 35% to the year ended March 2019. This increase in the strength of export income is generated from strong commodity prices for goods produced in our District in addition to favourable terms of trade for New Zealand producers. Sustaining this strong trade position is dependent upon a range of factors such as:

- Central government progressing trade relationships and free trade agreements with international markets;
- International stability that enables the current strong global demand for New Zealand commodities to continue; and



- Policy and regulation that protects the resource base i.e. biosecurity and environmental integrity, as well as regulation and policy that supports the profitability of primary producers.

As discussed, the greatest immediate threat to the New Zealand economy is the spread of Covid-19 virus globally and the impact this is having on demand for New Zealand agri-food products and it follows, commodity prices for goods produced in New Zealand. To demonstrate, to the year ended December 2019, China was by far our largest export market making up 27.9% of the total value of New Zealand exports. The current shock to global trade from the contraction of global demand and the downturn of supply of Chinese inputs to production has driven down global commodity prices impacting considerably on trade both here and internationally. At the Central Government level, any indication of impacts are being watched closely and as discussed, fiscal responses are important to manage the impacts of the Covid-19 outbreak on the domestic economy. Data to support communities to understand potential impacts as more information comes to light would enable local government and Economic Development Agencies to provide support to our industry sectors and reduce in-part the impacts of uncertainty on economic activity. The Reserve Bank of New Zealand is monitoring the impacts closely and these impacts will be reported to Council as events unfold.

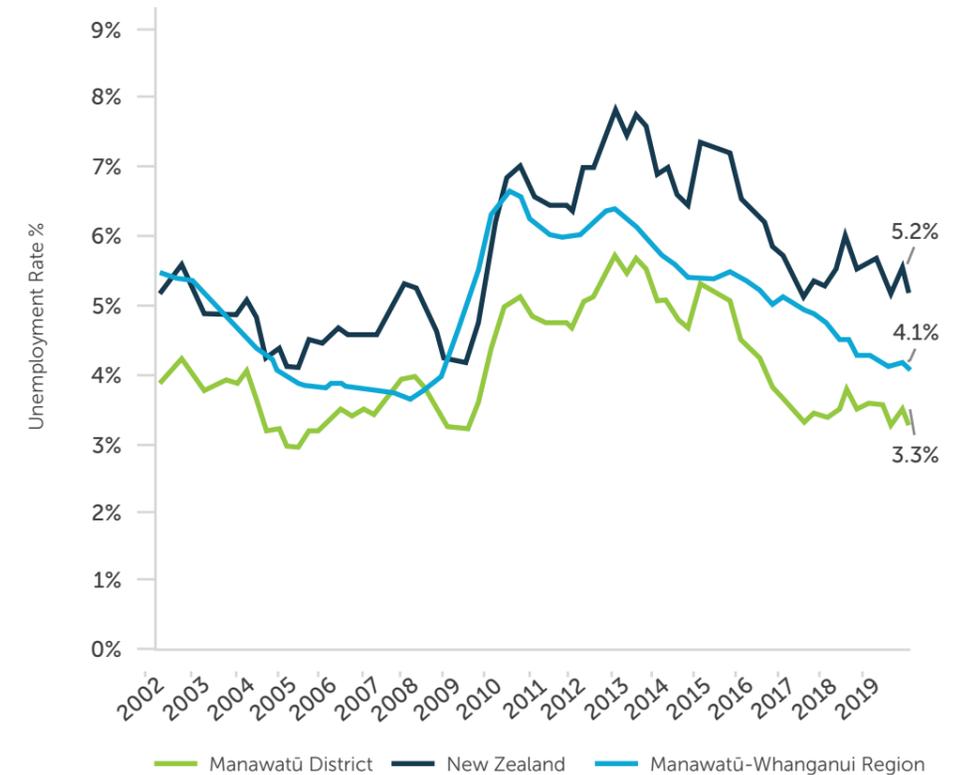
More generally, rising protectionism from the United States and the disruption to existing trade arrangements and global supply chains driven by Brexit create additional uncertainty for New Zealand primary producers. While there may be both costs and opportunities for New Zealand producers, the time it takes to negotiate and secure trade arrangements poses a cost in terms of uncertainty over periods of negotiation. Thus far, New Zealand export trade has stood up to the disruption created via the China/USA 'trade war'. For a small exporting nation such as New Zealand, maintaining strong trade relationships, entering into timely negotiations, protecting the reputation of New Zealand products and progressing with our trade partners in good faith is paramount to protecting and expanding market access for our primary producers. Appropriate Central Government policy and investment is crucial to ensure the right conditions for our primary producers are delivered. Local Government also has an important role to play in advocating for Central Government trade policy and actions that protect the interests of our primary producers.

Local government also has a central role to play in advocating for central and regional government policy that supports our primary producers to adapt to growing challenges such as changing temperatures, regulatory requirements and growing costs of compliance. An important part of this is understanding the contribution that the productive rural sector makes to the wellbeing of our wider communities and the sustainability of rural communities, including the economic and social costs of indiscriminate land-use conversion from food production to forestry and carbon farming. Entering into partnerships with primary producers, research institutes and central government to support the interests of the rural sector alongside innovation and processes to increase productivity and alleviate environmental concerns is an opportunity for local government to contribute to building the resiliency of the sector, for the benefit of our local communities.

The Labour Market

The average annual unemployment rate for the District to December remains beneath national unemployment at 3.3%. This compares with a regional unemployment rate of 5.2% and a national unemployment rate of 4.1%.

Figure 11 - Average annual unemployment rate



To the year ended December 2019, the number of jobseeker beneficiaries increased by 104 to 739. This is a 16.40% increase in jobseekers over the year to December 2019. This compares with a 10.0% annual increase in national jobseeker beneficiaries. Increases in the number of jobseekers alongside a stable and low unemployment rate in the District continue to imply the mismatch of labour demand with labour supply. Investment in training and skills guided by detailed knowledge of workforce imbalances is essential to address labour force constraints.

Labour Market Self-Sufficiency

Place of work data from the 2018 Census found that there are 13,818 people who live in the District and work around the Manawatū-Whanganui Region. 9,906 of these workers both live and work in the Manawatū District.

Table 3 shows that the Manawatū has a higher level of labour market interdependency than other territorial authorities in the Region. The 2018 Census found that 3,501 workers that live in the Manawatū District work within Palmerston North (25.3% of the total workforce). This has declined from 4,719 workers, or 38.9% of the total workforce, in the 2013 Census.

Table 4: 2018 Census live and work data – labour market self-sufficiency

Territorial Authority	% of total workers by residence that live and work in the same District	
	2013	2018
Ruapehu District	97.9%	99.6%
Whanganui District	95.0%	97.8%
Rangitikei District	75.4%	84.3%
Manawatū District	55.9%	71.7%
Palmerston North City	93.3%	95.7%
Tararua District	91.0%	93.1%
Horowhenua District	84.5%	90.5%

As Table 4 shows, the percentage of workers that both live and work in the Manawatū District has increased from 55.9% in 2013 to 71.7% in 2018. This is positive as it indicates that the labour market is providing for a greater proportion of our workforce within our boundaries.

Skills and Talent Development, Attraction and Retention

Labour force imbalances are a significant constraint to local economic activity in particular where national labour market conditions are tight and it is difficult to access appropriately skilled labour from either within or outside the area. As discussed, the District is currently experiencing an exceptionally low unemployment rate alongside strong growth in the number of job seeker beneficiaries. These factors imply a significant mismatch between labour supply and labour demand in the District.

Latest Infometrics data for the year ended March 2019 confirm particularly strong growth in employment, increasing by 3.1% versus 1.9% for New Zealand. Breaking this down, job openings data by industry reveals changes in labour demand in the District over the period March 2015 to March 2019.

Table 5 - Job openings data by industry

Industry	2015	2016	2017	2018	2019	Totals
Construction	32	23	103	101	85	345
Manufacturing	78	88	58	7	99	330
Accommodation and Food Services	25	30	29	16	70	170
Professional, Scientific and Technical Services	64	52	0	-1	24	140
Wholesale Trade	-17	7	57	89	-2	133
Health Care and Social Assistance	86	29	-5	21	-7	124
Administrative and Support Services	8	56	37	15	-8	108
Transport, Postal and Warehousing	20	0	10	39	31	100
Other Services	4	11	12	21	31	79
Rental, Hiring and Real Estate Services	0	5	31	30	-10	56
Education and Training	5	-7	15	19	4	37
Financial and Insurance Services	2	11	6	7	8	34
Electricity, Gas, Water and Waste Services	5	-3	-3	11	20	29

Agriculture, Forestry and Fishing	20	-48	-8	80	-15	29
Information Media and Telecommunications	-5	-1	0	7	20	22
Public Administration and Safety	-14	14	-1	12	5	15
Arts and Recreation Services	1	-5	-2	6	11	11
Retail Trade	-2	-19	8	-3	18	3
Owner-Occupied Property Operation	0	0	0	0	0	0
Unallocated	0	0	0	0	0	0
Mining	5	0	-5	1	-1	-1

Construction, manufacturing, accommodation and food services, and professional, scientific and technical services jobs stand out in terms of labour demand over the four year period. The range of skill levels of growth sectors is promising in the sense that changes to the labour market are catering for both entry level positions to support youth and re-entry to the workforce in addition to higher skilled occupations in the professional services.

Strong growth in construction as a result of unprecedented residential and commercial construction investment over the period has driven sustained growth in construction sector employment. This is likely to continue with approximately \$200m worth of commercial construction planned for Ōhakea to 2023 and no signs of a slowdown in residential investment. Accessing labour to support the construction industry to expand to cater for the current growth is essential to both the economic and social wellbeing of our communities, especially as the District experiences significant housing supply constraints.

The range of sectors that are experiencing strong labour demand highlights the importance of understanding labour market characteristics by place when we define 'skills and talent' and design programmes to match labour supply with labour demand. This is also essential for the purpose of informing youth and workers in declining industries. Interestingly, Ministry of Education counts data shows that the percentage of secondary school students in the District leaving school with university entrance fell from 39.1% in 2009 to 28.6% in 2018. Anecdotally, this suggests a range of employment and training opportunities available to young people reducing the need for school leavers to achieve the level of qualification that will enable them to go directly to university. Considering the demand for trades-people and labourers, leaving school earlier to enter the construction industry does not constitute a decline in skills and talent. Hence, it is important to understand the occupations that are in demand when we define 'skills and talent' and invest accordingly to attract and retain the specific skills needed to supply our labour demand.

Manawatū District Council invests in our Central Economic Development Agency (CEDA) to undertake labour force analysis and design strategy and actions to support skills development and attract and retain skills and talent to the area.

Earthquake-Prone Buildings

The Building (Earthquake-prone Buildings) Amendment Act 2016 came into force on 1 July 2017. It changed the current system for identifying and remediating earthquake-prone buildings. The new system ensures the way our buildings are managed for future earthquakes is consistent across the country, and provides more information for people using buildings, such as notices on earthquake-prone buildings and a public register (Ministry of Business, Innovation and Employment, 2017).

The new system prioritises identification and remediation of earthquake-prone buildings that either pose a high risk to life safety, or are critical to recovery in an emergency. In 2019 the Manawatū District Council consulted with the community to identify 'priority thoroughfares' that are sufficiently busy and where falling masonry

from buildings damaged in an earthquake would pose a high risk to life safety. Unreinforced masonry buildings on priority thoroughfares are determined 'priority buildings' (Ministry of Business, Innovation and Employment, 2017).

The map below illustrates the priority thoroughfares within the Feilding Central Business District.

Figure 12 - Priority thoroughfares in the Feilding CBD:



As the Manawatū District has been categorised as a high seismic risk area, the Manawatū District Council is required to identify potentially earthquake-prone buildings within five years of the Act coming into effect (i.e. by 1 July 2022). Council has now completed the identification of all potential priority earthquake-prone buildings in the District and notified the owners of these buildings. Owners have 12 months to respond to Council with an engineering assessment, evidence of factual error or notification that they do not intend to provide an engineering assessment. The assessment must be signed by an engineer with relevant skills and experience in structural and earthquake engineering, that meets the requirements of the Earthquake-Prone Building Methodology. If the engineering assessment determines the building is less than 34% New Build Standard (NBS) the building is classified as earthquake-prone. Council will then issue earthquake-prone building notices under the Building Act.

The Building (Earthquake-prone Buildings) Amendment Act 2016 gives these building owners 7.5 years from the date they received the notice from Council in which to strengthen or demolish their earthquake-prone building, or that part of the building that, if it were to collapse, would do so in a way that is likely to cause injury or death to persons in or near the building or on any other property, or cause damage to any other property (Ministry of Business, Innovation and Employment, 2017). Owners of all other earthquake-prone buildings must strengthen or demolish their earthquake-prone building(s) within 15 years of receiving an earthquake-prone building notice (Ministry of Business, Innovation and Employment, 2017).

Council will start issuing earthquake-prone building notices for priority buildings in August 2020.

Council will be notifying owners of non-priority buildings in July 2020 that their buildings are potentially earthquake-prone. Owners will have 12 months to respond to Council. Therefore, Council will start issuing earthquake-prone building notices for these buildings around August 2021.

Owners of earthquake-prone heritage buildings may apply to Council for an extension of up to 10 years to strengthen their buildings. For an extension to be granted, the building must be a Category 1 historic place on the New Zealand Heritage List/Rārangi Kōrero, or included on the National Historic Landmarks List/Ngā Manawhenua o Aotearoa me ōna korero Tūturu (Building Performance Website, 2020).

There is an engineering solution project underway with six building owners in Feilding. The engineering assessments are due to be completed by March 2020. This project has funding from Heritage Equip.

There is potential that the owners of priority earthquake-prone buildings within the Feilding CBD may demolish their buildings rather than strengthening them. This would have economic impacts as well as impacts on the amenity and vitality of the Feilding CBD, the scale of such effects being dependent on when and if new buildings are constructed in their place. If Council does not manage the impacts on businesses well, such as by not providing for innovative and mixed use development, there is potential for businesses to relocate outside of the District. This would have flow on impacts on the District economy, including flow on effects from a less attractive CBD, as well as social effects.

There is also potential for disruption, congestion, dust and noise effects while earthquake-prone buildings are being strengthened. These effects could be particularly significant if businesses are limited in their ability to temporarily relocate or otherwise continue trading during construction works. The strengthening of earthquake-prone buildings could also temporarily detract from the amenity of the business areas.

Council may need to consider and consult on the type and scale of any support that it provides to owners of earthquake-prone buildings during the engineering assessment and strengthening or demolition phase to manage potential impacts on the wider community.

Retail Trade

Retail spending increased by 4.1% in the District to the year ended December 2019. This is an increase of \$8.1m from the previous year, to a total of \$208.4m. Spending on takeaways increased by 13.1% followed by 9.5% growth in spending on 'other retail'. Accommodation expenditure also increased by a healthy 8.4% over the year to December, while expenditure on hardware/homeware and apparel posted declines by 3.8% and 1.1% respectively. Growth in retail activity in the District compares well with national spending which increased by 2.3% alongside a 3.3% increase in retail activity for the Manawatū-Whanganui Region.

Figure 13 - Change in retail sales

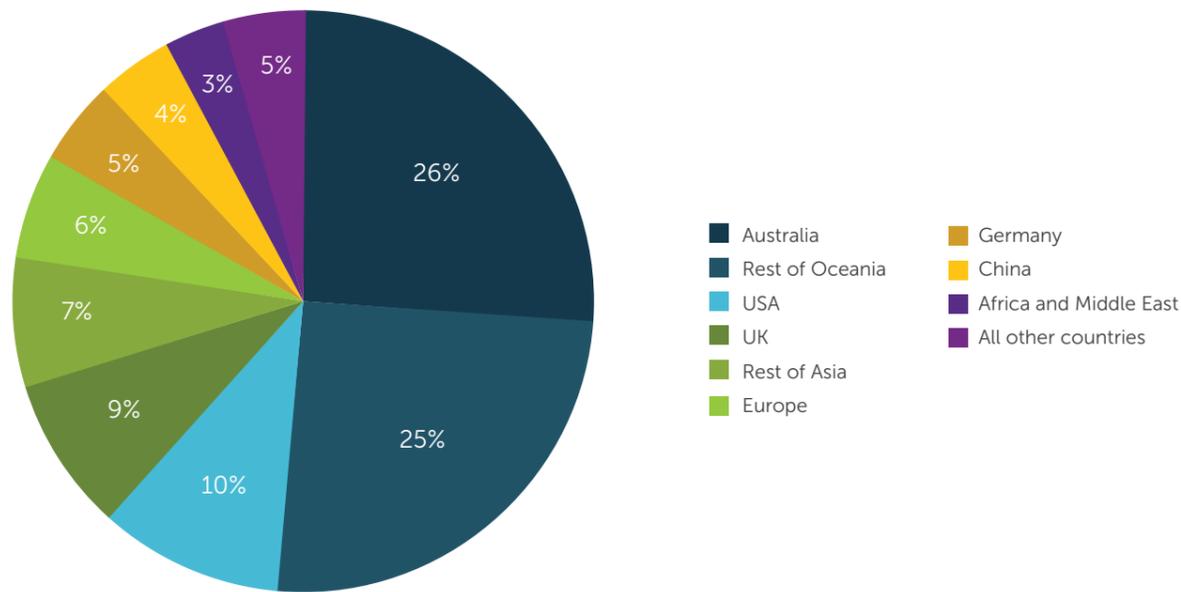


Tourism

Tourism spending in the District increased by 9.4% to a total of \$54.0m to the year ended December 2019. This compares with annual growth of 2% in Palmerston North and 3.5% growth nationally. International tourism expenditure in the District increased by 14.1% over the year while domestic tourism expenditure increased by 8.5%. Overall, international tourism contributed \$9.6m while domestic tourism contributed \$44.4m to total tourism spending.

Australia continues to be the District's largest international tourism market. Australian tourists spent \$2.5m in the District over the year to December 2019. This is 11.9% growth from the previous year. Strong growth in tourism spending from Africa and the Middle East, the United States and Germany also helped to bolster international tourism spending in the District over the period from December 2018 to December 2019.

Figure 14 - International visitor expenditure



Manawatū-Whanganui residents are the largest contributor to domestic tourism spending in the District.

The number of guest nights in the District to the year ended September increased by 2,094 (3.9%). The guest night data series ended in September 2019 therefore, September is the last quarter we have guest night data for.

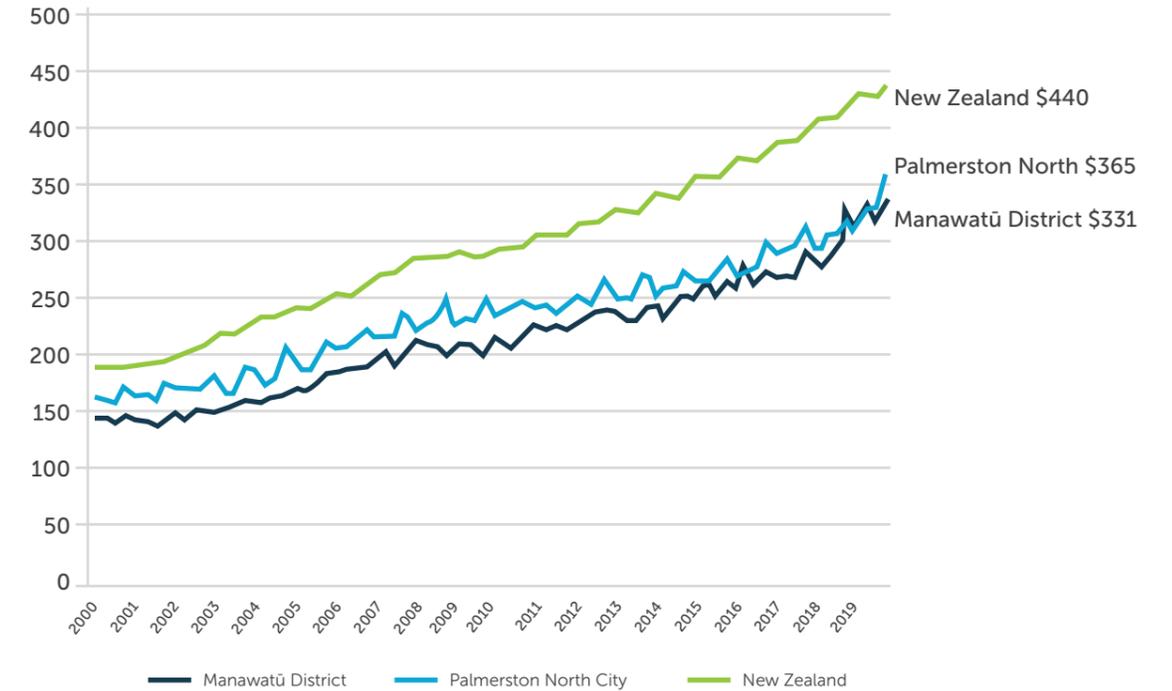
House Sales

Annual house sales over the year from September 2018 to September 2019 increased from 432 to 454 (up 4.6%). Across the Manawatū-Whanganui Region, volumes declined by 4% while national volumes were also down, falling by 0.7% over the period.

Average Weekly Rent

Average rents in the District as at December 2019 were \$331 per week. This compares to average weekly rent of \$365 in Palmerston North and \$440 in New Zealand overall. Over the 25-year time series, average weekly rents in the District have generally undershot Palmerston North rents. Over the past three years, the gap between rents in the District and Palmerston North have converged. Assuming availability of housing for long term accommodation, strong housing supply growth will help to alleviate housing pressures over time.

Figure 15- Average weekly rent – 1994 to 2019



Financial Stability

Elevated housing costs are impacting on financial stability. The Reserve Bank of New Zealand (RBNZ) reports that 'The high level and concentration of household sector debt remains the largest single vulnerability of New Zealand's financial system' (Reserve Bank of New Zealand, 2019).

Household debt accounts for 60% of bank lending. In September 2019, housing debt made up 94.2% of total household debt and increased at a rate of 6.5% over the year to September 2019, versus 0.2% for consumer debt. Overall, household and consumer debt grew at 6.2% over the year.

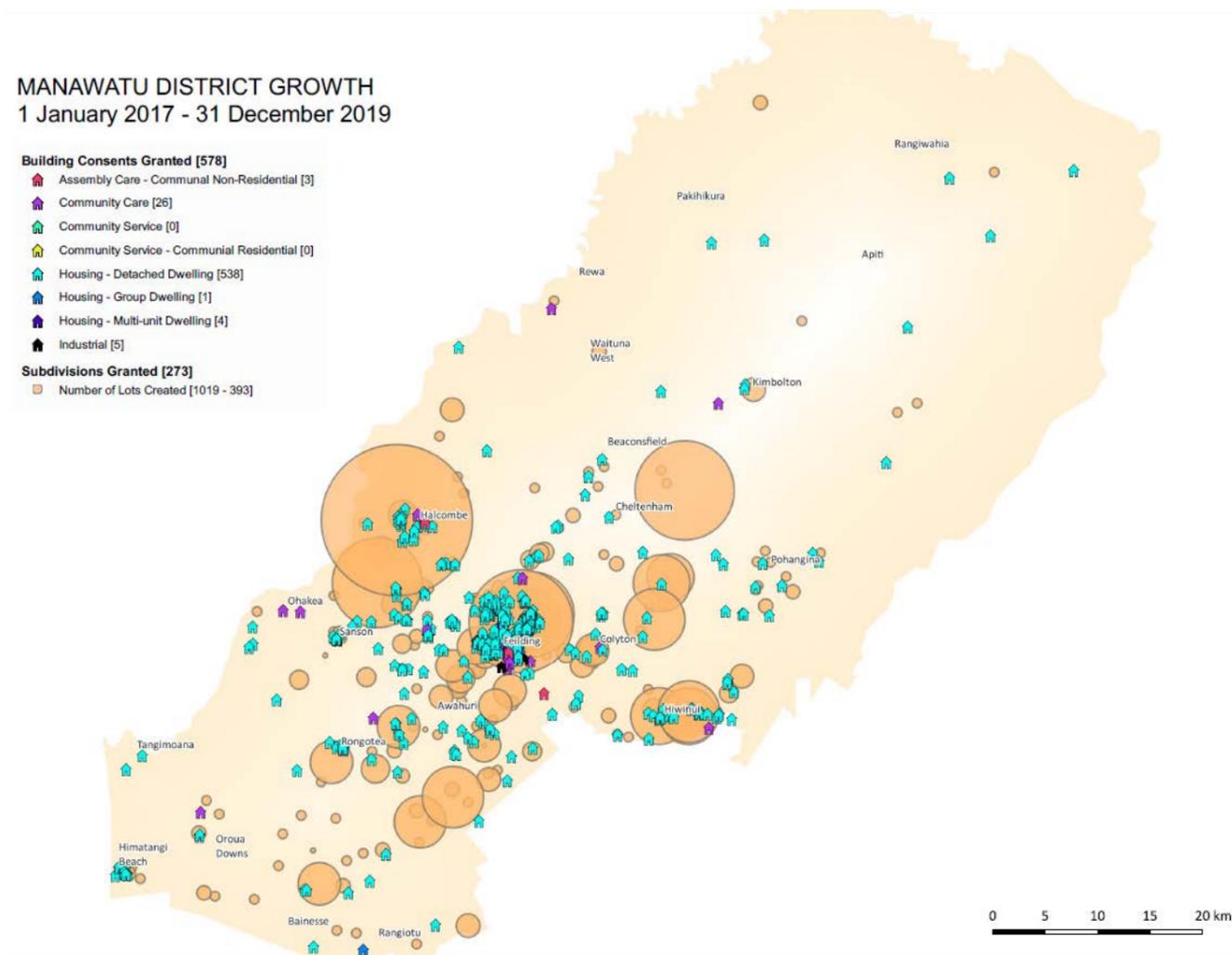
The RBNZ has responded to increasing debt levels by retaining loan-to-value (LVR) restrictions in an attempt to limit further house price growth. The RBNZ is also expected to announce increased capital requirements on banks to ensure sufficient capital is held to withstand financial shocks. While such measures support resilience in financial markets they cost those families on low to middle incomes as they have the potential to drive up bank mortgage rates, increasing rents and limiting home ownership for a greater number of families. In addition, the LVR restrictions will impact on those families struggling to save the 20% deposit needed to buy a home.

Environmental Profile

Development trends based on consents data

Figure 16 plots building consent and subdivision consent data for the Manawatū District over the period from 1 January 2017 to 31 December 2019. Over this time there has been a total of 578 building consents granted for new builds (93% for detached dwellings) and 273 subdivision consents granted, creating a total of 623 new lots. Figure 17 shows a concentration of subdivision and development within Feilding, Halcombe, Hiwinui and east of Cheltenham, and a moderate amount of development around Colyton and between Feilding and Palmerston North.

Figure 16 - Manawatū District Growth 1 January 2017 – 31 December 2019



Council is currently undertaking monitoring that will inform the upcoming review of the residential and rural lifestyle sections of the Manawatū District Plan. Some of the monitoring that is currently underway includes:

- Rural lifestyle development trends over time
- Rural activity and diversification
- Vacant residential landbank
- Vacant industrial landbank.

While this monitoring data will not be available in time to inform this Environmental Scan, it will inform parts of the 10YP, including the forecasting assumptions around land use change and Council's infrastructure planning to support growth, as detailed in the Infrastructure Strategy and the schedules of the Development Contributions Policy.

Land Use Change

Conversion of land to dairying is having an effect on the District's roading network, with pavement widths, loadings, and safety all under pressure (Manawatū District Council, 2019a). These effects have already become evident in the Apiti area. Conversion to other intensive land uses not currently known or anticipated may have similar effects (Manawatū District Council, 2019a). Inadequate seal widths on roads used by dairy tankers has resulted in increasing maintenance demands and the need to be addressed by seal widening improvement programmes (Manawatū District Council, 2019a). Tankers and other heavy vehicles also create problems on unsealed roads, requiring increased maintenance and grading and generating more dust than other vehicles (Manawatū District Council, 2019a).

Farming in the District has responded to climatic and trade uncertainties in recent years by diversifying and, in some cases, subdividing and selling land for residential development. As a result dairying, deer farming and residential development have increased while sheep farming has declined (Manawatū District Council, 2019a).

Council is looking to attract new commercial and industry ventures to the District. This has prompted the expansion of the Feilding Industrial Precinct.

Climate Change

Horizons commissioned NIWA to make climate change projections for the Manawatū-Whanganui Region (2016) based on IPCC scenarios, to project regional changes in temperature, sea level, and precipitation for the coming century (Horizons Regional Council, 2019c). Findings suggest annual average temperatures across our region are likely to increase by between 0.7°C and 1.1°C by 2040, and by up to 3.1°C by 2090. It is expected that this will result in an increase in hot days and decrease in cold nights by 2040, when compared to the period 1986 to 2005. Seasonal precipitation is also expected to change by the end of this century (Horizons Regional Council, 2019c).

Even under the low emissions scenario, we can expect more snow and rainfall in winter in western parts of the region, with Raetihi in the Ruapehu District potentially receiving up to 15% more precipitation during winter by 2090 (Horizons Regional Council, 2019c). Assuming the worst case scenario, the northern part of our region could experience up to 20% more snow and rainfall during winter, compared to 20% less precipitation in the south eastern area (Horizons Regional Council, 2019c).

NIWA modelled future flows for the Manawatū River under a range of climate change scenarios and compared them to climate data for the period 1986-2005. This modelling suggests little change in the average (mean)

annual flow to 2090, but summer flows are projected to decrease by 14% by 2090 and an increase in the average number of high flow (flood) events per year (Horizons Regional Council, 2019c).

The region is likely to experience warmer winters with fewer frosts, but hotter summers will bring increased risks of heat stress and drought (Horizons Regional Council, 2019c). The introduction of new pests – or more favourable conditions for pests we already have – is likely to be an ongoing challenge, along with the possible introduction of subtropical diseases. Species that are already under threat or are at the limit of their climatic range may struggle to survive (Horizons Regional Council, 2019c).

Natural Hazards

Earthquake Hazard

Updated earthquake forecasts from GeoNet on 2 December 2017 provide a best estimate of 30% (unlikely) of a magnitude 7 or higher earthquake occurring within the Central North Island within the next 10 years (Manawatū District Council, 2018). These likelihood predictions were updated following the Kaikoura event. Future updates to the forecasts are unlikely prior to the next 10 Year Plan, unless funding becomes available (Graham, J. Pers. Comm. 31/10/19).

The hazards most relevant to the District are flooding, earthquakes, land slippage, coastal erosion/deposition and tsunamis (Manawatū District Council, 2019a).

GNS has recently produced a report on the location of fault lines in the District. This information will be important when we consider the earthquake-prone building issue.

Flood Hazard

The Manawatū River is the second largest river system in the Region. The primary flood risk areas within the lower river system are Palmerston North, Feilding, Foxton and Foxton Beach (Manawatū-Whanganui Emergency Management Group, June 2018). The Rangitikei River is the third largest catchment in the Region. The primary flood risk areas are Marton, Bulls and Tangimoana (Manawatū-Whanganui Emergency Management Group, June 2018).

Horizons has completed flood modelling for some of the region’s catchments where key risks were identified (Horizons Regional Council, 2019b). The flood information only shows river flooding and does not show all the areas that might get wet during an extreme rainfall of flood event (Horizons Regional Council, 2019b). Areas of ponding from stormwater and other overland flow sources are not included in the modelled output and the modelled extent may not cover the full flooded area for a given event (Horizons Regional Council, 2019b).

Tsunami

The Manawatū-Whanganui Region is vulnerable to tsunami hazards on both the east and west coasts (Manawatū-Whanganui Emergency Management Group, June 2018). The following table summarises modelled tsunami wave heights for all sources on the west and east coast (Manawatū-Whanganui Emergency Management Group, June 2018). For evacuation and planning purposes, the 84th percentile wave height is doubled to provide on-shore heights (the wave run-up) from which evacuation zones are derived (Manawatū-Whanganui Emergency Management Group, June 2018).

Table 6 – Manawatū-Whanganui tsunami evacuation zones

	Wave Height Regional and Distant Sources 500 YR		Wave Height all sources 2500 YR	
	Median	84%	Median	84%
West Coast	2.6m	3.6m	5.2m	7.8m
East Coast	2.2m	3.1m	14.2m	24.2m

On the national scale, the consequences of tsunami events on the Manawatū-Whanganui CDEM Group are considered to be relatively low, due largely to the small number and population of coastal communities, and the relatively short coastline within the Region (Manawatū-Whanganui Emergency Management Group, June 2018).

The following are the evacuation maps for the coastal communities within the Manawatū District (Horizons Regional Council, 2019a). The blue symbols denote the designated safe zones (Horizons Regional Council, 2019a).

Figure 17 – Tangimoana Evacuation Zone

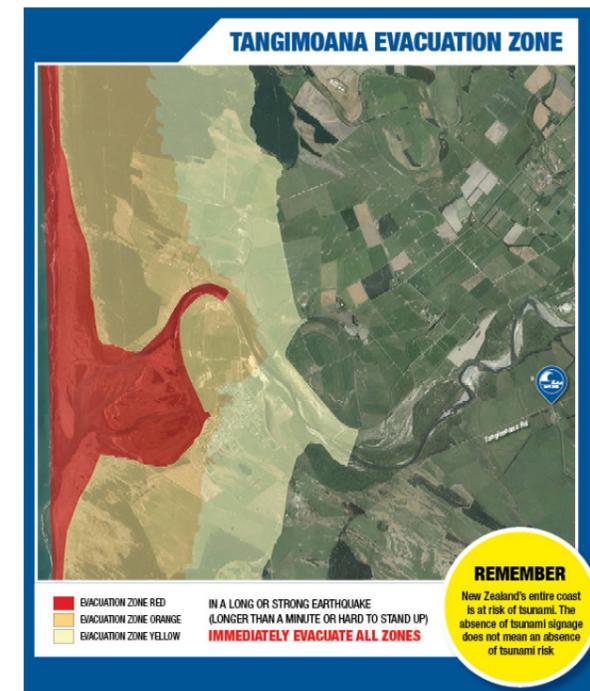


Figure 18 – Himatangi Evacuation Zone



National Disaster Resilience Strategy

The National Disaster Resilience Strategy outlines the vision and long-term goals for civil defence emergency management in New Zealand (Ministry of Civil Defence & Emergency Management, 2019). Its purpose is to deliver on the intent and purpose of the CDEM Act 2002 and provides a common agenda for resilience that individual organisations, agencies and groups can align with for collective impact (Ministry of Civil Defence & Emergency Management, 2019). The Strategy came into effect on 10 April 2019 and covers a 10 year period (Ministry of Civil Defence & Emergency Management, 2019).

The vision of the Strategy is that:

... New Zealand is a disaster resilient nation that acts proactively to manage risks and build resilience in a way that contributes to the wellbeing and prosperity of all New Zealanders.

The goal of the Strategy is:

... To strengthen the resilience of the nation by managing risks, being ready to respond to and recover from emergencies, and by enabling, empowering and supporting individuals, organisations, and communities to act for themselves and others, for the safety and wellbeing of all.

The Strategy sets out three priorities to improve New Zealand's resilience to disasters, as follows:

1. **Managing Risks:** what we can do to minimise the risks we face and limit the impacts to be managed if hazards occur;
2. **Effective response to and recovery from emergencies:** building our capability and capacity to manage emergencies when they do happen; and
3. **Enabling, empowering, and supporting community resilience:** building a culture of resilience in New Zealand so that everyone can participate in and contribute to communities' - and the nation's - resilience.

Each priority has six objectives to focus on the critical issues and drive progress. Most objectives are relevant to local government. The detail of how objectives are to be achieved sits alongside CDEM group plans and a range of other supporting policies and plans (Ministry of Civil Defence & Emergency Management, 2019).

The types of resilience referred to in the Strategy include:

- Social (including promoting social connectedness and cohesion, and the effective operation of key social support functions for the protection and strengthening of social and human capital);
- Cultural (including cultural values, places, institutions, practices, our identity as New Zealanders and our history and heritage);
- Economic (protection of financial capital);
- Resilience of the built environment including critical infrastructure; resilience of the natural environment (including understanding how hazards impact the environment and how the environment can protect society from hazards);
- Governance of risk and resilience (including leadership, policy, strategy, security, and the rule of law, for effective oversight, coordination, collaboration, and coherence of resilience activity); and
- Underpinning knowledge (including indigenous and scientific knowledge and up to date info on risks and effective resilience practices).

The following is an excerpt from the vision of a resilience NZ that is particularly relevant to Local Government:

"Resilience is integrated into urban and rural design principles as a matter of course and supported by quality information on safe building materials and design. Rich data and modelling of hazard and risk are enabling the transition to smart land-use, where permanent dwellings and key infrastructure are not built on the highest risk ground (Ministry of Civil Defence & Emergency Management, 2019)."

The Strategy includes the following list of directions for Local Government that may be relevant to this 10 Year Plan and the Infrastructure Strategy in particular:

- Understand your risk – identify and understand hazards and disruptions you could face and the willingness and ability of your community to cope with disruption.
- Organise for resilience – consider whether your governance of risk and resilience is fit for purpose. Engage all interested parties and take a whole-of-city/district approach
- Make resilience a strategic objective – the economic prosperity of the District and the wellbeing of communities depends on it
- Lead, promote and champion district-wide investment in resilience (ensure embedded in economic development plans and initiatives)
- Tackle gaps in hazard risk management policy – including matters of retreat or relocation from high risk areas, and adaptation to climate change
- Pursue resilient urban development – including risk-aware land-use decisions, and urban design and growth that incorporates resilience
- Increase infrastructure resilience – ensure resilience of critical assets and continuity of essential services
- Safeguard natural buffers – use the protective functions offered by natural ecosystems wherever practicable
- Strengthen financial capacity – understand economic impact of disasters in your area and the need for investment in resilience. Identify and develop financial mechanisms to support resilience activities.
- Strengthen societal capacity – cultivate social connectedness and a culture of mutual help. Support and enable grassroots efforts and organisations. Support diversity and promote inclusion.
- Invest in organisational resilience – ensure comprehensive business continuity planning is in place and consider your ability to respond to the unexpected
- Building capability and capacity for response and recovery – ensure not just fit for purpose, but future-ready and adaptable.

Major Regional Developments/Projects

KiwiRail Multi-Modal Freight Hub

KiwiRail has plans to construct a new high-tech multi-modal freight hub near Palmerston North (KiwiRail, 2019a). The hub project is aligned with Horizons and Palmerston North City Council growth plans and it will tie in with other freight transport projects in the region (KiwiRail, 2019a). The location of the new hub is yet to be determined but it needs to link with NZTA's planned freight ring road around Palmerston North and the Manawatū Gorge replacement road, be reasonably close to the North Island Main Trunk Line, and Palmerston North Airport. Options include inside the North East Industrial Zone (NEIZ) and other potential sites around Palmerston North (KiwiRail, 2019b).

The hub was designed in 2019, with the designation process commencing in April 2020 (including public notification). The planning, design, designation and land purchase is expected to take up to 3 years (KiwiRail, 2019b).

The project should generate a significant increase in employment during the construction phase. KiwiRail staffing levels are not expected to be affected, but there is potential for more jobs once the hub is in operation. The Freight Hub will also encourage more distribution companies to move into the area, which should grow employment (KiwiRail, 2019b).

Ōhakea Expansion

Five squadron, who fly marine reconnaissance Orions, are moving from Whenuapai to Ōhakea between 2022 and 2023 (Mitchell J. , 2018). In addition the airforce is replacing the Orions with Poseidons – larger jet powered aircraft. The base is expanding to include four new hangers, office space, operations and training centres, along with upgrades to existing taxiways (Mitchell J. , 2018). It is forecast that more than 2000 jobs would be sustained during the construction phase (Mitchell J. , 2018) and on-base staff will increase by 275. Some of the relocated families are expected to settle in Feilding.

Te Ahu a Tūranga: Manawatū-Tararua Highway

The Te Ahu a Tūranga: Manawatū-Tararua Highway project is due to start summer 2020/21 and is scheduled for completion in 2024 (NZ Transport Agency, 2019c). It will provide cars with a safe and reliable journey between Ashhurst and Woodville (NZ Transport Agency, 2019c).

During the construction period the gorge replacement project will divert a lot of both contractor and physical resource away from local roading projects. This means that MDC will need shift to maintenance of sealed roads towards cement stabilisation rather than thickening pavement due to the limited availability of gravel resource. Non-sealed roads will continue to be metaled.

Forestry

Damage from forestry is ramping up. The most intensive logging period will be between 2021 and 2030 (Manawatū District Council, 2019a). The quality of the road will rely on proactive road maintenance schedules and effective communication between roading engineers, forest managers and public users (Manawatū District Council, 2019a).

The largest continuous forest woodlots are in coastal areas close to Himatangi and Tangimoana (Manawatū District Council, 2019a). Small holdings are frequent in more fertile farmland and river terraces. Extensive stands exist closer to steeper hill country in the north east of the Region in proximity to Rangiwahia and Rewa.

Forestry harvest is currently centred on Waipuru, Mangapapa and Lower Pakihikura Roads, exiting onto SH54. Harvest in that area is expected to last 8 years.

Ōtaki to North of Levin Project and Rail Improvements

The Ōtaki to Levin highway, or the 'Ō2NL road,' is the northern-most section of the Wellington Northern Corridor project that includes Transmission Gully and the Kāpiti Expressway (RNZ, 2019). This project involves the construction of a new four-lane corridor from Ōtaki to north of Levin. It will improve safety and access, support economic growth, provide greater route resilience and better access to walking and cycling facilities (New Zealand Transport Agency, 2020). The construction of the Ōtaki to Levin highway was put on hold due to funding constraints (NZ Transport Agency, 2019d). However, on 29 January 2020 the Government announced a \$12 billion to be spent on infrastructure projects, including \$5.3 billion to be spent on roads. The Ōtaki to north of Levin (Ō2NL) is one of the projects listed within the Wellington package of projects that are to be funded (Coughlan, 2020). The budgeted cost for this project is \$817 million.

Also listed within the Wellington package of construction projects is improvements to the Wellington, Wairarapa and Palmerston North rail network and beyond, including upgraded tracks for the Wairarapa and Capital Connection lines, safety connections and refurbishment of Capital Connection carriages. The total budgeted cost is \$217 million (Crawford, 2020).

PFAS Contamination at Ōhakea

On 10 December 2019 the Minister for the Environment Hon David Parker announced that Government will invest \$10.8 million into a water scheme for properties affected by the PFAS contamination from the Ōhakea air force base (Mitchell P. , 2019). The new scheme will source water from outside the identified PFAS contamination zone and treat the water to surpass the current Drinking Water Standards to ensure the affected properties have access to clean water.

The government contribution is 75% of the maximum cost of the scheme, which has been estimated as \$14.4 million. The balance of the funding is the responsibility of the Manawatū District Council (Mitchell P. , 2019).

Himatangi Beach Subdivision

Oasis Properties Ltd has lodged a consent application (in May 2019) to subdivide a 18.6066 hectare property on Sandown Road in six stages to create 77 residential lots and a balance lot. The site is zoned Village, meaning that this type of development is provided for in the District Plan. A future link road to connect Sandown Avenue with Himatangi Beach Road is proposed as part of the development. All lots exceed the minimum site area of 500m² (Resource Consent Report for Consent Number 3700). Council is still working through the processing requirements for this application. However, if granted, this would constitute a significant development within this Village.

A further subdivision application in Himatangi Beach, known as "Western Sands" has lapsed. The applicant visited Council in late 2017, but no application has been received to date.

Government Proposals, Legislation, Inquiries and National Trends

National Direction for Freshwater

The Government is committed to stopping the degradation of New Zealand’s waterways so that water quality is materially improving within five years, and to restoring them to a healthy state within a generation (Ministry for the Environment, 2019a). There are three objectives, as follows:

1. Stop further degradation
2. Reverse past damage
3. Address water allocation issues

To achieve these objectives, the Government has developed a package of proposals that include changes to legislation and regulation, as follows:

- Amendments to the Resource Management Act 1991
- An updated National Policy Statement for Freshwater Management
- An updated National Environmental Standard for Sources of Human Drinking Water
- New National Environmental Standards for Freshwater and Wastewater.

The proposed work programme is illustrated in Table 7 below (Ministry for the Environment, 2018).

Table 7 – National Direction for Freshwater Work Programme

Workstream	
At-Risk Catchments	<p>Identify at-risk catchments, to:</p> <ul style="list-style-type: none"> • Consider the need for regulatory intervention • Target erosion risk for input into the One Billion Trees programme and other funds • Identify existing restoration projects that could be scaled for increased impact • Support voluntary action by councils, Māori, NGOs, other community groups, and industry.
National Policy Statement for Freshwater Management (Freshwater NPS)	<p>Changes to the Freshwater NPS may include:</p> <ul style="list-style-type: none"> • How to better provide for ecosystem health • New attributes – sediment, copper and zinc, dissolved oxygen • Clarifying the direction around how to set effective limits • Better protection for wetlands and sensitive downstream environments (e.g. estuaries) • Policy around at-risk catchments • Resolving exceptions to national bottom lines • Other changes proposed by the Land and Water Forum and other groups

National Environmental Standard for Freshwater Management (Freshwater NES)	<p>A New Freshwater NES may include:</p> <ul style="list-style-type: none"> • Preventing further loss of wetlands and urban streams • Mechanisms for managing intensification, including targeting at-risk catchments. • Direction around the use of farm environment plans and good management practices such as stock exclusion and riparian management • Rules to control activities such as intensive winter grazing, hill country cropping, and feedlots • Direction on nutrient allocation • Direction for the review of existing consents • A default regime for ecological flow and levels where none are set, and how minimum flows apply to existing consents.
Resource Management Act (RMA) Amendments	<ul style="list-style-type: none"> • 2018 RMA Bill – a narrow range of amendments. • Second phase; a more comprehensive review of the resource management system.
Allocation of Freshwater Resources	<ul style="list-style-type: none"> • Gathering information to understand catchment-level water quality issues and land (especially Māori land) development constraints. • Developing options on discharge allocation and engaging with stakeholders. • Developing options on water take allocation and engaging with stakeholders.
Future Framework	<ul style="list-style-type: none"> • Extend good practice across farms, forests, and urban water management. • Target investment in solutions and in advice and tools to support decision making. • Improved and nationally consistent measurement and monitoring. • Support councils to undertake their roles.

The Government has or is consulting separately on a number of these workstreams. This Environmental Scan considers the consultation on the Freshwater NPS and NES and some proposals relating to management of stormwater and wastewater under the topic of “Essential Freshwater Programme;” changes to the management of stormwater, wastewater and drinking water under the topic of “Three Waters Review;” and changes to the regulation of drinking water under “Regulation of Drinking Water.”

As noted below, some proposals relating to the Three Waters Review are also being considered under the Essential Freshwater Programme to ensure alignment. Likewise, the Taumata Arowai – Water Services Regulator Bill that is discussed under the Regulation of Drinking Water is the first part of package of reforms to the regulatory system for drinking water, wastewater, and stormwater, which is collectively referred to as the “Three Waters Review.” Given the overlapping nature of these topics it is difficult to consider them in isolation from one another. Essentially, all these proposals are working together to achieve the Governments objectives for freshwater.

Essential Freshwater Programme

The Action for Healthy Waterways proposal notified by the Ministry for the Environment in September 2019 included a package of proposals to address the first two government objectives (Ministry for the Environment, 2019a). The allocation of freshwater resources will be consulted on separately in the future.

The proposals were developed with a view to upholding Te Mana o te Wai. This concept refers to the integrated health and wellbeing of waters as a continuum from the mountains to the sea (Ministry for the Environment, 2019a).

The Essential Freshwater Programme is being developed alongside the Three Waters Review (see below). Some proposals (refer to proposal 5. Below) relating to the Three Waters Review were included in the Essential Freshwater Programme to ensure they are complementary (Ministry for the Environment, 2019d).

The proposals included in the Action for Healthy Waterways package include (Ministry for the Environment, 2019a):

1. Amendments to the Resource Management Act 1991 (RMA) to introduce a streamlined planning process to speed up the process for regional councils to develop and implement regional water management plans. All plans are required to be completed no later than 2025.
2. To set a clear policy direction in the National Policy Statement for Freshwater Management (NPS-FM). This includes strengthening the requirement to identify and reflect Māori values in freshwater planning.
3. Raising the bar on freshwater ecosystem health by introducing new attributes and requirements into the NPS-FM and better monitoring and reporting requirements.
4. Amendments to the National Environmental Standard for sources of human drinking water (tighter management of land use in areas that are sources of supply).
5. Better management of stormwater and wastewater including minimum standards for wastewater discharges and overflows and a requirement for operators to follow good practice risk management.
6. Improvements to farming practices where needed, including compulsory farm plan requirements, restrictions around further intensification of land use, interim measures to reduce nitrogen loss in catchments with high nitrate/nitrogen levels, stock exclusion from waterways and standards for intensive winter grazing, feedlots and stock holding areas.

Based on the information contained in the discussion document Action for Healthy Waterways, the draft National Policy Statement for Freshwater Management, the Proposed National Environmental Standards for Freshwater and the Draft Stock Exclusion Section 360 Regulations, the Essential Freshwater Programme is anticipated to impact on the Manawatū District in the following ways:

1. Additional resourcing needed to meet new risk management and reporting requirements as a wastewater and stormwater network operator. This will direct resources away from Business as Usual activities.
2. Additional resourcing needed for re-consenting of wastewater and stormwater discharge consents in anticipation of stricter conditions around discharge quality.
3. Additional resourcing will be required to meet stricter measures and targets within the 10 Year Plan for Council's stormwater and wastewater networks.
4. The need to implement stricter controls around land use activities within proximity of drinking water sources.

5. Council may be further limited in what productive land uses may be carried out on land that receives irrigated treated wastewater from wastewater treatment plants due to new controls around intensive farming land uses.
6. The need to review urban design standards, District Plan rules and structure plans to ensure that plan change and resource consent applications give adequate consideration to the requirements of the revised NPS-FM.
7. Resourcing needed to respond to customer enquiries regarding the new requirements.
8. Potential for 'trickle down' effects from the suite of rules that will be imposed by the Regional Council.

Three Waters Review

Alongside the Essential Freshwater programme, and as part of the Three Waters Review, the Government is reviewing challenges facing drinking water and wastewater, stormwater. (Ministry for the Environment, 2019d).

The Three Waters Review, which is a cross-agency initiative led by the Minister of Local Government, aims to strengthen the regulation of three waters infrastructure and ensure they complement the wider Essential Freshwater reforms

Central Government is undertaking a review of how three waters services are delivered to achieve the following key outcomes:

1. Safe, acceptable and reliable drinking water;
2. Better environmental performance; efficient, sustainable, resilient and accountable services; and
3. Achieving this in a way that is affordable for ratepayers

The first step in achieving key outcome 1 above was an agreement by Government on 30 September 2019 to establish a new drinking water regulator as an independent Crown entity. The Bill to establish this independent drinking water regulator is discussed in more detail under the topic of "Regulation of Drinking Water" below. The Government considers that a standalone regulator will have the high degree of focus and independence needed to provide confidence in New Zealand's regulatory regime for drinking water (Department of Internal Affairs, 2019a). It will also contribute to fresh water outcomes by providing central oversight and guidance for the sector's wastewater and stormwater regulatory functions (Department of Internal Affairs, 2020b).

An Establishment Unit is being created within the Department of Internal Affairs, with support from the Ministry of Health and the Ministry for the Environment, to design and operationalise the new regulator (Department of Internal Affairs, 2020b).

Funding and financing to upgrade infrastructure lies at the heart of the problems facing the three waters. For many smaller councils, there is no clear way forward given the scale of the challenges (Office of the Minister of Local Government and the Office of the Minister of Health, 2018). Current three waters operations are already subject to change, due to the initial government regulatory response and more rigorous application of standards (Manawatū-Whanganui Region Local Authorities, 2019).

The Chief Executives of the Manawatū-Whanganui Region are being proactive in responding to these reforms by:

- Conducting a 'point in time' stocktake of three waters services and assets (Financial Year 2018/19);
- Describing the human resources required to manage three waters services;
- Identifying the options available to councils within the study area for the delivery of three waters; and
- Providing advice to the councils on the optimal three waters delivery model.

The options being considered by the Chief Executives of the Manawatū-Whanganui Region are:

1. Status quo
2. Regional planning and shared services alliance; and
3. Regional asset managing council controlled organisation.

The identified challenges to collaboration include:

- Differing levels of debt across the districts
- Comparative state of infrastructure between districts
- Affordability
- Tyranny of distance
- Stranded overheads.

The recommendations of the Chief Executives of the Manawatū-Whanganui Region in October 2019 are as follows:

1. Develop a regional roadmap for services that could help build resilience, for example:
 - a) a formal training programme for key specialists such as operators
 - b) a regional approach to regulation, resource consent management and asset management
 - c) a centralised approach to providing resources such as staff, equipment, facilities and procurement
 - d) analysis and modelling of the financial impact of change, including stranded overheads for each council.
2. Progress consideration of a collaborative regional service delivery model, taking future needs and Freshwater Management Unit opportunities into account.
3. Broaden engagement to include Government stakeholders and elected representatives, in the first instance. Engagement with mana whenua and affected communities will also be required.
4. Assess how regulation costs impact both the status quo and a staged approach to a regional planning and shared services alliance, to verify the potential benefits.

Community engagement on any regional coordination approach for the three waters will be undertaken via the 10 Year Plan and/or Annual Plan process.

Regulation of Drinking Water

On 18 December 2019 Central Government notified the Taumata Arowai – Water Services Regulator Bill to give effect to decisions in the 30 September Cabinet paper agreeing to establish an independent regulator for drinking water and certain environmental aspects of wastewater and stormwater management (New Zealand Parliament, 2020). Submissions on the Bill close on 4 March 2020. This Bill is part of a broader package of reforms to the regulatory system for drinking water, wastewater, and stormwater (Three Waters). The Government has indicated a separate bill will be proposed at a later date to give effect to decisions to implement system-wide reforms to the regulation of drinking water and source water, and targeted reforms to improve the regulation and performance of wastewater and stormwater networks (New Zealand Parliament, 2020).

The Society of Local Government (SOLGM) has begun drafting a response to the Taumata Arowai – Water Services Regulator Bill (Horan, 2020). While a draft submission is still being formulated, initial commentary suggests that

the local government sector supports the need for an independent regulator in principle. However, there are issues around the funding for this body that are yet to be worked through. The regulations that Taumata Arowai makes will have cost implications for the local government sector. The sector expects that there will be co-investment in infrastructure where the case has been made on national good grounds.

The establishment of Taumata Arowai will create demand for people with skills and knowledge of the drinking water industry and environmental regulation. SOLGM is concerned about skill and capacity gaps (Horan, 2020).

Resource Management Act 1991 Reforms

The Resource Management Review Panel has been established by Government to undertake a comprehensive review of the Resource Management Act (RMA) and other significant legislation comprising the resource management system (Resource Management Review Panel, 2019). The overall aim is “to improve environmental outcomes and enable better and timely development in urban areas and elsewhere within environmental limits.”

Feedback is being sought from stakeholders and Iwi/Māori to inform the development of the panel’s proposals for reform. Comments on the issues and options paper closed on 3 February 2020. The panel’s final report is due with the Minister for the Environment at the end of May 2020. There will be further engagement with stakeholders, Iwi/Māori and the public on the development of the Government’s proposals for reform following the release of the final report (Resource Management Review Panel, 2019).

Deficiencies with the current system have been identified as: (Resource Management Review Panel, 2019):

- Lack of clear environmental protections
- Lack of recognition of the benefits of urban development
- A focus on managing the effects of resource use rather than planning to achieve outcomes
- A bias towards the status quo
- Lack of effective integration across the resource management system
- Excessive complexity, uncertainty and cost across the resource management system
- Lack of adequate national direction
- Insufficient recognition of the Treaty and lack of support for Māori participation
- Weak and slow policy and planning
- Weak compliance, monitoring and enforcement
- Capability and capacity challenges in central and local government
- Weak accountability for outcomes and lack of effective monitoring and oversight.

Broad options being considered include (Resource Management Review Panel, 2019):

1. Retaining the RMA as an integrated statute with enhanced principles for land use and environmental management
2. Split the RMA into an environmental management statute and a land use planning statute.

Options are also being considered in the following areas (Resource Management Review Panel, 2019):

1. Reforming the purpose and principles of the RMA;
2. Reforming the provision for the Treaty and Māori interests and engagement in the RMA;
3. Provision for strategic integration across the resource management system, including provision for

spatial planning;

4. Addressing climate change and natural hazards;
5. Improving national direction;
6. Improving the policy and planning framework;
7. Improving consents and other approvals;
8. Improving the use of economic instruments;
9. Improving the allocation framework;
10. Improving system oversight and monitoring;
11. Improving compliance, monitoring and enforcement to improve efficiency and effectiveness;
12. Reviewing institutional roles and responsibilities to ensure that functions are allocated to delivery institutions with the right incentives and capability; and
13. Reducing complexity across the system.

While the review process is still in its initial stages, early indications are that the focus of the Resource Management Act, and the consenting framework in particular, will shift from being effects based to outcomes based. Depending on the nature of the reforms, there will be adjustments to the way that resource consents are assessed, approved and monitored and changes to the plan change process. There will be cost and resourcing implications to any changes, including in educating staff of the new requirements and implementing new systems and processes to meet the new requirements. Over time, if the objectives of the review are realised, the resource management system should be more efficient and effective, resulting in better environmental outcomes and fewer barriers to development (in appropriate areas).

Emissions Trading Scheme Policy

The New Zealand Emissions Trading Scheme (ETS) puts a price on greenhouse gas emissions (Forestry New Zealand Website, 2019). This encourages people and businesses to:

- Reduce greenhouse gas emissions
- Establish forests to remove greenhouse gases from the atmosphere.

The primary unit of trade in the ETS is the New Zealand Unit (NZU), also called a carbon credit. One NZU represents 1 tonne of carbon dioxide (or the equivalent for other greenhouse gases) (Forestry New Zealand Website, 2019). Certain entities in the ETS that emit greenhouse gases must pay units to the government and entities that remove greenhouse gases, like those in forestry, can earn units from the government, which they can sell to companies that emit.

Ministry for Primary Industries (MPI) administers the ETS for forestry, along with the Ministry for the Environment (MfE) and the Environmental Protection Authority (EPA).

In 2018, the Government asked the Interim Climate Change Committee (ICCC) to investigate options to reduce agricultural emissions (Ministry for the Environment, 2019b). Government has reviewed the submissions as well as available evidence and has decided to put a price on agricultural emissions from 2025 (Ministry for the Environment, 2019b). Pricing will be at farm level for livestock and at processor level for fertiliser (Ministry for the Environment, 2019b). This will be included in the Climate Change Response (Emissions Trading Reform) Amendment Bill (Ministry for the Environment, 2019b). The Amendment Bill was introduced to Parliament in October 2019 and is expected to be enacted in early 2020 (Ministry for the Environment, 2019b).

The implications of the ETS for the Manawatū District and this 10YP will depend on the outcome of collaboration between the sector and government and resources applied at central government level to support adaptation of the industry. This will be key to minimising the impact alongside creating certainty for farmers. Those farmers who are heavily indebted are at greatest risk especially alongside new banking capital requirements that will decrease risk portfolios for bank lending. The combined impact of monetary and fiscal policy on the industry needs to be at the centre of the regulatory impact analysis prior to implementation.

Proposed National Policy Statement for Highly Productive Land

The proposed National Policy Statement for Highly Productive Land (NPS-HPL) aims to prevent the loss of more of our productive land and promote its sustainable management (Ministry for Primary Industries, 2019). The purpose is to improve the way highly productive land is managed under the RMA to:

- Recognise the full range of values and benefits associated with its use for primary production;
- Maintain its availability for primary production for future generations; and
- Protect it from inappropriate subdivision, use and development (Ministry for Primary Industries, 2019).

Officers reviewing the proposed NPS-HPL identified the following potential impacts on the Manawatū District Council:

- Highly versatile land should be prioritised for productive uses such as food production.
- Council will give more weight to the protection of versatile land when planning for future rural lifestyle zones and urban precincts within the District. This will influence the upcoming District Plan review of the Rural Zones.
- Previously, lifestyle development has been provided for at the periphery of Feilding and the villages. This may no longer be the case into the future if this land is Class 1 – 3 and not already included in the District Plan or another statutory document.
- Set-backs and buffers will be needed to protect existing areas of highly productive land that border more sensitive land uses such as lifestyle development or residential growth areas.
- Mapping of highly productive land will be done by the Regional Council. However, the NPS-HPL allows local authorities to set limits and controls through District Plans in consultation with communities.
- It is not clear what constitutes “inappropriate subdivision, use and development.”
- The NPS-HPL could constrain residential development which may push house prices up.

Proposed National Policy Statement on Urban Development

The proposed National Policy Statement on Urban Development (NPS-UD) gives national direction under the RMA to help local authorities make good decisions about making room for growth, both up and out, in suitable areas (Ministry for the Environment, 2019f). It aims to enable growth by requiring councils to:

- Provide development capacity to meet the diverse demands of communities
- Address unnecessary regulatory constraints
- Encourage quality urban environments
- Growth is strategically planned and leads to well-functioning cities that contribute positively to people’s well-being.

The proposed NPS-UD defines two categories of urban environment. Some proposals within the NPS-UD apply

to all urban environments, and some apply only to larger urban centres, as follows:

- Local authorities in all urban environments would need to meet the basic requirements
- Local authorities in major urban centres will need to meet more stringent requirements (Ministry for the Environment, 2019f).

The Manawatū District Council will likely be encouraged (or may be given a mandatory obligation) to prepare a Future Development Strategy (FDS). This is essentially a spatial plan that looks at where future intensification should be located and areas where development should be avoided. The FDS is intended to inform the 10 Year Plan but timing for the next 10 Year Plan is problematic.

Officers reviewing the proposed NPS-UD identified the following potential implications for MDC:

- Impacts on the scope and timeframe for the upcoming Rural Zone review/Residential Zone review plan changes, as some changes required by the NPS-UD must be implemented immediately
- MDC may need to review the Feilding Framework Plan (2013)
- Additional monitoring and reporting requirements.

The new NPS is more onerous than the current National Policy Statement on Urban Development Capacity 2016 and requires more monitoring of development trends. It is not clear how councils should provide for changing amenity values over time.

Proposed National Policy Statement on Indigenous Biodiversity

The Ministry for the Environment has notified a proposed National Policy Statement for Indigenous Biodiversity (NPS-IB) (Ministry for the Environment, 2019e). Consultation on the draft NPS-IB closes on 14 March 2020.

The proposed NPS-IB makes territorial authorities responsible for identifying and mapping all significant natural areas (SNAs - areas of significant vegetation such as forests and shrub land as well as habitats of significant fauna such as threatened kiwi) in partnership with tangata whenua, landowners and local communities (Ministry for the Environment, 2019e). The proposed NPS-IB will apply across all land in New Zealand (including public, private and Māori land) (Ministry for the Environment, 2019e). Territorial authorities will also be required to classify SNAs as high or medium, using a set of criteria in the NPS-IB (Ministry for the Environment, 2019e). Councils will also be required to work with tangata whenua to identify species, populations and ecosystems that are taonga in their RMA planning documents (Ministry for the Environment, 2019e).

The proposed NPS requires regional and territorial authorities to work together to survey and record areas outside SNAs to:

- Identify the likely presence or absence of highly mobile indigenous fauna in their districts
- Include maps in regional and District plans of areas where these species are likely to be present, where this will help protect them
- Provide people and communities with information about these species and their habitat requirements, as well as how to protect them and their habitats
- Include objectives, policies or methods in resource management plans for managing adverse effects on highly mobile fauna and for maintaining viable populations of these species across their natural range (Ministry for the Environment, 2019e).

Options are being considered for identifying SNAs on public conservation land (Ministry for the Environment,

2019e). The options include

- Making territorial authorities responsible for identifying and mapping SNAs on public conservation land;
- Making all public conservation land a SNA (until assessment is done by a council, a government agency or a consent applicant);
- Or that SNAs are not identified on public conservation land.

The NPS proposes that territorial authorities be required to update their schedule of SNAs every two years using newly available information and updated information gained through resource consent applications, monitoring or other means.

The NPS-IB is expected to be gazetted in mid-2020. The proposal suggests Councils will then have five years in which to identify and map all SNAs and six years to schedule and notify SNAs in plans (Ministry for the Environment, 2019e). All councils will also be required to include objectives, policies or methods in resource management plans and in the proposed regional biodiversity strategies which are directed at achieving their targets (Ministry for the Environment, 2019e).

One Billion Trees Programme⁴

Forestry New Zealand has a plan to plant one billion trees by 2028. Government wants to see trees integrated into the landscape to complement and diversify existing land uses, rather than see large-scale land conversion to forestry. Government wants to see innovative ideas, research and sector development that will improve the way New Zealand plants and grows trees.

The Government wants to encourage both permanent and plantation forests made up of exotic and native tree species. The One Billion Trees Programme encourages the planting of native species to improve biodiversity.

Government estimates that commercial foresters will plant 500 million trees by 2028. Government is offering \$240 million funding for landowners, organisations and community groups to get involved in planting the other 500 million trees – “the right trees in the right places for the right purposes”.

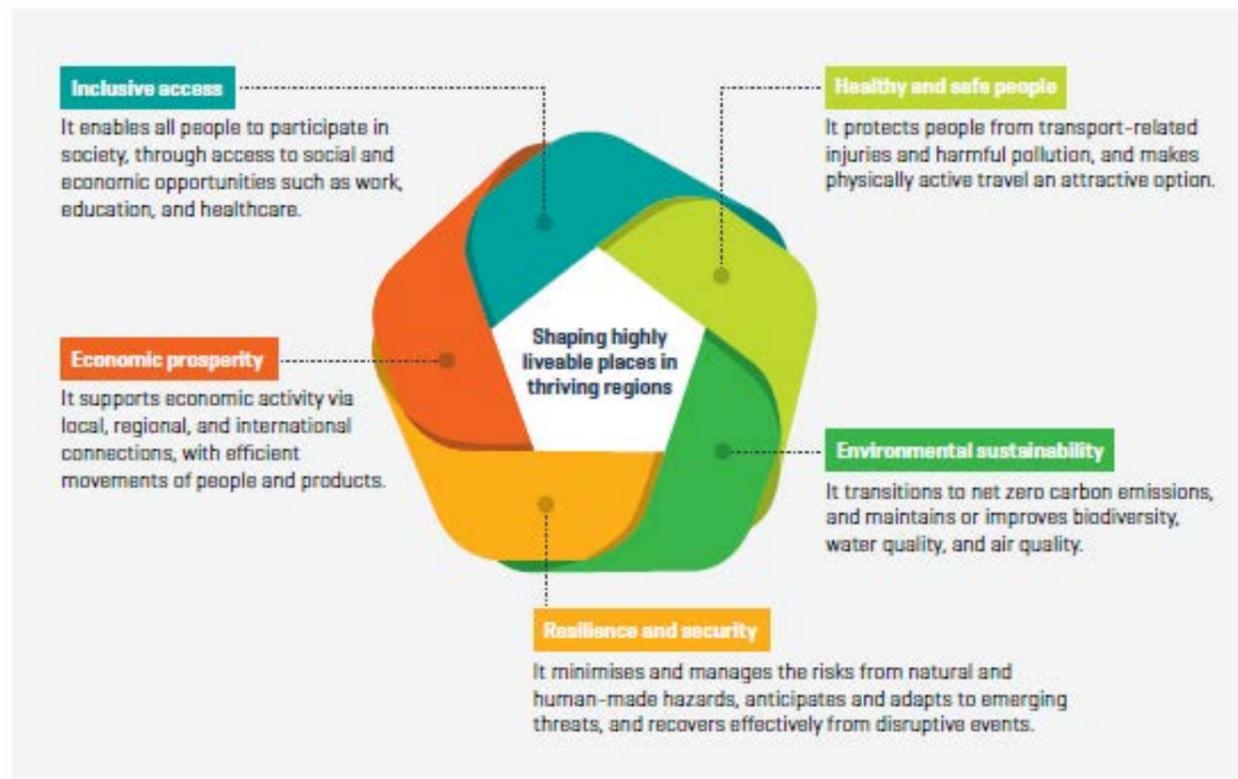
Crown Forestry is also helping to achieve the one billion trees goal through commercial joint ventures with landowners to plant commercial radiata pine on their properties.

Ministry of Transport Statement of Intent (2018-2022)

The Ministry of Transport's Statement of Intent sets out the strategic intentions of the Ministry for the next four years and the five core outcomes that Government is seeking from the transport system, as follows (Ministry of Transport, 2018):

⁴ All information in this section was sourced from Forestry New Zealand Website. (2019, November). About the One Billion Trees Programme. Retrieved from Forestry New Zealand: <https://www.mpi.govt.nz/funding-and-programmes/forestry/one-billion-trees-programme/about-the-one-billion-trees-programme>

Figure 19 – The Five Outcomes for the National Transport System



The Ministry is due to present a new Statement of Intent in 2019, based on the draft outcomes framework in Figure 19, and including new performance measures (Ministry of Transport, 2018).

Government Policy Statement on Land Transport (2018 – 2028)

The Government Policy Statement on Land Transport 2018-28 (the GPS) outlines the Government’s strategy to guide land transport investment over the next 10 years (WSP and the Manawātū District Council, 2019). It took effect on 1 July 2018. It sets out how funding is allocated between activities such as road safety policing, state highway improvements, local and regional roads and public transport (Ministry of Transport, 2019c). The GPS focuses on creating a safe, resilient, well-connected and multimodal transport system that enables new housing opportunities, liveable cities and sustainable economic development in regional New Zealand (WSP and the Manawātū District Council, 2019).

The priority placed on cycling and walkway projects and the introduction of subsidies for footpath maintenance necessitated a reprioritisation of projects within the Manawātū District Council’s Draft Long Term Plan 2018-28.

The draft GPS 2021 is due out for public consultation in March 2020 but will not take effect until July 2021. As the draft GPS will be published prior to the 2020 parliamentary elections, Council is not expecting a significant change in priorities or a need to make significant changes to our draft Roding Asset Management Plan or roading budget. However, if there is a change in Government as a result of the 2020 Parliamentary elections there is potential for a change in GPS priorities, which could necessitate a reprioritisation exercise.

Road to Zero Strategy

In mid-December 2019 the Government launched “Road to Zero”, New Zealand’s Road Safety Strategy 2020-2030. This strategy is to drive substantial improvements in road safety in New Zealand and will replace the current “Safer Journey” strategy (New Zealand Government, 2019).

The proposed vision is “a New Zealand where no one is killed or seriously injured in road crashes.” Traditionally road safety efforts have been primarily focused on improving driving skills and tackling risk-taking behaviours. The new strategy focusses on building a safe road system that is designed for people. This means acknowledging that mistakes will happen and that when they do, we can prevent serious harm through safe vehicles, safer speeds and more forgiving road design (New Zealand Government, 2019).

The target is reducing death and serious injuries on NZ roads by 40% by 2030 (from 2018 levels). Investment will focus on infrastructure upgrades such as median barriers and rumble strips, and on effective enforcement. This will be supported by a programme of safety changes, including setting safe and appropriate speeds, improving the safety of vehicles, and tackling risk taking on our roads (New Zealand Government, 2019).

The first action plan released with the strategy contains five focus areas:

1. Infrastructure improvements and speed management;
2. Vehicle safety;
3. Work-related road safety;
4. Road user choices; and
5. System management.

Focus area one will have the greatest impact on local government because it involves local infrastructure investment changes (more median barriers, rumble strips, side barriers and roundabouts) and a new approach to speed setting (Local Government New Zealand, 2020).

Tackling Unsafe Speeds

The Government is making changes to speed management to tackle unsafe speeds on New Zealand roads (Ministry of Transport, 2019d). The Tackling Unsafe Speeds programme is a key action under the initial Road to Zero action plan. The key initiatives of the programme include (Ministry of Transport, 2019d):

- Improving how councils and the NZTA plan for, consult on and implement speed management changes
- Transitioning to lower speed limits around schools to improve safety and encourage more children to walk and cycle to school
- Adopting a new approach to safety cameras to reduce excessive speeds on our highest risk roads.

Implementing the Tackling Unsafe Speeds proposals will require changes to the Land Transport Act 1998 and the Land Transport Management Act 2003 (Ministry of Transport, 2019d). These changes will be supported by substantial changes to the Land Transport Rule: Setting of Speed Limits (Ministry of Transport, 2019d). Consultation on these proposed changes is scheduled for mid-2020. It is estimated that legislative changes will become law by the end of 2020. A new regulatory framework will require local government to develop and consult on 10 Year Regional Speed Management Plans from mid-2020.

Accelerate25

In 2015, a central government driven Regional Growth Study was undertaken to provide an in-depth look at the economic opportunities for the Horizons Region (Horizons Regional Council, 2018). This study recommended eight key opportunities and three enablers. The subsequent Action Plan (Accelerate25) derived from the growth study findings provides the practical application for realising these opportunities, unlocking new levels of prosperity and growing our regional economy out to 2025 (Horizons Regional Council, 2018). Accelerate25's Manawatū-Whanganui Economic Action Plan (Action Plan) goes a step further and has a total of nine key opportunities and four enablers for realising economic growth in the region (Horizons Regional Council, 2018). The four enablers are:

1. Growing Business;
2. Skills and Talent;
3. Distribution and Transport; and
4. Digital Connectivity.

The Manawatū-Whanganui Region's central location has seen the region develop as a key freight and distribution hub in New Zealand, which takes advantage of its strategic and centralised geographic location (Horizons Regional Council, 2018). Transport as an 'enabler' of unlocking economic prosperity has huge potential to drive many of the work outcomes identified in the Action Plan as immediate, medium-term and future priorities for the region (Horizons Regional Council, 2018).

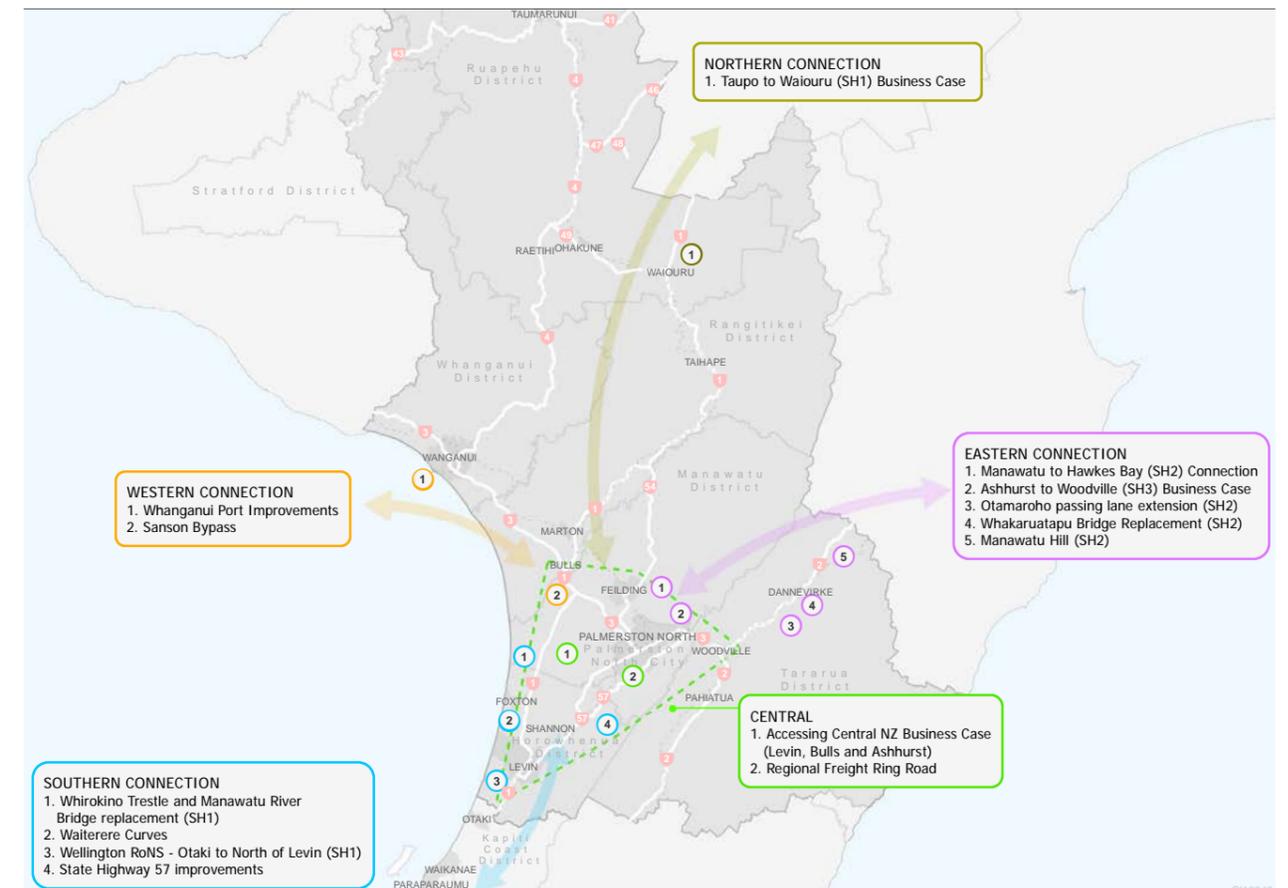
Accessing Central New Zealand

Accessing Central New Zealand (ACNZ) is a subgroup of the Regional Transport Committee and is tasked with overseeing projects that give life to the Distribution and Transport enabler of Accelerate25. The priority of ACNZ is to allow for the efficient movement of goods and commodities into and out of the region along key transport corridors (Horizons Regional Council, 2018).



These corridors and associated key projects are shown in Figure 20 below:

Figure 20 - Accessing Central New Zealand key projects



One of the key projects that is of relevance for this upcoming 10 Year Plan is the development of a Regional Freight Ring Road. This ring road is vital to unlocking the region's distribution and logistics potential and reducing large commercial traffic volumes on local roads. This is one of the projects that has been incorporated into a wider strategic case for transport investment through ACNZ as part of Accelerate25.

The exact Regional Freight Ring Road route is yet to be confirmed, however, it will fully encompass Palmerston North providing strong connections to the Ruapehu, Manawatū, Rangitikei and Whanganui Districts to the north, Tararua District to the east, and the Horowhenua District to the south, therefore connecting to the industries these districts harbour (Horizons Regional Council, 2018).

Zero Carbon – Transition to a Low-Emissions Economy

The Climate Change Response (Zero Carbon) Amendment Bill became law on 13 November 2019 (Local Government New Zealand, 2019). It sets New Zealand's emissions targets to reduce emissions in line with the Paris Agreement's long-term goal of limiting global warming to 1.5 degrees celsius above pre-industrial levels (Ministry for the Environment, 2019c). Included in the Bill are emissions targets for CO₂ and for biogenic methane which is produced by the agricultural and waste sectors (Ministry for the Environment, 2019c).

The first targets are to be set by the Government by 31 December 2021, based on advice from the Climate Change Commission (Ministry for the Environment, 2019c). Once the targets are set, transition will be needed

towards low-emissions technologies, and industries (Ministry for the Environment, 2019c). This may result in increased forestry planting, transition away from agricultural activities (particularly sheep and beef farming), increased renewable energy generation and transition from fossil fuels (including electric vehicles) (Ministry for the Environment, 2019c).

The “Zero Carbon Act” will likely cost the Manawatū District community, particularly in the short-term. Given our dependence on the rural sector, we may be impacted more than other communities.

With respect to climate change adaptation, the Act makes provision for:

- The completion of a National Climate Change Risk Assessment (NCCRA); and
- In response to each NCCRA, the preparation of a National Adaptation Plan by the Minister for Climate Change (Local Government New Zealand, 2019).

The Act also gives the Minister and the Climate Change Commission the ability to request local authorities and council-controlled organisations to provide all or any of the following information on climate change adaptation:

- A description of the organisation’s governance in relation to the risks of, and opportunities arising from climate change;
- A description of actual and potential effects of the risks and opportunities on the organisation’s business, strategy and financial planning;
- A description of processes for identifying, assessing and managing the risks, and the metrics and targets used to assess and manage risks and opportunities; and
- Any other matters specified in regulations (Local Government New Zealand, 2019).

The first NCCRA is being completed by Government (with subsequent NCCRAs to be undertaken by the Climate Change Commission), and is due for publication in mid-2020 (Local Government New Zealand, 2019). LGNZ is concerned that given the tight timeframe for completion of the first NCCRA there will be little opportunity for local government to have meaningful input into the identification of key risks. This is concerning as the NCCRA will inform the subsequent National Adaptation Plan, that will include actions for local government to address climate change adaptation risks and opportunities at the local level (Local Government New Zealand, 2019).

The Act gives both the Minister and the Commission the ability to request information from councils, which means potential for duplication of information provision (Local Government New Zealand, 2019). As a ‘lifeline utility provider’ the Manawatū District Council may be required by the Minister to produce a report on adaptation (Ministry for the Environment, 2019c). Government has not yet developed a set of specific reporting criteria/requirements so it is not yet clear what information councils will be expected to provide.

Council will need to address adaptation to the risks and opportunities arising from climate change in the 10 Year Plan as well as in the Infrastructure Strategy (Local Government New Zealand, 2019). Copies of these documents may be requested by the Minister or Commission under the adaptation reporting power of the “Zero Carbon Act” (Local Government New Zealand, 2019).

Uptake of Electric Vehicles

Electric vehicles (EVs) can be powered solely by electric batteries (pure electric vehicles) or a combination of batteries and a conventional engine (plug-in hybrid electric vehicles) (Ministry of Transport, 2019a).

More than 80% of electricity in New Zealand is generated from renewable sources and there is enough supply for widespread adoption of EVs. Even if every light vehicle was electric, there is sufficient generation capacity to charge these provided the majority are charged at off-peak times (Ministry of Transport, 2019a).

High renewable energy levels mean that emission reduction benefits of EVs in NZ are greater than in most countries, producing 80% fewer greenhouse gas emissions.

Electric Vehicles Programme

On 5 May 2016 the Government announced its Electric Vehicles Programme. This includes measures to increase the number of EVs in NZ and has a goal of reaching approximately 64,000 EVs on our roads by the end of 2021 (Ministry of Transport, 2019a).

On 22 September 2016, the Road User Charges (RUC) exemption on light vehicles was extended until 31 December 2021. The RUC exemption for heavy vehicles took effect from 1 September 2017 and will remain until they make up 2% of the heavy vehicle fleet (Ministry of Transport, 2019a).

In December 2016, the NZ Government Procurement added 15 new EVs models to the all of government vehicles contract to support the uptake of EVs (Ministry of Transport, 2019a).

The Government established a contestable fund of up to \$6 million per year to encourage and support innovative low emission vehicle projects was established and the first projects announced in early 2017 (Ministry of Transport, 2019a).

The Government agreed to an initiative to enable road controlling authorities to make bylaws to allow electric vehicles access to special vehicle lanes (including transit, high occupancy vehicle, priority bypass, and bus lanes). Changes to the Land Transport Act 1998 were made through the Energy Innovation (Electric Vehicles and Other Matters) Amendment Act (Ministry of Transport, 2019a).

The Inland Revenue was asked to review the tax depreciation rate, and the method used to calculate fringe benefit tax, for EVs to ensure it is fair. ACC levy rates for 2017/18 and 2018/19 will see owners of all EVs (including owners of plug-in hybrid electric vehicles) pay reduced ACC levies as part of their annual vehicle licensing (Ministry of Transport, 2019a).

The Electric Vehicles Programme Leadership Group was established across business, local and central government. It will share info between central and local government and industry (Ministry of Transport, 2019a).

The New Zealand Transport Agency has produced national guidance for public EV charging infrastructure (NZ Transport Agency, 2019b). This guidance is primarily for organisations setting up public charging infrastructure (NZ Transport Agency, 2019b). In April 2017 the New Zealand Transport Agency set a vision for nationwide coverage of fast/rapid DC charging stations every 75km across the state highway network (NZ Transport Agency, 2019a). By providing recommendations for public charging infrastructure, the Government is helping to ensure the national network of charging stations is aligned, safe and reliable, giving drivers the confidence to make longer trips in EVs (NZ Transport Agency, 2019b).

The Ministry of Transport provides vehicle fleet statistics monthly and quarterly for electric and hybrid vehicles at the regional level. The following graphs are of interest:

Figure 21 - Regional EVs - based on owner location

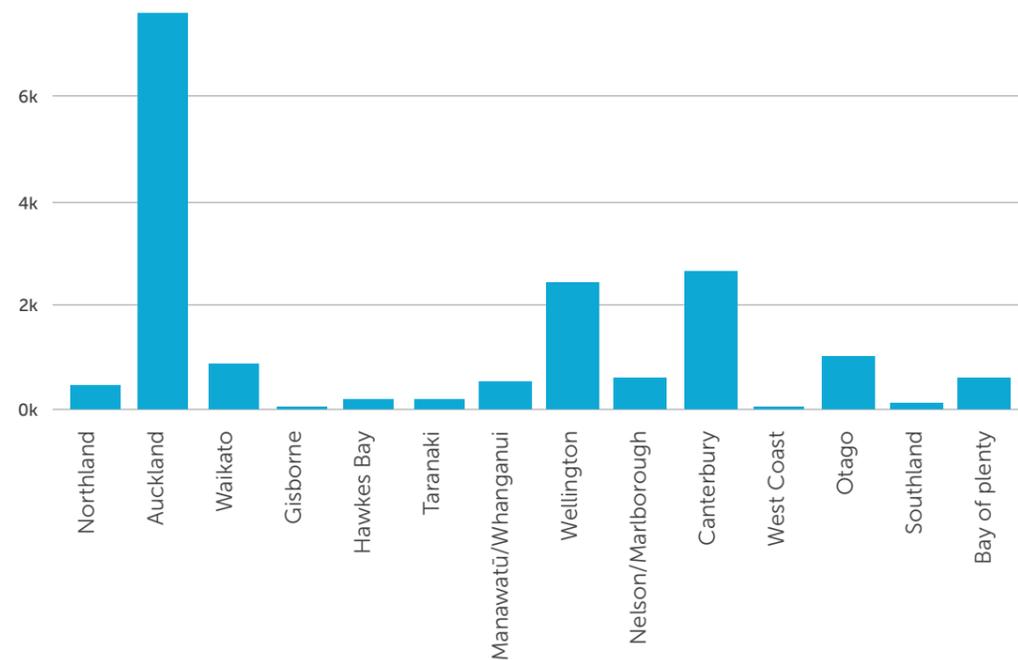
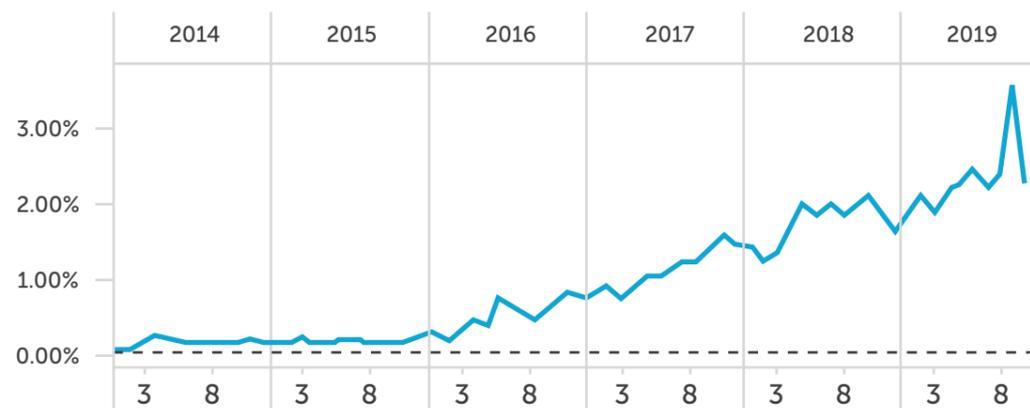


Figure 21 shows that the total number of EVs registered in the Manawatū-Whanganui Region was 555 as at 13 November 2019. The Manawatū-Whanganui regional data for the number of EVs per 1000 population (based on owner location) is 1.510 for pure EVs and 0.767 for plug-in hybrids (Ministry of Transport, 2019b). The Manawatū-Whanganui is ranked 7th of the Regions in New Zealand for EVs per 1000 population.

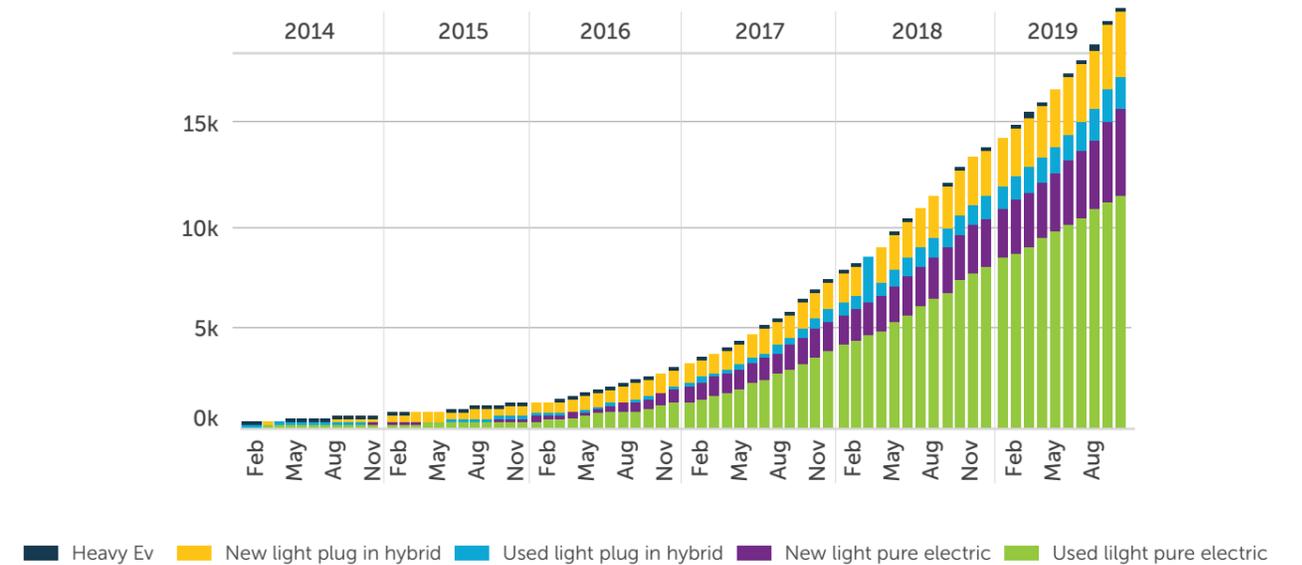
The proportion of EVs as a proportion of light vehicle registrations is increasing over time, as shown in Figure 22.

Figure 22 - EVs percentage of light registrations



Recently, pure EVs have out-sold plug-in hybrids. Since the fourth quarter of 2016, more than 74% of light EV registrations have been pure EVs. Individuals own more light EVs than companies (Ministry of Transport, 2019b).

Figure 23 - EV fleet size



The total fleet size for electric vehicles in New Zealand in October 2019 was 17,629.

Digital Connectivity and Technological Change

The New Zealand Productivity Commission undertook an inquiry into the scale and potential impacts of rapid technological change and its disruptive impact on the future of work and the workforce in New Zealand (New Zealand Productivity Commission, 2019).

The following is a summary of the findings of the New Zealand Productivity Commission's Inquiry:

- There is little, if anything, in the available data to suggest imminent disruption to work.
- Most technologies that could affect work and employment in New Zealand will be developed in other countries. The pace of technological and employment change in New Zealand will therefore be affected by the global pace of change.
- Technological and labour market trends in NZ tend to lag behind and be more muted than those overseas. NZ is traditionally a poor adopter of new technologies.
- NZ needs to embrace technology as this will open opportunities to improve New Zealanders' living standards. Embracing technology implies supporting people who are less able to adjust, preparing young people for the future, and setting policies and institutions that encourage the entry and uptake of new knowledge, processes, goods and services by firms.
- Artificial intelligence (AI) and related technologies could potentially increase productivity and displace human labour. However, there is no consensus on the pace of current and future progress in AI, its effect on specific occupations, its aggregate impact on employment, nor its likely effects on the nature of work. US data suggests that technology-induced structural change to the labour market has not been historically associated with mass unemployment.

- The pace of technological change does not appear to be accelerating, rather, local and international statistics suggests declining labour market and business dynamism.
- A continuation of existing trends seems the most likely scenario in the next 10–15 years, including further automation of routine tasks and the concentration of knowledge-intensive jobs in major cities. It is unlikely that, in the next 10–15 years, automation technologies will widely displace human labour in New Zealand.
- Increased technology with fewer jobs is a low-likelihood but high-consequence outcome. However, a stagnation scenario of low productivity growth and a significant risk of high unemployment is more likely. Neither outcome should be completely discounted.
- Regardless of the pace of technological change overseas, productivity growth and direct labour market effects are likely to lag, and be more muted than, overseas trends unless New Zealand overcomes its poor track record in adopting and diffusing technology. Although poor technological diffusion in New Zealand may imply less direct risk to employment here, poor technological diffusion implies lower productivity growth, with the result that workers' incomes grow more slowly.
- Monitoring labour market and business statistics can identify divergence from current trends. Such divergence will most likely be evident in other countries, particularly those with faster technology adoption, before it is evident in New Zealand. Faster adoption of technology increases the economy's ability to adjust to change without disruption. This requires policy changes that support and encourage faster adoption, and address objections to change, by:
 - reducing policy uncertainty for firms and for workers;
 - better supporting workers and others adversely affected by technology adoption;
 - better preparing New Zealanders for potential changes to the nature of work and the skills required; and
 - supporting the efficient allocation of capital and other resources to productive enterprises and away from less-productive ones.

In their Environmental Scan 2017, the Gisborne District Council predicted disruptive technologies to impact New Zealand, and smaller regions, in the following ways (Gisborne District Council, 2017):

- Biotechnology – the application to primary sector production leading to higher production, decreased inputs such as herbicides and fertilisers and reduced losses
- Information and communication – improved communication and information access via handheld devices, social networking, transfer of data via cloud storage, small scale access to super-computer processing services have all led to improved and efficient economic and social structures
- New energies and fuels – transition away from fossil fuels to biofuels, renewables (solar, wind, tidal and wave) as well as more efficient storage
- Nanotechnology – involves using individual atoms and molecules to producing goods. While its applications are largely unknown and will take place in the future, it has significant potential to transform. Potential applications include medicine and computer processing.

The growing influence of, and trend towards, technology that impacts the economy, society and the environment makes having good infrastructure and connectivity for communities, visitors and business critical (Gisborne District Council, 2017).

Cyber Security

With private and public society becoming increasingly reliant on digital technology, cyber security is one of the major challenges for our modern, global community. It is a constant challenge for cyber security specialists to stay ahead of those who are creating more and more sophisticated ways of breaching digital security systems. Cybercrime is now considered one of the leading risks to the global economy. (Law Council of Australia, n.d.)

Phishing, where information is gathered to launch convincing attacks against individuals often for the purposes of extortion, is one of the key concerns for organisations like councils because the security of the organisation's data relies on staff being aware and vigilant against emails that may appear to be personalised. MDC has an email filtering service hosted offsite which blocks spam and other malicious activity arriving by email. Figures below from the Sonicwall firewall system used by Council show intrusions to Council systems prevented in the 21 days to 4 February 2020, compared to the intrusions prevented worldwide during the same period by Sonicwall. Manawatū District Council continues to improve on our current cyber security posture with additional staff training and security audits by external auditors.

Figure 24 - Intrusions to Council systems prevented by Sonicwall firewall software in the 21 days to 4 February 2020

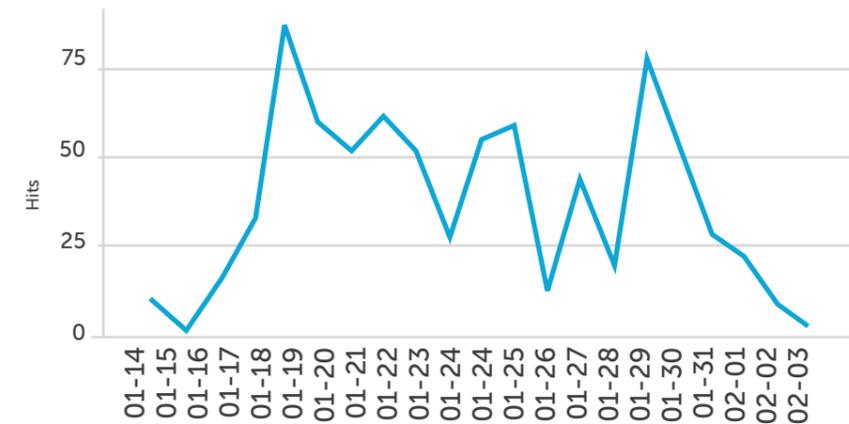
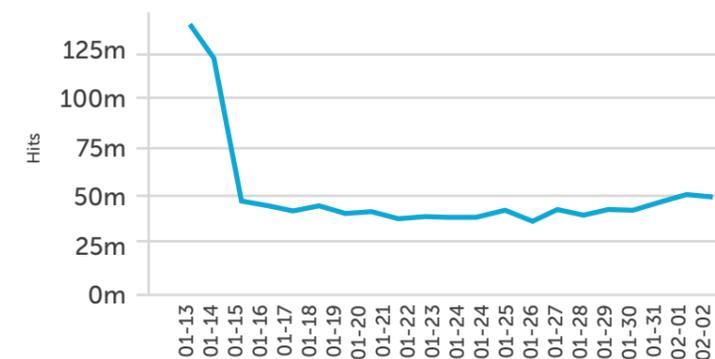


Figure 25 - Intrusions prevented worldwide by Sonicwall firewall software in the 21 days to 4 February 2020



The still-unfolding development of the Internet of Things (IoT) which “refers to the billions of physical devices around the world that are now connected to the internet, all collecting and sharing data...Connecting up all these different objects and adding sensors to them adds a level of digital intelligence to devices that would be otherwise dumb, enabling them to communicate real-time data without involving a human being” (Ranger, 2020). Such a vast network of “smart” objects presents obvious security challenges. A single compromised device can be the entryway for malicious activity which can have widespread implications. This does not mean that all IoT devices are suspect or should be treated with caution, but consumers need to be aware of the risks and be proactive in maintaining robust digital security and protection measures. (Security Brief NZ, 2020).

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