2021-31 LONG-TERM PLAN SIGNIFICANT ASSUMPTIONS

This document consists of three parts:

PART 1: Growth Assumptions

PART 2: Climate Change Assumptions

PART 3: Financial and Other Assumptions

PART 1 – DRAFT Growth and Demand Assumptions

1. POPULATION GROWTH

Our Assumption - The Most Likely Scenario:	**1% growth per annum** Based on Infometrics forecasts for Masterton, past growth trends and current circumstances, including COVID-19 considerations, we expect to see average annual growth of between 0.5% and 1.5% per annum over the life of this LTP, with the most likely scenario being a point between. Given that, we have based our planning on the medium growth scenario, which projects average growth of 1.01% per annum. See supporting information.
Best Case Scenario:	**1.5% growth per annum** This aligns with Infometrics's high growth projection for Masterton to 2031. It also aligns with the average growth per annum experienced over the past ten years (1.5%) but is less than the average growth experienced in the past five years (2.1%), which peaked in 2018. We don't expect our population growth to be at the level it was in the five years pre COVID-19. However, factors such as Masterton's proximity to Wellington, relative housing affordability and changes in the way we work (for example, remote working is now more acceptable), we believe Masterton is well positioned as a region to attract new residents.
Worst Case Scenario:	**0.4% growth per annum** This aligns with Infometrics's low growth projection for Masterton to 2031. It is also closer to average annual growth in the five years prior to 2014 (0.7%). We are not anticipating COVID-19 to impact our population growth for the duration of this LTP, or beyond. Projections in June 2020 suggested growth would slow versus stagnate, and then pick up as the economy recovers. While COVID-19 border restrictions will have implications for growth, given other factors that make Masterton an attractive option, we do not anticipate zero growth, or population decline.
Level of Uncertainty	**Moderate-High Uncertainty** Forecasts are based on key assumptions around natural population growth, net migration, work availability and residential development. There is always uncertainty in forecasting future population, particularly the further into the future we look.

	At the current time, COVID-19 adds to that uncertainty. We know COVID-19 will impact our population growth for at least the short to medium term, but at this point, we are uncertain of the extent or duration of that impact.
Risk	Given the level of uncertainty, there is a moderate to high risk that population growth across the district will occur at a rate that is higher or lower than we have assumed.
Financial Implications if we get it wrong:	***A higher growth scenario:*** Masterton has capacity for growth within its key infrastructure and services. Our Asset Management Plans indicate we could accommodate growth up to 1.8% per annum over the next ten years without significant impacts. If there was a significant and sustained rise in population beyond 1.8% per annum, that could have adverse effects on our ability to deliver some services to existing service levels – e.g. if demand was higher than the capacity of the service or asset. This could result in reduced levels of service or, worst case scenario, asset failures and/or a need to rapidly and heavily invest in assets to accommodate the growth. This in turn could result in much higher than planned debt or significant increases in rates (or both). If we were to experience higher growth than we have planned for, Council services that could be most affected are: • Roading – greater congestion could be experienced on our roads, especially at peak times of the day. There could be a need to expand roads and/or introduce new traffic management controls. • Water Supply – given consent conditions, demand for water can exceed our capacity to supply over hot, dry summer periods. Rapid growth could add to this. To help mitigate water demand Council are introducing water meters. We also have provision for water storage reservoirs at Kaituna in Year 3 of the 2021-31 LTP. • Community Facilities e.g. the Library and Recreation Centre may not have the capacity to meet demand from an increased population. • Community Services e.g. our regulatory functions like Animal and Noise Control could see increased demand as 'nuisance' related requests for service tend to be concentrated in more densely populated areas. ***A lower growth scenario:*** If there was significant and sustained decline in population, this would ultimately impact our rating base and may affect our ability to set rates at a level that is affordable for our community. This could result in higher than planned rates increases to maintain infrastructural assets (such as roads, water, and wastewater) and/or assets with greater capacity than required. It could also reduce demand for some services. This could increase the 'cost per use' for those services making them less affordable, whether that is due to increased fees and charges or increased rates to support the cost of service. However, in the short to medium term, lower growth than we have assumed or even declines in our population, would not necessarily result in a lower number of rating units given the rating base relies on the number of rateable properties versus people. As projections for households indicate fewer people

	per household, the number of rateable properties is likely to decline at a slower rate than the population. That noted, one of the drivers for more but smaller households is our aging population, and an aged population also means more people on fixed incomes. So while the rating base may not decline as rapidly, those paying the rates may have less capacity to absorb future rate increases.
What are we doing to reduce that risk? (Mitigation)	We need to balance the risk of over-investing to expand infrastructure and services if that is not going to be required against the alternative risk of not being adequately prepared for growth. Increases in population up to 1.8% per annum can be managed within existing infrastructure and levels of service. Where growth requires additional infrastructure (e.g. subdivisions), Council can currently require financial contributions for this work. Costs over this amount could result in additional Council expenditure, which would likely be loan funded. Council will continue to closely monitor population change in the District. By monitoring trends we can adjust and respond accordingly if we do need to revise our plans and approach. The financial implications for Council should be limited and able to be managed in the short to medium term but may need longer term responses if growth is substantially more or less than assumed.

SUPPORTING INFORMATION:

Growth Projections

Infometrics Projections to 2051 (November 2020) for medium growth indicate Masterton district's population will grow from 27,500 in 2020 to 30,549 (+11.1%) by 2031, and to 32,153 (+14.5%) by 2051. This equates to average annual growth of 1.01% to 2031; and an average of 0.55% per annum to 2051.

Masterton district's population is projected to grow from 27,500 in 2020 to:

	2020-2031		2020-2051	
	Number	Ave. Growth p.a.	Number	Ave. Growth p.a.
High	32,035 (+4,535)	1.5%	37,849 (+10349)	1.21%
Medium	30,549 (+3,049)	1.01%	32,153 (+4,653)	0.55%
Low	28,673 (+1,173)	0.39%	27,112 (-388)	-0.05%

Infometrics initial forecast (June 2020) expected growth to slow in the short term due to COVID-19, picking up in 2023 as the economy recovered. Looking to 2051, steady growth was forecast until the mid-2030s. This was driven by a need for strong net migration flows to replace a large number of retiring workers born between the 1950s and 1970s. In the 2040s population growth was expected to flatten.

In November 2020 the Infometrics forecast was refreshed given the evolving situation with COVID-19. The refreshed forecasts incorporated:

- Infometrics' latest international net migration forecast, which incorporates revised historic data from Statistics NZ for 2019, new data for 2020 on the wave of returning Kiwi's pre-lockdown, and a better understanding of the post-COVID economic environment.
- Statistics NZ's revised population estimates for 2018 and 2019, and new estimate for 2020.

Infometrics advised that they had expected net migration to gradually fall and then gradually rise. However there was a burst of migration ahead of lockdown (hence 2020 population growth was stronger than expected), followed by a very sharp fall. Infometrics expect it will be flat for several years, influencing the profile of population growth over time

BERL (June 2020) undertook similar forecasting to 2030 for the whole Wairarapa rather than each District. The most optimistic forecast for the Wairarapa Region was growth of 4,271 people, from 45,400 to 49,671, between 2020 and 2030. This equates to an average annual growth rate of 0.94% per annum for that period. The least optimistic forecast still projected growth, but at an average annual rate of 0.77%; and the mid-range forecast average annual growth of 0.88%.

By comparison, based on the medium projection and combining Infometrics data for the three Councils (November 2020), the Wairarapa population is expected to grow from 48,860 to 53,786 between 2020 and 2031, an average per annum growth rate of 0.92% per annum.

Forecast growth rates are comparable, though the Infometrics forecast does take revised population estimates for 2020 into consideration.

We based our planning on the Infometrics medium growth scenario. While Masterton has experienced growth in recent years, we are not currently considered a 'high growth Council'. Past growth trends discussed below indicate that recent growth peaked in 2018, and 2020 growth was influenced by people returning to New Zealand from overseas which is expected to slow in the immediate future.

Past Growth Trends

In March 2018 ID forecasts projected growth from 24,100 in 2013 to 25,441 in 2018, which equates to average growth of 1.09%. Actual growth for this period saw the population increase from 24,100 to 26,300, equating to average growth of 1.8% (note, this does not account for any revised population estimates).

Masterton has experienced good growth over the past five years, with the population increasing from 24,900 in 2015 to 27,500 in 2020 (+10.4%, or an average of +2.1% per annum). Growth peaked in 2018 at 2.3%. Growth in the last two years (1.9% in 2019 and 2.2% in 2020) has exceeded the 2018-28 LTP growth forecast of 1% per annum. Growth in 2020 was very close to the 2018 peak at 2.2%, however that was influenced by people returning home from overseas given the COVID-19 situation (see migration comments below).

In the five years prior to 2014, growth was slower, increasing from 23,300 in 2008 to 24,100 in 2013 (+3.4%, or an average of 0.7% per annum). Pre 2008 the population was generally static for an extended period, the 1996 population, at 23,300, matching the 2008 population despite some minor fluctuations over this period.

Overall, the population of Masterton increased 18.0% between 1996 and 2020, from 23,300 to 27,500, with most of that growth in the last 10-12 years. Over the last ten years (2010 to 2020) the average annual growth equates to 1.5% per annum, with a range of 0% to 2.3%.

Annual Growth 2010-2020 (source: Infometrics)

Year	Population	Change
2010	23.,700	0.90%
2011	24,000	1.30%
2012	24,100	0.40%
2013	24,100	*0.00%*
2014	24,500	*1.70%*
2015	24,900	*1.60%*
2016	25,400	*2.00%*
2017	25,800	*1.60%*
2018	26,400	*2.30%*
2019	26,900	*1.90%*
2020	27,500	*2.20%*

COVID-19 Implications:

The Infometrics projections for Masterton (June and November 2020) and BERL forecasts for the Wellington region (June 2020) factored in potential impacts of COVID-19 as they were understood at the time these forecasts were completed. However, COVID-19 is unprecedented and evolving. There is uncertainty regarding both the duration and longer-term effects of the pandemic, and associated restrictions both at the border and within our communities. The uncertainty associated with COVID-19, increases our uncertainty in projecting future population growth.

Migration:

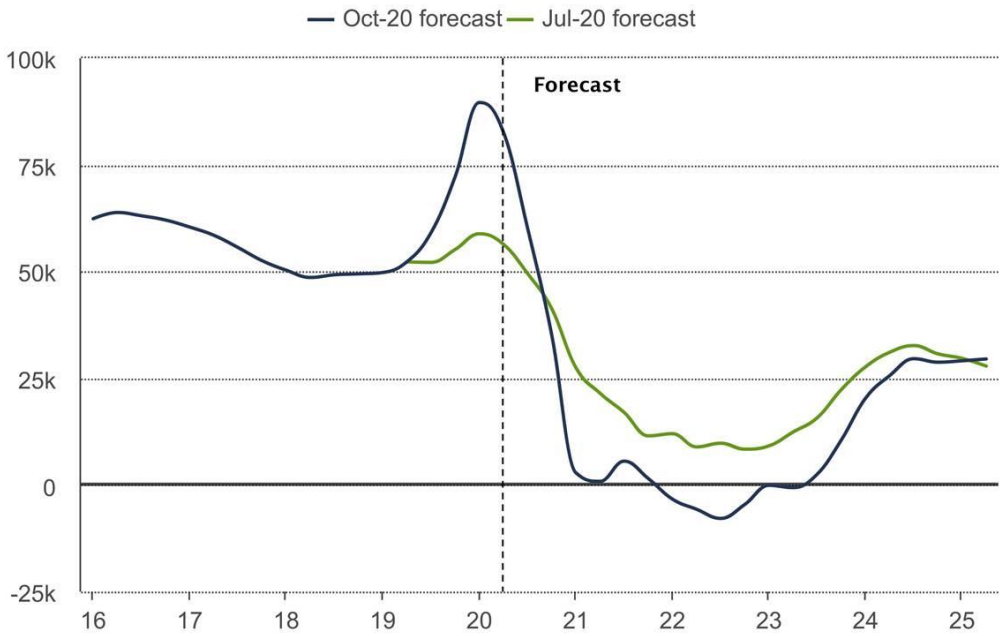
Since COVID-19, many New Zealanders who have been residing overseas have returned 'home', resulting in a burst of migration ahead of lockdown (hence 2020 population growth was stronger than expected), followed by a sharp fall.

In November 2020, Infometrics published analysis of 2020 population change by local area. For Masterton, 2020 population change was influenced by:

- 52% - net internal migration (people within New Zealand relocating)
- 44% - net international migration (people shifting to the area from outside the country)
- 3% - natural increase (births minus deaths)

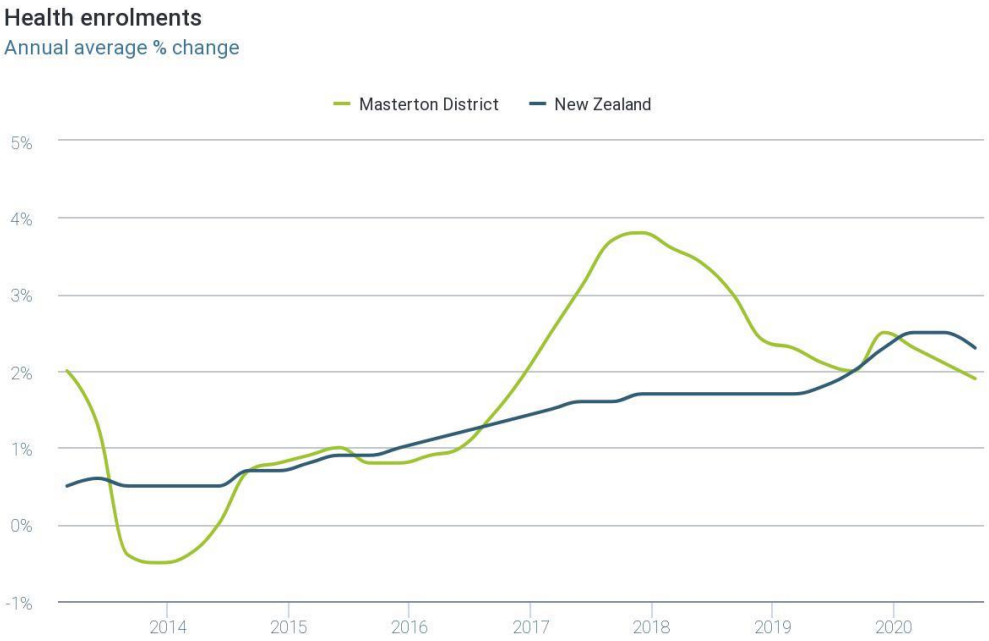
The 44 % net increase in international migration that has contributed to growth in 2020 is likely to decline rapidly in the short to medium term until borders re-open again. While Infometrics expect migration trends to be flat for several years, we are not expecting migration to be affected for the duration of this LTP. At this stage, migration rates are expected to increase from approximately 2023/24.

Infometrics Forecast - Annual international net migration



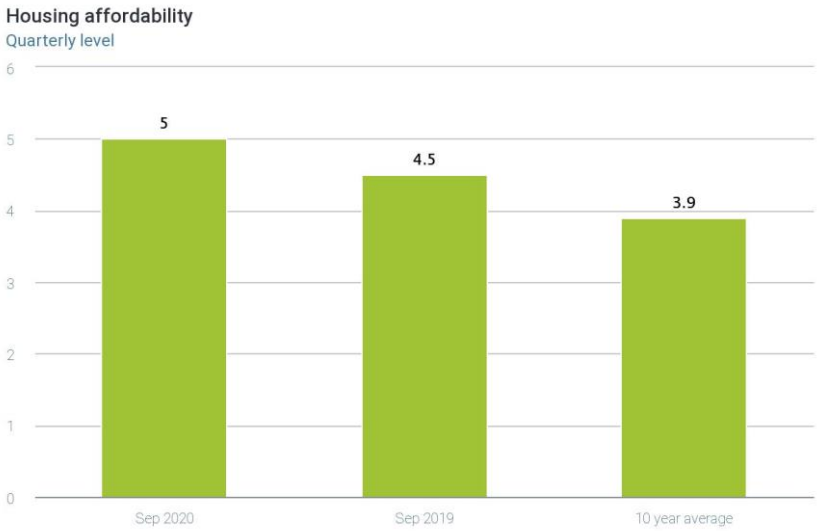
Health Enrolments

Health enrolments can reflect population growth. The number of people enrolled with a primary health organisation in Masterton District in the year to September 2020 increased by 1.9% compared to the previous year. At the end of September 2020, an average of 26,889 people were enrolled with primary healthcare providers in Masterton compared to an average of 25,159 since 2014. (Source, Infometrics Indicators, Sep 2020).

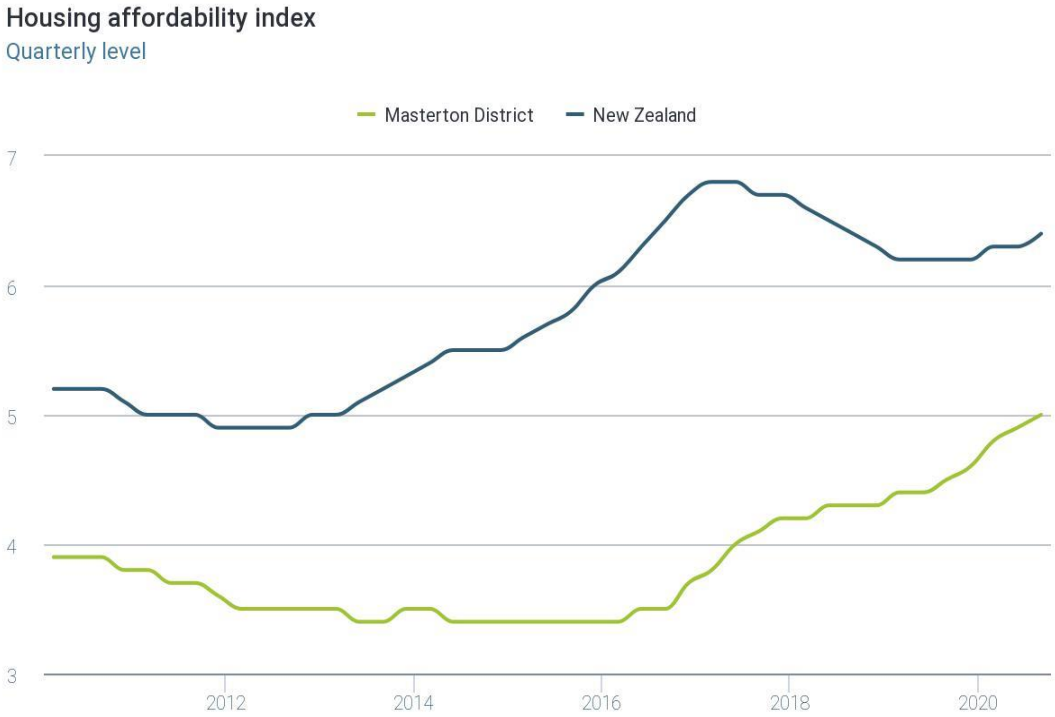


Housing Affordability

Drivers for those relocating within New Zealand include the ability to work remotely and affordable living, especially affordable housing. Housing affordability in Masterton has been declining:

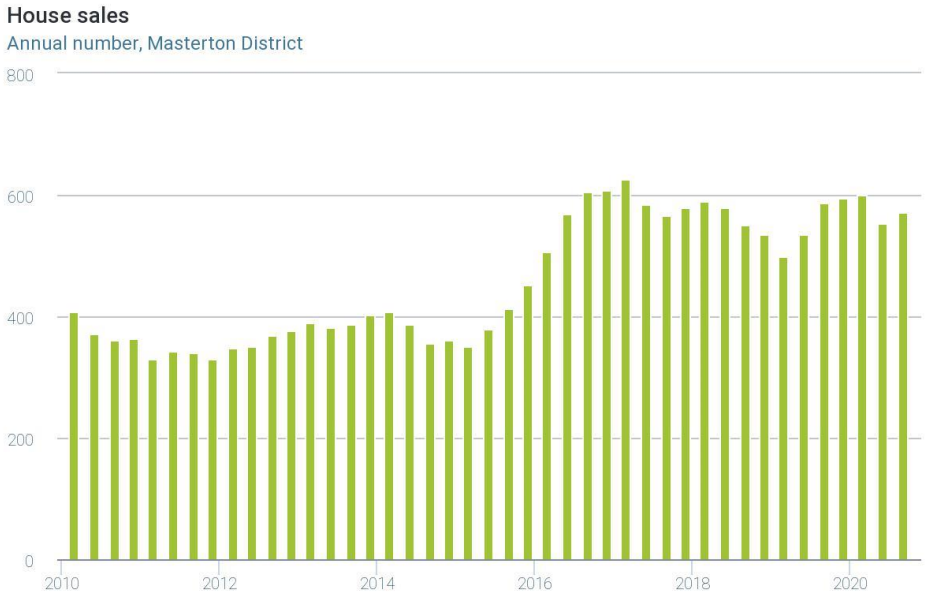


However, Masterton is still an affordable option compared to many other parts of the country and compared to the New Zealand average:



House Sales

While some house sales are people relocating within the district, house sales can also reflect people moving into the area. In the year to September 2020, house sales in Masterton District decreased by 2.7% compared with the previous year and were lower than the New Zealand average (sales increased by 1.1%). However house sales are still at relatively high levels compared to 5 years ago. A total of 572 houses were sold in Masterton District in the 12 months ended September 2020. This compares with the ten year average of 475.



2. DEMOGRAPHIC CHANGE: POPULATION AGE STRUCTURE

Our Assumption - The Most Likely Scenario:	**Our population will continue to age faster than the NZ average.** This is consistent with demographic trends and population projections for Masterton. See supporting information.
Best Case Scenario:	**The population ages slower than we anticipate.** Given Masterton's close proximity to Wellington, relative affordability and with changes as a result of COVID-19 that better support and enable remote working to achieve work life balance, more people of working age and young families could be attracted to or choose to stay in the District. This could slow the ageing of our population, grow our 'working age population' and balance affordability concerns by spreading the 'rates load'. This could also enable Council to more easily invest in projects and initiatives that could make Masterton more attractive in future.
Worst Case Scenario:	**The population ages more quickly than we anticipate.** If more people of working age, young families and youth than we anticipate are attracted to opportunities in other districts/locations and choose to leave the district, this could see our younger population decline, accelerating the aging of our population. This could contribute to affordability challenges as the rates impact would need to be shared by those who remained in the district. A higher proportion of people of retirement age would also mean a higher proportion of people on fixed incomes. Affordability concerns could restrict Council from being able to pursue projects/investment in our community and community infrastructure.
Level of Uncertainty	**Low-Medium Uncertainty** Globally (for western nations) and nationally it is widely accepted that the population is ageing. Masterton, like many other rural provincial towns in New Zealand, is ageing faster than the New Zealand average. Without intervention, this trend is unlikely to change. That noted, Masterton could become more attractive to younger people/families given its relative affordability, proximity to Wellington and as remote working becomes easier and more acceptable.
Risk	There is a low risk that our population will age differently to what we expect – this could be ageing faster or slower than anticipated.

Implications if we get it wrong:	***A faster ageing scenario:*** If the population ages more quickly than we anticipate, this could result in a higher proportion of people on fixed incomes and increased affordability challenges for our community. **A slower ageing scenario:** If the population ages more slowly than we have assumed, this could assist in mitigating affordability concerns for the community.
What are we doing to reduce that risk? (Mitigation)	We will continue to closely monitor population change in the District to understand trends and ensure we respond appropriately. We are currently working to ensure we balance demand at both ends of the demographic pyramid, providing services and opportunities that engage and contribute to the wellbeing of both our younger and our more mature populations. The three Wairarapa Councils have a Wairarapa Positive Ageing Strategy and Wairarapa Rangatahi Development Strategy. These strategies aim to improve outcomes for, and the wellbeing of, these demographics. By implementing these strategies, we will be better placed to attract and maintain younger people/families, whilst also supporting active aging (whether that is through involvement in social and cultural activities, volunteering or physical activity). From a financial perspective, those aged 65+ are more likely to have fixed incomes and rate increases can 'hit harder' in these circumstances. With a larger proportion of people on fixed incomes in our community, rates affordability is a consideration for Council and could impact Council's ability to pursue some opportunities. To mitigate this, we have, and will continue to seek external funding for projects where opportunities exist. For example, through the Provincial Growth Fund and other central government funding opportunities such as the Waste Minimisation Fund. Council has also worked in partnership with - and will continue to explore future partnership opportunities with - local Iwi and funders like Trust House and Trust Lands Trust.

SUPPORTING INFORMATION:

2018 Census Data

Compared to the New Zealand average (based on 2018 census data), Masterton has more people aged 65+ (21% compared to 15.2%); similar numbers of people aged under 15 (19.4% compared to 19.7%) and a smaller proportion of 'working age' (15-64 years - 59.6% compared to 65.1%).

Population Projections

Based on Infometrics forecasting (June 2020), the Masterton population aged 65+ is expected to grow by approximately 73% between 2019 and 2051, from 5,825 to 10,100 people.
Youth (under 15 years of age) and 'working age' groups are expected to remain at similar levels throughout this period.

The combined effect is that the proportion of people aged 65+ will increase and Masterton's population will age, projected to move from an average age of 42 in 2019 to 48 in 2051.

The number of people aged 65+ is expected to increase from 5,825 in 2019 (21.7% of the population) to 8,316 in 2030 (27.9% of the population) and 10,100 by 2051 (31.9% of the population). Over the same period, the proportion of under 15s is expected to decline from 19.3% in 2019 to 18.5% in 2030, and then to 15.8% by 2051; and Masterton's 'working age' population is projected to decline from 58.9% in 2019 to 53.6% in 2030, and then to 52.3% in 2051.

BERL (September 2020) also note New Zealand's aging population as a challenge noting that over the coming decade many of older working age will be retiring. BERL note areas and infrastructure for our aged population will be important.

Dependency Ratio

In 2019 Masterton's dependency ratio (the number of people aged under 15 and over 65 as a ratio of the rest of the population) was 69%, up from 61.4% in 2009. By comparison, the 2019 New Zealand dependency ratio is 54.1%, up from 50.8% in 2009. Based on projected population age changes, this ratio will continue to increase.

3. DEMOGRAPHIC CHANGE: POPULATION DIVERSITY

Our Assumption - The Most Likely Scenario:	**Our population will continue to become more diverse, and in particular our Māori population will continue to grow.** This is consistent with demographic trends and population projections for Masterton. See supporting information.
A More Diverse Scenario:	**The diversity of our population occurs more quickly than we anticipate.** Our community could benefit from opportunities that greater diversity present, provided we do take action to grow a more equitable and inclusive community now.
A Less Diverse Scenario:	**The diversity of our population occurs at a slower rate than we anticipate.** Planning for greater diversity and for meeting the needs of a more diverse community will make Masterton a better and more inclusive place, even if change happens slower than we anticipate or not at all. The more responsive and inclusive we can be, the stronger our community will become.
Level of Uncertainty	**Low Uncertainty** Nationally it is accepted that the population is becoming more diverse. Our Māori population is younger and growing faster than other ethnicities. We have also seen more 'new' New Zealanders. Masterton is also a refugee resettlement location; and New Zealand may become even more attractive to migrants once COVID-19 is manageable (e.g. via vaccines) and our border controls relax.
Risk	Given the level of uncertainty, there is a low risk that our population will be less diverse than what we anticipate, however planning for a more diverse, welcoming and inclusive community, can only benefit Masterton and its existing residents. The greater risk is doing nothing, especially given we know there is inequity between different ethnicities within our community now.
Financial Implications if we get it wrong:	A less inclusive community is more likely to see a break down in the 'social fabric' and potential negative implications as a result, such as growing inequality which is linked to a range of negative outcomes from poor health and education outcomes, to increased crime and violence. While the implications may appear to be more social than financial, there are financial flow on effects. For example, lower levels of education and/or poor health may impact an individual's ability to find work. A community with higher numbers of people in low skill, low paying jobs will have greater affordability concerns, which could limit opportunities for the community as a whole. A

	community where everyone thrives, and diversity is celebrated, will be stronger and more resilient. It will also be a more attractive place to live. Attracting 'new New Zealanders' and New Zealanders returning from overseas and/or living in other parts of New Zealand now, could contribute to population growth, buffer the effect of our aging population, result in new businesses/ economic growth and ultimately help to spread the rates load.
What are we doing to reduce that risk? (Mitigation)	We will continue to closely monitor population change in the District to understand trends and respond appropriately. Aspirations for our district, identified as priorities in our Wellbeing Strategy, *He Hiringa Tangata He Hiringa Whenua,* include: • Strengthening relationships with Iwi • Increasing opportunities for meaningful partnerships and collaboration with Iwi • Equitable access to opportunities • Being a community where people want to live • Having engaged communities that actively participate in our community Implementing the Strategy will help to create a more inclusive community. For Māori as tangata whenua it is particularly important that we respect and celebrate diversity (both as an organisation and as a community) and work towards greater equity and inclusiveness. A standard item on every Council decision report is consideration of how the decision may impact Māori. We are currently developing a framework to support better engagement and consultation with Māori, which will assist in growing our capacity to better meet the needs of our Māori communities. We are also working to improve the cultural appropriateness of services (e.g. offering te reo Māori based programmes in our Library; bilingual signage; reflecting Māori culture and design in 'our place'; and correcting past errors such as correcting the spelling of Makoura Road). We are also open to welcoming new residents. Masterton has been selected as a refugee resettlement location and has been part of the planning to support new families into our community. Refugees, originally from Syria, were scheduled to relocate to Masterton from June 2020. COVID-19 has deferred relocation for now. Masterton is also part of the "Welcoming Communities Programme', an initiative to support improved social inclusion outcomes for recent migrants.

SUPPORTING INFORMATION:

Census Data and Trends

Between the 2006 and 2018 Censuses, the proportion of our population identifying as Māori increased from 16.5% to 21.3%; Pacific from 2.6% to 4%; and Asian from 1.6% to 3.9%.

In particular, we expect our Māori population to continue to grow. The median age for Māori in Masterton is 24.2 years compared to the median age for all of Masterton at 43.2 years (Census 2018). With a younger population, we expect a higher proportion of youth to identify as Māori, and for the Māori population to continue to grow.

More Masterton people identify as Māori (21.3% compared to 16.5%) compared to New Zealand as a whole, and while Masterton still has a lower proportion of Pacific and Asian people than New Zealand, this population has also been growing.

Actual numbers are small, but there are now almost three times as many people who identify as Asian compared to 2006 (366 in 2006 vs 996 in 2018); and almost twice as many people who identify as Pacific (597 in 2006 vs 1011 in 2018).

Migration

International Migration

Migration into New Zealand has contributed to national population growth. And as New Zealand has become more diverse, this diversity is flowing out to our regions too. Masterton has seen growth in its Asian and Pacific populations; and the percentage of people living in Masterton who were born overseas has increased by 6% since 2013.

While Infometrics expect migration trends to be flat for several years, we are not expecting migration to be affected for the duration of this LTP.

Internal Migration

Regardless of whether we see more diversity in our population or not, a place that is inclusive and embraces diversity will be stronger and better positioned to address whatever future challenges we may face.

A more inclusive community is more likely to be attractive to potential new residents, and attracting new residents could help mitigate the effects of other challenges we are facing such as an aging population. As noted under population growth, 52% of population change in 2020 has resulted from net internal migration.

4. HOUSEHOLD GROWTH

Our Assumption - The Most Likely Scenario:	**1.25% growth per annum.** Based on Infometrics forecasts for Masterton, past growth trends and current circumstances (including COVID-19 considerations) we expect to see average annual growth of between 0.61% and 1.75% per annum over the life of this LTP, with the most likely scenario being a point between. Given that, we have based our planning on the medium growth scenario, which projects average growth of 1.25% per annum. See supporting information. Household growth is higher than population growth as households are also projected to get smaller with fewer people living in each house.
High Growth Scenario:	**1.75% growth per annum.** This aligns with Infometrics's high growth projection for Masterton to 2031. Looking beyond the life of this LTP, the high growth projection to 2051 forecasts average growth of 1.51% per annum. A key driver for the increase in households is the growth in our more mature population who are seeking smaller accommodation and smaller section sizes. Given this, and factors such as Masterton's proximity to Wellington, relative housing affordability and changes in the way we, we believe Masterton is well positioned as a region to attract new residents who will also need housing.
Low Growth Scenario:	**0.6% growth per annum.** This aligns with Infometrics low growth projection for Masterton to 2031. Looking beyond the life of this LTP, the low growth projection to 2051 forecasts average growth of 0.13% per annum. Given the factors noted above (under our high growth scenario), combined with our ageing population seeking smaller housing/section options, even in a low growth scenario, we do not anticipate zero growth or a decline in household growth.
Level of Uncertainty	**Moderate-High Uncertainty** Housing growth forecasts include some reliance on population growth and economic forecasts. There is always some uncertainty, and at the current time, COVID-19 amplifies that. The situation with COVID-19 is evolving and there is potential for flow on effects of COVID-19 (e.g. the economy) to impact household growth, but at this point, we are uncertain of the likelihood, extent or duration of that impact.

Risk	Given the level of uncertainty, there is a moderate-high risk that household growth will be higher or lower than we have forecast.
Implications of Risk:	***A higher growth scenario:*** Masterton has capacity for growth within its key infrastructure and services. Our Asset Management Plans indicate we could accommodate housing growth up to 1.8% per annum over the next ten years without significant impacts. If there was a significant and sustained rise in population beyond 1.8% per annum, that could have adverse effects on our ability to deliver some services to existing service levels – e.g. if demand was higher than the capacity of the service or asset. This could result in reduced levels of service or, worst case scenario, asset failures and/or a need to rapidly and heavily invest in assets to accommodate the growth. This in turn could result in much higher than planned debt or significant increases in rates (or both). If we were to experience higher household growth than we have planned for, Council services that could be most affected are: • Water Supply – given consent conditions, demand for water can exceed our capacity to supply over hot, dry summer periods. Rapid growth could add to this. To help mitigate water demand Council are introducing water meters. We also have provision for a water storage reservoir at Kaituna in Year 4 of the 2021-31 LTP. • Community Services e.g. our regulatory functions like Planning and Building Control could see increased demand for consent processing and inspections. ***A lower growth scenario:*** If there was significantly less growth than anticipated, this would ultimately impact our rating base and may affect our ability to set rates at a level that is affordable for our community. This could result in higher than planned rates increases to maintain infrastructural assets (such as roads, water, and wastewater) and/or assets with greater capacity than required.
What are we doing to reduce that risk? (Mitigation)	We need to balance the risk of over-investing to expand infrastructure for housing development if that is not going to be required against the alternative risk of not being adequately prepared for, and able to manage, growth. Where growth requires additional infrastructure (e.g. subdivisions), Council can currently require financial contributions for this work. Costs over this amount could result in additional Council expenditure, which would likely be loan funded. Council will continue to closely monitor population growth, economic conditions, and resource and building consents being processed in the District. By monitoring trends we can adjust and respond accordingly if we do need to revise our plans and approach. The financial implications for Council should be limited and able to be managed in the short to medium term but may need longer term responses if growth is substantially more or less than assumed.

SUPPORTING INFORMATION:

Growth Projections

Infometrics Projections to 2051 (November 2020) for medium growth indicate the number of households in Masterton district will grow from 11,182 in 2020 to 12,718 in 2031 (+13.7%) and 13,794 by 2051 (+23.4%). This equates to average annual growth of 1.25% to 2031; and an average of 0.78% per annum to 2051:

The number of household's in Masterton district are projected to grow from 11,182 in 2020 to:

	2020-2031		2020-2051	
	Number	**Ave. Growth p.a.**	**Number**	**Ave. Growth p.a.**
High	13,337 (+2,155)	1.75%	16,238 (+5,056)	1.51%
Medium	12,718 (+1,536)	1.25%	13,794 (+2,612)	0.78%
Low	11,938 (+755)	0.61%	11,632 (+450)	0.13%

Consistent with our ageing population, the fastest growth is expected to be households with one person or couples without children. The number of people per household is expected to drop from 2.4 to 2.2 between 2019 and 2051.

Infometrics (September 2020) reported that with house prices increasing, they would expect the number of new dwelling consents to also increase in future.

Past Growth Trends

Building Consents:

Over 2016/17 (the financial year ending 30 June 2017) there was rapid growth in the number of new dwelling consents in Masterton district. Numbers doubled compared to the previous year, up from 59 to 118.

The number of new dwelling consents continued to increase in 2018 (192 consents) and peaked at 204 in 2019. Over the past 12 months there has been some decline, with 170 consents processed. Prior to COVID-19 this was believed to reflect the building industry being at full capacity.

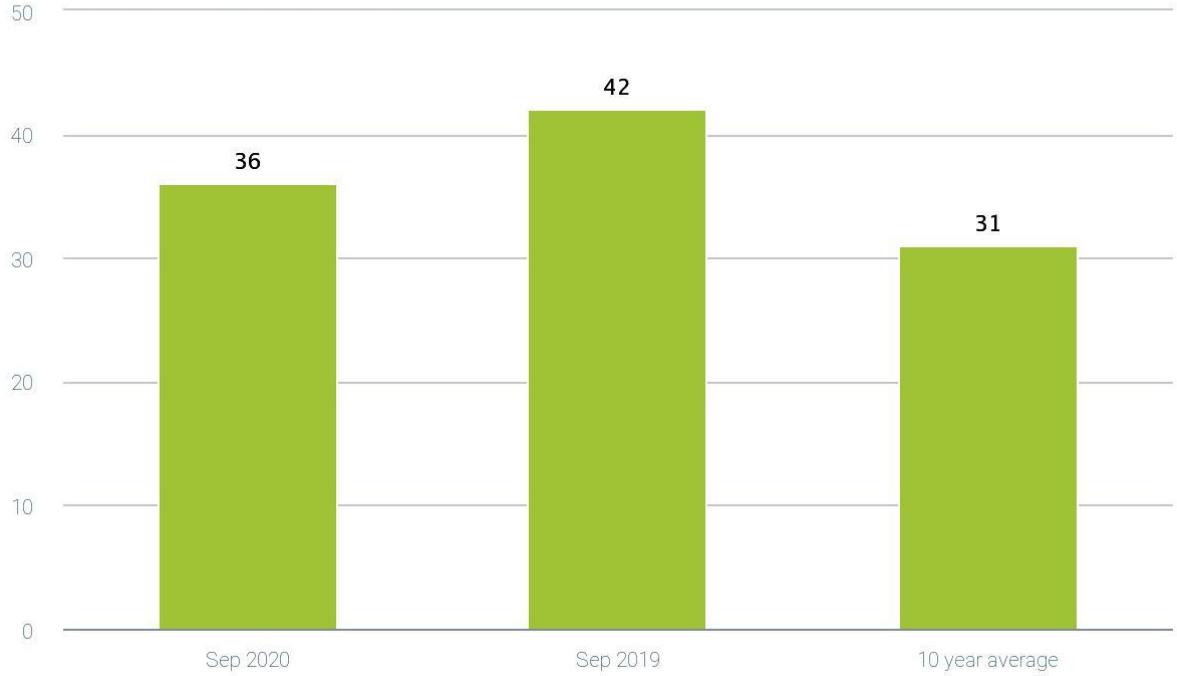
Since COVID-19, consenting teams have continued to be busy. Consents for the June 2020 quarter (44) were comparable with June 2019 (43). In the first 4 months of the 2020/21 financial Year (from 1 July to 2 November 2020), 67 new dwelling consents have been issued. There have also been 12 consents issued for relocated houses including new builds.

If this level of consenting continues for the remainder of the year, we could expect consent numbers to be similar to what they were in the three years pre COVID-19 (average of 188 consents per annum).

Infometrics (September 2020) report that on an annual basis the number of consents in Masterton District decreased by 15% compared with the same 12-month period a year ago, but are still at historically high levels; and as noted, that house prices could drive an increase in new dwelling consents increase in future.

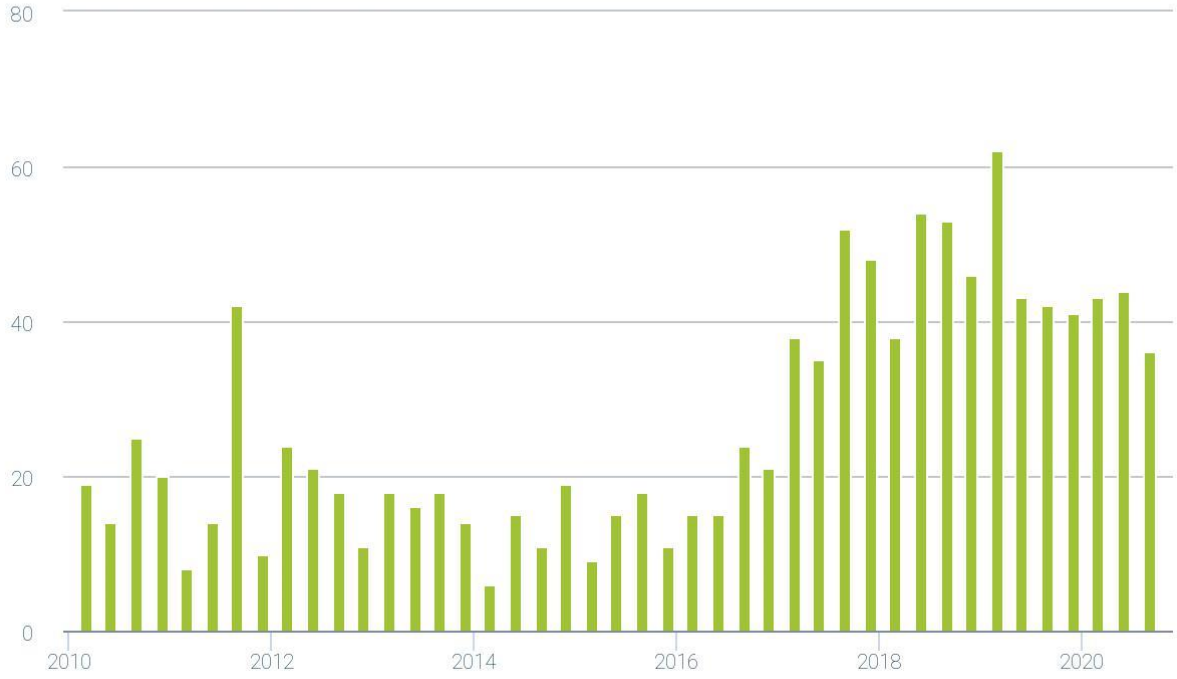
Number of new dwelling consents

Quarterly number, Masterton District



Residential consents

Quarterly number, Masterton District



Rating Base:

The number of rateable properties are included in the Annual Report each year. Between 30 June 2016 and 30 June 2020 the number of rateable properties increased from 12,220 to 12,702, an increase of 3.94%, which equates to average annual growth of 0.99%.

Numbers for the past 5 years are included below:

Year Ending:	Rateable Properties	Growth
30 June 2016	12,220	
30 June 2017	12,325	+105
30 June 2018	12,373	+48
30 June 2019	12,500	+127
30 June 2020	12,702 (from internal report)	+202

For the 2020/21 financial year we rated 8,249 urban residential properties. As at 18 November 2020, we are set to rate 8296 residential properties next year, which equates to an increase of 47 properties.

Growth Potential

Development in progress as at December 2020 includes provision for at least 687 units/houses/lots. The speed at which development progresses can be influenced by the type of housing. Houses or units of a similar design can be developed more quickly than bespoke (i.e. one off or tailored design) housing.

Location of Development:	Number of Units/ Houses/Lots:	Type of Housing:
Behind the Copthorne Hotel	71 units	Mostly 2 bedroom units.
Iorns Street	40 units	One or two bedroom units, some two storey.
The Barracks, Judds Road	65 lots	Mostly bespoke houses. Some town houses.
Tuatahi Avenue	43 lots	Mostly bespoke. Some lots already being subdivided again.
Carters Subdivision South Belt	22 lots	Bespoke housing.
Chamberlain Road	Approximately 197 houses with potential for more.	A mix of similar designs and bespoke housing.
Williams Block	191 houses	A mix of similar designs and bespoke housing.

Cashmere Downs	Current: 28 lots Remaining Subdivision: 100 lots	Bespoke housing.
Gordon Street, Joblin	30 lots	Bespoke housing.
TOTAL:	687 + 100 lots remaining in Cashmere Downs	

COVID-19 Implications

The Infometrics projections (November 2020) for Masterton household growth did factor in potential impacts of COVID-19 as understood at that time. However, given COVID-19 is unprecedented and evolving, there is uncertainty regarding both the duration and longer-term effects of the pandemic.

In August 2020, Infometrics believed the strong level of consenting would keep builders busy through until the end of 2020, but they expected consents to ease at the end of the 2020 year, impacting workloads in 2021. In September 2020, Infometrics identified the construction industry as a factor supporting our economic recovery, with commercial consent values in particular, exceeding the New Zealand average.

To date, our economic recovery has been positive, and we have not observed negative impacts on our consenting processes, however there is uncertainty regarding newer strains of the virus and the wider global situation. Changes in economic conditions for New Zealand as a result of the global economy, or if the COVID-19 situation in New Zealand did change, could slow down development.

5. THE ECONOMY

Our Assumption - The Most Likely Scenario:	**Our Economy Continues to Recover in line with Recent Trends** The impact of COVID-19 on Masterton's economy and/or the duration of impact to date has been less than expected when we first went into Alert Level 4 lockdown. Factors such as our economy being heavily influenced by the primary sector and less reliant on tourism has aided this. We have based our planning on the assumption that our recovery will continue on this trajectory. Masterton aligns with some criteria for BERL's 'faster rebuild scenario', however we have also considered other factors (such as the potential impact of the global economy on NZ trade) and have opted to base our plan on BERL's Medium scenario. See supporting information. Note: BERL's assumptions include that New Zealand remains at Alert Level 1; stringent borders controls are in place until the end of 2021; and that the New Zealand economy and our trading partners begin to recover from 2020.
Best Case Scenario:	**Our Economy Grows/Recovers Faster** Factors such as changing work patterns (for example more people who were commuting to Wellington now working from home and spending locally), domestic tourism and low interest rates have contributed to greater spending locally. Masterton's location near Wellington, and relative affordability of housing, has attracted new residents including those returning 'home' from overseas due to COVID-19 related concerns - and has the potential to continue to do so. These factors have the potential to positively impact our economy.
Worst Case Scenario:	**Our Economy Contracts/Recovers Slower** Overseas, COVID-19 and variant strains are heavily impacting parts of the world, and more recently have been identified in New Zealand too. Continuous and/or extended lockdowns in other countries has the potential to impact their economies, and could have economic flow on effects for New Zealand. Within New Zealand, as at 18 February 2021, concern regarding variant strains is growing, with very recent community transmission resulting in a three day Level 3 lockdown in Auckland, and Level 2 restrictions for the rest of New Zealand. There is potential for further Alert Level 4 lockdowns if community transmission is not identified early and well managed. There are also concerns regarding affordability of the housing market and whether increasing values can be sustained. These factors have the potential to negatively impact our economy. Other factors that could influence our economy are: 1) if people who have returned from overseas recently due to COVID-19 have used Masterton as a 'landing point' given family or other connections but decide not to stay in the district longer term; and 2) Labour shortages constraining recovery efforts.

Level of Uncertainty	**High Uncertainty** Economic trends are currently heavily influenced by COVID-19 and the flow on effects of this. Past trends are of less relevance in predicting the short to medium term economic future.
Risk	Given the level of uncertainty, there is a high risk that our economic situation will vary from what we have assumed.
Implications of Risk:	***A growth scenario:*** If our economy grows more than we have assumed, that would be a positive outcome reducing stress on our community and improving affordability. A growth economy could attract business and jobs creating more opportunities for our community. ***A contracting scenario:*** If the economy contracts, this would increase stress on our community and amplify affordability considerations for Council. If our economy is impacted again in the short to medium term, by COVID-19 or something else, options such as reducing levels of service or deferring projects may need to be considered.
What are we doing to reduce that risk? (Mitigation)	We will continue to closely monitor economic change in the District to understand trends and respond appropriately. The three Wairarapa Councils have a joint Wairarapa Economic development Strategy (WEDS) and are developing a Wairarapa COVID-19 Recovery Plan. Together, implementing these plans will help to maintain and over time, strengthen, our economy. It is also important to note that the effects of COVID-19 have not been evenly distributed in our community. Some industries and individuals have been impacted more than others. Ensuring that those who have been affected most are also considered is an important part of our recovery planning. We are also working to balance affordability for our community now against investment in projects that could stimulate jobs and investment that is required for our future. If we don't invest now, we may not be adequately prepared for, and able to manage, future challenges such as climate change and water resilience.

SUPPORTING INFORMATION:

Economic Projections

BERL

BERL released their Local Government Cost Adjustor Forecasts in September 2020. The report notes that as a result of measures to contain COVID-19, New Zealand has experienced severe economic downturn with activity and employment declining, and income and spending uncertain.

There is overlap between BERL's criteria for Medium and Faster Recovery scenarios. Masterton aligns with some of the Faster Rebuild criteria (as outlined below), in particular given our agricultural base. However, taking emerging situations into consideration as discussed below, we have chosen to base our plan on the Medium-Scenario.

The Faster Rebuild forecast is applicable to councils in areas that:

> a) **Have an economy with lower reliance on industries hardest hit by the response to COVID-19 such as tourism and retail** – *Masterton's economy is not heavily reliant on tourism. Infometrics data shows the industries that contributed the greatest proportion of GDP in 2019 were Health Care and Social Assistance (11.6% vs 5.8% for NZ); Agriculture, Forestry and Fishing (8.6% vs 5.2% for NZ) and Manufacturing (7.8% vs 9.7% for NZ).*
>
> Tourism contributed 4.1% of GDP (below the NZ average of 5.4%); Retail contributed 6.6% (above the NZ average of 5.1% and ranked 5th for Masterton); and Accommodation and Food Services contributed 2.1% (similar to the NZ average of 2.2%).
>
> Of the jobs filled in 2019, Accommodation and food services made up 6.8% and Retail made up 11.6%. (Infometrics)
>
> b) **Have relatively sound infrastructure but also expect to engage in significant infrastructure upgrades in the next decade** – *Masterton has sound infrastructure which does not need significant investment but is planning a new Civic Centre and some upgrades e.g. the Hood Aerodrome development and water storage reservoirs.*
>
> c) **Have a growing, young population** – *Masterton has an ageing population, but has seen growth in the population overall over the last ten years, with growth expected to continue.*
>
> d) **Have a high proportion of employment in local and central government** – *The hospital, district and regional Councils are bigger employers in the district. WINZ and ACC are also represented. Masterton's close proximity to Wellington means we also have a reasonable commuter base of people working for local and central government in Wellington but residing in Masterton. With remote working becoming more acceptable, many of these people are now working more from home and spending locally.*
>
> e) **Have a high proportion of employment in agriculture** – *Masterton has a strong agricultural base.*
>
> Agriculture, forestry and fishing ranked second in the industries that created the most jobs between 2009-2019, and second in the proportion of jobs filled (12.9%) in 2019. Health care and social assistance ranked first for both jobs filled in 2019 (15.6%) and the number of jobs created between 2009-2019. (Infometrics)
>
> f) **Have a high proportion of employment in knowledge work generally, especially technology and scienc**e – *Masterton has some employment in technology related fields but not a high proportion (5.9% of jobs filled in 2019). This is a growing industry for Masterton, but not a high proportion of employment at this time*

The key difference between the faster growth and medium scenarios is the point relating to a higher proportion of employment in agriculture. While Masterton does have a strong agricultural base, the emerging situation with COVID-19 presents a risk to the wider global economy and could have implications for NZ's agricultural exports. For example, dairy, seafood, meat and wool exports are forecast to decrease for the year ending June 2021 due to prices receding from the near-record

levels in late 2019, mainly due to COVID-19-related uncertainty and food service closures (MPI, 2020). Given border closures, we are also experiencing challenges with labour shortages in this sector which could impact the sector.

BERL's assumptions include that New Zealand remains at Alert Level 1; that stringent borders controls are in place until the end of 2021 and that the New Zealand economy and our trading partners begin to recover from 2020.

Infometrics

An economic forecast considering the impact of COVID-19 on the Masterton district was completed by Infometrics in April 2020. Subsequent Quarterly Economic Monitor reports (the latest available at this time is September 2020) have shown Masterton recovering more quickly than was originally anticipated. Given that, we have focused more on the Infometrics Economic Monitor and economic indicators than the report completed in April 2020.

We have also looked at the Infometrics report Wellington City Council commissioned (January 2021) for their economic assumptions. That includes comment on the national economic situation. Key national level points included:

- That the national situation has continued to improve and Infometrics have been revising forecasts upwards, but still expect weaker times ahead for New Zealand.
- Given circumstances overseas, globally a long period of economic weakness is expected.
- An assumption that a trans-Tasman bubble will be established mid-2021 but borders won't fully open until 2022. International visitors are expected to be at 80% of pre- COVID levels by 2025, and 110% by 2030 with Australia leading our tourism recovery.
- Terms of trade 'hold up' (that is the relationship between import and export prices).
- International net migration to be close to zero for the next three years.
- Nationally, house prices are expected to rise, albeit at a slower rate, over the next four years.

Infometrics Economic Monitor

Infometrics Quarterly Economic Monitor (September 2020) reported that Masterton's economy is bouncing back after COVID-19 impacted earlier in 2020. Masterton benefitted from Wellington commuters working and spending in the district, and domestic tourism.

Infometrics noted that Masterton's construction sector has also contributed with the value of non-residential consents over the 12 months to September almost double the 10 year average. Residential consents dropped more recently but are still at a high level.

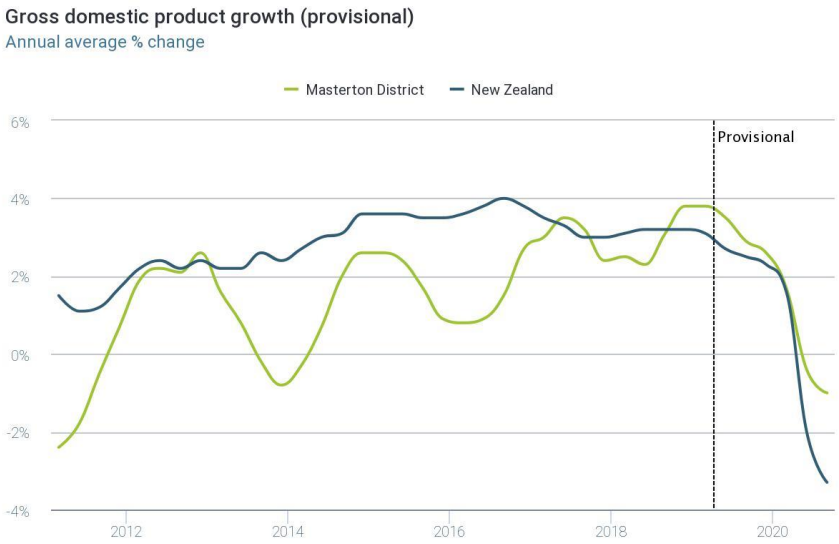
At a national level, for the September 2020 quarter, Infometrics reported that economic activity has rebounded strongly. This is attributed to post-lockdown spending levels and continued export activity enhancing confidence in the economy. Equally they caution that the pandemic is not over yet.

"The pandemic still looms large over regional economies, and the pathway ahead is uncertain. But after a hammer blow to the economy in the first half of 2020, the economic rebound in the September quarter has set New Zealand on a more optimistic course ahead".

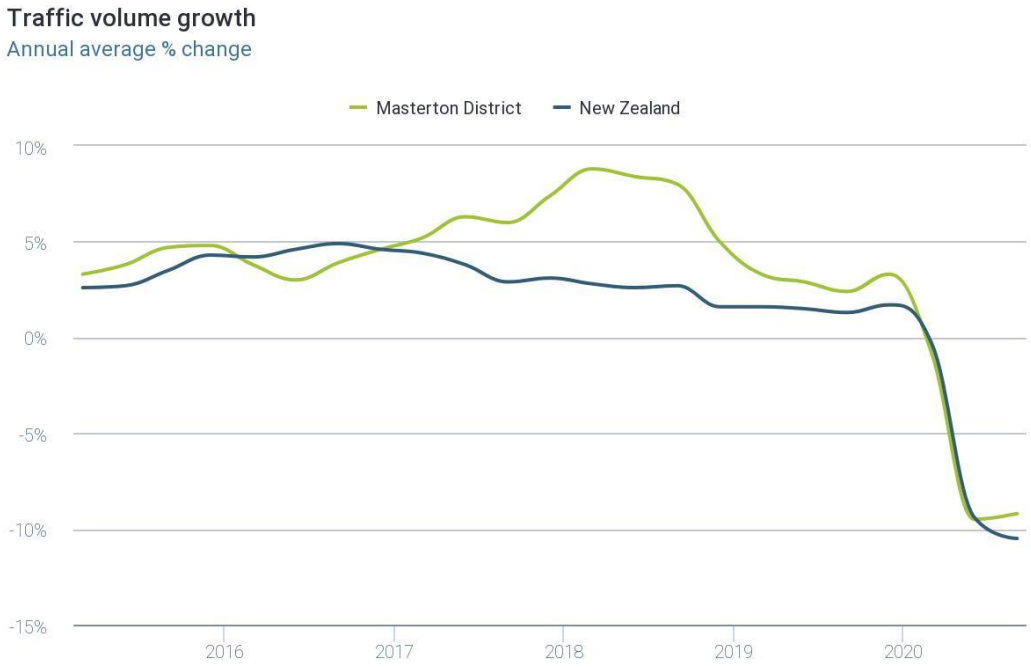
Economic Indicators

Economic indicators for the September 2020 quarter showed:

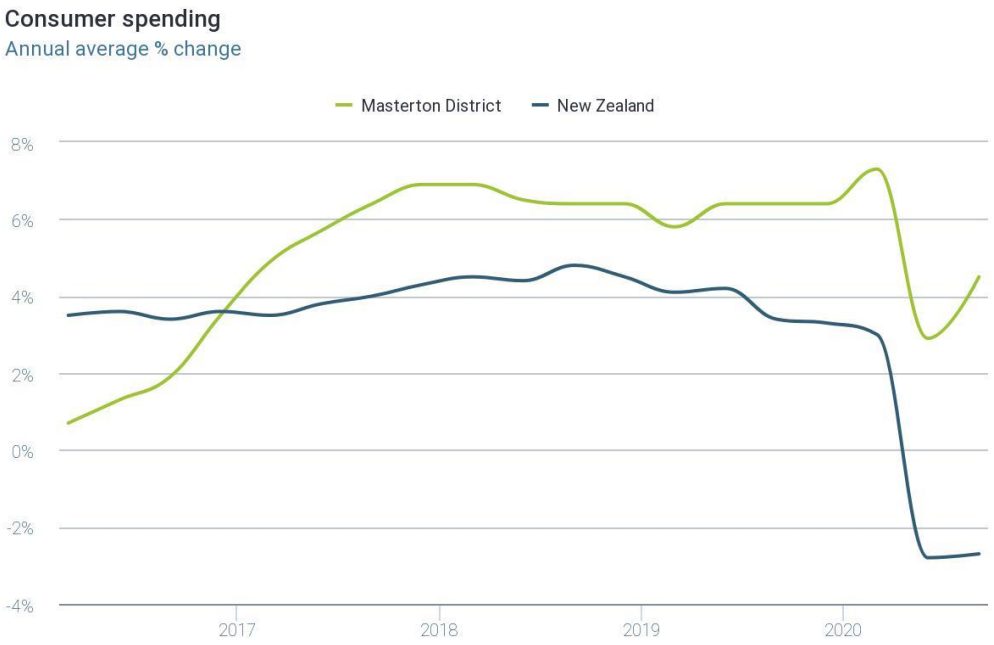
Masterton district GDP grew by 0.9%. Across other Councils, GDP growth ranged from 7.9% (Buller) to -9.3% (Queenstown-Lakes). Masterton was closest to Kapiti Coast District where growth was 1%. As a comparison, Horowhenua saw growth of 1.7%; Tararua 2.4%; South Wairarapa 3.2% and Carterton -0.8%.



Masterton traffic flow increased by 4.1%. Across other Councils, traffic flow growth ranged from 19.9% (Hurunui) to -43.1% (Waikato District). As a comparison, Carterton saw growth of 4.7%; Tararua 6.8%; South Wairarapa 2.8%; Horowhenua 1.7%.

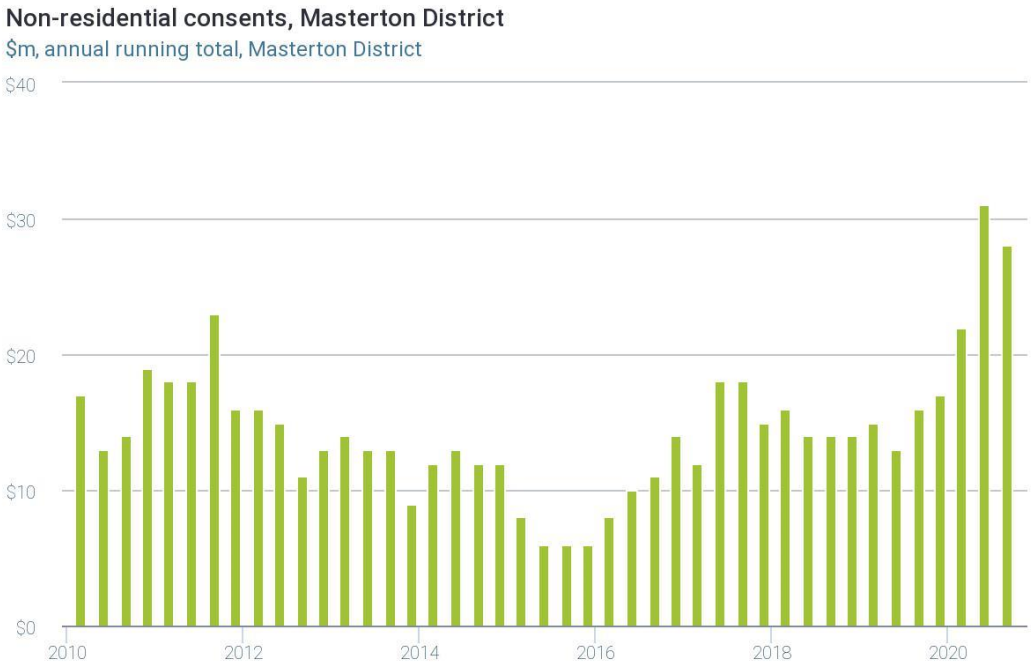


Electronic card consumer spending in Masterton District as measured by Marketview, increased by 4.5% over the year to September 2020 compared to the previous year. This compares with a decrease of 2.7% in New Zealand.



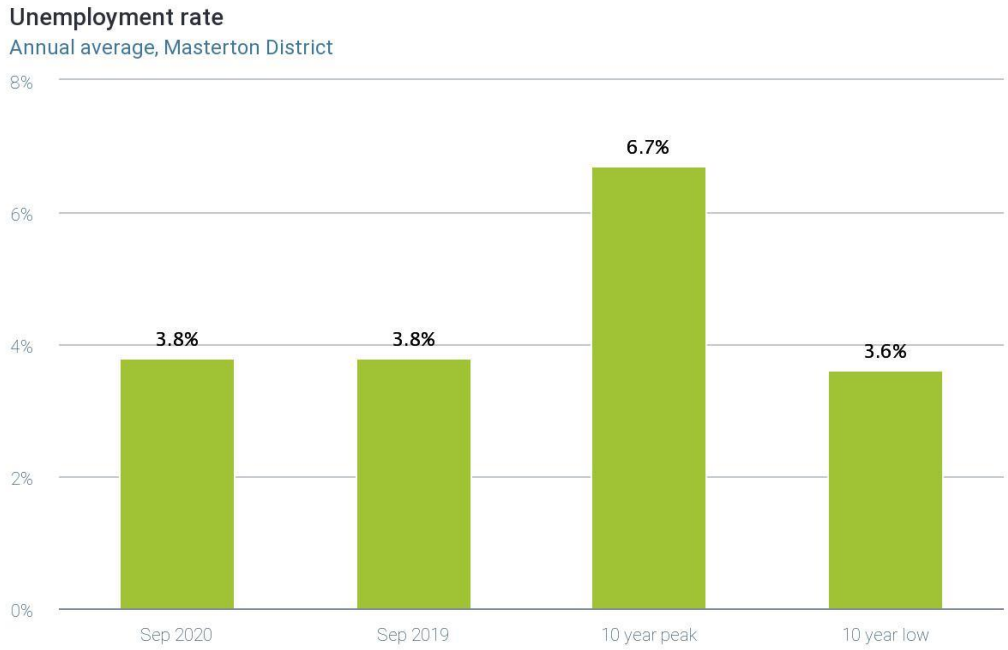
Total tourism expenditure in Masterton District increased by 8.9% in the year to September 2020. This compares with a decrease of 16.5% in New Zealand. Total tourism expenditure was approximately $114 million in Masterton District during the year to September 2020, which was up from $105 million a year ago.

Non-residential building consents to the value of $28 million were issued in Masterton District during the year to September 2020. The value of consents increased by 77% over the year to September 2020. By comparison the value of consents decreased by 7.6% in New Zealand over the same period. Over the last 10 years, consents in Masterton District reached a peak of $31 million in the year to June 2020. (See household growth for domestic consents).

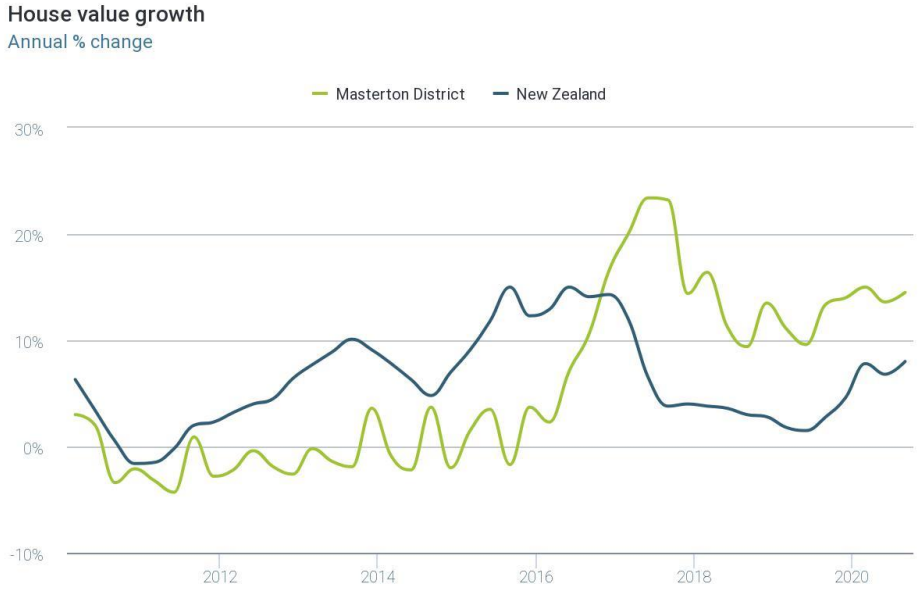


Jobseeker Support recipients in Masterton District in the year to September 2020 increased by 14.4% compared with previous year. Growth was lower relative to New Zealand (27.3%). An average of 932 people were receiving a Jobseeker Support benefit in Masterton District in the 12 months ended September 2020. This compares with an average of 829 since the start of the series in 2011.

The annual average unemployment rate in Masterton District was 3.8% in September 2020, the same as 12 months earlier. The unemployment rate in Masterton District was lower than in New Zealand (4.4%) in September 2020. Over the last ten years the unemployment rate in Masterton District reached a peak of 6.7% in June 2013.



Masterton house prices had increased by 14.5% compared to the same period last year, bringing the average house price to $467,147. This percentage growth was in the top twenty for Territorial Authorities in New Zealand.



6. COVID-19

Our Assumption:	**COVID-19 will continue to present uncertainty for NZ for the immediate future. NZ as a whole will not move beyond Alert Level 1 for any extended period, and there will be no national Alert Level 4 lockdowns. COVID-19 will be successfully managed within the life of this LTP.** As at 9.00am on 18 February 2021 there are six active cases in the community in New Zealand (as listed on the Ministry of health website). The country has spent 3 days, from midnight Sunday 14 February to midnight Wednesday 17 February at Alert Level 2 and is now at Alert Level 1. Auckland was at Alert Level 3 for this period and is currently at Alert Level 2. We have based our planning on the assumption that New Zealand will continue to effectively manage any community outbreaks and that the country, as a whole, will not move beyond Alert Level 1 for any extended period; and that the COVID-19 risk will reduce with the 'roll out' of vaccines. As at September 2020 BERL assumptions included: that New Zealand remains at Alert Level 1; that stringent borders controls are in place until the end of 2021; and that the New Zealand economy and our trading partners begin to recover from 2020. Our assumption is broadly similar but considers more recent community transmission and the way in which this has been managed to date.
Best Case Scenario:	**COVID-19 is managed in NZ and globally sooner** Vaccines are currently being 'rolled out' overseas. First vaccinations in New Zealand are expected to commence on 20 February 2021. Should vaccines prove effective in managing COVID-19 sooner, enabling borders to open and global recovery to commence sooner, this would be a positive outcome.
Worst Case Scenario:	**NZ experiences further community transmission that results in a change in Alert Levels for an extended period and/or further Alert Level 4 lockdowns** COVID-19 variant strains that have higher rates of transmission have been impacting many parts of the world, resulting in full or more restrictive lockdowns. The UK strain was identified in recent community transmission in New Zealand. Health professionals have warned of the need to return to Alert Level 4 restrictions if there was wider community transmission of this variant strain.

Level of Uncertainty	**High Uncertainty** COVID-19 is unprecedented and evolving. Factors the Reserve Bank have identified (referenced by BERL, September 2020) that could impact our economy include: a resurgence of COVID-19 in New Zealand, flow on effects from the global situation and a shortage of skilled labour constraining recovery efforts.
Risk	Given the level of uncertainty, there is a high risk that the COVID-19 situation will vary from what we have assumed.
Implications of Risk:	***Best Case scenario – COVID-19 is managed sooner:*** Eliminating or effectively managing the virus in NZ and beyond sooner would enable reconsideration of NZ border restrictions; and enable the world to look toward global recovery sooner. This could have positive implications for NZ where successful management of the pandemic to date has raised NZ's profile globally. This could make NZ more attractive as a potential trade partner, place to visit and/or live. This could have positive flow on effects for Masterton – e.g. potential population growth and business expansions improving affordability. ***Worst case scenario: Further restrictions/lock downs*** Further national restrictions for an extended period and/or another Alert Level 4 lock down would impact our economy and could have a range of negative flow on effects for our community. Further economic impacts could accentuate affordability issues for Masterton ratepayers and Council.
What are we doing to reduce that risk? (Mitigation)	We will continue to closely monitor COVID-19 developments to better understand risks and trends; and will respond appropriately. The three Wairarapa Councils are developing a Wairarapa COVID-19 Recovery Plan. Implementing this plan will help to maintain and over time, strengthen, our community and our economy. The three Councils support the Emergency Operations Centre should there be an event. This includes communication regarding response and ways to minimise risk. Council staff are guided by health and safety policies and procedures that have been updated to reflect COVID-19. Council has a revised Pandemic Response Plan.

SUPPORTING INFORMATION:

BERL COVID-19 Assumptions

BERL's Local Government Cost Adjustor Forecasts released in September 2020 include underlying assumptions about COVID-19. These are:

- New Zealand avoids a widespread outbreak of COVID-19 and is at Alert Level 1 through 2021
- Stringent border restrictions remain in place until the end of 2021

- From the September quarter 2020, New Zealand's economy gradually recovers. Demand from our trading-partner economies also recovers only gradually.

BERL note that these assumptions broadly align with assumptions made by the Reserve Bank. BERL also acknowledge that the Reserve Bank have identified risks including a resurgence of the virus, the impacts of the global economy/situation on New Zealand and labour shortages within New Zealand. BERL note that if any of these risks do eventuate, a stalled rebuild scenario would be more likely.

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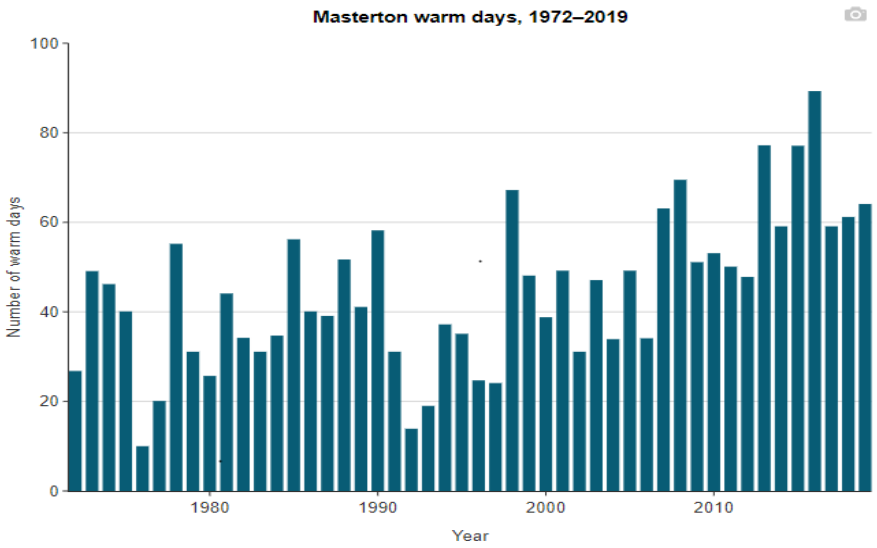
PART 2 – Climate Change Assumptions for 2021-31

Climate Change	The greenhouse gases we produce from most of our everyday activities are changing the climate and our environment. There is substantial scientific evidence that our climate has been and is continuing to change. https://www.mfe.govt.nz/climate-change/why-climate-change-matters/evidence-climate-change Winter 2020 was Aotearoa's warmest winter on record. The nationwide average temperature was 9.6°C (1.1°C above the 1981-2010 average from NIWA's seven station temperature series which begins in 1909). https://niwa.co.nz/climate/summaries/seasonal/winter-2020 New temperature data from 30 sites around Aotearoa shows that Aotearoa's temperature is warming (MfE, StatsNZ). Every site recorded increasing average temperatures in winter. The national average temperature has risen by 1.13 (±0.27) degrees Celsius from 1909 to 2019, at an average rate of 0.10 degrees per decade. That rate was 0.31 degrees Celsius per decade in the past 30 years. https://www.mfe.govt.nz/publications/environmental-reporting/our-atmosphere-and-climate-2020
Scenarios	The National Institute of Water and Atmospheric Research (NIWA) Climate Change Report is predicting that the Wairarapa Region is likely to warm significantly in the lifetime of the current generation. It is predicted that annual hot days (>25°C) may increase from 24 days currently to up to 80 days by 2090. For more see http://www.gw.govt.nz/assets/Climate-change-2/FINAL-WellNCC-projectionsimpacts.pdf We are using the NIWA modelled regional climate change projections (known as the Whaitua tables). The scenarios are expressed as a range, from lower emissions to higher emissions for a number of climate related parameters. https://www.gw.govt.nz/assets/Uploads/WhaituaClimateChangeprojectionsMarch2020.pdf All of the Wellington Region councils agreed to use these projections as the basis for the LTP 2021-31 climate change assumptions. NOTE: It is not possible to reduce the mid-century warming, due to the amount of carbon dioxide already accumulated in the atmosphere. The projections for mid-century are already 'locked in'.
'Scenarios at Glance'– expressed as a range lower to high emissions[1] (for detail see the Whaitua tables)	
	For average annual temperatures projected lower range 0.7 °C warmer above present by 2040 and 1.2 °C warmer by 2090; and for higher range 1.0 °C warmer by 2040 and 3.0 °C warmer by 2090 above present.

[1] Low - RCP4.5 mid-range scenarios where greenhouse gas concentrations stabilise by 2100.
High - RCP8.5 is a high concentration scenario where the GHG emissions continuing very high. In the light of new technologies and improvements it still remains a valid way to test the sensitivity of the climate variables.

	By 2040, up to 30 more hot days per year (>25°C) and by 2090 up to 80 more hot days for inland Wairarapa. **About a third of the warming predicted for mid-century has already happened in our region.** From *Our Atmosphere and Climate 2020* report https://www.mfe.govt.nz/sites/default/files/media/Environmental%20reporting/our-atmosphere-and-climate-2020-report.pdf  Data source: NIWA National Climate Database from 30 climate stations. https://www.stats.govt.nz/indicators/frost-and-warm-days
	Rainfall will vary locally within the Wairarapa region. The largest changes will be for particular seasons rather than annually. Heavy/extreme rainfall is likely to increase especially for the end of century. The increased temperatures will have greater impact on the evapotranspiration. The predicted changes in temperature will make a significant difference to the hydrological systems and water availability meaning that it will get a lot drier even if the average rainfall doesn't change significantly.
	Up to 15 fewer frost days (below 0°C) by 2040; and up to 40 fewer frost days in inland Wairarapa by 2090.
	Change in the intensity of the wind: up to 3% increase by 2040 and up to 4% by 2090. Change in annual number of windy days: up to 4 days by 2040, and up to 12 days by 2090.
	Sea level rise: projected lower to higher range is 0.12 to 0.24 metres above present by 2040 and 0.12 to 1.75 metres by 2090.

Level of uncertainty	The level of uncertainty is low especially for the projections for mid-century. About a third of the warming predicted for mid-century has already happened in our region. The biggest uncertainty is the rate of future global GHG emissions, which are influenced by the human factor e.g. social, economic and environmental policies and development. The big unknown is the scale and pace of human actions. How much and how fast we change our behavior will have an impact on the end of the century predictions, as well as whether policies, developments, and changing behavior stabilize the climatic changes that are already in motion.
Risks	The greatest risk relates more to our readiness and willingness to respond, and to respond at rate and to an extent that will reduce GHG emissions. Climate Change has the potential to increase the frequency and intensity of natural hazard events that already occur. Adaptation can help reduce our vulnerability and increase our resilience to natural hazards. Our efforts to mitigate the economic impacts of the COVID-19 pandemic provide us with an opportunity to base our recovery on a low carbon economy and to take consideration of intergenerational impacts.
Financial and other implications	If we continue BAU – i.e. no action or action to reduce GHG emissions is too late – the warming trends already observed will continue. This will have far-reaching impacts on fresh water, biodiversity, productivity, and our resilience against increasing climatic changes and weather extremes: • Vulnerable infrastructure and lifelines • Coastal inundation • Saltwater intrusion • Increase in human heat stress and impact to wellbeing • Stress on terrestrial and aquatic ecosystems and associated impacts on health and economy • Risk to water supply catchments • Water shortages becoming a norm • Decrease in water quality impacts on biodiversity, recreation and drinking water • Reduced soil fertility • Changes to timing of seasonal activities eg. flowering, breeding • Increase in pests and diseases eg. wasps, fruit flies • High stress on native species, extinction of some species • Ocean acidification, decline in fish population • Impacts on insurance and financial system By thinking how each decision we make increases or decreases GHG emissions and contributes to the overall GHG emissions, and by acting now we are playing our part in meeting Aotearoa's carbon zero 2050 target. The following are the tools and methodologies that we are either progressing or considering: • Reducing carbon emissions • Imbedding carbon emission considerations in our BAU

	• Energy efficiency and innovative approaches • Climate change adaptive planning framework • Water resilience • Work with other regional TAs and the regional council on getting the best and latest science and information • Engage with our community on adaptation *Financial Implications:* If climate change results in changes that are more significant, or which continue to occur sooner than currently predicted, then this could place strain on some of Council's core infrastructure e.g. water supplies and our stormwater system. If infrastructure needs to be upgraded sooner than planned, then this may result in unbudgeted expenditure which could result in an increase in borrowing, the use of Council reserves or an increase in rates. Council is currently developing plans and strategies, such as our Climate Change Action Plans; the combined Wairarapa Water Resilience Strategy; and the Stormwater Strategy, that will require investment to implement. These plans will also help Council in prioritising actions to mitigate and/or adapt to climate change and balance affordability for our community and our need to respond. Once these strategies are adopted, we will have a clearer indication of specific investment needed, and when that will occur. The cost of doing nothing, or responding too late, will be greater, presenting risks for Council assets and service delivery, our economy and our community.
What are we doing to reduce that risk?	• Our Asset Management Plans and Infrastructure Strategy have considered the impacts of these assumptions on our infrastructure over the next 30 years. They consider the scenarios and they projections as a range, as expressed in the Whaitua tables. • Participating in the Wellington Regional Climate Change Forum (WRCCF) • Co-ordinating and supporting the Wairarapa Climate Caucus to support participation in WRCCWG • Participating in the National Climate Change Network • Measuring our organisational carbon footprint • Focusing on energy efficiency • Increasing our EV fleet • Promoting waste minimisation • Developing a corporate carbon emissions reduction plan • Developing a district climate change action plan • Developing an air quality plan

PART 2A – Whaitua Tables

		Ruamāhanga Whaitua		Wairarapa Coast Whaitua		
	Scenarios	2040	2090	2040	2090	Impacts
Temperature and seasonality	**Average annual temperature**[2] will rise above present	+0.7°C to 1°C above present	+1.2°C to +3°C above present	+0.5°C to 1°C above present	+1°C to +3°C above present	• Increased human heat stress and mental health issues, rurally and in urban centres • Increased temperatures in urban centres due to human activities, large areas of concrete, buildings and vehicles • Increased risks of pests (such as wasps, rodents and fruit flies) and diseases (including risks to human health) and biodiversity losses • Reduced workplace productivity • Increased air pollution and seasonal allergies • Higher demand for drinking water at times when water is likely to be scarcer • Stress on ecosystems and associated impacts on health and economy • Range and habitat of native plants and animals will change- extinction of some species • Higher temperatures may allow for different crops to be grown. • Timing of seasonal activities such as flowering, breeding and migration will change.
	More very hot days (above 25°C) per year	Between 0 and 30 days increase	Between 0 and 80 days increase	Between 5 and 30 days in- crease	Between 15 and 60 days increase	
	Fewer frost nights (below 0°C) per year	Between 0 and 15 days reduction	Between 0 and 40 days reduction	Between 0 and 5 days reduction	Between 0 and 15 days reduction	
	Seasonal change in temperature	Maximum warming in autumn and summer for both whaitua. Least in winter for Ruamāhanga and least in spring for Wairarapa coast.				
Wind	**Change in the intensity of wind during windy days (>99th percentile of daily mean)**	0% to 3% increase	1% to 4% increase	0% to 3% increase	1% to 4% increase	• More frequent damage to trees, buildings and power lines • Will increase fire risk during hot, dry periods
	Change in annual number of windy days Extreme wind events are likely to increase	0 to 4 days increase	0 to 12 days increase	0 to 6 days increase	0 to 10 days increase	
Rainfall patterns and intensity	**Average annual rainfall**	5% decrease to 5% increase	0% to 10% decrease	5% de- crease to 5% in- crease	10% de- crease to 5% increase	• Increased prevalence of drought delivering urban and rural water shortages, and increased pressure on water infrastructure, including water storage • Saltwater intrusion on groundwater

[2] Uncertainty range: lower range for significant emissions reduction (Paris agreement targets met), and upper range for high emissions.

	Amount of rain falling during heavy rainfall days (> 99th per- centile of daily rainfall)[3]	0% to 10% increase	0% to 20% increase	0% to 15% increase	0% to 30% increase	• Decreased water quality and increased levels of toxic algae which impacts biodiversity, recreation and drinking water sources • Increased flooding, slips and landslides affecting land, houses, roads and other assets, public transport and rural productivity • Flood protection infrastructure Levels of Service reduced overtime • Impacted rural community due to reduced agricultural production • Reduced soil fertility • Regional parks negatively affected by both drought and flooding • Higher stress on indigenous ecosystems, plants and animals, especially with drought • Several fold increase in urban and rural wildfire risk – a particular concern for water supply catchments which may be rendered unusable for up to a year following a major wildfire
	Extreme rainfall magnitude: 6-12 hour duration, 100 year Average Recurrence Interval (normally used as reference for flooding design, referring to very extreme, infrequent rainfall events)[4]	8% to 12% increase	14% to 36% increase	6% to 12% increase	12% to 36% increase	
	Change in rivers mean annual flood dis- charge (MAF) Measures flood potential in the catchments	Between 20% de- crease and 40% increase depending on catchment	Between 20% de- crease and 60% in- crease de- pending on catchment	Between 20% de- crease and 20% in- crease de- pending on catchment	Between 20% de- crease and 60% in- crease de- pending on catchment	
	Change in rivers mean annual low flow discharge (MAL) Measures water shortage in the catchments	Decrease up to 60%	Decrease up to 80%	Decrease up to 60%	Decrease up to 80%	
	Change in annual growing degree days base 10 Measures potential for crop and pasture growth	Increase be- tween 0 and 300 GDD units	Increase be- tween 200 and 1000 GDD units	Increase between 0 and 300 GDD units	Increase be- tween 200 and 900 GDD units	
	Change in annual potential evapotranspiration deficit (mm) Measures drought intensity	Increase be- tween 20 and 120 mm	Increase be- tween 0 and 180 mm	Increase between 40 and 120 mm	Increase be- tween 40 and 160 mm	
	Changes in number of days of very high and extreme forest fire danger[5]	100% to 150% in- crease	100% to 150% in- crease	100% to 150% in- crease	100% to 150% in- crease	
Seal level rise and coastal hazards	**Seal level rise[6]**	0.12 to 0.24 metres above pre- sent	0.68 to 1.75 metres above pre- sent	0.12 to 0.24 metres above present	0.68 to 1.75 metres above pre- sent	• Increased coastal inundation with some areas to become permanently inundated • Saltwater incursion into freshwater habitats • Difficulty in obtaining insurance due to sea level rise and increasing frequency of flood events for community, business and central and local government
	More frequent storm surge (temporary raising of sea level during storms) more frequent and intense coastal flooding and coastal erosion					

[3] There is a large uncertainty in the range of changes due to model differences and emission scenarios. Changes against emission scenarios are not necessarily linear. Greater likelihood of increases in autumn, winter and spring

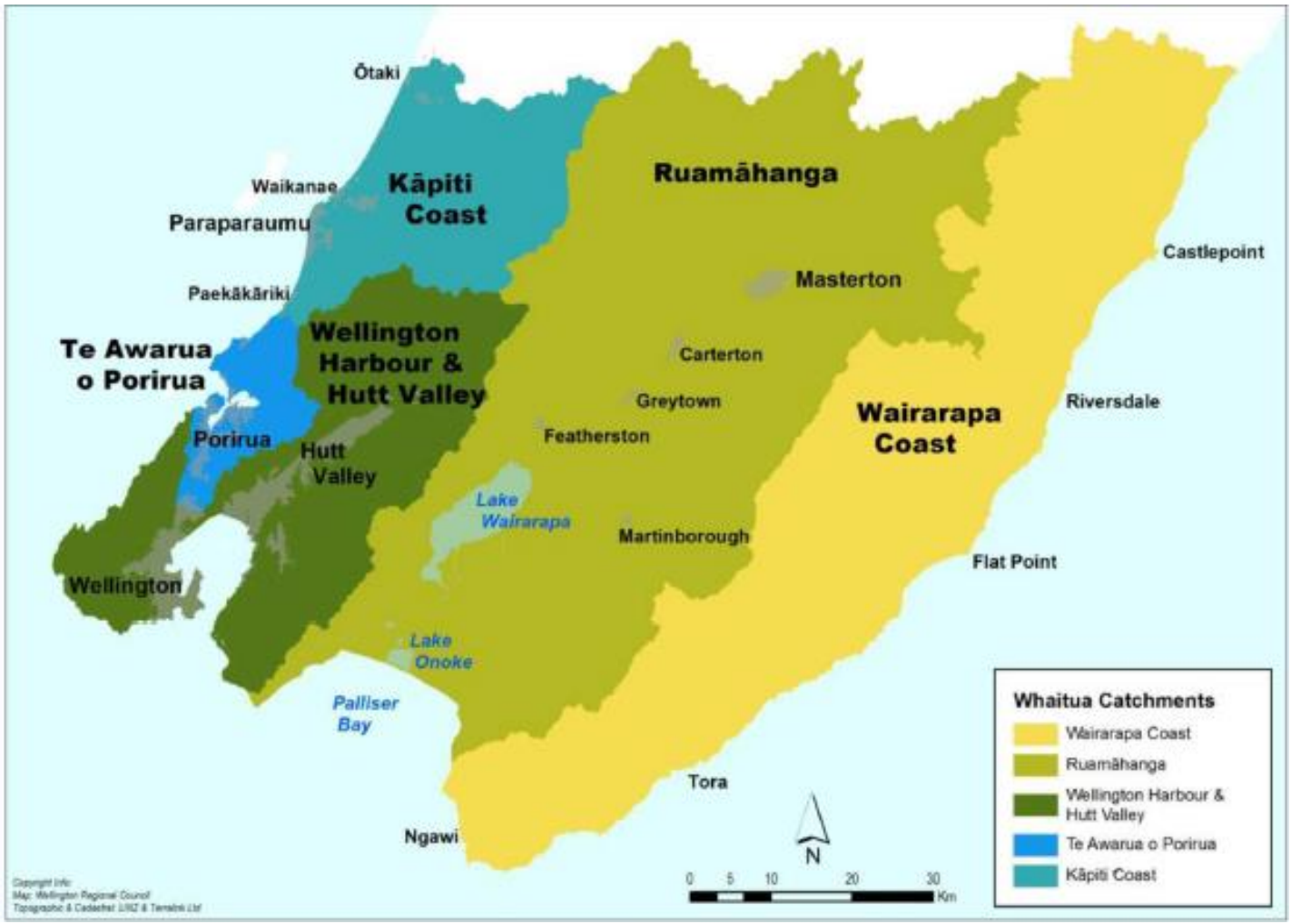
[4] Although the uncertainty in average rainfall range is high, extreme rainfall increases are more certain due to the increased amount of water vapour that the atmosphere can hold as it gets warmer (about 8% increase in saturation vapour per degree of warming).

[5] These figures are given by IPCC model averages. Individual models can show much higher increases of up to 700%

[6] The projected sea level rise for 2090 is based on IPCC AR5 plus an estimated additional contribution from Antarctica, based on papers published in Nature in 2018. Note the difference between pre- sent and pre-industrial, as we have already had about 26cm of sea level rise so far.
More regular storm events in the fragile coastal environment may also mean faster and more significant coastal retreat. See the link below for climate change, sea level rise and storm surge maps for the Region:
https://mapping1.gw.govt.nz/gw/ClimateChange/

	Saltwater intrusion into coastal groundwater, and further upstream in rivers					
Oceanic changes	Acidification of the ocean General temperature rise of sea water. Marine heatwaves					• Altered marine ecosystems, particularly affecting hard shelled species • Extinction of some species • Changes to the range of species, location and abundance of fish and sea birds around NZ • Impacts on aquaculture and fishing industries • Reduced recreational benefits

Wellington Region Whaitua



http://www.gw.govt.nz/assets/Climate-change/GWRC-NIWA-climate-extremes-FINAL3.pdf

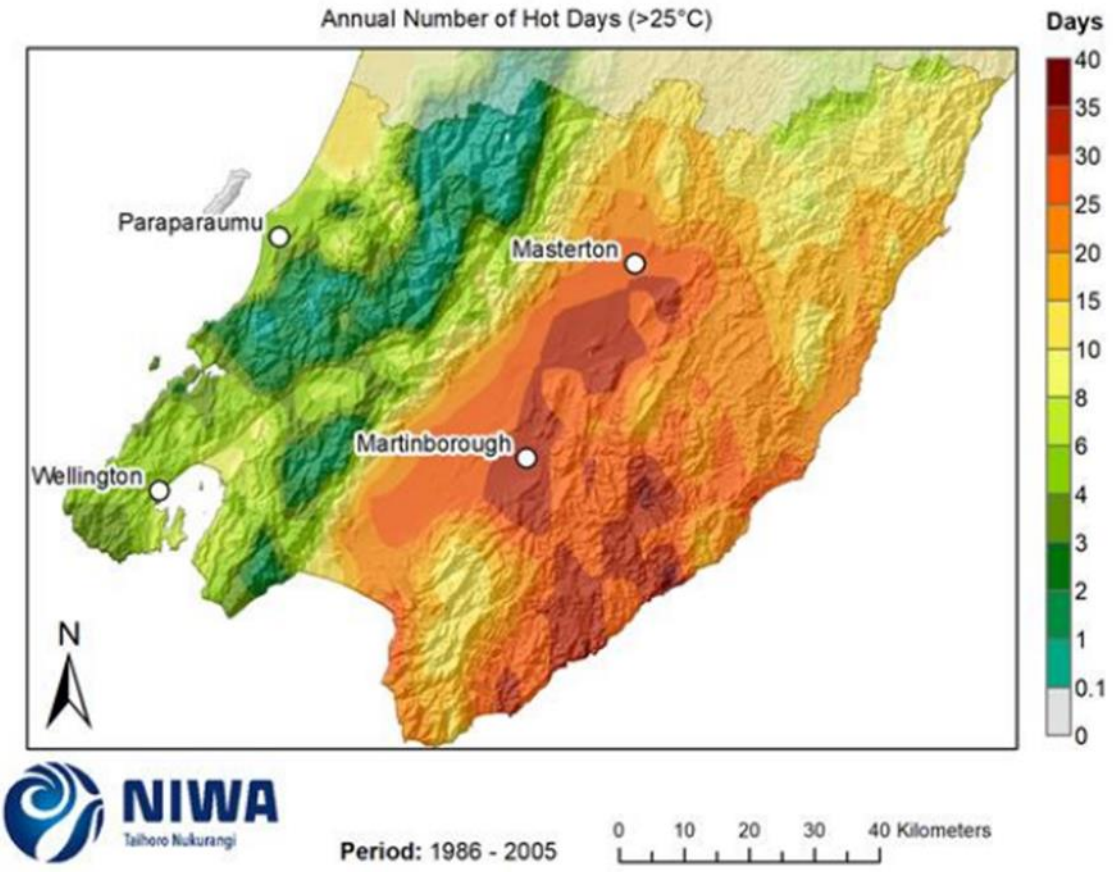


Figure 3-7: Modelled annual number of hot days (maximum temperature > 25°C), average over 1986-2005. Results are based on dynamical downscaled projections using NIWA's Regional Climate Model. Resolution of projection is 5km x 5km.

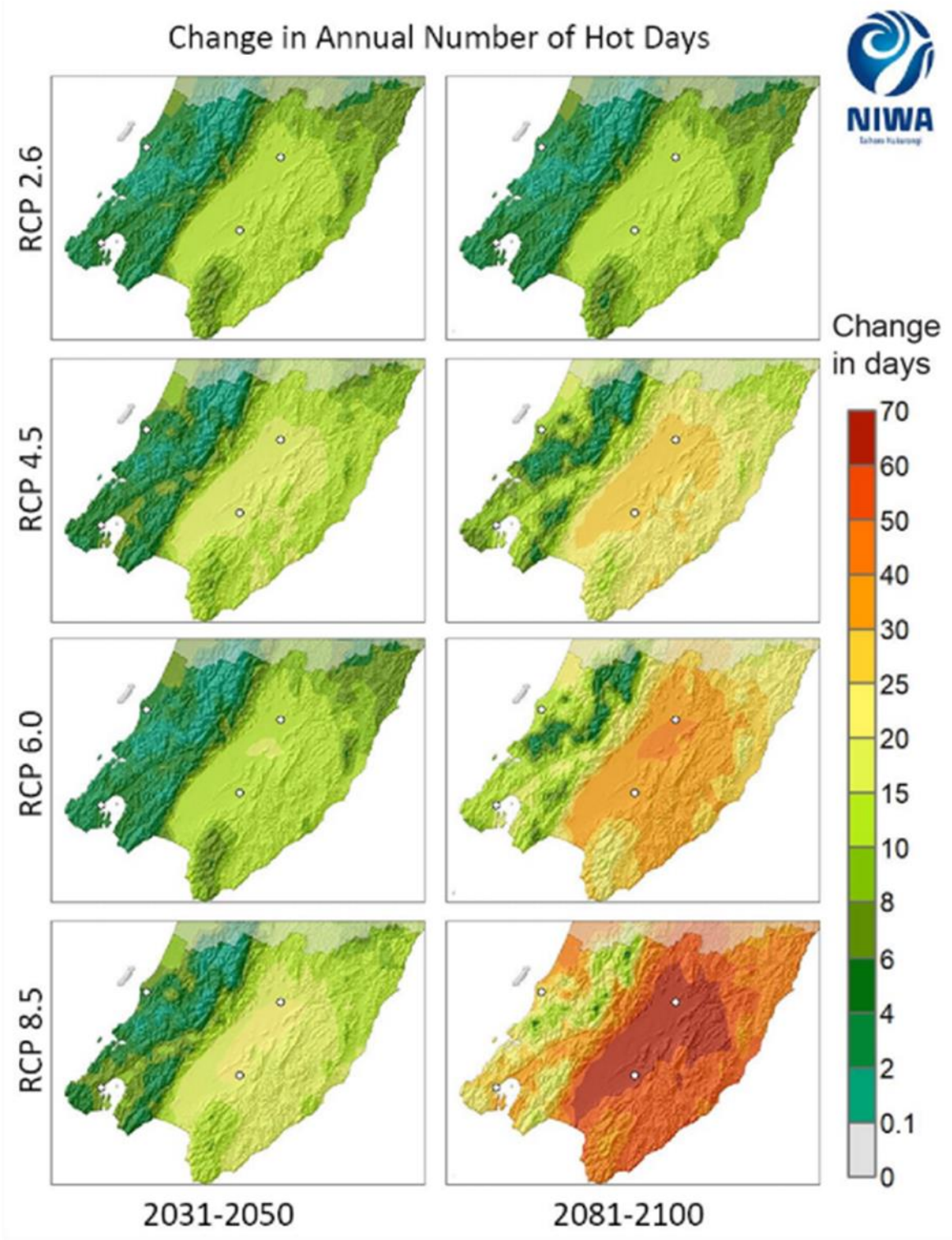


Figure 3-8: Projected annual hot day changes (max temperature > 25°C) at 2040 and 2090. Relative to 1986-2005 average, for four IPCC scenarios, based on the average of six global climate models. Results are based on dynamical downscaled projections using NIWA's Regional Climate Model. Resolution of projection is 5km x 5km.

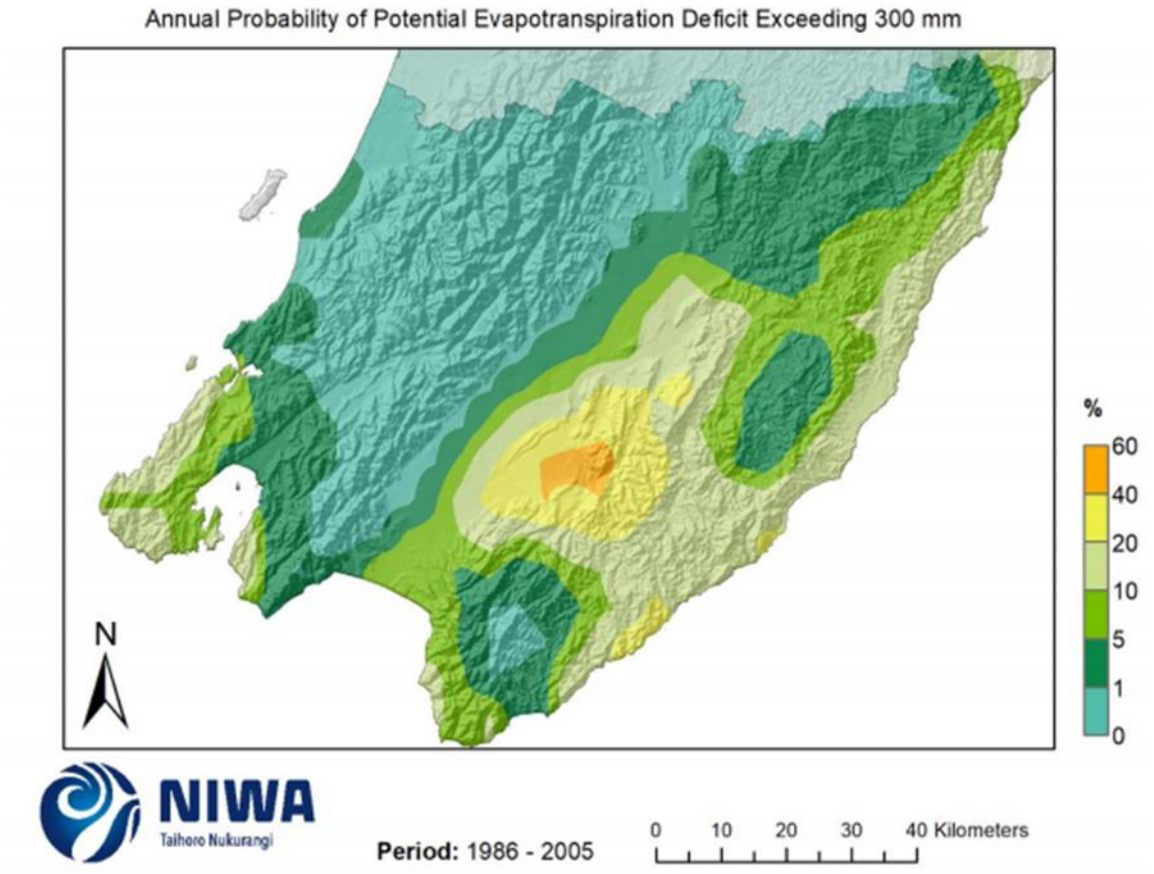


Figure 5-8: Modelled probability of Potential Evapotranspiration Deficit exceeding 300 mm in any year, average over 1986-2005. Results are based on dynamical downscaled projections using NIWA's Regional Climate Model. Resolution of projection is 5km x 5km.

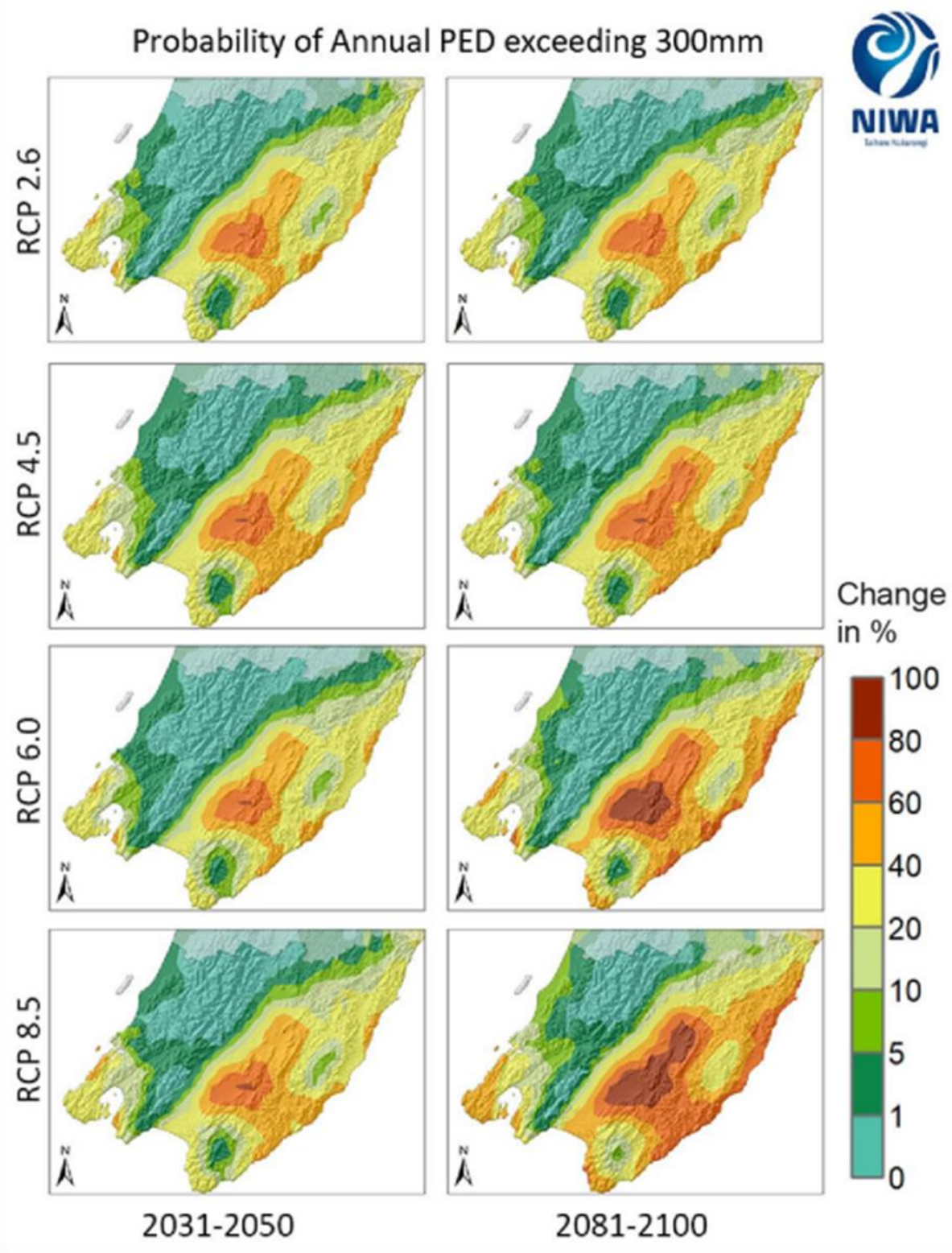


Figure 5-9: Projected probability of annual Potential Evapotranspiration Deficit exceeding 300 mm by 2040 and 2090. Relative to 1986-2005 average, for four IPCC scenarios, based on the average of six global climate models. Results are based on dynamical downscaled projections using NIWA's Regional Climate Model. Resolution of projection is 5km x 5km.

PART 3 – DRAFT: 2021-31 LTP Financial and Other Assumptions Summary

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
FUNDING SOURCES					
Growth in Rating Base	1.5% in year to June 2021, 1.2% in 2022, then 1% per annum from 2023 The number of households and value of properties in the Masterton District will continue to grow. Dwellings and household sizes will be smaller. The growth in numbers and values will be largely in the Masterton urban area.	**Medium-High** COVID-19 increases uncertainty around factors that influence growth in the rating base, such as our economy; household and population growth.	That growth in the rating base will be lower or higher than we have assumed.	**Higher Growth:** Rates would be spread over a larger number of properties, increasing affordability for our community. **Lower Growth:** If growth is significantly less than we have forecast, Council's ability to increase rates as much as needed will be less. Rates would be spread over fewer properties, decreasing affordability for our community.	Infometrics (September 2020) are expecting the building industry to slow in 2021, which could slow growth in our rating base. At the same time, Masterton and the Wairarapa are better placed for recovery than many other areas. Our economy is driven more from primary production and has less reliance on international tourism; and post lockdown spending in the Wairarapa has been up relative to the wider Wellington region (likely linked to more commuters spending locally). Given Masterton's close proximity to Wellington, relative housing affordability and changes in the way people work post COVID-19 (i.e. remote working being more acceptable) the district is expected to grow and attract people from other areas.
Interest Earned	**On Invested Funds:** 2021/22: 2.0% per annum	**Medium** COVID-19 increases	That interest rates will be lower than we have assumed.	**Lower Interest Rates:** Lower interest rates on investment funds would	Economic conditions have reduced interest rates for Council funds that are invested.

	From 2022/23: 1.5% per annum **On Internal Investment Loans:** 2021/22: 2.5% per annum From 2022/23: 2.0% per annum	uncertainty related to interest rates given adjustments in interest rates in response to the pandemic and economic recovery.		result in reduced income for Council. In Year 1 of this Plan, an interest rate that is 1% less than we have assumed for invested funds would equate to $185k less income. In Year 1 of this Plan, an interest rate that is 1% less than we have assumed for internal investments/loans would equate to $90k less internal income. **Higher Interest Rates:** In current circumstances, the likelihood of higher interest rates is considered low. However, if this was the case, our income would increase.	As at September 2020, Infometrics projections are that the economy will start to recover from 2023. Given that, interest rates are not expected to rise in the short to medium term. This will mean less income than Council has received historically from interest, especially in Years 1-3 of the Long Term Plan.
User Fees & Charges	User charges defined in the Revenue and Financing Policy will be achievable and will increase at the rate of inflation over the 10 years of the LTP.	**Medium-High** COVID-19 increases uncertainty. Further impacts related to COVID-19 or the economy may	That we do not receive the level of income that we have planned for. That our income has not been set at a level that adequately takes account of all cost	If user fees and charges are less than we have assumed the result would be lower than forecast income. If fees revenue was 1% lower than we have assumed, this would equate to $77k in reduced income.	Our fee projections have taken into consideration the potential impact of the COVID-19 related economic recession and our recovery from that. If the economy is further impacted, or the recession is greater or more prolonged than we have assumed,

	Fee income such as Building Consent fees and Transfer Station Charges are subject to market influences, but our income is assumed to be stable.	influence our community's ability to afford current fees and charges.	drivers other than inflation (e.g. increased costs of delivering the service) or other factors that could negatively impact fee income (e.g. economic recession).	If fees and charges are more than we have assumed, this would result in more income than we have forecast. If fees and charges do not increase at the rate of inflation, income would be less than we have assumed. Not inflating fees and charges would equate to approximately $77k in Year 1.	this may negatively impact our fee projections. If the effects of the recession are less than we anticipate, or our recovery is faster, this could positively influence our fee projections. Economic recession as a result of COVID-19 or other factors could impact income from user charges across a number of activities. Changes in legislation could also impact our ability to collect fees. For example, if a change meant we were restricted on how we set fees for an activity (e.g. liquor licensing). Increasing fees and charges beyond the rate of inflation could occur if there were cost drivers other than inflation. Council will be reviewing the Revenue and Finance Policy, and undertaking a Rating Review, in Year 1 of the LTP to ensure that public private benefit, and the use of financial tools such as fees and charges, remain appropriate.

Financial Contributions	Revenue generated from financial contributions will remain at levels achieved over the last 2 years. Changes to the Wairarapa Combined District Plan have not been decided, so no assumption about increased revenue being generated as a result of those changes, has been made.	**Medium-High** COVID-19 increases uncertainty around factors that influence financial contributions, such as our economy; household and population growth.	That financial contributions are less than we have assumed.	If financial contributions are less, Council may have to fund the difference, at least in the short term, for some development projects. This could increase the rates required. Revenue of $1.5m is anticipated from financial contributions each year of the LTP. Some proportion of this is at risk if development is less than anticipated. If development activity exceeds our expectations, contributions could be more than we have assumed. This would increase Council reserves and Council's ability to invest in new assets.	Our projections have taken into consideration the potential impact of the COVID-19 related economic recession and our recovery from that. Economic recession could reduce revenue generated from development contributions if development slows or stalls. If the economy is further impacted, or the recession is greater or more prolonged than we have assumed, and development slows or stalls, this may negatively impact our financial contribution projections. If the effects of the recession are less than we anticipate, or our recovery is faster, and there is more development, this could positively influence financial contribution projections.
Vested Assets	The value of assets that Council will take over from developers as a result of greenfield subdivision has not been estimated. This is due to the high level of	**Medium-High**	That Council will take over high value assets that generate additional operating costs in future years.	By not estimating vested asset revenue, potentially asset values are understated in the prospective financial position and depreciation expense is understated.	Revenue from financial contributions assumes there will be developments of both small and medium scale. Vested assets will result from medium scale development, but the assessed impact on operating costs of the long-life assets is considered

	uncertainty in the timing of when assets will be transferred, the nature of what assets are built varies for every development and the lack of visibility over the prospective value of the work that developers are doing.				minor. The level of uncertainty in estimating the value of future vested assets is high, hence the Council has chosen to not include any projected value in this LTP.
NZTA Roading Subsidy and Roading Subsidy Income Levels	1. NZTA will continue to provide a share of the funding for all defined maintenance, construction and minor safety work for roads and footpaths. Their share is known as the Funding Assistance Rate (FAR) and has been advised as follows: 58% 2021-22 57% 2022-23 56% 2023-24 and onwards. 2. All business cases for work that have been put forward to NZTA will be accepted	**Medium** COVID-19 increases uncertainty of the current advised FAR commitment. Should the economy be further impacted or our recovery slower, NZTA may review its funding criteria and/or level of funding commitment.	That NZTA's funding rate, beyond the current 3 year programme will be less than we anticipated. That our business cases are not accepted. That NZTA funding criteria changes and the cases we have put forward and assumed funding for will no longer meet their criteria. That we will not be able to complete the	If the NZTA subsidy is less than we have assumed the result would be lower than forecast income. Every 1% drop in NZTA funding equates to $120k in reduced income. This could mean we would need an additional rates contribution to complete the programmed work.	The revenue generated is dependent on work progressed and/or carried forward. If we are unable to complete the work that we have programmed, the income from this subsidy will be less than projected. The subsidy rate is reviewed every three years. It was reviewed in 2019/20 and is next due for review in 2022/23. The programme will be kept under review with Council decisions sought on changes to the programme should the subsidy level change.

	for funding subsidy, and we will receive NZTA funding at the level we have assumed.		full work programme (e.g. if there was another lock down period), which would reduce the level of funding we receive from NZTA.		

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
BORROWING					
Interest Paid on Borrowing	Interest paid on existing and new debt will average 3.7% in 2021-22, 3.0% in 2022-23 2.7% in 2023-24 2.8% from 2024-25	**Medium** COVID-19 increases uncertainty related to interest rates given adjustments in interest rates in response to the pandemic and economic recovery.	That interest rates will be higher than we have assumed.	**Higher interest rates:** Higher rates would result in increased borrowing costs for Council. In Year 1 of this Plan, an interest rate that is 1% more than we have assumed for borrowing would equate to increased cost of $530k. **Lower Interest Rates:** In current circumstances, there is a possibility that interest rates will further decline. If this was the case, the cost of borrowing would also decrease.	Interest rate hedging is used to fix interest rates for varying terms to reduce the impact of interest rate movements on Council borrowing. Economic conditions have seen interest rates on borrowing decline. As at September 2020 Infometrics projection is that the economy will start to recover from 2023. Given that, we expect interest rates on new borrowing, or borrowing coming up for renewal, to remain low for at least the first three years of the 2021 LTP. This could make borrowing for projects more affordable and could offer potential to consider doing more capital works to assist in stimulating economic recovery.

Repayment Periods	We will pay off debt within a 20 year timeframe, with the following exceptions: The repayment period of external borrowing is 25 years on Homebush (wastewater debt) and 50 years on the Civic Centre project debt.	**Low**	Repayment periods are shorter or longer than assumed. Council decides to depart from the assumed debt level. Council allows more exceptions to the 20 year timeframe for repayment of debt.	Any of these scenarios would impact the rates requirement. If repayment periods were significantly shorter this could result in higher repayments, negatively impacting rates required. It would also mean debt would be repaid more quickly than anticipated. The current generation could pay more than their share for the loan funded asset, reducing the cost for future generations. A longer repayment period could mean debt would be spread over a longer period, reducing payments and positively influencing cashflow in the shorter term, but it would also take longer to repay debt. The current generation could pay less than their share for the loan funded asset, moving this cost to future generations. Changing the duration of repayment periods could	The Council's Financial Strategy sets a constraint the debt level and requires debt to be repaid and charged to the activity that has benefitted from the application of the debt funding.

				also potentially impact on Council debt ratios.	
NZ Local Government Funding Authority	MDC will continue to be a shareholder and borrower from New Zealand Local Government Funding Authority (LGFA) which will continue to provide debt funding at competitive interest rate margins.	**Medium** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That MDC is called upon to be a guarantor - as an LGFA shareholder, MDC is obliged to be a guarantor in the event of default of one of the other shareholders. That NZLGA is impacted by the current economic climate and unable to offer loan funding, or at rates that are more competitive than the general market.	The proportion each guarantor Council is required to pay is relative to shareholding. In the very unlikely event that the guarantee was called on, for every $100K that might be defaulted, MDC would be required to pay $440. If the LGFA was no longer to participate in the debt markets, MDC would need to explore alternative borrowing options. Market interest rates are expected to remain low for at least the first three years of the LTP, but alternative lenders are unlikely to be able to offer comparable interest rates to the LGFA, resulting in increased costs.	In the current economic climate, the risk of the Council's guarantor status being called on might increase, however given the LGFA has numerous financial controls in place, this risk is considered low.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
INFLATION					
Inflation Rates	Inflation will be applied in line with Business and Economic Research Limited (BERL) rates across the ten years of the Plan, except where we have alternative information that better informs decisions regarding inflation. See table in Attachment 1 that includes BERL rates for Year 1-10.	**Medium-High** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That inflation is significantly higher or lower than expected.	Higher inflation would result in increased costs. Lower inflation would result in reduced costs. Either could have a flow on effect for rates, fees and/or charges (i.e. increase or decrease) or for work programmes (e.g. if costs were higher, to maintain affordability, we may need to deliver less).	Given the current economic climate, BERL have provided three scenarios for inflation: • Stalled Rebuild • BERL mid-scenario • Faster Rebuild Masterton has adopted the mid-scenario for the 2021-31 LTP. See Growth Assumptions. We will continue to monitor the economy and respond accordingly.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
CONTRACTS					
Operational Contracts	There will be no significant variations in terms of price (other than inflation) for operation and maintenance contracts.	**Medium** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That there are significant variations in contract costs.	Increased costs would result in increased expenditure for Council. This could have a flow on effect for rates and/or fees and charges.	Economic recession could affect contractors. This could lead to requests for additional support and/or the need to secure new providers.
Capital Project Costs	Costs of major capital projects will not vary significantly from estimated costs that have been budgeted for, and capital projects will be delivered on time.	**High** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That the cost of major capital projects is more than we have budgeted for.	Increased costs would result in increased expenditure for Council. This could have a flow on effect for rates and/or fees and charges.	Economic recession or further lock downs could impact supply and demand. This could see some reductions if contractors are looking for work. This could also see some increases in the cost of materials if they become less available. Slippage in the delivery programme may increase costs, therefore regular reporting to Council and Committees will occur and risk management plans will be developed for major projects and programmes of work.

			Delays occur in delivering the capital programme and community expectations are not met.		Adequate contingency will be built into projects and programmes of work. We will apply cost adjustors, including inflation adjustors, to projects and programmes in outer years of this plan. The proposed capital programme for the life of this plan is 60% larger than three years ago. The larger capital programme reflects some new projects, many having funding assistance from the government through the shovel-ready funding, the Progressive Growth Fund and the 3 waters stimulus funding along with the routine subsidy funding for the roading programme. The programme includes several large capital projects eg the proposed civic facility and Hood Aerodrome upgrading, which require less capacity to deliver on once tenders are secured. The Council has been steadily improving its performance at delivering on the capital programme over the last three years and has the project

					management capacity to deliver on the proposed programme. Contractor availability and longer timeframes than anticipated for gaining the appropriate consents may however delay the programme. Completing the programme over a longer timeframe will add some inflationary cost to the projects. Good planning and clever procurement will minimise this risk.
Item	**Assumption**	**Level of Uncertainty**	**Risk**	**Implications of Risk**	**Considerations/Commentary**
SIGNIFICANT ASSETS					
Asset Valuations	Infrastructural assets are scheduled to be revalued 30 June 2023, and every three years after that. Independent valuers are used to provide the valuations. The value escalations will reflect increases in the replacement and depreciated replacement costs of the Council's assets,	**Medium-High** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That actual asset revaluations are significantly different to what is forecast.	If valuations are more or less than has been allowed, depreciation costs in subsequent years will vary from the values that have been allowed in the LTP.	Economic recession could impact valuations.

	based on BERL inflation rates. Land and buildings assets will be revalued as at 30 June 2021 and every 3 years after that.				
Investment Properties	The value of investment properties will remain static given our small investment portfolio.	**Medium** The timing of sales, and the value of our investment properties at time of sale, is uncertain. Results of our Property Stocktake and Strategy work are not known at this point.	That the value of investment properties decreases or increases.	A decrease in asset value could result in reduced income for Council when the property is sold. An increase in asset value could result in increased income for Council when the property is sold. Income from the sale of investment properties is not relied on for the Council's operational funding.	Economic recession could impact the valuation of investment properties. Revaluation changes have not been allowed for.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
LEGISLATIVE					
MDC as an Entity	Amalgamation will not happen during life of the Plan.	**Medium**	That reorganisation occurs and results in alternative operating structures, or amalgamation is reconsidered.	If amalgamation did occur within the life of this LTP there would a range of associated costs, for example transition costs. There is also the potential for efficiency gains and higher levels of service to be achieved. Boundary reviews and changes would also require a review of this LTP with associated community consultation.	The Government is investigating delivery structures and options for the three waters. Further comment on the implications of three waters changes is included below. Shared services across the three Wairarapa Councils, for example the Wairarapa Combined District Plan, are likely to continue. Council activities that are shared services would be easier to transition into a bigger organisation if amalgamation did occur. Amalgamation could have economies of scale for the three Councils and could result in enhanced Levels of Service in some activity areas. Risk and mitigation plans will be kept under review.
Resource Consents	There will be changes to existing resource consents that are due for renewal during the ten years of this LTP.	**Low**	That consent conditions will not change, or that change will be more or less	If change is less restrictive than we have assumed, some planned projects or changes may not be required, or not required as	We are planning for change to the Henley Lake water intake consent and our Water Supply consent during the life of this LTP.

			restrictive than we anticipate.	soon as we have scheduled. If change is more restrictive than we have assumed, this may require further investment from Council, or impact on our ability to continue to provide the service or activity.	We are actively participating in changes to the Natural Resources Plan.
Three Water Reforms	1. MDC will continue to provide three waters services and maintain associated assets for our community. 2. There will be probable second order impacts of three waters reform.	**High** **Medium**	Another entity becomes the provider of the three water services and Council ceases delivery of these services. Second order impacts could include things like: private and/or community water supplies failing to meet their regulatory obligations; or advocacy for amalgamation of remaining functions.	Services would continue to be provided to the community via another entity. There are financial and operational implications for the Council relating to the size and scale of the business. The three waters make up 27% of the Council's operating budgets, so their loss will result in the organisation reassessing its delivery capabilities and support structures in all other activity areas. Second order impacts could include: Council could be required to take over management of private and/or community	Three waters provision is currently being considered by central government. We expect to know more about the future of three waters services by the end of 2021. Council is using 3 waters stimulus funding to support private and community suppliers. Council will assess second order impacts as part of its analysis of the proposal when that is received.

				water supplies that can't meet their regulatory obligations. Amalgamation of Councils remaining functions with other Wairarapa Councils could be considered.	
Resource Management Act Reform **SUBJECT TO AGREEMENT WITH CDC/ SWDC**	Through the review of the Wairarapa Combined District Plan (WCDP), we will adapt the district plan to reflect RMA reforms.	**Low**	The RMA reforms being pursued by the government suspends or slows the District Plan review.	If the review is suspended or takes longer, then the issues causing frustrations within the planning environment will continue. We may need to suspend our contract for service for review support and there will be some savings; or we may need to extend this contract, adding to costs. The Council could change tack and undertake a Plan Change for urgent matters while the reforms are progressed through to enactment. If the plan change was pursued the costs of the plan change would be covered by the existing District Plan review budget.	RMA reforms are being considered by the government following receipt of the Randerson Report which was commissioned by the Minster for the Environment. The report recommends the replacement of the Resource Management Act 1991 with two separate pieces of legislation; a Natural and Built Environments Act and a Strategic Planning Act which would be complemented with another piece of legislation to address issues related to climate change adaptation and the managed retreat from areas threatened with inundation. The Wairarapa Combined District Plan budget allows for some flexibility to ensure that the Plan will be relevant in future.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
LEVELS OF SERVICE					
Levels of Service	LOS will be maintained or improved in line with this LTP.	**Medium-High** COVID-19 and current economic conditions increase the level of uncertainty compared to previous LTPs.	That there will be a change to LOS during this LTP that is outside the scope of the Plan.	An increase in level of service for any activity could require additional funding from our community. A reduced level of service could reduce costs for our community. Specific implications of any LOS change would depend on the service that changes.	Increases in LOS are planned for the Civic Centre, Library, Town Centre and Animal Shelter (to meet increased regulatory requirements). There may be pressure to reduce some LOS to reduce costs/ rates impacts. There could also be demand for other changes to LOS (e.g. increase operating hours of some facilities/ services or greater focus on/investment in economic development to support recovery).

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
HUMAN RESOURCES					
Human Resources	MDC will be able to attract and retain appropriately skilled staff to deliver the planned work programme.	**Medium**	That MDC will not be able to attract appropriately skilled staff to deliver the planned work programme.	Planned work programmes and or service levels could be impacted, and/or external contractors would be needed to progress work. Contractor costs could impact the overall cost of programme delivery.	We have experienced challenges recruiting in some areas, building and planning in particular where there is a national shortage of experienced and suitably qualified staff. Covid-19 may impact on staff capacity to deliver the work programme if there was another lock down. At the same time, with many New Zealanders who have been residing overseas returning 'home' given COVID-19, and with recent growth in our population, there could be more skilled workers seeking roles.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
NATURAL ENVIRONMENT					
Natural Disasters	No natural disaster will occur that causes widespread or significant damage to Masterton's infrastructure.	**Medium-High**	That a significant natural disaster will occur.	This could disrupt the community with the level of disruption dependent on the event and consequences of that. Council could need to borrow substantially as a result of an event – e.g. if assets were lost. The flow on effects from a serious event could mean Council is not able to raise rates and may need to borrow more.	Council carries insurance with the intention of mitigating the financial impact of natural disasters. The Council has a Flood Damage Reserve to contribute towards our share of remedial work on roads and bridges in the event of storm or other damage from natural disasters. Work is currently underway as part of Upper Ruamahanga catchment work to improve flood protection, and there is funding allocated in this LTP to support that. (CHECK PHRASING). Council is also developing a Stormwater Strategy that will assist in prioritising work that will contribute to a reduction in flooding risk for our community.

Item	Assumption	Level of Uncertainty	Risk	Implications of Risk	Considerations/Commentary
INFRASTRUCTURE					
Water Resilience	Council will invest in water storage, either through increasing the capacity of its own raw water reservoir or partnering with the proposed community water storage scheme in order to have guaranteed access to water at times of low river flow. That partnering initially includes the provision of loan funding of up to $1m.	**Low**	That Council revokes its decision to invest in water storage.	Water conservation and availability will become a bigger challenge for our community.	The budget includes provision of $7 million in Year 4 for water storage reservoirs. Whether we proceed with this investment or consider alternative water storage options is to be determined. Council will support the development of Wairarapa Water Limited's community reservoir proposal through provision of a loan of up to $1m in year 1 of the LTP.

ATTACHMENT 1: BERL INFLATION RATES FOR YEARS 1 TO 10

Inflation Assumptions

Budgets for years 2-10 of the LTP are modelled using the inflation forecasts developed by Business and Economic Research Ltd (BERL). The Society of Local Government Managers (SOLGM) commissions BERL to develop inflation forecasts for local authorities to use in their LTP. These forecasts focus on specific areas of activity in local government. In addition, BERL produce a Local Government Cost Index (LGCI) for a range of operating and capital costs. In the uncertain evironment of 2020, BERL produced 3 different scenarios. Masterton District Council have used the mid-scenario and used an average for the first two years (as recommended by BERL).

The table below shows the percentage increase applied annually to each the eight defined price indices. For operational and capital costs, the movement is applied in the year after the index date.

Year Ending	LGCI (Overall) (2021: 1.5%)	Water (Capex)	Water, Sewerage & Drainage (Opex)	Roading (Capex & Opex)	Pipelines (Capex)	LGCI (Opex) (applied property, energy & other)	Local Government Salary & Wage Rates	LGCI (Capex) (applied property & other)
Jun 2022	1.5%	2.2%	0.9%	2.1%	3.1%	1.5%	0.7%	1.6%
Jun 2023	2.9%	4.2%	3.4%	3.1%	5.0%	2.9%	2.4%	3.0%
Jun 2024	2.5%	3.6%	2.1%	3.0%	4.9%	2.5%	1.5%	2.6%
Jun 2025	2.5%	3.6%	2.3%	2.9%	4.7%	2.5%	1.7%	2.6%
Jun 2026	2.6%	3.7%	2.6%	2.9%	4.6%	2.5%	2.0%	2.7%
Jun 2027	2.5%	3.5%	2.3%	2.9%	4.5%	2.5%	2.2%	2.6%
Jun 2028	2.6%	3.7%	3.0%	2.9%	4.4%	2.6%	2.3%	2.8%
Jun 2029	2.7%	3.8%	3.3%	2.9%	4.4%	2.7%	2.4%	2.8%
Jun 2030	2.7%	3.8%	3.3%	2.9%	4.3%	2.7%	2.6%	2.9%

The revaluation of all assets has been applied every three years using the appropriate LGCI index for Capex. This attempts to predict the property market's level of value growth over each three year period.