Greater Wellington Region

COVID-19 economic impact

Pipiri 2020

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Making sense of the numbers

COVID-19 has been a sudden shock to New Zealand and the economy. Unprecedented policies interrupted the normal functioning of economic and social life. This has had a major impacts on the wellbeing of all New Zealanders.

As we get on top of the health response, concern is moving rapidly towards the economic dimension. Rightly so, given the depth of the fall in output and its social effects. The recovery from this pandemic will have lasting effects on every region in New Zealand. The pandemic and associated lockdowns have already affected businesses and households, but the ongoing impacts on the economy and wellbeing will persist for years to come.

Within this context, Greater Wellington Regional Council is reconsidering its statuary planning documents, including the Long Term Plan and Annual Plan.

Business and Economics Research Limited (BERL) considered three scenarios for the recovery based on the health, economic and treatment responses to COVID-19. BERL provides its best estimates across a select range of economic indicators.

The three scenarios are:

- Scenario one – the best case
- Scenario two – the mid-point
- Scenario three – the worst case.

Each scenario has a different mix of time spent at each alert level, time for a vaccine (alert level one (2021)) to be developed and distributed, allowing for border restrictions to ease and international travel to pick up. The economic impacts are informed by the Treasury 2020 Budget Economic and Fiscal Update and the Reserve Bank economic impacts of COVID-19 containment measures report.

The time at each alert level and the economic impact during each alert level for the three scenarios is set out below. The remainder of this executive summary provides the high level economic impacts across a selection of indicators. Early signs are that scenario one is the most likely recovery path and could be improved further with less time spent at each alert level and a trans-Tasman travel bubble.

Greater Wellington COVID-19 recovery scenarios

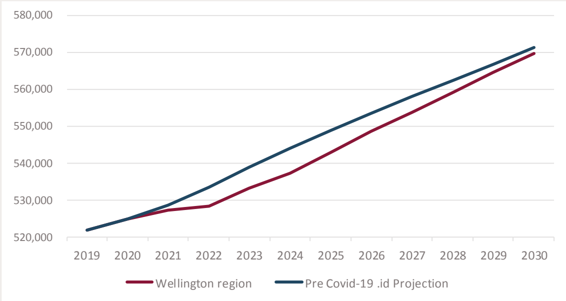
Alert level	Scenario one (Best case)	Scenario two (Mid-point)	Scenario one (Worst case)	GDP reduction
	Months			%
Level 4	1	2	3	37
Level 3	1	2	3	19
Level 2	5	6	6	8.8
Level 1	5	2	-	3.8
Level 1 (2021)	6	9	12	4.8

Greater Wellington COVID-19 economic impacts

Scenario one (Best case)

Population

Year	Total	Change from 2020 People	Change from 2020 %
2020	524,876		
2021	527,271	2,395	0.5
2022	528,469	3,593	0.7
2023	533,248	8,372	1.6
2025	542,984	18,108	3.5
2030	569,821	44,945	8.6



Gross domestic product (GDP)

Year	$million	Change from 2020 $million	Change from 2020 %
2020	30,746		
2021	28,193	- 2,553	-8.3
2022	30,389	- 357	-1.2
2023	32,070	1,324	4.3
2025	34,142	3,396	11.0
2030	38,452	7,706	25.1

Employment

Year	FTEs	Change from 2020 FTEs	Change from 2020 %
2020	262,783		
2021	248,266	- 14,517	-5.5
2022	246,134	- 16,649	-6.3
2023	257,289	- 5,494	-2.1
2025	268,629	5,846	2.2
2030	288,055	25,272	9.6

Unemployment (Count)

Year	Population People	Change from 2020 People	Change from 2020 %
2020	14,100		
2021	18,246	4,146	29.4
2022	16,311	2,211	12.1
2023	15,974	1,874	11.5
2025	15,273	1,173	7.3
2030	14,355	255	1.7

Unemployment (Rate)

Year	%	Change from 2020 %	Change from 2020 %
2020	4.7		
2021	6.3	1.6	34.6
2022	5.7	1.0	22.2
2023	5.4	0.7	14.9
2025	4.9	0.3	5.7
2030	4.4	- 0.3	-6.8

Household income

Year	$million	Change from 2020 $million	Change from 2020 %
2020	21,553		
2021	18,894	- 2,659	-12.3
2022	20,423	- 1,130	-6.0
2023	21,553	-	0.0
2025	22,946	1,393	6.5
2030	25.842	4.289	18.7

Consumer spending

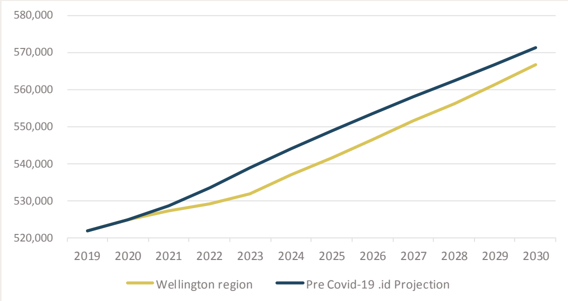
Year	$million	Change from 2020 $million	Change from 2020 %
2020	10,878		
2021	10,488	- 390	-3.6
2022	11,016	138	1.3
2023	11,460	582	5.3
2025	11,948	1,070	9.3
2030	13.586	2.708	22.7

Greater Wellington COVID-19 economic impacts

Scenario two (Mid-point)

Population

Year	Total	Change from 2020 People		%
2020	524,876			
2021	527,271	2,395	▲	0.5
2022	529,139	4,263	▲	0.8
2023	531,935	7,059	▲	1.3
2025	541,735	16,859	▲	3.2
2030	566,670	41,794	▲	8.0



Gross domestic product (GDP)

Year	$million	Change from 2020 $million		%
2020	30,746			
2021	26,747	- 3,999	▼	-13.0
2022	30,237	- 509	▼	-1.7
2023	31,599	853	▲	2.8
2025	33,542	2,796	▲	9.1
2030	37,697	6,951	▲	22.6

Employment

Year	FTEs	Change from 2020 FTEs		%
2020	262,783			
2021	241,001	- 21,782	▼	-8.3
2022	244,790	- 17,993	▼	-6.8
2023	253,367	- 9,416	▼	-3.6
2025	263,753	970	▲	0.4
2030	282,231	19,448	▲	7.4

Unemployment (Count)

Year	Population People	Change from 2020 People		%
2020	14,100			
2021	21,668	7,568	▲	53.7
2022	19,207	5,107	▲	23.6
2023	18,209	4,109	▲	21.4
2025	16,792	2,692	▲	14.8
2030	14,879	779	▲	4.6

Unemployment (Rate)

Year	%	Change from 2020 %		%
2020	4.7			
2021	7.6	2.9	▲	62.4
2022	6.7	2.0	▲	43.1
2023	6.2	1.5	▲	31.8
2025	5.5	0.8	▲	17.6
2030	4.6	- 0.1	▼	-1.7

Household income

Year	$million	Change from 2020 $million		%
2020	21,553			
2021	17,902	- 3,651	▼	-16.9
2022	20,321	- 1,232	▼	-6.9
2023	21,236	- 317	▼	-1.6
2025	22,542	989	▲	4.7
2030	25.335	3.782	▲	16.8

Consumer spending

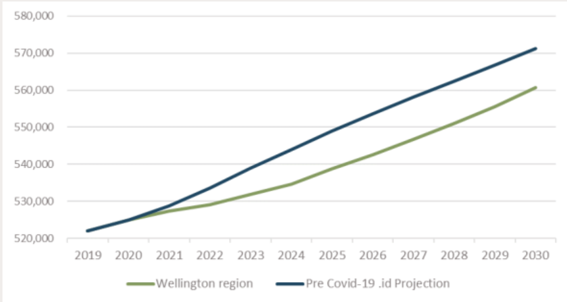
Year	$million	Change from 2020 $million		%
2020	10,878			
2021	10,412	- 466	▼	-4.3
2022	10,885	7	▲	0.1
2023	10,984	106	▲	1.0
2025	11,599	721	▲	6.6
2030	12.935	2.057	▲	17.7

Greater Wellington COVID-19 economic impacts

Scenario three (Worst case)

Population

Year	Total	Change from 2020 People	Change from 2020 %
2020	524,876		
2021	527,271	2,395	0.5
2022	529,099	4,223	0.8
2023	531,895	7,019	1.3
2025	538,723	13,847	2.6
2030	560,715	35,839	6.8



Gross domestic product (GDP)

Year	$million	Change from 2020 $million	Change from 2020 %
2020	30,746		
2021	25,437	- 5,309	-17.3
2022	30,183	- 563	-1.8
2023	30,989	243	0.8
2025	32,532	1,786	5.8
2030	36,276	5,530	18.0

Employment

Year	FTEs	Change from 2020 FTEs	Change from 2020 %
2020	262,783		
2021	234,008	- 28,775	-11.0
2022	244,200	- 18,583	-7.1
2023	248,283	- 14,500	-5.5
2025	255,586	- 7,197	-2.7
2030	271,322	8,539	3.2

Unemployment (Count)

Year	Population People	Change from 2020 People	Change from 2020 %
2020	14,100		
2021	25,298	11,198	79.4
2022	23,275	9,175	36.3
2023	21,837	7,737	33.2
2025	20,142	6,042	27.7
2030	18,077	3,977	19.7

Unemployment (Rate)

Year	%	Change from 2020 %	Change from 2020 %
2020	4.7		
2021	9.0	4.3	92.3
2022	8.0	3.3	71.4
2023	7.4	2.8	59.2
2025	6.7	2.0	43.7
2030	5.7	1.1	22.8

Household income

Year	$million	Change from 2020 $million	Change from 2020 %
2020	21,553		
2021	17,010	- 4,543	-21.1
2022	20,285	- 1,268	-7.5
2023	20,827	- 726	-3.6
2025	21,864	311	1.5
2030	24,380	2,827	12.9

Consumer spending

Year	$million	Change from 2020 $million	Change from 2020 %
2020	10,878		
2021	9,989	- 889	-8.2
2022	10,919	41	0.4
2023	11,022	144	1.3
2025	11,571	693	6.3
2030	12,742	1,864	16.1

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1 Introduction

The COVID-19 pandemic has resulted in a global health and economic crisis that will have long lasting impacts for the Wellington region and Greater Wellington Regional Council (GWRC). The impact of COVID-19 (the virus) requires GWRC to reconsider the assumptions, forecasts and data that will be used to prepare its long term and annual plans.

The impact of COVID-19 is likely to be one of the biggest challenges many of us will face. The International Monetary Fund (IMF) forecast that the global economic impact could be the worst since the Great Depression.

Maintaining an environment that saves lives and a health system that meets the demands placed on it is of the upmost importance during the response to the virus. COVID-19 will have long term impacts on the wellbeing of Wellington communities and will require a long term response. The recovery will impact all four of the wellbeings; economic, social, cultural and environmental.

Because there is so much uncertainty surrounding COVID-19 the focus of this report is to provide GWRC with early projections and forecasts of how the Wellington region is likely to respond to the impacts of the response to COVID-19 under a range of scenarios. The information in this report is intended to inform and guide GWRC as it prepares to develop its planning documents which will outline the regional council's response to support regional wellbeing during the recovery.

1.1 About COVID-19 and Greater Wellington

GWRC is the regional council responsible for the Wellington region. Regional councils are responsible for their region's natural resources and environment as a whole. GWRC promotes quality of life and wellbeing by ensuring the environment is protected while meeting the economic, cultural and social and environmental needs of the community.

Like all regional authorities in New Zealand, GWRC's specific responsibilities include environment management, flood protection and land management, provision of regional parks, public transport planning and funding, and metropolitan water supply.

GWRC is responsible for developing policies that direct the activities of Greater Wellington. Various Acts of Parliament, such as the Local Government Act 2002 and the Resource Management Act 1991 state the activities the Council should, or may, be involved with. It is the councillors' role to decide how the activities should be carried out.

As required by the Local Government Act 2002, GWRC is developing its Annual Plan and Long Term Plan (LTP). The impact of COVID-19 has required GWRC to reconsider the assumptions, forecasts and data it is using to prepare these plans.

The planning documents need to reflect the changes that have already occurred and the uncertainty about the future. In the short term GWRC is interested in the next 12 months. Looking towards the long term, GWRC needs to consider how COVID-19 will impact on things such as population change, work change and transport needs over the next 10 years.

Greater Wellington is comprised of the following territorial local authority (TLA) areas:

- Wellington City
- Porirua City
- Hutt City

- Upper Hutt City
- Kapiti Coast District
- South Wairarapa District
- Carterton District
- Masterton District.

For the purposes of this report South Wairarapa District, Carterton District and Masterton District are grouped together as Wairarapa.

1.2 The report in context

This report has been prepared during May 2020. On 21 March Prime Minister Jacinda Ardern announced four lockdown alert levels. On 23 March New Zealand went to level three then on 25 March New Zealand went to alert level four.

Each alert level has different restrictions on the level of activity, movement and interactions that could take place. The alert levels descended in level of restriction from four to one.

After most of April at alert level four at 11:59pm on 27 April New Zealand moved to alert level three then to alert level two with a staggered return from 14 May. This report was completed on 1 June 2020.

A list of the alert levels and the activities allowed at each is included as Appendix J.

1.3 Scope of the assessment

The purpose of this report is to inform GWRC of the likely economic impacts of the health response to COVID-19 and economic impact this will have on the Wellington region under three scenarios:

- Scenario one -the best case
- Scenario two - the mid-point
- Scenario three - the worst case

The scenarios are based on the time spent at each alert level (the health response), the economic impact at each alert level (the economic response) and the time spent to develop and distribute a vaccine (the treatment response).

The economic impacts are presented across six indicators

- Population
- Gross domestic product (GDP)
- Employment
- Unemployment
- Household income
- Consumer spending

The report also comments on the impact on the Māori economy GDP in each scenario. All GDP, household income and household consumption figures in this report are real in 2020 values.

1.4 Approach

This report builds on an initial high level report BERL provided GWRC during alert level four. The approach consisted of three stages.

Stage one –Scenario building and data collection

In the first stage of this report the three COVID-19 scenarios were developed and included the collection of data to inform development of the model for stage two. The scenarios build on the scenarios in the GWRC COVID-19 briefing BERL assisted GWRC to produce. The three scenarios set out the short term impacts of COVID-19 before considering the medium and long term impacts of the economic recovery.

BERL worked closely with GWRC to develop and refine scenarios that are appropriate for the Wellington region.

Stage two – Impacts analysis

Stage two used the scenarios developed in stage one to forecast and project the impacts that COVID-19, the response and recovery will have on the Wellington region.

Before COVID-19 emerged population and demographic projections were developed by .id in partnership with the region's territorial local authorities (TLAs). The projections were built starting at the TLA level and regionalised for Greater Wellington to the year 2051.

These population and demographic projections were used as a baseline. Analysis was undertaken to determine how the underlying assumptions changed due to COVID-19.

Once the population projections were established the economic impacts were informed by the scenarios and population. As the recovery will likely take a number of years, forecasting will looks at economic impacts on the Wellington region over the short term (2020-2022, the medium term (2022-2025) and the long-term (2025-2031). This fits with the 10 year timeframe of the LTP and the likelihood that the impacts of COVID-19 will be felt hardest in the short term before the economy moves into a longer term recovery phase.

All population projections and the economic impacts were assessed at a regional level, and where possible at TLA level.

Stage three – Synthesis of findings and output creation

The final stage was preparing the report. This required calculating the net and percentage changes of the indicators used in this report. This analysis is used to craft a narrative to outline the expected impact that the scenarios will have on the Wellington region and to create the charts and tables for the report.

1.5 Report time periods

This report uses 31 March as the end date for all years. Reference to the year refers to the 12 months to 31 March of that year. Where dollar values are presented this is cumulative for the 12 months to this date. Counts of people and (full time equivalent jobs) FTEs is reported as at this date. 2020 should be considered the last year before the impact of COVID-19 was fully felt. Alert level four began on 25 March meaning the majority of the impact of COVID-19 restrictions and alert levels are captured in the 2021 year.

The first 12 months of the alert levels will all be captured in the 2021 year. The immediate recovery will occur in 2022 and the long term recovery will begin in the 2023 year.

Gross domestic product, consumer spending and are presented in real values using 2020 dollars.

1.5.1 Assessing the recovery over time

This report makes a number of assumptions about the time spent at each alert level and the level of activity allowed. If the health and treatment responses are better than the assumptions in the respective scenarios, the negative economic impact will be less than the scenarios predict. Therefore, the economic future of the region will be better with less time at each alert level. This will limit the total impact of COVID-19 on the wellbeing of the Wellington region. This would reduce the initial negative impacts and keep the economic trajectory of the region as close to pre-COVID-19 levels and trajectory as possible.

The industries that would benefit from fewer restrictions are expected to be those hardest impacted across the GDP and employment measures used in this report. These include:

- Accommodation and food services
- Arts and recreation services
- Retail trade.

The benefits that are experienced from being able to increase activities have indirect and induced benefits that further reduce the impact of COVID-19 and will drive the recovery.

1.5.2 Trans-Tasman travel bubble and tourism

If a trans-Tasman travel bubble or similar was possible it would limit the impact of COVID-19 on the Wellington economy. The impact of the travel bubble will replicate that of eased restrictions on gatherings and events. Accommodation and food services, arts and recreation services and retail trade will be the industries that see the most benefit from increased tourism activity. However this will not return in full as airfares are likely to be higher than before COVID-19.

If a vaccine is developed sooner than expected the benefits to tourism focussed businesses further limit the negative impact that COVID-19 will have on the economy and wellbeing.

1.5.3 Population estimates used

The population projections used as the basis for this analysis were provided by GWRC and are sourced from .id. The id. projections were produced for GWRC and the Wellington territorial local authorities before the release of Statistics New Zealand 31 March 2020 population estimates. For this reason the population data for 2018 to 2020 will not match with the official Statistics New Zealand projections.

The id. projections have been used as the basis of this report as they were being used by GWRC and the territorial local authorities as they were preparing planning documents prior to COVID-19. This report allows for a direct comparison to pre COVID-19 planning assumptions and documents. The id. projections also take into account where territorial local authorities believe future growth will occur within the region.

1.6 Report structure

This report has five main sections:

- Section two establishes the three scenarios and sets out the basis for the analysis that follows.
- Section three sets out the outcomes of scenario one (Best case)
- Section four sets out the outcomes and impacts of scenario two (Mid-point)
- Section five sets out the outcomes and impacts of scenario three (Worst case)
- Section six provides a comparison of the differing outcomes as a result of the different scenarios
- Section seven provides a conclusion.

The report concludes with methodology, and appendices and references.

2 Scenarios for the COVID-19 recovery

What happens in the 12 to 24 months following identification of COVID-19 in New Zealand will set the foundation for the economic recovery and the performance of the Wellington regional economy over the 10 year period of the Long Term Plan (LTP). To enable Greater Wellington Regional Council (GWRC) to plan for the future BERL has created scenarios to illustrate how the recovery might unfold. We created three scenarios to reflect the initial short term impact of COVID-19 and the longer term recovery over the ten year LTP period. The short term scenarios look at a period for the year ending March 2021 and a period past this to manufacture and distribute a vaccine to enable borders to re-open. The long term scenario considers the longer term recovery over the remaining period to 2030 and will focus on the recovery that will follow the short term scenarios.

2.1 Short term recovery

Due to the uncertain future brought on by COVID-19 we have created three short term scenarios to inform this report. We are using scenarios to provide a range and options for the recovery so that the document continues to be relevant and fit for purpose.

The scenarios draw on the work that has been completed by Treasury[1] and the Reserve Bank of New Zealand[2]. The scenarios look at the impact during the year to March 2021 and will establish the starting position for the long term recovery.

As Treasury states in its COVID-19 economic scenarios document *"[w]hen the public health risks diminish, and the containment measures here and internationally de-escalate, the global and domestic economy will begin to recover, supported by the large fiscal packages and the significant easing in monetary policy that has taken place. The timing and pace at which this happens is unclear, and may be very different domestically versus internationally."*

The scenarios represent the best case, mid-point and worst case heath responses to COVID-19. The scenarios will illustrate the possible paths that the economy will take over the rest of the year to March 2021 before looking toward the future and the next nine years.

The scenarios have three key inputs:

- The amount of time spent at each alert level in the year to March 2021 (the health response)
- The economic impact of the restrictions at each alert level (the economic response)
- The time taken to develop and distribute a vaccine and re-open borders (the treatment response).

2.1.1 The health response

The basis for the Treasury economic scenarios is the amount of time spent at each alert level. The alert levels tell us the public health and social measures needed to be taken to control the spread of COVID-19. The alert levels are determined by the Government and the measures may be updated on the basis of new scientific knowledge about COVID-19, and information about the effectiveness of intervention measures in New Zealand and elsewhere.

In general, the alert levels are cumulative, for example alert level one is a base-level response. At all alert levels there will be restrictions on the activities that can take place. The restrictions are

[1] New Zealand Treasury (2020). *Treasury Report: Economic scenarios.*
[2] Reserve Bank of New Zealand (2020). *Economic impacts of COVID-19 containment measures.*

necessary to slow and stop the spread of the virus. The higher the alert level the stronger the restrictions in place. Restrictions on activity at any level has negative economic consequences. However, the higher the alert level the greater the impact.

The immediate economic impact of COVID-19 that will lay the foundation for the recovery and economic performance over the 10 year LTP period will be dictated by the amount of time spent at each alert level. The Treasury scenarios provide the best indicator available to show how the Government sees the health response to the pandemic may play out. Treasury produced four scenarios for the time expected to be spent at each alert level. Each scenario assumes that the border restrictions will remain in place until a vaccine is available.

Treasury scenarios

Treasury Scenario 1 is the most optimistic with one month at each of alert levels three and four and ten months at alert levels one and two. This assumes that the initial period spent at alert level four was successful, New Zealand quickly moves to alert levels one and two and the majority of activity returns in some form. This is the current trajectory for the health response. Treasury Scenario 3 was the most pessimistic with six months each at levels three and four and no time spent at levels one or two. Treasury Scenario 4 provides a medium situation where the virus is not contained after the first period at level four and we move between alert levels three and four for six months to get the spread of COVID-19 under control before settling into levels one and two for six months.

In Treasury Scenario 2, a longer period of time has been spent at alert level four (three months), with the remaining months of the 12-month period in alert levels one and two. This health response scenario was not considered as New Zealand has already moved through alert level three into alert level two and therefore this scenario is now unlikely to occur.

Table 2.1 Treasury scenario times at each alert level

Alert level	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Level 4	1	3	6	3
Level 3	1	-	6	3
Level 1/2	10	9	-	6

Source: Treasury

To account for the developments that have occurred since the Treasury scenarios were released in April we have adjusted some of the time periods spent at each alert level. After one month at alert level four, on Monday 27 April New Zealand moved to level three, some restrictions were lifted and a number of activities were allowed to resume, though some in a reduced capacity. During the time at alert level three the number of new COVID-19 cases fell and then stabilised at around one or two per day. After just over two weeks at alert level three on Thursday 14 May the alert level reduced again to alert level two. Additional activities were permitted to resume and some activities permitted at alert level three were able to expand. Table 2.1 sets out the time spent at each alert level for each of the three short term scenarios in this report. Each scenario has differing times at each alert level.

The best case scenario assumes that the response will continue on its current path. The recent period in alert level three lasted less than three weeks. Some activities were delayed and there was a period at alert level three before we entered alert level four. We have opted to use months spent at alert levels for consistency and ease of understanding. This also allows some leeway for a movement back to level three in the future if measures in place at alert levels one and two are unsuccessful. In this scenario we assume that alert levels one and two will last for five months each.

The mid-point scenario is based on the Treasury Scenario 4. However, we have rebalanced the time spent at alert level three and alert level four to account for developments since the Treasury scenarios were produced. In this scenario New Zealand is unsuccessful at alert level two and we have a second wave. Here we move back up through the alert levels back to alert level four before returning to alert levels one and two for the remainder of the year with six months at alert level two and two months at alert level one. This assumes that we are at alert level two for three months for every month at alert level four.

The worst case scenario is based on Treasury Scenario 4 and assumes three waves and that we spend a total of three months at each of alert level three and alert level four. Six months would then be spent at alert level two. We have assumed that after a third period, or extended second period at alert level four (like seen in New York where stay at home orders have been in place for approximately two months at the time of writing) New Zealanders will understand the lockdown and it will be third time lucky.

Table 2.2 GWRC scenario times at each alert level

Alert level	Best case	Mid-point	Worst case
Level 4	1	2	3
Level 3	1	2	3
Level 2	3	6	6
Level 1	7	2	-

2.1.2 The economic response

The scenarios all begin with a deep contraction in activity in the present June quarter as a result of the restrictions in place at alert levels three and four. Difficult economic conditions will continue under all alert levels. This will have a negative impact on output, gross domestic product and employment. How much impact restrictions have over the rest of the year to March 2021 depends on the success of measures to contain the virus, and how quickly alert levels are reduced.

The Reserve Bank of New Zealand (Reserve Bank) estimated the direct impact on GDP from each of the COVID-19 alert levels. The impact ranges from an estimated 3.8 percent reduction in GDP under alert level one up to 37 percent of GDP under alert level four. The Reserve Bank identified that the impact is not uniform across the economy, with some sectors more heavily effected than others such as tourism. The Reserve Bank analysis also showed the impact on industries at alert level three and alert level four. Table 2.3 shows the GDP reduction at each alert level brought about by the restrictions in place.

Table 2.3 Reserve Bank of New Zealand GDP impact by alert level

Alert level	GDP reduction (%)
Level 4	37
Level 3	19
Level 2	8.8
Level 1	3.8

Source: Reserve Bank of New Zealand

2.1.3 The treatment response

The Government has been clear that border restrictions will remain in place for a long time to come. On 30 March 2020, Prime Minister Jacinda Ardern warned New Zealanders should get used to border restrictions in New Zealand and overseas. The Prime Minister told Radio New Zealand "I'm anticipating border restrictions for some time".[3]

The Prime Minister has also said border restrictions overseas would likely persist until a vaccine is developed. *"We will be having to manage COVID-19 for months, until of course there is a vaccine and that will be many months"*. It is believed that this could be one year to eighteen months away at the earliest.

To allow for the uncertainty surrounding the time for a vaccine to be developed we have applied an additional period at alert level one following the end of the year to March 2021 that is not considered by the Treasury.

In its economic impacts of COVID-19 containment measures document the Reserve Bank states "*If alert level one was implemented with a stricter border closure for an extended period, GDP could fall by up to another one percentage point.*"[4]

On top of the 3.8 percent impact on GDP at alert level one in the year to March 2021 this makes the ongoing GDP impact of not having a vaccine or a control that allows the border restrictions 4.8 percent. This will continue for the period that the border controls remain in place.

To account for the development of a vaccine and borders restrictions being in place past March 2021 we have allowed for additional time at level one. While vaccine may be available after 12 months it will take time to be manufactured and distributed. Demand for the vaccine will also be high and supply will be limited in the early stages.

Given New Zealand's elimination strategy the vaccine will need to be administered to large parts of the community to ensure that COVID-19 doesn't re-enter New Zealand when border restrictions ease. In the best case scenario we allow six additional months at alert level one, the mid-point scenario allows nine months more to develop and distribute the vaccine and in the worst case scenario we allow 12 months. For each of these periods we assume the economic impact will be a GDP reduction of 4.8 percent for each month.

Table 2.4 Additional months at alert level one for vaccine development and distribution

Alert Level	Best case	Mid-point	Worst case
Level 1	6	9	12

2.2 Long term recovery

The length of the recovery from the health measures put in place to eliminate COVID-19 from New Zealand will be longer than just the period where COVID-19 remains a health threat. Given the unprecedented nature of the COVID-19 disruption the length of the recovery is uncertain. The general consensus is that the recovery will take time but the big unknown is how much time.

[3] Coughlan, T. (2020). Coronavirus*: Jacinda Ardern warns border restrictions will exist for some time*. Available at: https://www.stuff.co.nz/national/health/coronavirus/120670604/coronavirus-jacinda-ardern-warns-border-restrictions-will-exist-for-some-time (Accessed May 2020).

[4] Reserve Bank of New Zealand (2020). Economic impacts of COVID-19 containment measures.

Westpac chief economist Dominick Stephens says the effects of COVID-19 are going to impact New Zealand's economy for a while. *"I think this is going to cast a long shadow for years. It'll take years for a full recovery in the economy to really take place*."[5]

To allow for the uncertainty of the length of the recovery we have created a long term recovery scenario that covers the ten years of the LTP. These scenarios continue the assumption in the Treasury scenarios that in time show the economy returns to its pre COVID-19 trajectory. To account for this we have included a scenario that follows Treasury's five year path and a second scenario that sees the recovery period extend for ten years.

The long term scenario will pick up from the March 2021 positions established in the short term scenarios and assumes a return to the long term Treasury assumptions for unemployment and GDP growth. We considered two possible scenarios for the future direction of the recovery.

2.2.1 Five year recovery

The Treasury assumes a five year recovery period until the economy returns to its pre COVID-19 trajectory. In this scenario unemployment during the recovery will peak in the year ending March 2022. GDP growth will peak in the year ended March 2022. GDP will then grow at a reducing rate year on year until GDP growth returns to 2.1 percent in 2030 as projected by Treasury in the 2020 Budget Economic and Fiscal Update. Unemployment will also decrease at a declining rate from March 2021[6]. For the remaining five years Treasury assumes that the economic recovery will remain consistent at the levels that were consistent with forecasts and projections by Treasury.

2.2.2 Ten year recovery

As for the five year recovery, the ten year recovery assumes the same starting position of high unemployment and a fall in GDP growth. The difference in the ten year scenario is that GDP and unemployment do not return to the baseline levels until 2030. To allow for a recovery that is twice as long as that expected by Treasury we have assumed that the growth in GDP and reduction in the unemployment rate in the year ending March 2022 will be half of that assumed in the five year scenario.

We believe that a five year recovery is optimistic. Therefore we have used the 10 year scenario in preparation of these forecasts and projections for the Wellington region recovery from the impacts of COVID-19.

Table 2.5 COVID-19 recovery scenarios

Alert level	Scenario one (Best case)	Scenario two (Mid-point)	Scenario one (Worst case)	GDP reduction
	Months			%
Level 4	1	2	3	37
Level 3	1	2	3	19
Level 2	5	6	6	8.8
Level 1	5	2	-	3.8
Level 1 (2021)	6	9	12	4.8

[5] Reidy, M. (2020). *COVID-19 lockdown wipes billions from New Zealand's economy*. Available at: https://www.newshub.co.nz/home/money/2020/05/covid-19-lockdown-wipes-billions-from-new-zealand-s-economy.html (Accessed May 2020)

[6] Treasury (2020). *Budget Economic and Fiscal Update.*

3 Scenario one (Best case)

Scenario one is the best case scenario for the economic recovery from the health response to COVID-19. The scenario begins from April 2020 soon after New Zealand entered alert level four. In this scenario New Zealand will continue on the successful trajectory that has seen the county move from alert level four down through the alert levels to alert level two at the time of writing. As it is unclear what will determine a move down to alert level one we have assumed that the remaining ten months of the year will be split evenly with five months at alert level one and five months at alert level two. This also allows for uncertainty and some movement between alert levels as the situation in New Zealand and globally evolves.

To account for the additional time required to manufacture and distribute the vaccine, an additional six months at alert level one is included. This is to account for the border restrictions that will be in place while distribution occurs. We have referred to this as alert level one (2021).

Table 3.1 Time spent at each alert level in scenario one and GDP reduction

Alert level	Months	GDP Reduction (%)
Level four	1	37.0
Level three	1	19.0
Level two	5	8.8
Level one	5	3.8
Level one (2021)	6	4.8

Once New Zealand leaves alert level one (2021) in October 2021, New Zealand will move from the short term scenarios into the long term recovery that will continue until the 12 months ending March 2030. Table 3.2 shows the time spent at each alert level over the next two years.

Table 3.2 Time spent at each alert level in scenario one by month 2020 and 2021

<table>
<tr><th>Month</th><th>2020</th><th>2021</th></tr>
<tr><td>Jan</td><td rowspan="3"></td><td rowspan="3">Alert level 1 (Continued)</td></tr>
<tr><td>Feb</td></tr>
<tr><td>March</td></tr>
<tr><td>April</td><td>Alert level 4</td><td rowspan="6">Alert level 1 (2021)</td></tr>
<tr><td>May</td><td>Alert level 3</td></tr>
<tr><td>June</td><td rowspan="5">Alert level 2</td></tr>
<tr><td>July</td></tr>
<tr><td>Aug</td></tr>
<tr><td>Sept</td></tr>
<tr><td>Oct</td><td rowspan="3">Long term recovery</td></tr>
<tr><td>Nov</td><td rowspan="2">Alert level 1</td></tr>
<tr><td>Dec</td></tr>
</table>

Full data for the tables included in this section can be found in Appendix C.

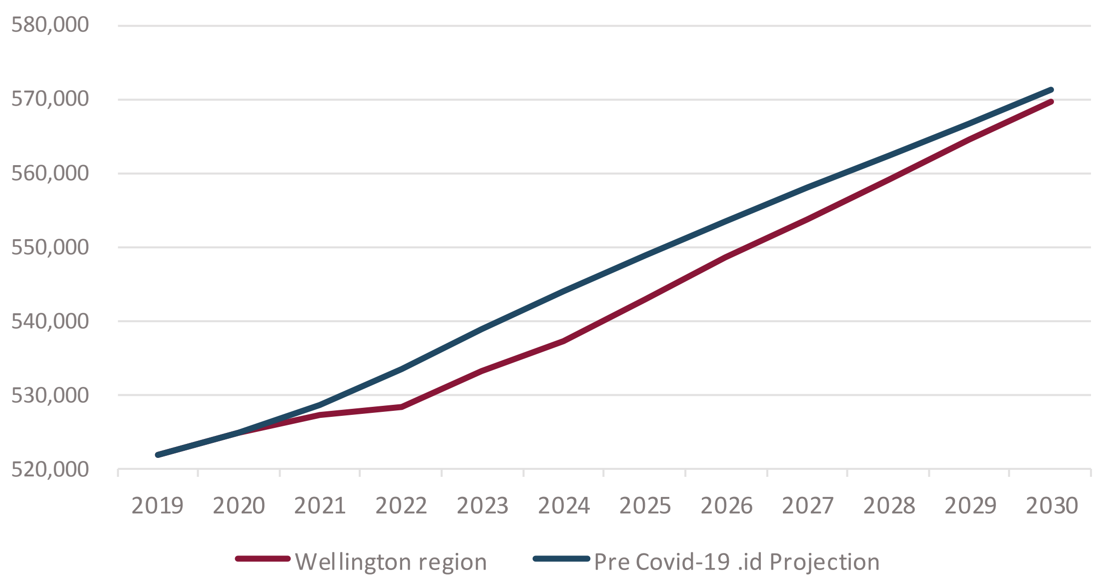
3.1 Population

Under this best case scenario the population of the Wellington region is expected to increase from 524,876 in 2020 to 569,821 in 2030. This is an 8.6 percent increase (44,945 people) as shown in Table 3.3. The natural cycle of birth and deaths is expected to keep the population growing while international migration slows. Population growth from outside the region is expected to continue over the next ten years. However, this will be a much lower rate than expected before COVID-19. Population growth is expected to be slower in 2021 and 2022 as the impact of border measures continue to be felt. Once the country moves away from the restrictions put in place at all alert levels and the economic situation begins to improve the population growth is expected to pick up.

The rate of job creation in the region is expected to slow as businesses recover. When new jobs will be created during the recovery it is likely that the majority of jobs will be filled by those already resident in the region, who may have lost their previous job. As a result there is likely to be fewer opportunities to attract people to the region from other parts of New Zealand.

International migration will be limited by the border restrictions. This will limit the ability of international migrants to relocate to the region. Then once border controls are lifted, in the short to medium term, it is likely that people will be apprehensive to relocate away from family or move country to take a new job given experiences during the pandemic. A reduction in flight frequency and a likely increase in fares will also make New Zealand and Wellington a less attractive option.

Figure 3.1 Wellington region population 2019-2030



Given the limited information available we have assumed that the populations of the territorial local authorities (TLAs) will grow at the same proportional rate as expected before COVID-19. Wellington City is expected to have the greatest growth in population from 2020 to 2030. The population of Wellington City is forecast to increase 7.5 percent (16,108 people) from 214,537 people in 2020 to 230,645 in 2030. This is also the largest total increase of Wellington's TLAs

Porirua City will have the largest proportional increase in population, growing by 20.5 percent from 2020 to 2030. This will see Porirua City's population increase by 12,169 residents to 71,339 by 2030.

Kapiti Coast District will increase its population by 8.4 percent to 60,166. All other districts in the region will grow by less than the Wellington average of 8.6 percent over the period. With Upper Hutt City growing the least at 3.9 percent. Lower Hutt City will grow by six percent over the period and the Wairarapa will grow at just below the Wellington region average.

Table 3.3 Wellington region population by TLA 2019-2030

Total Population	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	55,163	55,503	55,710	55,781	56,137	56,959	60,166
Porirua City	58,606	59,230	59,600	60,067	61,109	63,582	71,399
Upper Hutt City	44,126	44,084	43,955	43,714	43,755	44,131	45,824
Lower Hutt City	105,702	105,722	106,046	106,066	106,667	107,877	112,114
Wellington City	212,923	214,537	215,891	216,678	219,077	223,151	230,645
Wairarapa	45,400	45,800	46,069	46,162	46,503	47,284	49,671
Wellington Region	**521,920**	**524,876**	**527,271**	**528,469**	**533,248**	**542,984**	**569,821**

3.2 Gross domestic product (GDP)

The impact of COVID-19 will cause the GDP of the Wellington region to fall by $277 million between 2020 and 2021 (8.3 percent). GDP in the year ending March 2021 is forecast to fall to $28.2 billion as shown in Table 3.4. This will then pick up again in 2022 when GDP is expected to recover by 7.8 percent ($223.5 million) to $30.4 billion. By 2023 GDP in the region will increase a further 5.5 percent from 2021 to $32.1 billion.

We expect that Kapiti Coast District and Porirua City will face the largest percentage decline in GDP in 2021. Kapiti Coast District GDP is expected to decline by 10.4 percent and Porirua City will decline by 9.4 percent. Lower Hutt City will also experience a GDP decrease of greater than nine percent (9.2 percent). These three authorities will also experience the biggest bounce back in 2022 when Lower Hutt City and Kapiti Coast District will grow by 8.6 percent and Porirua City GDP will grow by 8.2 percent. Given the uncertainty surrounding the impact of COVID-19 from 2023 we have assumed that regional GDP will increase in line with national GDP and TLAs will grow at the same rate.

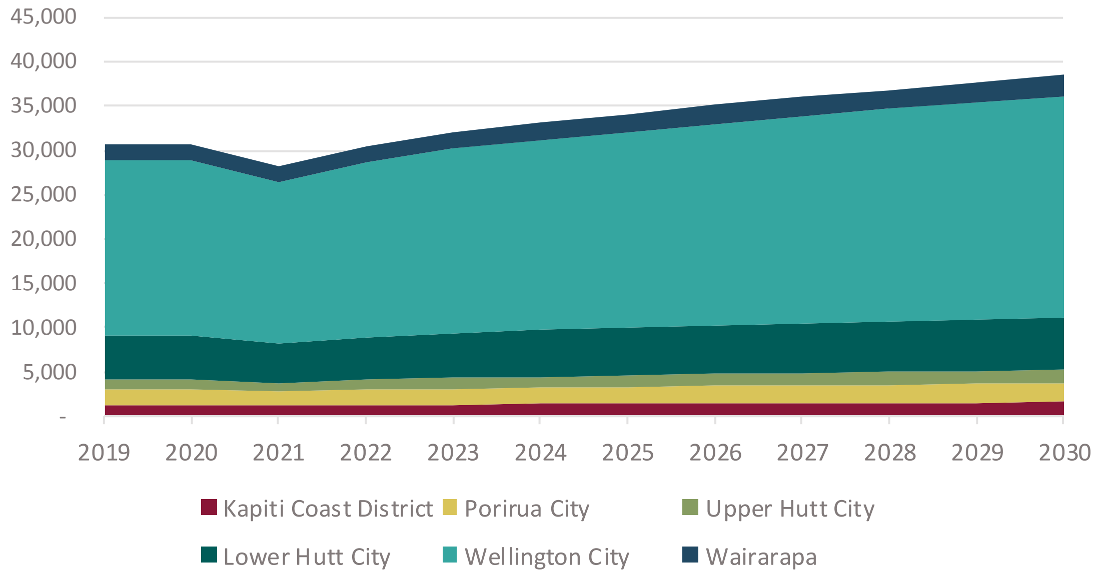
Table 3.4 Wellington territorial authority GDP 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,285	1,286	1,152	1,251	1,320	1,406	1,583
Porirua City	1,701	1,703	1,543	1,670	1,762	1,876	2,113
Upper Hutt City	1,178	1,180	1,078	1,163	1,227	1,307	1,472
Lower Hutt City	4,828	4,836	4,391	4,770	5,034	5,360	6,036
Wellington City	19,850	19,892	18,333	19,712	20,803	22,147	24,943
Wairarapa	1,845	1,848	1,695	1,822	1,923	2,047	2,305
Wellington Region	**30,688**	**30,746**	**28,193**	**30,389**	**32,070**	**34,142**	**38,452**

The rate of GDP growth will then become more level and will grow at a slowing rate to 2030 as New Zealand settles into a new economic situation and some of the programmes and projects put in place to support the recovery come to an end.

By 2030 Wellington region GDP is forecast to be $38.5 billion. This is a 25.1 percent increase from 2020 and a 36.4 percent increase from the projected low of 2021.

Figure 3.2 Wellington regional GDP 2019-2030 ($million)



3.2.1 GDP by industry

Each alert level will have a different impact on businesses in various industries. However, all industries will be impacted by the COVID-19 restrictions. Whether these are direct, indirect or induced the impact will be felt across the economy in some way. Industries that are reliant on face to face interactions or people being in close contact will be impacted hardest by the health measures taken to stop the spread of COVID-19. Industries that were able to transition to alternative ways of working such as public administration and safety, agriculture, fishing and forestry and information media and telecommunications will be impacted the least. While the industries that had to shut down or severely limit services like accommodation and food services and arts and recreations services will be impacted greatest.

Four industries are expected to have reductions in GDP above 20 percent in 2021:

- Accommodation and food services will fall by 63.9 percent to $288 million
- Arts and recreations services will fall by 58.1 percent to $218 million
- Personal services will decline by 27.1 percent to $338 million
- Administrative and support services will fall by 22.3 percent to $540 million.

As the recovery continues to pick up momentum in 2022 all industries will see GDP growth. The four industries with double digit reductions in GDP will see a bounce back in 2022. However all four industries will be below 2019 levels for the majority of the decade.

Accommodation and food services will recover by 29.9 percent in 2022 and the industry contribution to regional GDP will be $374 million. This is a 55 percent reduction from 2019. Accommodation and foods services is only expected to recover to 40.6 percent of its 2020 GDP by 2030 ($473 million).

Arts and recreation services will recover in 2021 but will still be well below pre COVID-19 GDP levels. The impact on arts and recreation will continue right through the decade. Arts and recreation services are only expected to reach 72.2 percent of their 2019 GDP by 2030 ($376 million).

Personal services will recover by 27.9 percent in 2022 and by 2023 will grow to levels that were greater than 2020 ($472 million).

The five largest industries by GDP in the Wellington region are:

- Professional scientific and technical services
- Public administration and safety
- Financial and insurance services
- Health care and social assistance
- Information media and telecommunications.

As shown in Table 3.5 all five industries above will suffer declines in GDP in 2021 before growing again in 2022. By 2023 these industries return to GDP levels above 2020. These industries will remain the largest contributors to regional GDP.

Table 3.5 Wellington region GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	461	464	459	477	503	535	603
Mining	591	595	564	611	645	687	773
Manufacturing	1,752	1,761	1,666	1,810	1,910	2,034	2,290
Electricity and waste services	1,025	1,030	1,012	1,059	1,117	1,189	1,340
Construction	1,823	1,833	1,688	1,883	1,988	2,116	2,383
Wholesale trade	1,143	1,147	1,079	1,159	1,223	1,302	1,467
Retail trade	1,702	1,703	1,425	1,649	1,740	1,853	2,086
Accommodation and food services	832	796	288	374	394	420	473
Transport, postal and warehousing	1,149	1,153	1,085	1,164	1,228	1,307	1,472
Information media and telecommunications	1,956	1,967	1,948	2,021	2,133	2,271	2,558
Financial and insurance services	3,231	3,244	3,146	3,284	3,466	3,690	4,156
Rental hiring and real estate services	717	720	709	731	771	821	925
Professional scientific and technical services	4,379	4,398	4,006	4,471	4,719	5,024	5,658
Administrative and support services	694	695	540	683	720	767	864
Public administration and safety	4,219	4,242	4,182	4,359	4,600	4,897	5,515
Education and training	1,549	1,549	1,454	1,502	1,586	1,688	1,901
Health care and social assistance	2,460	2,463	2,386	2,422	2,556	2,722	3,065
Arts and recreations services	539	521	218	297	314	334	376
Personal Services	465	464	338	433	457	486	547
Total	**30,688**	**30,746**	**28,193**	**30,389**	**32,070**	**34,142**	**38,452**

A territorial breakdown of GDP by industry is included in Appendix F.

3.3 Employment

Employment in the Wellington region increased to 262,783 full time equivalent employees (FTEs) in the year to March 2020 but this is expected to fall by 5.5 percent by March 2021 to 248,266 FTEs. In 2022 there will be a further 0.9 percent decrease in the number of FTEs in the Wellington region when total FTEs will decrease to 246,134. This is in part due to the ongoing border restrictions that are in place for part of 2022.

In 2023 employment will bounce back and the total number of FTEs will increase by 4.5 percent (11,155 FTEs). As the recovery continues the growth in the number of employed will decrease as the economy re-establishes itself and develops in a new economic environment. Total employment in the region will reach 288,055 by 2030. This is an increase of 17 percent (41,922 FTEs) from the low expected in 2022.

Table 3.6 Wellington regional employment by territorial authority 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	13,253	13,285	12,287	12,254	12,809	13,373	14,341
Porirua City	17,847	17,721	16,812	16,638	17,392	18,159	19,472
Upper Hutt City	11,704	11,909	11,368	11,202	11,710	12,226	13,110
Lower Hutt City	44,505	44,317	41,473	41,497	43,378	45,290	48,565
Wellington City	155,719	157,855	149,569	148,020	154,729	161,548	173,231
Wairarapa	17,672	17,697	16,757	16,522	17,271	18,032	19,336
Wellington Region	**260,700**	**262,783**	**248,266**	**246,134**	**257,289**	**268,629**	**288,055**

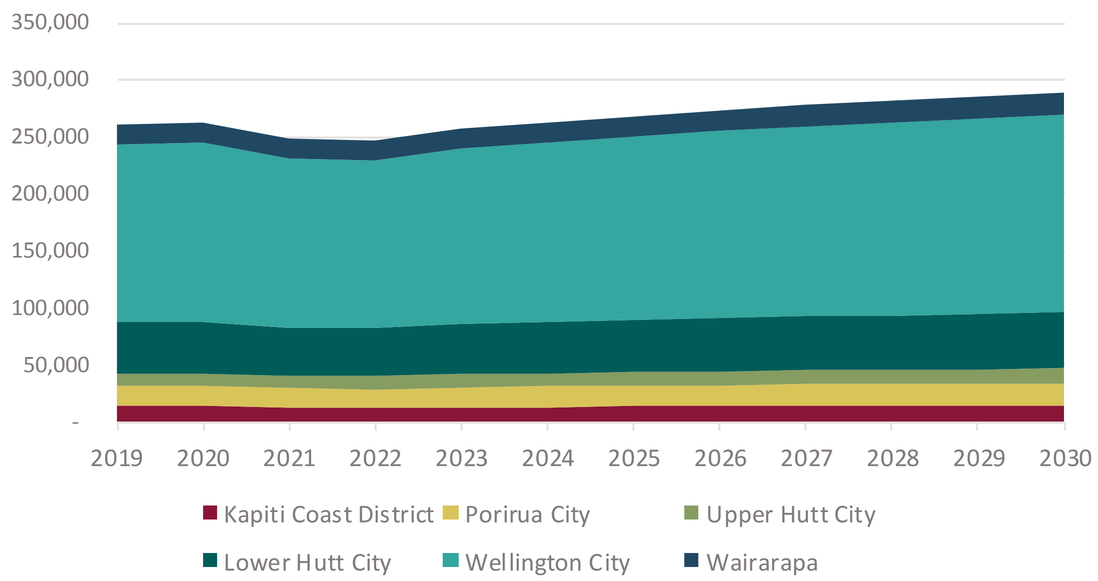
Across the territorial authorities Kapiti Coast District will have the greatest proportional drop in employment in 2021, 7.5 percent (998 FTEs). Lower Hutt City will see the second largest proportional drop of 6.4 percent. The 2,844 jobs lost in Lower Hutt City is the second largest total FTE loss behind Wellington City which will see 8,285 FTEs lost (5.2 percent).

Looking ahead to 2022 Wellington City will see employment fall by another 1,549 FTEs. Wairarapa will have the second highest number of total job losses with 235. A positive sign from Lower Hutt City is that it will see FTEs increase in 2022.

Looking ahead to 2023 when the recovery will be in full effect, all territorial authorities will begin to see an increase in employment. Wellington City will see an additional 6,709 FTEs and Lower Hutt City will see 1,881 FTEs return. The other territorial authorities will see increases of between 754 FTEs (Porirua City) and 508 FTEs (Upper Hutt City).

Looking out to 2030 employment growth will continue but the rate of growth will decline as the economy returns to the trajectory it was on before the impacts of COVID-19.

Figure 3.3 Wellington regional employment by territorial authority 2019-2030 (FTEs)



3.3.1 Employment by industry

Due to the nature of COVID-19 and the activities that are allowed at each alert level each industry will be impacted differently. Seven of the 19 Australian and New Zealand Standard Industrial Classification (ANZSIC) industries will see employment fall in 2021 as a result of COVID-19 as shown in Table 3.7.

The two industries with the biggest fall in employment will be accommodation and food services which will fall by 61.6 percent (11,381 FTEs) and arts and recreational services that will see regional employment fall by 55.3 percent (3,138 FTEs). Retail trade will also lose almost 2,000 FTEs, which is equal to 9.5 percent of FTEs in the industry.

Two industries that will see large growth in employment are those linked to the COVID-19 response and recovery. Health care and social assistance will grow by 1,177 FTEs in 2021 as New Zealand fights the health effects of COVID-19 before falling by 2,065 FTEs in 2022. Health and social care is an interesting industry for employment change. COVID-19 has placed demand on the health service so one would expect employment to increase by more over time. However, there are two factors countering this. The first is that a lot of the activities captured in this industry are face to face and were or still are impacted by restrictions at higher alert levels such as childcare, dentists and physiotherapists. The second is that the industry has a lot of FTEs with specialist skills and cannot transition into this field easily. This causes a lag where doctors and nurses cannot be trained as demand grows. Therefore, health resources are redirected during COVID-19. For example the cancellation of elective surgeries was required during alert level four.

Public administration and safety will see a similar trend with 2,794 additional employees in 2021 before a reduction of 2,485 FTEs in 2022.

In 2023 all industries will see positive growth in FTEs with the region adding 11,155 FTEs.

Looking ahead to 2030 the five largest industries in Wellington by employment will be:

- Public administration and safety
- Professional scientific and technical services
- Health care and social assistance
- Construction
- Education and training.

Table 3.7 Wellington regional employment by industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	3,713	3,755	4,018	3,783	3,954	4,129	4,427
Mining	417	421	433	425	444	463	497
Manufacturing	13,867	13,144	13,451	13,241	13,841	14,451	15,496
Electricity and waste services	2,205	2,090	2,221	2,105	2,201	2,298	2,464
Construction	21,403	21,426	21,348	21,583	22,561	23,555	25,259
Wholesale trade	8,411	7,510	7,638	7,435	7,772	8,115	8,702
Retail trade	19,122	20,898	18,904	19,825	20,724	21,637	23,202
Accommodation and food services	16,908	18,479	7,098	8,368	8,747	9,133	9,793
Transport, postal and warehousing	7,682	9,222	9,384	9,118	9,531	9,951	10,670
Information media and telecommunications	4,919	4,619	4,951	4,653	4,864	5,078	5,445
Financial and insurance services	12,416	11,813	12,399	11,723	12,254	12,795	13,720
Rental hiring and real estate services	2,779	2,609	2,781	2,595	2,713	2,832	3,037
Professional scientific and technical services	33,208	33,527	33,023	33,408	34,922	36,461	39,098
Administrative and support services	11,252	11,359	9,524	10,931	11,427	11,930	12,793
Public administration and safety	39,195	41,659	44,453	41,968	43,870	45,803	49,115
Education and training	22,500	20,949	21,274	19,903	20,805	21,722	23,293
Health care and social assistance	26,596	24,374	25,551	23,487	24,551	25,633	27,487
Arts and recreations services	5,366	5,678	2,541	3,140	3,282	3,427	3,675
Personal Services	8,741	9,250	7,274	8,443	8,826	9,215	9,881
Total	**260,700**	**262,783**	**248,266**	**246,134**	**257,289**	**268,629**	**288,055**

3.4 Unemployment

Wellington regional unemployment is expected to peak at 6.3 percent in 2021 as shown in Table 3.9. This will see 18,246 unemployed from a labour force of 258,359 people. In 2022 as the recovery takes full effect the unemployment rate will drop to 5.7 percent (16,311 people unemployed).

Looking ahead to 2030 the total number of unemployed (14,355) will still be above the total number of unemployed in 2020 (14,100). However, this is consistent with the growth in the population and an unemployment rate of 4.4 percent which is consistent with pre COVID-19 experiences. The unemployment rate will then slowly reduce each year from 6.3 percent until it reaches 4.4 percent by 2030.

Table 3.8 Wellington region unemployment statistics 2020-2030

	2020	2021	2022	2023	2025	2030
FTEs	262,783	227,038	246,134	257,289	268,629	288,055
Total employed	287,247	271,379	269,048	281,242	293,637	314,872
Total unemployed	14,100	18,246	16,311	15,974	15,273	14,355
Labour force	301,347	289,625	285,359	297,215	308,909	329,227
Not in labour force	125,846	140,149	146,002	138,648	136,061	139,224
Change in employment minus change in unemployed	-	- -	4,266	4,503	5,503	3,280
Unemployment rate (%)	4.7	6.3	5.7	5.4	4.9	4.4

Across the region the number of unemployed will increase 29.4 percent (4,146 people) from 2020 to 2021. At a territorial authority level Wellington City has the largest increase in the number of unemployed in the year to March 2021 with an additional 2,367 people expected to become unemployed. This is a 54.2 percent increase from 2020 and is the highest amongst TLAs. This increase in unemployment reflects the challenges that COVID-19 has presented for industries that operate heavily in Wellington City such as accommodation and food services, retail trade and arts and recreational services. This high level of unemployment will begin to decline in 2022 when 1,406 previously unemployed people from 2021 in Wellington City will find new employment.

Table 3.9 Wellington unemployment by territorial authority 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,252	1,487	1,772	1,742	1,725	1,690	1,644
Porirua City	1,633	1,987	2,247	2,089	2,066	2,019	1,957
Upper Hutt City	1,034	1,254	1,408	1,258	1,243	1,211	1,169
Lower Hutt City	3,262	3,846	4,658	4,681	4,624	4,506	4,351
Wellington City	3,606	4,363	6,730	5,324	5,121	4,699	4,147
Wairarapa	1,015	1,163	1,431	1,219	1,196	1,149	1,087
Wellington Region	**11,802**	**14,100**	**18,246**	**16,311**	**15,974**	**15,273**	**14,355**

Other territorial authorities which will see the number of unemployed increase by greater than 20 percent in 2021 are Wairarapa and Lower Hutt City which will see unemployment increase by 23.1 percent (268 people) and 21.1 percent (812 people) respectively. While the Wairarapa sees the number of unemployed decrease by 14.9 percent in 2022 Lower Hutt City will see a 0.5 percent increase in unemployed people in 2022.

3.5 Household income

Household income across the Wellington region is expected to fall by 12.3 percent in 2021 ($2.7 billion) as shown in Table 3.10. In 2020 household income was $21.6 billion, this was a $1.2 billion increase from 2019. The impact of COVID-19 will see household income fall to $18.9 billion in 2021. As the economy recovers this will bounce back to $20.4 billion in 2022 before returning to a pre COVID-19 level by 2023.

As the economy recovers the increase in household income will be 8.1 percent in 2022 ($1.5 billion) and 5.5 percent in 2023 ($1.1 billion) before steeling into a lower level of growth as the economy returns to what will be considered normal once the shock of COVID-19 subsides.

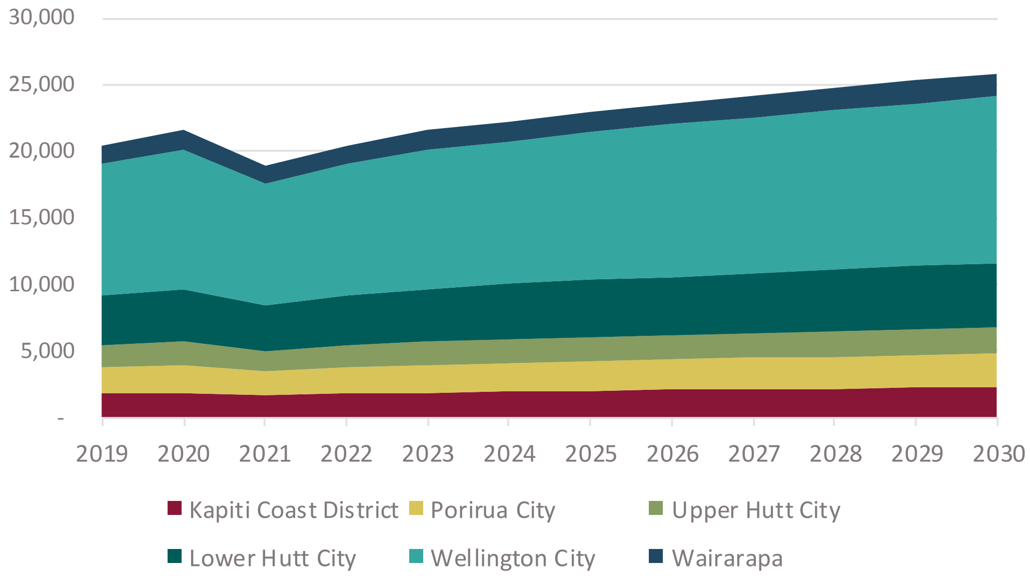
Table 3.10 Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,758	1,862	1,628	1,765	1,862	1,982	2,233
Porirua City	1,998	2,120	1,855	2,008	2,120	2,257	2,541
Upper Hutt City	1,597	1,703	1,492	1,614	1,703	1,813	2,042
Lower Hutt City	3,766	3,983	3,483	3,774	3,983	4,240	4,776
Wellington City	9,860	10,424	9,152	9,878	10,424	11,098	12,499
Wairarapa	1,387	1,461	1,284	1,384	1,461	1,555	1,751
Wellington Region	**20,367**	**21,553**	**18,894**	**20,423**	**21,553**	**22,946**	**25,842**

The decline in household income will be between 12.6 percent in Lower Hutt City and Kapiti Coast District and 12.1 percent in the Wairarapa. As the recovery takes effect in 2022 household spending will increase in Kapiti Coast District and Lower Hutt City (8.4 percent). As the recovery continues household incomes will increase from between 3.3 percent and 2.1 percent out to 2030.

The low point for household spending is expected in 2021 when household income will be $18.9 billion. This will increase by 37 percent ($6.9 billion) to reach $25.8 billion by 2030.

Figure 3.4 Wellington region household income by territorial authority 2019-2030 ($million)



3.6 Consumer spending

Consistent with a decrease in household income will be a decrease in consumer spending. Consumer spending in the Wellington region is expected to decrease from $10.9 billion in the year to March 2020 to $10.5 billion in the same period to March 2021 as shown in Table 3.11. Consumer spending in 2021 will be similar to the level of consumer spending experienced in 2019.

This decline in consumer spending from 2020 to 2021 is $390 million. The increase in 2022 will be $528 million as the economy recovers. By 2023 consumer spending will have increased above the 2020 level for the first time to reach $11 billion.

As incomes grow during the recovery consumer spending will also increase. Between 2024 and 2030 Wellington regional consumer spending will increase from $11.5 billion in 2024 to $11.9 billion in 2025.

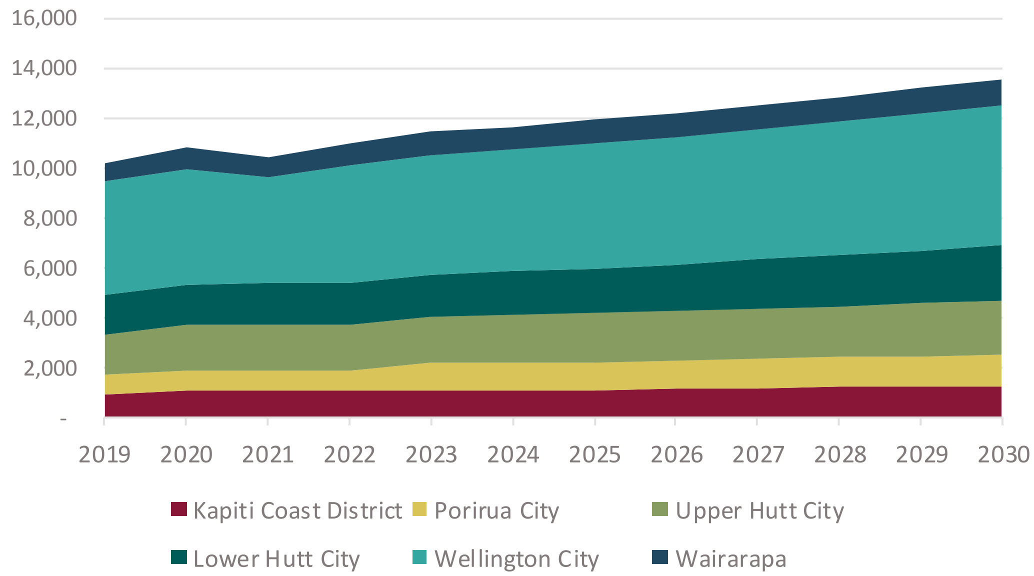
Table 3.11 Wellington region consumer spending by territorial authority 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	932	1,064	1,068	1,075	1,090	1,132	1,292
Porirua City	823	839	837	836	1,089	1,124	1,262
Upper Hutt City	1,614	1,831	1,837	1,847	1,873	1,937	2,176
Lower Hutt City	1,585	1,634	1,644	1,665	1,708	1,818	2,207
Wellington City	4,520	4,645	4,233	4,717	4,809	5,010	5,597
Wairarapa	756	865	870	877	891	926	1,052
Wellington Region	**10,231**	**10,878**	**10,488**	**11,016**	**11,460**	**11,948**	**13,586**

At the TLA level, Wellington City will be the only area to experience a decline in consumer spending, 8.9 percent in 2021. As the economy recovers in 2022 Wellington City consumer spending will then increase by 11.4 percent from the 2021 low. Consumer spending will continue to increase in Wellington City between 1.9 and 2.8 percent for the rest of the decade.

As the recovery continues consumer spending in the region will grow steadily out to 2030. The remaining TLAs will see consumer spending increase slightly in 2021 and 2022. The recovery then gets into full swing and consumer spending will increase by tens of millions for each territorial authority areas for the rest of the decade.

Figure 3.5 Wellington region consumer spending by territorial authority 2019-2030 ($million)



3.7 Māori economy

Māori have been adversely impacted by every previous economic shock, COVID-19 will also disproportionately impact upon Māori. However, a successful response to COVID-19 could insulate against being adversely impacted in future shocks.

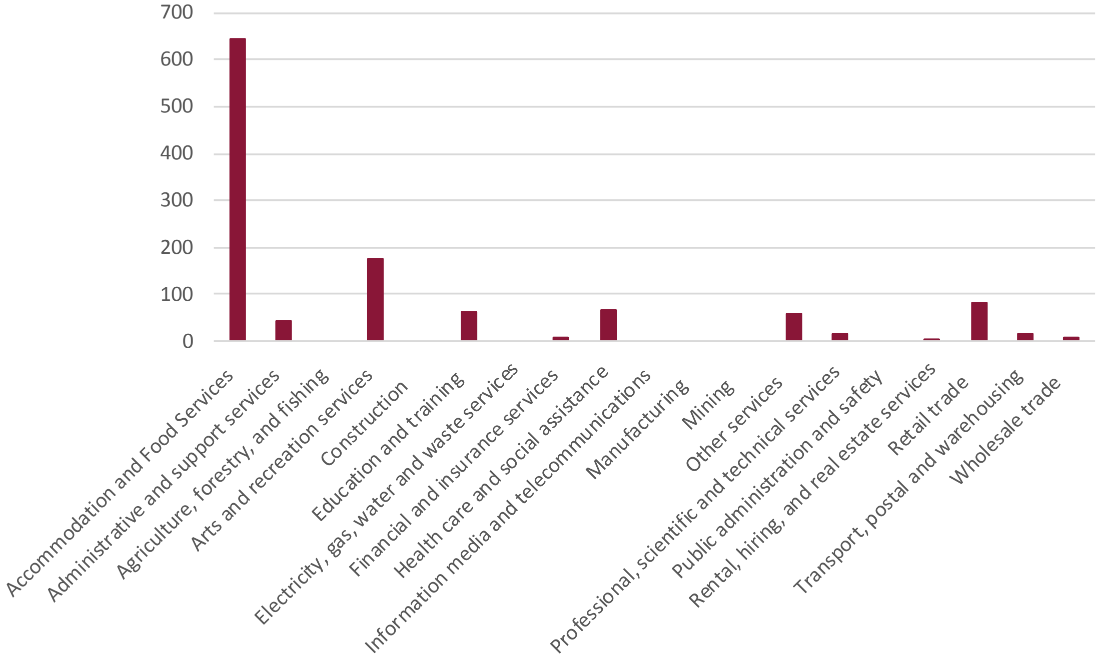
Māori rangatahi between the ages of 15 and 19 in the Wellington region will be leaving formal secondary education during the most severe impacts of the response to COVID-19. Historically, it was entry level positions such as retail, hospitality, and some manufacturing that were attractive for rangatahi coming out of education. However, given the new reality, these might not be available. The Governments $1.6 billion investment in trades is likely to support some of the rangatahi.

A 2018 report for GWRC[7] found Māori business thriving, with a strong presence in film, technology and business services. Further, Māori owned entities play a key role in commercial property, housing and social developments. However, Māori did earn significantly less than the regional average. Notably lower home ownership rates constrained their ability to enter into self-employed or SME business enterprise. Nearly 60 percent of Māori in the region were aged under 30 years old.

Immediate consequences on the Māori economy will centre on the negative impact on several tourism operators. Further, employment numbers in the film sector are also likely to fall. However, the impact on Māori employment in business services – given the ability to work from home – may not be as large.

[7] Māori economy in the Greater Wellington Region, BERL report #5885, March 2018

Figure 3.6 Māori employment loss at level one in the Wellington region



The future of tourism in the Wellington region is a big unknown, but the relative importance of domestic tourism is likely to increase.

With a slower growth in population expected this may also impact on property development opportunities in which Māori currently have an interest. Another unknown is the impact of COVID-19 on the many Māori currently residing in Australia. There is a possibility that more move back to New Zealand (and this could be a result of pro-active encouragement) to be closer to home, whānau, and whenua in this time of uncertainty. The situation and state of social and cultural networks, services, and infrastructure would likely be important in influencing such an outcome.

Longer term the impact on Māori will be acutely felt by their currently young population. The different demographic structure of Māori is important when considering the inter-generational aspect of decisions made now. In particular, decisions to defer infrastructure spending (whether on social networks, community facilities, or physical and natural capital) will impact disproportionately more on Māori. Their young population will bear more of the load of restoring/repairing/overhauling infrastructure in the future, should it be neglected (or 'kicked down the road') now. In this context, the growing role of government (both local and central) will also be a factor in the impact on Māori. With Māori at the table, a longer-term horizon for decision-making may be encouraged.

The Wellington region Māori economy GDP will drop eight percent ($299 million) from 2020 to 2021 as shown in Table 3.12. The industries with the greatest total losses of GDP between 2020 and 2021 will be the same as the region as a whole with retail trade ($35 million), accommodation and food services ($41 million) and arts and recreation services ($47 million). The percentage decreases for these industries are expected to be 16 percent, 64 percent and 58 percent respectively.

Administrative and support services (22 percent) and personal services (27 percent) are the other industries that will see declines above 20 percent.

Professional scientific and technical GDP in the Māori economy will decline by $43 million. This is the second largest decline amongst industries in the Māori economy. This is a nine percent decline in GDP from 2020 to 2021 which is consistent with the industry change for the Wellington region. All industries will then see a recovery in 2022.

Table 3.12 Wellington region Māori economy GDP 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	62	62	62	64	68	72	81
Mining	94	95	90	97	103	109	123
Manufacturing	289	291	275	299	316	336	378
Electricity and waste services	128	129	127	133	140	149	168
Construction	330	332	306	341	360	383	432
Wholesale trade	136	136	128	138	145	155	174
Retail trade	214	214	179	207	219	233	263
Accommodation and food services	67	64	23	30	32	34	38
Transport, postal and warehousing	130	130	122	131	139	148	166
Information media and telecommunications	155	156	155	160	169	180	203
Financial and insurance services	479	481	467	487	514	548	617
Rental hiring and real estate services	57	57	56	58	61	65	73
Professional scientific and technical services	485	487	443	495	522	556	626
Administrative and support services	51	51	39	50	53	56	63
Public administration and safety	484	486	479	500	527	561	632
Education and training	154	154	145	150	158	168	189
Health care and social assistance	307	308	298	303	319	340	383
Arts and recreations services	83	80	34	46	48	51	58
Personal Services	49	49	36	46	48	52	58
Total	**3,754**	**3,763**	**3,464**	**3,734**	**3,941**	**4,195**	**4,725**

Looking out to 2030 the Māori economy in the Wellington region will grow to 26 percent above its 2020 level and 36 percent above the low expected in 2021. Māori economy GDP will return above pre COVID-19 levels by 2023.

4 Scenario two (Mid-point)

Scenario two is the mid-point scenario for the economic recovery. Like scenario one the scenario begins from April 2020 when New Zealand entered alert level four. In this scenario New Zealand will continue on the successful trajectory that has seen the county move from alert level four down through the alert levels to alert level two at the time of writing. The scenario then assumes that New Zealand will suffer a second wave of the virus when restrictions are eased at level two. This will see New Zealand repeat the cycle whereby we have another period at alert level four before then moving back down through the alert levels with the final two months of the year to March 2021 spent at alert level one. This allows for uncertainty and some movement between alert levels as the situation in New Zealand and globally evolves.

To account for the additional time required to manufacture and distribute the vaccine an additional nine months at alert level one is included. This is to account for the border restrictions that will be in place while distribution occurs. We have referred to this as alert level one (2021).

Table 4.1 Time spent at each alert level in scenario two and GDP reduction

Alert level	Months	GDP Reduction (%)
Level four	2	37.0
Level three	2	19.0
Level two	6	8.8
Level one	2	3.8
Level one (2021)	9	4.8

Table 4.2 Time spent at each alert level in scenario two by month 2020 and 2021

<table>
<tr><th>Month</th><th>2020</th><th>2021</th></tr>
<tr><td>Jan</td><td rowspan="3"></td><td>Alert level 2 (Continued)</td></tr>
<tr><td>Feb</td><td rowspan="2">Alert level 1</td></tr>
<tr><td>March</td></tr>
<tr><td>April</td><td>Alert level 4</td><td rowspan="9">Alert level 1 (2021)</td></tr>
<tr><td>May</td><td>Alert level 3</td></tr>
<tr><td>June</td><td rowspan="2">Alert level 2</td></tr>
<tr><td>July</td></tr>
<tr><td>Aug</td><td>Alert level 4</td></tr>
<tr><td>Sept</td><td>Alert level 3</td></tr>
<tr><td>Oct</td><td rowspan="3">Alert level 2</td></tr>
<tr><td>Nov</td></tr>
<tr><td>Dec</td></tr>
</table>

This mid-point scenario will see the same types of impacts as seen in the best case scenario. However, the additional time spent at higher alert levels will result in a lower starting position at a later time than scenario one, this will push the immediate recovery out for a longer period that scenario one. As a result the initial losses will be higher than scenario one. However, as there will be more activity returning in 2022 the initial loss and recovery will be greater than scenario one before levelling out. Overall this scenario has a longer recovery and growth will be lower over the period to March 2030.

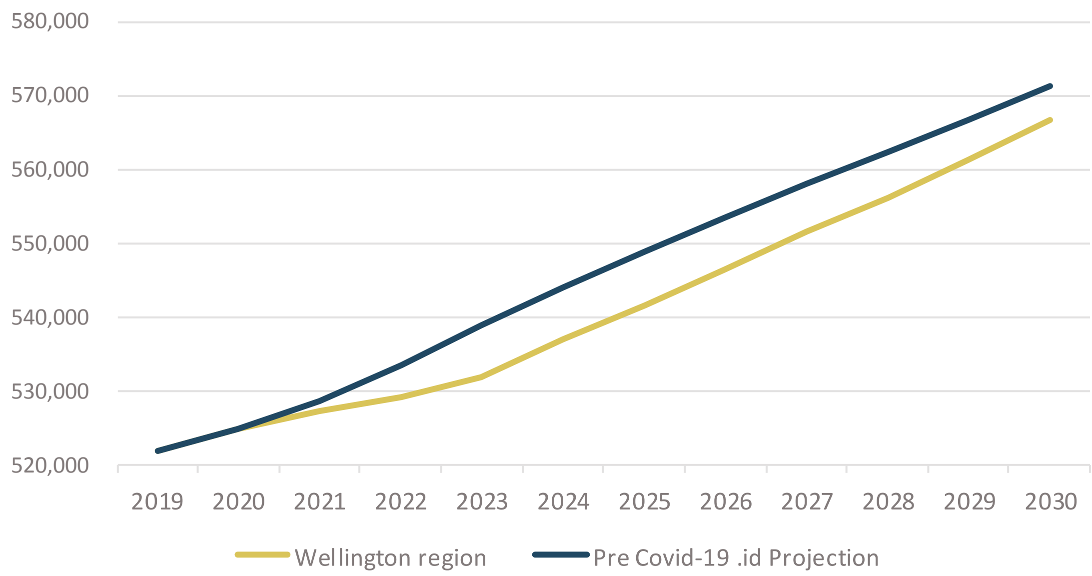
For a comparison of the scenarios please see section six.

4.1 Population

Under this scenario the population of the Wellington region is expected to increase to 566,670 in 2030 as shown in table 4.3. This is an eight percent increase (41,794 people). Population growth is expected to be slower in 2021 and 2022 as the impact of border measures continue to be felt. Once the country moves away from the restrictions put in place at all alert levels and the economic situation begins to improve the population growth is expected to pick up.

The rate of job creation is expected to be lower than scenario one. The longer period spent at higher alert levels and a longer time allowed for border restrictions to ease will delay the recovery and as a result all indicators, including population will be lower by comparison.

Figure 4.1 Wellington region population 2019-2030



As for scenario one, Wellington City is expected to have the greatest growth in population from 2020 to 2030 with an additional 14,833 residents as shown in Table 4.3. The population of Wellington City is forecast to increase 6.9 percent from 214,537 people in 2020 to 229,370 in 2030.

Porirua City will have the largest proportional increase in population growing by 19.9 percent from 2020 to 2030. This will see Porirua City's population increase by 11,775 residents to 71,005 by 2030.

Kapiti Coast District will increase its population by 7.8 percent to 59,834. All other districts in the region will grow by less than the Wellington average of 8 percent over the period. With Upper Hutt City growing the least at 3.4 percent. Lower Hutt City will grow by 5.5 percent over the period. The major difference from scenario one is that Wairarapa will grow slightly below the Wellington regional average at 7.9 percent.

Table 4.3 Wellington region population by territorial authority 2019-2030

Total Population	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	55,163	55,503	55,710	55,852	55,999	56,828	59,834
Porirua City	58,606	59,230	59,600	60,143	60,959	63,436	71,005
Upper Hutt City	44,126	44,084	43,955	43,770	43,647	44,030	45,571
Lower Hutt City	105,702	105,722	106,046	106,200	106,404	107,629	111,494
Wellington City	212,923	214,537	215,891	216,953	218,538	222,638	229,370
Wairarapa	45,400	45,800	46,069	46,221	46,388	47,175	49,397
Wellington Region	**521,920**	**524,876**	**527,271**	**529,139**	**531,935**	**541,735**	**566,670**

4.2 Gross domestic product (GDP)

Similar to population, the GDP recovery will be less than scenario one over the ten year period. In this scenario GDP will fall by more than scenario one in 2021. However, the recovery will also be greater in the initial years as there is more activity restricted for longer in this scenario, meaning a larger impact on GDP in 2021 than scenario one. Table 4.4 shows that the impact of COVID-19 will cause the GDP of the Wellington region to fall by $428.7 million between 2020 and 2021 (13 percent). GDP in the year ending March 2021, is forecast to fall to $26.7 billion. It will pick up again in 2022, when GDP is expected to recover by 13 percent ($366.9 million) to $30.2 billion. By 2023 GDP in the region will increase further a 4.5 percent from 2022 to $31.6 billion.

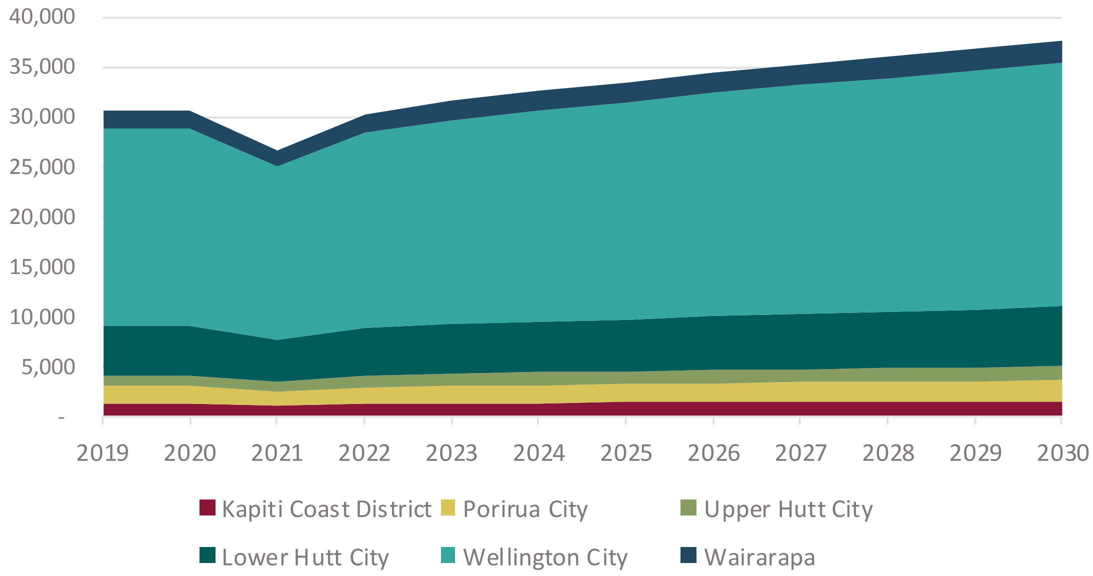
We expect that Kapiti Coast District and Lower Hutt City will face the largest percentage decline in GDP in 2021. Kapiti Coast District GDP is expected to decline by 15.5 percent and Lower Hutt City will decline by 14.5 percent. Porirua City will also experience a GDP decrease of greater than 14 percent (14.4 percent). These three authorities will also experience the biggest bounce back in 2022 when Lower Hutt City and Kapiti Coast District will grow by 14.6 percent and Lower Hutt City GDP will grow by 14.8 percent.

Table 4.4 Wellington territorial authority GDP 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,285	1,286	1,087	1,245	1,301	1,381	1,552
Porirua City	1,701	1,703	1,458	1,662	1,736	1,843	2,071
Upper Hutt City	1,178	1,180	1,024	1,157	1,209	1,284	1,443
Lower Hutt City	4,828	4,836	4,134	4,747	4,960	5,265	5,918
Wellington City	19,850	19,892	17,431	19,614	20,497	21,758	24,453
Wairarapa	1,845	1,848	1,613	1,813	1,895	2,011	2,260
Wellington Region	**30,688**	**30,746**	**26,747**	**30,237**	**31,599**	**33,542**	**37,697**

The rate of GDP growth will then become more level and will grow at a slowing rate to 2030. By 2030 Wellington region GDP is forecast to be $37.7 billion. This is a 22.6 percent increase from 2020 and a 40.9 percent increase from the projected low of 2021.

Figure 4.2 Wellington regional GDP 2019-2030 ($million)



4.2.1 GDP by industry

The impact of additional time at each alert level will see all industries hit harder in this scenario compared to scenario one. In this scenario six industries are expected to have reductions in GDP above 15 percent in 2021:

- Accommodation and food services will fall by 69.7 percent to $241 million
- Arts and recreations services will fall by 65.8 percent to $178 million
- Personal services will decline by 38.2 percent to $287 million
- Administrative and support services will fall by 35.7 percent to $446 million
- Retail trade will fall by 25.2 percent to $1.3 billion
- Professional scientific and technical services will decline by 16.4 percent to $3.7 billion.

As the recovery continues to pick up momentum in 2022 all industries will see GDP growth as shown in Table 4.5. All the industries with double digit reductions in GDP will see a bounce back in 2022. However, the three industries with the largest proportional falls will remain below 2020 levels for the majority of the decade if not all of it.

Accommodation and food services will recover by 54.1 percent in 2022 and the industry contribution to regional GDP will be $372 million. Accommodation and foods services is only expected to recover to 58 percent of its 2019 GDP by 2030 ($464 million).

Arts and recreation services will recover in 2021 but will still be well below pre COVID-19 GDP levels. The impact on arts and recreation will continue to be right through the 2020s. Arts and recreation services are only expected to reach 70 percent of their 2019 GDP by 2030 ($369 million).

Personal services will recover by 50.3 percent in 2022 and by 2025 will grow to levels that were greater than 2019 ($478 million).

The five largest industries by GDP in the Wellington region are:

- Professional scientific and technical services
- Public administration and safety
- Financial and insurance services
- Health care and social assistance
- Information media and telecommunications.

All five industries will suffer declines in GDP in 2021 before growing again in 2022 and 2023. These industries will remain the largest contributors to regional GDP.

Table 4.5 Wellington region GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	461	464	449	474	496	526	591
Mining	591	595	521	608	635	674	758
Manufacturing	1,752	1,761	1,565	1,801	1,882	1,998	2,245
Electricity and waste services	1,025	1,030	982	1,053	1,101	1,169	1,313
Construction	1,823	1,833	1,535	1,874	1,958	2,079	2,336
Wholesale trade	1,143	1,147	1,014	1,153	1,205	1,279	1,438
Retail trade	1,702	1,703	1,274	1,641	1,715	1,820	2,046
Accommodation and food services	832	796	241	372	389	413	464
Transport, postal and warehousing	1,149	1,153	1,022	1,158	1,210	1,284	1,443
Information media and telecommunications	1,956	1,967	1,888	2,011	2,102	2,231	2,507
Financial and insurance services	3,231	3,244	3,066	3,268	3,415	3,625	4,074
Rental hiring and real estate services	717	720	699	727	760	806	906
Professional scientific and technical services	4,379	4,398	3,675	4,449	4,649	4,935	5,547
Administrative and support services	694	695	446	679	710	754	847
Public administration and safety	4,219	4,242	4,100	4,337	4,532	4,811	5,407
Education and training	1,549	1,549	1,438	1,495	1,562	1,658	1,864
Health care and social assistance	2,460	2,463	2,367	2,410	2,519	2,674	3,005
Arts and recreations services	539	521	178	296	309	328	369
Personal Services	465	464	287	431	450	478	537
Total	**30,688**	**30,746**	**26,747**	**30,237**	**31,599**	**33,542**	**37,697**

A territorial breakdown of GDP by industry for this scenario is included in Appendix G.

4.3 Employment

In this scenario full time equivalent employees (FTEs) in the year to March 2021 are expected to fall by 8.3 percent (21,465 FTEs) by March 2021 to 241,001 FTEs as shown in Table 4.6. In 2022 there will be a 1.6 percent increase in the number of FTEs in the Wellington region when total FTEs will increase to 244,790.

In 2023 employment will bounce back. The total number of FTEs will increase by 3.5 percent (8,577 FTEs). As the recovery continues growth in the number of FTEs will decrease as the economy re-establishes itself and develops in a new economic environment. Total employment in the region will reach 282,231 by 2030. This is an increase of 17.1 percent (41,230 FTEs) from the low expected in 2021.

Table 4.6 Wellington regional employment by territorial authority 2019-2030

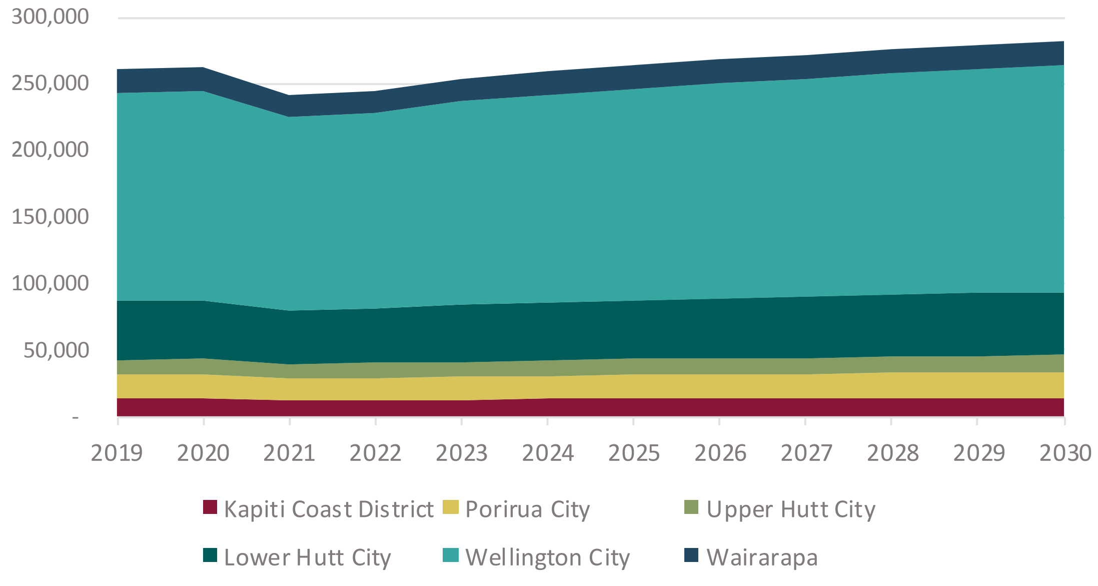
Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	13,253	13,285	11,859	12,186	12,613	13,130	14,050
Porirua City	17,847	17,721	16,321	16,548	17,128	17,830	19,079
Upper Hutt City	11,704	11,909	11,100	11,142	11,532	12,005	12,846
Lower Hutt City	44,505	44,317	39,869	41,269	42,715	44,466	47,581
Wellington City	155,719	157,855	145,525	147,212	152,370	158,617	169,729
Wairarapa	17,672	17,697	16,327	16,433	17,008	17,706	18,946
Wellington Region	**260,700**	**262,783**	**241,001**	**244,790**	**253,367**	**263,753**	**282,231**

At the TLA level Kapiti Coast District will have the greatest proportional drop in employment in 2021. Employment will fall by 10.7 percent (1,426 FTEs). Lower Hutt City will see the second largest proportional drop, 10 percent. The 4,448 jobs lost in Lower Hutt City is the second largest total FTE loss behind Wellington City which will see 12,330 FTEs lost (7.8 percent).

Looking ahead to 2022 Wellington City will see employment grow. Wellington City will add 1,687 FTEs. A positive sign from Lower Hutt City will see its FTEs increase by 1,401 (3.5 percent) in 2022.

Looking ahead to 2023 when the recovery will be in full effect all TLAs will see increases of between 580 FTEs (Porirua City) and 390 FTEs (Upper Hutt City). Looking out to 2030 employment growth will continue but the rate of growth will decline as the economy returns to the trajectory it was on before the impacts of COVID-19.

Figure 4.3 Wellington regional employment by territorial authority 2019-2030 (FTEs)



4.3.1 Employment by industry

Eleven of the 19 Australian and New Zealand Standard Industrial Classification (ANZSIC) industries will see employment fall in this scenario. The industries that were impacted hardest in scenario one will face greater impacts in this scenario.

The two industries with the biggest falls in employment will again be accommodation and food services which will fall by 66.9 percent (12,360 FTEs) and arts and recreational services that will see regional employment fall by 62.4 percent (3,545 FTEs) as shown in Table 4.7. Retail trade will also lose 3,465 FTEs, which is equal to 16.6 percent of FTEs in this industry.

Health care and social assistance will grow by 1,812 FTEs in 2021 as New Zealand fights the health effects of COVID-19 before falling by 2,818 FTEs in 2022 as the health response eases. Public administration and safety will see a similar trend with 3,372 additional employees in 2021 before a reduction of 3,276 FTEs in 2022.

2022 will also see significant job losses in education and training which will see 1,936 jobs lost after increasing by 790 FTEs in 2021.

The top five industries that will add the most FTEs will be construction, retail trade, manufacturing and transport, postal and warehousing.

Looking ahead to 2030 the five largest industries in Wellington by employment will be the same as in scenario one:

- Public administration and safety
- Professional scientific and technical services
- Health care and social assistance
- Construction
- Education and training.

By 2030 employment in the region will be 282,231 FTEs. This is a 7.4 percent increase from 2020 and a 17.1 percent increase from the low expected in 2021.

Table 4.7 Wellington regional employment by industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	3,713	3,755	4,064	3,764	3,896	4,055	4,339
Mining	417	421	413	422	437	455	487
Manufacturing	13,867	13,144	13,052	13,173	13,634	14,193	15,187
Electricity and waste services	2,205	2,090	2,228	2,095	2,168	2,257	2,415
Construction	21,403	21,426	20,035	21,468	22,220	23,131	24,752
Wholesale trade	8,411	7,510	7,412	7,397	7,656	7,970	8,528
Retail trade	19,122	20,898	17,434	19,715	20,406	21,243	22,731
Accommodation and food services	16,908	18,479	6,119	8,291	8,581	8,933	9,559
Transport, postal and warehousing	7,682	9,222	9,130	9,070	9,388	9,773	10,458
Information media and telecommunications	4,919	4,619	4,958	4,629	4,792	4,988	5,337
Financial and insurance services	12,416	11,813	12,484	11,664	12,072	12,567	13,448
Rental hiring and real estate services	2,779	2,609	2,834	2,582	2,673	2,782	2,977
Professional scientific and technical services	33,208	33,527	31,278	33,231	34,396	35,806	38,314
Administrative and support services	11,252	11,359	8,120	10,862	11,242	11,703	12,523
Public administration and safety	39,195	41,659	45,031	41,755	43,218	44,990	48,142
Education and training	22,500	20,949	21,739	19,803	20,496	21,337	22,831
Health care and social assistance	26,596	24,374	26,186	23,368	24,187	25,178	26,942
Arts and recreations services	5,366	5,678	2,133	3,111	3,220	3,352	3,587
Personal Services	8,741	9,250	6,352	8,390	8,684	9,039	9,673
Total	**260,700**	**262,783**	**241,001**	**244,790**	**253,367**	**263,753**	**282,231**

4.4 Unemployment

Wellington regional unemployment is expected to peak at 7.6 percent in 2021. This will see 21,668 unemployed from a labour force of 285,105 people. In 2022 as the recovery takes effect the unemployment rate will drop to 6.7 percent (19,207 people unemployed).

Looking ahead to 2030 the total number of unemployed (14,879) will still be above the total number of unemployed in 2020 (14,100). However, this is consistent with the growth in the population and an unemployment rate of 4.6 percent.

Table 4.8 Wellington region unemployment statistics 2020-2030

	2020	2021	2022	2023	2025	2030
FTEs	262,783	213,254	244,790	253,367	263,753	282,231
Total employed	287,247	263,437	267,579	276,954	288,307	308,505
Total unemployed	14,100	21,668	19,207	18,209	16,792	14,879
Labour force	301,347	285,105	286,784	295,162	305,099	323,383
Not in labour force	125,846	144,670	145,124	139,628	138,847	142,478
Change in employment minus change in unemployed	-	-	1,680	2,881	4,728	3,058
Unemployment rate (%)	4.7	7.6	6.7	6.2	5.5	4.6

Across the region the number of unemployed will increase by 7,568 people (53.7 percent) from 2020 to 2021. At a territorial authority level Wellington City has the largest increase in the number of unemployed in the year to March 2021 with 8,647 people expected to be unemployed. This is a 98.2 percent increase from 2020 and is the highest among the territorial authorities.

Longer periods of lockdown will have a greater impact than in scenario one. This high level of unemployment will begin to decline in 2022. In Wellington City, where accommodation and food services and arts and recreation employment will he hit hard, 1,096 previously unemployed people from 2021 in Wellington City will find new employment.

Table 4.9 Wellington unemployment by territorial authority 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,252	1,487	1,982	1,770	1,720	1,650	1,555
Porirua City	1,633	1,987	2,473	2,326	2,259	2,163	2,034
Upper Hutt City	1,034	1,254	1,535	1,508	1,462	1,398	1,311
Lower Hutt City	3,262	3,846	5,391	4,481	4,313	4,074	3,752
Wellington City	3,606	4,363	8,647	7,551	6,951	6,099	4,948
Wairarapa	1,015	1,163	1,639	1,570	1,503	1,408	1,280
Wellington Region	**11,802**	**14,100**	**21,668**	**19,207**	**18,209**	**16,792**	**14,879**

All other territorial authorities will see the number of unemployed increase by greater than 20 percent in 2021. Wairarapa (40.9 percent) and Lower Hutt City (40.2 percent) will see unemployment increase by greater than 40 percent from 2020 to 2021. Upper Hutt City has the lowest proportional decrease in unemployment (22.4 percent) followed by Porirua City (24.5 percent).

Looking out towards 2030 the unemployment rate in the Wellington region will fall from a high of 7.6 percent in 2021 to 6.7 percent in 2022 and 6.2 percent in 2023. The unemployment rate will continue to decline out to 2030 when it will be around 4.6 percent. Slightly above pre COVID-19 levels.

4.5 Household income

Household income across the Wellington region is expected to fall by 16.9 percent in 2021 ($3.7 billion). In 2020 household income was $21.6 billion as shown in Table 4.10. The impact of COVID-19 in this scenario will see household income fall to $17.9 billion in 2021. As the economy recovers this will bounce back to $20.3 billion in 2022 before returning to a pre COVID-19 level by 2024.

The increase in household income will be 13.5 percent ($2.4 billion) in 2022 and 4.5 percent ($915 million) in 2023 before steeling into a lower level of growth as things return to what will be considered normal once the shock of COVID-19 subsides.

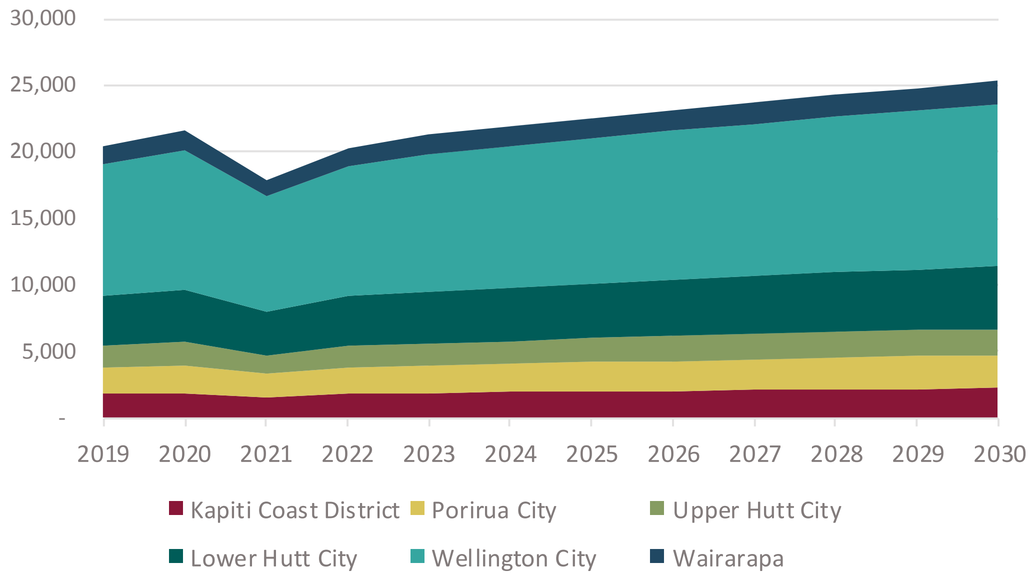
Table 4.10 Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,758	1,862	1,538	1,756	1,835	1,948	2,189
Porirua City	1,998	2,120	1,753	1,998	2,088	2,217	2,492
Upper Hutt City	1,597	1,703	1,413	1,606	1,678	1,781	2,002
Lower Hutt City	3,766	3,983	3,291	3,755	3,925	4,166	4,682
Wellington City	9,860	10,424	8,689	9,828	10,271	10,903	12,254
Wairarapa	1,387	1,461	1,218	1,377	1,439	1,528	1,717
Wellington Region	**20,367**	**21,553**	**17,902**	**20,321**	**21,236**	**22,542**	**25,335**

The decline in household income will be between 17.4 percent in Lower Hutt City and Kapiti Coast District and 16.6 percent in the Wairarapa and Wellington City. As the recovery takes effect in 2022 household spending will increase with the largest proportional increases in Kapiti Coast District and Lower Hutt City (14.1 percent). As the recovery continues from 2023 household incomes will increase across the region from between 4.5 percent and 2.1 percent out to 2030.

A low is expected in 2021 when household income is $17.9 billion. This will increase by 41 percent ($7.4 billion) to reach $25.3 billion by 2030.

Figure 4.4 Wellington region household income by territorial authority 2019-2030 ($million)



4.6 Consumer spending

Consistent with a decrease in household income will be a decrease in consumer spending. Consumer spending in the Wellington region is expected to decrease from $10.9 billion in the year to March 2020 to $9.7 billion in the same period to March 2021 as shown in Table 4.11. Consumer spending in 2021 will be similar to the level of consumer spending experienced in 2019.

This decline in consumer spending from 2020 to 2021 will be $946 million. The increase in 2022 will be $602 million.

As incomes grow during the recovery consumer spending will also increase. Between 2024 and 2030 Wellington region consumer spending will increase from $10.9 billion in 2024 to $11.6 billion in 2025.

As the recovery continues consumer spending in the region will grow steadily out to 2030. Consumer spending will reach $12.9 billion by 2030. This is a 24.2 percent increase from the low of 2021.

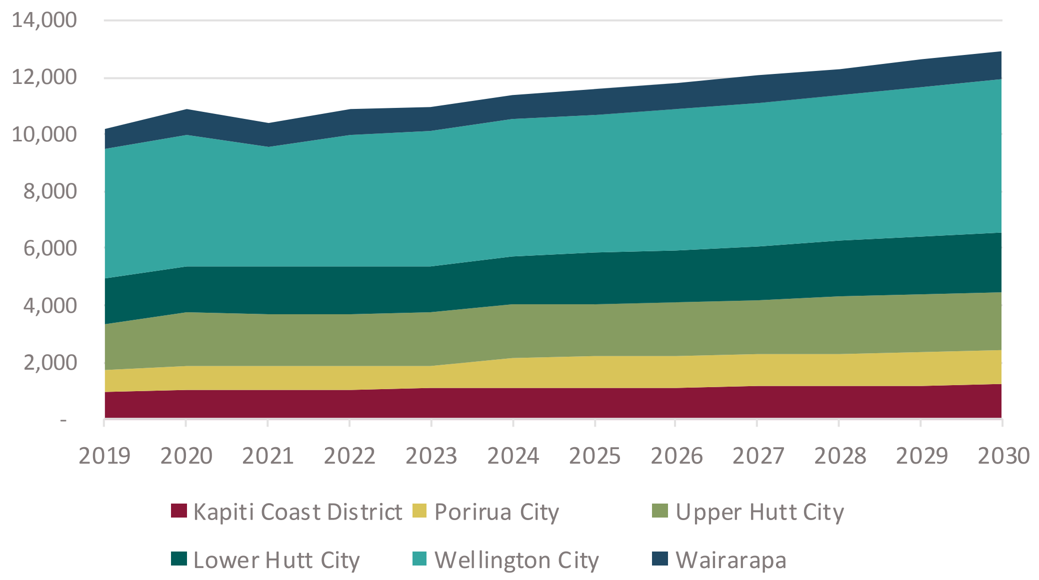
Table 4.11 Wellington region consumer spending by territorial authority 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	932	1,064	1,060	1,061	1,068	1,099	1,232
Porirua City	823	839	832	829	830	1,088	1,181
Upper Hutt City	1,614	1,831	1,823	1,824	1,834	1,881	2,075
Lower Hutt City	1,585	1,634	1,632	1,645	1,673	1,766	2,105
Wellington City	4,520	4,645	4,202	4,659	4,708	4,865	5,338
Wairarapa	756	865	864	866	872	900	1,003
Wellington Region	**10,231**	**10,878**	**10,412**	**10,885**	**10,984**	**11,599**	**12,935**

Wellington City consumer spending will decline by 9.4 percent in 2021. This is consistent with higher levels of unemployment and lower GDP growth. As the economy recovers in 2022 Wellington City consumer spending will then increase by 10.9 percent from the 2021 low. Consumer spending will continue to increase in Wellington City between 1.8 and 2.5 percent for the rest of the decade.

The consumer spending by territorial authority areas will decline in 2021 due to the alert level restrictions. As the recovery continues consumer spending in the region will grow steadily out to 2030. Territorial authority areas will see consumer spending increase slightly in 2021 and 2022 before the recovery gets into full swing from 2024. From 2024 onwards consumer spending will increase by over $10 million per year for each territorial authority area for the rest of the decade.

Figure 4.5 Wellington region consumer spending by territorial authority 2019-2030 ($million)



4.7 Māori economy

The Wellington region Māori economy GDP will drop 13 percent ($479 million) from 2020 to 2021 as shown in Table 4.12. This is five percentage points greater than scenario one. All industries will suffer a decline in GDP in 2021. Like scenario one, the industries with the greatest total losses of GDP between 2020 and 2021 are the same as the region as a whole with retail trade ($44 million), accommodation and food services ($41 million) and arts and recreation services ($53 million). The percentage decreases for these industries are 24 percent, 70 percent and 66 percent respectively.

Administrative and support services (36 percent) and personal services (38 percent) are the other industries that will see declines above 20 percent. All industries will then see a recovery in 2022.

Table 4.12 Wellington region Māori economy GDP 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	62	62	60	64	67	71	79
Mining	94	95	83	97	101	107	120
Manufacturing	289	291	259	298	311	330	371
Electricity and waste services	128	129	123	132	138	146	164
Construction	330	332	278	340	355	377	423
Wholesale trade	136	136	120	137	143	152	171
Retail trade	214	214	160	206	216	229	257
Accommodation and food services	67	64	19	30	31	33	37
Transport, postal and warehousing	130	130	115	131	137	145	163
Information media and telecommunications	155	156	150	160	167	177	199
Financial and insurance services	479	481	455	485	507	538	605
Rental hiring and real estate services	57	57	55	57	60	64	72
Professional scientific and technical services	485	487	407	492	515	546	614
Administrative and support services	51	51	33	50	52	55	62
Public administration and safety	484	486	470	497	519	551	620
Education and training	154	154	143	149	156	165	186
Health care and social assistance	307	308	296	301	315	334	375
Arts and recreations services	83	80	27	46	48	51	57
Personal Services	49	49	30	46	48	51	57
Total	**3,754**	**3,763**	**3,284**	**3,715**	**3,883**	**4,121**	**4,632**

Looking out to 2030 the Māori economy in the Wellington region will grow to 23 percent above its 2020 level and 41 percent above the low expected in 2021. Māori economy GDP will return above pre COVID-19 levels by 2023.

5 Scenario three (Worst case)

Scenario three is the worst scenario for the economic recovery from the health response to COVID-19. Like scenarios one and two the scenario begins from April 2020, when New Zealand entered alert level four. The scenario then assumes that New Zealand will suffer a second and third wave of the virus when restrictions are eased and we move to level two. Current trends indicate that if New Zealand continues to be successful, this scenario is unlikely. This scenario will see New Zealand twice repeat the cycle we have been through, moving down from alert level four down to three then two. This will see two further cycles follow where we have a month at alert level four before then moving back down for a month at alert level three then two months at alert level two. This will result in a total of three months at alert level four, three months at alert level three and six months at alert level two.

To account for the additional time required to manufacture and distribute the vaccine an additional twelve months at alert level one is included until the end of the year to March 2022. This is to account for the border restrictions that will be in place while distribution occurs. We have referred to this as alert level one (2021).

This scenario will see the same types of impacts as seen in the other two scenarios. However, because of the time spent at higher alert levels and the longer period to allow for the vaccine, the impact of measures to combat the spread of COVID-19 will be much greater. This will result in a lower starting position at a later time from which to recover than the previous scenarios. As a result, the initial losses will be higher than previous scenarios. However, as there will be more activity returning in 2022 the initial recovery will be greater than scenario one before levelling out. Overall this scenario has a longer recovery and growth will be lower over the period to March 2030.

Table 5.1 Time spent at each alert level in scenario three and GDP reduction

Alert level	Months	GDP Reduction (%)
Level four	3	37.0
Level three	3	19.0
Level two	6	8.8
Level one	-	3.8
Level one (2021)	12	4.8

Table 5.2 Time spent at each alert level in scenario three by month 2020, 2021 and 2022

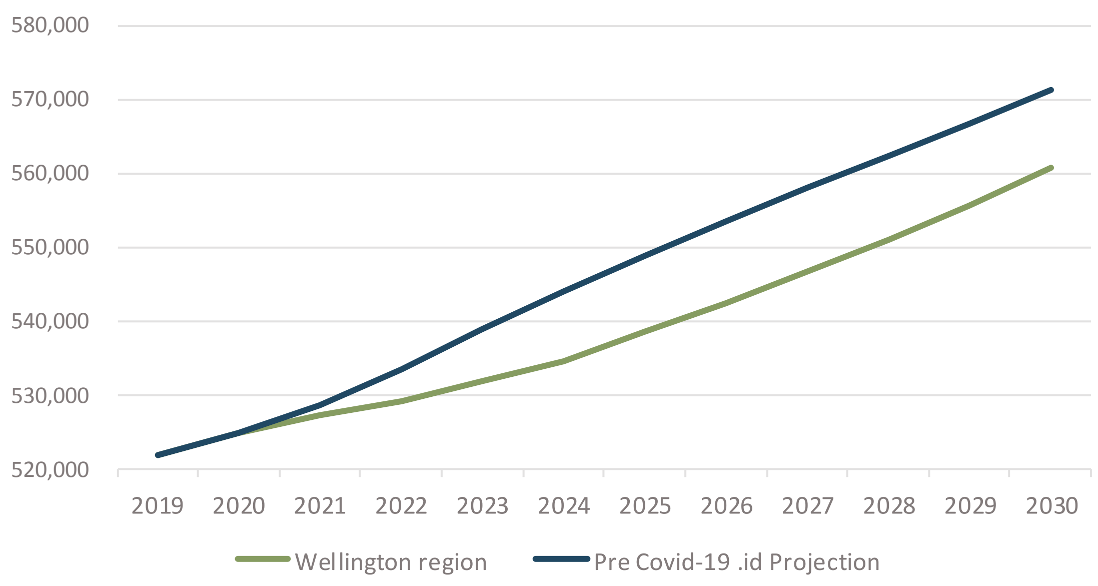
<table>
<tr><th>Month</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Jan</td><td rowspan="3"></td><td>Alert level 3</td><td rowspan="3">Alert level 1 (2021)</td></tr>
<tr><td>Feb</td><td rowspan="2">Alert level 2</td></tr>
<tr><td>March</td></tr>
<tr><td>April</td><td>Alert level 4</td><td rowspan="9">Alert level 1 (2021)</td><td rowspan="9">Long term recovery</td></tr>
<tr><td>May</td><td>Alert level 3</td></tr>
<tr><td>June</td><td rowspan="2">Alert level 2</td></tr>
<tr><td>July</td></tr>
<tr><td>Aug</td><td>Alert level 4</td></tr>
<tr><td>Sept</td><td>Alert level 3</td></tr>
<tr><td>Oct</td><td rowspan="2">Alert Level 2</td></tr>
<tr><td>Nov</td></tr>
<tr><td>Dec</td><td>Alert level 4</td></tr>
</table>

5.1 Population

Under this scenario the population of the Wellington region is expected to increase to 560,715 by 2030 as shown in Table 5.3. This is a 6.8 percent increase (35,839 people) from 2020. Population growth is expected to be slower than in the other scenarios. Once the country moves away from the restrictions put in place at all alert levels and the economic situation begins to improve the population growth is expected to pick up.

The rate of job creation is expected to be lower than scenarios one and two. This will slow the growth of the population sourced from elsewhere in the country who move into the region for employment opportunities. The longer period spent at higher alert levels than in scenario one and a longer time allowed for border restrictions to ease will delay the recovery and as a result all indicators, including population being lower by comparison.

Figure 5.1 Wellington region population 2019-2030



As in the other scenarios, Wellington City is expected to have the greatest growth in population from 2020 to 2030 with an additional 12,422 residents as shown in table 5.3. The population of Wellington City is forecast to increase 5.3 percent from 214,537 people in 2020 to 226,959 in 2030.

Porirua City will have the largest proportional increase in population. Porirua City is expected to grow by 18.6 percent from 2020 to 2030. This will see Porirua City's population increase by 11,028 residents to 70,258 by 2030.

Kapiti Coast District will increase its population by 6.7 percent to just under 60,000. In the other two more optimistic scenarios the population for Kapiti Coast District is expected to have a population above 60,000 by 2030.

All other districts in the region will grow by less than the Wellington average of 6.8 percent over the period. With Upper Hutt City growing the least at 2.3 percent. Lower Hutt City will grow by 4.4 percent over the period. Similar to scenario two, Wairarapa will grow slightly below the Wellington regional average. In this scenario the growth is 6.7 percent.

Table 5.3 Wellington region population by territorial authority 2019-2030

Total Population	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	55,163	55,503	55,710	55,847	55,995	56,512	59,205
Porirua City	58,606	59,230	59,600	60,139	60,954	63,083	70,258
Upper Hutt City	44,126	44,084	43,955	43,766	43,644	43,785	45,092
Lower Hutt City	105,702	105,722	106,046	106,192	106,396	107,031	110,322
Wellington City	212,923	214,537	215,891	216,937	218,521	221,400	226,959
Wairarapa	45,400	45,800	46,069	46,217	46,384	46,913	48,878
Wellington Region	**521,920**	**524,876**	**527,271**	**529,099**	**531,895**	**538,723**	**560,715**

5.2 Gross domestic product (GDP)

Similar to population, the GDP recovery will be less than the proceeding scenarios over the ten year period. The longer period of inaction in 2021 due to the tougher alert level restrictions being in place for longer, GDP will take the biggest hit in 2021 in this scenario. However, this will be partially offset by a greater recovery in 2022. The impact of COVID-19 will cause the GDP of the Wellington region to fall by $565.2 million between 2020 and 2021 (17.3 percent). GDP in the year ending March 2021 is forecast to fall to $25.4 billion as shown in table 5.4. This will then pick up again in 2022 when GDP is expected to recover by 18.7 percent ($500.4 million) to $30.2 billion. By 2023 GDP in the region will increase a further 2.7 percent from 2022 to $31.0 billion.

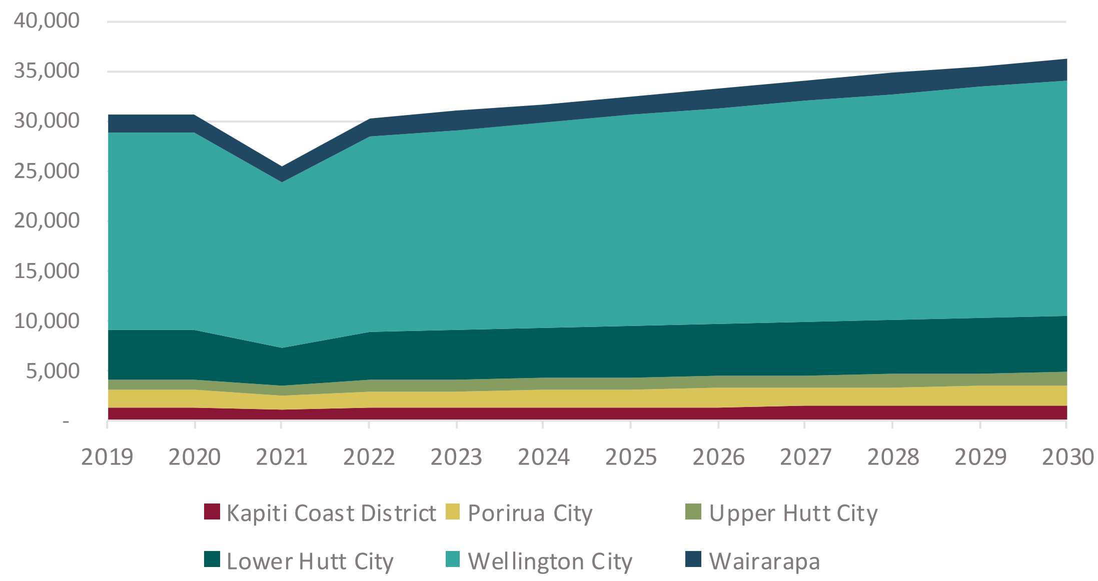
We expect that Kapiti Coast District and Lower Hutt City will face the largest percentage decline in GDP in 2021. Kapiti Coast District GDP is expected to decline by 20.1 percent. This is nearly double the best case scenario. Lower Hutt City will decline by 19.3 percent. Of the remaining territorial authority areas, Porirua City will also experience a GDP decrease of greater than 18 percent (18.9 percent). All other territorial authority areas will have GDP declines of between 16.5 percent (Wellington City) and 17.4 percent (Upper Hutt City). The three authorities that experienced the greatest decline in 2021 will also experience the biggest bounce back in 2022. Kapiti Coast District will grow by 20.9 percent and Lower Hutt City GDP will grow by 21.5 percent. Porirua City will grow GDP in 2022 by 20 percent.

Table 5.4 Wellington territorial authority GDP 2019-2030.

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,285	1,286	1,028	1,243	1,276	1,339	1,493
Porirua City	1,701	1,703	1,382	1,659	1,703	1,788	1,993
Upper Hutt City	1,178	1,180	975	1,155	1,186	1,245	1,388
Lower Hutt City	4,828	4,836	3,900	4,738	4,865	5,107	5,695
Wellington City	19,850	19,892	16,615	19,579	20,102	21,103	23,531
Wairarapa	1,845	1,848	1,538	1,810	1,858	1,951	2,175
Wellington Region	**30,688**	**30,746**	**25,437**	**30,183**	**30,989**	**32,532**	**36,276**

The rate of GDP growth will then become more level and will grow at a slowing rate to 2030. By 2030 Wellington region GDP is forecast to be $36.3 billion. This is an 18 percent increase from 2020 and a 42.6 percent increase from projected the low of 2021.

Figure 5.2 Wellington regional GDP 2019-2030 ($million)



5.2.1 GDP by industry

In this scenario every industry is expected to have reductions in GDP above 4 percent in 2021. This ranges from a 74.4 percent decrease in accommodation and food services to 4 percent for rental hiring and real estate services. The top five industries by GDP in 2020 the Wellington region will be impacted as follows in 2021:

- Professional scientific and technical services will fall by 23.5 percent ($1.03 billion)
- Public administration and safety will decline by 4.9 percent ($207.7 million)
- Financial and insurance services is expected to fall by 7.7 percent ($249.4 million)
- Health care and social assistance will decline by 4.7 percent ($116.6 million)
- Information media and telecommunications will decline by 7.1 percent ($138.7 million).

As the recovery continues to pick up momentum in 2022 all industries will see GDP growth as shown in table 5.5. By 2023 GDP will return to 2020 levels.

Arts and recreation services will recover in 2021 but will still be well below pre COVID-19 GDP levels. The impact on arts and recreation will continue through 2021 and beyond. Arts and recreation services are only expected to return to 68 percent of its 2020 level.

Personal services will recover by 31.8 percent in 2022 and by 2025 will grow to levels that were close to 2020.

Table 5.5 Wellington region GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	461	464	440	473	486	510	569
Mining	591	595	479	607	623	654	729
Manufacturing	1,752	1,761	1,472	1,798	1,846	1,938	2,161
Electricity and waste services	1,025	1,030	956	1,052	1,080	1,133	1,264
Construction	1,823	1,833	1,389	1,871	1,921	2,016	2,248
Wholesale trade	1,143	1,147	950	1,151	1,182	1,241	1,384
Retail trade	1,702	1,703	1,137	1,638	1,682	1,765	1,968
Accommodation and food services	832	796	204	371	381	400	446
Transport, postal and warehousing	1,149	1,153	961	1,156	1,187	1,246	1,389
Information media and telecommunications	1,956	1,967	1,828	2,008	2,061	2,164	2,413
Financial and insurance services	3,231	3,244	2,994	3,262	3,349	3,516	3,920
Rental hiring and real estate services	717	720	691	726	745	782	872
Professional scientific and technical services	4,379	4,398	3,370	4,441	4,560	4,787	5,338
Administrative and support services	694	695	364	678	696	731	815
Public administration and safety	4,219	4,242	4,034	4,329	4,445	4,666	5,203
Education and training	1,549	1,549	1,427	1,492	1,532	1,608	1,794
Health care and social assistance	2,460	2,463	2,347	2,406	2,470	2,593	2,892
Arts and recreations services	539	521	148	295	303	318	355
Personal Services	465	464	245	430	441	463	517
Total	**30,688**	**30,746**	**25,437**	**30,183**	**30,989**	**32,532**	**36,276**

A territorial breakdown of GDP by industry is included in Appendix H.

5.3 Employment

In this scenario full time equivalent employees (FTEs) in the year to March 2020 is expected to fall by 11 percent (28,775 FTEs) by March 2021 to 234,008 FTEs as shown in table 5.6. In 2022 there will be a 4.4 percent increase in the number of FTEs in the Wellington region when total employees will increase to 244,200 employees.

In 2023 employment will continue to bounce back. However, the growth in employment will slow to 1.7 percent (4,082 FTEs). As the recovery continues the growth in the number of FTEs will decrease as the economy re-establishes itself and develops in a new economic environment. It will take until 2028 for the number of employed to reach the same level as 2020. Given the growing population this will mean a higher unemployment rate.

Total employment in the region will reach 271,314 by 2030. This is an increase of 15.9 percent (37,314 FTEs) from the low expected in 2021 and 3.2 percent (8,539 FTEs) above 2020.

Table 5.6 Wellington regional employment by territorial authority 2019-2030

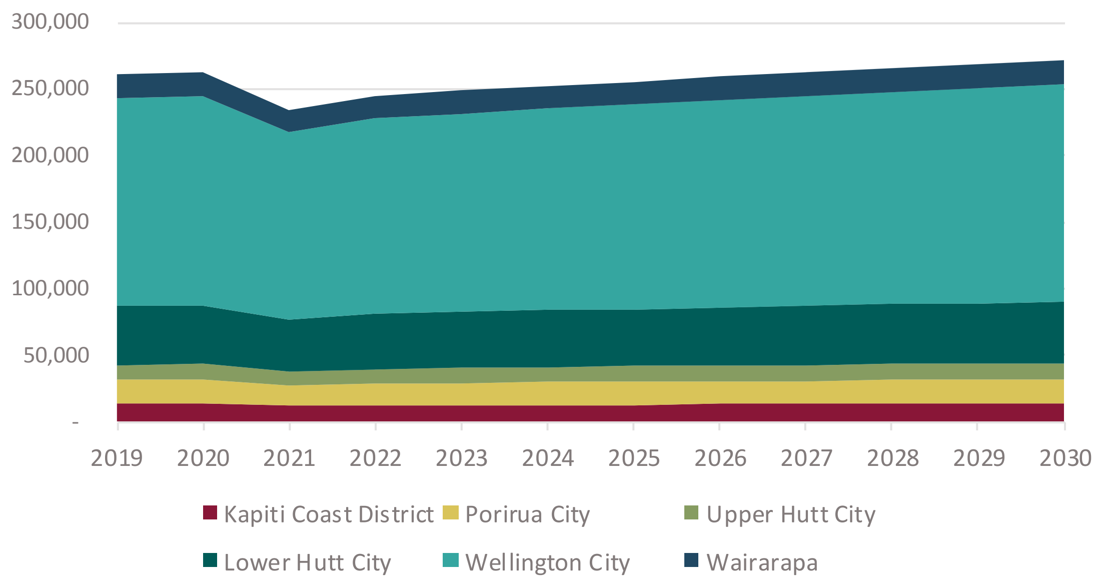
Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	13,253	13,285	11,443	12,155	12,359	12,722	13,506
Porirua City	17,847	17,721	15,841	16,509	16,785	17,278	18,342
Upper Hutt City	11,704	11,909	10,844	11,116	11,302	11,634	12,350
Lower Hutt City	44,505	44,317	38,297	41,167	41,855	43,086	45,739
Wellington City	155,719	157,855	141,673	146,860	149,315	153,707	163,170
Wairarapa	17,672	17,697	15,909	16,394	16,668	17,158	18,215
Wellington Region	**260,700**	**262,783**	**234,008**	**244,200**	**248,283**	**255,586**	**271,322**

Kapiti Coast District will have the greatest proportional drop in employment in 2021. Employment will fall by 13.9 percent (1,842 FTEs). Lower Hutt City will see the second largest proportional drop of 13.6 percent. The 6,019 jobs lost in Lower Hutt City is the second largest total FTE loss behind Wellington City which will see 16,182 FTE jobs lost (10.3 percent).

Looking ahead to 2022 Wellington City will see employment grow again. Wellington City will see 5,186 FTEs return. A positive sign from Lower Hutt City is the addition of 2,870 FTEs in 2022.

By 2023 when the recovery will be in full effect, all TLAs will continue to see increases in employment. Wellington City will see an additional 2,455 FTEs and Lower Hutt City will see 688 FTEs return. The other territorial authorities will see increases of between 276 FTEs (Porirua City) and 186 FTEs (Upper Hutt City). Looking out to 2030 employment growth will continue but the rate of growth will decline as the economy returns to the trajectory it was on before the impacts of COVID-19.

Figure 5.3 Wellington regional employment by territorial authority 2019-2030 (FTEs)



5.3.1 Employment by industry

All of the 19 Australian and New Zealand Standard Industrial Classification (ANZSIC) industries will see employment fall in this scenario as shown in table 5.7. The industries that were impacted hardest in scenarios one and two will face greater impacts in this scenario. Across the region 28,775 FTEs will be lost from 2020 to 2021.

The two industries with the biggest fall in employment will again be accommodation and food services, which will fall by 71.3 percent (13,179 FTEs) and arts and recreational services that will see regional employment fall by 68.2 percent (3,871 FTEs). Retail trade will also lose 4,890 FTEs which is equal to 23.4 percent of FTEs in this industry. These three industries will account for 76 percent of all jobs lost in 2021.

In 2022 total employment will increase by 10,193 FTEs. However the impact of COVID-19 will continue to be felt on industries indirectly impacted. If this scenario continues FTEs will be lost from the following industries:

- Agriculture, fishing and forestry (8.5 percent decrease)
- Electricity and waste services (6.4 percent decrease)
- Information media and telecommunications (6.5 percent decrease)
- Financial and insurance services (7.3 percent decrease)
- Rental hiring and real estate services (10.6 percent decrease)
- Public administration and safety (8.7 percent decrease)
- Education and training (11.1 percent decrease)
- Health care and social assistance (12.8 percent decrease).

In 2023 all industries will see positive growth in FTEs with the region adding 4,082 FTEs.

By 2030 employment in the region will be 271,322 FTEs. This is a 3.2 percent increase from 2020 and a 15.9 percent increase from the low expected in 2021.

Table 5.7 Wellington regional employment by industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	3,713	3,755	4,107	3,757	3,820	3,932	4,174
Mining	417	421	390	421	428	441	468
Manufacturing	13,867	13,144	12,637	13,146	13,366	13,759	14,606
Electricity and waste services	2,205	2,090	2,233	2,091	2,126	2,188	2,323
Construction	21,403	21,426	18,648	21,419	21,777	22,418	23,798
Wholesale trade	8,411	7,510	7,153	7,382	7,505	7,726	8,202
Retail trade	19,122	20,898	16,008	19,664	19,993	20,581	21,848
Accommodation and food services	16,908	18,479	5,300	8,233	8,370	8,616	9,147
Transport, postal and warehousing	7,682	9,222	8,837	9,052	9,204	9,474	10,058
Information media and telecommunications	4,919	4,619	4,944	4,621	4,698	4,836	5,134
Financial and insurance services	12,416	11,813	12,558	11,642	11,837	12,185	12,935
Rental hiring and real estate services	2,779	2,609	2,884	2,577	2,621	2,698	2,864
Professional scientific and technical services	33,208	33,527	29,515	33,158	33,712	34,704	36,840
Administrative and support services	11,252	11,359	6,805	10,817	10,997	11,321	12,018
Public administration and safety	39,195	41,659	45,637	41,679	42,376	43,622	46,308
Education and training	22,500	20,949	22,223	19,767	20,097	20,688	21,962
Health care and social assistance	26,596	24,374	26,748	23,326	23,716	24,413	25,916
Arts and recreations services	5,366	5,678	1,807	3,090	3,141	3,234	3,433
Personal Services	8,741	9,250	5,573	8,359	8,499	8,749	9,287
Total	**260,700**	**262,783**	**234,008**	**244,200**	**248,283**	**255,586**	**271,322**

5.4 Unemployment

In this scenario Wellington region unemployment is expected to peak at nine percent in 2021 as shown in Table 5.7. This will see 25,298 unemployed from a labour force of 281,091 people. In 2022 as the recovery takes effect the unemployment rate will drop to eight percent (23,279 people unemployed).

Looking ahead to 2030 the total number of unemployed (18,077) will still be above the total number of unemployed in 2020 (14,100). However, this is consistent with the growth in the population and an unemployment rate of 5.7 percent which is still above pre COVID-19 levels.

Table 5.8 Wellington region unemployment statistics 2020-2030

	2020	2021	2022	2023	2025	2030
FTEs	262,783	201,013	244,200	248,283	255,586	271,322
Total employed	287,247	255,793	266,935	271,397	279,380	296,581
Total unemployed	14,100	25,298	23,275	21,837	20,142	18,077
Labour force	301,347	281,091	290,210	293,233	299,522	314,657
Not in labour force	125,846	148,684	141,666	141,524	141,956	146,308
Change in employment minus change in unemployed	-	-	2,100	2,882	3,148	2,931
Unemployment rate (%)	4.7	9.0	8.0	7.4	6.7	5.7

Across the region the number of unemployed will increase by 79.4 percent (11.198 people) from 2020 to 2021. At a territorial authority level Wellington City has the largest increase in the number of unemployed in the year to March 2021 with 6,297 people expected to become unemployed. This is a 144.3 percent increase from 2020 and is the highest among the territorial authorities.

The industries with high unemployment have a high concentration in Wellington City such as accommodation and food services, retail trade and arts and recreational services and will be impacted hardest. Longer periods of lockdown will have a greater impact than in scenarios one and two. The high level of unemployment will begin to decline in 2022 when 2,023 previously unemployed people from 2021 in Wellington City will find new employment as shown in table 5.9.

Table 5.9 Wellington unemployment by territorial authority 2019-2030

Total unemployed	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,252	1,487	2,204	2,062	1,991	1,906	1,804
Porirua City	1,633	1,987	2,719	2,586	2,489	2,374	2,235
Upper Hutt City	1,034	1,254	1,668	1,614	1,549	1,472	1,378
Lower Hutt City	3,262	3,846	6,188	5,619	5,376	5,091	4,743
Wellington City	3,606	4,363	10,660	9,631	8,766	7,747	6,505
Wairarapa	1,015	1,163	1,859	1,763	1,666	1,552	1,414
Wellington Region	**11,802**	**14,100**	**25,298**	**23,275**	**21,837**	**20,142**	**18,077**

All other territorial authorities will see the number of unemployed increase by greater than 30 percent in 2021. Wairarapa (40.9 percent) and Lower Hutt City (40.2 percent) will see unemployment increase by greater than 40 percent from 2020 to 2021. Upper Hutt City has the lowest proportional increase in unemployment (33 percent) followed by Porirua City (36.8 percent).

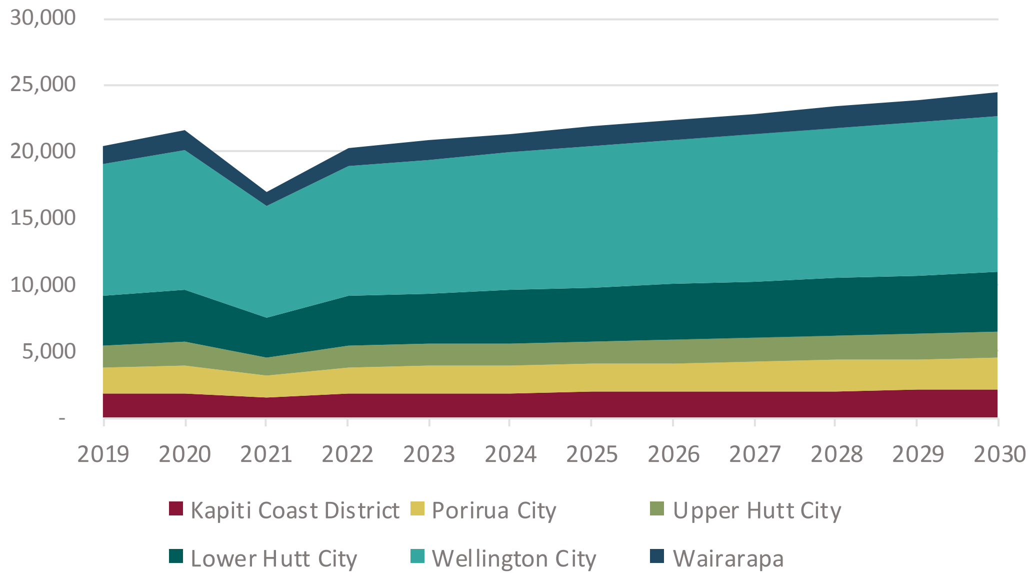
Looking out towards 2030 the unemployment rate in the Wellington region will fall from the high of nine percent in 2021 to eight percent in 2022 and 7.4 percent in 2023. The unemployment rate will continue to decline out to 2030 when it will be around 5.7 percent (18,077). The total number of unemployed in the region will remain above pre COVID-19 levels.

5.5 Household income

Household income across the Wellington region is expected to fall by 21.1 percent ($4.5 billion) in 2021 as shown in Table 5.13. In 2020 household income was $21.6 billion. The impact of COVID-19 in this scenario will see household income fall to $17.0 billion in 2021. As the economy recovers this will bounce back to $20.3 billion in 2022 before returning to a pre COVID-19 level by 2023.

As the economy recovers the increase in household income will be 19.3 percent in 2022 ($3.3 billion) and 2.7 percent in 2023 ($542 million) before settling into a lower level of growth as things return to what will be considered normal once the shock of COVID-19 subsides.

Figure 5.4 Wellington region household income 2019-2030 ($million)



The decline in household income will be between 21.8 percent in Kapiti Coast District and 20.6 percent in the Wairarapa and Wellington City. As the recovery takes effect in 2022 household spending will increase with the largest proportional increases in Kapiti Coast District and Lower Hutt City (20.3 percent). As the recovery continues from 2023 household incomes will increase across the region from between 2.7 percent and 2.1 percent out to 2030.

The low point for household income is expected in 2021 when household income is $17.0 billion. This will increase by 43.3 percent ($7.4 billion) to reach $24.4 billion by 2030.

Table 5.10 Wellington region household income by territorial authority 2019-2030 ($million)

Total Household Income ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	1,758	1,862	1,457	1,753	1,799	1,889	2,106
Porirua City	1,998	2,120	1,662	1,995	2,048	2,150	2,398
Upper Hutt City	1,597	1,703	1,340	1,603	1,646	1,728	1,927
Lower Hutt City	3,766	3,983	3,117	3,749	3,849	4,041	4,505
Wellington City	9,860	10,424	8,274	9,811	10,073	10,575	11,791
Wairarapa	1,387	1,461	1,159	1,375	1,412	1,482	1,652
Wellington Region	**20,367**	**21,553**	**17,010**	**20,285**	**20,827**	**21,864**	**24,380**

5.6 Consumer spending

Consistent with a decrease in household income will be a decrease in consumer spending. In this scenario consumer spending in the Wellington region is expected to decrease from $10.9 billion in the year to March 2020 to $9.9 billion in the same period to March 2021 as shown in table 5.11. Consumer spending in 2021 will be less than the level of consumer spending experienced in 2019.

This decline in consumer spending from 2020 to 2021 will be $889 million. The increase in 2022 will be above the 2020 level.

As incomes grow during the recovery consumer spending will also increase. Between 2025 and 2030 Wellington region consumer spending will increase from $11.6 billion to $12.7 billion.

As the recovery continues consumer spending in the region will grow steadily out to 2030. Consumer spending will reach $12.7 billion by 2030. This is a 16.7 percent increase from the low of 2021.

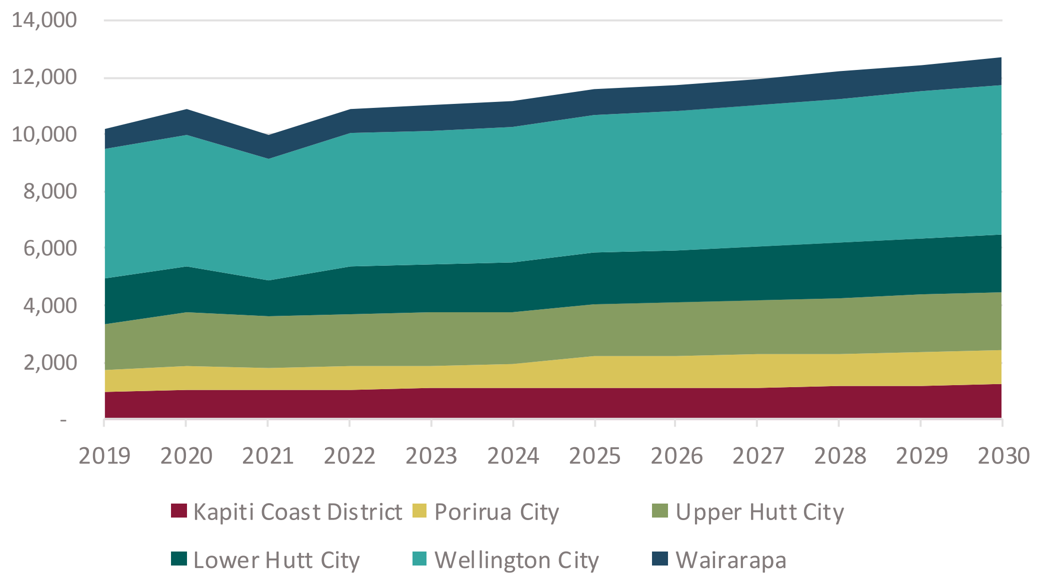
Table 5.11 Wellington region consumer spending by territorial authority 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2025	2030
Kapiti Coast District	932	1,064	1,062	1,065	1,071	1,095	1,210
Porirua City	823	839	754	828	832	1,096	1,201
Upper Hutt City	1,614	1,831	1,827	1,830	1,840	1,875	2,038
Lower Hutt City	1,585	1,634	1,267	1,651	1,679	1,760	2,067
Wellington City	4,520	4,645	4,212	4,675	4,725	4,849	5,242
Wairarapa	756	865	866	869	875	896	985
Wellington Region	**10,231**	**10,878**	**9,989**	**10,919**	**11,022**	**11,571**	**12,742**

Wellington City consumer spending will decline by 9.3 percent in 2021. As the economy recovers in 2022 Wellington City consumer spending will then increase by 11 percent from the 2021 low. Consumer spending will continue to increase in Wellington City between 0.9 and 2.2 percent for the rest of the decade.

The consumer spending will decline across all territorial authorities in 2021 due to the alert level restrictions being in place for longer. As the recovery continues consumer spending in the region will grow steadily out to 2030. The remaining territorial authority areas will see consumer spending increase slightly in 2021 and 2022 before the recovery gets into full swing from 2024. From 2025 onwards consumer spending will increase by over $10 million per year for each territorial authority areas for the rest of the decade.

Figure 5.5 Wellington region consumer spending by territorial authority 2019-2030 ($million)



5.7 Māori economy

The Wellington region Māori economy GDP will lose 17 percent ($642 million) from 2020 to 2021. All industries will see GDP decline as shown in table 5.12. The industries with the greatest total losses of GDP between 2020 and 2021 will be retail trade ($71 million), accommodation and food services ($47 million) and arts and recreation services ($57 million). The percentage decreases for these industries were 33 percent, 74 percent and 72 percent respectively.

Other industries with expected GDP declines greater that 20 percent in 2021 are:

- Mining (20 percent decline)
- Construction (24 percent)
- Professional scientific and technical services (23 percent)
- Personal Services (47 percent).

All industries will see a recovery in 2022.

Table 5.12 Wellington region Māori economy GDP 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Agriculture, fishing and forestry	62	62	59	64	65	69	76
Mining	94	95	76	96	99	104	116
Manufacturing	289	291	243	297	305	320	357
Electricity and waste services	128	129	120	132	135	142	158
Construction	330	332	252	339	348	365	407
Wholesale trade	136	136	113	137	140	147	164
Retail trade	214	214	143	206	212	222	248
Accommodation and food services	67	64	16	30	31	32	36
Transport, postal and warehousing	130	130	108	130	134	141	157
Information media and telecommunications	155	156	145	159	164	172	191
Financial and insurance services	479	481	444	484	497	522	582
Rental hiring and real estate services	57	57	55	57	59	62	69
Professional scientific and technical services	485	487	373	492	505	530	591
Administrative and support services	51	51	27	49	51	53	59
Public administration and safety	484	486	462	496	509	535	596
Education and training	154	154	142	149	153	160	179
Health care and social assistance	307	308	293	300	309	324	361
Arts and recreations services	83	80	23	45	47	49	55
Personal Services	49	49	26	46	47	49	55
Total	**3,754**	**3,763**	**3,120**	**3,709**	**3,808**	**3,997**	**4,457**

Looking out to 2030 the Māori economy in the Wellington region will grow to 19 percent above its 2020 level and 43 percent above the low expected in 2021. Māori economy GDP will return above pre COVID-19 levels by 2023.

6 Scenario comparisons

This section provides a comparison of the scenarios that have been presented independently earlier in the report. This has been done to allow for a comparison between the impacts of the different scenarios. Tables showing employment by sector are included in the 'scenario by the numbers' appendices, appendices C to E.

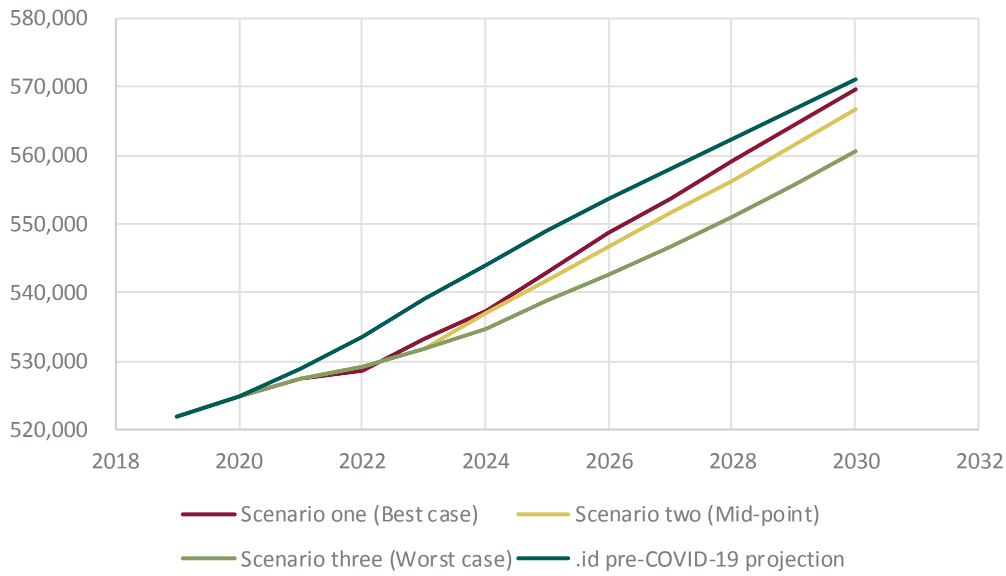
6.1 Population

Under all scenarios the population of the Wellington region will decline from the trend seen from 2019 to 2020. The population will grow from 524,876 people in 2020 to between 560,715 people by 2030 in the worst case scenario (scenario three) and 569,821 people in the best case scenario (scenario one). Buy 2030 the difference between the .id pre-COVID-19 projections is 1,474 residents in the best case scenario and 10,580 fewer in the worst case scenario.

Table 6.1 Wellington region population by scenario 2019-2030

Total Population	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	521,920	524,876	527,271	528,469	533,248	542,984	569,821
Scenario two (Mid-point)	521,920	524,876	527,271	529,139	531,935	541,735	566,670
Scenario three (Worst case)	521,920	524,876	527,271	529,099	531,895	538,723	560,715
.id pre-COVID-19 projection	521,920	524,876	528,771	533,482	538,953	548,912	571,295

Figure 6.1 Wellington region population by scenario 2019-2030



6.2 Gross domestic product

Across all scenarios the Wellington region will see a decline in GDP in 2021 before recovering in 2022. GDP will then continue to grow for the remainder of the decade. In the worst case scenario (scenario three) the GDP decline is largest (17.3 percent). However, it has the largest increase once businesses re open and the majority of economic activity resumes (17.7 percent).

Table 6.2 Wellington region GDP by scenario 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	30,688	30,746	28,193	30,389	32,070	34,142	38,452
Scenario two (Mid-point)	30,688	30,746	26,747	30,237	31,599	33,542	37,697
Scenario three (Worst case)	30,688	30,746	25,437	30,183	30,989	32,532	36,276

Figure 6.2 Wellington region gross domestic product by scenario 2019-2030 ($million)

6.3 Employment

As with the other indicators considered in this report employment will decline in 2021 as the job losses from the impact of COVID-19 are felt. Also like the other indicators the outlook looks best for scenario one and worst in scenario three. In the worst case scenario employment will fall 11 percent in 2021 before recovering to reach 271,322 FTEs by 2030. In the best case scenario employment will reach 288,055 by 2030.

Table 6.3 Wellington region employment by scenario 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	260,700	262,783	248,266	246,134	257,289	268,629	288,055
Scenario two (Mid-point)	260,700	262,783	241,001	244,790	253,367	263,753	282,231
Scenario three (Worst case)	260,700	262,783	234,008	244,200	248,283	255,586	271,322

Figure 6.3 Wellington region employment by scenario 2019-2020 (FTEs)

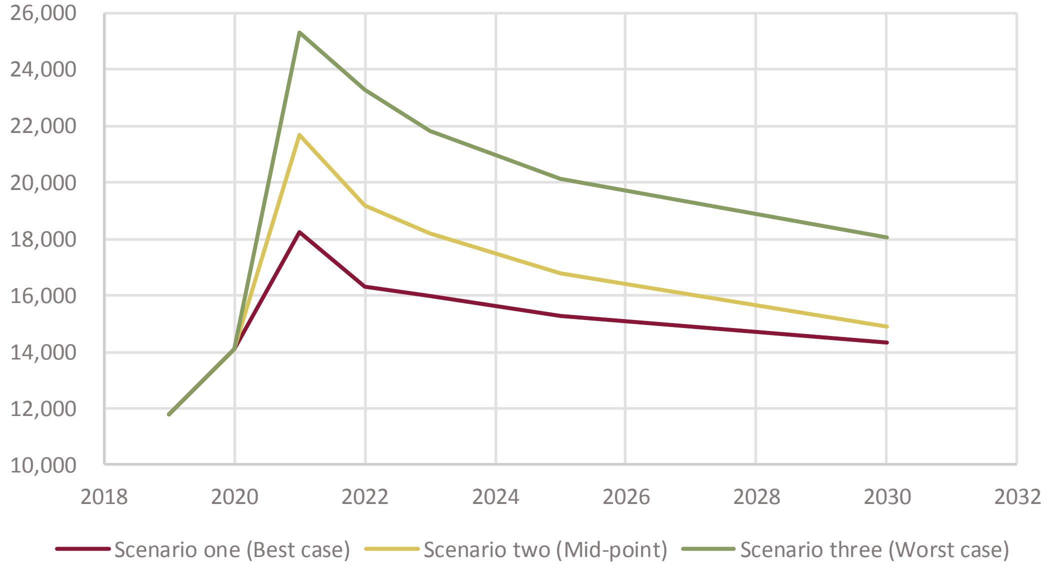
6.4 Unemployment

Unemployment will peak in 2021 under all scenarios. Scenario one will have the lowest number of unemployed with 18,246 people unemployed. This is 7,052 fewer unemployed than the worst case scenario. Looking towards the long term recovery by 2030 the difference in employment between the best and worst case scenarios will reduce to 3,722.

Table 6.4 Wellington region total unemployed by scenario 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	11,802	14,100	18,246	16,311	15,974	15,273	14,355
Scenario two (Mid-point)	11,802	14,100	21,668	19,207	18,209	16,792	14,879
Scenario three (Worst case)	11,802	14,100	25,298	23,275	21,837	20,142	18,077

Figure 6.4 Wellington region unemployment by scenario 2029-2030 (People)

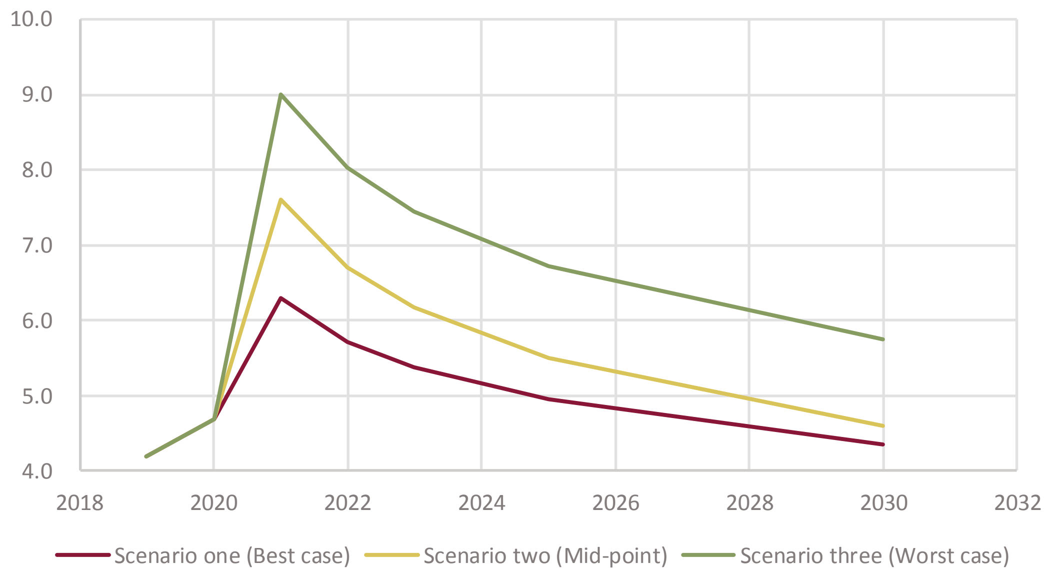


The unemployment rate for each scenario will reflect the number of people unemployed. The unemployment rate will be highest for all scenarios in 2021. Before recovering in 2022 and continuing to decline out to 2030. As expected the best case scenario has the lowest unemployment across all years while worst case scenario has unemployment that is 7.5 percentage points higher than the best case scenario. By 2030 the difference will decline to 1.3 percentage points.

Table 6.5 Wellington region unemployment rate by scenario 2019-2030

Unemploymentr rate (%)	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	4.2	4.7	6.3	5.7	5.4	4.9	4.4
Scenario two (Mid-point)	4.2	4.7	7.6	6.7	6.2	5.5	4.6
Scenario three (Worst case)	4.2	4.7	9.0	8.0	7.4	6.7	5.7

Figure 6.5 Wellington region unemployment rate by scenario 2020-2030 (percent)



6.5 Household income

Household income follows the trend of the indicators above, as they all impact on household incomes. All scenarios forecast a decline in 2021 followed by an increase in 2022 before settling into a long term recovery out to 2030. All scenarios expect to see household income increase to approximately the same level in 2022. However, in the best case scenario the economy is starting at a higher level than the worst case scenario. The lower GDP, lower population and higher unemployment experienced in the worst case scenario flows through to household incomes which will remain lower through the decade under the worst case scenario.

Table 6.6 Wellington region household income by scenario 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	20,367	21,553	18,894	20,423	21,553	22,946	25,842
Scenario two (Mid-point)	20,367	21,553	17,902	20,321	21,236	22,542	25,335
Scenario three (Worst case)	20,367	21,553	17,010	20,285	20,827	21,864	24,380

Figure 6.6 Wellington region household income by scenario 2019-2030 ($million)

6.6 Consumer spending

For all scenarios there will be a decline in 2021 before recovering in 2022 and continuing to grow out to 2030. As would be expected scenario one as the best case scenario has the best short and long term outcomes. This is the result of the economy being more active for longer with fewer periods at the higher alert levels and a shorter period to develop and distribute a vaccine when compared to the mid-point and worst case scenarios.

Table 6.7 Wellington region consumer spending by scenario 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2025	2030
Scenario one (Best case)	9,789	10,672	9,797	10,456	10,731	11,464	12,966
Scenario two (Mid-point)	10,231	10,878	10,412	10,885	10,984	11,599	12,935
Scenario three (Worst case)	10,231	10,878	9,989	10,919	11,022	11,571	12,742

Figure 6.7 Wellington region consumer spending by scenario 2019-2030 ($million)

7 Conclusion

This report makes a number of assumptions about the time spent at each alert level and the level of activity allowed. If the health and treatment responses are better than the scenarios we expect the economic impact will be less than the scenarios predict. Therefore the economic future of the region will be better with less time at each alert level. This will limit the total impact of COVID-19 on the wellbeing of the Wellington region. This would reduce the initial negative impacts and keep the economic trajectory of the region as close to pre-COVID-19 levels and trajectory as possible.

GWRC should assume that the Wellington region will see the impact of the response to COVID-19 across all indicators and all territorial authority areas. In every scenario there is a negative impact on all six indicators. As the name suggests (best case) the impact of COVID-19 is less in scenario one than at scenarios two and three.

Despite the impact of scenario one being less than scenarios two and three the impact will still be significant, and will see the region take a number of years to reach pre COVID-19 levels of GDP and employment. In the best case scenario (scenario one) it will take until 2023 or 2024 for most industries to return to levels of GDP and employment.

The industries that will be hardest hit by COVID-19 will be those that rely on face to face interactions. These include:

- Accommodation and food services
- Professional services
- Retail trade
- Personal services.

For these industries the levels of GDP and employment will not return to levels that were seen prior to COVID-19 in 2019 and 2020.

At the territorial authority level. We expect that Kapiti Coast District and Lower Hutt City will face the largest percentage decline in GDP in 2021. These two authorities that experienced the greatest proportional decline in 2021 will also experience the biggest proportional bounce back in 2022.

The same TLAs will see employment impacted the greatest. Kapiti Coast District will have the greatest proportional drop in employment in 2021 and Lower Hutt City will see the second largest proportional drop. The 2,844 jobs lost in Lower Hutt City is the second largest total FTE loss behind Wellington City in all scenarios.

Looking ahead to 2022, Wellington City will see employment fall further as the indirect and induced impacts of COVID-19 are felt in other industries. In 2022 Wairarapa will have the second highest number of total job losses across all TLAs. A positive sign for Lower Hutt City is that it will see FTEs increase in 2022 across the scenarios.

Looking ahead to 2023 when the recovery will be in full effect all territorial authorities will begin to see an increase in employment. Finally, looking out to 2030 employment and GDP growth will continue but the rate of growth will decline as the economy returns to the trajectory it was on before the impacts of COVID-19.

The industries that would benefit from fewer restrictions are expected to be those hardest impacted across the GDP and employment measures used in this report. These include:

- Accommodation and Food Services
- Arts and recreation services
- Retail trade.

The benefits that are experienced from these industries being able to increase activities have indirect and induced benefits that further reduce the impact of COVID-19 and will drive the recovery.

If a trans-Tasman travel bubble or similar was possible it would further limit the impact of COVID-19 on the Wellington economy. The impact of the travel bubble will replicate that of eased restrictions on gatherings and events. Accommodation and food services, arts and recreation services and retail trade will be the industries that see the most benefit from increased tourism activity. However, this will not return in full as airfares are likely to be higher than before COVID-19.

If a vaccine is developed sooner than expected then the benefits to tourism focussed businesses and industries will further limit the negative impact COVID-19 will have on the economy and wellbeing.

While we believe that the Wellington region will be impacted significantly by COVID-19 for the 2030 decade it is likely that the region will perform better than a number of regions as Wellington does not have the same reliance on tourism and face to face services. Wellington's position as the heart of New Zealand's government will also help it recover as the government will play a major part in the recovery and this will require staff to perform the roles that government requires to lead New Zealand through the recovery from COVID-19.

Appendix A Reserve Bank GDP impacts at COVID-19 alert levels

Level and restriction	Assumption: How binding?	GDP impact (%)
Level 1	We assume two weeks in self-isolation would severely reduce tourist numbers but a few would still come or remain here (this may depend on the length of time the restriction is in place). Over time, we assume the international tourism contribution to GDP falls to 10 percent of its original level.	3.8
Border restriction	We assume the GDP contribution of international students falls to half its original level. Domestic tourism linked to overseas travel falls to a negligible level. If alert level one was implemented with a stricter border closure for an extended period, GDP could fall by up to another one percentage point.	
Level 2	The border is closed to international tourists, severely affecting the tourism sector. We assume the contribution to GDP from international tourism falls to five percent of its original level. This accounts for foreigners already in the country before the restrictions were enacted.	8.8
Border closure	We assume the GDP contribution from international students falls to one third of its original level.	
Restrictions on mass gatherings and public venues	We assume these restrictions would reduce production in related industries by half. The proportion impacted is uncertain, and some groups would fare better than others. However, the marginal impact of this restriction is small compared to the other restrictions.	
Avoid non-essential domestic travel	Domestic tourism is also restricted at this alert level. We assume a 75 percent reduction. It is unclear how much domestic travel is essential and would still take place. However, it is likely to be relatively small. In addition, domestic tourism linked to overseas travel would fall.	
Level 3		19
Border closure Ban mass gatherings Limit domestic travel	To avoid double counting, we assume there is no additional impact from restrictions on domestic and international tourism and mass gatherings over and above the impact of restrictions on business.	0
Restrictions on businesses (and closure of public venues)	At level three, businesses can only operate if they can do it safely, maintaining distancing requirements and without direct face-to-face contact with customers. Some business are closed at this level, including public venues. Many businesses are able to open but we assume they are less productive due to distancing. For example, people on a production line needing to be one metre apart.	19
Level 4		37
Border closure Ban mass gatherings Limit domestic travel	To avoid double counting, we assume there is no additional impact from restrictions on domestic and international tourism and mass gatherings over and above business closures.	0
Close non-essential businesses (including educational facilities and public venues)	We assume that the only binding restriction during alert level four is the lockdown of all non-essential businesses.	37

Appendix B Methodology

BERL has undertaken the following methodology in order to develop three alternative forecasts based on scenarios, and report on how these alternative scenarios might differ from the projections developed prior to COVID-19, by Greater Wellington regional Council (GWRC). Given the recovery from COVID-19 will likely take a number of years, BERL is forecasting the economic impacts on the Wellington region over the medium (2020-2025) to long-term (2025-2030).

For each of the three scenarios, BERL has estimated the impact of COVID-19 on the following indicators:

- Employment
- Unemployment rate
- Gross domestic product (GDP)
- Consumer spending
- Household income
- Resident population.

In order for BERL to estimate these impacts, the following base datasets were gathered in order to provide BERL with a March 2020 baseline of data, upon which to apply the three scenarios:

- ID population projections for Wellington region
- Labour Cost Index
- 2013 Wellington regional Input-Output multipliers
- Seasonally adjusted GDP by ANZSIC industry groups
- Household Labour Force Survey - Household income by region
- Ministry of Social Development (MSD) quarterly jobseeker support benefit numbers by territorial authority
- Household Labour Force Survey - Number of people employed by industry by region
- 2018 Census employment counts by industry for Wellington region
- Annual GDP by ANZSIC industry and region
- Annual employment (FTEs) by ANZSIC industry and region
- Household Economic Survey – Household expenditure by household income group
- Household Labour Force Survey – Labour force status by region
- 2018 Census personal income by ANZSIC industry and region
- Net external migration by region
- Population projection characteristics by region.

With the March 2020 baseline setup, the following steps were then undertaken to develop each of the three alternative scenarios across all six indicators.

1) Use the ANZSIC industry level GDP impacts from the 2020 Reserve Bank of New Zealand (RBNZ) report: *Economic impacts of COVID-19 containment measures,* to determine the

economic impact of Wellington regions GDP by industry from March 2020 through to March 2022 for each scenario. The RBNZ report provides a per industry economic impact for each of the four alert levels being used by New Zealand

2) Use the GDP projections from the 2020 Budget Economic and Fiscal Update. This report provides five year projections across five different scenarios. BERL has taken these five year projections and transformed them into 10 year projections

3) For each scenario apply the RNBZ GDP impacts by industry on a month by month basis out to March 2022, to the March 2020 Wellington region GDP by industry

4) For each scenario apply the calculated 10 year GDP projections derived from Treasury projections, to project GDP values per industry out to March 2030 from March 2022

5) Distribute the GDP totals per year per industry to the six sub-region areas, using their March 2020 GDP total per industry, for each of the scenarios. It is assumed here that the share of each industry between the sub-regions stays fixed for the 10 year period

6) Use the projected annual GDP growth calculated for each scenario to project for Wellington region the change in employment (FTEs). We have assumed that the GDP to FTE ratio will remain fixed across the 10 year period. In addition we are assuming that over the 10 year period that labour productivity will remain fixed at one percent growth per annum

7) Distribute the employment totals per year per industry to the six sub-region areas, using their March 2020 employment total per industry, for each of the scenarios. It is assumed here that the share of each industry between the sub-regions stays fixed for the 10 year period

8) Use .id population projections for Wellington region (2013 base) out to 2036 as our initial population for each scenario. The total population projection for each scenario for Wellington region has been adjusted by using new estimates for net internal and external migration numbers for each year, across the 10 years

9) Determine the population totals per year for each of the six sub-region areas, using their ID population projection growth rates, as well as adjusted for their share of total Wellington region population, for each of the scenarios. These two processes allow for each regions population to change per year separately, while ensuring that each year the sub-regions add up to match the calculated population totals for Wellington region

10) Use the unemployment projections from the 2020 Budget Economic and Fiscal Update. This report provides five year projections across five different scenarios. BERL has taken these five year projections and transformed them into 10 year projections

11) For each scenario apply the calculated 10 year unemployment projections derived from Treasury projections, to project the total number of unemployed out to March 2030 from March 2020. As part of this we used the new population projections, Household Labour Force counts, as well as the employment projections for each scenario to determine the working age population, the not in labour force population, and the labour force population for each year. With these population group counts determined, we can apply the 10 year transformed unemployment rates to determine the number of unemployed people per year in the Wellington region. As part of this calculation we assumed that around 30 percent of people who become unemployed in the year to March 2021 will leave the labour force. This is due in part to people retiring, as well as people taking up full-time training opportunities and no longer continuing to work

12) As part of the unemployment calculations for each scenario, BERL estimated the impact for Wellington region of the impact of the Government's wage subsidy scheme on the number of people employed in the year to March 2021. This newly calculated figure for the March 2021 year was then injected into the projection employment counts for each scenario

13) Distribute the unemployment totals per year to the six sub-region areas, using their March 2020 unemployment totals from MSD, for each of the scenarios. We do assume the proportion of unemployed across the region will remain similar to the March 2020 totals

14) To determine gross household income for each scenario, BERL was able to make use of the GDP to gross household income ratio for each ANZSIC industry contained in the Wellington region Input-Output multipliers. This meant that for each year, BERL was able to take the projection annual GDP values per industry and transform it into a household income value per industry, before summing the industries values together to get a total household income value for the Wellington region

15) Distribute the gross household income totals per year per industry to the six sub-region areas, using their projected GDP totals, as determined for each of the scenarios

16) Using the newly calculated population projections for each scenario along with the population to household ratios from ID's projection, we determined the projected number of households in the Wellington region across the 10 years

17) To determine household consumption, we first took our gross household income for the Wellington region projections per scenario and divided them by the projected number of households for the Wellington region. This gave us an estimated average household income per household. Using this total and the income decline groups from the 2019 Household Economic Survey, we determined the average weekly spend per household after housing costs. To account for changes to living costs over time, BERL transformed the Treasury's five year Consumers Price Index (CPI) projections into 10 year projections and applied them to the weekly spend totals. This process enabled us to estimate for each year and each scenario the average weekly consumer spend (total spend minus housing costs). This weekly amount was turned into an annual figure, before being multiplied by the total number of projected households to turn the figure into an overall consumer spend per year for the Wellington region

18) Using the same process, BERL determined for each scenario the overall total consumer spend per year for each of the six sub-regions within the Wellington region.

These steps set out briefly the process undertaken by BERL to project for Wellington region and its six sub-regions, the impacts from COVID-19 and our response to it, across each of the six indicators, and the three alternative scenarios being examined. At its heart the projected impact on the six indicators originate from the transformed 10 year Treasury scenario projections for New Zealand's national GDP and unemployment.

Appendix C Scenario one by the numbers

Scenario one Wellington region population 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	55,163	55,503	55,710	55,781	56,137	56,462	56,959	57,543	58,143	58,786	59,454	60,166
Porirua City	58,606	59,230	59,600	60,067	61,109	62,197	63,582	65,048	66,530	68,106	69,745	71,399
Upper Hutt City	44,126	44,084	43,955	43,714	43,755	43,892	44,131	44,426	44,746	45,124	45,484	45,824
Lower Hutt City	105,702	105,722	106,046	106,066	106,667	107,117	107,877	108,750	109,555	110,422	111,274	112,114
Wellington City	212,923	214,537	215,891	216,678	219,077	220,885	223,151	225,040	226,566	228,002	229,331	230,645
Wairarapa	45,400	45,800	46,069	46,162	46,503	46,828	47,284	47,764	48,228	48,722	49,202	49,671
Wellington Region	**521,920**	**524,876**	**527,271**	**528,469**	**533,248**	**537,380**	**542,984**	**548,571**	**553,768**	**559,163**	**564,492**	**569,821**

Scenario one Wellington region total unemployment 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,252	1,487	1,772	1,742	1,725	1,705	1,690	1,678	1,668	1,659	1,651	1,644
Porirua City	1,633	1,987	2,247	2,089	2,066	2,039	2,019	2,003	1,989	1,977	1,967	1,957
Upper Hutt City	1,034	1,254	1,408	1,258	1,243	1,224	1,211	1,200	1,191	1,183	1,176	1,169
Lower Hutt City	3,262	3,846	4,658	4,681	4,624	4,556	4,506	4,466	4,432	4,402	4,376	4,351
Wellington City	3,606	4,363	6,730	5,324	5,121	4,878	4,699	4,556	4,436	4,330	4,235	4,147
Wairarapa	1,015	1,163	1,431	1,219	1,196	1,169	1,149	1,133	1,119	1,108	1,097	1,087
Wellington Region	**11,802**	**14,100**	**18,246**	**16,311**	**15,974**	**15,571**	**15,273**	**15,035**	**14,835**	**14,659**	**14,501**	**14,355**

Scenario one Wellington region employment 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	13,253	13,285	12,287	12,254	12,809	13,109	13,373	13,609	13,821	14,012	14,185	14,341
Porirua City	17,847	17,721	16,812	16,638	17,392	17,800	18,159	18,479	18,766	19,026	19,260	19,472
Upper Hutt City	11,704	11,909	11,368	11,202	11,710	11,985	12,226	12,442	12,635	12,810	12,968	13,110
Lower Hutt City	44,505	44,317	41,473	41,497	43,378	44,395	45,290	46,088	46,805	47,452	48,037	48,565
Wellington City	155,719	157,855	149,569	148,020	154,729	158,356	161,548	164,395	166,953	169,260	171,346	173,231
Wairarapa	17,672	17,697	16,757	16,522	17,271	17,676	18,032	18,350	18,636	18,893	19,126	19,336
Wellington Region	**260,700**	**262,783**	**248,266**	**246,134**	**257,289**	**263,322**	**268,629**	**273,362**	**277,616**	**281,453**	**284,921**	**288,055**

Scenario one Wellington region employment by industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,713	3,755	4,018	3,783	3,954	4,047	4,129	4,201	4,267	4,326	4,379	4,427
Mining	417	421	433	425	444	454	463	472	479	485	491	497
Manufacturing	13,867	13,144	13,451	13,241	13,841	14,166	14,451	14,706	14,935	15,141	15,328	15,496
Electricity and waste services	2,205	2,090	2,221	2,105	2,201	2,252	2,298	2,338	2,375	2,407	2,437	2,464
Construction	21,403	21,426	21,348	21,583	22,561	23,090	23,555	23,971	24,344	24,680	24,984	25,259
Wholesale trade	8,411	7,510	7,638	7,435	7,772	7,954	8,115	8,258	8,386	8,502	8,607	8,702
Retail trade	19,122	20,898	18,904	19,825	20,724	21,210	21,637	22,018	22,361	22,670	22,949	23,202
Accommodation and food services	16,908	18,479	7,098	8,368	8,747	8,952	9,133	9,294	9,438	9,569	9,687	9,793
Transport, postal and warehousing	7,682	9,222	9,384	9,118	9,531	9,754	9,951	10,126	10,284	10,426	10,554	10,670
Information media and telecommunications	4,919	4,619	4,951	4,653	4,864	4,978	5,078	5,168	5,248	5,321	5,386	5,445
Financial and insurance services	12,416	11,813	12,399	11,723	12,254	12,542	12,795	13,020	13,223	13,405	13,571	13,720
Rental hiring and real estate services	2,779	2,609	2,781	2,595	2,713	2,776	2,832	2,882	2,927	2,968	3,004	3,037
Professional scientific and technical services	33,208	33,527	33,023	33,408	34,922	35,741	36,461	37,104	37,681	38,202	38,673	39,098
Administrative and support services	11,252	11,359	9,524	10,931	11,427	11,695	11,930	12,141	12,329	12,500	12,654	12,793
Public administration and safety	39,195	41,659	44,453	41,968	43,870	44,898	45,803	46,610	47,335	47,990	48,581	49,115
Education and training	22,500	20,949	21,274	19,903	20,805	21,293	21,722	22,105	22,449	22,759	23,040	23,293
Health care and social assistance	26,596	24,374	25,551	23,487	24,551	25,127	25,633	26,085	26,491	26,857	27,188	27,487
Arts and recreations services	5,366	5,678	2,541	3,140	3,282	3,359	3,427	3,487	3,542	3,591	3,635	3,675
Personal Services	8,741	9,250	7,274	8,443	8,826	9,033	9,215	9,377	9,523	9,655	9,774	9,881
Total	**260,700**	**262,783**	**248,266**	**246,134**	**257,289**	**263,322**	**268,629**	**273,362**	**277,616**	**281,453**	**284,921**	**288,055**

Scenario one Wellington region gross domestic product 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,285	1,286	1,152	1,251	1,320	1,364	1,406	1,444	1,481	1,517	1,550	1,583
Porirua City	1,701	1,703	1,543	1,670	1,762	1,821	1,876	1,928	1,977	2,024	2,069	2,113
Upper Hutt City	1,178	1,180	1,078	1,163	1,227	1,268	1,307	1,343	1,377	1,410	1,441	1,472
Lower Hutt City	4,828	4,836	4,391	4,770	5,034	5,203	5,360	5,508	5,648	5,783	5,912	6,036
Wellington City	19,850	19,892	18,333	19,712	20,803	21,498	22,147	22,758	23,340	23,896	24,430	24,943
Wairarapa	1,845	1,848	1,695	1,822	1,923	1,987	2,047	2,104	2,157	2,209	2,258	2,305
Wellington Region	**30,688**	**30,746**	**28,193**	**30,389**	**32,070**	**33,142**	**34,142**	**35,085**	**35,982**	**36,839**	**37,661**	**38,452**

Scenario one Wellington region gross domestic product by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	461	464	459	477	503	520	535	550	564	578	591	603
Mining	591	595	564	611	645	666	687	705	724	741	757	773
Manufacturing	1,752	1,761	1,666	1,810	1,910	1,974	2,034	2,090	2,143	2,194	2,243	2,290
Electricity and waste services	1,025	1,030	1,012	1,059	1,117	1,155	1,189	1,222	1,254	1,283	1,312	1,340
Construction	1,823	1,833	1,688	1,883	1,988	2,054	2,116	2,174	2,230	2,283	2,334	2,383
Wholesale trade	1,143	1,147	1,079	1,159	1,223	1,264	1,302	1,338	1,372	1,405	1,436	1,467
Retail trade	1,702	1,703	1,425	1,649	1,740	1,798	1,853	1,904	1,952	1,999	2,044	2,086
Accommodation and food services	832	796	288	374	394	408	420	432	443	453	463	473
Transport, postal and warehousing	1,149	1,153	1,085	1,164	1,228	1,269	1,307	1,343	1,378	1,411	1,442	1,472
Information media and telecommunications	1,956	1,967	1,948	2,021	2,133	2,204	2,271	2,334	2,393	2,450	2,505	2,558
Financial and insurance services	3,231	3,244	3,146	3,284	3,466	3,582	3,690	3,792	3,889	3,981	4,070	4,156
Rental hiring and real estate services	717	720	709	731	771	797	821	844	865	886	905	925
Professional scientific and technical services	4,379	4,398	4,006	4,471	4,719	4,876	5,024	5,162	5,294	5,420	5,541	5,658
Administrative and support services	694	695	540	683	720	745	767	788	808	828	846	864
Public administration and safety	4,219	4,242	4,182	4,359	4,600	4,754	4,897	5,032	5,161	5,284	5,402	5,515
Education and training	1,549	1,549	1,454	1,502	1,586	1,639	1,688	1,735	1,779	1,821	1,862	1,901
Health care and social assistance	2,460	2,463	2,386	2,422	2,556	2,642	2,722	2,797	2,868	2,937	3,002	3,065
Arts and recreations services	539	521	218	297	314	324	334	343	352	360	368	376
Personal Services	465	464	338	433	457	472	486	500	512	525	536	547
Total	**30,688**	**30,746**	**28,193**	**30,389**	**32,070**	**33,142**	**34,142**	**35,085**	**35,982**	**36,839**	**37,661**	**38,452**

Scenario one Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,758	1,862	1,628	1,765	1,862	1,924	1,982	2,037	2,089	2,139	2,187	2,233
Porirua City	1,998	2,120	1,855	2,008	2,120	2,190	2,257	2,319	2,378	2,435	2,489	2,541
Upper Hutt City	1,597	1,703	1,492	1,614	1,703	1,760	1,813	1,863	1,911	1,957	2,000	2,042
Lower Hutt City	3,766	3,983	3,483	3,774	3,983	4,116	4,240	4,358	4,469	4,575	4,677	4,776
Wellington City	9,860	10,424	9,152	9,878	10,424	10,773	11,098	11,404	11,696	11,974	12,242	12,499
Wairarapa	1,387	1,461	1,284	1,384	1,461	1,510	1,555	1,598	1,639	1,678	1,715	1,751
Wellington Region	**20,367**	**21,553**	**18,894**	**20,423**	**21,553**	**22,274**	**22,946**	**23,579**	**24,182**	**24,758**	**25,311**	**25,842**

Scenario one Wellington region consumer spending 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	932	1,064	1,068	1,075	1,090	1,108	1,132	1,159	1,188	1,220	1,255	1,292
Porirua City	823	839	837	836	1,089	1,104	1,124	1,147	1,172	1,201	1,231	1,262
Upper Hutt City	1,614	1,831	1,837	1,847	1,873	1,900	1,937	1,980	2,024	2,072	2,123	2,176
Lower Hutt City	1,585	1,634	1,644	1,665	1,708	1,757	1,818	1,886	1,957	2,035	2,119	2,207
Wellington City	4,520	4,645	4,233	4,717	4,809	4,899	5,010	5,121	5,232	5,349	5,470	5,597
Wairarapa	756	865	870	877	891	906	926	948	972	997	1,024	1,052
Wellington Region	**10,231**	**10,878**	**10,488**	**11,016**	**11,460**	**11,676**	**11,948**	**12,241**	**12,545**	**12,874**	**13,221**	**13,586**

Scenario one Wellington region population by age and territorial authority 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District												
Child - up to 15 years	9,649	9,627	9,582	9,516	9,499	9,477	9,485	9,507	9,606	9,712	9,822	9,939
Young adult - 15 to 24 years	5,343	5,356	5,357	5,345	5,361	5,373	5,402	5,440	5,452	5,468	5,487	5,509
Adult - 25 to 64 years	25,042	25,093	25,084	25,016	25,078	25,125	25,250	25,414	25,625	25,856	26,097	26,357
Older adult - 65 years and over	15,129	15,427	15,686	15,903	16,200	16,486	16,821	17,182	17,460	17,751	18,049	18,362
Total	55,163	55,503	55,710	55,781	56,137	56,462	56,959	57,543	58,143	58,786	59,454	60,166
Porirua City												
Child - up to 15 years	13,855	13,936	13,958	14,004	14,184	14,375	14,633	14,909	15,251	15,613	15,990	16,371
Young adult - 15 to 24 years	7,884	7,918	7,918	7,932	8,023	8,118	8,253	8,397	8,549	8,713	8,885	9,058
Adult - 25 to 64 years	29,594	29,853	29,986	30,168	30,639	31,133	31,775	32,457	33,141	33,872	34,634	35,404
Older adult - 65 years and over	7,274	7,523	7,738	7,963	8,264	8,571	8,921	9,286	9,590	9,908	10,235	10,566
Total	58,606	59,230	59,600	60,067	61,109	62,197	63,582	65,048	66,530	68,106	69,745	71,399
Upper Hutt City												
Child - up to 15 years	8,825	8,792	8,742	8,671	8,655	8,659	8,683	8,719	8,762	8,817	8,868	8,916
Young adult - 15 to 24 years	5,290	5,226	5,153	5,068	5,017	4,977	4,949	4,927	4,952	4,984	5,013	5,040
Adult - 25 to 64 years	22,826	22,757	22,644	22,474	22,450	22,475	22,553	22,660	22,752	22,875	22,988	23,091
Older adult - 65 years and over	7,185	7,309	7,416	7,501	7,633	7,780	7,945	8,120	8,279	8,449	8,615	8,777
Total	44,126	44,084	43,955	43,714	43,755	43,892	44,131	44,426	44,746	45,124	45,484	45,824
Lower Hutt City												
Child - up to 15 years	21,963	21,873	21,847	21,759	21,790	21,791	21,855	21,942	22,046	22,161	22,274	22,384
Young adult - 15 to 24 years	13,604	13,520	13,476	13,394	13,386	13,359	13,372	13,397	13,455	13,520	13,583	13,645
Adult - 25 to 64 years	54,999	54,933	55,026	54,961	55,198	55,357	55,676	56,054	56,337	56,653	56,961	57,262
Older adult - 65 years and over	15,136	15,396	15,698	15,952	16,293	16,609	16,974	17,357	17,717	18,087	18,456	18,823
Total	105,702	105,722	106,046	106,066	106,667	107,117	107,877	108,750	109,555	110,422	111,274	112,114
Wellington City												
Child - up to 15 years	34,869	34,835	34,761	34,599	34,696	34,700	34,777	34,795	34,854	34,899	34,927	34,952
Young adult - 15 to 24 years	36,942	37,132	37,278	37,327	37,654	37,879	38,184	38,424	38,650	38,860	39,053	39,242
Adult - 25 to 64 years	114,761	115,087	115,278	115,173	115,928	116,370	117,055	117,542	117,851	118,111	118,315	118,509
Older adult - 65 years and over	26,352	27,483	28,574	29,580	30,800	31,936	33,136	34,279	35,211	36,131	37,037	37,941
Total	212,923	214,537	215,891	216,678	219,077	220,885	223,151	225,040	226,566	228,002	229,331	230,645
Wairarapa												
Child - up to 15 years	8,609	8,620	8,606	8,560	8,560	8,558	8,580	8,606	8,654	8,708	8,759	8,807
Young adult - 15 to 24 years	4,938	4,950	4,949	4,929	4,936	4,942	4,961	4,983	5,003	5,025	5,047	5,067
Adult - 25 to 64 years	22,140	22,271	22,337	22,319	22,422	22,517	22,675	22,845	23,018	23,206	23,386	23,562
Older adult - 65 years and over	9,713	9,959	10,177	10,354	10,584	10,811	11,068	11,330	11,553	11,783	12,011	12,236
Total	45,400	45,800	46,069	46,162	46,503	46,828	47,284	47,764	48,228	48,722	49,202	49,671
Wellington Region												
Child - up to 15 years	97,770	97,682	97,496	97,108	97,385	97,561	98,014	98,479	99,173	99,910	100,640	101,369
Young adult - 15 to 24 years	74,000	74,103	74,131	73,996	74,376	74,649	75,120	75,567	76,060	76,571	77,068	77,562
Adult - 25 to 64 years	269,363	269,994	270,356	270,112	271,714	272,977	274,985	276,971	278,726	280,573	282,381	284,184
Older adult - 65 years and over	80,788	83,097	85,288	87,253	89,773	92,193	94,865	97,554	99,809	102,109	104,403	106,705
Total	521,920	524,876	527,271	528,469	533,248	537,380	542,984	548,571	553,768	559,163	564,492	569,821

Scenario one Wellington region Māori economy GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	62	62	62	64	68	70	72	74	76	78	79	81
Mining	94	95	90	97	103	106	109	112	115	118	120	123
Manufacturing	289	291	275	299	316	326	336	345	354	362	371	378
Electricity and waste services	128	129	127	133	140	145	149	153	157	161	164	168
Construction	330	332	306	341	360	372	383	394	404	414	423	432
Wholesale trade	136	136	128	138	145	150	155	159	163	167	171	174
Retail trade	214	214	179	207	219	226	233	240	246	252	257	263
Accommodation and food services	67	64	23	30	32	33	34	35	35	36	37	38
Transport, postal and warehousing	130	130	122	131	139	143	148	152	155	159	163	166
Information media and telecommunications	155	156	155	160	169	175	180	185	190	194	199	203
Financial and insurance services	479	481	467	487	514	532	548	563	577	591	604	617
Rental hiring and real estate services	57	57	56	58	61	63	65	67	68	70	72	73
Professional scientific and technical services	485	487	443	495	522	540	556	571	586	600	613	626
Administrative and support services	51	51	39	50	53	54	56	57	59	60	62	63
Public administration and safety	484	486	479	500	527	545	561	577	591	606	619	632
Education and training	154	154	145	150	158	163	168	173	177	181	185	189
Health care and social assistance	307	308	298	303	319	330	340	349	358	367	375	383
Arts and recreations services	83	80	34	46	48	50	51	53	54	56	57	58
Personal Services	49	49	36	46	48	50	52	53	54	56	57	58
Total	**3,754**	**3,763**	**3,464**	**3,734**	**3,941**	**4,072**	**4,195**	**4,311**	**4,421**	**4,527**	**4,628**	**4,725**

Appendix D Scenario two by the numbers

Scenario two Wellington region population 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	55,163	55,503	55,710	55,852	55,999	56,416	56,828	57,333	57,910	58,482	59,135	59,834
Porirua City	58,606	59,230	59,600	60,143	60,959	62,146	63,436	64,811	66,264	67,754	69,370	71,005
Upper Hutt City	44,126	44,084	43,955	43,770	43,647	43,856	44,030	44,264	44,567	44,891	45,240	45,571
Lower Hutt City	105,702	105,722	106,046	106,200	106,404	107,030	107,629	108,354	109,116	109,850	110,676	111,494
Wellington City	212,923	214,537	215,891	216,953	218,538	220,707	222,638	224,219	225,659	226,822	228,098	229,370
Wairarapa	45,400	45,800	46,069	46,221	46,388	46,790	47,175	47,590	48,035	48,470	48,938	49,397
Wellington Region	**521,920**	**524,876**	**527,271**	**529,139**	**531,935**	**536,945**	**541,735**	**546,571**	**551,552**	**556,270**	**561,456**	**566,670**

Scenario two Wellington region total unemployment 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,252	1,487	1,982	1,770	1,720	1,680	1,650	1,625	1,604	1,586	1,569	1,555
Porirua City	1,633	1,987	2,473	2,326	2,259	2,204	2,163	2,129	2,101	2,076	2,054	2,034
Upper Hutt City	1,034	1,254	1,535	1,508	1,462	1,426	1,398	1,375	1,356	1,339	1,324	1,311
Lower Hutt City	3,262	3,846	5,391	4,481	4,313	4,178	4,074	3,991	3,920	3,858	3,802	3,752
Wellington City	3,606	4,363	8,647	7,551	6,951	6,467	6,099	5,800	5,547	5,325	5,128	4,948
Wairarapa	1,015	1,163	1,639	1,570	1,503	1,449	1,408	1,375	1,347	1,322	1,300	1,280
Wellington Region	**11,802**	**14,100**	**21,668**	**19,207**	**18,209**	**17,405**	**16,792**	**16,295**	**15,874**	**15,506**	**15,178**	**14,879**

Scenario two Wellington region employment 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	13,253	13,285	11,859	12,186	12,613	12,887	13,130	13,349	13,548	13,730	13,897	14,050
Porirua City	17,847	17,721	16,321	16,548	17,128	17,499	17,830	18,127	18,398	18,645	18,871	19,079
Upper Hutt City	11,704	11,909	11,100	11,142	11,532	11,782	12,005	12,205	12,387	12,554	12,706	12,846
Lower Hutt City	44,505	44,317	39,869	41,269	42,715	43,642	44,466	45,209	45,883	46,499	47,064	47,581
Wellington City	155,719	157,855	145,525	147,212	152,370	155,678	158,617	161,265	163,671	165,869	167,882	169,729
Wairarapa	17,672	17,697	16,327	16,433	17,008	17,378	17,706	18,001	18,270	18,515	18,740	18,946
Wellington Region	**260,700**	**262,783**	**241,001**	**244,790**	**253,367**	**258,867**	**263,753**	**268,156**	**272,158**	**275,812**	**279,160**	**282,231**

Scenario two Wellington region employment by Industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,713	3,755	4,064	3,764	3,896	3,980	4,055	4,123	4,184	4,241	4,292	4,339
Mining	417	421	413	422	437	447	455	463	470	476	482	487
Manufacturing	13,867	13,144	13,052	13,173	13,634	13,930	14,193	14,430	14,645	14,842	15,022	15,187
Electricity and waste services	2,205	2,090	2,228	2,095	2,168	2,215	2,257	2,294	2,329	2,360	2,389	2,415
Construction	21,403	21,426	20,035	21,468	22,220	22,703	23,131	23,518	23,868	24,189	24,483	24,752
Wholesale trade	8,411	7,510	7,412	7,397	7,656	7,822	7,970	8,103	8,224	8,334	8,435	8,528
Retail trade	19,122	20,898	17,434	19,715	20,406	20,849	21,243	21,597	21,920	22,214	22,483	22,731
Accommodation and food services	16,908	18,479	6,119	8,291	8,581	8,767	8,933	9,082	9,217	9,341	9,455	9,559
Transport, postal and warehousing	7,682	9,222	9,130	9,070	9,388	9,592	9,773	9,936	10,085	10,220	10,344	10,458
Information media and telecommunications	4,919	4,619	4,958	4,629	4,792	4,896	4,988	5,071	5,147	5,216	5,279	5,337
Financial and insurance services	12,416	11,813	12,484	11,664	12,072	12,334	12,567	12,777	12,968	13,142	13,301	13,448
Rental hiring and real estate services	2,779	2,609	2,834	2,582	2,673	2,731	2,782	2,829	2,871	2,909	2,945	2,977
Professional scientific and technical services	33,208	33,527	31,278	33,231	34,396	35,142	35,806	36,403	36,947	37,443	37,897	38,314
Administrative and support services	11,252	11,359	8,120	10,862	11,242	11,486	11,703	11,898	12,076	12,238	12,387	12,523
Public administration and safety	39,195	41,659	45,031	41,755	43,218	44,156	44,990	45,741	46,424	47,047	47,618	48,142
Education and training	22,500	20,949	21,739	19,803	20,496	20,941	21,337	21,693	22,017	22,312	22,583	22,831
Health care and social assistance	26,596	24,374	26,186	23,368	24,187	24,712	25,178	25,599	25,981	26,330	26,649	26,942
Arts and recreations services	5,366	5,678	2,133	3,111	3,220	3,290	3,352	3,408	3,459	3,506	3,548	3,587
Personal Services	8,741	9,250	6,352	8,390	8,684	8,872	9,039	9,190	9,328	9,453	9,568	9,673
Total	**260,700**	**262,783**	**241,001**	**244,790**	**253,367**	**258,867**	**263,753**	**268,156**	**272,158**	**275,812**	**279,160**	**282,231**

Scenario two Wellington region gross domestic product 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,285	1,286	1,087	1,245	1,301	1,342	1,381	1,418	1,453	1,487	1,520	1,552
Porirua City	1,701	1,703	1,458	1,662	1,736	1,791	1,843	1,892	1,939	1,985	2,029	2,071
Upper Hutt City	1,178	1,180	1,024	1,157	1,209	1,248	1,284	1,318	1,351	1,383	1,413	1,443
Lower Hutt City	4,828	4,836	4,134	4,747	4,960	5,118	5,265	5,406	5,541	5,670	5,796	5,918
Wellington City	19,850	19,892	17,431	19,614	20,497	21,147	21,758	22,338	22,895	23,432	23,950	24,453
Wairarapa	1,845	1,848	1,613	1,813	1,895	1,955	2,011	2,065	2,116	2,166	2,214	2,260
Wellington Region	**30,688**	**30,746**	**26,747**	**30,237**	**31,599**	**32,600**	**33,542**	**34,437**	**35,295**	**36,122**	**36,922**	**37,697**

Scenario two Wellington region gross domestic product by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	461	464	449	474	496	511	526	540	554	567	579	591
Mining	591	595	521	608	635	656	674	692	710	726	742	758
Manufacturing	1,752	1,761	1,565	1,801	1,882	1,942	1,998	2,051	2,102	2,152	2,199	2,245
Electricity and waste services	1,025	1,030	982	1,053	1,101	1,136	1,169	1,200	1,230	1,258	1,286	1,313
Construction	1,823	1,833	1,535	1,874	1,958	2,020	2,079	2,134	2,187	2,239	2,288	2,336
Wholesale trade	1,143	1,147	1,014	1,153	1,205	1,243	1,279	1,314	1,346	1,378	1,408	1,438
Retail trade	1,702	1,703	1,274	1,641	1,715	1,769	1,820	1,869	1,915	1,960	2,003	2,046
Accommodation and food services	832	796	241	372	389	401	413	424	434	444	454	464
Transport, postal and warehousing	1,149	1,153	1,022	1,158	1,210	1,248	1,284	1,319	1,351	1,383	1,414	1,443
Information media and telecommunications	1,956	1,967	1,888	2,011	2,102	2,168	2,231	2,291	2,348	2,403	2,456	2,507
Financial and insurance services	3,231	3,244	3,066	3,268	3,415	3,523	3,625	3,722	3,814	3,904	3,990	4,074
Rental hiring and real estate services	717	720	699	727	760	784	806	828	849	869	888	906
Professional scientific and technical services	4,379	4,398	3,675	4,449	4,649	4,797	4,935	5,067	5,193	5,315	5,433	5,547
Administrative and support services	694	695	446	679	710	732	754	774	793	812	829	847
Public administration and safety	4,219	4,242	4,100	4,337	4,532	4,676	4,811	4,939	5,062	5,181	5,296	5,407
Education and training	1,549	1,549	1,438	1,495	1,562	1,612	1,658	1,703	1,745	1,786	1,825	1,864
Health care and social assistance	2,460	2,463	2,367	2,410	2,519	2,599	2,674	2,745	2,814	2,879	2,943	3,005
Arts and recreations services	539	521	178	296	309	319	328	337	345	353	361	369
Personal Services	465	464	287	431	450	464	478	490	503	514	526	537
Total	**30,688**	**30,746**	**26,747**	**30,237**	**31,599**	**32,600**	**33,542**	**34,437**	**35,295**	**36,122**	**36,922**	**37,697**

Scenario two Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,758	1,862	1,538	1,756	1,835	1,893	1,948	2,000	2,049	2,098	2,144	2,189
Porirua City	1,998	2,120	1,753	1,998	2,088	2,155	2,217	2,276	2,333	2,387	2,440	2,492
Upper Hutt City	1,597	1,703	1,413	1,606	1,678	1,731	1,781	1,829	1,875	1,919	1,961	2,002
Lower Hutt City	3,766	3,983	3,291	3,755	3,925	4,049	4,166	4,277	4,384	4,486	4,586	4,682
Wellington City	9,860	10,424	8,689	9,828	10,271	10,597	10,903	11,194	11,473	11,742	12,002	12,254
Wairarapa	1,387	1,461	1,218	1,377	1,439	1,485	1,528	1,569	1,608	1,645	1,682	1,717
Wellington Region	**20,367**	**21,553**	**17,902**	**20,321**	**21,236**	**21,910**	**22,542**	**23,144**	**23,721**	**24,277**	**24,814**	**25,335**

Scenario two Wellington region consumer spending 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	932	1,064	1,060	1,061	1,068	1,082	1,099	1,120	1,144	1,170	1,200	1,232
Porirua City	823	839	832	829	830	1,077	1,088	1,101	1,118	1,137	1,158	1,181
Upper Hutt City	1,614	1,831	1,823	1,824	1,834	1,856	1,881	1,913	1,949	1,987	2,030	2,075
Lower Hutt City	1,585	1,634	1,632	1,645	1,673	1,716	1,766	1,822	1,884	1,951	2,026	2,105
Wellington City	4,520	4,645	4,202	4,659	4,708	4,784	4,865	4,949	5,038	5,129	5,230	5,338
Wairarapa	756	865	864	866	872	885	900	916	936	956	979	1,003
Wellington Region	**10,231**	**10,878**	**10,412**	**10,885**	**10,984**	**11,399**	**11,599**	**11,821**	**12,069**	**12,331**	**12,623**	**12,935**

Scenario two Wellington region population by age and territorial authority 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District												
Child - up to 15 years	9,649	9,627	9,582	9,528	9,476	9,470	9,463	9,473	9,568	9,662	9,769	9,884
Young adult - 15 to 24 years	5,343	5,356	5,357	5,352	5,347	5,369	5,390	5,420	5,430	5,440	5,457	5,479
Adult - 25 to 64 years	25,042	25,093	25,084	25,048	25,016	25,105	25,192	25,321	25,523	25,722	25,956	26,211
Older adult - 65 years and over	15,129	15,427	15,686	15,924	16,160	16,473	16,782	17,119	17,390	17,659	17,952	18,260
Total	55,163	55,503	55,710	55,852	55,999	56,416	56,828	57,333	57,910	58,482	59,135	59,834
Porirua City												
Child - up to 15 years	13,855	13,936	13,958	14,021	14,149	14,363	14,599	14,855	15,190	15,533	15,904	16,281
Young adult - 15 to 24 years	7,884	7,918	7,918	7,942	8,003	8,112	8,234	8,366	8,515	8,668	8,837	9,008
Adult - 25 to 64 years	29,594	29,853	29,986	30,206	30,564	31,108	31,702	32,338	33,009	33,697	34,448	35,208
Older adult - 65 years and over	7,274	7,523	7,738	7,973	8,243	8,564	8,901	9,252	9,551	9,856	10,180	10,508
Total	58,606	59,230	59,600	60,143	60,959	62,146	63,436	64,811	66,264	67,754	69,370	71,005
Upper Hutt City												
Child - up to 15 years	8,825	8,792	8,742	8,682	8,634	8,652	8,664	8,687	8,727	8,771	8,821	8,866
Young adult - 15 to 24 years	5,290	5,226	5,153	5,075	5,005	4,973	4,938	4,909	4,932	4,958	4,986	5,013
Adult - 25 to 64 years	22,826	22,757	22,644	22,503	22,395	22,457	22,501	22,577	22,661	22,757	22,864	22,963
Older adult - 65 years and over	7,185	7,309	7,416	7,511	7,614	7,774	7,927	8,091	8,246	8,405	8,569	8,729
Total	44,126	44,084	43,955	43,770	43,647	43,856	44,030	44,264	44,567	44,891	45,240	45,571
Lower Hutt City												
Child - up to 15 years	21,963	21,873	21,847	21,786	21,736	21,773	21,805	21,862	21,957	22,047	22,155	22,261
Young adult - 15 to 24 years	13,604	13,520	13,476	13,411	13,353	13,349	13,341	13,348	13,401	13,450	13,510	13,569
Adult - 25 to 64 years	54,999	54,933	55,026	55,031	55,062	55,312	55,548	55,849	56,112	56,360	56,655	56,945
Older adult - 65 years and over	15,136	15,396	15,698	15,972	16,252	16,596	16,935	17,294	17,646	17,993	18,356	18,719
Total	105,702	105,722	106,046	106,200	106,404	107,030	107,629	108,354	109,116	109,850	110,676	111,494
Wellington City												
Child - up to 15 years	34,869	34,835	34,761	34,643	34,611	34,672	34,697	34,668	34,715	34,718	34,739	34,759
Young adult - 15 to 24 years	36,942	37,132	37,278	37,374	37,561	37,849	38,096	38,284	38,495	38,659	38,843	39,026
Adult - 25 to 64 years	114,761	115,087	115,278	115,319	115,642	116,276	116,785	117,114	117,379	117,500	117,678	117,854
Older adult - 65 years and over	26,352	27,483	28,574	29,617	30,724	31,910	33,060	34,154	35,070	35,944	36,838	37,732
Total	212,923	214,537	215,891	216,953	218,538	220,707	222,638	224,219	225,659	226,822	228,098	229,370
Wairarapa												
Child - up to 15 years	8,609	8,620	8,606	8,571	8,539	8,551	8,560	8,575	8,620	8,663	8,712	8,759
Young adult - 15 to 24 years	4,938	4,950	4,949	4,936	4,924	4,938	4,949	4,964	4,982	4,999	5,020	5,039
Adult - 25 to 64 years	22,140	22,271	22,337	22,348	22,366	22,499	22,623	22,762	22,926	23,086	23,261	23,431
Older adult - 65 years and over	9,713	9,959	10,177	10,367	10,558	10,802	11,042	11,289	11,507	11,722	11,946	12,168
Total	45,400	45,800	46,069	46,221	46,388	46,790	47,175	47,590	48,035	48,470	48,938	49,397
Wellington Region												
Child - up to 15 years	97,770	97,682	97,496	97,231	97,145	97,482	97,788	98,120	98,776	99,393	100,099	100,809
Young adult - 15 to 24 years	74,000	74,103	74,131	74,090	74,193	74,589	74,948	75,292	75,756	76,175	76,653	77,133
Adult - 25 to 64 years	269,363	269,994	270,356	270,454	271,045	272,756	274,352	275,962	277,610	279,121	280,862	282,613
Older adult - 65 years and over	80,788	83,097	85,288	87,364	89,552	92,119	94,647	97,198	99,409	101,580	103,841	106,115
Total	521,920	524,876	527,271	529,139	531,935	536,945	541,735	546,571	551,552	556,270	561,456	566,670

Scenario two Wellington region Māori economy GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	62	62	60	64	67	69	71	73	74	76	78	79
Mining	94	95	83	97	101	104	107	110	113	115	118	120
Manufacturing	289	291	259	298	311	321	330	339	347	355	363	371
Electricity and waste services	128	129	123	132	138	142	146	150	154	158	161	164
Construction	330	332	278	340	355	366	377	387	396	406	415	423
Wholesale trade	136	136	120	137	143	148	152	156	160	164	167	171
Retail trade	214	214	160	206	216	223	229	235	241	247	252	257
Accommodation and food services	67	64	19	30	31	32	33	34	35	36	36	37
Transport, postal and warehousing	130	130	115	131	137	141	145	149	153	156	160	163
Information media and telecommunications	155	156	150	160	167	172	177	182	186	191	195	199
Financial and insurance services	479	481	455	485	507	523	538	552	566	579	592	605
Rental hiring and real estate services	57	57	55	57	60	62	64	65	67	69	70	72
Professional scientific and technical services	485	487	407	492	515	531	546	561	575	588	601	614
Administrative and support services	51	51	33	50	52	53	55	56	58	59	60	62
Public administration and safety	484	486	470	497	519	536	551	566	580	594	607	620
Education and training	154	154	143	149	156	160	165	169	174	178	182	186
Health care and social assistance	307	308	296	301	315	325	334	343	351	360	368	375
Arts and recreations services	83	80	27	46	48	49	51	52	53	54	56	57
Personal Services	49	49	30	46	48	49	51	52	53	55	56	57
Total	**3,754**	**3,763**	**3,284**	**3,715**	**3,883**	**4,006**	**4,121**	**4,231**	**4,337**	**4,439**	**4,537**	**4,632**

Appendix E Scenario three by the numbers

Scenario three Wellington region population 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	55,163	55,503	55,710	55,847	55,995	56,168	56,512	56,911	57,396	57,938	58,517	59,205
Porirua City	58,606	59,230	59,600	60,139	60,954	61,873	63,083	64,335	65,675	67,123	68,646	70,258
Upper Hutt City	44,126	44,084	43,955	43,766	43,644	43,663	43,785	43,939	44,171	44,473	44,768	45,092
Lower Hutt City	105,702	105,722	106,046	106,192	106,396	106,560	107,031	107,557	108,147	108,828	109,521	110,322
Wellington City	212,923	214,537	215,891	216,937	218,521	219,736	221,400	222,571	223,654	224,711	225,718	226,959
Wairarapa	45,400	45,800	46,069	46,217	46,384	46,584	46,913	47,240	47,609	48,019	48,427	48,878
Wellington Region	**521,920**	**524,876**	**527,271**	**529,099**	**531,895**	**534,584**	**538,723**	**542,553**	**546,651**	**551,091**	**555,597**	**560,715**

Scenario three Wellington region total unemployment 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,252	1,487	2,204	2,062	1,991	1,942	1,906	1,878	1,855	1,835	1,818	1,804
Porirua City	1,633	1,987	2,719	2,586	2,489	2,423	2,374	2,336	2,304	2,278	2,255	2,235
Upper Hutt City	1,034	1,254	1,668	1,614	1,549	1,505	1,472	1,446	1,424	1,407	1,391	1,378
Lower Hutt City	3,262	3,846	6,188	5,619	5,376	5,213	5,091	4,995	4,916	4,850	4,792	4,743
Wellington City	3,606	4,363	10,660	9,631	8,766	8,182	7,747	7,404	7,123	6,886	6,683	6,505
Wairarapa	1,015	1,163	1,859	1,763	1,666	1,601	1,552	1,514	1,483	1,456	1,433	1,414
Wellington Region	**11,802**	**14,100**	**25,298**	**23,275**	**21,837**	**20,865**	**20,142**	**19,572**	**19,105**	**18,711**	**18,373**	**18,077**

Scenario three Wellington region employment 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	13,253	13,285	11,443	12,155	12,359	12,546	12,722	12,890	13,052	13,207	13,359	13,506
Porirua City	17,847	17,721	15,841	16,509	16,785	17,039	17,278	17,507	17,726	17,937	18,143	18,342
Upper Hutt City	11,704	11,909	10,844	11,116	11,302	11,473	11,634	11,788	11,935	12,078	12,216	12,350
Lower Hutt City	44,505	44,317	38,297	41,167	41,855	42,489	43,086	43,655	44,202	44,730	45,241	45,739
Wellington City	155,719	157,855	141,673	146,860	149,315	151,577	153,707	155,737	157,686	159,569	161,395	163,170
Wairarapa	17,672	17,697	15,909	16,394	16,668	16,920	17,158	17,385	17,602	17,813	18,016	18,215
Wellington Region	**260,700**	**262,783**	**234,008**	**244,200**	**248,283**	**252,044**	**255,586**	**258,961**	**262,203**	**265,334**	**268,370**	**271,322**

Scenario three Wellington region employment by industry 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,713	3,755	4,107	3,757	3,820	3,877	3,932	3,984	4,034	4,082	4,129	4,174
Mining	417	421	390	421	428	435	441	447	453	458	463	468
Manufacturing	13,867	13,144	12,637	13,146	13,366	13,569	13,759	13,941	14,115	14,284	14,447	14,606
Electricity and waste services	2,205	2,090	2,233	2,091	2,126	2,158	2,188	2,217	2,245	2,272	2,298	2,323
Construction	21,403	21,426	18,648	21,419	21,777	22,107	22,418	22,714	22,998	23,273	23,539	23,798
Wholesale trade	8,411	7,510	7,153	7,382	7,505	7,619	7,726	7,828	7,926	8,021	8,113	8,202
Retail trade	19,122	20,898	16,008	19,664	19,993	20,296	20,581	20,853	21,114	21,366	21,610	21,848
Accommodation and food services	16,908	18,479	5,300	8,233	8,370	8,497	8,616	8,730	8,839	8,945	9,047	9,147
Transport, postal and warehousing	7,682	9,222	8,837	9,052	9,204	9,343	9,474	9,600	9,720	9,836	9,948	10,058
Information media and telecommunications	4,919	4,619	4,944	4,621	4,698	4,769	4,836	4,900	4,961	5,021	5,078	5,134
Financial and insurance services	12,416	11,813	12,558	11,642	11,837	12,016	12,185	12,346	12,501	12,650	12,795	12,935
Rental hiring and real estate services	2,779	2,609	2,884	2,577	2,621	2,660	2,698	2,733	2,767	2,800	2,833	2,864
Professional scientific and technical services	33,208	33,527	29,515	33,158	33,712	34,223	34,704	35,162	35,602	36,027	36,440	36,840
Administrative and support services	11,252	11,359	6,805	10,817	10,997	11,164	11,321	11,470	11,614	11,753	11,887	12,018
Public administration and safety	39,195	41,659	45,637	41,679	42,376	43,018	43,622	44,198	44,752	45,286	45,804	46,308
Education and training	22,500	20,949	22,223	19,767	20,097	20,402	20,688	20,961	21,224	21,477	21,723	21,962
Health care and social assistance	26,596	24,374	26,748	23,326	23,716	24,075	24,413	24,736	25,045	25,344	25,634	25,916
Arts and recreations services	5,366	5,678	1,807	3,090	3,141	3,189	3,234	3,276	3,317	3,357	3,395	3,433
Personal Services	8,741	9,250	5,573	8,359	8,499	8,628	8,749	8,864	8,975	9,083	9,186	9,287
Total	**260,700**	**262,783**	**234,008**	**244,200**	**248,283**	**252,044**	**255,586**	**258,961**	**262,203**	**265,334**	**268,370**	**271,322**

Scenario three Wellington region gross domestic product 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,285	1,286	1,028	1,243	1,276	1,308	1,339	1,370	1,401	1,432	1,463	1,493
Porirua City	1,701	1,703	1,382	1,659	1,703	1,746	1,788	1,829	1,870	1,911	1,952	1,993
Upper Hutt City	1,178	1,180	975	1,155	1,186	1,216	1,245	1,274	1,303	1,331	1,360	1,388
Lower Hutt City	4,828	4,836	3,900	4,738	4,865	4,987	5,107	5,225	5,343	5,460	5,577	5,695
Wellington City	19,850	19,892	16,615	19,579	20,102	20,607	21,103	21,593	22,079	22,563	23,047	23,531
Wairarapa	1,845	1,848	1,538	1,810	1,858	1,905	1,951	1,996	2,041	2,086	2,130	2,175
Wellington Region	**30,688**	**30,746**	**25,437**	**30,183**	**30,989**	**31,768**	**32,532**	**33,287**	**34,037**	**34,784**	**35,530**	**36,276**

Scenario three Wellington region gross domestic product by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	461	464	440	473	486	498	510	522	534	546	557	569
Mining	591	595	479	607	623	639	654	669	684	699	714	729
Manufacturing	1,752	1,761	1,472	1,798	1,846	1,892	1,938	1,983	2,027	2,072	2,116	2,161
Electricity and waste services	1,025	1,030	956	1,052	1,080	1,107	1,133	1,160	1,186	1,212	1,238	1,264
Construction	1,823	1,833	1,389	1,871	1,921	1,969	2,016	2,063	2,109	2,156	2,202	2,248
Wholesale trade	1,143	1,147	950	1,151	1,182	1,212	1,241	1,270	1,298	1,327	1,355	1,384
Retail trade	1,702	1,703	1,137	1,638	1,682	1,724	1,765	1,806	1,847	1,887	1,928	1,968
Accommodation and food services	832	796	204	371	381	391	400	409	419	428	437	446
Transport, postal and warehousing	1,149	1,153	961	1,156	1,187	1,216	1,246	1,275	1,303	1,332	1,360	1,389
Information media and telecommunications	1,956	1,967	1,828	2,008	2,061	2,113	2,164	2,214	2,264	2,314	2,363	2,413
Financial and insurance services	3,231	3,244	2,994	3,262	3,349	3,433	3,516	3,597	3,678	3,759	3,840	3,920
Rental hiring and real estate services	717	720	691	726	745	764	782	800	818	836	854	872
Professional scientific and technical services	4,379	4,398	3,370	4,441	4,560	4,674	4,787	4,898	5,008	5,118	5,228	5,338
Administrative and support services	694	695	364	678	696	714	731	748	765	781	798	815
Public administration and safety	4,219	4,242	4,034	4,329	4,445	4,557	4,666	4,774	4,882	4,989	5,096	5,203
Education and training	1,549	1,549	1,427	1,492	1,532	1,571	1,608	1,646	1,683	1,720	1,757	1,794
Health care and social assistance	2,460	2,463	2,347	2,406	2,470	2,532	2,593	2,653	2,713	2,773	2,832	2,892
Arts and recreations services	539	521	148	295	303	311	318	326	333	340	348	355
Personal Services	465	464	245	430	441	452	463	474	485	495	506	517
Total	**30,688**	**30,746**	**25,437**	**30,183**	**30,989**	**31,768**	**32,532**	**33,287**	**34,037**	**34,784**	**35,530**	**36,276**

Scenario three Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	1,758	1,862	1,457	1,753	1,799	1,845	1,889	1,933	1,976	2,020	2,063	2,106
Porirua City	1,998	2,120	1,662	1,995	2,048	2,100	2,150	2,200	2,250	2,299	2,348	2,398
Upper Hutt City	1,597	1,703	1,340	1,603	1,646	1,687	1,728	1,768	1,808	1,847	1,887	1,927
Lower Hutt City	3,766	3,983	3,117	3,749	3,849	3,946	4,041	4,134	4,227	4,320	4,413	4,505
Wellington City	9,860	10,424	8,274	9,811	10,073	10,326	10,575	10,820	11,064	11,307	11,549	11,791
Wairarapa	1,387	1,461	1,159	1,375	1,412	1,447	1,482	1,516	1,550	1,584	1,618	1,652
Wellington Region	**20,367**	**21,553**	**17,010**	**20,285**	**20,827**	**21,351**	**21,864**	**22,371**	**22,875**	**23,377**	**23,878**	**24,380**

Scenario three Wellington region consumer spending 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kapiti Coast District	932	1,064	1,062	1,065	1,071	1,081	1,095	1,112	1,133	1,156	1,181	1,210
Porirua City	823	839	754	828	832	839	1,096	1,113	1,132	1,154	1,177	1,201
Upper Hutt City	1,614	1,831	1,827	1,830	1,840	1,853	1,875	1,900	1,929	1,963	1,998	2,038
Lower Hutt City	1,585	1,634	1,267	1,651	1,679	1,714	1,760	1,810	1,866	1,928	1,994	2,067
Wellington City	4,520	4,645	4,212	4,675	4,725	4,778	4,849	4,916	4,989	5,066	5,149	5,242
Wairarapa	756	865	866	869	875	884	896	910	927	945	964	985
Wellington Region	**10,231**	**10,878**	**9,989**	**10,919**	**11,022**	**11,148**	**11,571**	**11,763**	**11,976**	**12,211**	**12,463**	**12,742**

Scenario three Wellington region population by age and territorial authority 2019-2030

Total Population	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Kapiti Coast District												
Child - up to 15 years	9,649	9,627	9,582	9,527	9,475	9,428	9,411	9,403	9,483	9,572	9,667	9,780
Young adult - 15 to 24 years	5,343	5,356	5,357	5,351	5,347	5,345	5,360	5,380	5,382	5,389	5,400	5,421
Adult - 25 to 64 years	25,042	25,093	25,084	25,046	25,014	24,995	25,052	25,135	25,296	25,482	25,685	25,936
Older adult - 65 years and over	15,129	15,427	15,686	15,922	16,159	16,400	16,689	16,993	17,235	17,494	17,765	18,068
Total	55,163	55,503	55,710	55,847	55,995	56,168	56,512	56,911	57,396	57,938	58,517	59,205
Porirua City												
Child - up to 15 years	13,855	13,936	13,958	14,020	14,148	14,300	14,518	14,746	15,055	15,388	15,738	16,110
Young adult - 15 to 24 years	7,884	7,918	7,918	7,942	8,002	8,076	8,188	8,304	8,439	8,587	8,745	8,914
Adult - 25 to 64 years	29,594	29,853	29,986	30,204	30,561	30,971	31,526	32,101	32,715	33,384	34,089	34,838
Older adult - 65 years and over	7,274	7,523	7,738	7,973	8,243	8,527	8,851	9,184	9,466	9,765	10,074	10,397
Total	58,606	59,230	59,600	60,139	60,954	61,873	63,083	64,335	65,675	67,123	68,646	70,258
Upper Hutt City												
Child - up to 15 years	8,825	8,792	8,742	8,681	8,633	8,614	8,615	8,623	8,650	8,690	8,729	8,773
Young adult - 15 to 24 years	5,290	5,226	5,153	5,074	5,004	4,951	4,910	4,873	4,889	4,912	4,934	4,960
Adult - 25 to 64 years	22,826	22,757	22,644	22,501	22,393	22,358	22,376	22,411	22,460	22,545	22,626	22,722
Older adult - 65 years and over	7,185	7,309	7,416	7,510	7,614	7,740	7,883	8,031	8,173	8,327	8,479	8,637
Total	44,126	44,084	43,955	43,766	43,644	43,663	43,785	43,939	44,171	44,473	44,768	45,092
Lower Hutt City												
Child - up to 15 years	21,963	21,873	21,847	21,784	21,735	21,678	21,684	21,701	21,762	21,842	21,923	22,027
Young adult - 15 to 24 years	13,604	13,520	13,476	13,410	13,352	13,290	13,267	13,250	13,282	13,325	13,369	13,427
Adult - 25 to 64 years	54,999	54,933	55,026	55,026	55,058	55,069	55,239	55,439	55,614	55,835	56,063	56,347
Older adult - 65 years and over	15,136	15,396	15,698	15,971	16,251	16,523	16,841	17,167	17,489	17,826	18,165	18,522
Total	105,702	105,722	106,046	106,192	106,396	106,560	107,031	107,557	108,147	108,828	109,521	110,322
Wellington City												
Child - up to 15 years	34,869	34,835	34,761	34,640	34,608	34,520	34,504	34,413	34,406	34,395	34,376	34,393
Young adult - 15 to 24 years	36,942	37,132	37,278	37,371	37,558	37,682	37,884	38,002	38,153	38,300	38,437	38,615
Adult - 25 to 64 years	114,761	115,087	115,278	115,310	115,633	115,765	116,136	116,253	116,337	116,406	116,450	116,615
Older adult - 65 years and over	26,352	27,483	28,574	29,615	30,722	31,769	32,876	33,903	34,758	35,610	36,453	37,335
Total	212,923	214,537	215,891	216,937	218,521	219,736	221,400	222,571	223,654	224,711	225,718	226,959
Wairarapa												
Child - up to 15 years	8,609	8,620	8,606	8,570	8,539	8,514	8,513	8,512	8,543	8,582	8,621	8,667
Young adult - 15 to 24 years	4,938	4,950	4,949	4,935	4,924	4,916	4,922	4,928	4,938	4,953	4,967	4,986
Adult - 25 to 64 years	22,140	22,271	22,337	22,346	22,365	22,400	22,497	22,594	22,722	22,871	23,018	23,185
Older adult - 65 years and over	9,713	9,959	10,177	10,366	10,558	10,755	10,981	11,206	11,405	11,613	11,821	12,040
Total	45,400	45,800	46,069	46,217	46,384	46,584	46,913	47,240	47,609	48,019	48,427	48,878
Wellington Region												
Child - up to 15 years	97,770	97,682	97,496	97,223	97,138	97,053	97,245	97,398	97,898	98,468	99,054	99,750
Young adult - 15 to 24 years	74,000	74,103	74,131	74,084	74,187	74,261	74,531	74,738	75,083	75,466	75,853	76,323
Adult - 25 to 64 years	269,363	269,994	270,356	270,434	271,024	271,557	272,827	273,933	275,144	276,523	277,932	279,643
Older adult - 65 years and over	80,788	83,097	85,288	87,357	89,545	91,714	94,121	96,483	98,526	100,635	102,758	105,000
Total	521,920	524,876	527,271	529,099	531,895	534,584	538,723	542,553	546,651	551,091	555,597	560,715

Scenario two Wellington region Māori economy GDP by industry 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	62	62	59	64	65	67	69	70	72	73	75	76
Mining	94	95	76	96	99	102	104	106	109	111	114	116
Manufacturing	289	291	243	297	305	313	320	328	335	342	350	357
Electricity and waste services	128	129	120	132	135	139	142	145	149	152	155	158
Construction	330	332	252	339	348	357	365	374	382	391	399	407
Wholesale trade	136	136	113	137	140	144	147	151	154	158	161	164
Retail trade	214	214	143	206	212	217	222	227	232	238	243	248
Accommodation and food services	67	64	16	30	31	31	32	33	34	34	35	36
Transport, postal and warehousing	130	130	108	130	134	137	141	144	147	150	154	157
Information media and telecommunications	155	156	145	159	164	168	172	176	180	184	187	191
Financial and insurance services	479	481	444	484	497	510	522	534	546	558	570	582
Rental hiring and real estate services	57	57	55	57	59	60	62	63	65	66	68	69
Professional scientific and technical services	485	487	373	492	505	517	530	542	554	567	579	591
Administrative and support services	51	51	27	49	51	52	53	54	56	57	58	59
Public administration and safety	484	486	462	496	509	522	535	547	560	572	584	596
Education and training	154	154	142	149	153	156	160	164	168	171	175	179
Health care and social assistance	307	308	293	300	309	316	324	331	339	346	354	361
Arts and recreations services	83	80	23	45	47	48	49	50	51	52	54	55
Personal Services	49	49	26	46	47	48	49	50	51	53	54	55
Total	**3,754**	**3,763**	**3,120**	**3,709**	**3,808**	**3,904**	**3,997**	**4,090**	**4,182**	**4,274**	**4,366**	**4,457**

Appendix F Scenario comparisons by the numbers

Wellington region population 2019-2030

Total Population	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	521,920	524,876	527,271	528,469	533,248	537,380	542,984	548,571	553,768	559,163	564,492	569,821
Scenario two (Mid-point)	521,920	524,876	527,271	529,139	531,935	536,945	541,735	546,571	551,552	556,270	561,456	566,670
Scenario three (Worst case)	521,920	524,876	527,271	529,099	531,895	534,584	538,723	542,553	546,651	551,091	555,597	560,715
.id pre-COVID-19 projection	521,920	524,876	528,771	533,482	538,953	543,948	548,912	553,579	558,036	562,354	566,758	571,295

Wellington region total unemployment 2019-2030

Total Unemployed	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	11,802	14,100	18,246	16,311	15,974	15,571	15,273	15,035	14,835	14,659	14,501	14,355
Scenario two (Mid-point)	11,802	14,100	21,668	19,207	18,209	17,405	16,792	16,295	15,874	15,506	15,178	14,879
Scenario three (Worst case)	11,802	14,100	25,298	23,275	21,837	20,865	20,142	19,572	19,105	18,711	18,373	18,077

Wellington region unemployment rate 2019-2030

Unemploymentr rate (%)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	4.2	4.7	6.3	5.7	5.4	5.1	4.9	4.8	4.7	4.5	4.4	4.4
Scenario two (Mid-point)	4.2	4.7	7.6	6.7	6.2	5.8	5.5	5.3	5.1	4.9	4.7	4.6
Scenario three (Worst case)	4.2	4.7	9.0	8.0	7.4	7.0	6.7	6.5	6.2	6.1	5.9	5.7

Wellington region employment 2019-2030

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	260,700	262,783	248,266	246,134	257,289	263,322	268,629	273,362	277,616	281,453	284,921	288,055
Scenario two (Mid-point)	260,700	262,783	241,001	244,790	253,367	258,867	263,753	268,156	272,158	275,812	279,160	282,231
Scenario three (Worst case)	260,700	262,783	234,008	244,200	248,283	252,044	255,586	258,961	262,203	265,334	268,370	271,322

Wellington region gross domestic product 2019-2030

Total GDP ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	30,688	30,746	28,193	30,389	32,070	33,142	34,142	35,085	35,982	36,839	37,661	38,452
Scenario two (Mid-point)	30,688	30,746	26,747	30,237	31,599	32,600	33,542	34,437	35,295	36,122	36,922	37,697
Scenario three (Worst case)	30,688	30,746	25,437	30,183	30,989	31,768	32,532	33,287	34,037	34,784	35,530	36,276

Wellington region household income 2019-2030

Total Household Income ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	20,367	21,553	18,894	20,423	21,553	22,274	22,946	23,579	24,182	24,758	25,311	25,842
Scenario two (Mid-point)	20,367	21,553	17,902	20,321	21,236	21,910	22,542	23,144	23,721	24,277	24,814	25,335
Scenario three (Worst case)	20,367	21,553	17,010	20,285	20,827	21,351	21,864	22,371	22,875	23,377	23,878	24,380

Wellington region consumer spending 2019-2030

Total Consumer Spending ($millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Scenario one (Best case)	9,789	10,672	9,797	10,456	10,731	10,928	11,464	11,729	12,101	12,375	12,664	12,966
Scenario two (Mid-point)	10,231	10,878	10,412	10,885	10,984	11,399	11,599	11,821	12,069	12,331	12,623	12,935
Scenario three (Worst case)	10,231	10,878	9,989	10,919	11,022	11,148	11,571	11,763	11,976	12,211	12,463	12,742

Appendix G Scenario one employment by industry and TA

Kapiti Coast District

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	373	377	404	380	397	406	415	422	429	434	440	445
Mining	24	24	25	24	25	26	27	27	27	28	28	29
Manufacturing	763	723	740	728	761	779	795	809	821	833	843	852
Electricity and waste services	100	95	100	95	100	102	104	106	107	109	110	111
Construction	2,119	2,121	2,114	2,137	2,234	2,286	2,332	2,373	2,410	2,443	2,474	2,501
Wholesale trade	145	129	131	128	134	137	140	142	144	146	148	150
Retail trade	1,760	1,924	1,740	1,825	1,908	1,953	1,992	2,027	2,059	2,087	2,113	2,136
Accommodation and food services	1,048	1,145	440	518	542	555	566	576	585	593	600	607
Transport, postal and warehousing	299	359	366	355	371	380	388	395	401	406	411	416
Information media and telecommunications	89	83	89	84	88	90	92	93	95	96	97	98
Financial and insurance services	143	136	143	135	141	144	147	150	152	154	156	158
Rental hiring and real estate services	182	171	182	170	178	182	186	189	192	194	197	199
Professional scientific and technical services	750	758	746	755	789	808	824	838	851	863	874	883
Administrative and support services	456	461	386	443	464	474	484	492	500	507	513	519
Public administration and safety	466	495	529	499	522	534	545	554	563	571	578	584
Education and training	1,430	1,332	1,352	1,265	1,323	1,354	1,381	1,405	1,427	1,447	1,465	1,481
Health care and social assistance	2,362	2,164	2,269	2,086	2,180	2,231	2,276	2,316	2,352	2,385	2,414	2,441
Arts and recreations services	246	260	116	144	150	154	157	160	162	165	167	168
Personal Services	498	527	415	481	503	515	525	534	543	550	557	563
Total	**13,253**	**13,285**	**12,287**	**12,254**	**12,809**	**13,109**	**13,373**	**13,609**	**13,821**	**14,012**	**14,185**	**14,341**

Porirua City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	78	79	84	79	83	85	86	88	89	90	92	93
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,106	1,048	1,073	1,056	1,104	1,130	1,153	1,173	1,191	1,208	1,223	1,236
Electricity and waste services	48	45	48	46	48	49	50	51	51	52	53	53
Construction	2,790	2,793	2,783	2,813	2,941	3,010	3,071	3,125	3,173	3,217	3,257	3,293
Wholesale trade	626	559	568	553	578	592	604	614	624	632	640	647
Retail trade	2,150	2,350	2,126	2,230	2,331	2,385	2,433	2,476	2,515	2,549	2,581	2,609
Accommodation and food services	941	1,029	395	466	487	498	508	517	525	533	539	545
Transport, postal and warehousing	309	371	378	367	384	393	401	408	414	420	425	430
Information media and telecommunications	88	83	89	84	87	89	91	93	94	96	97	98
Financial and insurance services	198	188	198	187	195	200	204	207	211	214	216	219
Rental hiring and real estate services	170	160	171	159	166	170	174	177	180	182	184	186
Professional scientific and technical services	973	982	967	979	1,023	1,047	1,068	1,087	1,104	1,119	1,133	1,145
Administrative and support services	509	514	431	494	517	529	540	549	558	565	572	579
Public administration and safety	1,068	1,135	1,211	1,143	1,195	1,223	1,248	1,270	1,290	1,307	1,324	1,338
Education and training	2,908	2,707	2,749	2,572	2,689	2,752	2,807	2,857	2,901	2,941	2,977	3,010
Health care and social assistance	3,055	2,800	2,935	2,698	2,820	2,886	2,944	2,996	3,043	3,085	3,123	3,157
Arts and recreations services	234	248	111	137	143	147	150	152	155	157	159	161
Personal Services	596	630	496	575	601	615	628	639	649	658	666	673
Total	**17,847**	**17,721**	**16,812**	**16,638**	**17,392**	**17,800**	**18,159**	**18,479**	**18,766**	**19,026**	**19,260**	**19,472**

Upper Hutt City

Total employment (FTEs)	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Agriculture, fishing and forestry	60	60	64	61	63	65	66	67	68	69	70	71
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,129	1,070	1,095	1,078	1,127	1,153	1,176	1,197	1,216	1,233	1,248	1,261
Electricity and waste services	104	99	105	99	104	106	108	110	112	114	115	116
Construction	1,392	1,394	1,388	1,404	1,467	1,502	1,532	1,559	1,583	1,605	1,625	1,643
Wholesale trade	251	224	228	222	232	238	243	247	251	254	257	260
Retail trade	1,147	1,253	1,134	1,189	1,243	1,272	1,298	1,321	1,341	1,360	1,376	1,391
Accommodation and food services	727	794	305	360	376	385	393	400	406	411	416	421
Transport, postal and warehousing	195	235	239	232	242	248	253	258	262	265	268	271
Information media and telecommunications	71	67	71	67	70	72	73	75	76	77	78	79
Financial and insurance services	87	83	87	83	86	88	90	92	93	94	96	97
Rental hiring and real estate services	82	77	82	76	80	82	83	85	86	87	88	89
Professional scientific and technical services	446	451	444	449	469	480	490	499	506	513	520	525
Administrative and support services	156	158	132	152	159	162	166	168	171	173	176	177
Public administration and safety	3,219	3,422	3,651	3,447	3,603	3,688	3,762	3,828	3,888	3,942	3,990	4,034
Education and training	1,167	1,087	1,103	1,032	1,079	1,104	1,127	1,147	1,164	1,180	1,195	1,208
Health care and social assistance	839	769	806	741	775	793	809	823	836	847	858	867
Arts and recreations services	258	273	122	151	158	162	165	168	170	173	175	177
Personal Services	373	394	310	360	376	385	393	400	406	412	417	421
Total	**11,704**	**11,909**	**11,368**	**11,202**	**11,710**	**11,985**	**12,226**	**12,442**	**12,635**	**12,810**	**12,968**	**13,110**

Lower Hutt City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	57	58	62	58	61	63	64	65	66	67	68	68
Mining	28	29	30	29	30	31	32	32	33	33	34	34
Manufacturing	4,722	4,476	4,580	4,508	4,713	4,823	4,920	5,007	5,085	5,155	5,219	5,276
Electricity and waste services	622	590	627	594	621	635	648	660	670	679	688	695
Construction	6,133	6,139	6,117	6,184	6,464	6,616	6,749	6,868	6,975	7,072	7,159	7,237
Wholesale trade	2,952	2,636	2,681	2,610	2,728	2,792	2,848	2,899	2,944	2,984	3,021	3,054
Retail trade	4,420	4,831	4,370	4,583	4,790	4,903	5,001	5,089	5,169	5,240	5,305	5,363
Accommodation and food services	2,710	2,961	1,138	1,341	1,402	1,435	1,464	1,489	1,513	1,533	1,552	1,569
Transport, postal and warehousing	1,270	1,525	1,551	1,507	1,576	1,613	1,645	1,674	1,700	1,724	1,745	1,764
Information media and telecommunications	383	360	386	363	379	388	396	403	409	415	420	425
Financial and insurance services	961	915	960	908	949	971	991	1,008	1,024	1,038	1,051	1,062
Rental hiring and real estate services	687	644	687	641	670	686	700	712	723	733	742	750
Professional scientific and technical services	3,525	3,558	3,505	3,546	3,706	3,793	3,870	3,938	3,999	4,055	4,104	4,150
Administrative and support services	2,615	2,640	2,214	2,541	2,656	2,718	2,773	2,822	2,866	2,905	2,941	2,974
Public administration and safety	1,866	1,984	2,117	1,998	2,089	2,138	2,181	2,219	2,254	2,285	2,313	2,339
Education and training	3,748	3,490	3,544	3,316	3,466	3,547	3,619	3,682	3,740	3,791	3,838	3,880
Health care and social assistance	5,492	5,033	5,276	4,850	5,070	5,188	5,293	5,386	5,470	5,546	5,614	5,676
Arts and recreations services	825	873	391	483	505	517	527	536	545	552	559	565
Personal Services	1,489	1,575	1,239	1,438	1,503	1,538	1,569	1,597	1,622	1,644	1,665	1,683
Total	**44,505**	**44,317**	**41,473**	**41,497**	**43,378**	**44,395**	**45,290**	**46,088**	**46,805**	**47,452**	**48,037**	**48,565**

Wellington City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	88	89	95	89	93	96	97	99	101	102	103	105
Mining	282	286	293	288	301	308	314	319	324	329	333	337
Manufacturing	4,215	3,995	4,088	4,024	4,207	4,305	4,392	4,469	4,539	4,602	4,658	4,710
Electricity and waste services	1,160	1,100	1,169	1,108	1,158	1,185	1,209	1,231	1,250	1,267	1,283	1,297
Construction	7,267	7,275	7,248	7,328	7,660	7,840	7,998	8,139	8,265	8,379	8,483	8,576
Wholesale trade	3,887	3,470	3,530	3,436	3,592	3,676	3,750	3,816	3,875	3,929	3,977	4,021
Retail trade	7,900	8,634	7,810	8,190	8,562	8,762	8,939	9,097	9,238	9,366	9,481	9,585
Accommodation and food services	10,100	11,038	4,240	4,998	5,225	5,347	5,455	5,551	5,638	5,716	5,786	5,850
Transport, postal and warehousing	5,162	6,197	6,306	6,127	6,405	6,555	6,687	6,805	6,911	7,007	7,093	7,171
Information media and telecommunications	4,229	3,972	4,257	4,001	4,182	4,280	4,367	4,444	4,513	4,575	4,631	4,682
Financial and insurance services	10,843	10,317	10,828	10,238	10,702	10,953	11,174	11,371	11,547	11,707	11,851	11,982
Rental hiring and real estate services	1,457	1,368	1,459	1,361	1,423	1,456	1,485	1,511	1,535	1,556	1,575	1,593
Professional scientific and technical services	26,691	26,947	26,542	26,852	28,069	28,727	29,306	29,822	30,286	30,705	31,083	31,425
Administrative and support services	7,209	7,278	6,102	7,004	7,322	7,493	7,644	7,779	7,900	8,009	8,108	8,197
Public administration and safety	32,027	34,041	36,324	34,293	35,847	36,688	37,427	38,087	38,679	39,214	39,697	40,134
Education and training	11,776	10,964	11,134	10,417	10,889	11,144	11,369	11,569	11,749	11,911	12,058	12,191
Health care and social assistance	12,603	11,550	12,108	11,130	11,634	11,907	12,147	12,361	12,553	12,727	12,883	13,025
Arts and recreations services	3,637	3,849	1,722	2,128	2,225	2,277	2,323	2,364	2,401	2,434	2,464	2,491
Personal Services	5,184	5,486	4,314	5,007	5,234	5,357	5,465	5,561	5,648	5,726	5,796	5,860
Total	**155,719**	**157,855**	**149,569**	**148,020**	**154,729**	**158,356**	**161,548**	**164,395**	**166,953**	**169,260**	**171,346**	**173,231**

Wairarapa

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,058	3,092	3,309	3,115	3,257	3,333	3,400	3,460	3,514	3,562	3,606	3,646
Mining	82	83	85	84	87	89	91	93	94	96	97	98
Manufacturing	1,934	1,833	1,875	1,846	1,930	1,975	2,015	2,050	2,082	2,111	2,137	2,161
Electricity and waste services	171	162	172	163	170	174	178	181	184	186	189	191
Construction	1,703	1,704	1,698	1,717	1,795	1,837	1,874	1,907	1,937	1,963	1,988	2,009
Wholesale trade	550	491	499	486	508	520	531	540	548	556	563	569
Retail trade	1,744	1,907	1,725	1,809	1,891	1,935	1,974	2,009	2,040	2,068	2,094	2,117
Accommodation and food services	1,383	1,512	581	684	715	732	747	760	772	783	792	801
Transport, postal and warehousing	445	534	544	528	552	565	577	587	596	604	612	618
Information media and telecommunications	58	54	58	55	57	58	60	61	62	62	63	64
Financial and insurance services	183	175	183	173	181	185	189	192	195	198	201	203
Rental hiring and real estate services	201	189	201	188	196	201	205	208	212	215	217	220
Professional scientific and technical services	823	831	819	828	866	886	904	920	934	947	959	969
Administrative and support services	305	308	259	297	310	317	324	330	335	339	344	347
Public administration and safety	548	583	622	587	614	628	641	652	662	671	680	687
Education and training	1,471	1,370	1,391	1,301	1,360	1,392	1,420	1,445	1,468	1,488	1,506	1,523
Health care and social assistance	2,245	2,058	2,157	1,983	2,073	2,121	2,164	2,202	2,237	2,267	2,295	2,321
Arts and recreations services	165	175	78	97	101	104	106	107	109	111	112	113
Personal Services	602	637	501	581	608	622	634	646	656	665	673	680
Total	**17,672**	**17,697**	**16,757**	**16,522**	**17,271**	**17,676**	**18,032**	**18,350**	**18,636**	**18,893**	**19,126**	**19,336**

Appendix H Scenario two employment industry and TA

Kapiti Coast District

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	373	377	408	378	391	400	407	414	420	426	431	436
Mining	24	24	24	24	25	26	26	27	27	27	28	28
Manufacturing	763	723	718	724	750	766	781	794	805	816	826	835
Electricity and waste services	100	95	101	95	98	100	102	104	105	107	108	109
Construction	2,119	2,121	1,984	2,125	2,200	2,248	2,290	2,328	2,363	2,395	2,424	2,451
Wholesale trade	145	129	128	127	132	135	137	139	141	143	145	147
Retail trade	1,760	1,924	1,605	1,815	1,879	1,919	1,956	1,988	2,018	2,045	2,070	2,093
Accommodation and food services	1,048	1,145	379	514	532	543	553	563	571	579	586	592
Transport, postal and warehousing	299	359	356	354	366	374	381	387	393	398	403	408
Information media and telecommunications	89	83	90	84	87	88	90	92	93	94	95	96
Financial and insurance services	143	136	144	134	139	142	144	147	149	151	153	155
Rental hiring and real estate services	182	171	186	169	175	179	182	185	188	191	193	195
Professional scientific and technical services	750	758	707	751	777	794	809	823	835	846	856	866
Administrative and support services	456	461	329	441	456	466	475	483	490	496	502	508
Public administration and safety	466	495	535	496	514	525	535	544	552	559	566	572
Education and training	1,430	1,332	1,382	1,259	1,303	1,331	1,356	1,379	1,400	1,418	1,436	1,451
Health care and social assistance	2,362	2,164	2,325	2,075	2,148	2,194	2,236	2,273	2,307	2,338	2,367	2,393
Arts and recreations services	246	260	98	143	148	151	154	156	159	161	163	164
Personal Services	498	527	362	478	495	506	515	524	532	539	545	551
Total	**13,253**	**13,285**	**11,859**	**12,186**	**12,613**	**12,887**	**13,130**	**13,349**	**13,548**	**13,730**	**13,897**	**14,050**

Porirua City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	78	79	85	79	81	83	85	86	87	89	90	91
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,106	1,048	1,041	1,051	1,088	1,111	1,132	1,151	1,168	1,184	1,198	1,211
Electricity and waste services	48	45	48	45	47	48	49	50	50	51	52	52
Construction	2,790	2,793	2,612	2,798	2,897	2,959	3,015	3,066	3,111	3,153	3,191	3,226
Wholesale trade	626	559	551	550	569	582	593	603	612	620	627	634
Retail trade	2,150	2,350	1,961	2,217	2,295	2,345	2,389	2,429	2,465	2,498	2,528	2,556
Accommodation and food services	941	1,029	341	462	478	488	497	506	513	520	526	532
Transport, postal and warehousing	309	371	368	365	378	386	394	400	406	412	417	421
Information media and telecommunications	88	83	89	83	86	88	90	91	92	94	95	96
Financial and insurance services	198	188	199	186	192	197	200	204	207	209	212	214
Rental hiring and real estate services	170	160	174	158	164	168	171	174	176	178	181	183
Professional scientific and technical services	973	982	916	973	1,007	1,029	1,049	1,066	1,082	1,097	1,110	1,122
Administrative and support services	509	514	367	491	508	520	529	538	546	554	560	566
Public administration and safety	1,068	1,135	1,227	1,138	1,177	1,203	1,226	1,246	1,265	1,282	1,297	1,312
Education and training	2,908	2,707	2,809	2,559	2,649	2,706	2,757	2,803	2,845	2,883	2,918	2,950
Health care and social assistance	3,055	2,800	3,008	2,684	2,778	2,839	2,892	2,940	2,984	3,024	3,061	3,095
Arts and recreations services	234	248	93	136	141	144	146	149	151	153	155	157
Personal Services	596	630	433	572	592	605	616	626	636	644	652	659
Total	**17,847**	**17,721**	**16,321**	**16,548**	**17,128**	**17,499**	**17,830**	**18,127**	**18,398**	**18,645**	**18,871**	**19,079**

Upper Hutt City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	60	60	65	60	62	64	65	66	67	68	69	70
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,129	1,070	1,063	1,072	1,110	1,134	1,155	1,175	1,192	1,208	1,223	1,236
Electricity and waste services	104	99	105	99	102	105	107	108	110	111	113	114
Construction	1,392	1,394	1,303	1,396	1,445	1,477	1,504	1,530	1,552	1,573	1,592	1,610
Wholesale trade	251	224	222	221	229	234	238	242	246	249	252	255
Retail trade	1,147	1,253	1,046	1,182	1,224	1,250	1,274	1,295	1,315	1,332	1,348	1,363
Accommodation and food services	727	794	263	356	369	377	384	390	396	402	406	411
Transport, postal and warehousing	195	235	232	231	239	244	249	253	256	260	263	266
Information media and telecommunications	71	67	72	67	69	71	72	73	74	75	76	77
Financial and insurance services	87	83	88	82	85	87	89	90	91	93	94	95
Rental hiring and real estate services	82	77	83	76	78	80	82	83	84	85	86	87
Professional scientific and technical services	446	451	420	447	462	472	481	489	497	503	509	515
Administrative and support services	156	158	113	151	156	159	162	165	168	170	172	174
Public administration and safety	3,219	3,422	3,699	3,429	3,550	3,627	3,695	3,757	3,813	3,864	3,911	3,954
Education and training	1,167	1,087	1,128	1,027	1,063	1,086	1,107	1,125	1,142	1,157	1,171	1,184
Health care and social assistance	839	769	826	737	763	780	794	808	820	831	841	850
Arts and recreations services	258	273	103	150	155	158	161	164	166	169	171	173
Personal Services	373	394	271	358	370	378	385	392	398	403	408	412
Total	**11,704**	**11,909**	**11,100**	**11,142**	**11,532**	**11,782**	**12,005**	**12,205**	**12,387**	**12,554**	**12,706**	**12,846**

Lower Hutt City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	57	58	63	58	60	62	63	64	65	66	66	67
Mining	28	29	28	29	30	31	31	32	32	33	33	33
Manufacturing	4,722	4,476	4,444	4,485	4,642	4,743	4,833	4,913	4,987	5,054	5,115	5,171
Electricity and waste services	622	590	629	591	612	625	637	647	657	666	674	681
Construction	6,133	6,139	5,741	6,151	6,367	6,505	6,628	6,738	6,839	6,931	7,015	7,092
Wholesale trade	2,952	2,636	2,602	2,596	2,687	2,746	2,798	2,844	2,887	2,925	2,961	2,994
Retail trade	4,420	4,831	4,030	4,557	4,717	4,819	4,910	4,992	5,067	5,135	5,197	5,254
Accommodation and food services	2,710	2,961	981	1,329	1,375	1,405	1,432	1,455	1,477	1,497	1,515	1,532
Transport, postal and warehousing	1,270	1,525	1,509	1,500	1,552	1,586	1,616	1,643	1,667	1,690	1,710	1,729
Information media and telecommunications	383	360	387	361	374	382	389	395	401	407	412	416
Financial and insurance services	961	915	967	903	935	955	973	989	1,004	1,018	1,030	1,041
Rental hiring and real estate services	687	644	700	638	660	675	687	699	709	719	727	735
Professional scientific and technical services	3,525	3,558	3,320	3,527	3,651	3,730	3,800	3,864	3,921	3,974	4,022	4,066
Administrative and support services	2,615	2,640	1,887	2,525	2,613	2,670	2,720	2,766	2,807	2,845	2,879	2,911
Public administration and safety	1,866	1,984	2,144	1,988	2,058	2,102	2,142	2,178	2,210	2,240	2,267	2,292
Education and training	3,748	3,490	3,621	3,299	3,414	3,489	3,554	3,614	3,668	3,717	3,762	3,803
Health care and social assistance	5,492	5,033	5,407	4,825	4,994	5,103	5,199	5,286	5,365	5,437	5,503	5,563
Arts and recreations services	825	873	328	478	495	506	516	524	532	539	546	552
Personal Services	1,489	1,575	1,082	1,429	1,479	1,511	1,540	1,565	1,589	1,610	1,629	1,647
Total	**44,505**	**44,317**	**39,869**	**41,269**	**42,715**	**43,642**	**44,466**	**45,209**	**45,883**	**46,499**	**47,064**	**47,581**

Wellington City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	88	89	96	89	92	94	96	97	99	100	101	102
Mining	282	286	280	286	296	303	308	313	318	322	326	330
Manufacturing	4,215	3,995	3,967	4,003	4,144	4,234	4,314	4,386	4,451	4,511	4,566	4,616
Electricity and waste services	1,160	1,100	1,173	1,102	1,141	1,166	1,188	1,208	1,226	1,242	1,257	1,271
Construction	7,267	7,275	6,802	7,289	7,544	7,708	7,854	7,985	8,104	8,213	8,312	8,404
Wholesale trade	3,887	3,470	3,425	3,418	3,538	3,615	3,683	3,745	3,800	3,851	3,898	3,941
Retail trade	7,900	8,634	7,202	8,145	8,430	8,613	8,776	8,923	9,056	9,177	9,289	9,391
Accommodation and food services	10,100	11,038	3,655	4,952	5,126	5,237	5,336	5,425	5,506	5,580	5,648	5,710
Transport, postal and warehousing	5,162	6,197	6,135	6,096	6,309	6,446	6,568	6,678	6,777	6,868	6,952	7,028
Information media and telecommunications	4,229	3,972	4,263	3,981	4,120	4,210	4,289	4,361	4,426	4,485	4,540	4,590
Financial and insurance services	10,843	10,317	10,902	10,186	10,543	10,772	10,975	11,158	11,325	11,477	11,616	11,744
Rental hiring and real estate services	1,457	1,368	1,486	1,354	1,402	1,432	1,459	1,483	1,505	1,526	1,544	1,561
Professional scientific and technical services	26,691	26,947	25,139	26,710	27,646	28,246	28,779	29,259	29,696	30,095	30,460	30,795
Administrative and support services	7,209	7,278	5,203	6,959	7,203	7,360	7,499	7,624	7,738	7,841	7,937	8,024
Public administration and safety	32,027	34,041	36,797	34,120	35,315	36,082	36,763	37,376	37,934	38,444	38,910	39,338
Education and training	11,776	10,964	11,377	10,364	10,727	10,960	11,167	11,353	11,523	11,677	11,819	11,949
Health care and social assistance	12,603	11,550	12,409	11,073	11,461	11,710	11,931	12,130	12,311	12,477	12,628	12,767
Arts and recreations services	3,637	3,849	1,446	2,109	2,183	2,230	2,272	2,310	2,345	2,376	2,405	2,431
Personal Services	5,184	5,486	3,767	4,976	5,150	5,262	5,361	5,451	5,532	5,606	5,674	5,737
Total	**155,719**	**157,855**	**145,525**	**147,212**	**152,370**	**155,678**	**158,617**	**161,265**	**163,671**	**165,869**	**167,882**	**169,729**

Wairarapa

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,058	3,092	3,347	3,100	3,208	3,278	3,340	3,395	3,446	3,492	3,535	3,574
Mining	82	83	81	83	86	88	90	91	92	94	95	96
Manufacturing	1,934	1,833	1,820	1,837	1,901	1,942	1,979	2,012	2,042	2,069	2,095	2,118
Electricity and waste services	171	162	172	162	168	171	175	178	180	183	185	187
Construction	1,703	1,704	1,594	1,708	1,768	1,806	1,840	1,871	1,899	1,924	1,948	1,969
Wholesale trade	550	491	485	484	501	511	521	530	538	545	552	558
Retail trade	1,744	1,907	1,590	1,799	1,862	1,902	1,938	1,970	2,000	2,027	2,051	2,074
Accommodation and food services	1,383	1,512	501	678	702	717	731	743	754	764	773	782
Transport, postal and warehousing	445	534	529	526	544	556	566	576	584	592	599	606
Information media and telecommunications	58	54	58	54	56	57	59	59	60	61	62	63
Financial and insurance services	183	175	184	172	178	182	186	189	192	194	197	199
Rental hiring and real estate services	201	189	205	187	193	198	201	205	208	210	213	215
Professional scientific and technical services	823	831	775	824	853	871	888	902	916	928	939	950
Administrative and support services	305	308	220	295	305	312	318	323	328	332	336	340
Public administration and safety	548	583	630	584	605	618	629	640	649	658	666	673
Education and training	1,471	1,370	1,421	1,295	1,340	1,369	1,395	1,418	1,440	1,459	1,477	1,493
Health care and social assistance	2,245	2,058	2,211	1,973	2,042	2,086	2,126	2,161	2,193	2,223	2,250	2,275
Arts and recreations services	165	175	66	96	99	101	103	105	107	108	109	111
Personal Services	602	637	437	578	598	611	622	633	642	651	659	666
Total	**17,672**	**17,697**	**16,327**	**16,433**	**17,008**	**17,378**	**17,706**	**18,001**	**18,270**	**18,515**	**18,740**	**18,946**

Appendix I Scenario three employment by industry and TA

Kapiti Coast District

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	373	377	413	377	384	389	395	400	405	410	415	419
Mining	24	24	22	24	25	25	25	26	26	26	27	27
Manufacturing	763	723	695	723	735	746	757	767	776	786	795	803
Electricity and waste services	100	95	101	95	96	98	99	100	102	103	104	105
Construction	2,119	2,121	1,846	2,121	2,156	2,189	2,219	2,249	2,277	2,304	2,330	2,356
Wholesale trade	145	129	123	127	129	131	133	135	136	138	140	141
Retail trade	1,760	1,924	1,474	1,810	1,841	1,868	1,895	1,920	1,944	1,967	1,989	2,011
Accommodation and food services	1,048	1,145	328	510	519	526	534	541	548	554	561	567
Transport, postal and warehousing	299	359	344	353	359	364	369	374	379	383	388	392
Information media and telecommunications	89	83	89	83	85	86	87	88	90	91	92	93
Financial and insurance services	143	136	144	134	136	138	140	142	144	145	147	149
Rental hiring and real estate services	182	171	189	169	172	174	177	179	181	184	186	188
Professional scientific and technical services	750	758	667	749	762	773	784	795	804	814	823	832
Administrative and support services	456	461	276	439	446	453	459	465	471	477	482	488
Public administration and safety	466	495	543	496	504	511	519	526	532	538	545	551
Education and training	1,430	1,332	1,413	1,257	1,278	1,297	1,315	1,332	1,349	1,365	1,381	1,396
Health care and social assistance	2,362	2,164	2,375	2,071	2,106	2,138	2,168	2,197	2,224	2,251	2,276	2,301
Arts and recreations services	246	260	83	142	144	146	148	150	152	154	156	157
Personal Services	498	527	318	476	484	492	499	505	512	518	524	529
Total	**13,253**	**13,285**	**11,443**	**12,155**	**12,359**	**12,546**	**12,722**	**12,890**	**13,052**	**13,207**	**13,359**	**13,506**

Porirua City

Total employment (FTEs)	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Agriculture, fishing and forestry	78	79	86	79	80	81	82	83	84	85	86	87
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,106	1,048	1,008	1,049	1,066	1,082	1,097	1,112	1,126	1,139	1,152	1,165
Electricity and waste services	48	45	48	45	46	47	47	48	49	49	50	50
Construction	2,790	2,793	2,431	2,792	2,839	2,882	2,922	2,961	2,998	3,034	3,068	3,102
Wholesale trade	626	559	532	549	558	567	575	582	589	597	603	610
Retail trade	2,150	2,350	1,800	2,211	2,248	2,282	2,315	2,345	2,374	2,403	2,430	2,457
Accommodation and food services	941	1,029	295	458	466	473	480	486	492	498	504	509
Transport, postal and warehousing	309	371	356	365	371	376	382	387	391	396	401	405
Information media and telecommunications	88	83	89	83	84	86	87	88	89	90	91	92
Financial and insurance services	198	188	200	186	189	191	194	197	199	202	204	206
Rental hiring and real estate services	170	160	177	158	161	163	165	168	170	172	174	176
Professional scientific and technical services	973	982	864	971	987	1,002	1,016	1,030	1,043	1,055	1,067	1,079
Administrative and support services	509	514	308	489	497	505	512	519	525	532	538	544
Public administration and safety	1,068	1,135	1,243	1,135	1,154	1,172	1,188	1,204	1,219	1,234	1,248	1,262
Education and training	2,908	2,707	2,872	2,554	2,597	2,636	2,673	2,709	2,743	2,775	2,807	2,838
Health care and social assistance	3,055	2,800	3,072	2,679	2,724	2,765	2,804	2,841	2,877	2,911	2,945	2,977
Arts and recreations services	234	248	79	135	137	139	141	143	145	147	148	150
Personal Services	596	630	380	570	579	588	596	604	612	619	626	633
Total	**17,847**	**17,721**	**15,841**	**16,509**	**16,785**	**17,039**	**17,278**	**17,507**	**17,726**	**17,937**	**18,143**	**18,342**

Upper Hutt City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	60	60	66	60	61	62	63	64	65	65	66	67
Mining	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	1,129	1,070	1,029	1,070	1,088	1,105	1,120	1,135	1,149	1,163	1,176	1,189
Electricity and waste services	104	99	105	99	100	102	103	105	106	107	108	110
Construction	1,392	1,394	1,213	1,393	1,416	1,438	1,458	1,477	1,496	1,514	1,531	1,548
Wholesale trade	251	224	214	221	224	228	231	234	237	240	243	245
Retail trade	1,147	1,253	960	1,179	1,199	1,217	1,234	1,251	1,266	1,281	1,296	1,310
Accommodation and food services	727	794	228	354	360	365	370	375	380	385	389	393
Transport, postal and warehousing	195	235	225	230	234	238	241	244	247	250	253	256
Information media and telecommunications	71	67	71	67	68	69	70	71	72	72	73	74
Financial and insurance services	87	83	88	82	83	85	86	87	88	89	90	91
Rental hiring and real estate services	82	77	85	76	77	78	79	80	81	82	83	84
Professional scientific and technical services	446	451	397	446	453	460	466	473	478	484	490	495
Administrative and support services	156	158	94	150	153	155	157	159	161	163	165	167
Public administration and safety	3,219	3,422	3,748	3,423	3,480	3,533	3,583	3,630	3,676	3,719	3,762	3,803
Education and training	1,167	1,087	1,153	1,025	1,042	1,058	1,073	1,087	1,101	1,114	1,127	1,139
Health care and social assistance	839	769	844	736	748	760	770	780	790	800	809	818
Arts and recreations services	258	273	87	149	151	153	156	158	160	161	163	165
Personal Services	373	394	238	356	362	368	373	378	383	387	392	396
Total	**11,704**	**11,909**	**10,844**	**11,116**	**11,302**	**11,473**	**11,634**	**11,788**	**11,935**	**12,078**	**12,216**	**12,350**

Lower Hutt City

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	57	58	63	58	59	60	61	62	62	63	64	65
Mining	28	29	27	29	29	30	30	31	31	31	32	32
Manufacturing	4,722	4,476	4,303	4,476	4,551	4,620	4,685	4,747	4,806	4,864	4,919	4,973
Electricity and waste services	622	590	630	590	600	609	617	625	633	641	648	655
Construction	6,133	6,139	5,343	6,137	6,240	6,334	6,423	6,508	6,590	6,668	6,745	6,819
Wholesale trade	2,952	2,636	2,511	2,591	2,634	2,674	2,712	2,748	2,782	2,815	2,848	2,879
Retail trade	4,420	4,831	3,700	4,545	4,621	4,691	4,757	4,820	4,880	4,939	4,995	5,050
Accommodation and food services	2,710	2,961	849	1,319	1,341	1,362	1,381	1,399	1,417	1,434	1,450	1,466
Transport, postal and warehousing	1,270	1,525	1,461	1,497	1,522	1,545	1,566	1,587	1,607	1,626	1,645	1,663
Information media and telecommunications	383	360	385	360	366	372	377	382	387	391	396	400
Financial and insurance services	961	915	972	901	917	930	944	956	968	979	991	1,002
Rental hiring and real estate services	687	644	712	637	647	657	666	675	684	692	700	707
Professional scientific and technical services	3,525	3,558	3,133	3,519	3,578	3,632	3,683	3,732	3,779	3,824	3,867	3,910
Administrative and support services	2,615	2,640	1,582	2,514	2,556	2,595	2,631	2,666	2,700	2,732	2,763	2,793
Public administration and safety	1,866	1,984	2,173	1,984	2,018	2,048	2,077	2,104	2,131	2,156	2,181	2,205
Education and training	3,748	3,490	3,702	3,293	3,348	3,399	3,446	3,492	3,536	3,578	3,619	3,659
Health care and social assistance	5,492	5,033	5,523	4,817	4,897	4,971	5,041	5,108	5,172	5,233	5,293	5,351
Arts and recreations services	825	873	278	475	483	490	497	504	510	516	522	528
Personal Services	1,489	1,575	949	1,424	1,447	1,469	1,490	1,510	1,529	1,547	1,565	1,582
Total	**44,505**	**44,317**	**38,297**	**41,167**	**41,855**	**42,489**	**43,086**	**43,655**	**44,202**	**44,730**	**45,241**	**45,739**

Wellington City

Total employment (FTEs)	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Agriculture, fishing and forestry	88	89	97	89	90	92	93	94	95	96	97	99
Mining	282	286	264	286	290	295	299	303	307	310	314	317
Manufacturing	4,215	3,995	3,841	3,995	4,062	4,124	4,182	4,237	4,290	4,341	4,391	4,439
Electricity and waste services	1,160	1,100	1,175	1,100	1,119	1,136	1,152	1,167	1,182	1,196	1,209	1,223
Construction	7,267	7,275	6,331	7,272	7,394	7,506	7,611	7,712	7,808	7,902	7,992	8,080
Wholesale trade	3,887	3,470	3,305	3,411	3,468	3,521	3,570	3,618	3,663	3,707	3,749	3,790
Retail trade	7,900	8,634	6,614	8,124	8,260	8,385	8,503	8,615	8,723	8,827	8,928	9,026
Accommodation and food services	10,100	11,038	3,166	4,918	5,000	5,075	5,147	5,215	5,280	5,343	5,404	5,464
Transport, postal and warehousing	5,162	6,197	5,939	6,084	6,185	6,279	6,367	6,451	6,532	6,610	6,686	6,759
Information media and telecommunications	4,229	3,972	4,251	3,973	4,040	4,101	4,159	4,213	4,266	4,317	4,367	4,415
Financial and insurance services	10,843	10,317	10,967	10,167	10,337	10,494	10,641	10,782	10,917	11,047	11,174	11,297
Rental hiring and real estate services	1,457	1,368	1,512	1,352	1,374	1,395	1,415	1,433	1,451	1,469	1,485	1,502
Professional scientific and technical services	26,691	26,947	23,723	26,651	27,096	27,507	27,893	28,262	28,615	28,957	29,288	29,611
Administrative and support services	7,209	7,278	4,360	6,931	7,046	7,153	7,254	7,350	7,442	7,530	7,617	7,700
Public administration and safety	32,027	34,041	37,292	34,057	34,627	35,151	35,645	36,116	36,568	37,005	37,428	37,840
Education and training	11,776	10,964	11,631	10,345	10,518	10,677	10,827	10,970	11,108	11,240	11,369	11,494
Health care and social assistance	12,603	11,550	12,675	11,053	11,238	11,408	11,569	11,721	11,868	12,010	12,147	12,281
Arts and recreations services	3,637	3,849	1,225	2,094	2,129	2,161	2,192	2,221	2,248	2,275	2,301	2,327
Personal Services	5,184	5,486	3,305	4,958	5,040	5,117	5,189	5,257	5,323	5,387	5,448	5,508
Total	**155,719**	**157,855**	**141,673**	**146,860**	**149,315**	**151,577**	**153,707**	**155,737**	**157,686**	**159,569**	**161,395**	**163,170**

Wellington Region

Total employment (FTEs)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Agriculture, fishing and forestry	3,713	3,755	4,107	3,757	3,820	3,877	3,932	3,984	4,034	4,082	4,129	4,174
Mining	417	421	390	421	428	435	441	447	453	458	463	468
Manufacturing	13,867	13,144	12,637	13,146	13,366	13,569	13,759	13,941	14,115	14,284	14,447	14,606
Electricity and waste services	2,205	2,090	2,233	2,091	2,126	2,158	2,188	2,217	2,245	2,272	2,298	2,323
Construction	21,403	21,426	18,648	21,419	21,777	22,107	22,418	22,714	22,998	23,273	23,539	23,798
Wholesale trade	8,411	7,510	7,153	7,382	7,505	7,619	7,726	7,828	7,926	8,021	8,113	8,202
Retail trade	19,122	20,898	16,008	19,664	19,993	20,296	20,581	20,853	21,114	21,366	21,610	21,848
Accommodation and food services	16,908	18,479	5,300	8,233	8,370	8,497	8,616	8,730	8,839	8,945	9,047	9,147
Transport, postal and warehousing	7,682	9,222	8,837	9,052	9,204	9,343	9,474	9,600	9,720	9,836	9,948	10,058
Information media and telecommunications	4,919	4,619	4,944	4,621	4,698	4,769	4,836	4,900	4,961	5,021	5,078	5,134
Financial and insurance services	12,416	11,813	12,558	11,642	11,837	12,016	12,185	12,346	12,501	12,650	12,795	12,935
Rental hiring and real estate services	2,779	2,609	2,884	2,577	2,621	2,660	2,698	2,733	2,767	2,800	2,833	2,864
Professional scientific and technical services	33,208	33,527	29,515	33,158	33,712	34,223	34,704	35,162	35,602	36,027	36,440	36,840
Administrative and support services	11,252	11,359	6,805	10,817	10,997	11,164	11,321	11,470	11,614	11,753	11,887	12,018
Public administration and safety	39,195	41,659	45,637	41,679	42,376	43,018	43,622	44,198	44,752	45,286	45,804	46,308
Education and training	22,500	20,949	22,223	19,767	20,097	20,402	20,688	20,961	21,224	21,477	21,723	21,962
Health care and social assistance	26,596	24,374	26,748	23,326	23,716	24,075	24,413	24,736	25,045	25,344	25,634	25,916
Arts and recreations services	5,366	5,678	1,807	3,090	3,141	3,189	3,234	3,276	3,317	3,357	3,395	3,433
Personal Services	8,741	9,250	5,573	8,359	8,499	8,628	8,749	8,864	8,975	9,083	9,186	9,287
Total	**260,700**	**262,783**	**234,008**	**244,200**	**248,283**	**252,044**	**255,586**	**258,961**	**262,203**	**265,334**	**268,370**	**271,322**

Appendix J COVID 19 alert level summary

New Zealand COVID-19 **Alert Levels Summary**

Unite against COVID-19

- The Alert Levels are determined by the Government and specify the public health and social measures to be taken in the fight against COVID-19. Further guidance is available on the **Covid19.govt.nz** website.
- The measures may be updated based on new scientific knowledge about COVID-19, information about the effectiveness of control measures in New Zealand and overseas, or the application of Alert Levels at different times (e.g. the application may be different depending on if New Zealand is moving down or up Alert Levels).
- Different parts of the country may be at different Alert Levels. We can move up and down Alert Levels.
- Essential services including supermarkets, health services, emergency services, utilities and goods transport will continue to operate at any level. Employers in those sectors must continue to meet health and safety obligations.
- Restrictions are cumulative (at Alert Level 4, all restrictions from Alert Level 2 and 3 apply).

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ELIMINATION STRATEGY – New Zealand is working together to eliminate COVID-19

Alert Level	Risk Assessment	Range of Measures (can be applied locally or nationally)	
Level 4 – Lockdown Likely the disease is not contained	• Community transmission is occurring. • Widespread outbreaks and new clusters.	• People instructed to stay at home (in their bubble) other than for essential personal movement. • Safe recreational activity is allowed in local area. • Travel is severely limited. • All gatherings cancelled and all public venues closed.	• Businesses closed except for essential services (e.g. supermarkets, pharmacies, clinics, petrol stations) and lifeline utilities. • Educational facilities closed. • Rationing of supplies and requisitioning of facilities possible. • Reprioritisation of healthcare services.
Level 3 – Restrict High risk the disease is not contained	• Community transmission might be happening. • New clusters may emerge but can be controlled through testing and contact tracing.	• People instructed to stay home in their bubble other than for essential personal movement – including to go to work, school if they have to or for local recreation. • Physical distancing of two metres outside home (including on public transport), or one metre in controlled environments like schools and workplaces. • People must stay within their immediate household bubble, but can expand this to reconnect with close family / whānau, or bring in caregivers, or support isolated people. This extended bubble should remain exclusive. • Schools (years 1 to 10) and Early Childhood Education centres can safely open, but will have limited capacity. Children should learn at home if possible. • People must work from home unless that is not possible. • Businesses can open premises, but cannot physically interact with customers.	• Low risk local recreation activities are allowed. • Public venues are closed (e.g. libraries, museums, cinemas, food courts, gyms, pools, playgrounds, markets). • Gatherings of up to 10 people are allowed but only for wedding services, funerals and tangihanga. Physical distancing and public health measures must be maintained. • Healthcare services use virtual, non-contact consultations where possible. • Inter-regional travel is highly limited (e.g. for essential workers, with limited exemptions for others). • People at high risk of severe illness (older people and those with existing medical conditions) are encouraged to stay at home where possible, and take additional precautions when leaving home. They may choose to work.
Level 2 – Reduce The disease is contained, but the risk of community transmission remains	• Household transmission could be occurring. • Single or isolated cluster outbreaks.	• Physical distancing of one metre outside home (including on public transport). • Gatherings of up to 100 people indoors and 500 outdoors allowed while maintaining physical distancing and contact tracing requirements. • Sport and recreation activities are allowed if conditions on gatherings are met, physical distancing is followed and travel is local. • Public venues can open but must comply with conditions on gatherings, and undertake public health measures. • Health services operate as normally as possible.	• Most businesses open, and business premises can be open for staff and customers with appropriate measures in place. Alternative ways of working encouraged (e.g. remote working, shift-based working, physical distancing, staggering meal breaks, flexible leave). • Schools and Early Childhood Education centres open, with distance learning available for those unable to attend school (e.g. self-isolating). • People advised to avoid non-essential inter-regional travel. • People at high risk of severe illness (older people and those with existing medical conditions) are encouraged to stay at home where possible, and take additional precautions when leaving home. They may choose to work.
Level 1 – Prepare The disease is contained in New Zealand	• COVID-19 is uncontrolled overseas. • Isolated household transmission could be occurring in New Zealand.	• Border entry measures to minimise risk of importing COVID-19 cases. • Intensive testing for COVID-19. • Rapid contact tracing of any positive case. • Self-isolation and quarantine required. • Schools and workplaces open, and must operate safely. • Physical distancing encouraged.	• No restrictions on gatherings. • Stay home if you're sick, report flu-like symptoms. • Wash and dry hands, cough into elbow, don't touch your face. • No restrictions on domestic transport – avoid public transport or travel if sick.

Source: New Zealand Ministry of Health

Appendix K ANZSIC industries 2006

Agriculture, Forestry and Fishing		
	Agriculture	
		Horticulture and Fruit Growing
		Sheep, Beef Cattle and Grain Farming
		Dairy Cattle Farming
		Poultry, Deer and Other Livestock Farming
	Forestry and Logging	
		Forestry and Logging
	Fishing, Aquaculture and Agriculture, Forestry and Fishing Support Services	
		Fishing and Aquaculture
		Agriculture, Forestry and Fishing Support Services and Hunting
Mining		
	Mining	
		Mining
Manufacturing		
	Food, Beverage and Tobacco Product Manufacturing	
		Meat and Meat Product Manufacturing
		Seafood Processing
		Dairy Product Manufacturing
		Fruit, Oil, Cereal and Other Food Product Manufacturing
		Beverage and Tobacco Product Manufacturing
	Textile, Leather, Clothing and Footwear Manufacturing	
		Textile, Leather, Clothing and Footwear Manufacturing
	Wood and Paper Products Manufacturing	
		Wood Product Manufacturing
		Pulp, Paper and Converted Paper Product Manufacturing
	Printing	
		Printing
	Petroleum, Chemical, Polymer and Rubber Product Manufacturing	
		Petroleum and Coal Product Manufacturing
		Basic Chemical and Chemical Product Manufacturing
		Polymer Product and Rubber Product Manufacturing
	Non-Metallic Mineral Product Manufacturing	
		Non-Metallic Mineral Product Manufacturing
	Metal Product Manufacturing	
		Primary Metal and Metal Product Manufacturing
		Fabricated Metal Product Manufacturing
	Transport Equipment, Machinery and Equipment Manufacturing	
		Transport Equipment Manufacturing
		Machinery and Other Equipment Manufacturing
	Furniture and Other Manufacturing	
		Furniture and Other Manufacturing
Electricity, Gas, Water and Waste Services		
	Electricity, Gas, Water and Waste Services	
		Electricity and Gas Supply
		Water, Sewerage, Drainage and Waste Services
Construction		

	Construction	
		Building Construction
		Heavy and Civil Engineering Construction
		Construction Services
Wholesale Trade		
	Wholesale Trade	
		Wholesale Trade
Retail Trade and Accommodation		
	Retail Trade	
		Motor Vehicle and Motor Vehicle Parts and Fuel Retailing
		Supermarket, Grocery Stores and Specialised Food Retailing
		Other Store-Based Retailing and Non Store Retailing
	Accommodation and Food Services	
		Accommodation and Food Services
Transport, Postal and Warehousing		
	Transport, Postal and Warehousing	
		Road Transport
		Rail, Water, Air and Other Transport
		Postal, Courier Transport Support, and Warehousing Services.
Information Media and Telecommunications		
	Information Media and Telecommunications	
		Information Media Services
		Telecommunications, Internet and Library Services
Financial and Insurance Services		
	Financial and Insurance Services	
		Finance
		Insurance and Superannuation Funds
		Auxiliary Finance and Insurance Services
Rental, Hiring and Real Estate Services		
	Rental, Hiring and Real Estate Services	
		Rental and Hiring Services (except Real Estate)
		Property Operators and Real Estate Services
	Owner-Occupied Property Operation (National Accounts Only)	
		Owner-Occupied Property Operation (National Accounts Only)
Professional, Scientific, Technical, Administrative and Support Services		
	Professional, Scientific and Technical Services	
		Professional, Scientific and Technical Services
	Administrative and Support Services	
		Administrative and Support Services
Public Administration and Safety		
	Local Government Administration	
		Local Government Administration
	Central Government Administration, Defence and Public Safety	
		Central Government Administration, Defence and Public Safety
Education and Training		
	Education and Training	
		Education and Training
Health Care and Social Assistance		
	Health Care and Social Assistance	
		Health Care and Social Assistance

Arts, Recreation and Other Services	
Arts and Recreation Services	
	Arts and Recreation Services
Other Services	
	Other Services

Source: Statistics New Zealand

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