

Growth Projections

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Growth Projections

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Table of Contents

Glossary	6
1 Executive Summary	8
1.1 Methodology	8
1.2 Growth scenarios	8
1.3 Waimate District Growth Projection Summary	9
1.4 Usually Resident Population	10
1.5 Employment	11
1.6 Dwellings.....	11
1.7 Visitors	12
1.8 Rating Units.....	12
1.9 Recommendations	13
2 Purpose	13
3 Context	14
3.1 Stats NZ	14
3.2 COVID-19	14
4 Scope	15
4.1 Statistical Area 2 Boundaries	16
5 Methodology	17
5.1 Net Migration	17
5.1.1 Employment	17
5.1.2 Lifestyle	17
5.2 Births and deaths.....	18
5.3 Dwellings.....	18
5.4 Visitor Projections.....	18
5.5 Rateable Units.....	19
5.6 Data sources.....	19
6 Scenarios	19
6.1 Scenario 1: Business as Usual (Pre COVID-19)	19
6.2 Scenario 2: High.....	20
6.3 Scenario 3: Medium	20
6.4 Scenario 4: Low	20
7 District Assumptions and Outputs	20
7.1 Waimate District Growth Projections Summary	20
7.2 Employment Projections	21
7.2.1 Key Industries and Trends	21
7.2.2 COVID-19.....	21
7.2.3 Output	22
7.3 Population Projections	22
7.3.1 Key Migration Drivers.....	22
7.3.2 COVID-19.....	23
7.3.3 Output	24
7.4 Dwelling Projections	25
7.4.1 Assumptions	25
7.4.2 Output	25
7.5 Visitor Projections.....	26
7.5.1 Assumptions	26
7.5.2 Output	27
7.6 Rating Units.....	27
7.6.1 Assumptions	27
7.6.2 Output	28

8	Recommendation	28
9	Addendum – Stats NZ Update	29
10	Appendix A: Hakataramea	30
10.1	Hakataramea Growth Projections Summary	30
10.2	Employment Projections	31
10.2.1	Key Industries and Trends	31
10.2.2	Output	32
10.3	Population Projections	32
10.3.1	Key Migration Drivers	32
10.3.2	COVID-19	33
10.3.3	Output	33
10.4	Dwelling Projections	33
10.4.1	Assumptions	33
10.4.2	Output	34
10.5	Visitor Projections	35
10.5.1	Assumptions	35
10.5.2	Output	35
11	Appendix B: Lyalldale	36
11.1	Lyalldale Growth Projections Summary	36
11.2	Employment Projections	37
11.2.1	Key Industries and Trends	37
11.2.2	Output	38
11.3	Population Projections	38
11.3.1	Key Migration Drivers	38
11.3.2	COVID-19	39
11.3.3	Output	39
11.4	Dwelling Projections	39
11.4.1	Assumptions	39
11.4.2	Output	40
11.5	Visitor Projections	41
11.5.1	Assumptions	41
11.5.2	Output	41
11.6	St Andrews	41
12	Appendix C: Makikihi-Willowbridge	44
12.1	Makikihi-Willowbridge Growth Projections Summary	44
12.2	Employment Projections	45
12.2.1	Key Industries and Trends	45
12.2.2	Output	46
12.3	Population Projections	46
12.3.1	Key Migration Drivers	46
12.3.2	COVID-19	47
12.3.3	Output	47
12.4	Dwelling Projections	47
12.4.1	Assumptions	47
12.4.2	Output	48
12.5	Visitor Projections	49
12.5.1	Assumptions	49
12.5.2	Output	49
13	Appendix D: Maungati	50
13.1	Maungati Growth Projections Summary	50
13.2	Employment Projections	51
13.2.1	Key Industries and Trends	51
13.2.2	Output	52

13.3	Population Projections	52
13.3.1	Key Migration Drivers.....	52
13.3.2	COVID-19.....	53
13.3.3	Output	53
13.4	Dwelling Projections.....	53
13.4.1	Assumptions	53
13.4.2	Output	54
13.5	Visitor Projections	55
13.5.1	Assumptions	55
13.5.2	Output	55
14	Appendix E: Morven-Glenavy-Ikawai.....	56
14.1	Morven-Glenavy-Ikawai Growth Projections Summary	56
14.2	Employment Projections	57
14.2.1	Key Industries and Trends	57
14.2.2	Output	58
14.3	Population Projections	58
14.3.1	Key Migration Drivers.....	58
14.3.2	COVID-19.....	59
14.3.3	Output	59
14.4	Dwelling Projections.....	60
14.4.1	Assumptions	60
14.4.2	Output	60
14.5	Visitor Projections	61
14.5.1	Assumptions	61
14.5.2	Output	61
14.6	Glenavy.....	61
15	Appendix F: Waimate Township.....	64
15.1	Waimate Township Growth Projections Summary	64
15.2	Employment Projections	65
15.2.1	Key Industries and Trends	65
15.2.2	Output	66
15.3	Population Projections	66
15.3.1	Key Migration Drivers.....	66
15.3.2	COVID-19.....	67
15.3.3	Output	67
15.4	Dwelling Projections.....	67
15.4.1	Assumptions	67
15.4.2	Output	68
15.5	Visitor Projections	69
15.5.1	Assumptions	69
15.5.2	Output	69
	Appendix G: Growth Projections Methodology.....	70

Glossary

OUTPUT DEFINITIONS

Term	Definition
Usually Resident Population	The number of people who usually live in an area.
Total Dwellings	Any building structure, or any part of a building structure, that is used or intended to be used for human inhabitation.
Occupied Dwellings	Any dwelling which is usually has people residing in it.
Unoccupied Dwellings	Any dwelling which is usually does not have people have residing in it. These are primarily holiday homes.
Filled Jobs	The total number of jobs that are based in an area. These may be full time or part time jobs.
Rating Units - Total SUIPs	The total number of rating units. This is the sum of the individual rating units below.
Rating Units - Urban SUIPs	The number of rating units who are charged under the Urban rate.
Rating Units - Rural 1 SUIPs	The number of rating units who are charged under the Rural 1 rate.
Rating Units - Rural 2 SUIPs	The number of rating units who are charged under the Rural 2 rate.
Rating Units - Business SUIPs	The number of rating units who are charged under the Business rate.
Average Day Visitor Nights	The mean number of visitors that are within an area overnight, within in a 12-month period.
Peak Day Visitor Nights	The number of visitors that are within an area overnight, on the busiest night within in a 12-month period.
Average Day Visitor Numbers	The mean number of visitors that are within an area at any time in the day, within in a 12-month period.
Peak Day Visitor Numbers	The number of visitors that are within an area at any time in the day, on the busiest night within in a 12-month period.

OTHER DEFINITIONS

Term	Definition
Rating Unit	The unit of liability for rates is the rating unit. It is based on the concept of ownership – where, in particular, 1 certificate of title = 1 rating unit. Valuation rules allow for exceptions and oddities, as not all land in New Zealand has a certificate of title.
SUIP - Separately Used or Inhabited Part	<p>A SUIP is every rating unit and, without limitation, every additional dwelling, commercial or community activity. This includes:</p> <ul style="list-style-type: none"> a) any part or parts of a rating unit that is used or occupied by the ratepayer for more than one single use. b) any parts, whether or not actually occupied at any particular time, which are used for rental (or other form of occupation) on an occasional or long-term basis. c) vacant land and vacant premises offered or intended for use or habitation and usually used as such are defined as 'used'. <p>For the purposes of clarity, every rating unit has a minimum of one SUIP.</p>

Statistical Area 1 (SA1)	The main purpose of the SA1 geography is to provide an output geography that allows the release of more low-level data than is available at the meshblock level. Built by joining meshblocks, SA1s have an ideal size range of 100–200 residents, and a maximum population of about 500.
Statistical Area 2 (SA2)	The main purpose of the SA2 geography is to provide an output geography for higher aggregations of population data than can be provided at the SA1 level. The SA2 geography aims to reflect communities that interact together socially and economically. In populated areas, SA2s generally contain similar-sized populations. Statistical areas either define or aggregate to define urban rural areas, territorial authorities, and regional councils.
Peaking Factor	The ratio between peak day visitor numbers and average day visitor numbers
Net Migration	People moving into an area, less the people moving out of an area.

1 Executive Summary

This report presents Waimate District's 2020 growth projections, which seek to understand how Waimate might grow over the next 30 years.

Understanding growth is an extremely important component to consider when planning for the District's future and these growth projections will be used to inform a wide range of key projects, plans and strategies.

Projections through to 2050 are made for the following categories:

- Usually resident population
- Employment
- Dwellings
- Rating units
- Visitors

1.1 Methodology

In the past Waimate District Council (WDC) have used the growth projections prepared by Stats NZ. WDC are now looking for a more in-depth understanding of what their district might look like over the next 30 years. This coupled with the delayed release of the Stats NZ projections, following 2018 Census, has led WDC to commission these growth projections to understand the future growth in their district and provide a single source of the truth for council.

The 2020 projections have been developed using a bottom up approach. Individual growth drivers for each Statistical Area 2 (SA2) have been developed using migration for employment and lifestyle as the basis of the modelling.

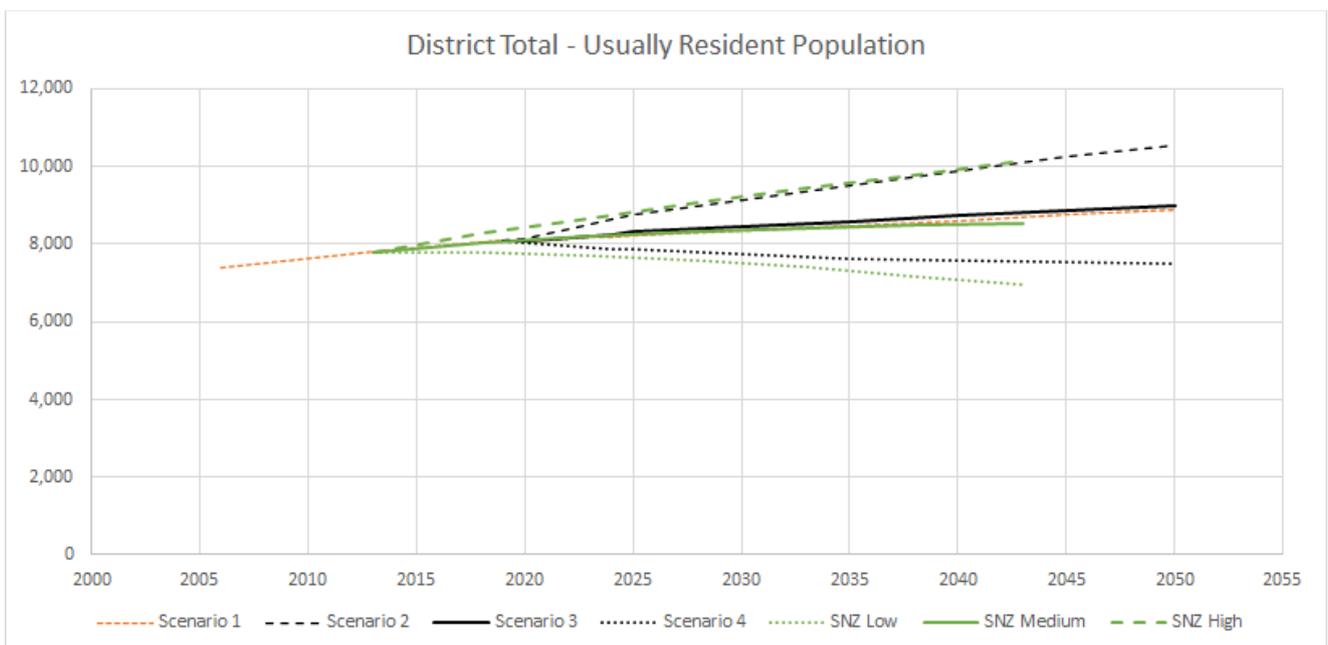


Figure 1. Comparison between 2017 Stats NZ predictions and Rationale's 2020 predictions.

1.2 Growth scenarios

Four growth scenarios have been modelled for each parameter representing different levels of ambition in terms of the district's growth over the next thirty years.

It is recommended that WDC adopt Scenario 3, medium growth.

Table 1. Summary of the four growth scenarios.

Scenario	Scenario	Description
Scenario 1	Business as Usual (Pre COVID-19)	Used as a baseline to compare the other three scenarios. It assumes that there has been no impact from COVID-19 and there is no limit on the number of dwellings that can be constructed.
Scenario 2	High	Assumes that COVID-19 has a minimal impact on the district. While there are some job losses, the district recovers to a level above the business as usual scenario. Migration drivers and assumptions are also increased by 20% which means more people will move to Waimate and less people will leave. Investment in the town centre of Waimate is expected to generate an additional 20 long term jobs per year, from 2020 to 2025.
Scenario 3	Medium	Models the expected impact from COVID-19. This assumes that all parameters return to the business as usual prediction by 2025. Investment in the town centre of Waimate is expected to generate an additional 10 long term jobs per year, from 2020 to 2025.
Scenario 4	Low	Models a situation in which COVID-19 has a higher than expected impact on the district, i.e. more job losses, and only recovers to 5% less than the business as usual scenario by 2025. Migration drivers and assumptions are also reduced by 20% which means less people will move to Waimate and more people will leave.

1.3 Waimate District Growth Projection Summary

Table 2. Waimate District growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	7390	7810	8070	8093	8327	8448	8584	8730	8885	9005
Total Dwellings	3519	3714	3912	3931	4034	4096	4170	4254	4346	4424
Occupied Dwellings	3000	3228	3327	3336	3434	3485	3544	3608	3676	3729
Unoccupied Dwellings	501	468	576	594	600	611	625	646	670	694
Number of Jobs	2165	2435	2595	2489	2884	2979	3081	3190	3312	3442
Number of Businesses	1221	1215	1260	1212	1406	1445	1486	1530	1580	1633
Rating Units - Total SUIPs				3822	3917	3977	4045	4121	4202	4274
Rating Units - Urban SUIPs				1756	1804	1832	1865	1902	1944	1979
Rating Units - Rural 1 SUIPs				1700	1735	1761	1790	1821	1853	1883
Rating Units - Rural 2 SUIPs				282	286	289	293	297	301	305
Rating Units - Business SUIPs				84	93	95	98	100	103	107
Total Peak Day Visitor Nights			762	527	829	877	925	973	1020	1068
Total Average Day Visitor Nights			243	168	265	280	295	311	326	341
Total Peak Day Visitor Numbers			1408	979	1531	1617	1704	1791	1878	1964
Total Average Day Visitor Numbers			346	241	377	398	419	441	462	483

Table 3. Waimate District short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	700	54	0.7%	237	40	0.5%	915	30	0.3%
Total Dwellings	408	31	0.8%	107	18	0.4%	496	16	0.4%
Occupied Dwellings	336	26	0.8%	98	16	0.5%	394	13	0.4%
Unoccupied Dwellings	91	7	1.3%	9	1	0.2%	102	3	0.5%
Number of Jobs	450	35	1.5%	269	45	1.6%	827	27	0.9%
Number of Businesses	48	4	0.3%	137	23	1.7%	364	12	0.8%
Rating Units - Total SUIPs				100	17	0.4%	457	15	0.4%
Rating Units - Urban SUIPs				49	8	0.5%	224	7	0.4%
Rating Units - Rural 1 SUIPs				38	6	0.4%	186	6	0.3%
Rating Units - Rural 2 SUIPs				5	1	0.3%	24	1	0.3%
Rating Units - Business SUIPs				9	1	1.6%	23	1	0.8%
Total Peak Day Visitor Nights				58	10	1.2%	297	10	1.1%
Total Average Day Visitor Nights				18	3	1.2%	95	3	1.1%
Total Peak Day Visitor Numbers				105	17	1.2%	538	17	1.0%
Total Average Day Visitor Numbers				26	4	1.2%	133	4	1.0%

1.4 Usually Resident Population

Over the next thirty years, the usually resident population of Waimate District is predicted to increase slightly.

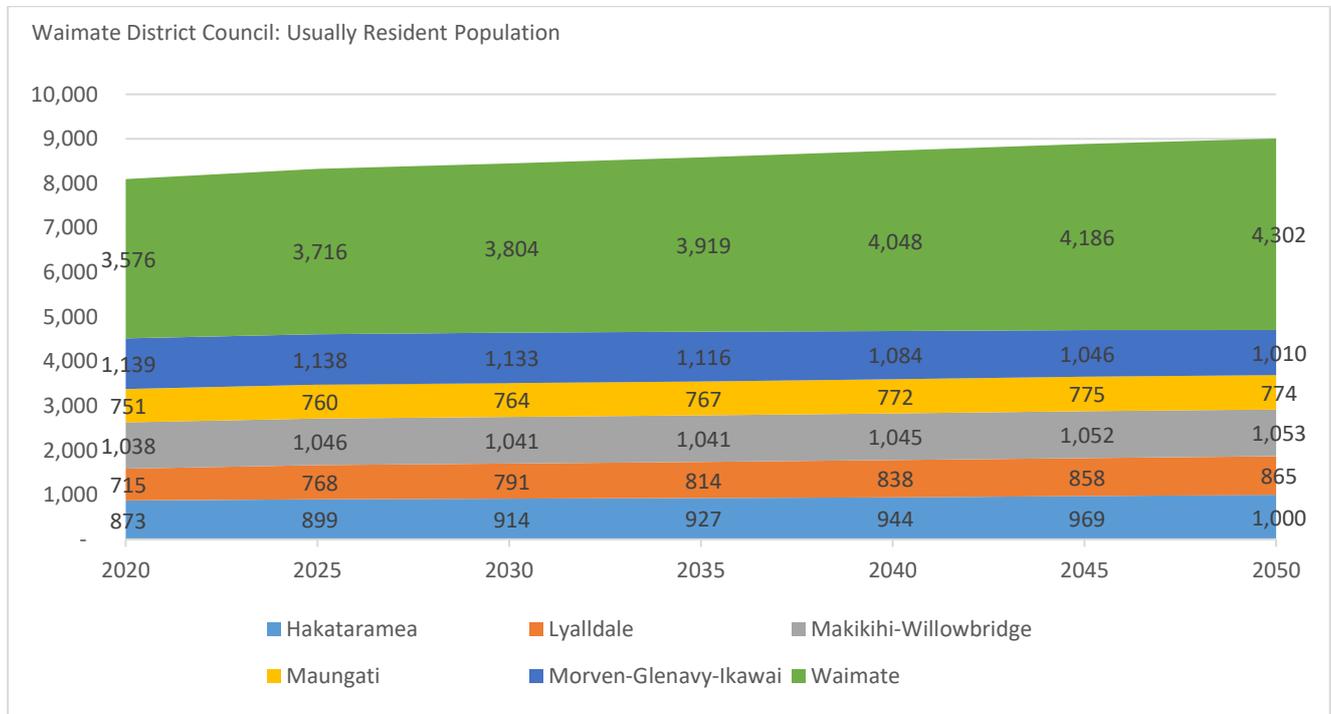


Figure 2. WDC – Usually resident population.

The average age of Waimate District's population is older than the national average of 37.3 years (Stats NZ). Looking across the district Waimate township has a significantly older average age of 48.6 years in

2020 when compared to the outlying rural areas. This makes sense as people are living and working on farms then moving into Waimate for retirement later in life.

Table 4. Average age of District Population.

	2020	2030	2040	2050
District Wide	43.8	43.4	43.3	43.5

1.5 Employment

Whilst it is likely that WDC will experience a short-term reduction in the number of jobs, it is predicted that come 2025 the economy and number of jobs will have normalised and be on the increase once again.

Whilst COVID-19 has some impact on employment in the district, as seen in the figure below, it is expected that those who lose their jobs will not move away. Typically, the most mobile and reactive portion of the population are those in their early working years, who do not have the necessary finances to “stick out” unemployment, or strong ties (family, property ownership etc) to the area. Waimate District has a relatively small proportion of the population in this age group, between 20 and 35. Therefore, modelling has assumed that if residents become unemployed, they will find work elsewhere and commute or remain unemployed in the area.

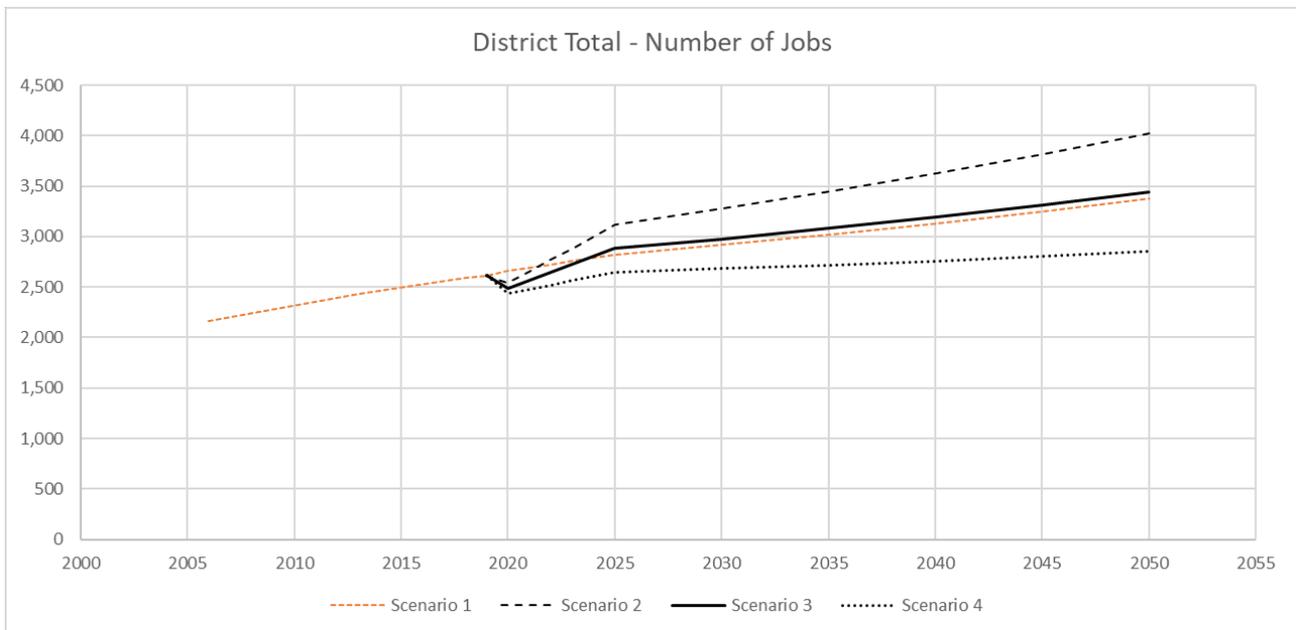


Figure 3. WDC's employment predictions in the next thirty years.

1.6 Dwellings

Waimate will continue to have a high percentage of occupied dwellings into the future. However, as the population reduces in some areas there may be an increase in the number of unoccupied dwellings.

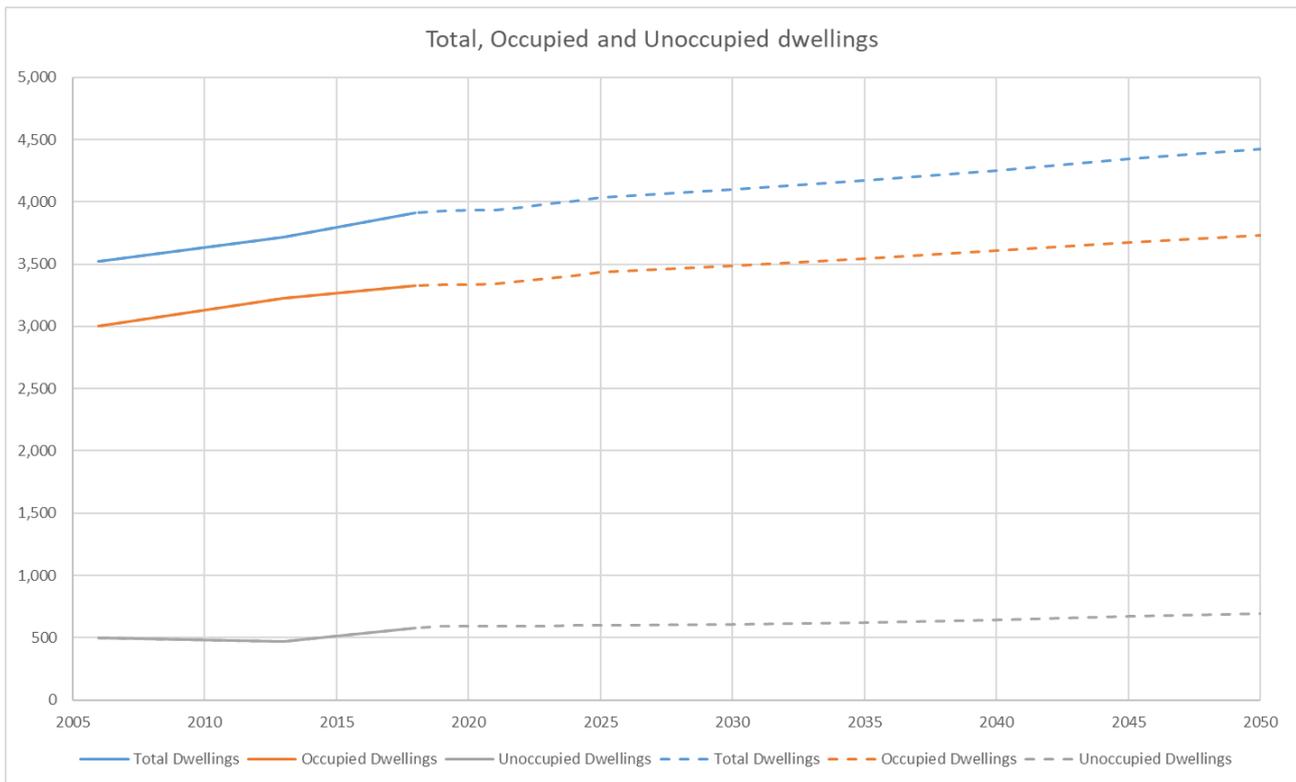


Figure 4. WDC – Dwellings.

1.7 Visitors

Whilst there is a short-term impact created by COVID-19, it is projected that the peak visitor nights will increase into the future.

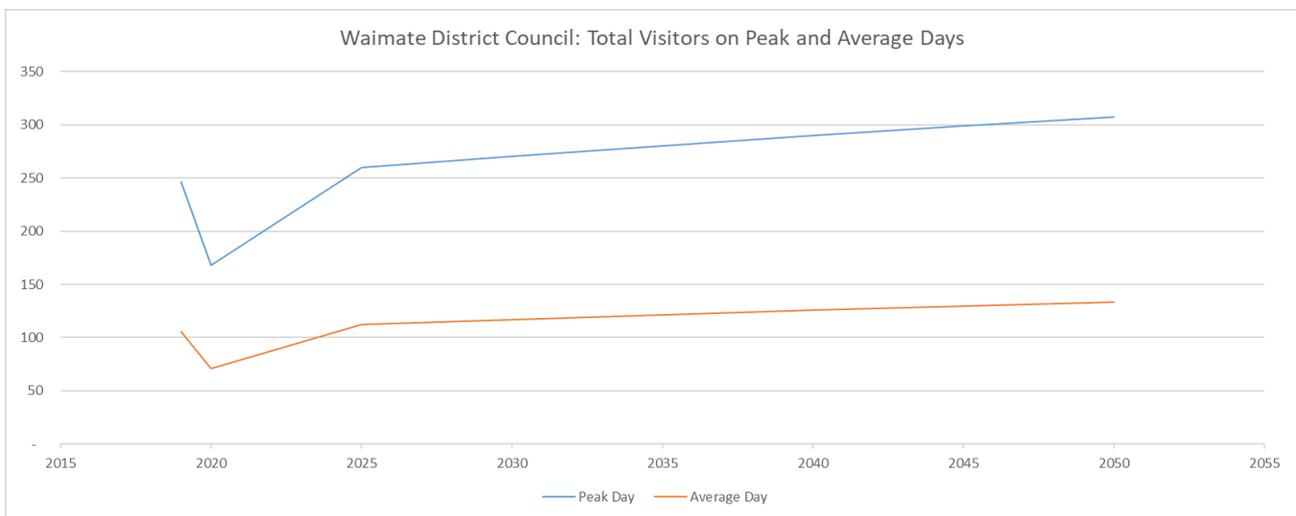


Figure 5. WDC – peak day vs. average day visitors.

1.8 Rating Units

The total number of rating units is predicted to continue to increase. Several assumptions have been made regarding future projections of Rating Units these are discussed in Section 5.

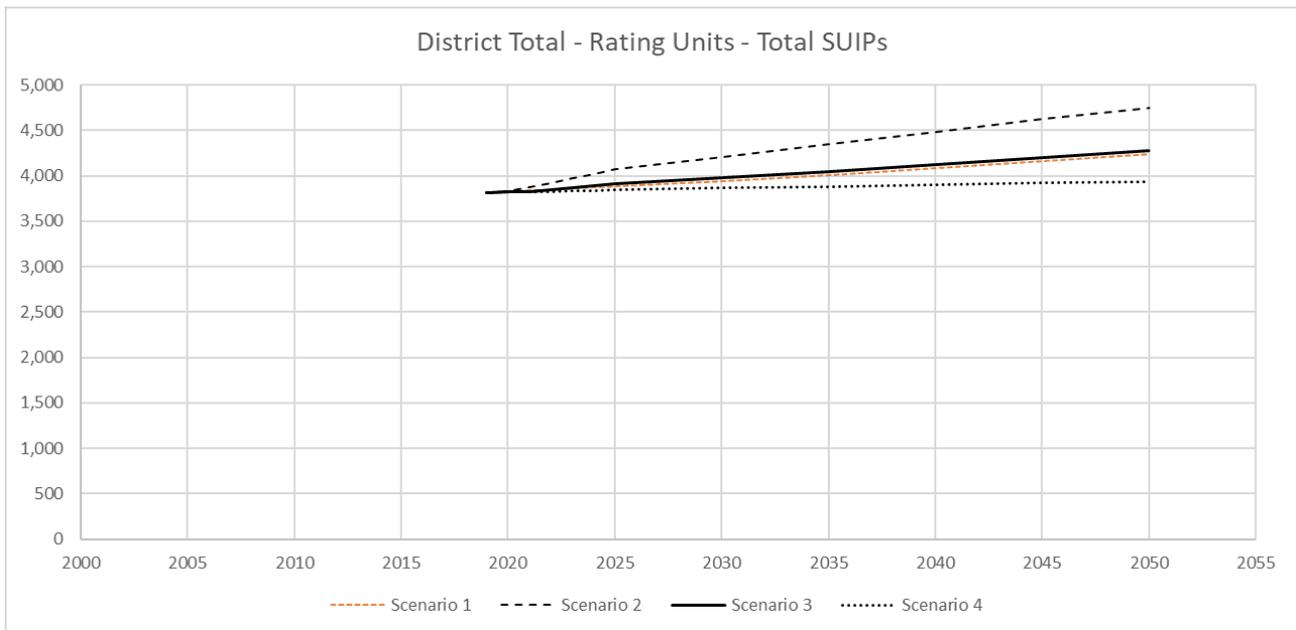


Figure 6. WDC- Rating Units – Total Separately used or inhabited part of a rating unit (SUIPs).

1.9 Recommendations

It is recommended that WDC adopt Scenario 3 as the expected level of growth in the next thirty years and use this information to inform key projects, plans and strategies.

Scenario 3 is recommended as there will be short term effects due to COVID-19. However, it is not yet known what, if any, long term effects there will be.

Due to this uncertainty it is recommend that annual “check-ins” are completed with the most up-to-date data to monitor the impact of COVID-19 and the progress of recovery. At this time growth can be re-projected, if necessary.

Since this growth projections model was developed it has become apparent that a bubble between New Zealand and Australia will not be forming in 2020. To offer best value for money to WDC, and due to the minimal impact on the final projections, Rationale recommend revisiting these assumptions once there is a known scenario and date for border reopening.

2 Purpose

*How much growth is going to occur in the Waimate District over the next 30 years?
Where is it going to occur? And what are its likely drivers?*

Understanding how the Waimate District may grow over the next 30 years, in terms of population, number of dwellings, visitors and rating units is an extremely important component of the District’s future planning.

This summary report and accompanying model explains the methodology used to calculate the predicted growth, including the data used and assumptions that have been made, and presents a number of outputs which can be used to inform a range of key projects, plans and strategies, including:

- District Plan Review
- Spatial planning
- Infrastructure Strategy
- Asset Management Plans
- District Plan changes
- Tourism Strategy

- Long Term Plan

3 Context

In the past Waimate District Council (WDC) have used the growth projections prepared by Stats NZ. WDC are now looking to have a more in-depth understanding of what their district might look like over the next 30 years. This coupled with the delayed release of the Stats NZ projections, following the 2018 Census, has led WDC to commission these growth projections to understand the future growth in their district.

Overall, the 2020 projections are slightly more optimistic than the 2013 Stats NZ projections, particularly for the long-term trends (2025 – 2050).

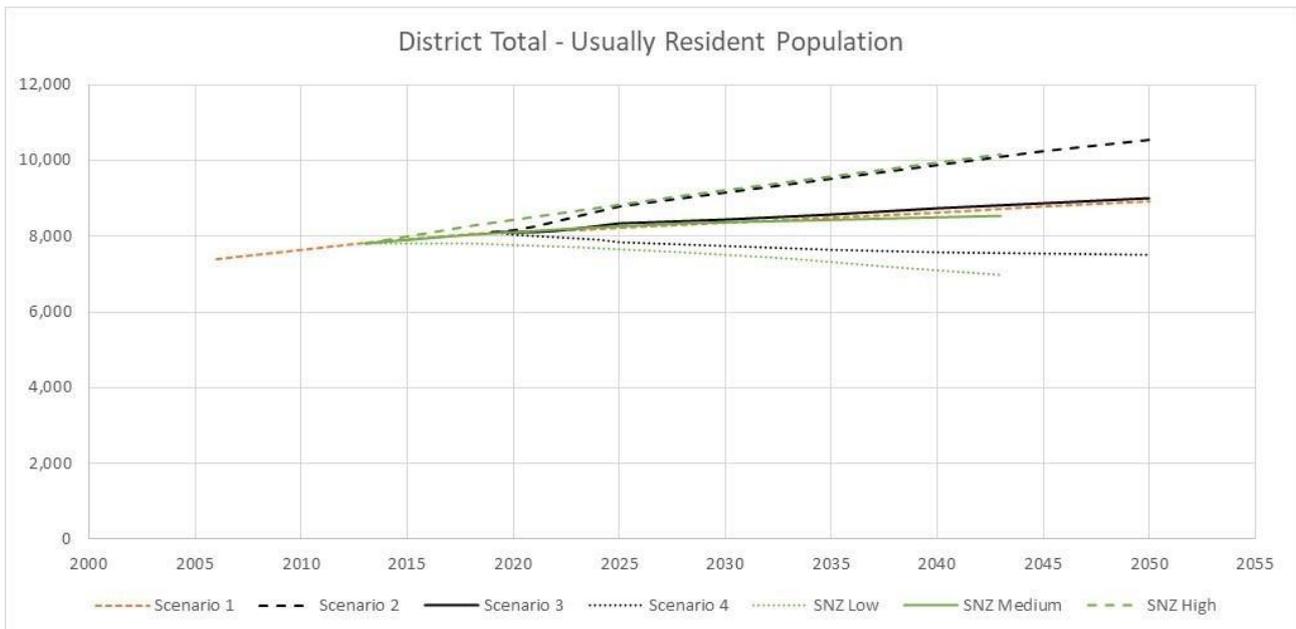


Figure 7. Comparison between Stats NZ 2013 projections and Rationale's 2020 projections.

3.1 Stats NZ

The release of data from the 2018 Census has been significantly delayed. High level insights were first released in September 2019, approximately one year later than expected. At the time of writing, July 2020, the Stats NZ growth projections had not been released, and are not expected until late 2020 or even 2021.

3.2 COVID-19

The COVID-19 pandemic and lockdown occurred in New Zealand concurrently with work on this project. The pandemic has had significant and lasting social and economic effects on New Zealand which will have some impact on the future growth in Waimate. The significance of this impact is discussed throughout the document.

4 Scope

The growth projections are built up based on areas in WDC. Different areas have different outputs depending on size. This is described and illustrated below.

Table 5. Areas of focus.

District	Statistical Area 2	Statistical Area 1
Waimate District Council	Hakataramea	
	Lyalldale	St Andrews
	Makikihi-Willowbridge	
	Maungati	
	Morven-Gelnavy-Ikawai	Glenavy
	Waimate – East, West and North	

Table 6. Modelling outputs by geographical area.

	Output	District	Statistical Area 2	Statistical Area 1
Population	Usually Resident Population	✓	✓	✓
Dwellings	Total Dwellings	✓	✓	✓
	Occupied Dwellings	✓	✓	✓
	Unoccupied Dwellings	✓	✓	✓
Employment	Filled Jobs	✓	✓	
Rating Units	Total SUIPs	✓		
	Urban SUIPs	✓		
	Rural 1 SUIPs	✓		
	Rural 2 SUIPs	✓		
	Business SUIPs	✓		
Visitors	Average Day Visitor Nights	✓	✓	
	Peak Day Visitor Nights	✓	✓	
	Average Day Visitor Numbers	✓	✓	
	Peak Day Visitor Numbers	✓	✓	

4.1 Statistical Area 2 Boundaries



Figure 8. Statistical Area 2 boundaries.

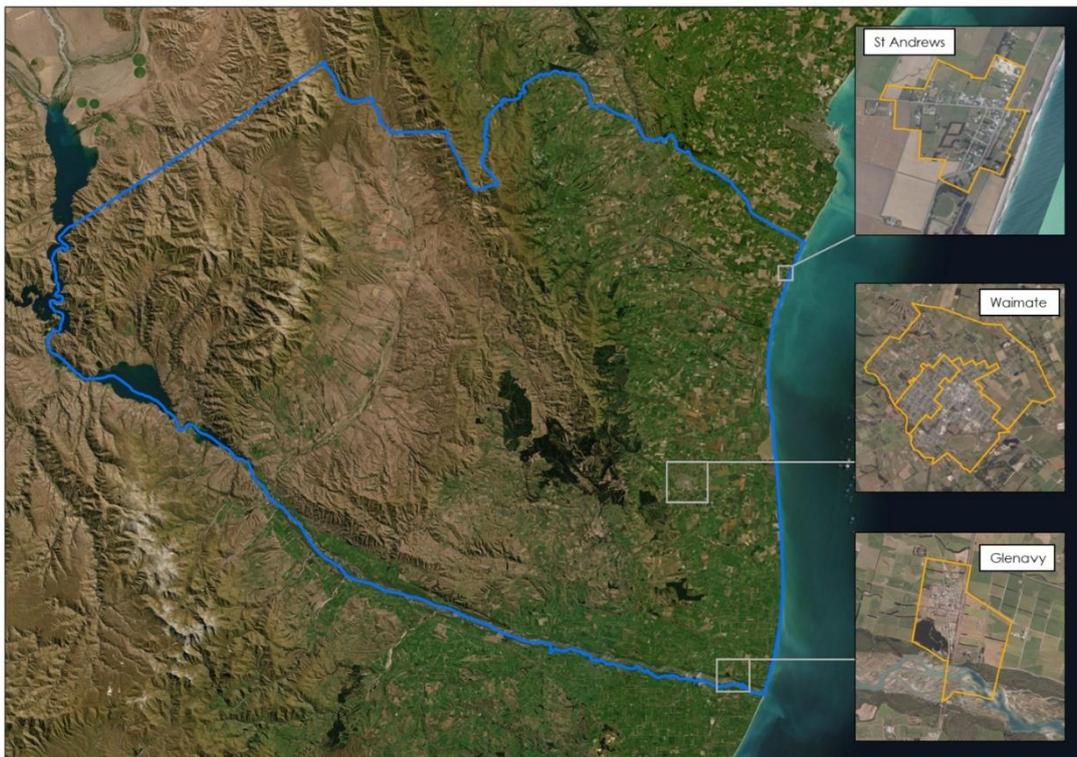


Figure 9. Rural Townships.

5 Methodology

These growth projections have been developed using a bottom up approach. Individual growth drivers were used for each Statistical Area 2 (SA2). These were then summed to understand the growth across the District.

The following figure described the process, at a high level, which was taken to develop the projections herein. A detailed diagram depicting the methodology has been appended.

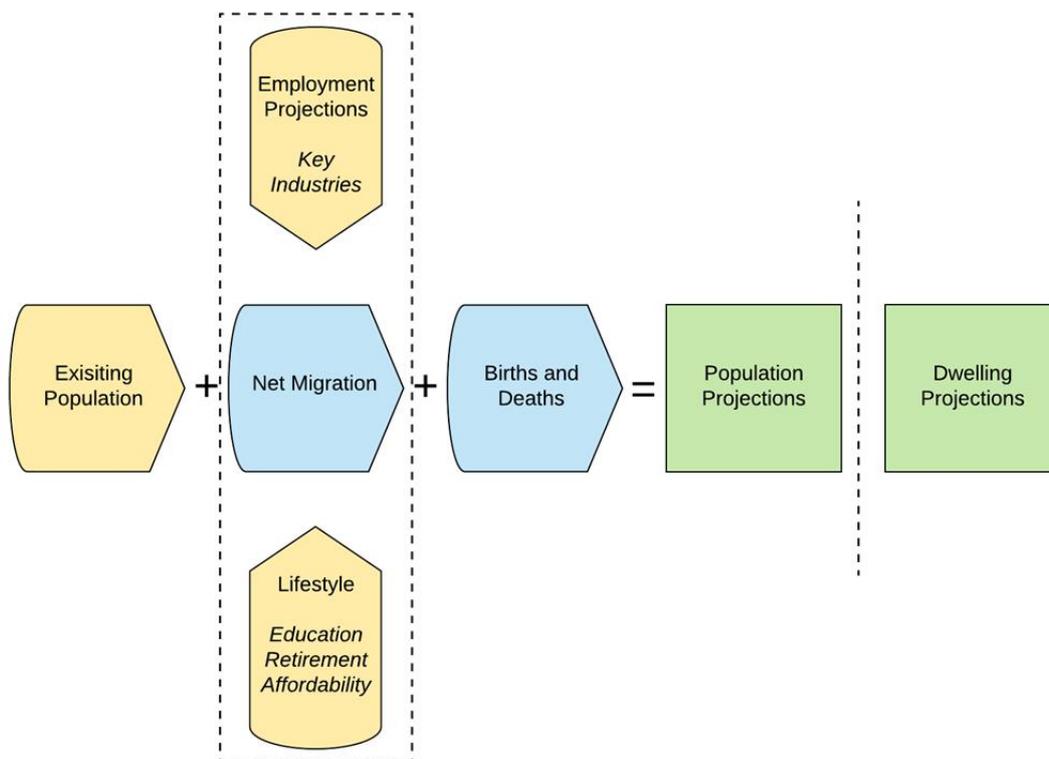


Figure 10. Growth Projections methodology – simplified.

5.1 Net Migration

The migration model has been derived from observed trends in people moving to or from the area. It has been assumed that people move to/away from the area for one of two reasons, either employment or lifestyle.

The predictions have then been correlated against the observed migration trends between 2013 and 2018.

5.1.1 EMPLOYMENT

Historic employment records were analysed and used to understand the key industries in each area and how these have changed and evolved since 2000.

To predict future growth in jobs, an annual growth rate was calculated using an average of the growth in each of the key industries over the past three years through to 2025, and the past ten years to 2050. The exception to this rule was agriculture where the MBIE forecast NZ Wide Annual Growth to 2028 of 0.3% growth has been applied. This is due to various instabilities in the sector.

The growth rate derived from this process has been applied to the number of jobs in the previous year.

In each area a percentage of migration was accounted for based on people moving in to fill new jobs or leaving as the number of jobs decreased. There was also allowance, in some areas, for dependents. These assumptions are detailed within the appendices for each area of focus.

5.1.2 LIFESTYLE

Migration for other reasons such as lifestyle, access to better care, education and career opportunities was accounted for based on the population's past propensity to move in or out for these reasons.

5.2 Births and deaths

Population was calculated as the previous year's population plus migration (for any reason) which was then overlaid by StatsNZ Births and Deaths data.

5.3 Dwellings

The number of occupied dwellings were projected by:

1. Taking the number of people per occupied household from the 2018 census
2. Occupied dwelling = usually resident population / people per occupied household

The total number of dwellings were projected by:

1. Using the ratio of total dwellings to occupied dwellings from 2018 census
2. Future total dwellings = Future occupied dwellings multiplied by the ratio (total dwellings to occupied dwellings)

Note:

- The total number of dwellings is not allowed to decrease year to year in the model, i.e. the model assumes that if a house/building is demolished it is replaced.
 - If population growth is negative, then the total number of dwellings is taken from the year before, i.e. the number of dwellings remain constant.
- Unoccupied Dwellings = total dwellings – occupied dwellings
- If the population (and occupied dwellings) decreases, unoccupied dwellings increase to make up the shortfall to keep total dwellings constant.

5.4 Visitor Projections

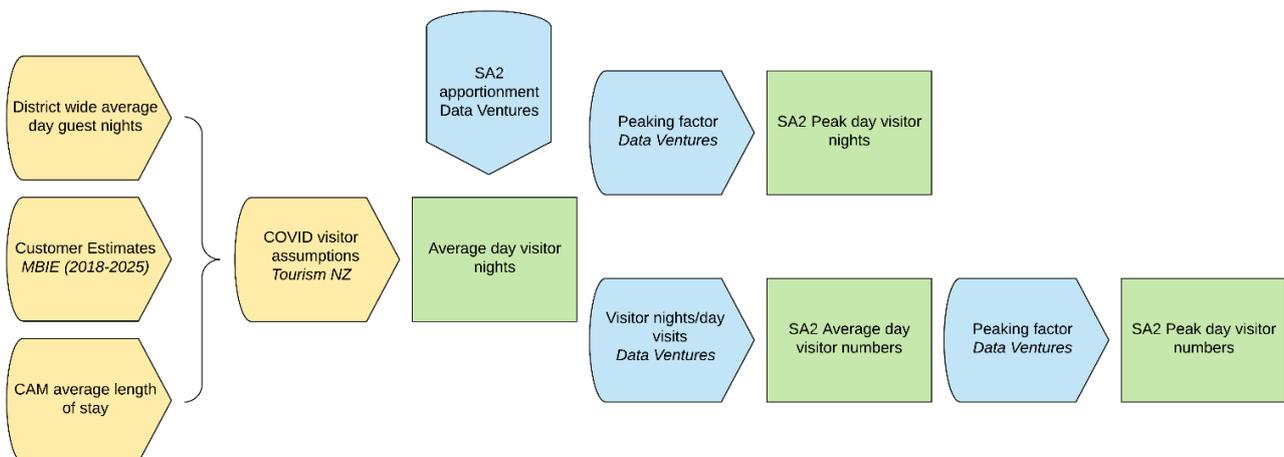


Figure 11. Visitor projections methodology.

The visitor projections methodology was calculated using the following steps which are illustrated below

1. The projections were based on the MBIE Customer forecasts (2018 – 2025).
2. The Commercial Accommodation Monitor (Stats NZ) average length of stay was used to calculate the average yearly visitor nights
3. Data from Data Ventures was used to apportion average visitor nights to the individual SA2s. This was used to calculate the average day visitor nights.
4. The Data Ventures data was also used to calculate the peaking factors (maximum visitor population/average visitor population)
5. The calculated peaking factors were applied to the average visitor nights to get peak day visitor nights

6. The Data Ventures data was used to calculate the day visitor to overnight visitor ratio (average visitor population/average 3am visitor population), to understand how many people were day-visitors.
7. This ratio was applied to the average day visitor nights and peak day visitor nights to calculate average and peak day visitor numbers.

5.5 Rateable Units

The Waimate rates database categorises land use using two measures:

- Type - Urban, Rural 1, Rural 2, Business
- Valuation New Zealand's Category Codes (VNZ Category)

The future projections for the number of rateable units in the Waimate District were calculated by assuming an appropriate level of growth for each VNZ Category, as shown below, then combining these to understand the growth of each Rating Unit per type to understand overall growth across the district.

It has been assumed that the number of rating units does not decrease.

Table 7. Source of assumed growth for each Valuation New Zealand Category Code.

Top Level VNZ Category	Modelled Growth
Arable	MBIE 2018 - 2028 agriculture growth forecast (0.3% pa)
Commercial	Job projections
Dairying	MBIE 2018 - 2028 agriculture growth forecast (0.3% pa)
Horticulture	MBIE 2018 - 2028 agriculture growth forecast (0.3% pa)
Industrial	Job projections
Lifestyle	Dwelling projections
Other	Assume no growth
Pastoral	MBIE 2018 - 2028 agriculture growth forecast (0.3% pa)
Residential	Dwelling projections
Specialist	Assume no growth

5.6 Data sources

Data was utilised from three key sources:

- Statistics New Zealand
- Data Ventures (commercial arm of Stats NZ)
- MBIE Tourism and Accommodation Data Sets

6 Scenarios

Four scenarios have been modelled each with their own assumptions and level of growth as described below. In all scenarios, it has been assumed that people will remain in the area if they lose their job due to COVID-19 due to comparable affordability.

6.1 Scenario 1: Business as Usual (Pre COVID-19)

The business as usual scenario is used as a baseline to compare the other three scenarios. It assumes that there has been no impact from COVID-19.

The employment and lifestyle assumptions are detailed below in the section 7.

6.2 Scenario 2: High

Scenario 2 assumes that COVID-19 has a minimal impact on the district. While there are some job losses, it expects that the district will recover to a level above the business as usual scenario. The employment and lifestyle assumptions are detailed below in the section 7.

Migration drivers and assumptions are also increased by 20% which means more people will move to WDC and less people will leave.

6.3 Scenario 3: Medium

Scenario 3, the medium prediction, models the expected impact from COVID-19. This assumes that all parameters will come back to the business as usual prediction by 2025. The employment and lifestyle assumptions are detailed below in the section 7.

Scenario three uses the business as usual migration drivers and assumptions.

6.4 Scenario 4: Low

Scenario 4, the low prediction, models a situation in which COVID-19 has a higher than expected impact on the district (such as more job losses) and recovers to a level less than the business as usual scenario by 2025. The employment and lifestyle assumptions are detailed below in the section 7.

Migration drivers and assumptions are also reduced by 20% which means less people will move to WDC and more people will leave.

7 District Assumptions and Outputs

7.1 Waimate District Growth Projections Summary

Table 8. Waimate District growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	7390	7810	8070	8093	8327	8448	8584	8730	8885	9005
Total Dwellings	3519	3714	3912	3931	4034	4096	4170	4254	4346	4424
Occupied Dwellings	3000	3228	3327	3336	3434	3485	3544	3608	3676	3729
Unoccupied Dwellings	501	468	576	594	600	611	625	646	670	694
Number of Jobs	2165	2435	2595	2489	2884	2979	3081	3190	3312	3442
Number of Businesses	1221	1215	1260	1212	1406	1445	1486	1530	1580	1633
Rating Units - Total SUIPs				3822	3917	3977	4045	4121	4202	4274
Rating Units - Urban SUIPs				1756	1804	1832	1865	1902	1944	1979
Rating Units - Rural 1 SUIPs				1700	1735	1761	1790	1821	1853	1883
Rating Units - Rural 2 SUIPs				282	286	289	293	297	301	305
Rating Units - Business SUIPs				84	93	95	98	100	103	107
Total Peak Day Visitor Nights			762	527	829	877	925	973	1020	1068
Total Average Day Visitor Nights			243	168	265	280	295	311	326	341
Total Peak Day Visitor Numbers			1408	979	1531	1617	1704	1791	1878	1964
Total Average Day Visitor Numbers			346	241	377	398	419	441	462	483

Table 9. Waimate District short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	700	54	0.7%	237	40	0.5%	915	30	0.3%
Total Dwellings	408	31	0.8%	107	18	0.4%	496	16	0.4%

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
Occupied Dwellings	336	26	0.8%	98	16	0.5%	394	13	0.4%
Unoccupied Dwellings	91	7	1.3%	9	1	0.2%	102	3	0.5%
Number of Jobs	450	35	1.5%	269	45	1.6%	827	27	0.9%
Number of Businesses	48	4	0.3%	137	23	1.7%	364	12	0.8%
Rating Units - Total SUIPs				100	17	0.4%	457	15	0.4%
Rating Units - Urban SUIPs				49	8	0.5%	224	7	0.4%
Rating Units - Rural 1 SUIPs				38	6	0.4%	186	6	0.3%
Rating Units - Rural 2 SUIPs				5	1	0.3%	24	1	0.3%
Rating Units - Business SUIPs				9	1	1.6%	23	1	0.8%
Total Peak Day Visitor Nights				58	10	1.2%	297	10	1.1%
Total Average Day Visitor Nights				18	3	1.2%	95	3	1.1%
Total Peak Day Visitor Numbers				105	17	1.2%	538	17	1.0%
Total Average Day Visitor Numbers				26	4	1.2%	133	4	1.0%

7.2 Employment Projections

7.2.1 KEY INDUSTRIES AND TRENDS

The top five industries employ 73% of those working within the district.

The growth model assumes the last three years average growth rate will continue through to 2025 and then the last ten years average growth rate through to 2050 except for agriculture, due to the instabilities in the industry the MBIE forecast NZ Wide Annual Growth to 2028 of 0.3% growth has been applied.

Table 10. Top five industries in WDC.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate -last 3 years	Average Annual Growth Rate -last 10 years
Agriculture, Forestry and Fishing	1071	41%	-1%	1%
Manufacturing	360	14%	19%	7%
Education and Training	169	6%	1%	1%
Retail Trade	157	6%	1%	3%
Construction	157	6%	-2%	2%

7.2.2 COVID-19

Employment growth has been modelled using the below assumptions to consider various levels of impact and how quickly and strong the recovery is from COVID-19. These have been assumed to be constant across all areas in WDC.

Table 11. Employment assumptions.

Scenario	Description	Assumptions
Scenario 1	BAU (Pre COVID-19)	
Scenario 2	High	1. Reduced by 80% of the number of job losses forecasted in the district in 2020, in scenario 3. 2. Recovers to 110% of BAU forecasted jobs in 2025 and remains at this level.
Scenario 3	Medium	1. Reduced to the number of forecast jobs calculated via predicted job losses in the district.

Scenario	Description	Assumptions
		2. Recovers to 100% of BAU forecasted jobs in 2025 and remains at this level
Scenario 4	Low	1. Reduced by 120% of the number of job losses forecasted in the district in 2020, in scenario 3. 2. Recovers to 90% of BAU forecasted jobs in 2025 and remains at this level

7.2.3 OUTPUT

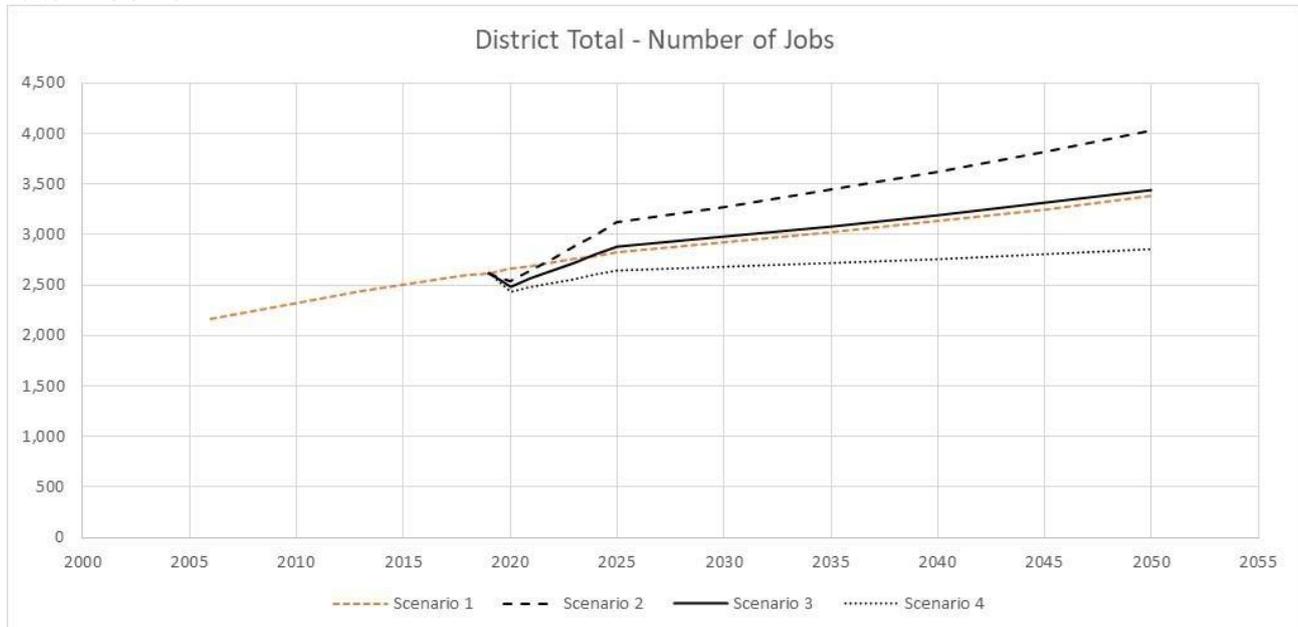


Figure 12. Number of Jobs.

7.3 Population Projections

7.3.1 KEY MIGRATION DRIVERS

The key characteristics of Waimate District's population are:

- Younger people leave the area for education and employment opportunities.
- People later in their working lives or early retirement are moving to the area for the lifestyle, affordability and/or retirement.
- Older people (over 70) are moving from the rural areas of the district to Waimate or leaving the area, likely in search of better healthcare or to be closer to family.

The key migration drivers for each area are discussed in detail in the appendices.

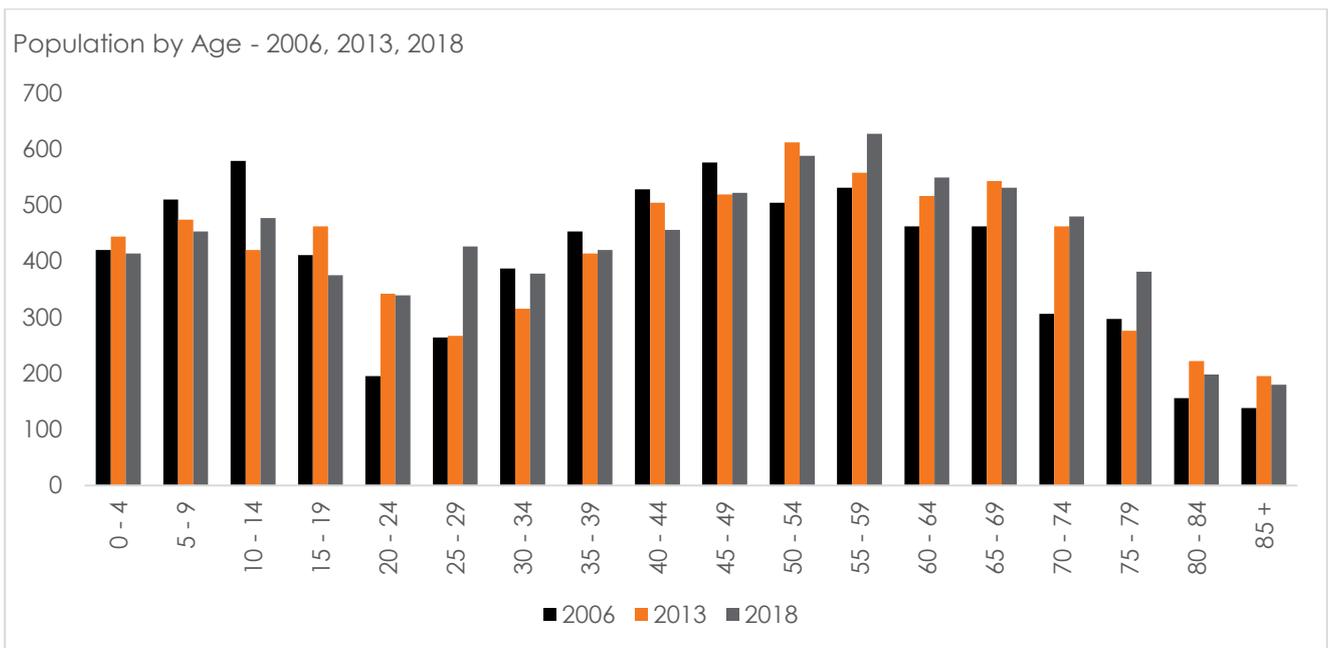


Figure 13. Waimate District's population by Age – 2006, 2013, 2018. Source: NZ Stats.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that has been occurring. This ensures that the model is accurate and reliable. Net migration is equal to inbound migration minus outbound migration.

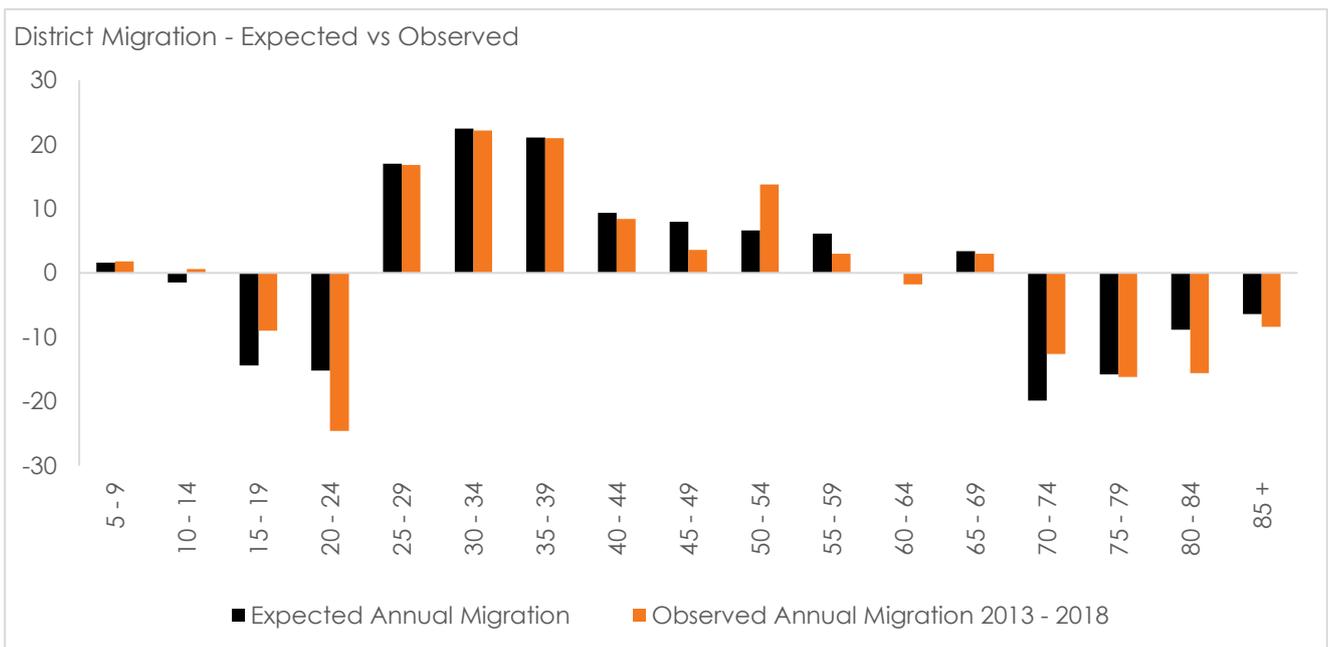


Figure 14. Net migration check.

7.3.2 COVID-19

As seen above, whilst COVID-19 has some impact on employment in the district, it is not expected that those who lose their jobs will move away. Typically, the most mobile and reactive portion of the population are those in their early working years, who don't have the necessary finances to "stick out" unemployment, or strong ties (family, property ownership etc) to the area. Waimate District has a relatively small proportion of the population in this age group, between 20 and 35. Therefore, modelling has assumed that if residents become unemployed, they find work elsewhere and commute or remain unemployed in the area.

7.3.3 OUTPUT

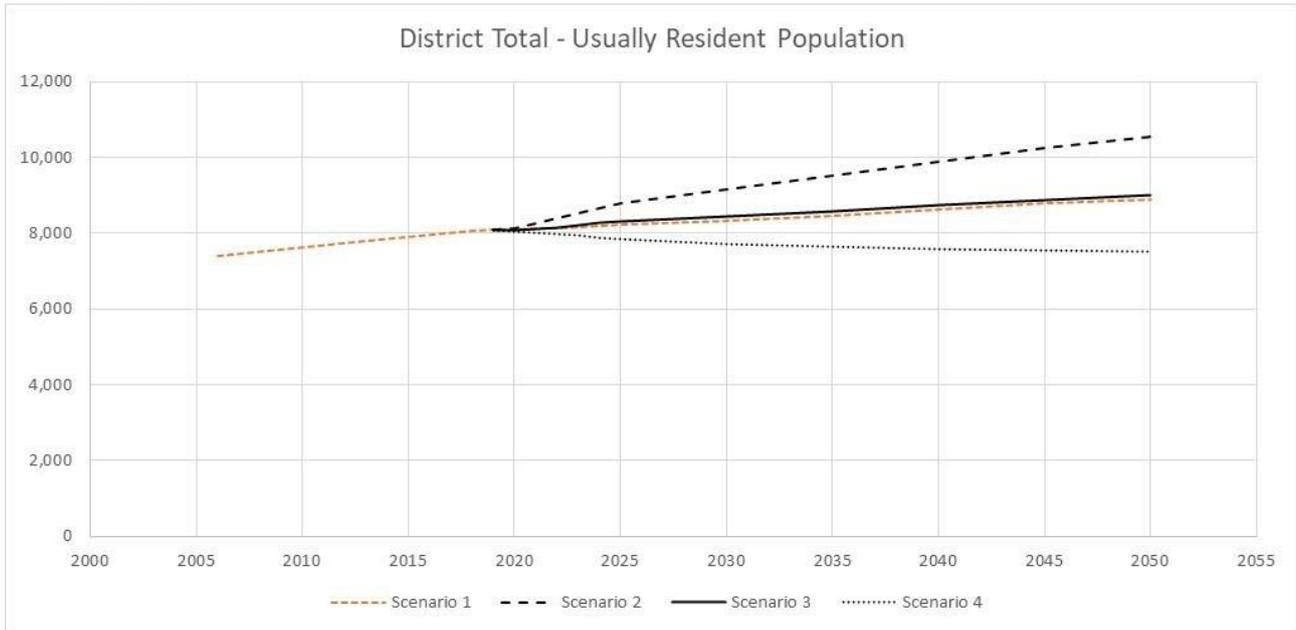


Figure 15. Usually resident population in WDC.

The average age of Waimate District's population is older than the national average of 37.3 years (Stats NZ). Looking across the district Waimate township has a significantly older average age of 48.6 years in 2020 when compared to the outlying rural areas. This makes sense as people are living and working on farms then moving into Waimate for retirement.

Table 12. Average age of District Population.

	2020	2030	2040	2050
District Wide	43.8	43.4	43.3	43.5
Hakataramea	40.3	40.3	39.7	40.0
Lyalldale	41.7	43.9	44.8	45.5
Makikihi-Willowbridge	43.0	43.0	42.9	43.0
Maungati	36.8	39.0	40.4	41.5
Morven-Glenavy-Ikawai	37.8	39.8	40.6	41.4
Waimate	48.6	46.2	45.2	45.0

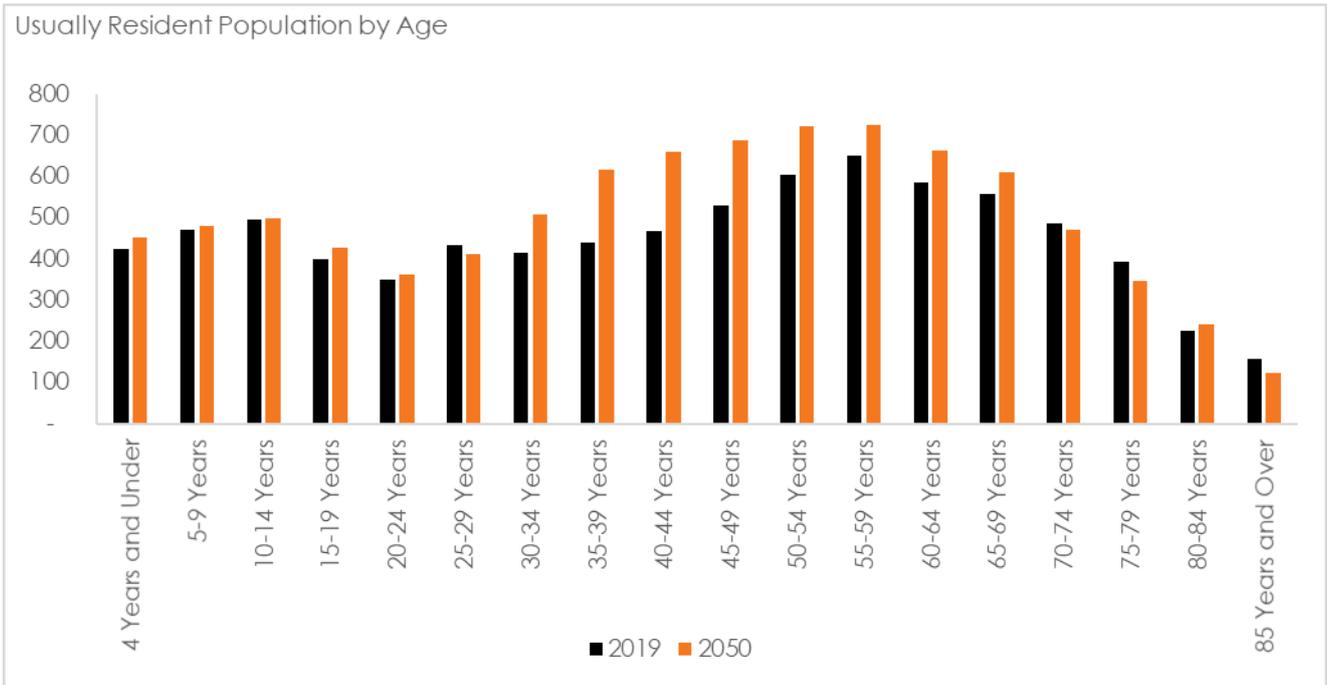


Figure 16. Age distribution of Waimate District's population in 2050.

7.4 Dwelling Projections

7.4.1 ASSUMPTIONS

It has been assumed that the number of dwellings does not decrease if population growth is negative, i.e. there will be an increase in the number of unoccupied homes if the population decreases.

7.4.2 OUTPUT

In Scenario 4 the number of unoccupied homes increases as the number of occupied dwellings decreases, this is in line with the decrease of the usually resident population.

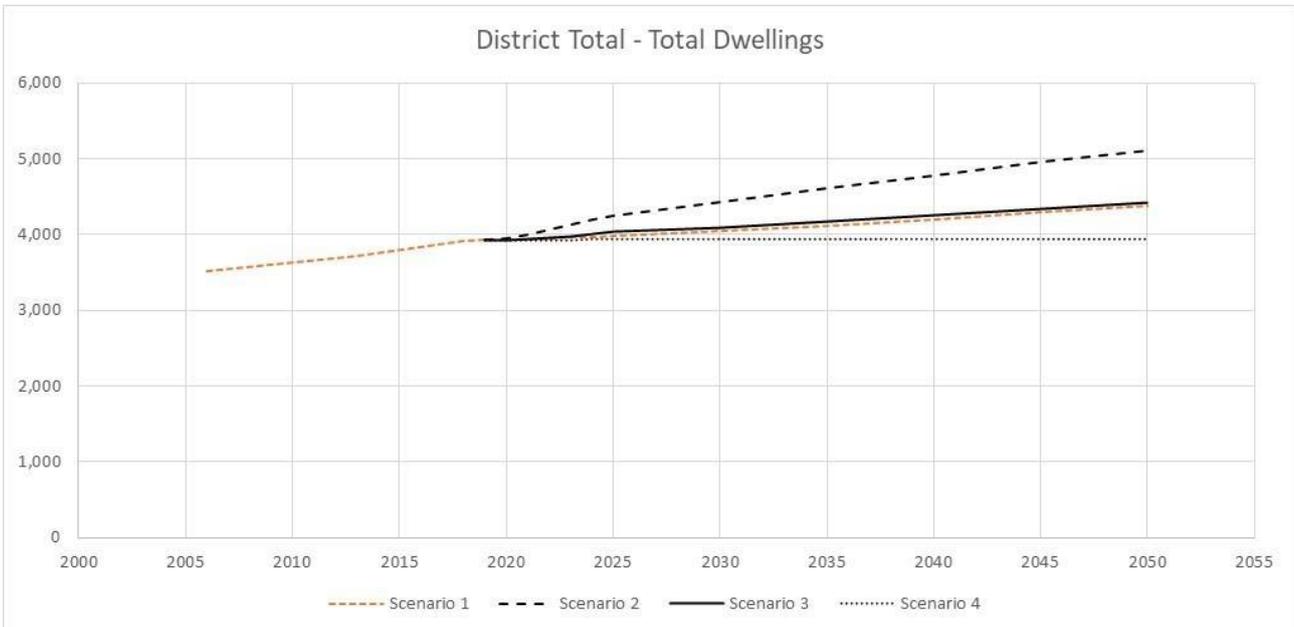


Figure 17. Total dwellings in WDC.

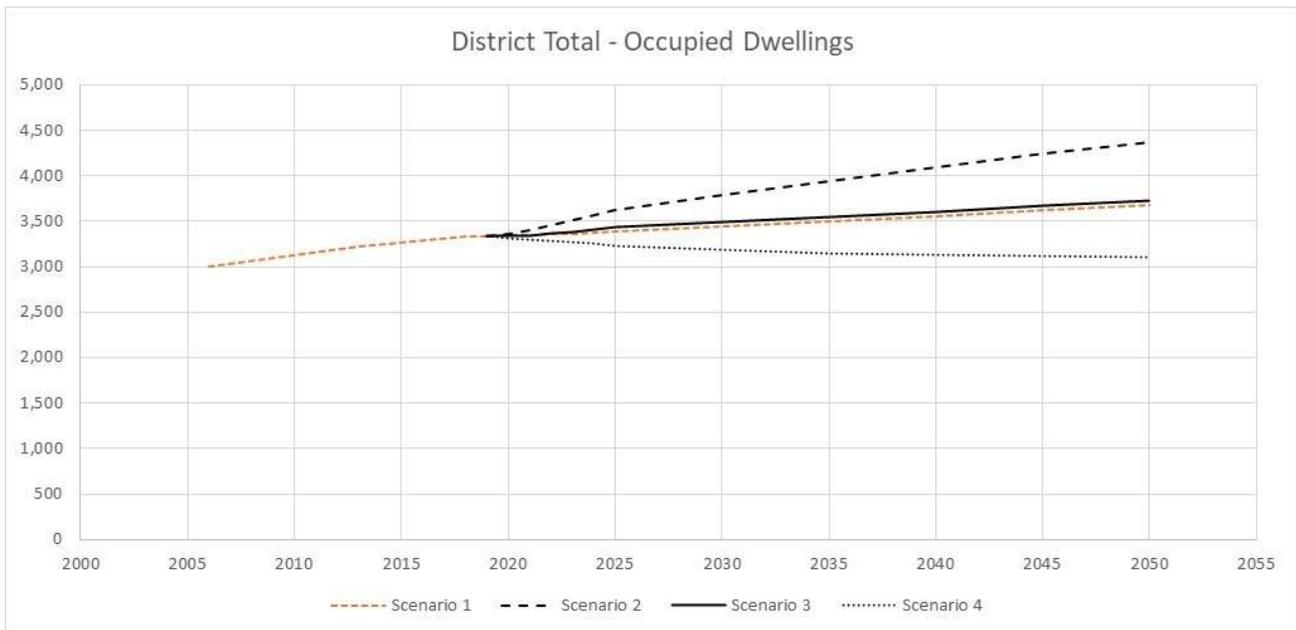


Figure 18. Occupied dwellings in WDC.

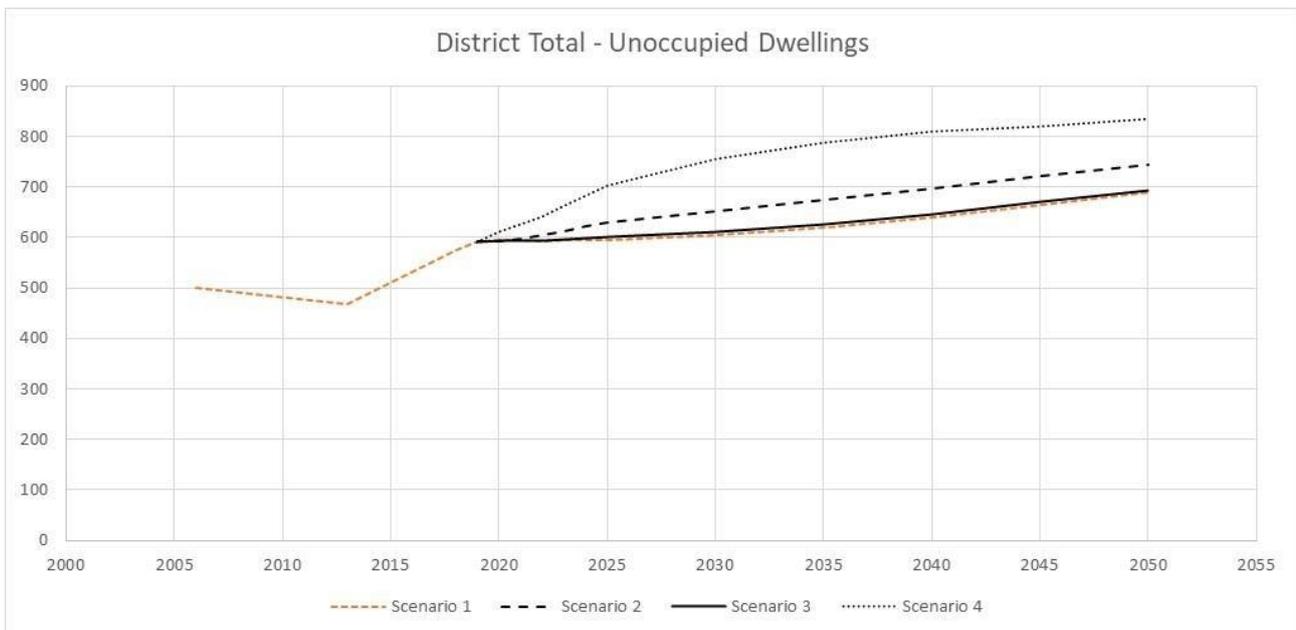


Figure 19. Unoccupied dwellings in WDC.

7.5 Visitor Projections

7.5.1 ASSUMPTIONS

In the wake of the COVID-19, New Zealand went into a domestic lockdown for six weeks and have closed borders indefinitely to non-residents. This has had a severe effect on tourism. Since the lockdown has lifted New Zealanders have reinvigorated the domestic tourism market. The following assumptions have been applied to understand how many people will visit WDC in the future.

These assumptions have been developed from Tourism New Zealand Scenario Models, April-May 2020. These scenarios have been updated to reflect the latest COVID-19 alert level restrictions, as at July 2019.

Since this growth projections model and the Tourism New Zealand Scenarios were developed it has become apparent that Scenario 2 is unrealistic as States within Australia go back into a COVID-19 Lockdown. However, to offer best value for money to WDC, and due to the minimal impact on the final

figures, Rationale recommend revisiting these assumptions once there is a known scenario and date for border reopening.

Table 13. Visitor projection assumptions.

Scenario	Description	2025	2050
Scenario 1 - BAU (Pre COVID-19)	1. Assume that growth continues at that of 2020 - 2025	100%	100%
Scenario 2 - High	1. Level 1 in June 2020, domestic travel is allowed 2. Aus/NZ bubble opens in Sept 2020 3. NZ to rest of world opens in April 2021	102%	110%
Scenario 3 - Medium	1. Level 1 in June 2020, domestic travel is allowed 2. Aus/NZ bubble opens in Feb 2021 3. NZ to rest of world opens in April 2021	100%	100%
Scenario 4 - Low	1. Level 1 in June 2020, domestic travel is allowed 2. Aus/NZ bubble opens in April 2021 3. NZ to rest of world opens in Jan 2022	98%	90%

The percentages describe the amount of growth, or lack thereof, compared to Scenario 1 i.e. for Scenario 2 there is 2.5% more visitors in 2025 and 10% more visitors in 2050 than in Scenario 2.

7.5.2 OUTPUT

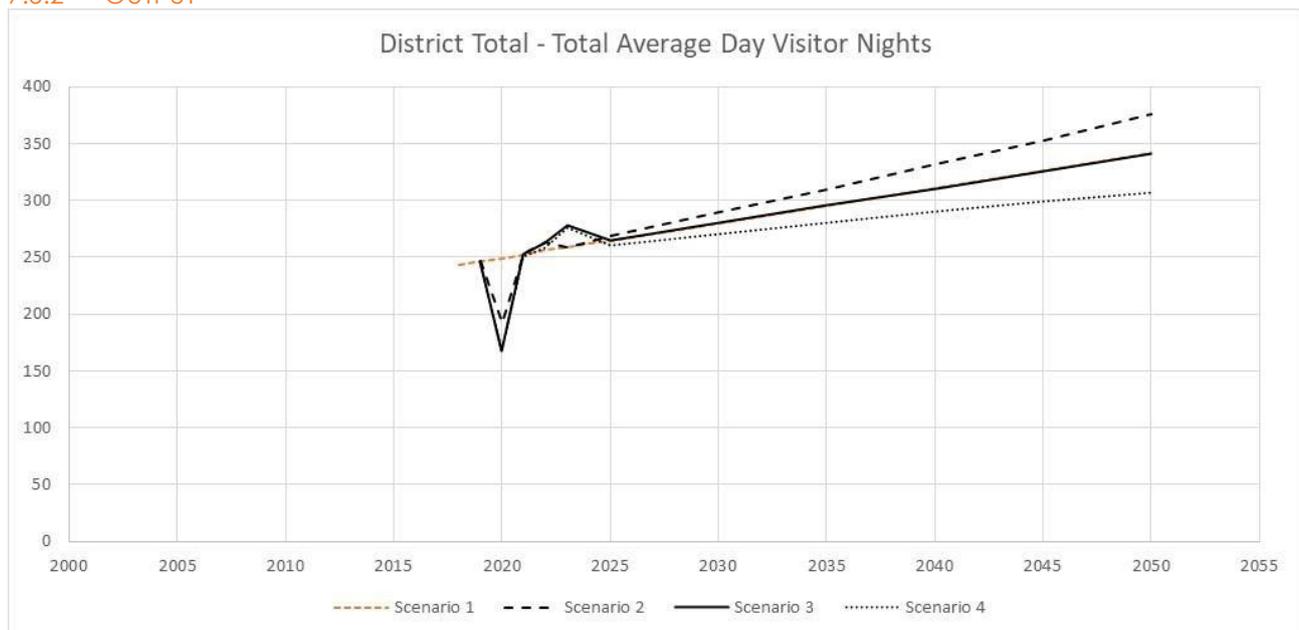


Figure 20. Average visitor nights in WDC.

7.6 Rating Units

7.6.1 ASSUMPTIONS

No assumptions have been made regarding projecting the rating units, refer to Section 5 for the methodology that has been used to calculate the projections.

7.6.2 OUTPUT

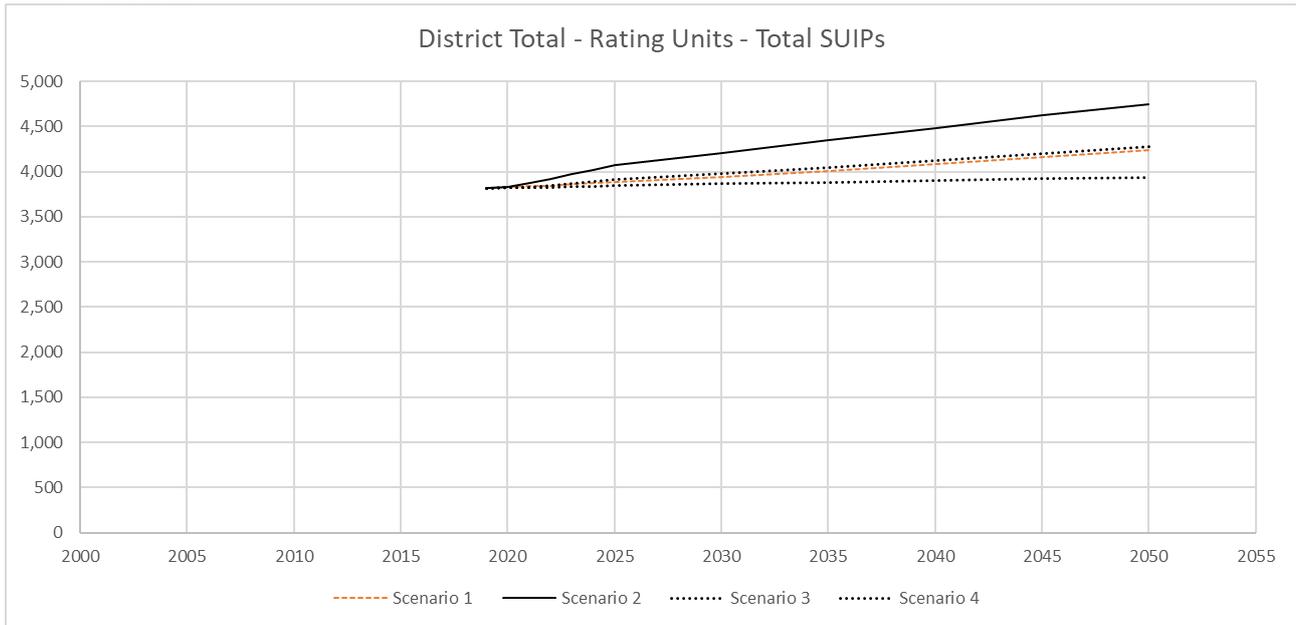


Figure 21. Rating units for WDC – Total Separately used or inhabited part of a rating unit.

8 Recommendation

It is recommended that WDC adopt Scenario 3 as the expected level of growth in the next thirty years and use this information to inform key projects, plans and strategies.

Scenario 3 is recommended as there will be short term effects due to COVID-19. However, it is not yet known what, if any, long term effects there will be.

Due to this uncertainty it is recommend that annual “check-ins” are completed with the most up-to-date data to monitor the impact of COVID-19 and the progress of recovery. At this time growth can be re-projected, if necessary.

Since this growth projections model was developed it has become apparent that a bubble between New Zealand and Australia will not be forming in 2020. To offer best value for money to WDC, and due to the minimal impact on the final projections, Rationale recommend revisiting these assumptions once there is a known scenario and date for border reopening.

9 Addendum – Stats NZ Update

Stats NZ released their growth projections on March 31, 2021 significantly later than expected. The Stats NZ medium growth scenario is comparable to Rationale's Scenario 3, as shown below.

Note: The Rationale projections were produced prior to the release of the Stats NZ projections and were produced 100% independently.

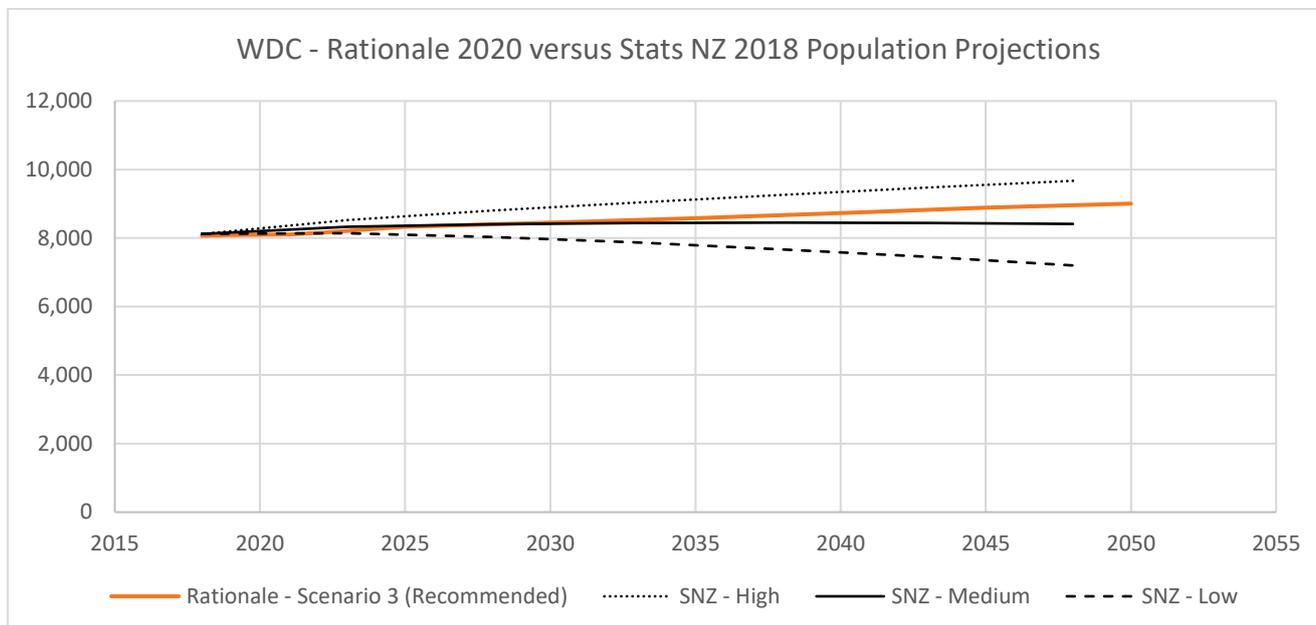


Figure 22. Waimate Growth Projections, comparison between Rationale 2020 and Stats NZ 2018 (released March 2021) projections.

Table 14. Summary of Projected Population.

	2018	2025	2030	2040	2050
Rationale - Scenario 3	8,070	8,327	8,448	8,730	9,005
SNZ - Medium	8,120	8,358	8,416	8,446	8,398
Difference	50	31	-32	-284	-607
Difference %	1%	0%	0%	-3%	-7%

Table 15. Summary of Population Growth.

	Short Term 2018 - 2030		Long Term 2018 - 2050	
	New People	Annual Growth %	New People	Annual Growth %
Rationale - Scenario 3	378	0.4%	935	0.3%
SNZ - Medium	296	0.3%	278	0.1%
Difference	-82	-0.1%	-657	-0.2%

10 Appendix A: Hakataramea

Hakataramea is a large rural area that is sparsely populated within the Waimate District. Whilst there has been growth in some industries the actual number of jobs is still very small.



Figure 23. SA2 boundaries of Waimate District.

10.1 Hakataramea Growth Projections Summary

Table 16. Hakataramea growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	750	790	860	873	899	914	927	944	969	1000
Total Dwellings	393	387	429	436	448	456	463	471	483	499
Occupied Dwellings	297	318	333	338	348	354	359	365	375	387
Unoccupied Dwellings	93	66	96	97	100	102	104	105	108	112
Number of Jobs	220	240	180	182	215	223	232	241	250	259
Number of Businesses	213	213	231	227	268	278	289	300	312	323
Total Peak Day Visitor Nights			310	217	337	356	374	393	412	431
Total Average Day Visitor Nights			65	46	71	75	79	83	87	91
Total Peak Day Visitor Numbers			390	273	424	447	471	494	518	541
Total Average Day Visitor Numbers			80	56	87	92	97	102	107	111

Table 17. Hakataramea short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	120	9	1.1%	29	5	0.5%	130	4	0.5%
Total Dwellings	41	3	0.8%	14	2	0.5%	65	2	0.5%
Occupied Dwellings	40	3	1.0%	11	2	0.5%	50	2	0.5%
Unoccupied Dwellings	4	0	0.3%	3	1	0.5%	15	0	0.5%
Number of Jobs	-30	-2	-1.1%	25	4	2.1%	69	2	1.0%
Number of Businesses	24	2	0.8%	31	5	2.1%	86	3	1.0%
Total Peak Day Visitor Nights				23	4	1.2%	117	4	1.0%
Total Average Day Visitor Nights				5	1	1.2%	25	1	1.0%
Total Peak Day Visitor Numbers				28	5	1.2%	146	5	1.0%
Total Average Day Visitor Numbers				6	1	1.2%	30	1	1.0%

10.2 Employment Projections

10.2.1 KEY INDUSTRIES AND TRENDS

The Hakataramea is a large farming area, which is reflected in the number and types of jobs available in the area. There has been minimal growth in the area in recent times.

Table 18. Top five industries in Hakataramea.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Agriculture, Forestry and Fishing	140	73%	-8%	-3%
Arts and Recreation Services	15	8%	8%	3%
Construction	6	3%	33%	-
Education and Training	6	3%	33%	20%
Rental, Hiring and Real Estate Services	3	2%	-11%	-

10.2.2 OUTPUT

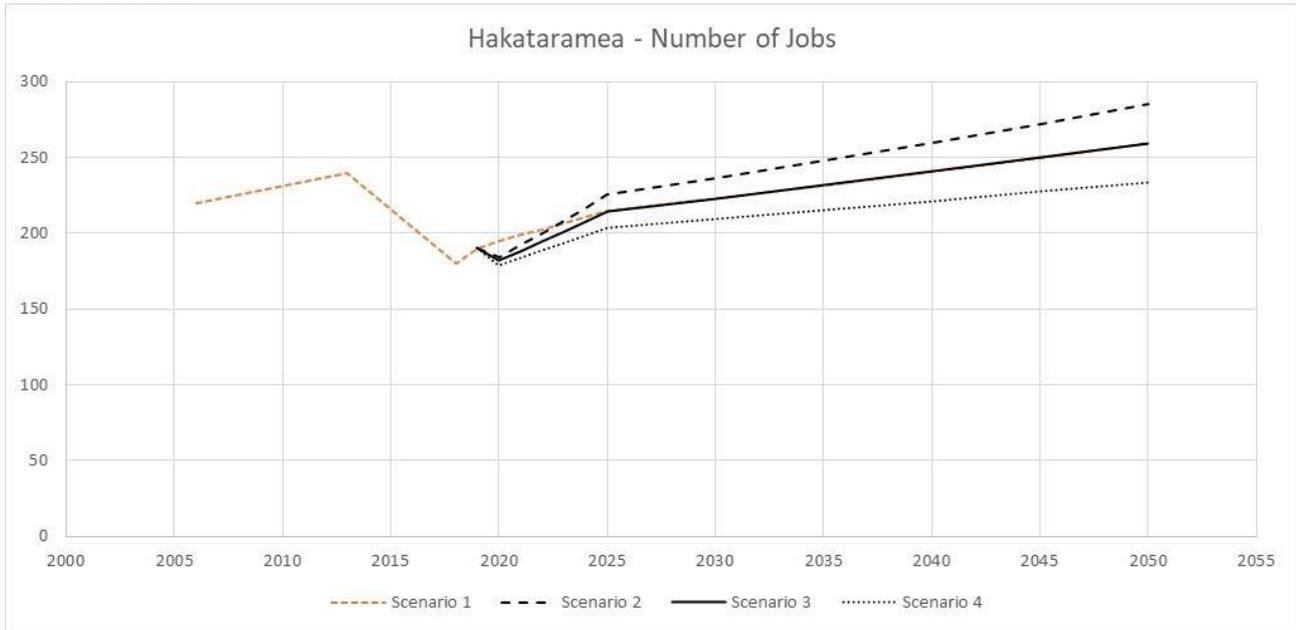


Figure 24. Number of jobs in Hakataramea.

10.3 Population Projections

10.3.1 KEY MIGRATION DRIVERS

- Young people leave the area for other opportunities such as education and employment.
- Families are moving to the area and commuting away for work.
- Later in life people tend to move away from the area for retirement and access to greater support and healthcare.

These trends are reflected below through the population by age and net migration figures.

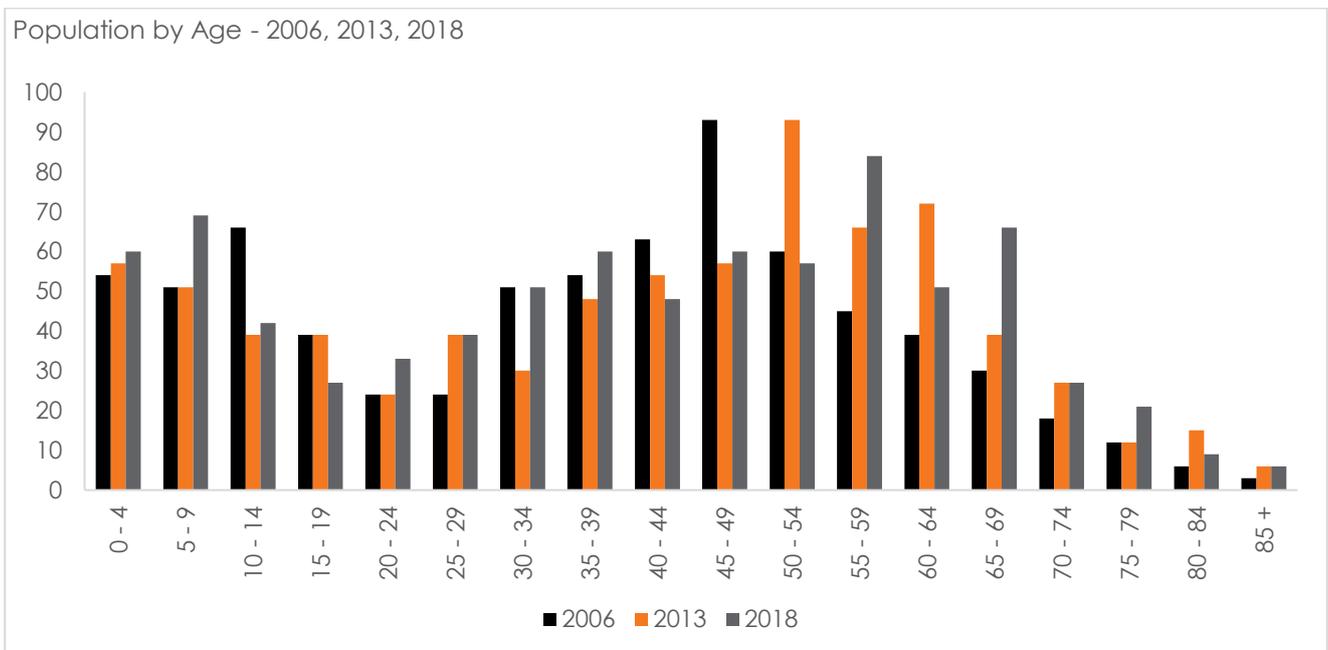


Figure 25. Hakataramea population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

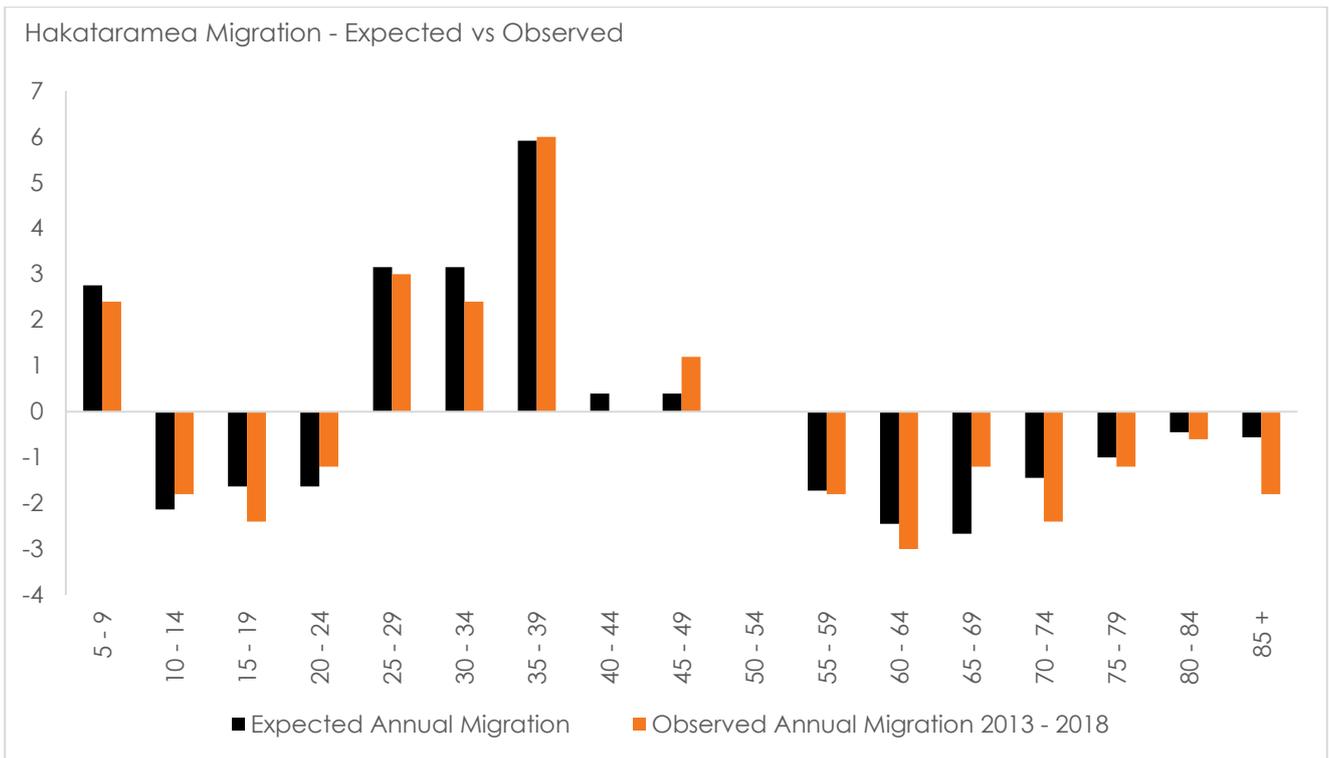


Figure 26. Net migration check.

10.3.2 COVID-19

It is unlikely that the population of Hakataramea will be significantly impacted due to COVID-19.

10.3.3 OUTPUT

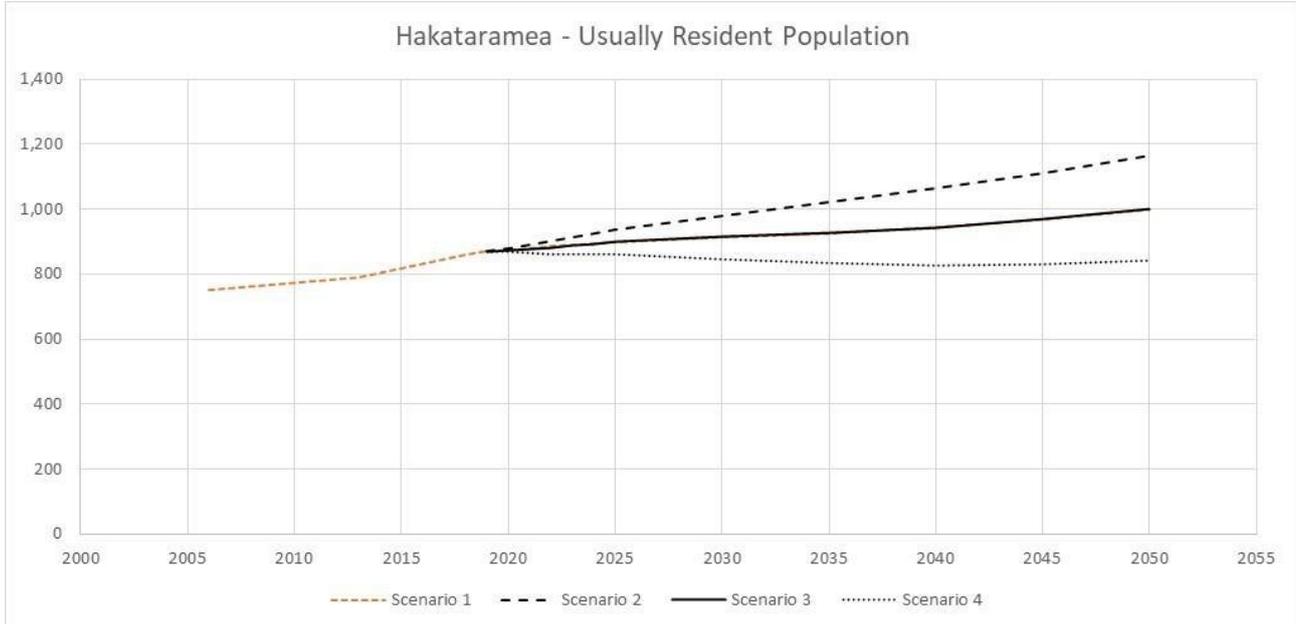


Figure 27. Hakataramea usually resident population.

10.4 Dwelling Projections

10.4.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the analysis in Hakataramea. These assumptions are available in Section 7.

10.4.2 OUTPUT

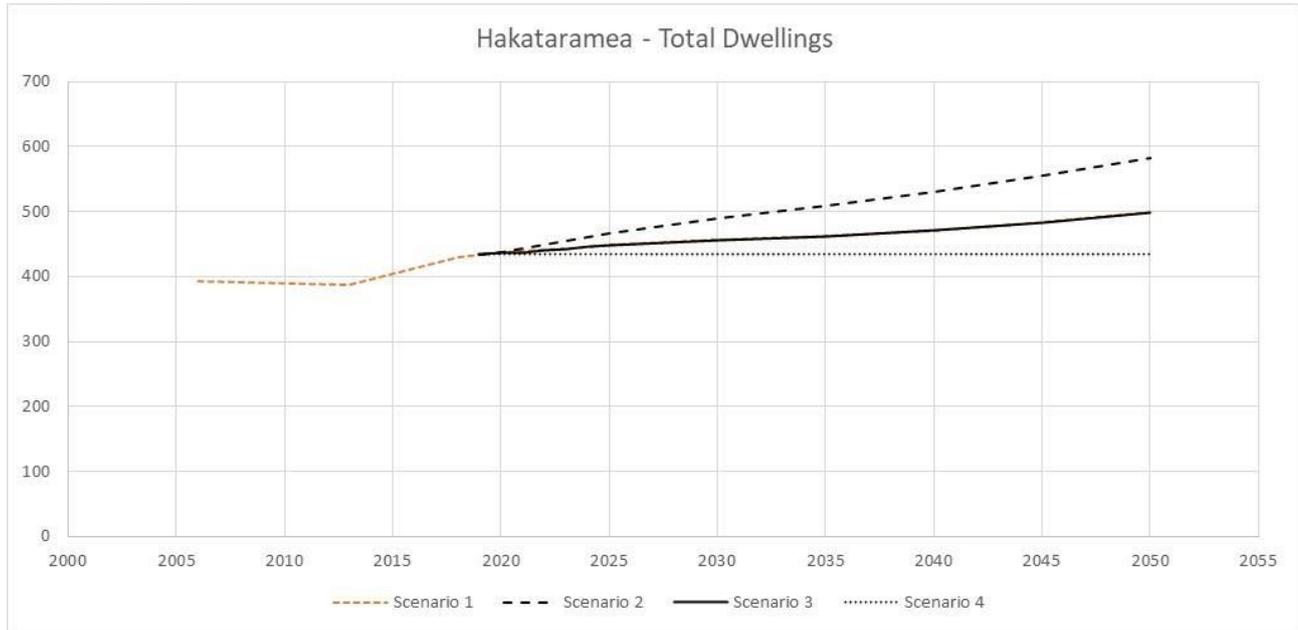


Figure 28. Total dwellings.

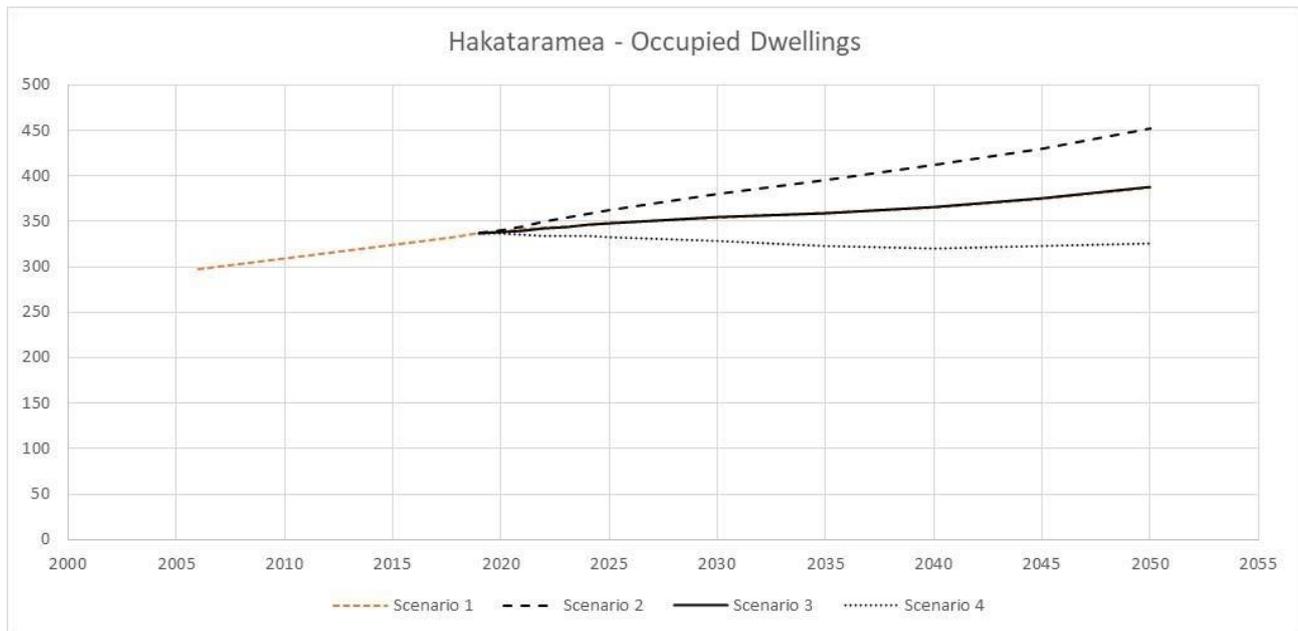


Figure 29. Occupied dwellings.

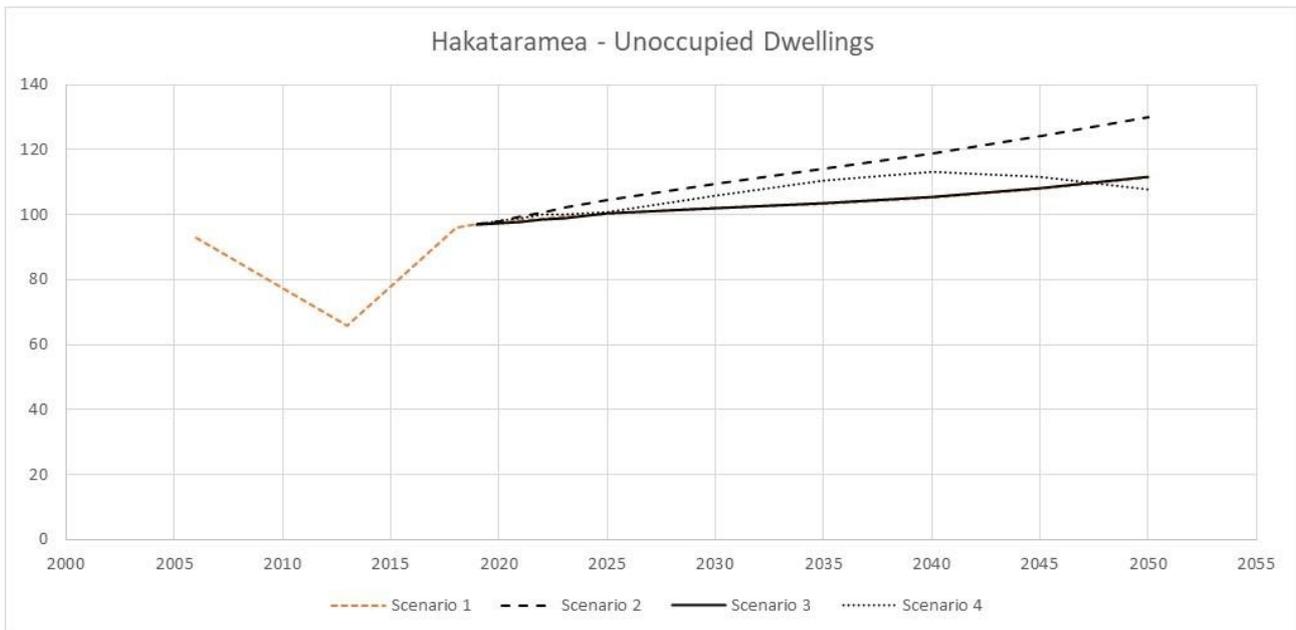


Figure 30. Unoccupied dwellings.

10.5 Visitor Projections

10.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the visitor projections analysis in Hakataramea. These assumptions are available in Section 7.

10.5.2 OUTPUT

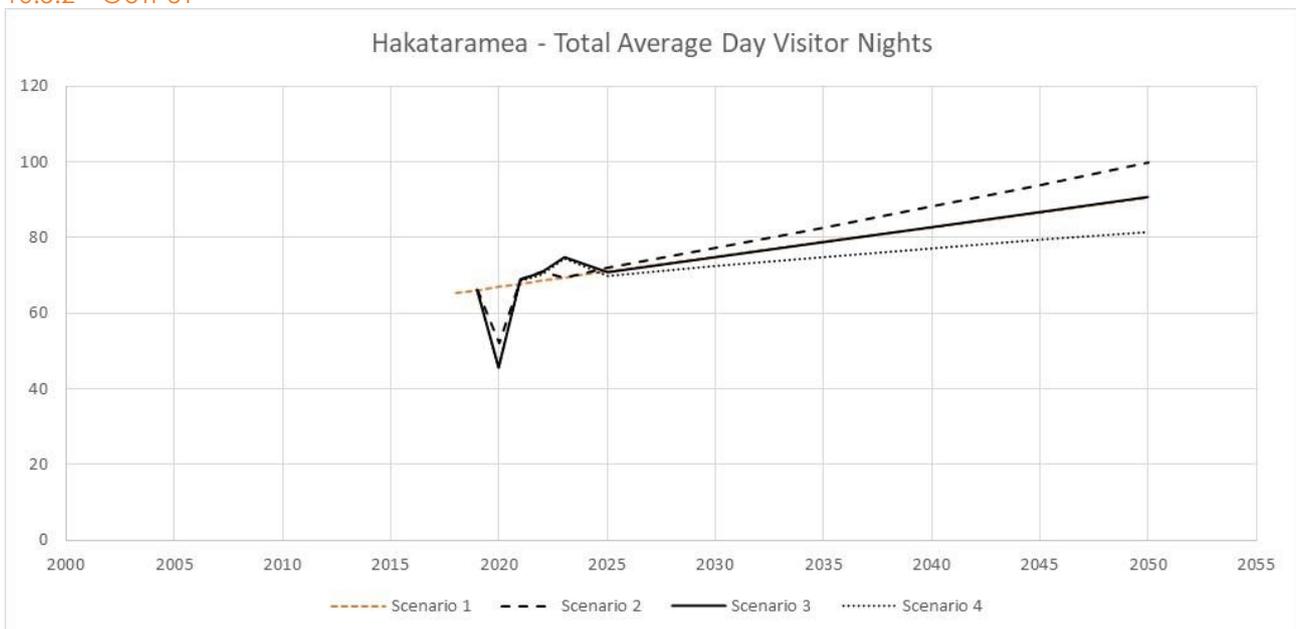


Figure 31. Hakataramea average day visitor nights.

11 Appendix B: Lyalldale

Lyalldale is a small, rural area in the north of the Waimate District. Employment trends are similar to the rest of the district.



Figure 32. SA2 boundaries of Waimate District.

11.1 Lyalldale Growth Projections Summary

Table 19. Lyalldale growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	600	660	710	715	768	791	814	838	858	865
Total Dwellings	237	255	267	269	289	298	306	315	323	325
Occupied Dwellings	219	237	243	245	263	271	278	287	294	296
Unoccupied Dwellings	18	15	24	24	26	27	28	28	29	29
Number of Jobs	100	85	130	99	134	135	136	137	138	139
Number of Businesses	105	87	87	86	117	117	118	119	120	120
Total Peak Day Visitor Nights			70	49	76	80	84	88	93	97
Total Average Day Visitor Nights			40	28	43	45	48	50	52	55
Total Peak Day Visitor Numbers			105	74	114	120	126	132	138	145
Total Average Day Visitor Numbers			47	33	51	54	57	59	62	65

Table 20. Lyalldale growth projections summary.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	110	8	1.3%	58	10	1.3%	155	5	0.6%
Total Dwellings	30	2	0.9%	22	4	1.3%	58	2	0.6%
Occupied Dwellings	24	2	0.8%	20	3	1.3%	53	2	0.6%
Unoccupied Dwellings	6	0	2.2%	2	0	1.3%	5	0	0.6%
Number of Jobs	0	0	0.0%	34	6	5.0%	39	1	1.1%
Number of Businesses	-18	-1	-1.4%	30	5	5.0%	33	1	1.1%
Total Peak Day Visitor Nights				5	1	1.2%	26	1	1.0%
Total Average Day Visitor Nights				3	0	1.2%	15	0	1.0%
Total Peak Day Visitor Numbers				8	1	1.1%	39	1	1.0%
Total Average Day Visitor Numbers				3	1	1.1%	17	1	1.0%

11.2 Employment Projections

Lyalldale is a smaller agricultural area to the north of the district. This is reflected in the number and type of jobs available. There has been minimal growth in the area.

There have been significant changes in the number of jobs in Lyalldale in the last 10 years.

A large proportion of residents commute out of the area for work, either to Waimate or Timaru.

11.2.1 KEY INDUSTRIES AND TRENDS

Table 21. Top five industries in Lyalldale.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Agriculture, Forestry and Fishing	50	50%	-5%	5%
Education and Training	18	18%	50%	13%
Transport, Postal and Warehousing	15	15%	0%	1%
Construction	3	3%	110%	-
Wholesale Trade	3	3%	-	-

11.2.2 OUTPUT

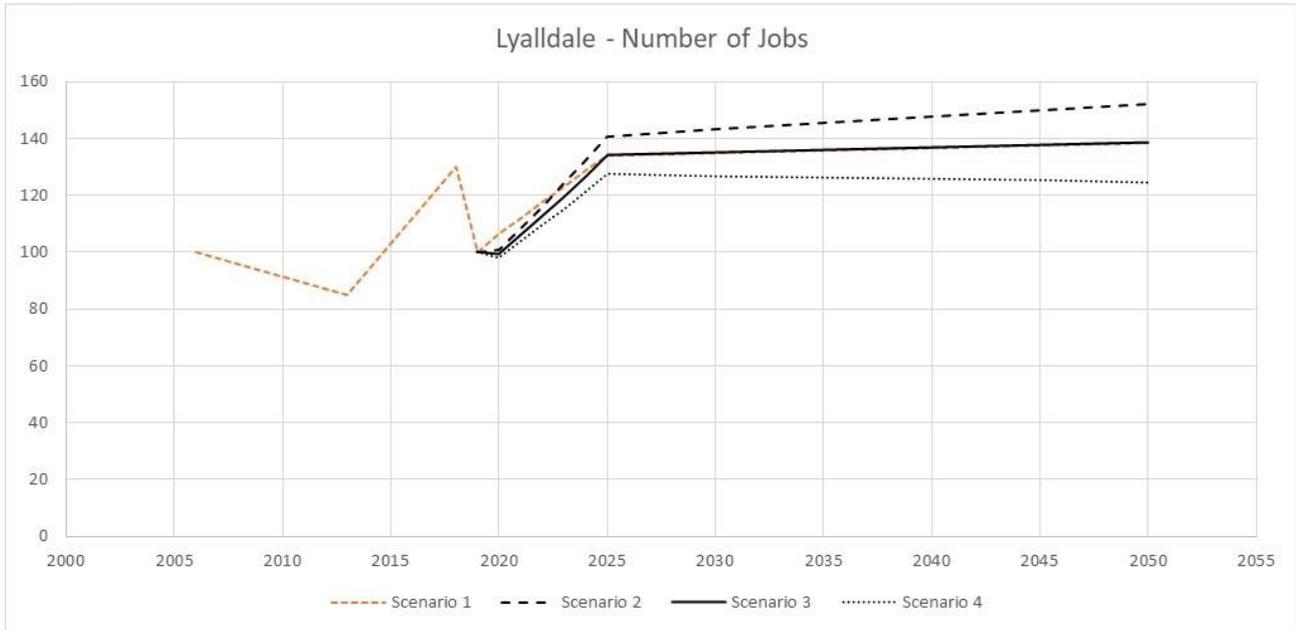


Figure 33. Number of jobs in Lyalldale.

11.3 Population Projections

11.3.1 KEY MIGRATION DRIVERS

- Migration to Lyalldale for more affordable housing compared to Timaru.
- A small number of younger people are attracted to the area for employment opportunities.
- Older people tend to leave the area for retirement and access to more support and healthcare.

These trends are reflected below through the population by age and net migration figures.

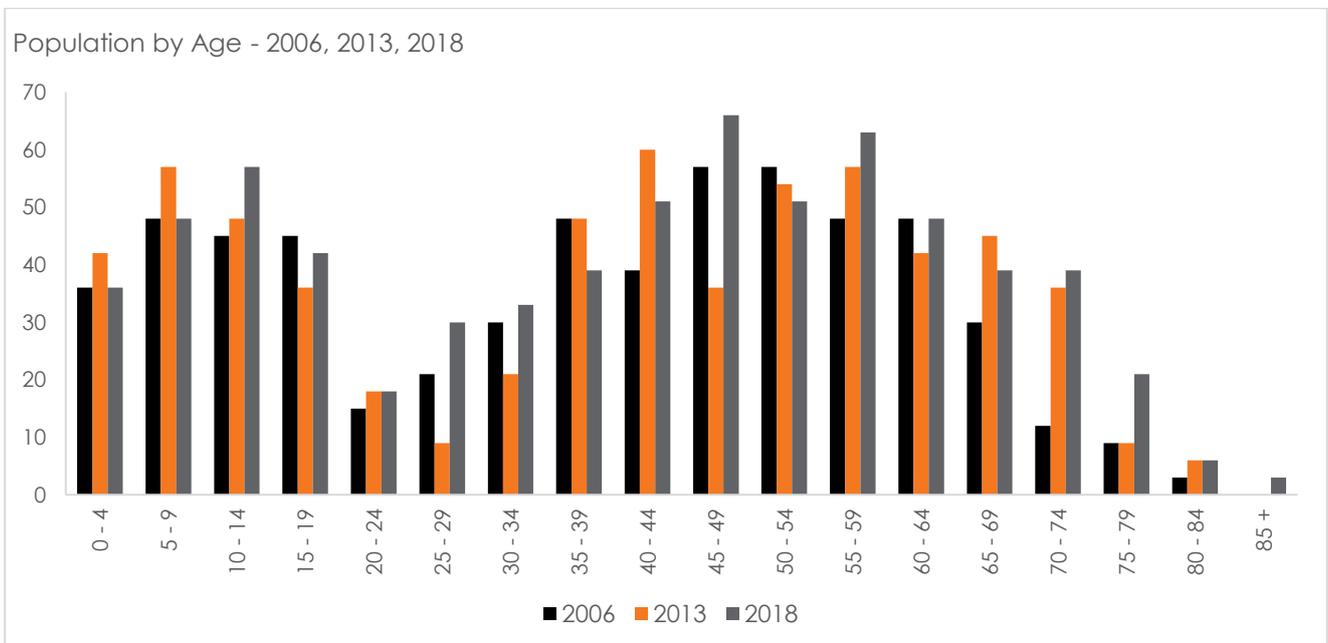


Figure 34. Lyalldale population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

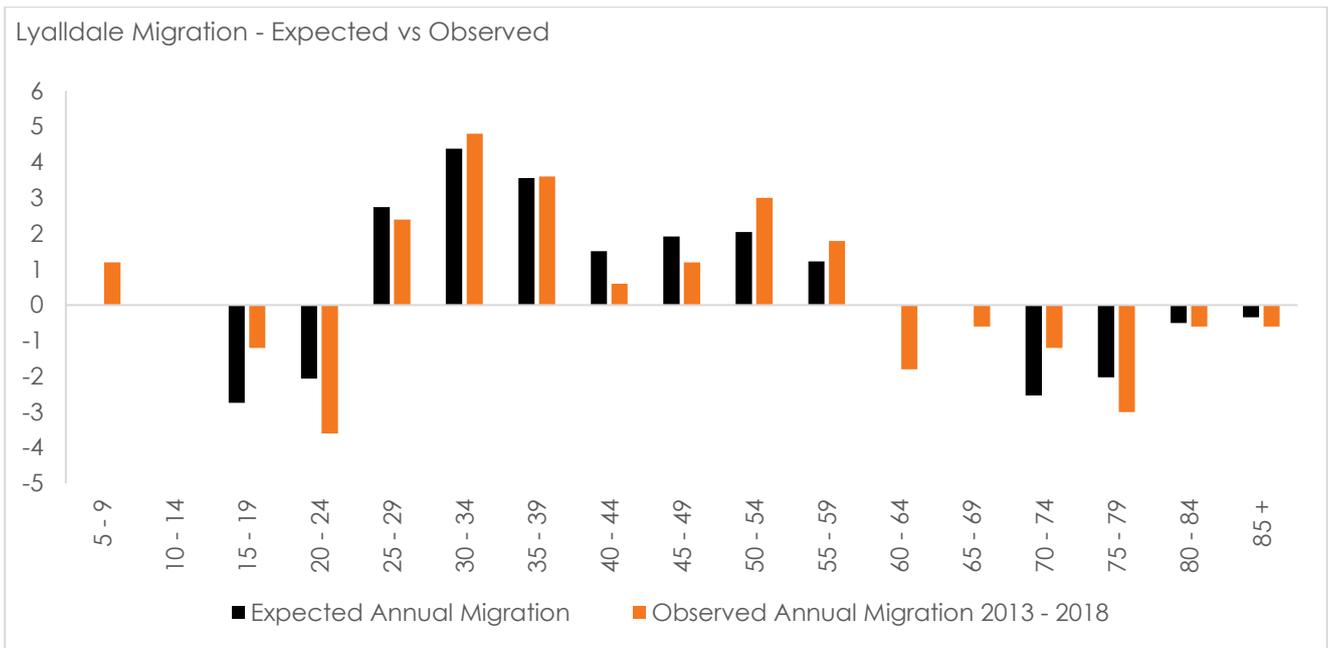


Figure 35. Net migration check.

11.3.2 COVID-19

It is unlikely that the population of Lyalldale will be significantly impacted due to COVID-19.

11.3.3 OUTPUT

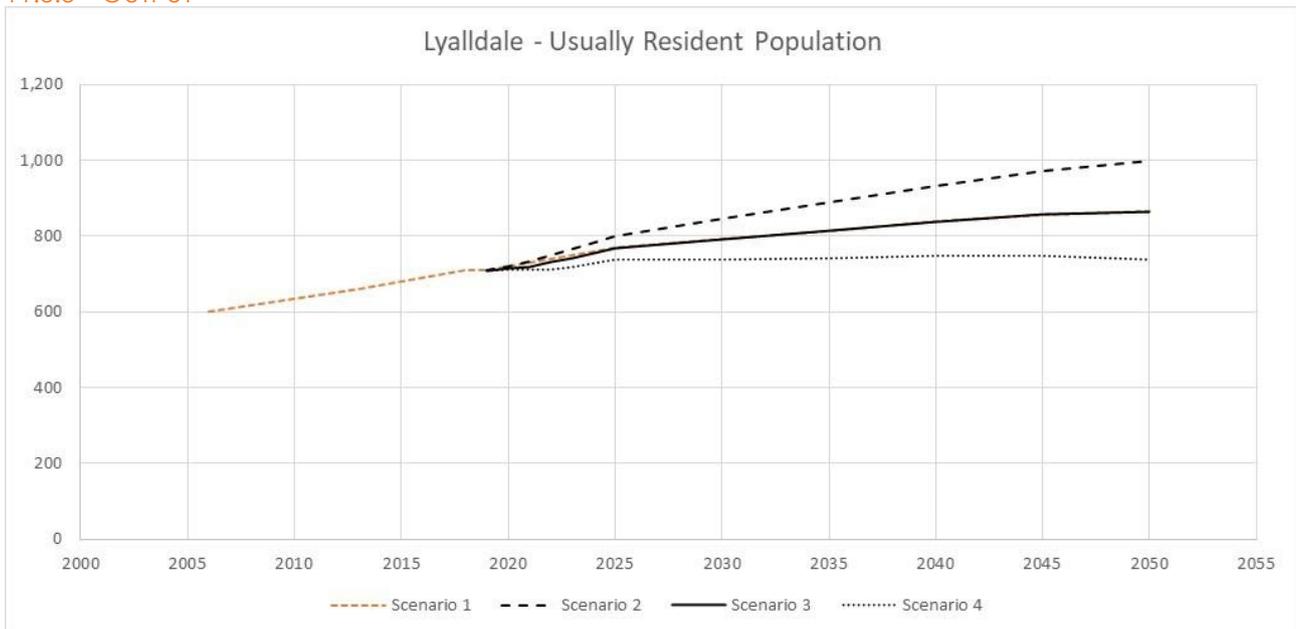


Figure 36. Lyalldale's usually resident population.

11.4 Dwelling Projections

11.4.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the dwelling projections analysis in Lyalldale. These assumptions are available in Section 7.

11.4.2 OUTPUT

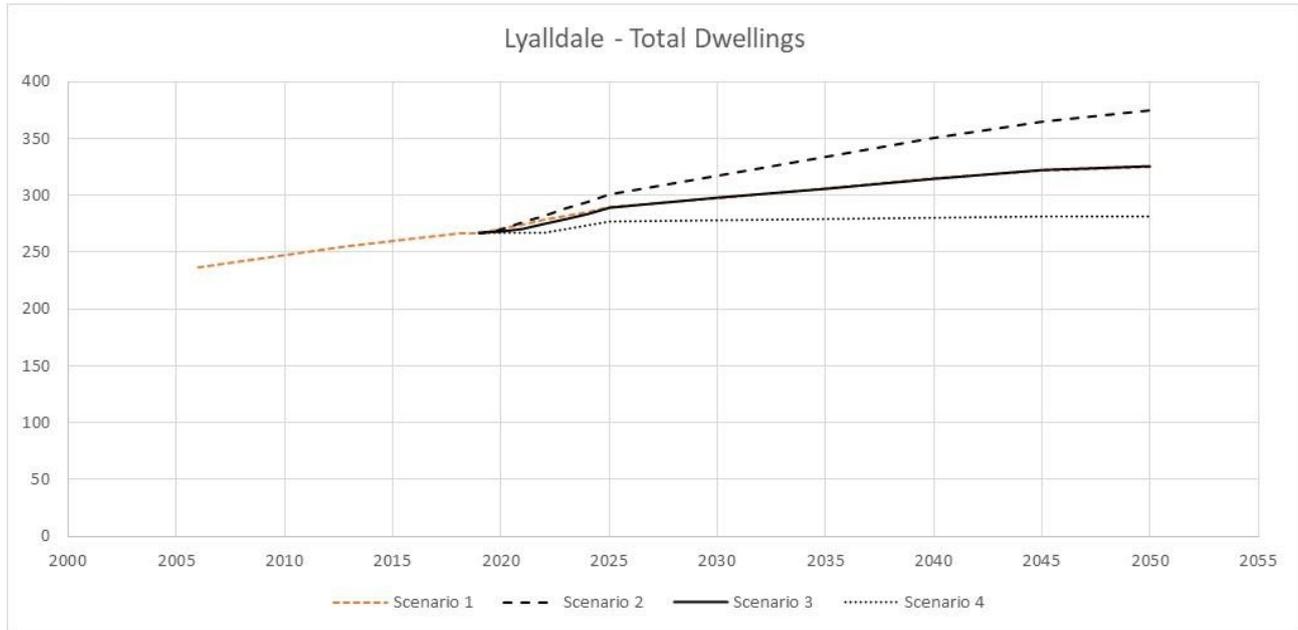


Figure 37. Total dwellings.

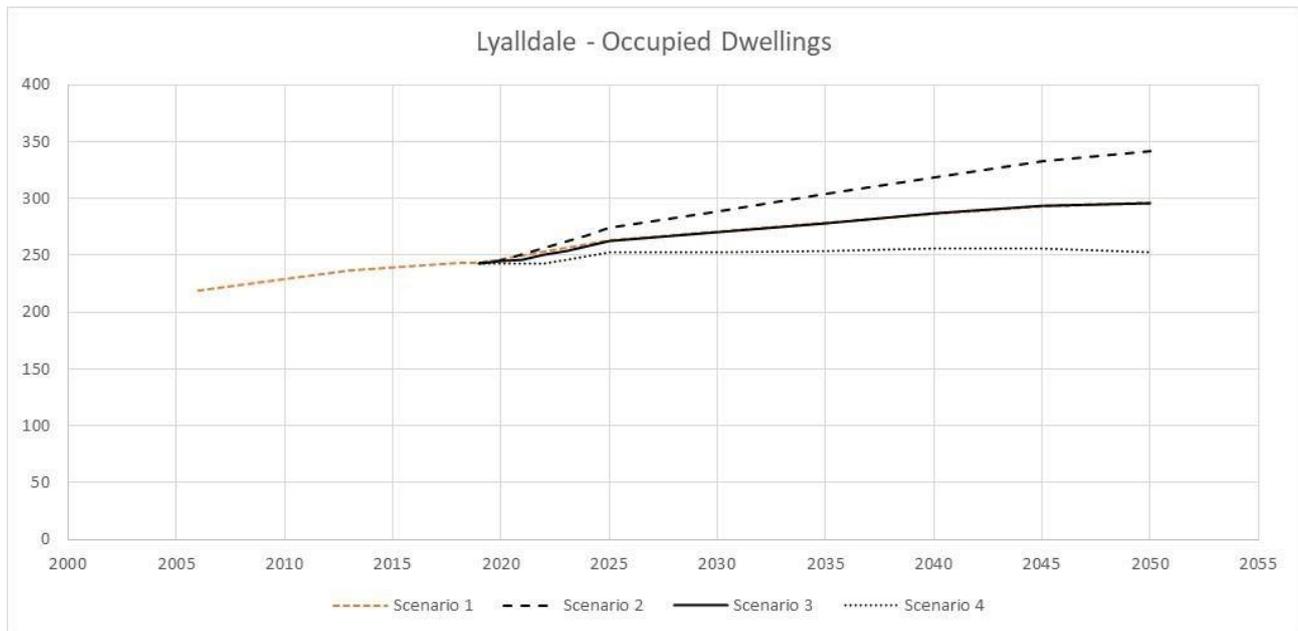


Figure 38. Occupied dwellings.

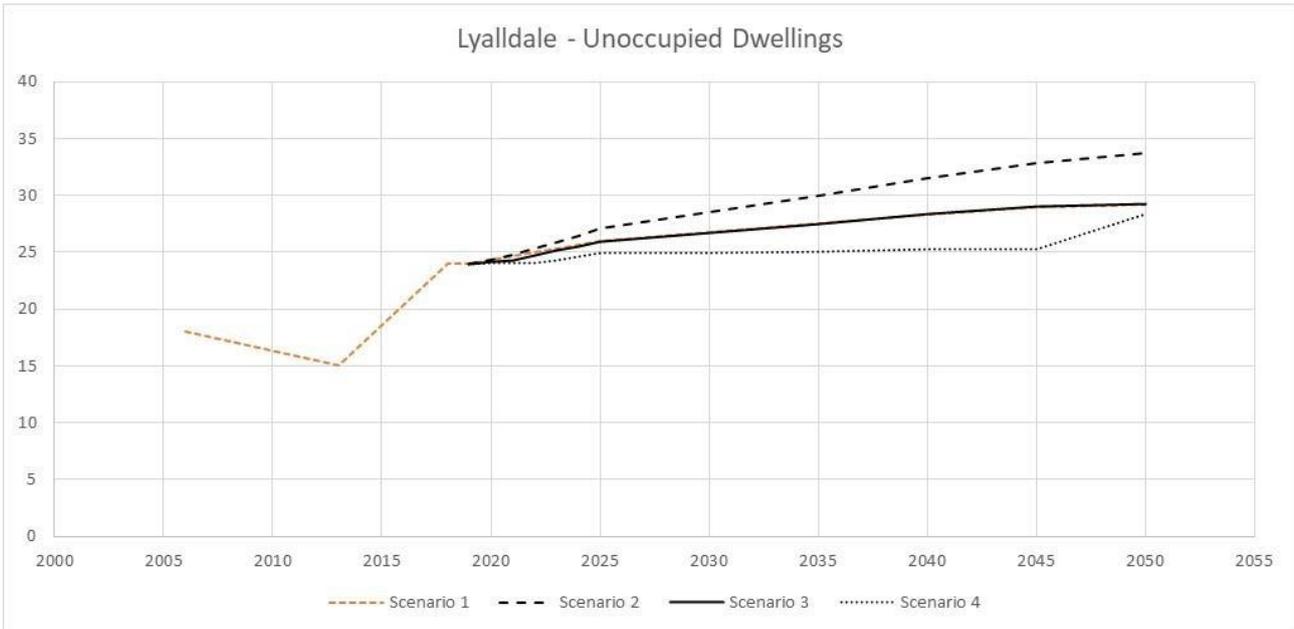


Figure 39. Unoccupied dwellings.

11.5 Visitor Projections

11.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the analysis of the visitor projections in Lyalldale. These assumptions are available in Section 7.

11.5.2 OUTPUT

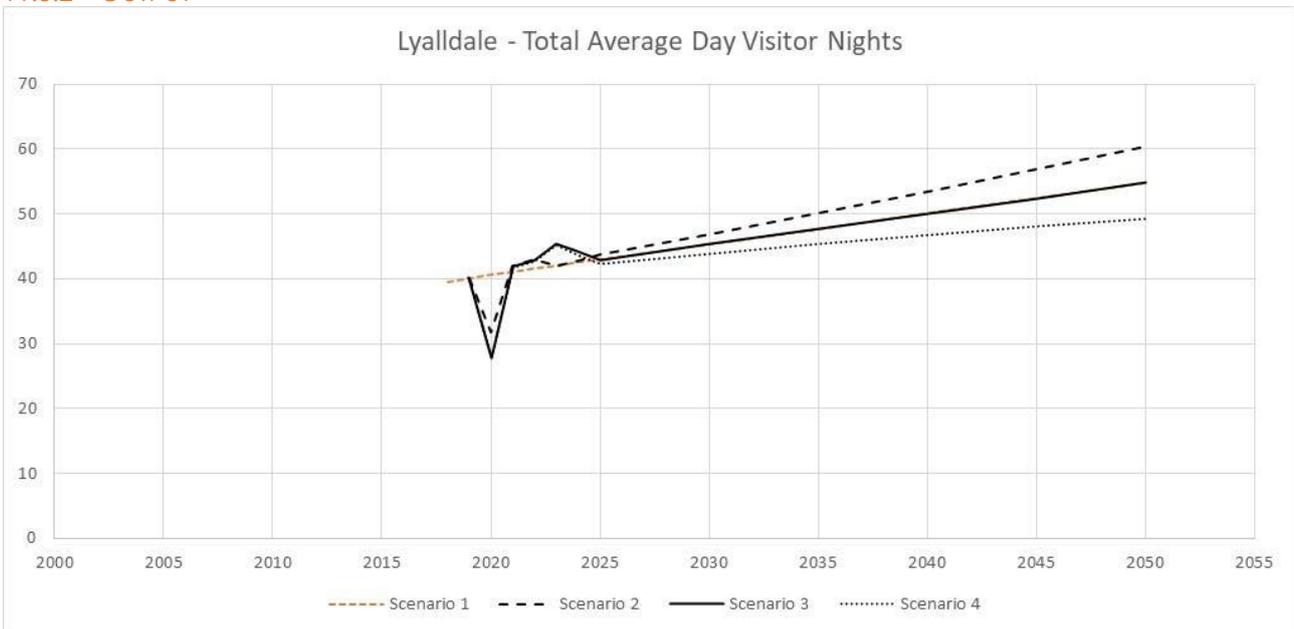


Figure 40. Lyalldale's average day visitor nights.

11.6 St Andrews

St Andrews is a small township on State Highway 1 in the north of the Waimate District. The town has experienced some population and hence dwelling growth over the last two decades. This is expected to increase through to 2050.

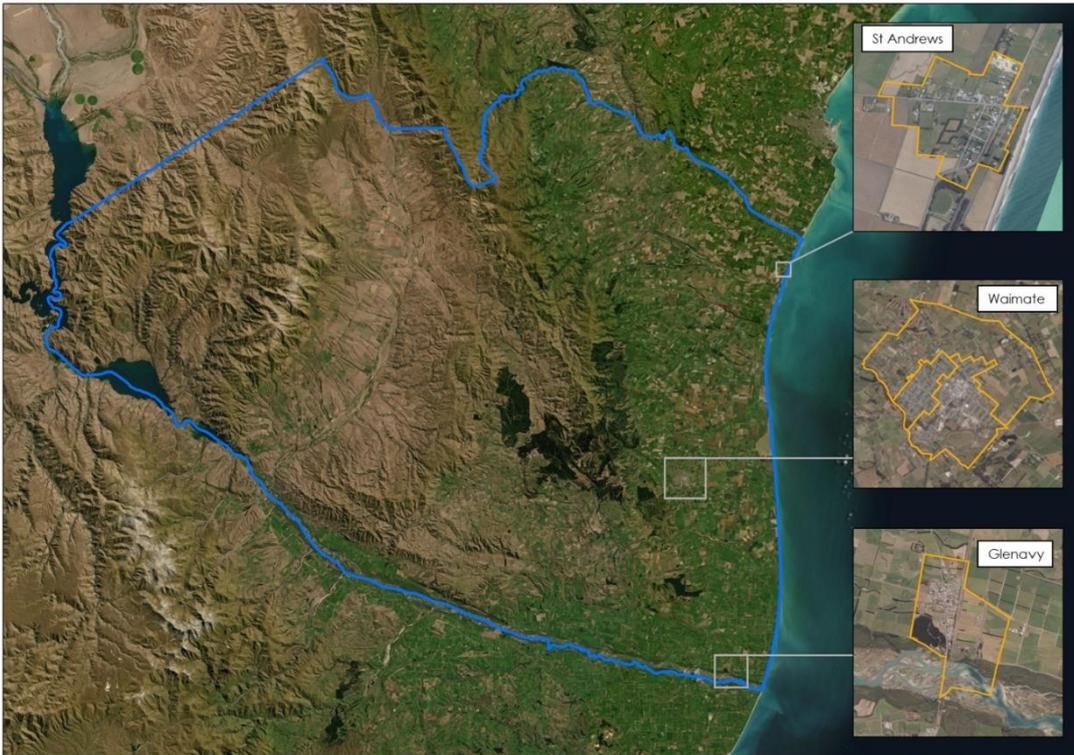


Figure 41. Township boundaries in the Waimate District.

Table 22. St Andrews growth projections.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	177	180	195	196	211	217	223	230	236	238
Total Dwellings	72	78	81	82	88	90	93	96	98	99
Occupied Dwellings	72	78	72	72	78	80	83	85	87	88
Unoccupied Dwellings	0	0	9	9	10	10	10	11	11	11

Table 23. St Andrews short- and long-term forecasts.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	18	1	0.7%	16	3	1.3%	43	1	0.6%
Total Dwellings	9	1	0.9%	7	1	1.3%	18	1	0.6%
Occupied Dwellings	0	0	0.0%	6	1	1.3%	16	1	0.6%
Unoccupied Dwellings	9	1		1	0	1.3%	2	0	0.6%

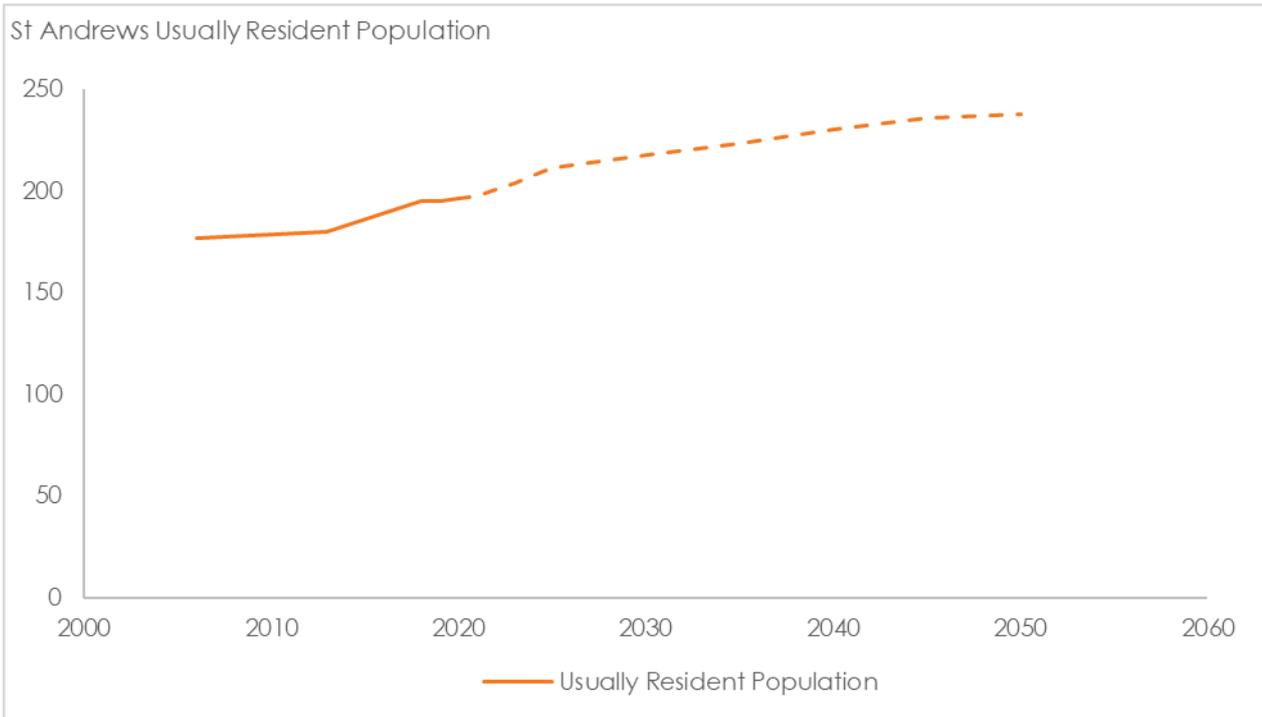


Figure 42. St Andrews usually resident population.

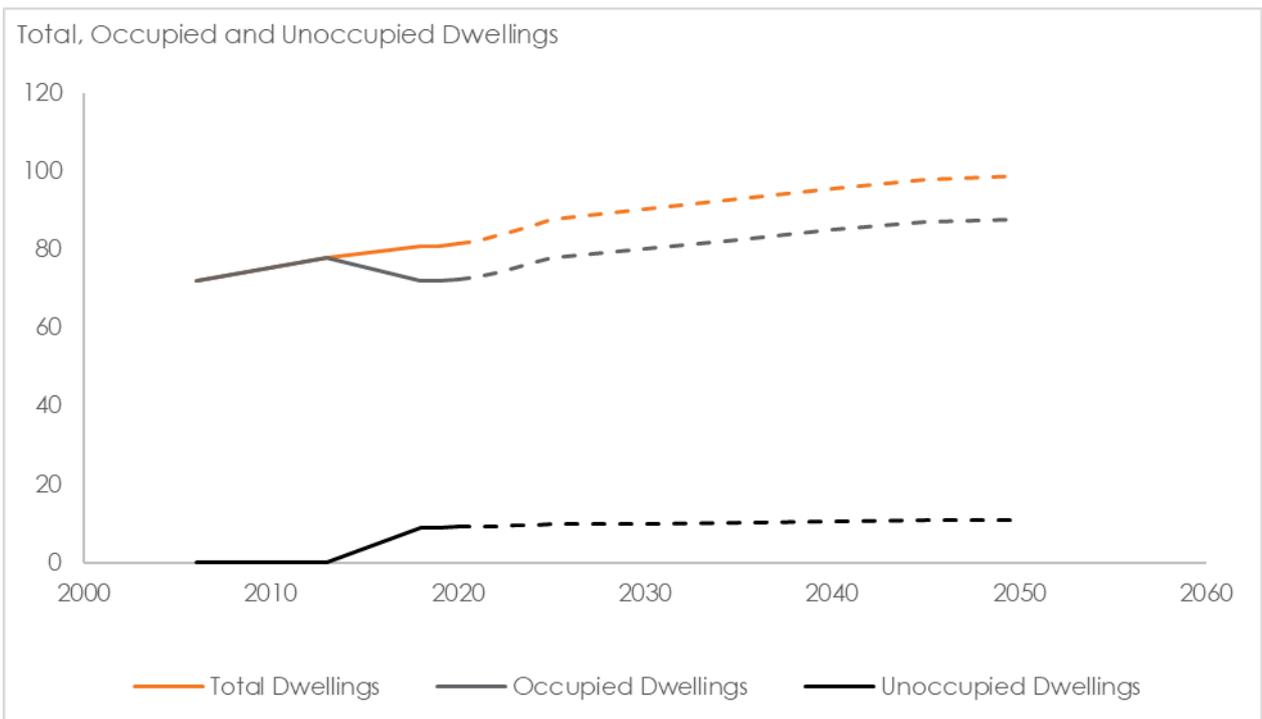


Figure 43. St Andrews total occupied and unoccupied dwellings.

12 Appendix C: Makikihi-Willowbridge

Makikihi-Willowbridge is a small, coastal area in the Waimate District.



Figure 44. SA2 boundaries of Waimate District.

12.1 Makikihi-Willowbridge Growth Projections Summary

Table 24. Makikihi-Willowbridge growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	1010	1030	1040	1038	1046	1041	1041	1045	1052	1053
Total Dwellings	414	438	462	462	465	465	465	465	467	468
Occupied Dwellings	369	408	402	401	404	403	403	404	406	407
Unoccupied Dwellings	39	30	60	61	60	62	62	61	61	61
Number of Jobs	390	410	400	375	410	403	396	390	388	386
Number of Businesses	231	240	240	222	243	239	235	231	230	229
Total Peak Day Visitor Nights			63	43	68	73	77	81	85	89
Total Average Day Visitor Nights			25	17	28	29	31	32	34	36
Total Peak Day Visitor Numbers			206	144	225	237	250	263	275	288
Total Average Day Visitor Numbers			52	36	57	60	63	67	70	73

Table 25. Makikihi-Willowbridge short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2025)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	30	2	0.2%	6	1	0.1%	13	0	0.0%
Total Dwellings	48	4	0.8%	3	0	0.1%	6	0	0.0%
Occupied Dwellings	33	3	0.7%	2	0	0.1%	5	0	0.0%
Unoccupied Dwellings	21	2	3.4%	0	0	0.1%	1	0	0.0%
Number of Jobs	0	0	0.0%	20	3	0.8%	-4	0	0.0%
Number of Businesses	0	0	0.0%	12	2	0.8%	-2	0	0.0%
Total Peak Day Visitor Nights				5	1	1.2%	25	1	1.1%
Total Average Day Visitor Nights				2	0	1.2%	10	0	1.1%
Total Peak Day Visitor Numbers				15	3	1.2%	79	3	1.0%
Total Average Day Visitor Numbers				4	1	1.2%	20	1	1.0%

12.2 Employment Projections

12.2.1 KEY INDUSTRIES AND TRENDS

Employment trends in the Mikikihi-Willowbridge are similar to those elsewhere in the district.

Table 26. Top five industries in Makikihi - Willobridge

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Agriculture, Forestry and Fishing	240	60%	-1%	2%
Manufacturing	75	19%	3%	-6%
Accommodation and Food Services	25	6%	1%	1%
Transport, Postal and Warehousing	12	3%	0%	2%
Construction	9	2%	0%	-2%

12.2.2 OUTPUT

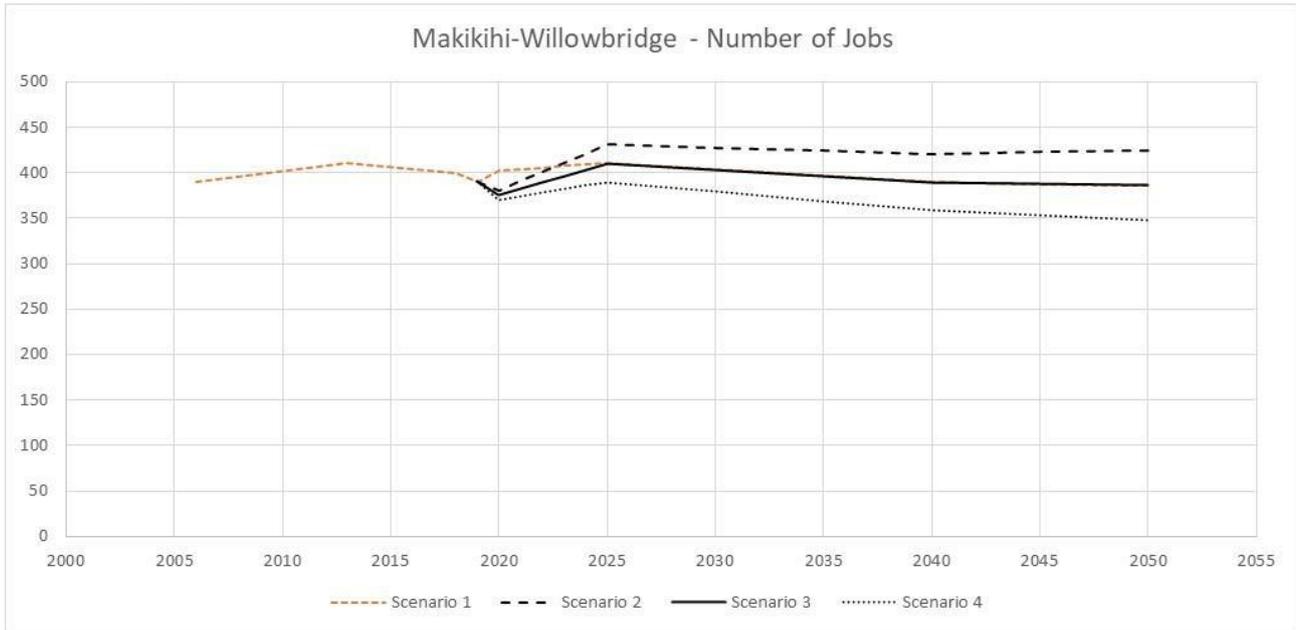


Figure 45. Number of jobs in Makikihi-Willowbridge.

12.3 Population Projections

12.3.1 KEY MIGRATION DRIVERS

- Migration to Makikihi-Willowbridge for more affordable housing compared to Timaru.
- A small number of younger people are attracted to the area for employment opportunities.
- Older people tend to leave the area for retirement and access to more support and healthcare.

These trends are reflected below through the population by age and net migration figures.

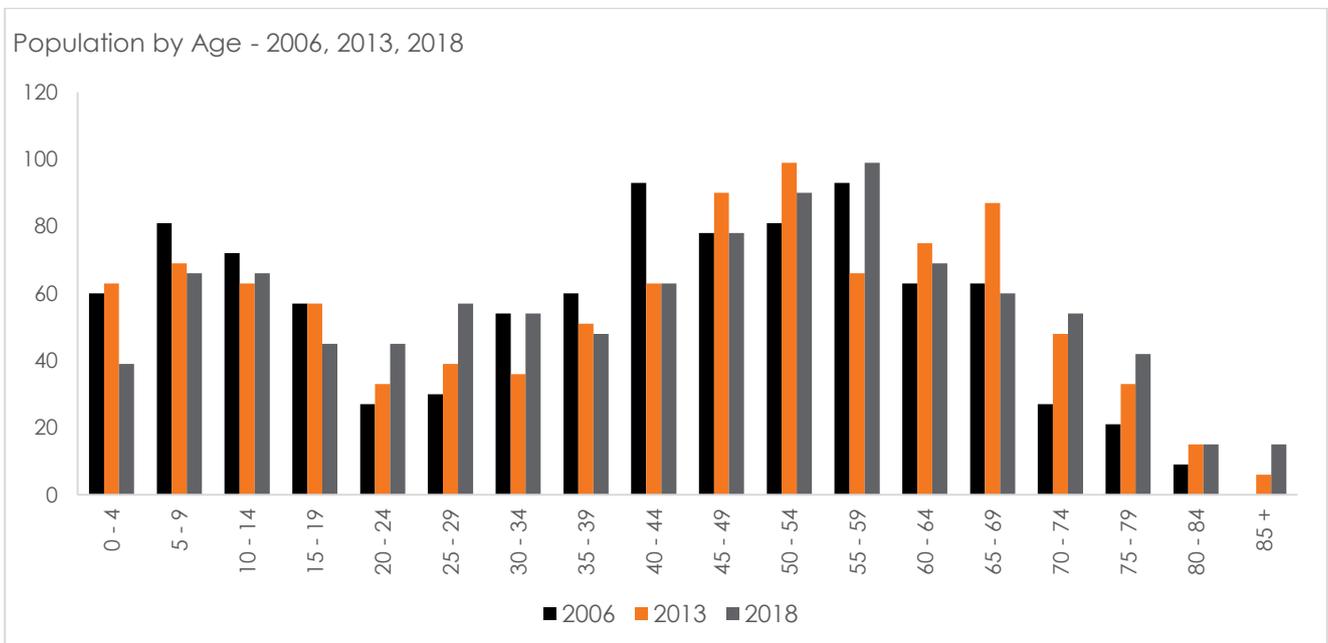


Figure 46. Makikihi-Willowbridge population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

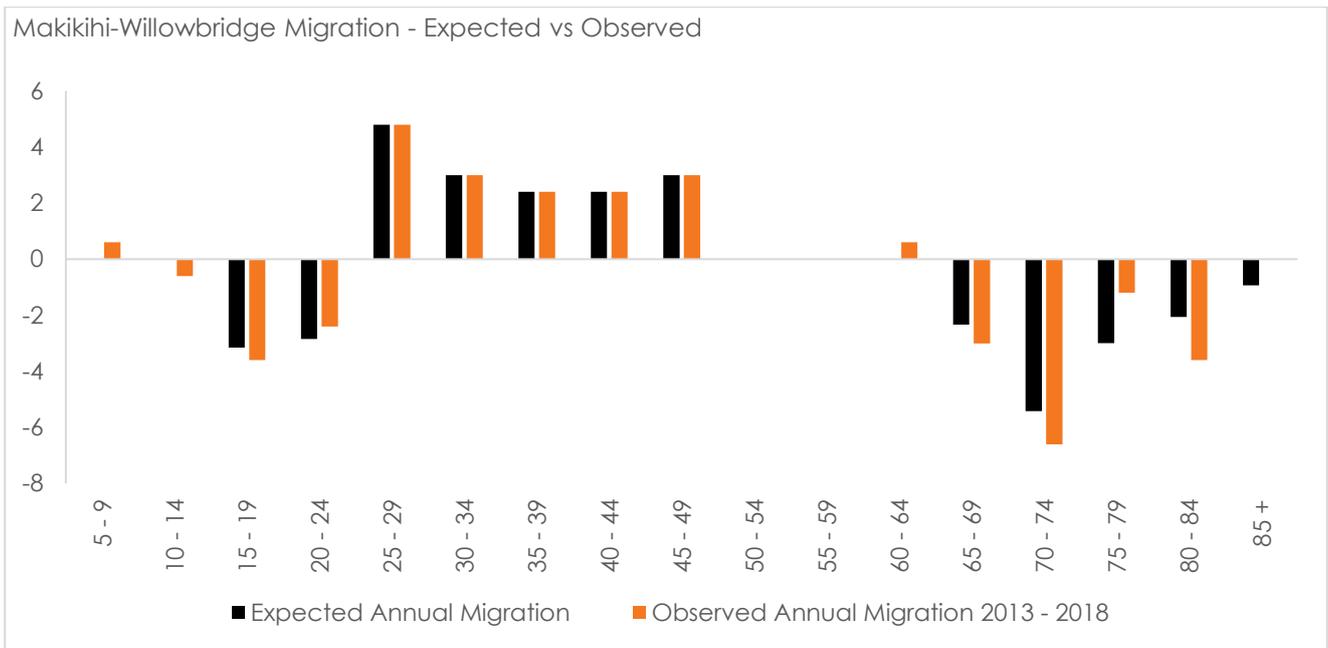


Figure 47. Net migration check.

12.3.2 COVID-19

It is unlikely that the population of Makikihi-Willowbridge will be significantly impacted due to COVID-19.

12.3.3 OUTPUT

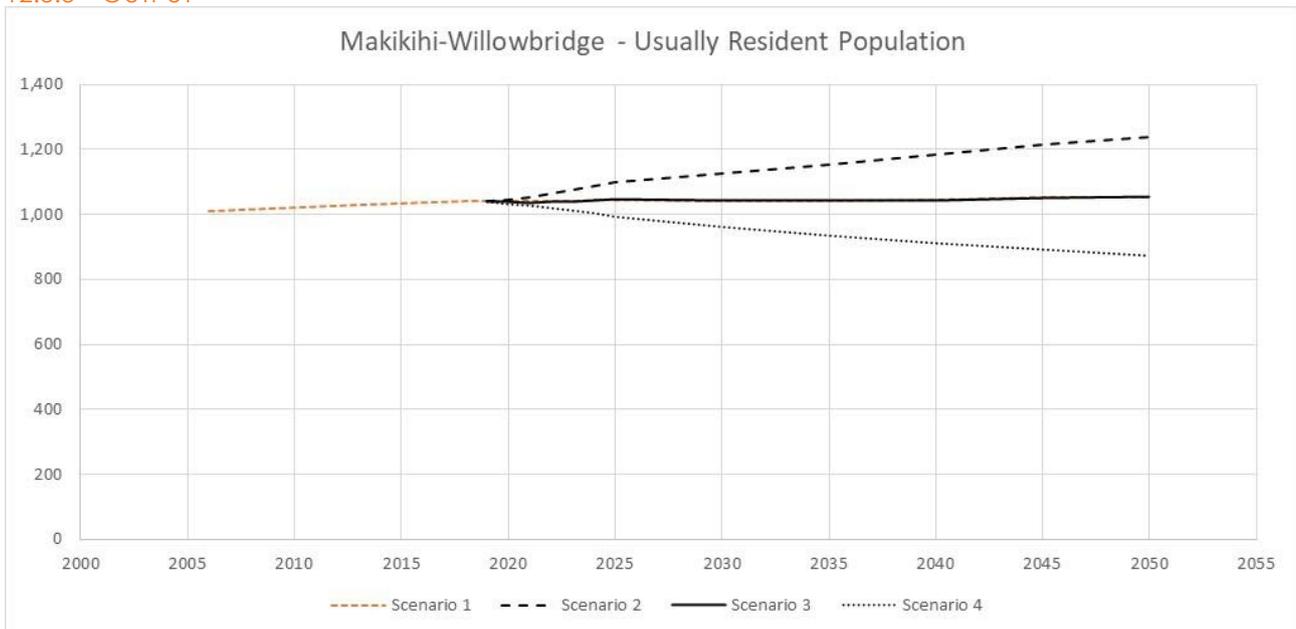


Figure 48. Makikihi-Willowbridge's usually resident population.

12.4 Dwelling Projections

12.4.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the analysis of dwelling projections in Makikihi-Willowbridge. These assumptions are available in Section 7.

12.4.2 OUTPUT

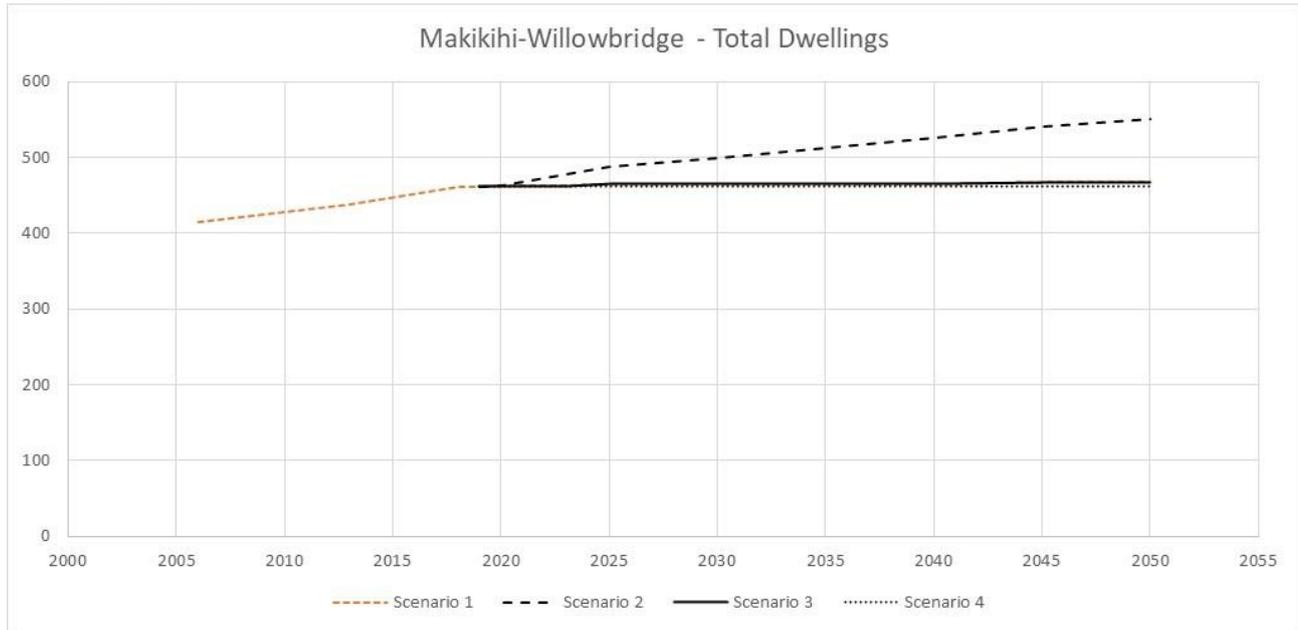


Figure 49. Total Dwellings.

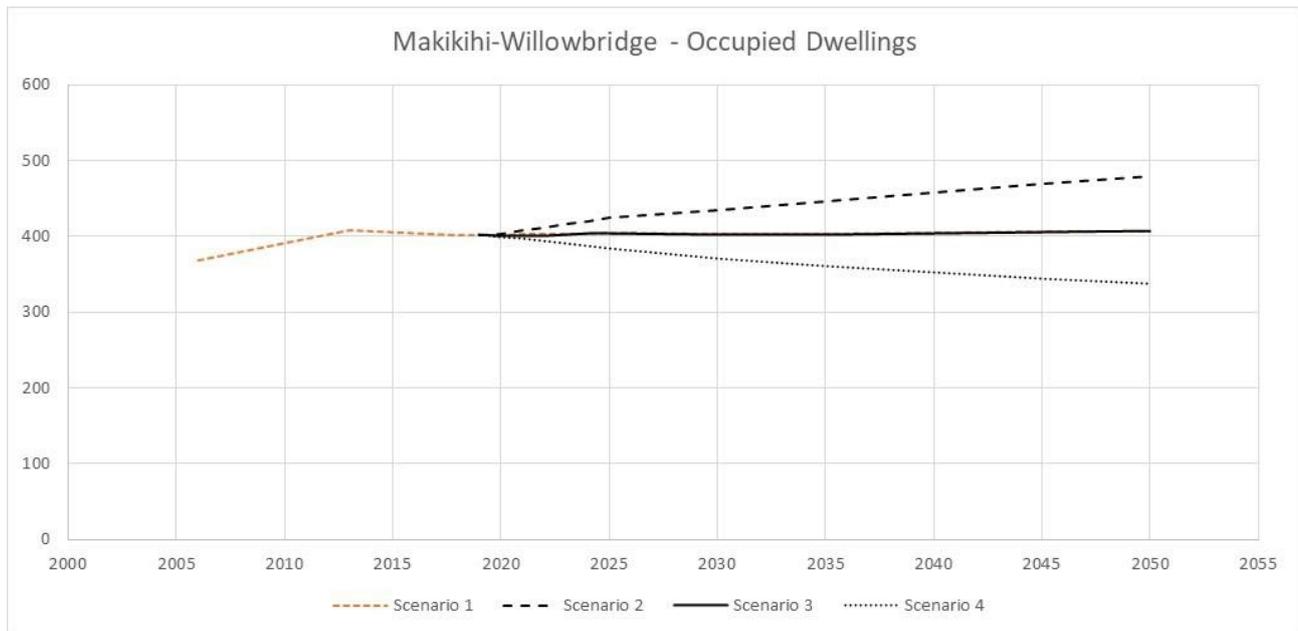


Figure 50. Occupied dwellings.

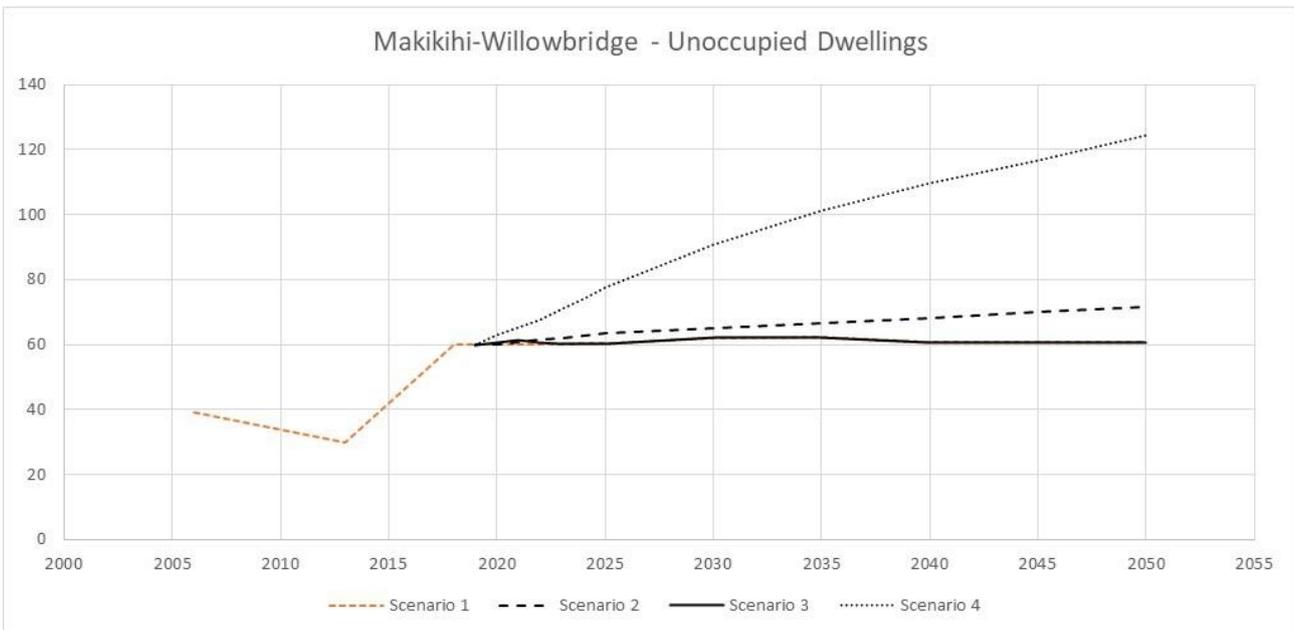


Figure 51. Unoccupied dwellings.

12.5 Visitor Projections

12.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the analysis of visitor projections in Makikihi-Willowbridge. These assumptions are available in Section 7.

12.5.2 OUTPUT

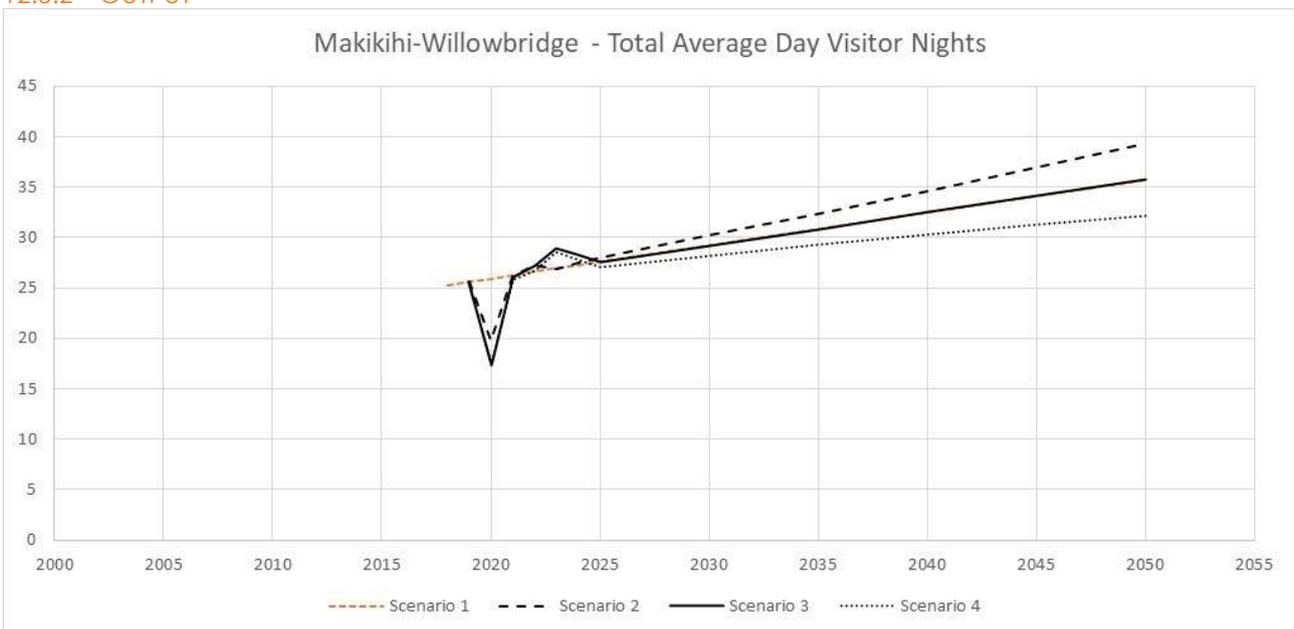


Figure 52. Makikihi-Willowbridge's average day visitor nights.

13 Appendix D: Maungati

Maungati is a predominately rural area, where much of the population commute out of the area for work.



Figure 53. SA2 boundaries of Waimate District.

13.1 Maungati Growth Projections Summary

Table 27. Maungati growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	690	760	760	751	760	764	767	772	775	774
Total Dwellings	339	348	366	366	366	368	369	372	373	373
Occupied Dwellings	252	273	282	279	282	283	284	286	287	287
Unoccupied Dwellings	87	72	81	87	84	84	85	85	86	86
Number of Jobs	150	230	200	189	209	213	218	222	227	232
Number of Businesses	174	177	183	176	194	198	202	207	211	216
Total Peak Day Visitor Nights			57	39	62	66	69	73	77	80
Total Average Day Visitor Nights			25	17	27	29	30	32	33	35
Total Peak Day Visitor Numbers			107	74	117	123	130	137	143	150
Total Average Day Visitor Numbers			40	28	43	46	48	51	53	56

Table 28. Maungati short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	60	5	0.6%	10	2	0.2%	24	1	0.1%
Total Dwellings	27	2	0.6%	0	0	0.0%	7	0	0.1%
Occupied Dwellings	26	2	0.8%	4	1	0.2%	9	0	0.1%
Unoccupied Dwellings	1	0	0.1%	-4	-1	-0.7%	-2	0	-0.1%
Number of Jobs	50	4	2.2%	9	1	0.7%	32	1	0.5%
Number of Businesses	12	1	0.5%	8	1	0.7%	30	1	0.5%
Total Peak Day Visitor Nights				4	1	1.2%	23	1	1.1%
Total Average Day Visitor Nights				2	0	1.2%	10	0	1.1%
Total Peak Day Visitor Numbers				8	1	1.2%	41	1	1.0%
Total Average Day Visitor Numbers				3	0	1.2%	15	0	1.0%

13.2 Employment Projections

Similarly, to other areas in the district the number of jobs in Maungati is variable depending on the activities in the area. These have been averaged in the future projections.

13.2.1 KEY INDUSTRIES AND TRENDS

Table 29. Top five industries in Maungati.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Agriculture, Forestry and Fishing	190	94%	-2%	4%
Rental, Hiring and Real Estate Services	6	3%	33%	15%
Construction	3	2%	-17%	5%
Professional, Scientific and Technical Services	0	0%	-	-
Arts and Recreation Services	0	0%	-	-

13.2.2 OUTPUT

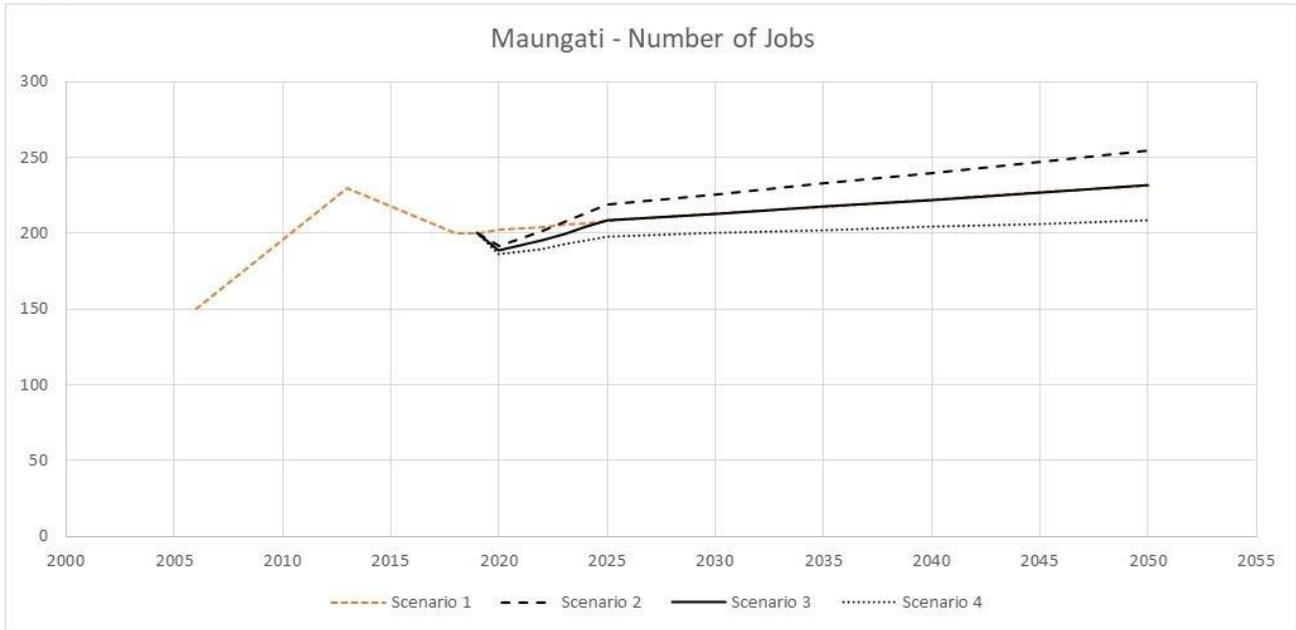


Figure 54. Number of jobs in Maungati.

13.3 Population Projections

13.3.1 KEY MIGRATION DRIVERS

- A small number of people move to the area for employment.
- There is a small amount of migration of people who commute away for work.
- Young people leave the area for other opportunities such as education and employment.
- Elderly tend to move away from the area in their later years, likely in search of better healthcare.

These trends are reflected below through the population by age and net migration figures.

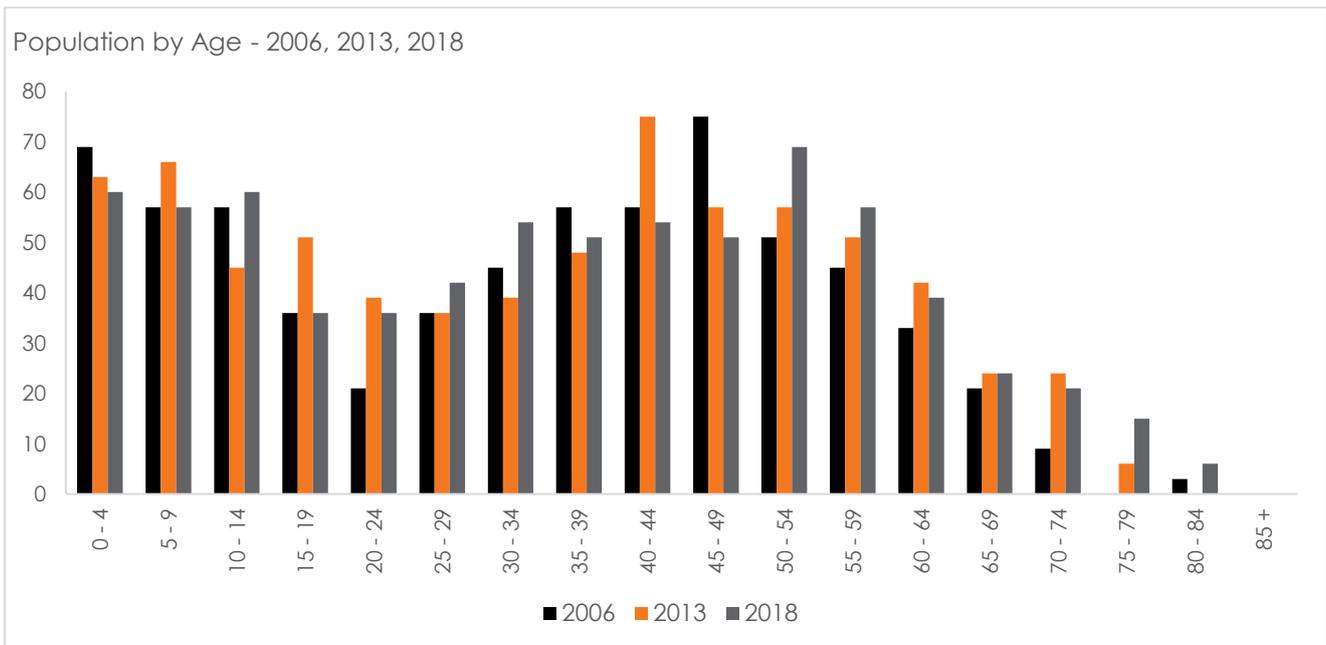


Figure 55. Maungati population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

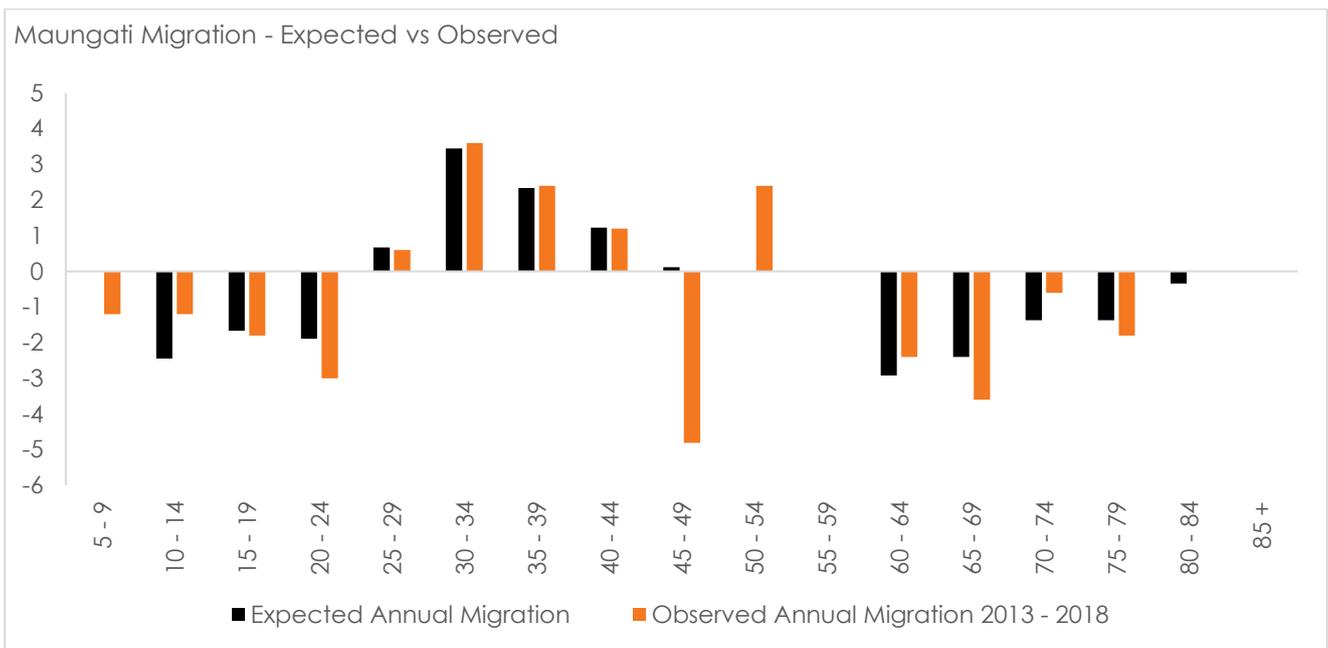


Figure 56. Net migration check

13.3.2 COVID-19

It is unlikely that the population of Maungati will be significantly impacted due to COVID-19.

13.3.3 OUTPUT

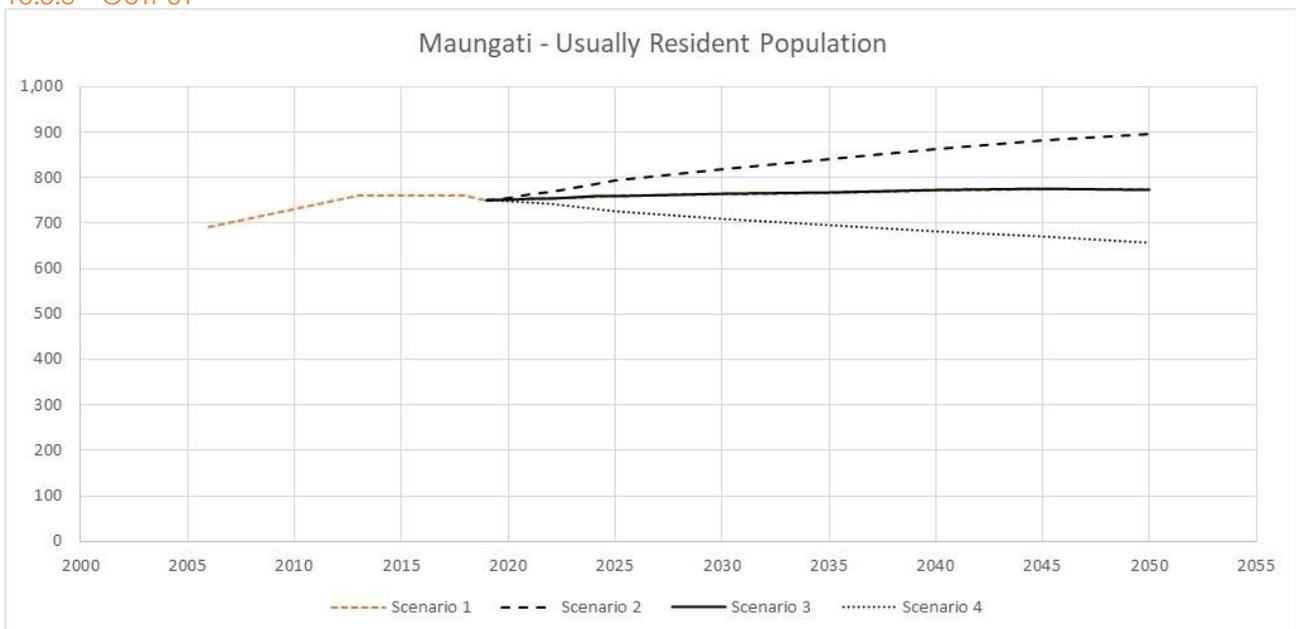


Figure 57. Maungati's usually resident population

13.4 Dwelling Projections

13.4.1 ASSUMPTIONS

It has been assumed that dwellings will not be demolished if there is negative population growth. Therefore, there is an increasing number of unoccupied dwellings in Scenario 4.

13.4.2 OUTPUT

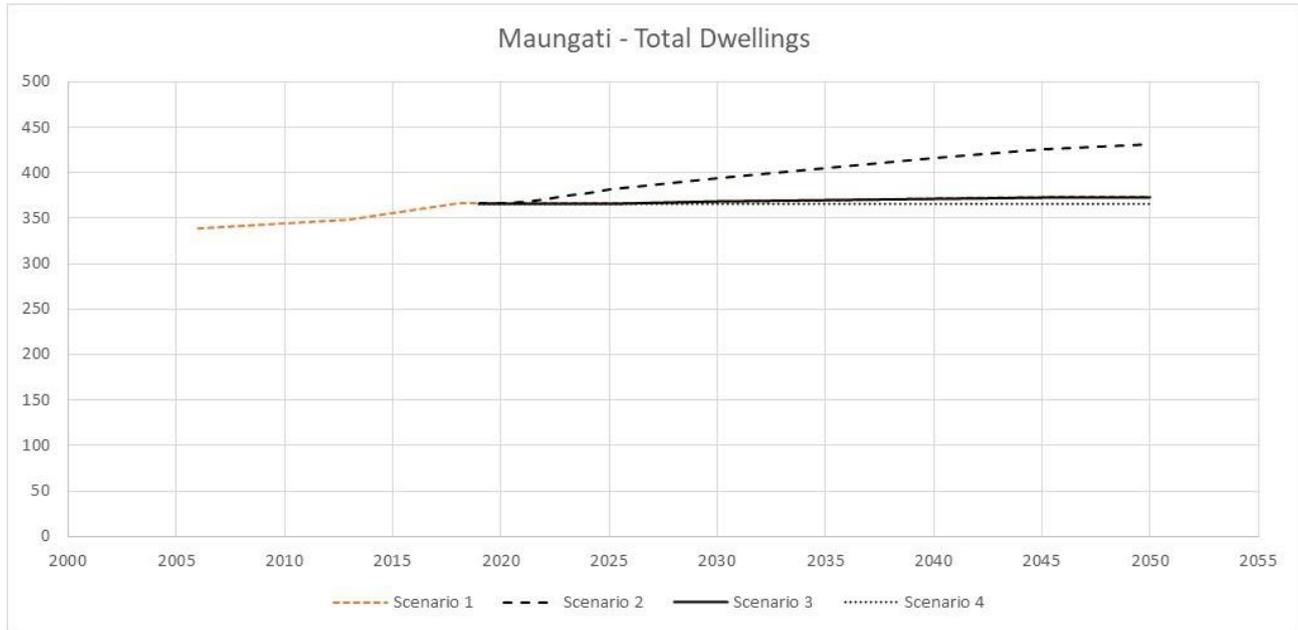


Figure 58. Total dwellings.

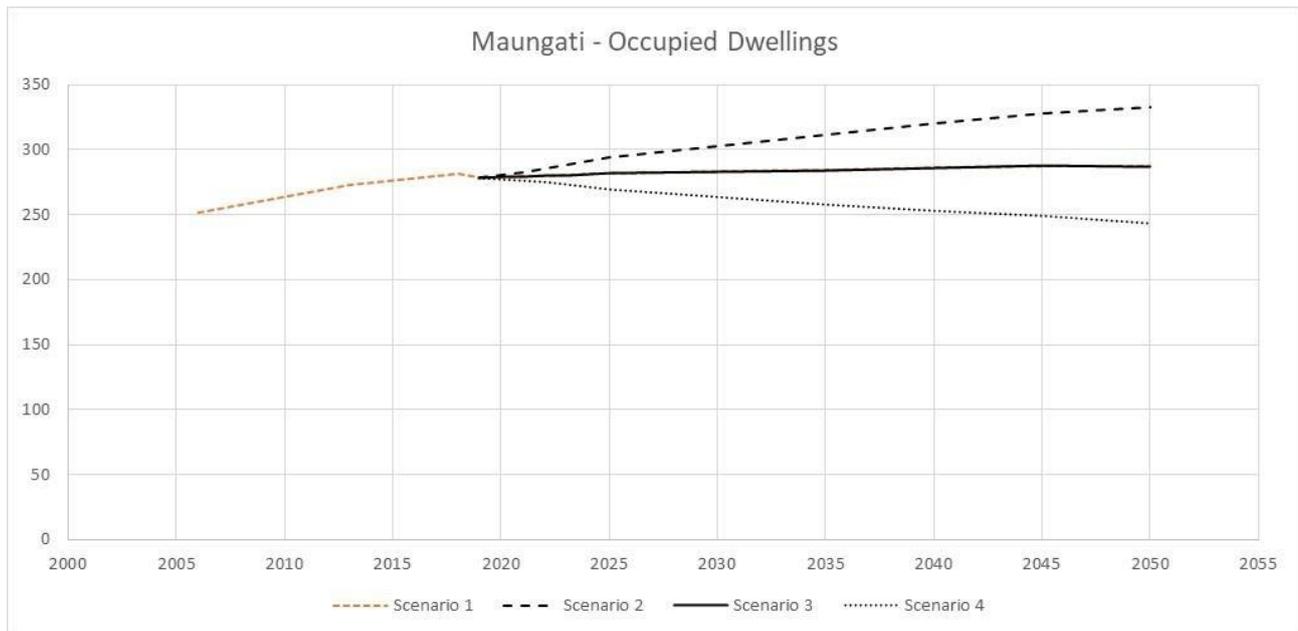


Figure 59. Occupied dwellings.

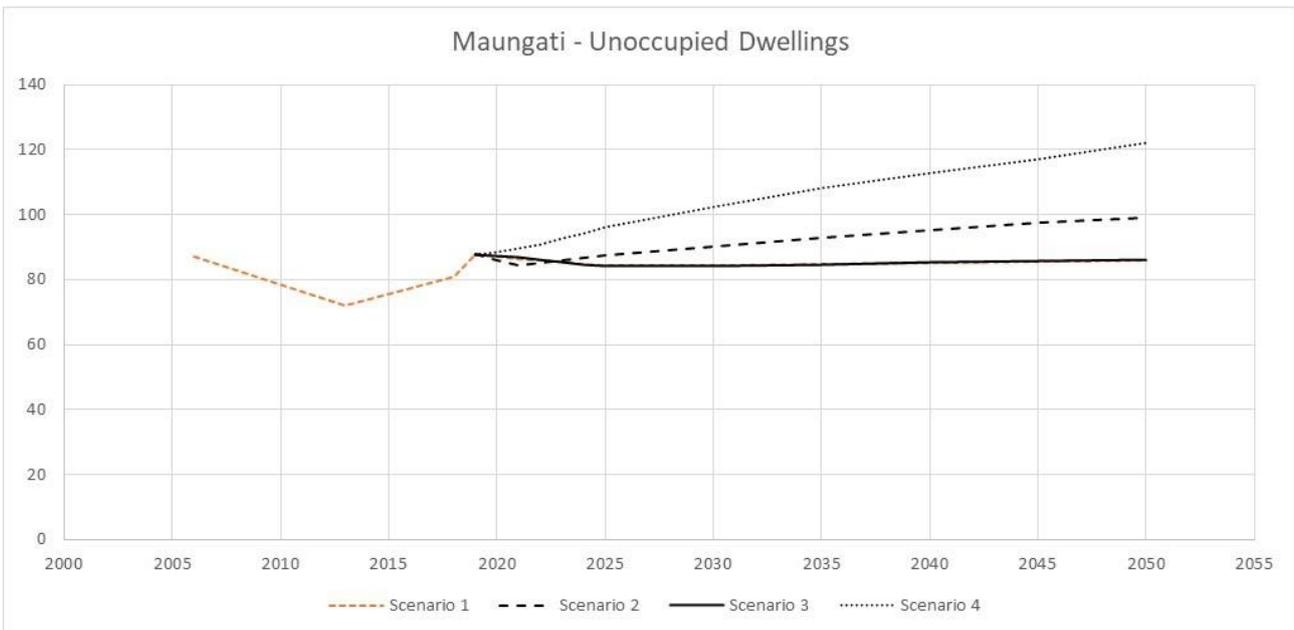


Figure 60. Unoccupied dwellings.

13.5 Visitor Projections

13.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made for the analysis of visitor projections in Maungati. These assumptions are available in Section 7.

13.5.2 OUTPUT

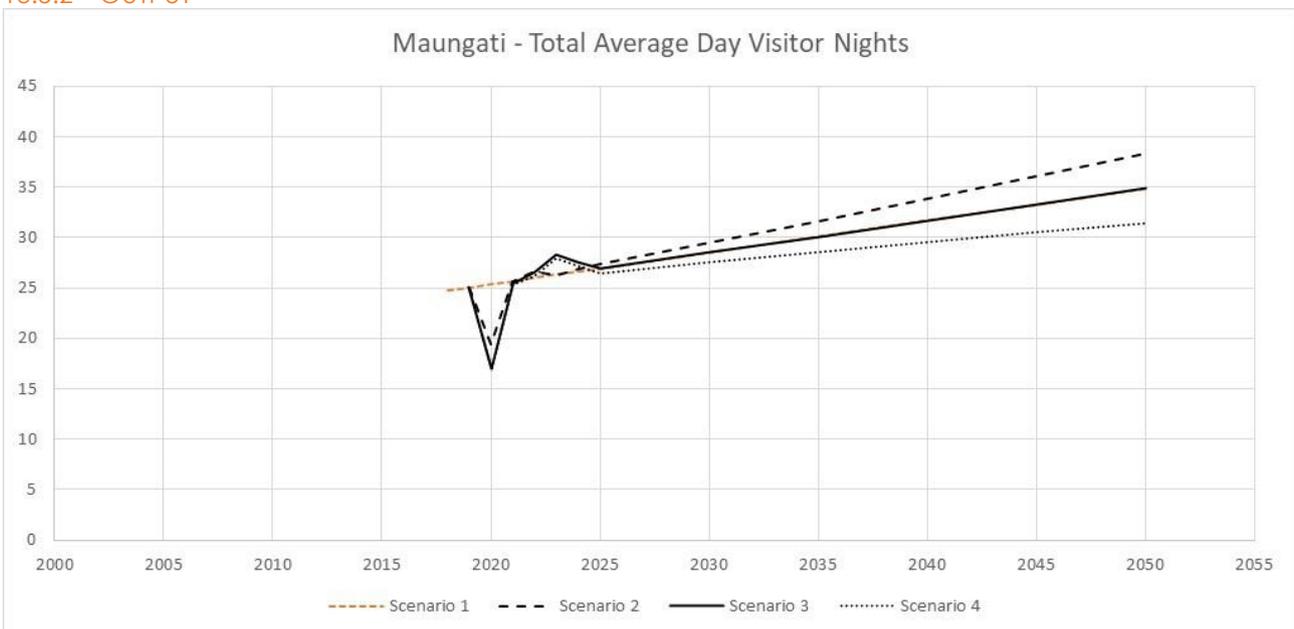


Figure 61. Maungati's average day visitor nights.

14 Appendix E: Morven-Glenavy-Ikawai

There has been significant employment growth in Morven-Glenavy-Ikawai over the last twenty years. A large amount of this growth can be attributed to the development of the Oceania Dairy plant in Morven.



Figure 62. SA2 boundaries of Waimate District.

14.1 Morven-Glenavy-Ikawai Growth Projections Summary

Table 30. Morven-Glenavy-Ikawai growth projections

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	970	1180	1130	1139	1138	1133	1116	1084	1046	1010
Total Dwellings	483	582	609	614	614	614	614	614	614	614
Occupied Dwellings	360	435	447	451	450	448	441	429	414	399
Unoccupied Dwellings	120	141	159	164	164	166	173	186	201	215
Number of Jobs	360	490	710	751	917	999	1087	1183	1285	1396
Number of Businesses	222	231	240	237	289	315	343	373	406	440
Total Peak Day Visitor Nights			105	71	114	121	128	135	142	148
Total Average Day Visitor Nights			58	39	63	67	70	74	78	82
Total Peak Day Visitor Numbers			178	122	194	205	216	228	239	250
Total Average Day Visitor Numbers			87	60	95	101	106	112	117	123

Table 31. Morven-Glenavy-Ikawai short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	170	13	1.2%	-2	0	0.0%	-130	-4	-0.4%
Total Dwellings	131	10	1.9%	0	0	0.0%	0	0	0.0%
Occupied Dwellings	91	7	1.7%	-1	0	0.0%	-51	-2	-0.4%
Unoccupied Dwellings	43	3	2.4%	1	0	0.1%	51	2	0.9%
Number of Jobs	410	32	6.0%	147	25	3.0%	626	20	1.9%
Number of Businesses	21	2	0.7%	46	8	3.0%	197	6	1.9%
Total Peak Day Visitor Nights				8	1	1.3%	43	1	1.1%
Total Average Day Visitor Nights				5	1	1.3%	23	1	1.1%
Total Peak Day Visitor Numbers				14	2	1.2%	70	2	1.1%
Total Average Day Visitor Numbers				7	1	1.2%	35	1	1.1%

14.2 Employment Projections

14.2.1 KEY INDUSTRIES AND TRENDS

A large amount of this growth can be attributed to the development of the Oceania Dairy plant in Morven. However, the factory buses employees from Timaru and Oamaru so does not have a substantial net effect on the population. In the coming years, the factory is likely to expand; a laboratory facility is likely to opening later in 2020 that will create new jobs. The table below details the assumptions that have been included in the model to account for future growth.

Table 32. Oceania Dairy Plant impact on employment.

Scenario	Description
Scenario 1 - BAU (Pre COVID-19)	Assume that the Oceania Dairy plant continues to employ people at a rate of 2% (from MBIE forecast for food productions) through to 2050.
Scenario 2 - High	Assume that the Oceania Dairy plant continues to employ people at a rate of 4% (twice the MBIE forecast for food productions) through to 2050.
Scenario 3 - Medium	Assume that the Oceania Dairy plant continues to employ people at a rate of 2% (from MBIE forecast for food productions) through to 2050.
Scenario 4 - Low	Assume that the Oceania Dairy plant stops expanding and ceases to employ people from now until 2050.

Table 33. Top five industries in Morven-Glenavy-Ikawai.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Agriculture, Forestry and Fishing	400	51%	4%	2%
Manufacturing	260	33%	38%	-
Transport, Postal and Warehousing	60	8%	15%	11%

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Education and Training	21	3%	-2%	4%
Other Services	12	2%	-12%	-

14.2.2 OUTPUT

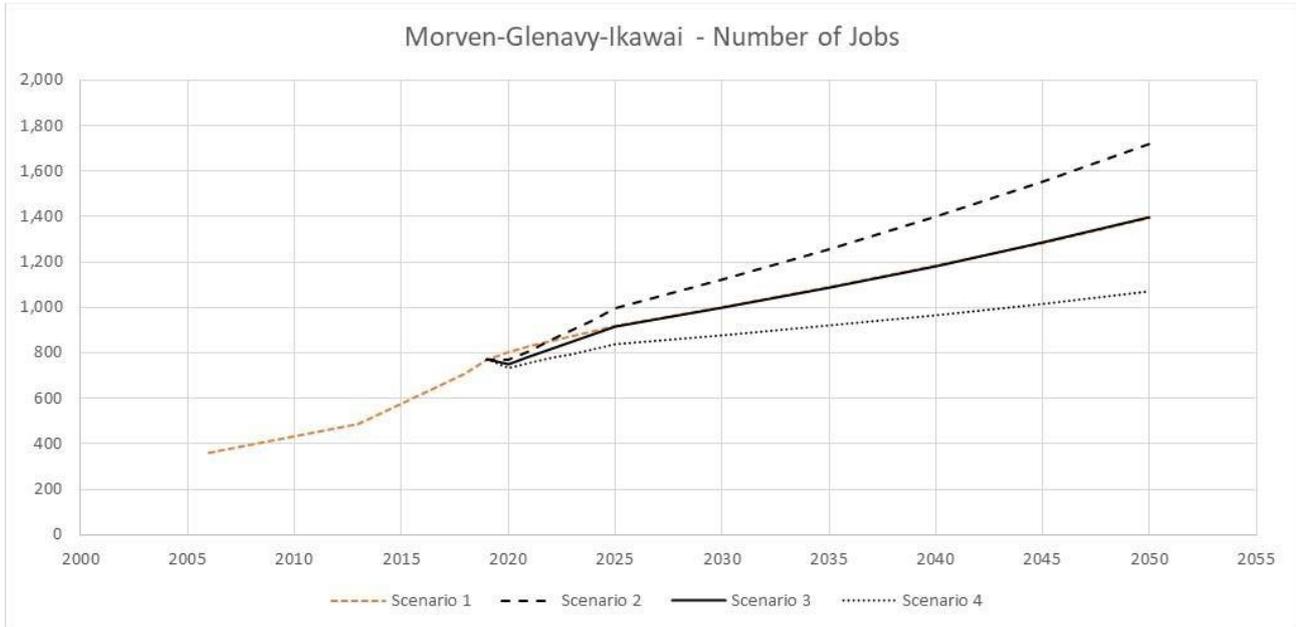


Figure 63. Number of jobs in Morven-Glenavy-Ikawai.

14.3 Population Projections

14.3.1 KEY MIGRATION DRIVERS

There is minimal migration into Morven-Glenavy-Ikawai despite the employment growth.

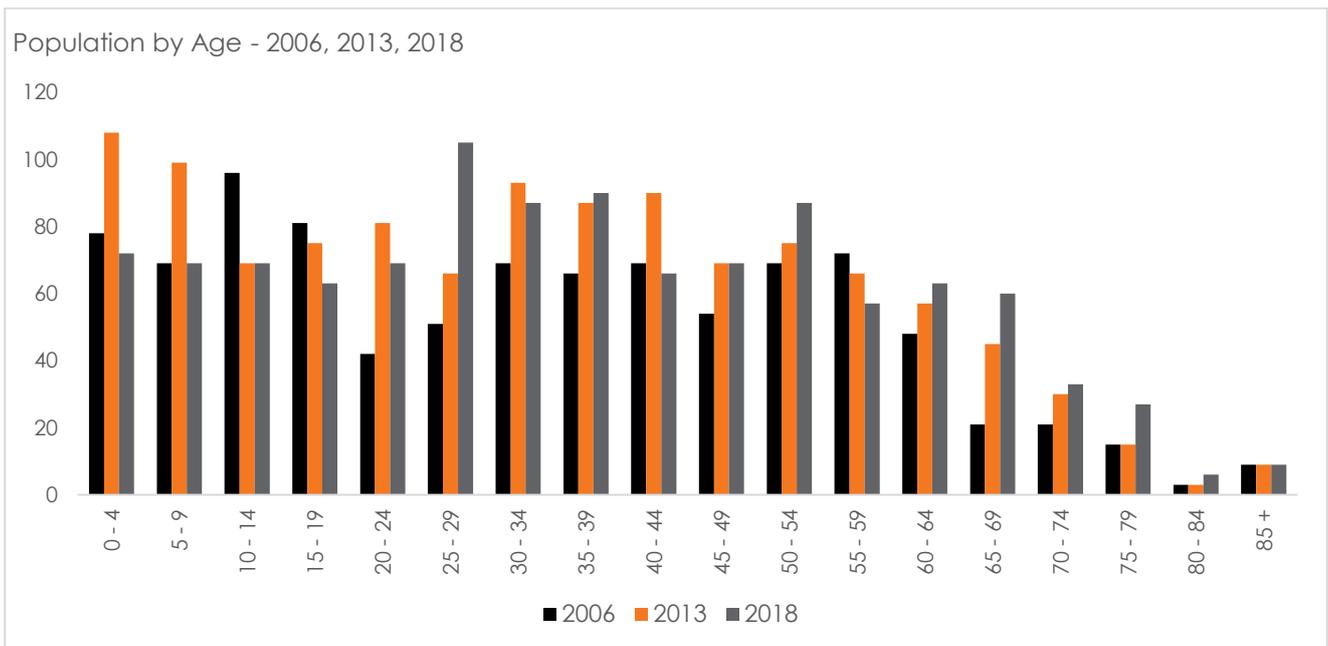


Figure 64. Morven-Glenavy-Ikawai. population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

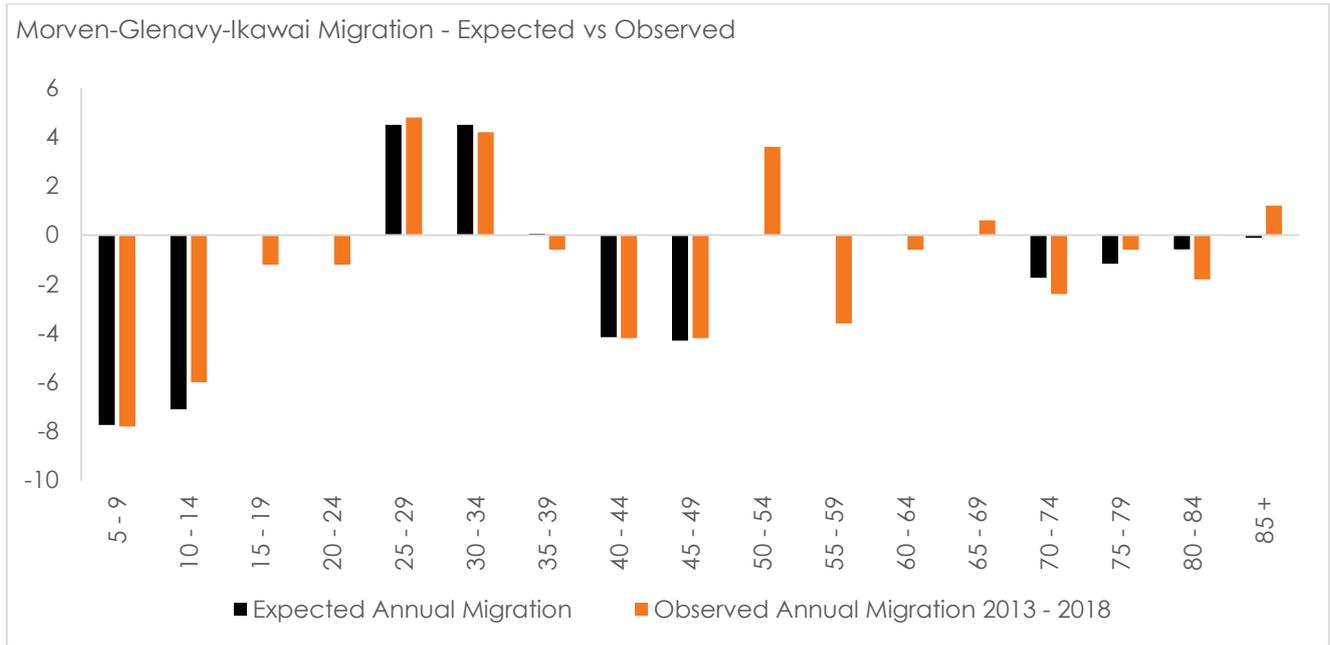


Figure 65. Net migration check.

14.3.2 COVID-19

It is unlikely that the population of Morven-Glenavy-Ikawai. will be significantly impacted due to COVID-19.

14.3.3 OUTPUT

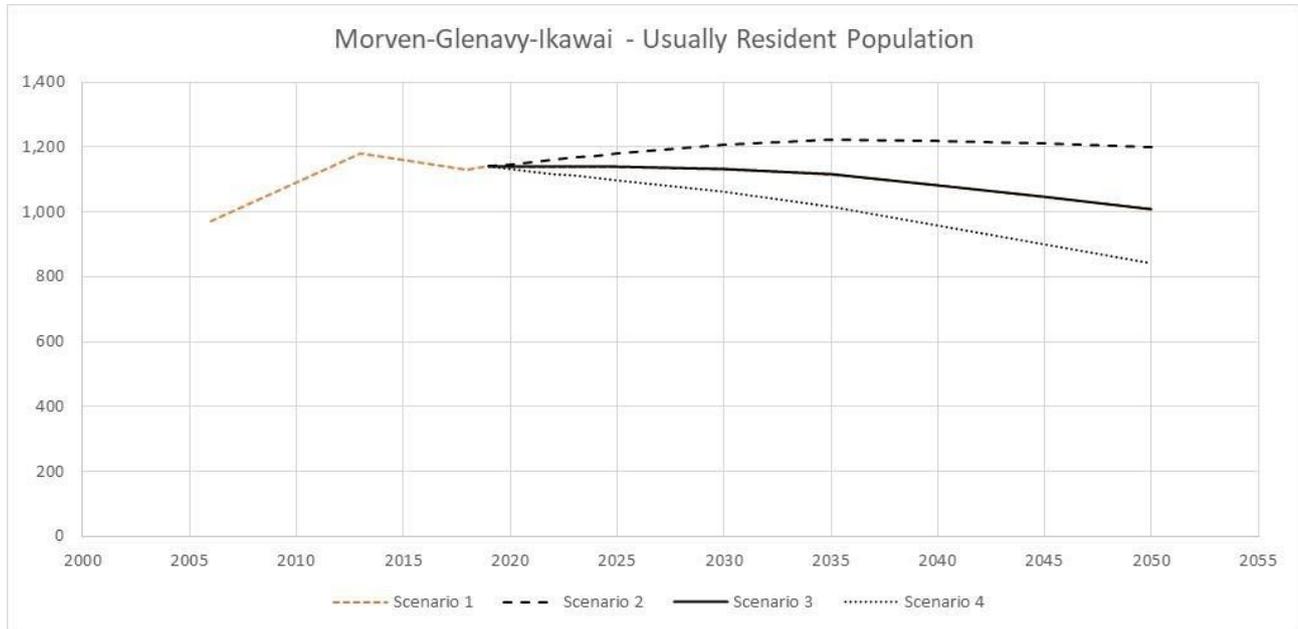


Figure 66. Morven-Glenavy-Ikawai. 's usually resident population.

14.4 Dwelling Projections

14.4.1 ASSUMPTIONS

It has been assumed that dwellings will not be demolished if there is negative population growth. These houses become unoccupied dwellings.

14.4.2 OUTPUT

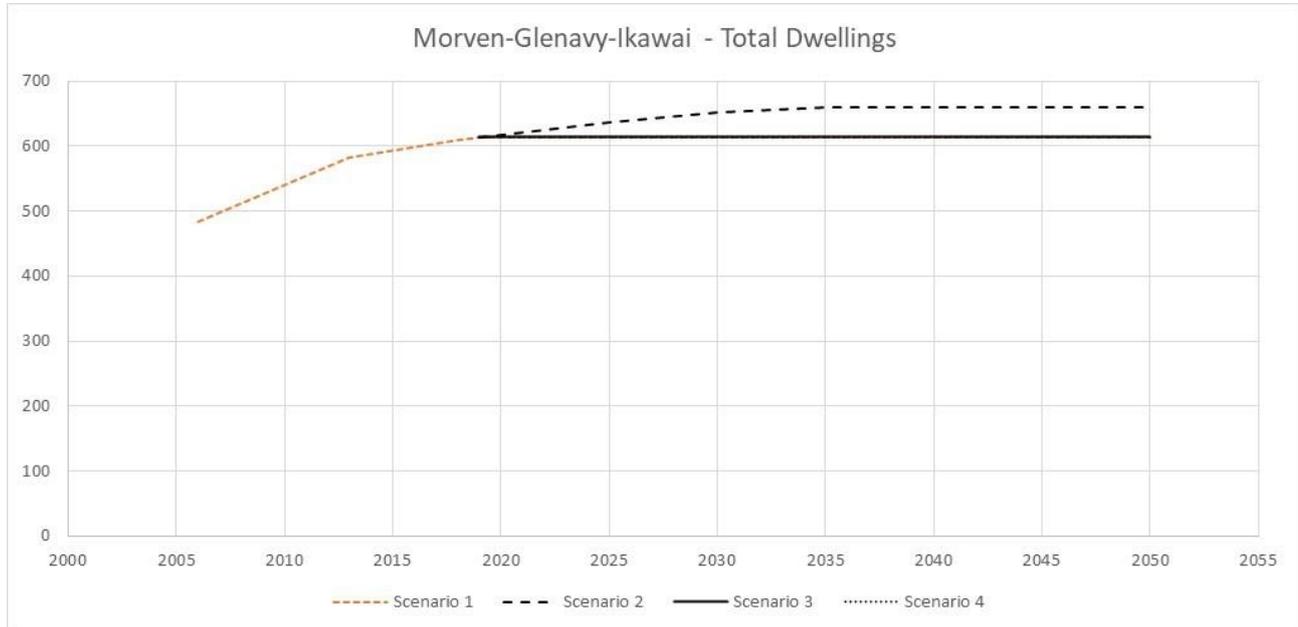


Figure 67. Total dwellings.

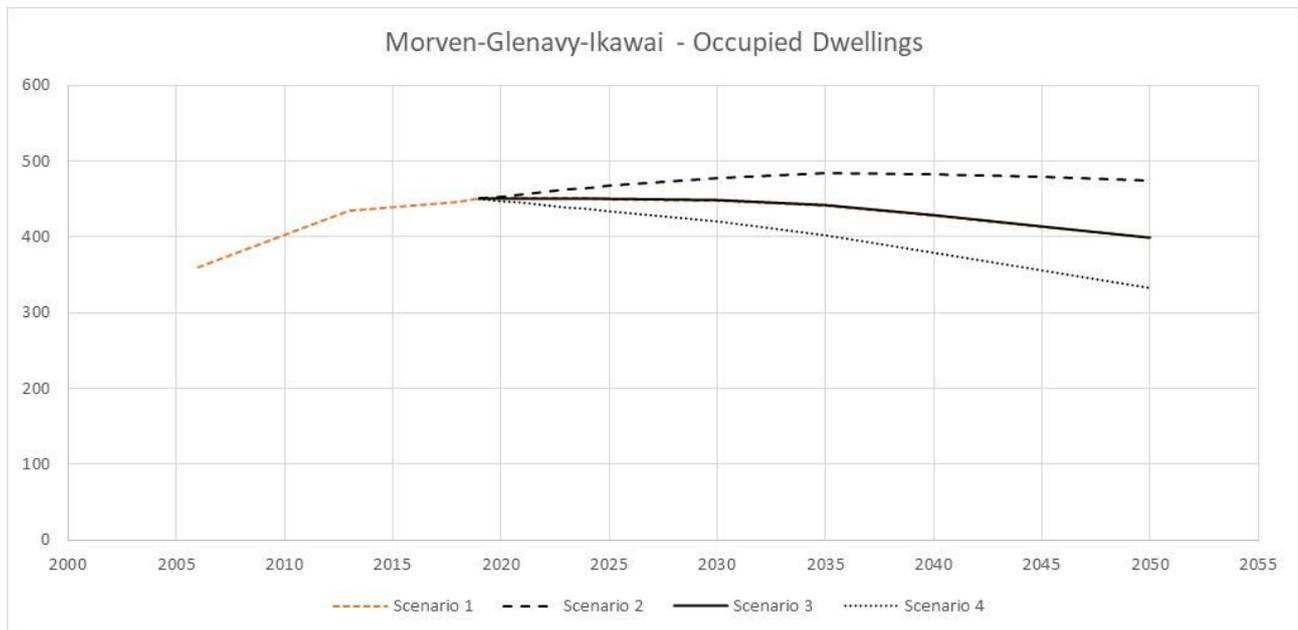


Figure 68. Occupied dwellings.

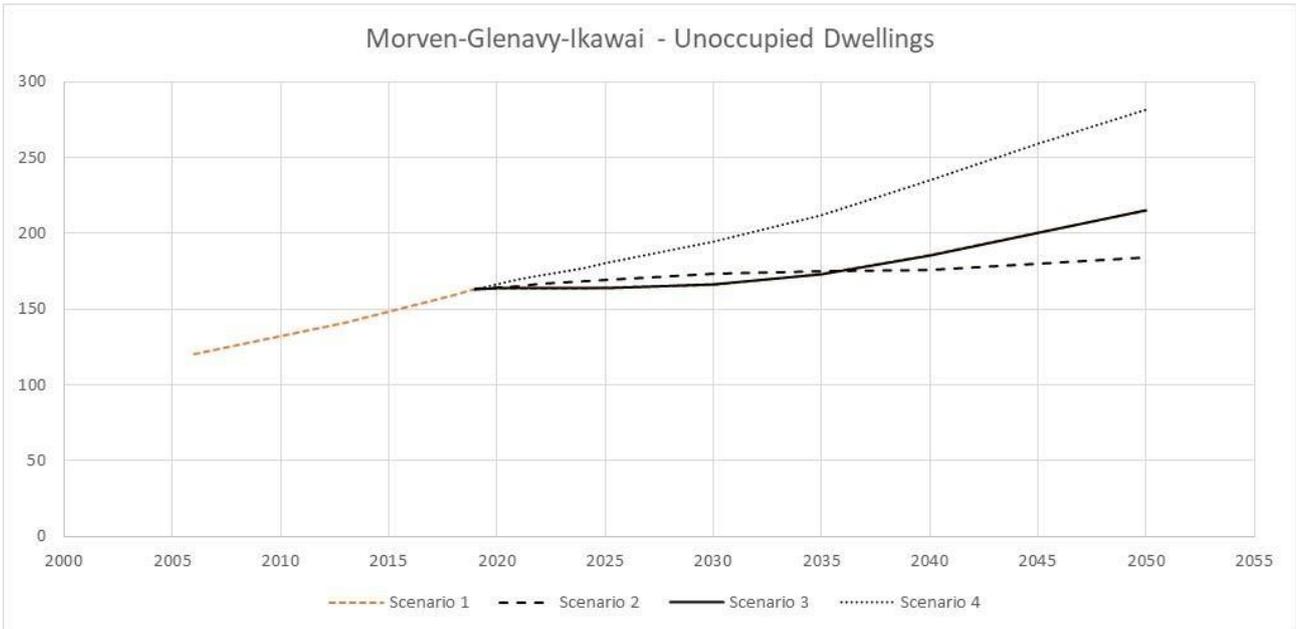


Figure 69. Unoccupied dwellings.

14.5 Visitor Projections

14.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made to the analysis of the visitor projections for Morven-Glenavy-Ikawai. These assumptions are available in Section 7.

14.5.2 OUTPUT

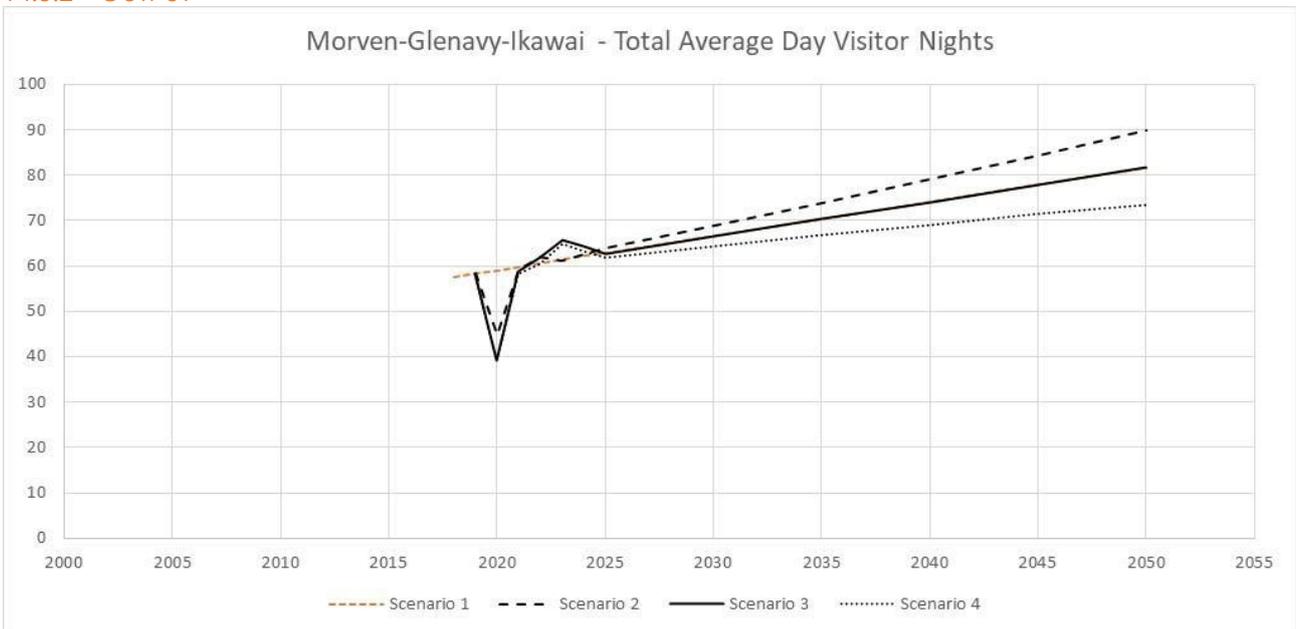


Figure 70. Morven-Glenavy-Ikawai's average day visitor nights.

14.6 Glenavy

Glenavy is a small township to the north of the Waitaki River in the south of the Waimate District. The population of the town is relatively steady.

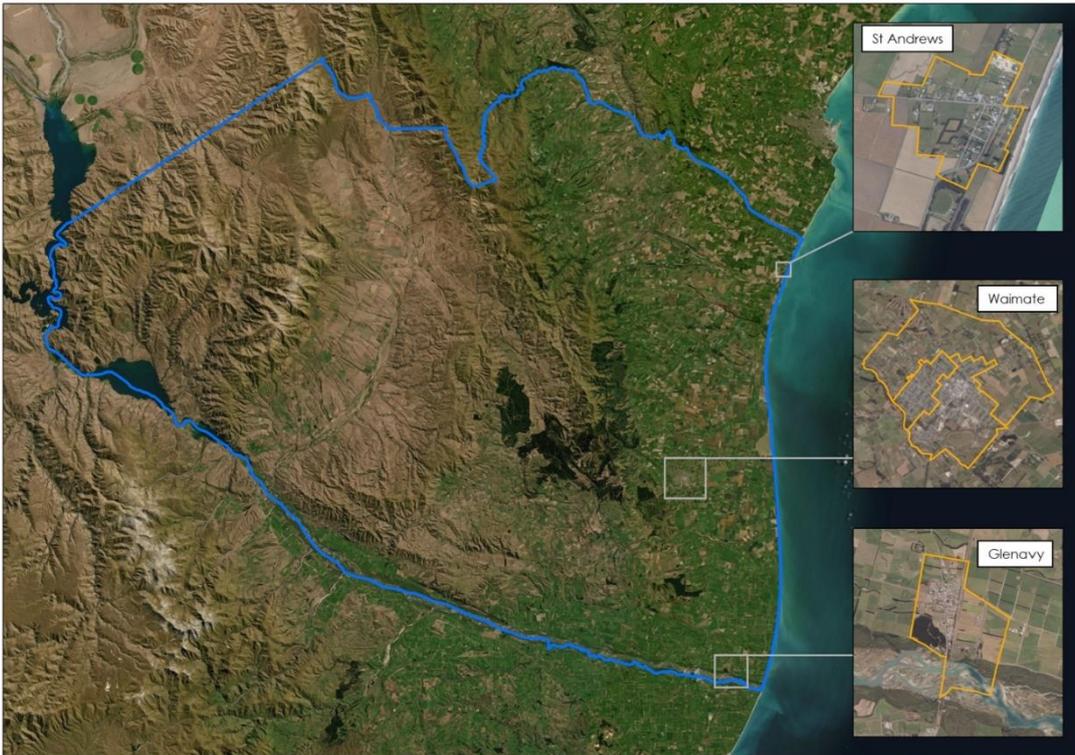


Figure 71. Township boundaries in the Waimate District.

Table 34. Glenavy detailed growth projections.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	129	201	195	197	196	196	193	187	181	174
Total Dwellings	84	126	138	139	139	139	139	139	139	139
Occupied Dwellings	60	102	108	109	109	108	107	104	100	97
Unoccupied Dwellings	24	24	30	30	30	31	33	36	39	43

Table 35. Glenavy short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	68	5	3.3%	0	0	0.0%	-22	-1	-0.4%
Occupied Dwellings	49	4	4.7%	0	0	0.0%	-12	0	-0.4%
Unoccupied Dwellings	6	0	1.8%	0	0	0.1%	12	0	1.1%

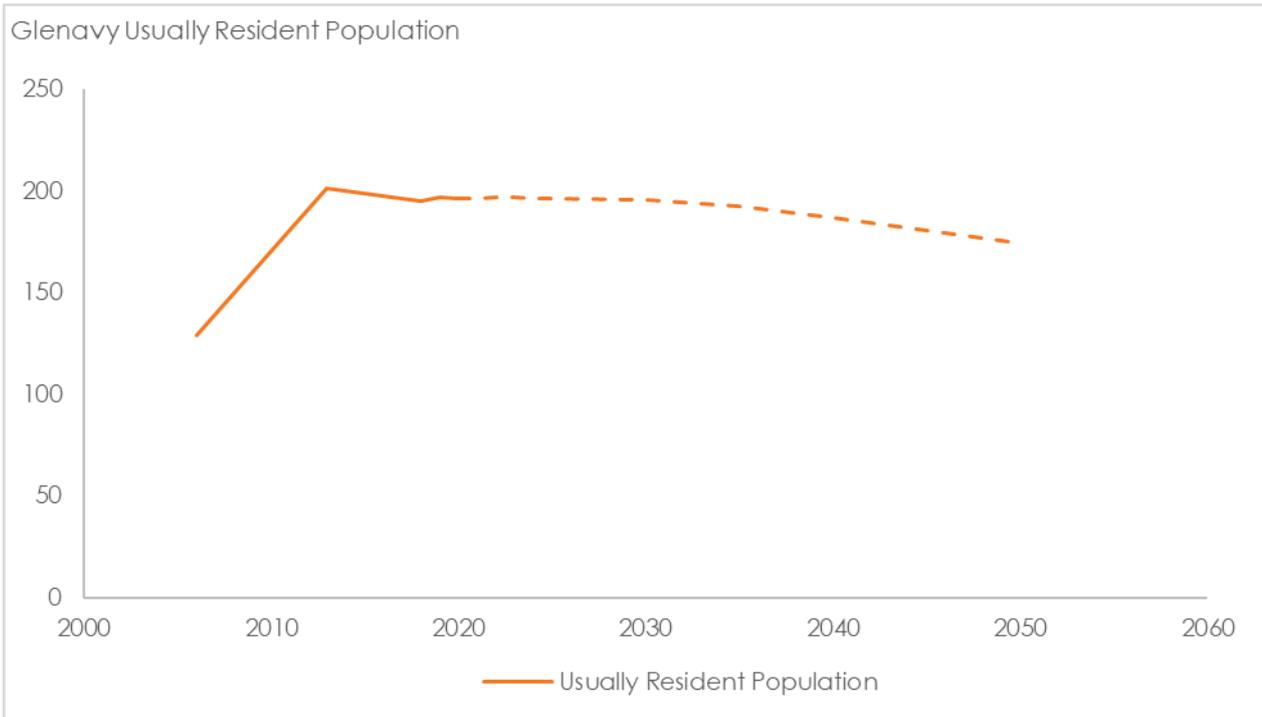


Figure 72. Glenavy usually resident population.

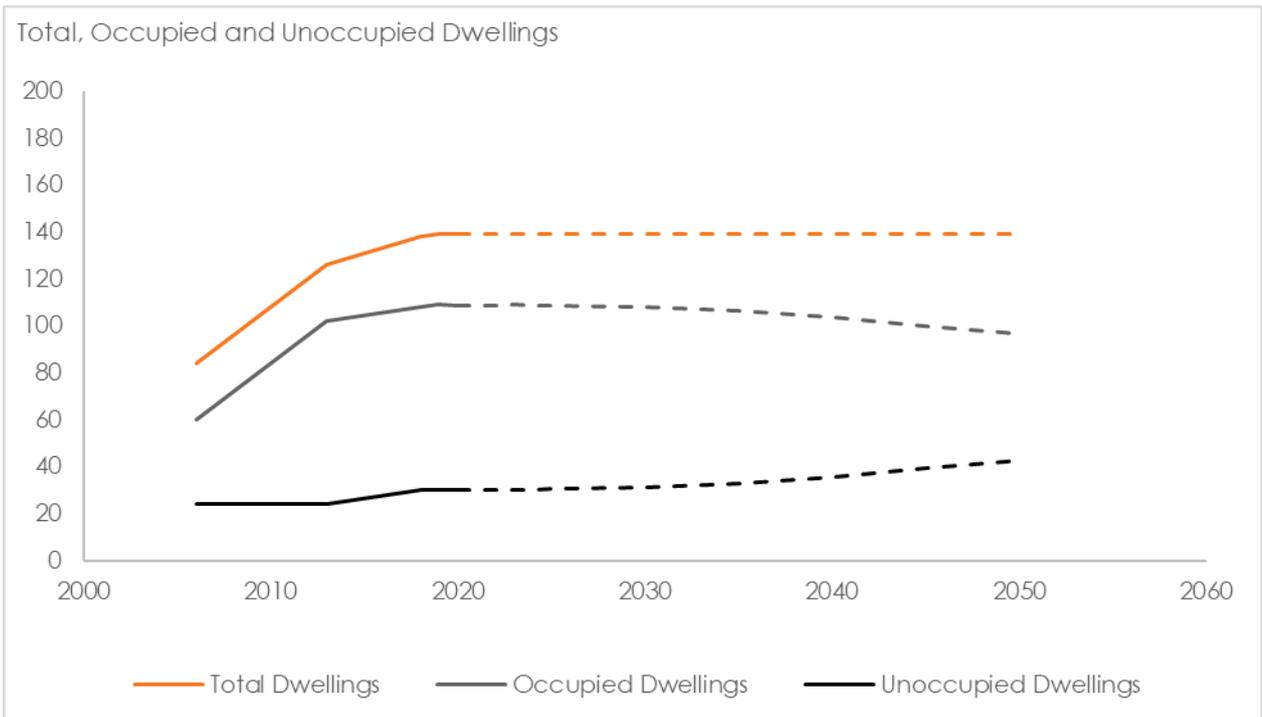


Figure 73. Glenavy total, occupied and unoccupied dwellings.

15 Appendix F: Waimate Township

Waimate township comprises three SA2 areas – Waimate East, Waimate West and Waimate North. For the purposes of projecting growth these have been treated as one area. This is due to the inextricable interactions between each SA2 area.



Figure 74. SA2 boundaries of Waimate District.

15.1 Waimate Township Growth Projections Summary

Table 36. Waimate township detailed growth projections summary.

	2006	2013	2018	2020	2025	2030	2035	2040	2045	2050
Usually Resident Population	3370	3390	3570	3576	3716	3804	3919	4048	4186	4302
Total Dwellings	1653	1704	1779	1784	1852	1896	1953	2017	2086	2144
Occupied Dwellings	1503	1557	1620	1623	1686	1726	1778	1837	1899	1952
Unoccupied Dwellings	144	144	156	161	166	169	175	180	186	192
Number of Jobs	945	980	975	893	999	1005	1012	1018	1024	1031
Number of Businesses	276	267	279	264	295	297	299	301	302	304
Total Peak Day Visitor Nights			158	108	172	182	192	203	213	223
Total Average Day Visitor Nights			31	21	34	36	38	40	42	44
Total Peak Day Visitor Numbers			422	292	459	485	511	538	564	590
Total Average Day Visitor Numbers			39	27	43	45	48	50	53	55

Table 37. Waimate township short- and long-term forecast.

	Historic Growth (2006 - 2019)			Short Term Forecast (2019 - 2025)			Long Term Forecast (2019 - 2050)		
	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate	Total Growth	Av. Annual Growth	Av. Annual Growth Rate
Usually Resident Population	210	16	0.5%	136	23	0.6%	722	23	0.6%
Total Dwellings	131	10	0.6%	68	11	0.6%	360	12	0.6%
Occupied Dwellings	122	9	0.6%	62	10	0.6%	328	11	0.6%
Unoccupied Dwellings	15	1	0.8%	6	1	0.6%	32	1	0.6%
Number of Jobs	20	2	0.2%	34	6	0.6%	66	2	0.2%
Number of Businesses	9	1	0.2%	10	2	0.6%	19	1	0.2%
Total Peak Day Visitor Nights				12	2	1.3%	64	2	1.1%
Total Average Day Visitor Nights				2	0	1.3%	12	0	1.1%
Total Peak Day Visitor Numbers				32	5	1.2%	163	5	1.0%
Total Average Day Visitor Numbers				3	0	1.2%	15	0	1.0%

15.2 Employment Projections

15.2.1 KEY INDUSTRIES AND TRENDS

Traditionally, Waimate has been servicing the Waimate District's needs for generations providing secondary schooling, medical care, retail and the council's offices. Thus, Waimate small has a balance of industries.

In recent years there has been a significant amount of private investment into Waimate town centre. This is predicted to continue through the next 10 years. It has been assumed that in Scenario 3 (medium) the investment will create 10 jobs per year until 2025 and in Scenario 2 (high) 20 jobs per year until 2025. Additional migration to Waimate will fill these jobs.

Table 38. Top five industries in Waimate.

Industry	Number of Employees in 2019	% of workforce in 2019	Average Annual Growth Rate - last 3 years	Average Annual Growth Rate - last 10 years
Retail Trade	142	15%	0%	3%
Health Care and Social Assistance	140	15%	0%	2%
Construction	136	14%	-3%	3%
Education and Training	109	11%	-1%	1%
Agriculture, Forestry and Fishing	51	5%	-9%	4%

15.2.2 OUTPUT

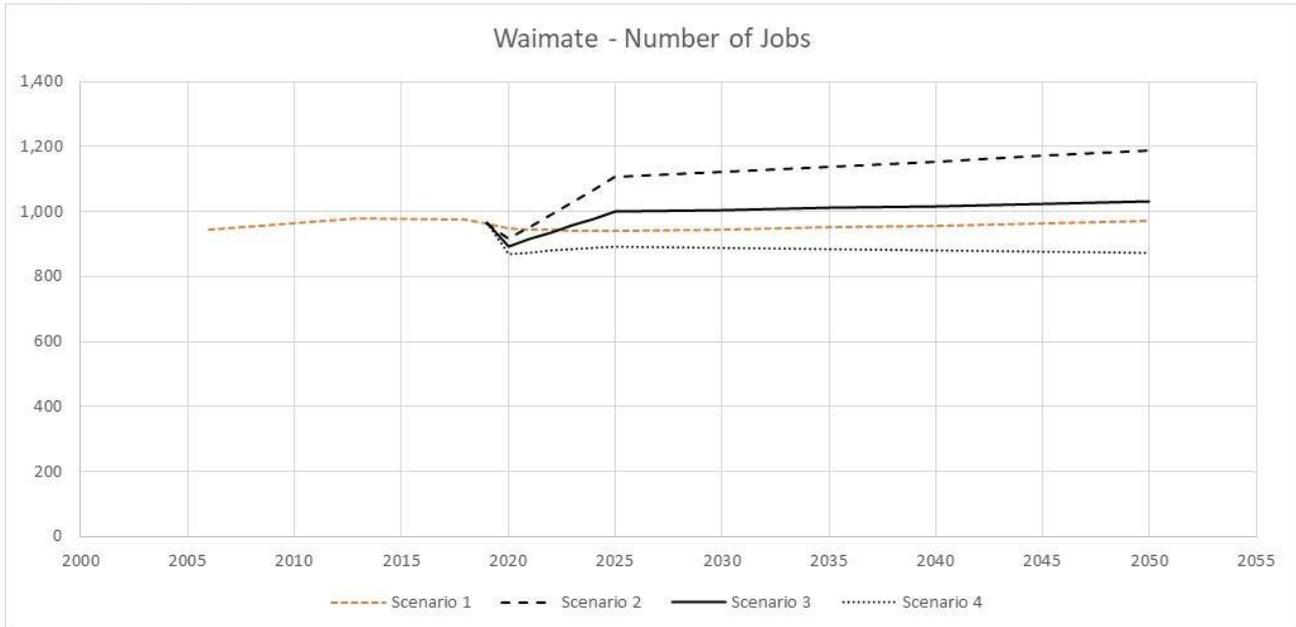


Figure 75. Number of jobs in Waimate.

15.3 Population Projections

15.3.1 KEY MIGRATION DRIVERS

- Migration to Waimate as housing is comparatively more affordable than Timaru.
- People late in their career move for work and lifestyle.
- Older population, who move to the area from other places in the district and might require care.

These trends are reflected below through the population by age and net migration figures.

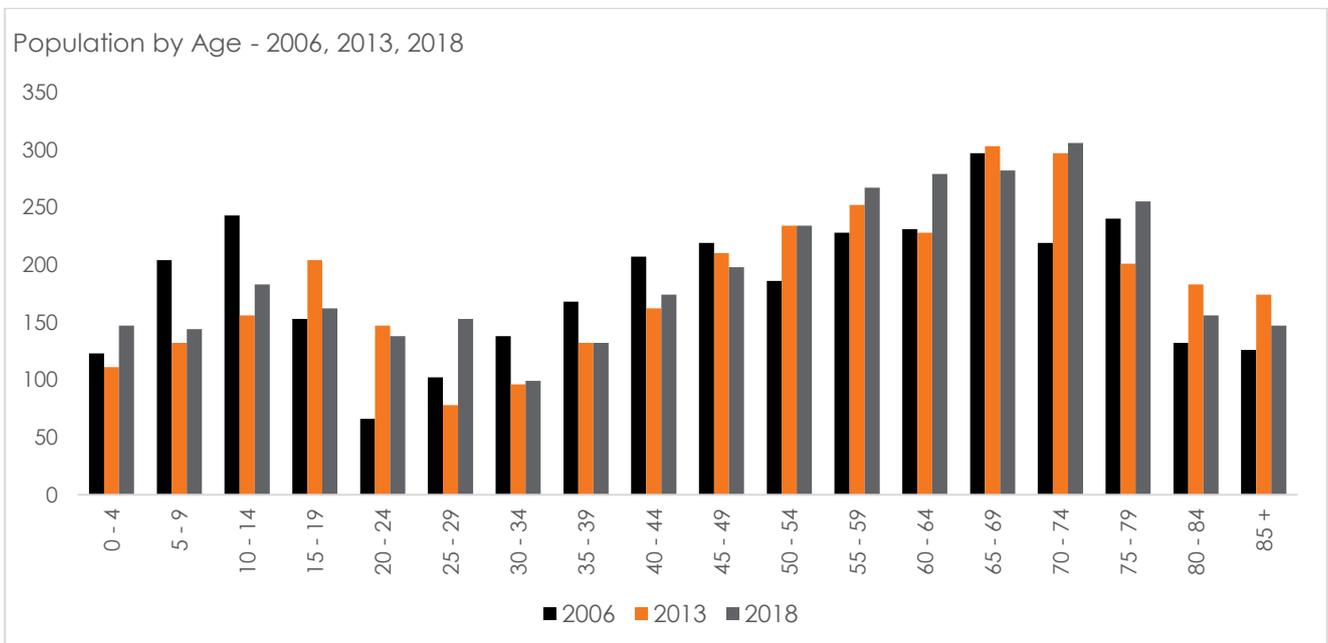


Figure 76. Waimate population by age, 2006, 2013, 2018. Source: Stats NZ.

The below graph has been produced to calibrate the migration modelling used in these projections against the observed migration that is occurring. This ensures that the modelling is accurate and reliable.

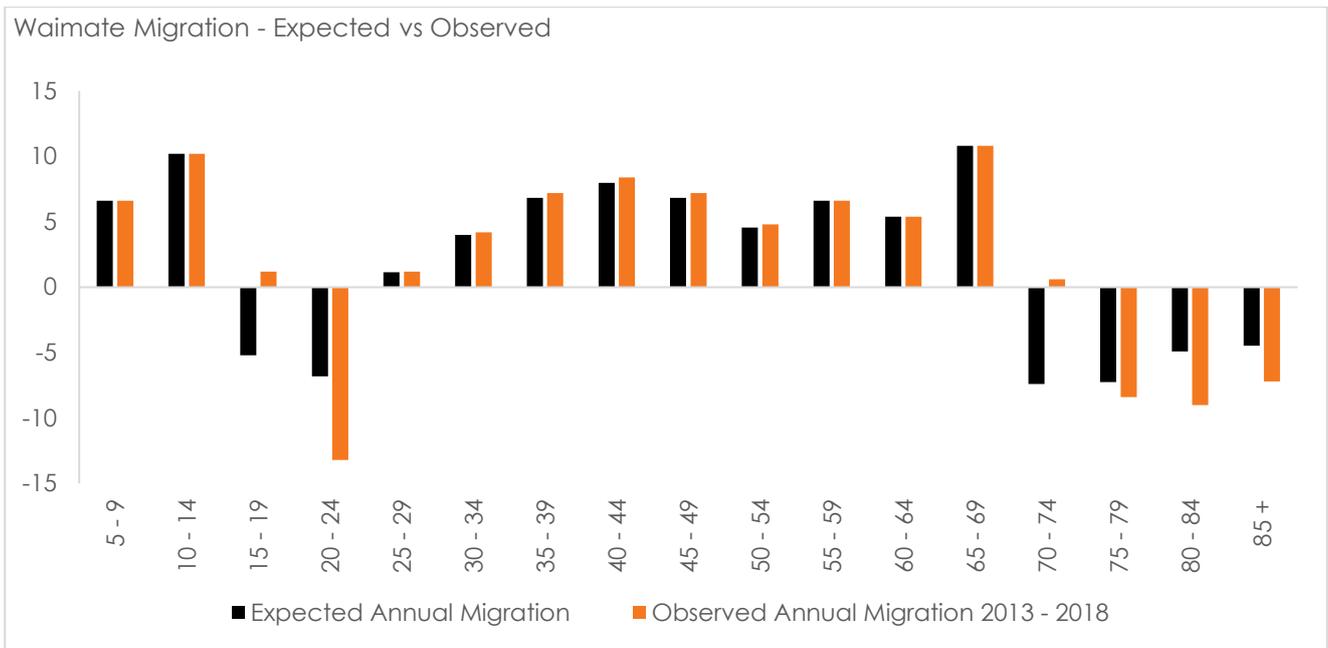


Figure 77. Net migration check

15.3.2 COVID-19

It is unlikely that the population of Waimate will be significantly impacted due to COVID-19.

15.3.3 OUTPUT

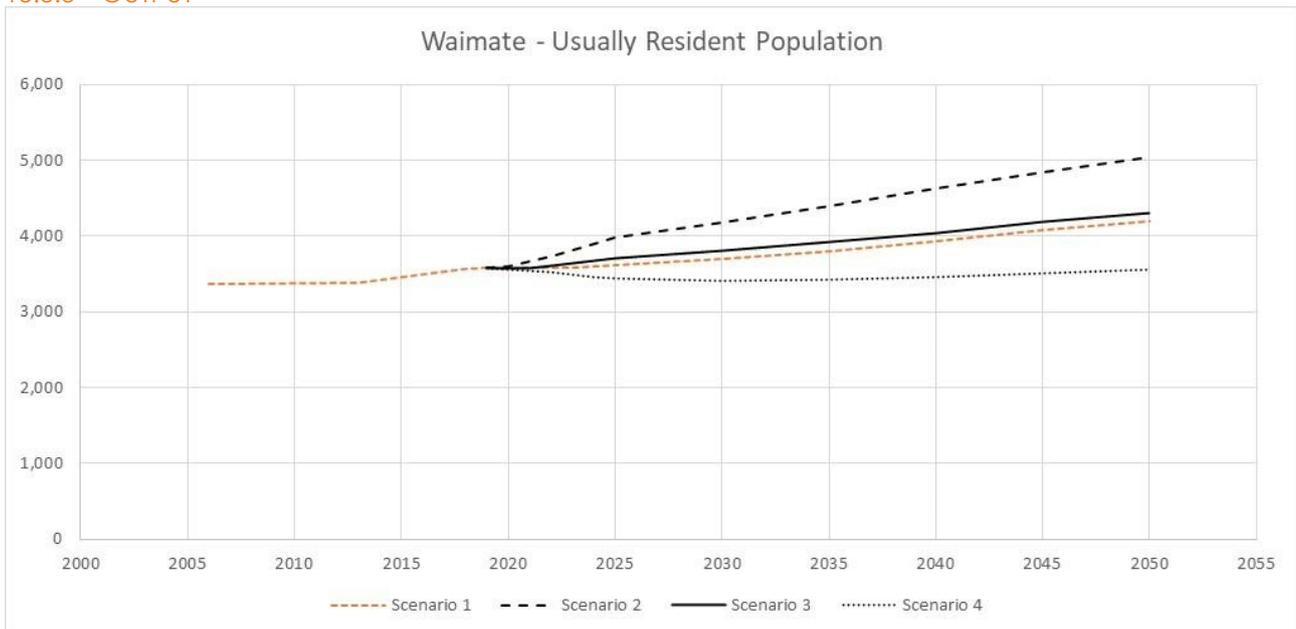


Figure 78. Waimate's usually resident population.

15.4 Dwelling Projections

15.4.1 ASSUMPTIONS

It has been assumed that dwellings will not be demolished if there is negative population growth. These houses become unoccupied dwellings.

In Scenario 4, the population decreases in 2030, this corresponds to fewer occupied dwellings and hence an increase in unoccupied dwellings.

15.4.2 OUTPUT

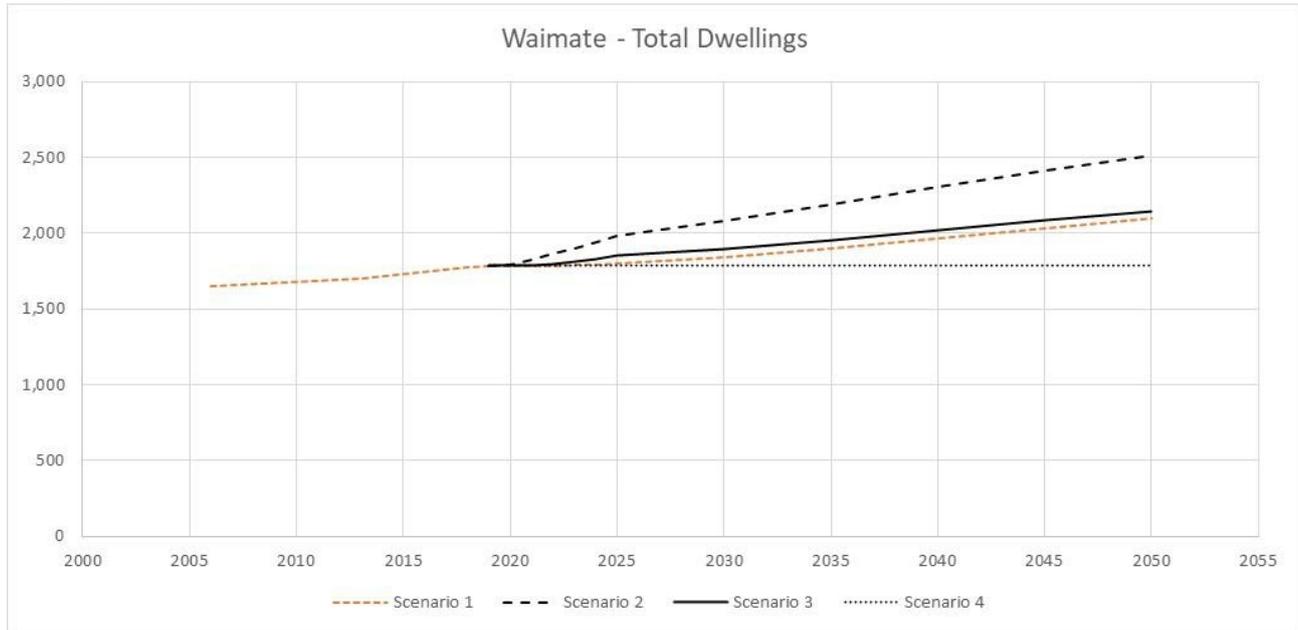


Figure 79. Total dwellings.

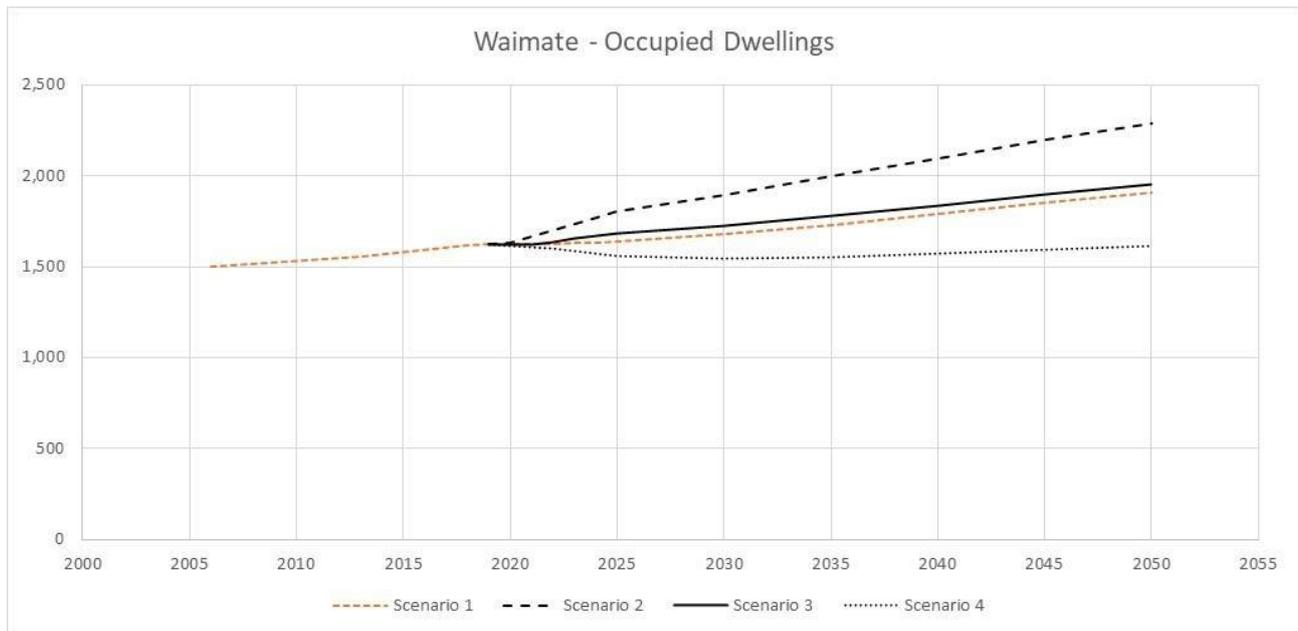


Figure 80. Occupied dwellings.

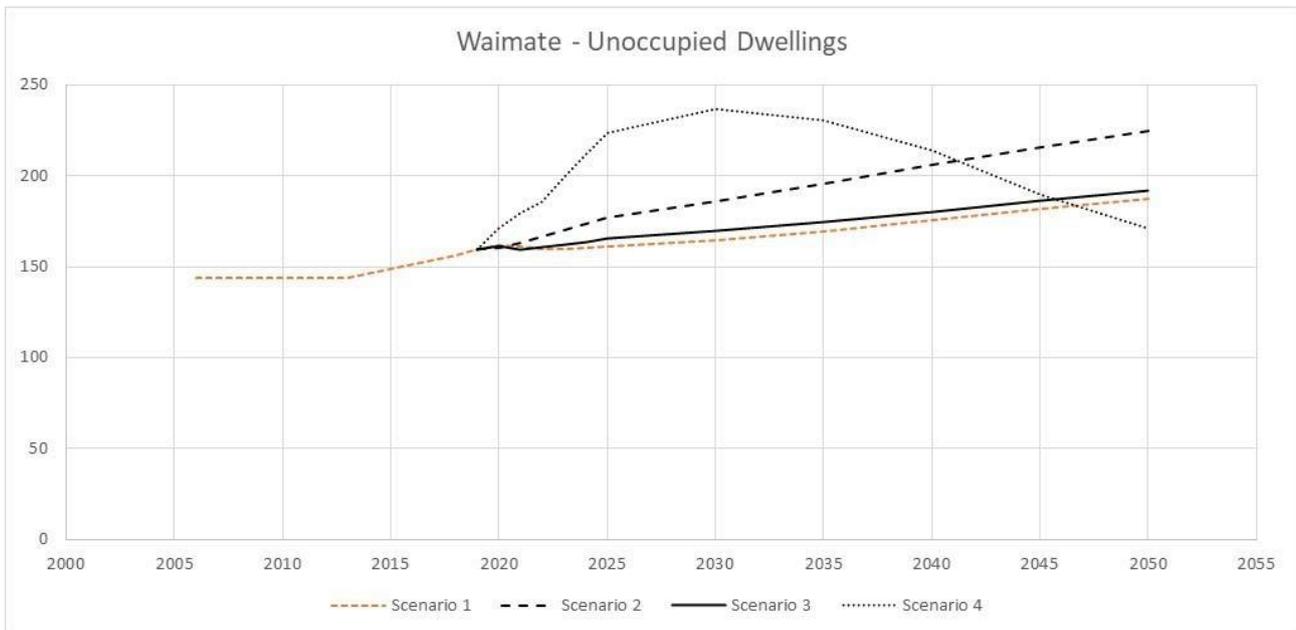


Figure 81. Unoccupied dwellings.

15.5 Visitor Projections

15.5.1 ASSUMPTIONS

No further assumptions to those outlined earlier in the report have been made to the analysis of visitor projections in Waimate. These assumptions are available in Section 7.

15.5.2 OUTPUT

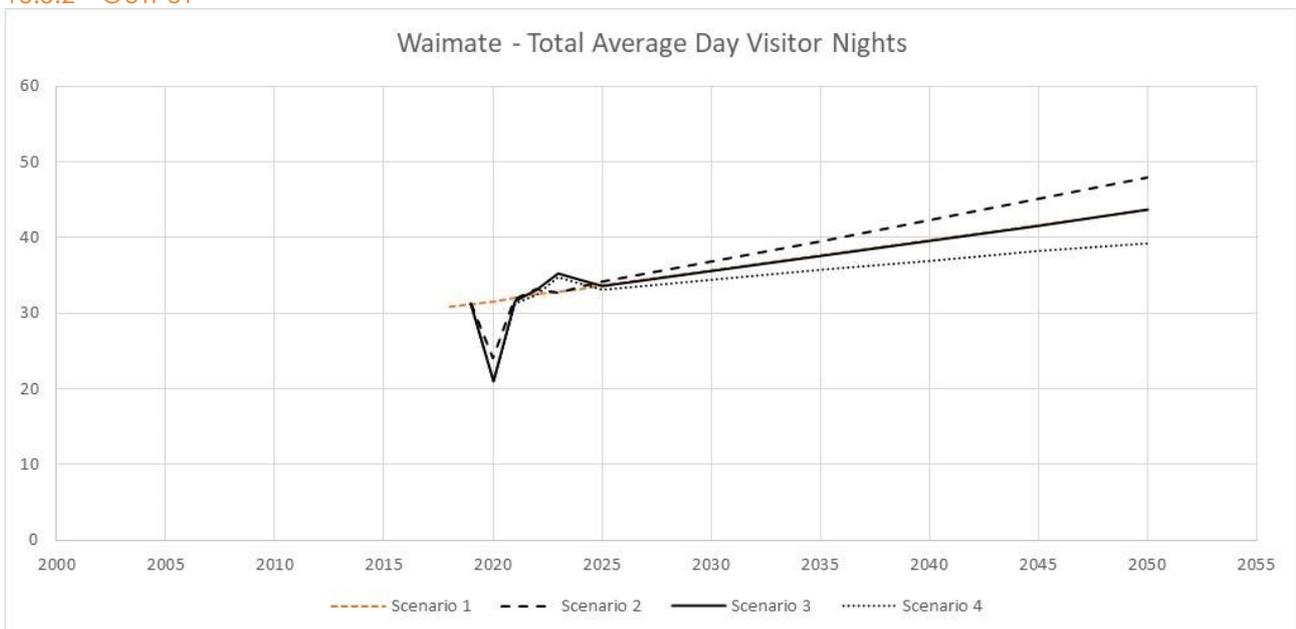


Figure 82. Waimate's average day visitor nights.

Appendix G: Growth Projections Methodology

