



Demand and Capacity Assessment &
Economic Cost-Benefit Analysis:
Proposed Residential Zone
at 45 - 130 Constable Road,
Waiuku

PREPARED FOR
C/O Gardon Trust - Ohara Plan Change



ABOUT US

OUR AREAS OF EXPERTISE

Economic Analysis

Our work aims to bridge the gap between land-use planning and urban economics. Our focus is on the interaction between land markets, land-use regulations, and urban development. We have developed a range of methodologies using a quantitative approach to analyse urban spatial structure and audit land-use regulations.

Property Research

We provide property and retail market research to assist with planning and marketing of new projects. This includes identification of new sites and market areas, assessments of market potential and positioning, and the evaluation of market-feasibility of specific projects.

Development Advisory

We provide development planning and costing advisory services to support small and large-scale developments.

P: 09 963 8776

150 Foundry Road, Silverdale, Auckland

adam@ue.co.nz

www.ue.co.nz



CONTENTS

1.	KEY POINTS.....	5
2.	INTRODUCTION.....	8
3.	CATCHMENT	8
4.	LOCATIONAL CHARACTERISTICS	9
	4.1. Drive Time to Employment Hubs.....	10
5.	DEMAND FOR HOUSING	11
	5.1. Population Projections.....	11
	5.2. Demographic Profile.....	12
	5.3. Net Internal Migration.....	13
	5.4. Auckland Growth Patterns.....	14
	5.5. Building Consents.....	16
	5.6. Recent Sales	18
	5.7. Recent House Price Increases 2019-2020.....	21
6.	SUPPLY OF HOUSING	24
	6.1. Current Listings.....	24
	6.2. Feasible Capacity	25
7.	RESIDENTIAL DEVELOPMENT SITES	28
8.	RETIREMENT VILLAGE SUPPLY & DEMAND	29
	8.1. Retirement Village Demand.....	29
	8.2. Retirement Village Supply	31
	8.3. Conclusion.....	32
9.	BENEFITS OF MASTERPLANNED DEVELOPMENTS	33
10.	ZONING OPTIONS.....	35
11.	ENABLING A DIVERSE & AFFORDABLE HOUSING STOCK.....	36
12.	KIWIBUILD CONSIDERATIONS	36
13.	EMPLOYMENT IMPACT	37
14.	WAIUKU INDUSTRIAL LAND CAPACITY	38
	14.1. Industrial Area Case Studies	39
15.	RURAL LAND USE SURROUNDING WAIUKU	41
16.	LOCAL ECONOMY IMPACT	43



16.1.	10% Terrace, 90% Stand Alone Development	43
16.2.	10% Terrace, 40% Stand Alone, 50% Retirement Village Development	45
17.	FUTURE HOUSING SCENARIOS	46
18.	INFRASTRUCTURE INVESTMENT	49
18.1.	Population Growth Scenarios Summary	50
19.	AUCKLANDER RELOCATION SURVEY	51
20.	ECONOMIC IMPACT OF RELOCATION INEFFICIENCIES	53
21.	NPS-UD	53
22.	SUMMARY OF ECONOMIC COSTS AND BENEFITS	55
23.	CONCLUSION	55
24.	APPENDIX 1: RECENT SALES	56
25.	APPENDIX 2: PROPOSED DEVELOPMENT LOT YIELD	61
26.	APPENDIX 3: NET PRESENT VALUE METHODOLOGY	62
26.1.	UE Current Zoning Capacity Scenario	62
26.2.	UE MDRZ Capacity Scenario	66
26.3.	UE MDRZ plus Proposal Capacity Scenario	70
27.	APPENDIX 4- WAIUKU PPC RMA AMENDMENT BILL COMMENTARY	74



1. Key Points

- The proposal site has 73,400 jobs available within a 40-minute drive.
- Waiuku has 100 hectares of undeveloped Light Industry zone land. This would enable conservatively 1,400 jobs (20 employees per hectare (net)), with higher estimates indicating 2,000 - 3,000 jobs. Many of these will be filled by Waiuku residents and would provide local employment self-sufficiency, and in turn create an amount of additional demand for housing.
- Waiuku is forecast to increase by 35 households (dwellings) per annum. Given the historic shortage of land, the limited range of housing types that are able to be built, and rate of growth seen within the sub-region, it is anticipated that Waiuku has underlying demand for 120 dwellings per annum over the 2020-2030 period.
- Waiuku is a lower income township and therefore requires lower priced housing to meet local demand.
- Over the 2018-2020 period a net -24,400 people migrated from Auckland annually to elsewhere in New Zealand. This is due to high housing prices and presents a significant economic cost for Auckland and New Zealand. This trend is expected to continue as Auckland house prices have continued to increase over the past year.
- Auckland has experienced moderate-high growth in apartment living in the CBD, low-negative growth in inner suburbs, moderate growth in infill development in middle suburbs, and high growth in peripheral greenfield and rural towns areas. This trend is evident in most large cities across New Zealand.
- Prices have risen considerably in the Auckland Region over the past two years with the median house price rising from \$850,000 in May 2019 to \$1,148,000 in May 2021, an increase of \$298,000 or 35%. This confirms Auckland does not have a sufficient supply of land to ensure an efficient market. Consequently, Auckland now has some of the most expensive housing in the world relative to incomes, which places many households under unnecessary financial hardship, reduces economic productivity, and is resulting in an unprecedented exodus from Auckland to the regions. At present, 14,400 New Zealand residents are leaving Auckland annually, and this will likely increase rapidly over the short to medium term if there continues to be a shortage of new affordable family homes.
- This regional price trend has been felt in Waiuku with the proportion of sales decreasing in lower priced brackets and increasing in higher priced brackets. In the December 2019 - February 2020 period, 26% of all sales were for less than \$500,000. In November 2020 - January 2021 however, only 20% of sales were for less than \$500,000.
- There is estimated reasonably realised capacity for 309 additional dwellings in Waiuku over the next decade under the current AUP provisions. This equates to 2.1 years of demand.
- There is estimated reasonably realised capacity for 536 additional dwellings over the next decade



under medium density residential zone (MDRZ). This equates to 3.7 years of demand.

- Under the MDRZ plus proposal, the RER capacity is estimated to be 1,446 dwellings, suppling 10 years of capacity. While the NPS-UD requirements in the long term are still not met, the proposal enables Waiuku to meet its medium-term requirements.
- There are 12 undeveloped residential zone sites in Waiuku that are 4,000m² or larger in size. These have a total estimated yield of 154 dwellings. This supports the conclusion that there is very little remaining residential capacity in Waiuku.
- There are currently 80 retirement village units in Waiuku and Secondary catchments, and estimated demand for 360 units. There is therefore unmet demand of 280 units in the current market. This is projected to grow to 580 units over the next decade, indicating unmet demand for retirement villages in Waiuku.
- The proposal is of a scale that would enable a masterplanned development. This would ensure a diverse range of housing, in terms of price and type, is able to be offered to the market in Waiuku.
- The proposal would produce additional employment opportunities. It would produce between 70 - 200 FTE jobs per annum over the life of the project. This is a significant economic benefit.
- The employment to dwellings ratio in Waiuku of 1.1:1 is above the ratio anticipated in the Auckland Plan 2012 of 1:1 for rural towns. By comparison, the regional average is currently 1.4:1. This indicates that Waiuku has a relatively high degree of employment self-sufficiency. An important implication is that Waiuku will require an increase in population to provide efficient access to a local workforce to support this industrial node.
- The proposal would have a positive impact on the local economy. The proposal has a net present value of \$184.2 - \$507.7 million with regards to the impact of the proposal on the value-added portion of local GDP. This is a significant economic benefit.
- Watercare's planned investments in infrastructure in Waiuku, includes a sub-regional wastewater treatment plant and an upgrade of the water supply network in Waiuku to accommodate growth, with an estimated cost of \$209m.
- The Net present value (NPV) for Watercare's planned investment in infrastructure is negative across all capacity scenarios considered in this study over a 30-year period. This is mainly a result of insufficient supply of residential dwellings in Waiuku.
- Of the three capacity scenarios assessed in this study, "UE MDRZ plus proposal" scenario supply 1466 dwellings is the preferred outcome due to better total discounted revenue and lower negative NPV values, suggesting that the returns on investment of the infrastructure project relies significantly on the supply of the residential land.
- The proposal would increase the number of dwellings available to the market in Waiuku, for less than \$600,000, to 50%. This will ensure a more efficient housing market and meet demand as required under the National Policy Statement - Urban Development - 2000 (NPS-UD).



- The proposal could supply between 57% and 66% of dwellings below the Kiwibuild maximum price cap of \$650,000 for three-bedroom dwellings. This equates to a supply of between 523 and 552 Kiwibuild qualified dwellings. This would make a significant contribution to affordable housing in Waiuku and the wider sub-region.



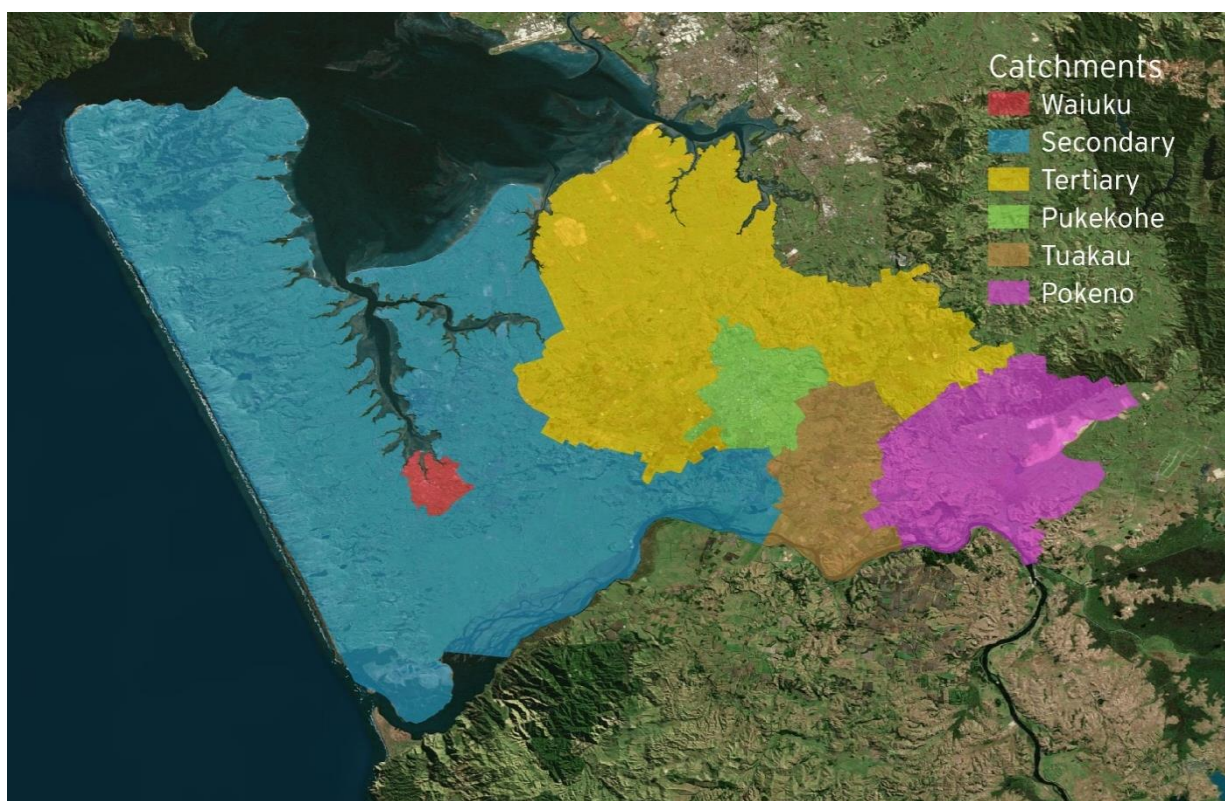
2. Introduction

This report estimates future residential demand and capacity, and evaluates the economic costs and benefits of the rezoning of 33.3 ha of rural production land, at 45 - 130 Constable Road, Waiuku, to a residential zone.

3. Catchment

The following figure displays the catchments used in this analysis. This area encompasses the main urban settlements in the area and their rural surrounds.

Figure 1: Catchment Map



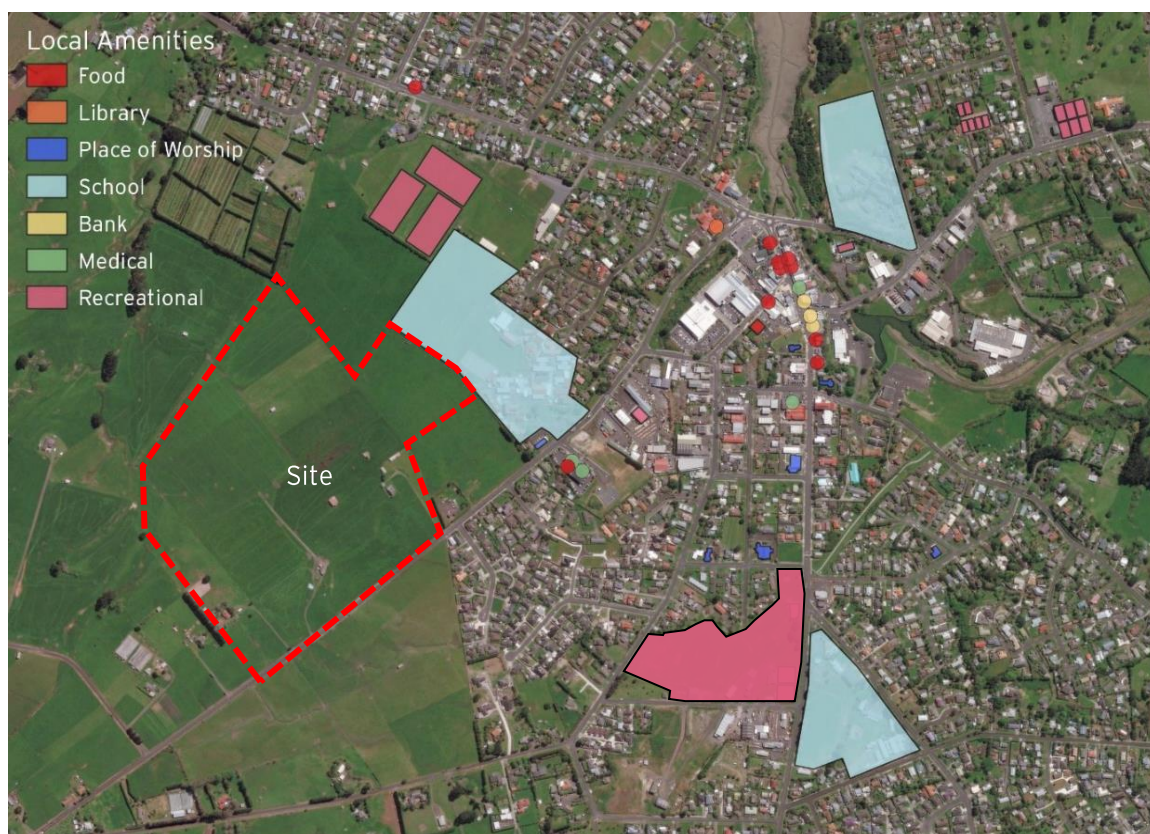


4. Locational Characteristics

The following figure displays the location of the site in relation to local amenities. The key points to note are:

- The site is well serviced for educational amenities. It is adjacent to Waiuku College, and Waiuku Primary School and View Road School are a 15-minute walk away.
- The site is well serviced for recreational amenities. Waiuku Rugby Club is a 15 minute walk to the site's north-east. A park adjacent to Waiuku Primary school is a 15 minute walk to the south-east of the site, containing a football club, bowling club, basketball court, and skate park.
- The site is a 10 minute walk away from the commercial area on Queen Street, with access to the library, multiple food and beverage, banking and medical facilities.
- The site is considered well serviced for amenities.

Figure 2: Local Amenities



Source: Google Maps



4.1. Drive Time to Employment Hubs

The following figures display the location and drive time to employment hubs within the sub-region. The site has 73,400 jobs available within a 40-minute drive.

Figure 3: Auckland Key Employment Hubs



Source: Google Maps

Figure 4: Driving Times to Key Employment Hubs

Cluster	Employment count	Drive Time (Minutes)	
		Off-Peak Traffic	Peak Traffic
Pukekohe	9,720	20	20
Papakura - Drury	24,730	30	40
Manukau City	38,630	40	50
Auckland Airport	36,320	50	60
Mt Wellington	91,400	50	60
Tamaki	52,000	50	60
Auckland CBD	225,360	60	80

Source: Google Maps



5. Demand for Housing

5.1. Population Projections

The following figure displays the historic, current and projected population across the catchments. The key points to note are:

- Waiuku grew from a population of 9,170 in 2018 to 9,640 by 2020, a growth rate of 240 per annum. By contrast, Statistics NZ projected a growth rate of 100 per annum over this period. Recent growth in Waiuku has been almost 250% higher than projected.
- A similar pattern is observed across the wider catchment area, with the total population increasing from 65,810 in 2018 to 72,710 by 2020, a growth rate of 3,450 people per annum. Statistics NZ projected a growth rate of 1,600 per annum over this period. Recent growth across the catchment area has been more than double Statistics NZ projections.
- Pokeno in particular has grown at a very high rate, growing at more than three times the rate of growth projected by Statistics NZ over the past two years. Pokeno's population in 2020 had reached the projected population in 2028. This high growth rate has been driven by the ability to provide affordable family housing. Waiuku is also well placed to provide affordable family housing, however, does not presently have any potential for a medium-large scale masterplanned development.
- Waiuku is forecast to increase by 35 households (dwellings) per annum. Given the historic shortage of land, the limited range of housing types that are able to be built, and rate of growth seen within the sub-region, it is anticipated that Waiuku has underlying demand for 120 dwellings per annum over the 2020-2030 period.

Figure 5: Population and Household Growth Rates 2006 - 2020

	Catchment	Historic			Current	Actual Growth					
		2006	2013	2018	2020	2006 - 2013	Per Annum	2013 - 2018	Per Annum	2018 - 2020	Per Annum
Population	Waiuku	7,460	8,320	9,170	9,640	860	120	850	170	470	240
	Secondary	9,700	9,870	11,180	12,050	170	20	1,310	260	870	440
	Tertiary	9,110	9,350	10,780	11,680	240	30	1,430	290	900	450
	Pukekohe	17,270	20,530	23,900	26,510	3,260	470	3,370	670	2,610	1,310
	Tuakau	4,940	5,730	6,590	7,080	790	110	860	170	490	250
	Pokeno	1,830	1,980	4,190	5,750	150	20	2,210	440	1,560	780
	Total	50,320	55,770	65,810	72,710	5,450	780	10,040	2,010	6,900	3,450
Households	Waiuku	2,610	2,920	3,210	3,380	310	40	290	60	170	90
	Secondary	3,420	3,480	3,950	4,250	60	10	470	90	300	150
	Tertiary	2,960	3,030	3,500	3,790	70	10	470	90	290	150
	Pukekohe	5,940	7,060	8,220	9,120	1,120	160	1,160	230	900	450
	Tuakau	1,620	1,880	2,160	2,320	260	40	280	60	160	80
	Pokeno	600	640	1,360	1,870	40	10	720	140	510	260
	Total	17,160	19,020	22,410	24,740	1,860	270	3,390	680	2,330	1,170

Source: Statistics NZ, Urban Economics



Figure 6: Population and Household Projections 2013 - 2038

	Catchment	Projection					Projected Growth					
		2013	2018	2023	2028	2038	2013 - 2018	Per Annum	2018-2028	Per Annum	2018-2038	Per Annum
Population	Waiuku	8,550	9,270	9,760	10,250	11,160	720	140	980	100	1,890	95
	Secondary	10,700	11,665	13,350	15,190	18,060	970	190	3,530	350	6,395	320
	Tertiary	7,220	8,355	9,410	10,580	13,570	1,140	230	2,230	220	5,215	261
	Pukekohe	22,090	25,550	28,300	30,720	36,940	3,460	690	5,170	520	11,390	570
	Tuakau	7,340	8,340	9,160	10,080	11,940	1,000	200	1,740	170	3,600	180
	Pokeno	1,860	3,460	5,120	5,800	7,060	1,600	320	2,340	230	3,600	180
	Total	57,760	66,640	75,090	82,620	98,720	8,880	1,780	15,980	1,600	32,090	1,605
Households	Waiuku	3,000	3,250	3,420	3,590	3,910	250	50	340	30	660	35
	Secondary	3,780	4,120	4,710	5,360	6,370	340	68	1,240	120	2,250	113
	Tertiary	2,340	2,710	3,050	3,430	4,400	370	74	720	70	1,690	85
	Pukekohe	7,600	8,790	9,740	10,570	12,710	1,190	238	1,780	180	3,920	196
	Tuakau	2,410	2,740	3,010	3,310	3,920	330	66	570	60	1,180	59
	Pokeno	610	1,130	1,670	1,890	2,300	520	104	760	80	1,170	59
	Total	19,740	22,740	25,590	28,150	33,610	3,000	600	5,420	540	10,870	546

Source: Statistics NZ, Urban Economics

5.2. Demographic Profile

Figure 7 outlines the demographic profile for Waiuku. Waiuku is a lower income township and therefore requires lower priced housing to meet local demand.

Figure 7: Demographic Table

		Waiuku	Secondary	Tertiary	Pukekohe	Tuakau	Pokeno
Sex	Male	50%	51%	51%	48%	50%	51%
	Female	50%	49%	49%	52%	50%	49%
Age	Under 15	22%	19%	20%	23%	24%	22%
	15 - 29	18%	15%	17%	19%	20%	17%
	30 - 64	45%	50%	49%	42%	43%	50%
	65 plus	16%	15%	14%	17%	12%	10%
Ethnicity	European	71%	80%	75%	61%	61%	66%
	Māori	17%	11%	11%	17%	24%	13%
	Pacific Peoples	4%	3%	4%	8%	6%	4%
	Asian	5%	5%	7%	11%	7%	13%
	MELAA*/ Other	3%	3%	3%	3%	2%	4%
Income	\$0 - \$30,000	48%	41%	39%	47%	45%	36%
	\$30,000 - \$70,000	33%	34%	33%	35%	38%	37%
	\$70,000 plus	19%	25%	28%	18%	17%	27%
	Median Income	\$33,740	\$39,940	\$42,660	\$34,270	\$35,000	\$44,950
Home Ownership	Do not own	41%	36%	41%	49%	47%	36%
	Own	59%	64%	59%	51%	53%	64%

Source: Statistics NZ, Urban Economics

*Middle Eastern, Latin American or African



5.3. Net Internal Migration

The following figures display net internal migration (i.e. migration within New Zealand) for the upper North Island for the past two years. Over the 2018-2020 period a net -24,400 people migrated from Auckland to elsewhere in New Zealand, shown in red (i.e. 24,400 fewer existing Auckland residents live in Auckland). The largest beneficiaries have been the neighbouring districts, with the Waikato, Waipa, Western Bay of Plenty, Whangarei and Tauranga City all posting high growth from net internal migration (shown in yellow). This trend, with high net internal migration driven by an exodus from the Auckland Region, is expected to continue into the future, as it is driven primarily by high house prices in Auckland. This will be exacerbated with recent house price inflation, which will result in more households moving to locations that offer affordable housing.

Figure 8: Net Internal Migration (2018 - 2020)

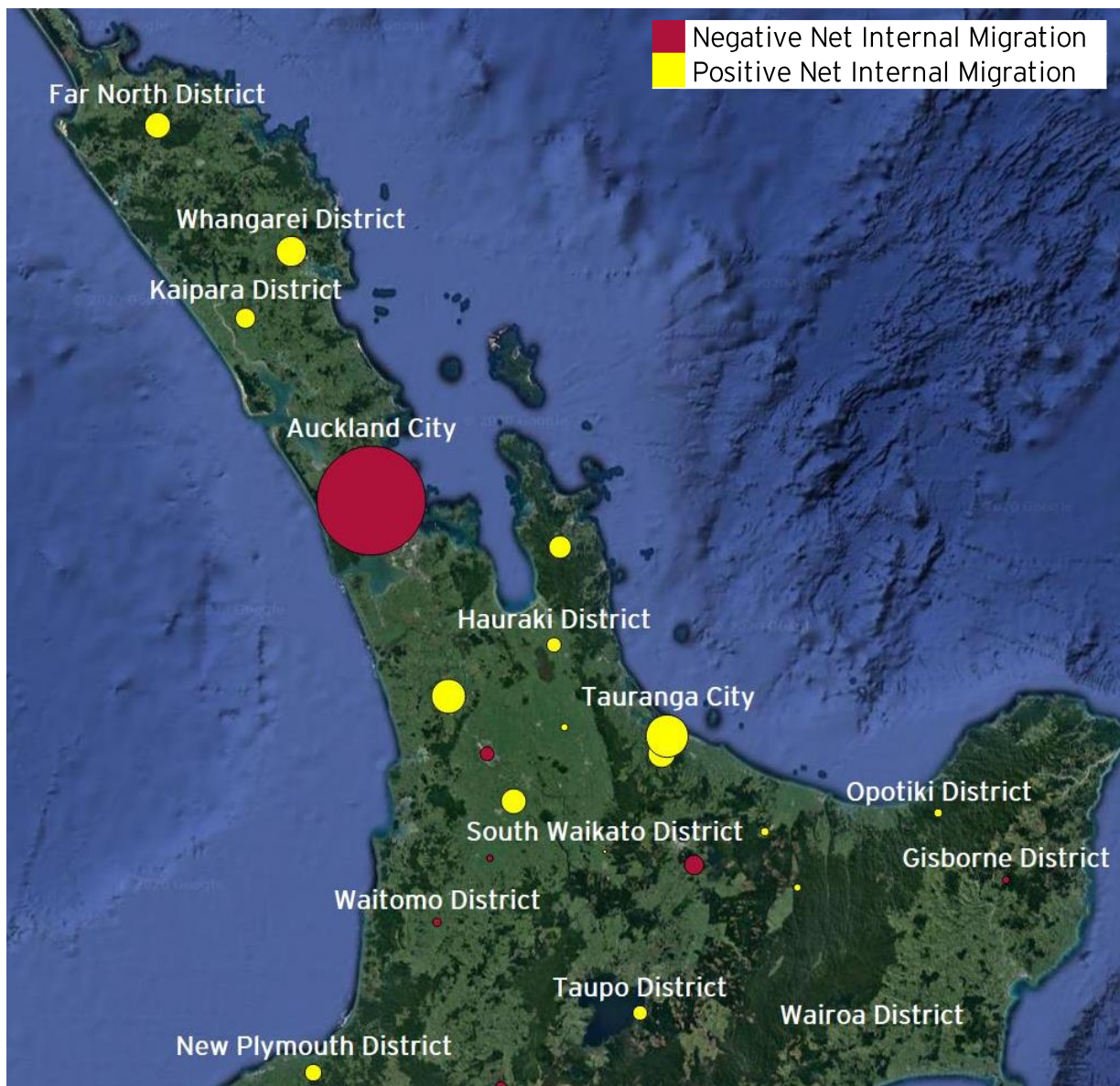




Figure 9: Net Internal Migration for Key Districts 2018 - 2020

Selected Areas	2018 - 2019	2019 - 2020	2018 - 2020 Total
Tauranga City	1,800	1,900	3,700
Waikato District	1,200	1,200	2,400
Whangarei District	960	920	1,880
Western Bay of Plenty District	750	790	1,540
Far North District	630	740	1,370
Waipa District	710	580	1,290
Thames-Coromandel District	500	560	1,060
Kaipara District	420	430	850
Taupo District	210	230	440
Hauraki District	220	210	430
Hauraki District	220	210	430
Opotiki District	60	70	130
Kawerau District	70	60	130
Matamata-Piako District	50	70	120
Whakatane District	30	80	110
South Waikato District	20	10	30
Otorohanga District	-40	-30	-70
Gisborne District	-60	-60	-120
Waitomo District	-80	-70	-150
Hamilton City	-110	-280	-390
Rotorua District	-400	-390	-790
Auckland	-11,800	-12,600	-24,400

Source: Statistics NZ

5.4. Auckland Growth Patterns

The following figures display the net internal and international migration for Auckland. The key points to note are:

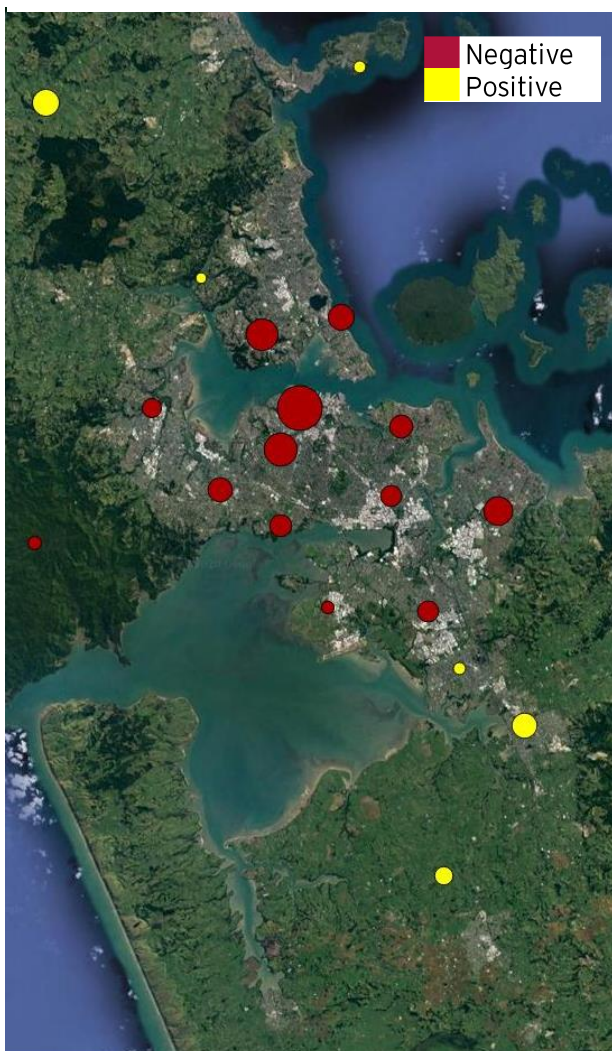
- Internal migration is negative for all central and middle suburbs and positive for outer or peripheral suburbs, shown in red points (i.e. there has been a decline in the total number of New Zealanders living in the central and middle suburbs, and an increase in the outer suburbs). This is being driven by the demand for affordable family houses which are able to be supplied in the outer suburbs.
- The distribution of growth from all sources displayed in figure 12 shows high growth in peripheral greenfield areas, moderate growth driven by infill development in middle suburbs, moderate-high growth in apartment living in the CBD and low - negative growth in inner suburbs.
- Of these the highest growth has been in peripheral greenfield areas with the fastest growth being in large masterplanned developments in Hobsonville Point, Flat Bush, Papakura, Millwater, Kumeu and Pokeno. Large masterplanned developments are often able to provide the most affordable housing due to economies of scale.
- More generally there has been a significant exodus of Aucklanders to the regions over the 2018-2020 period, with a net decline of 24,400 New Zealanders choosing to reside in Auckland. This is largely due to the regions offering affordable housing.



- Population growth in Auckland is being driven in large part by international migration, with a net increase of 61,820 people in the 2018 - 2020 period. A large proportion of the international migrants have chosen to reside in the central and middle suburbs, indicating they are better placed to afford the higher house prices.
- This pattern of higher growth in the outer suburbs and satellite towns is consistent with the finding in section 5.1 - the Waiuku catchment area has grown significantly faster than projected over the 2013 - 2020 period. This high growth in lower priced peripheral areas is expected to continue for the foreseeable future as house prices are anticipated by Auckland Council to remain high in central areas.

Figure 10: Internal Migration 2018 - 2020

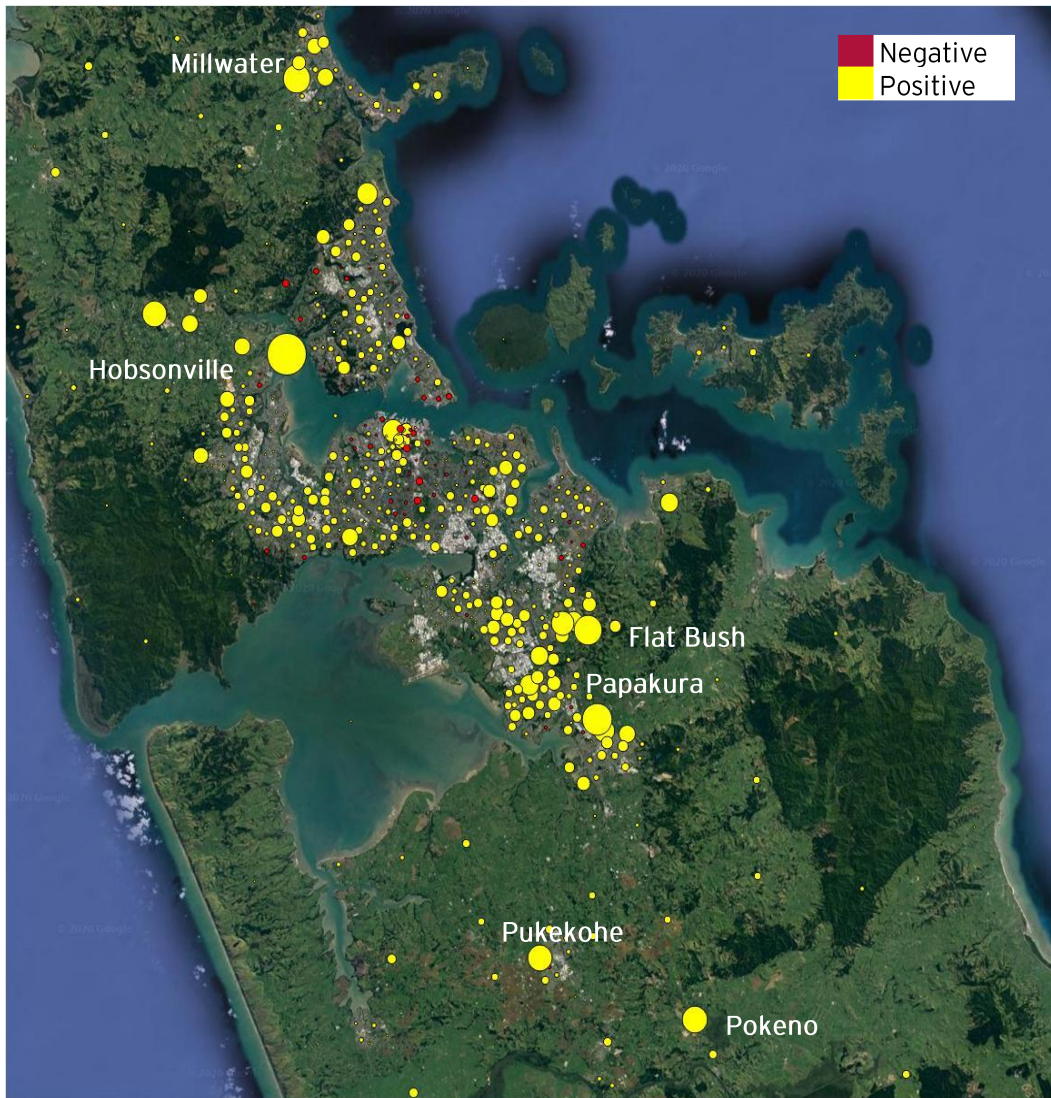
Figure 11: International Migration 2018 - 2020



Source: Statistics NZ



Figure 12: Distribution of Growth from all Sources 2018 - 2020



Source: Statistics NZ

5.5. Building Consents

The following figure displays the building consents for new dwellings across the catchments over the past ten years. The key points to note are:

- 30 dwellings per annum have been consented in Waiuku over the past ten years with a peak of 50 dwellings in 2016. Almost all growth has been in stand-alone dwellings with approximately 90% of building consents falling into this category.
- A small number of terrace dwellings have been consented in Waiuku over the past two years. This is an emerging regional trend that is likely to continue into the future as people choose smaller more compact dwelling types in exchange for lower house prices.



- Growth has also been strong in the other rural towns within the catchment, with both the Pokeno and Pukekohe catchments experiencing 150 – 230 dwellings consented per annum.
- Pokeno in particular has grown much faster than expected. This is driven by its ability to provide some of the most affordable family housing within the Auckland metropolitan area. In the past two years building consents issued in Pokeno were only marginally lower than in Pukekohe, which is notable given the relative size of the towns.
- Building consents in Waiuku have not kept up with population growth in recent years, with growth of 120 additional households over the 2018 - 2020 period but only 50 building consents for new dwellings over this same period. Taking into account that some building consents do not result in new dwellings, this suggests that approximately twice as many households have moved into Waiuku as new dwellings constructed over the past two years. This is likely to be a result of vacant houses becoming occupied.
- It is worth noting that a total of 290 CCC's for the 2017-2021 period were granted in Waiuku. This equates to approximately 70 p.a. This is sourced from the 'Waiuku - Planning Scope Study 2020' report undertaken by the Franklin Local Board and indicates the increasing demand for land in Waiuku. Comparing this to the building consents per annum, this indicates constraints to the development of this land.

Figure 13: Building Consents 2011 - 2020

Catchment	Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	Per Annum	Per Annum Past Five Years
Waiuku	Stand Alone	10	30	40	30	30	50	30	20	20	10	270	30	30
	Terrace	0	0	0	0	0	0	0	0	10	10	20	0	0
	Subtotal	10	30	40	30	30	50	30	20	30	20	290	30	30
Secondary	Stand Alone	20	30	40	50	60	90	70	80	100	80	620	60	80
	Terrace	0	0	0	0	0	0	10	0	10	10	30	0	10
	Subtotal	20	30	40	50	60	90	80	80	110	90	650	70	90
Tertiary	Stand Alone	30	50	110	70	110	90	90	140	120	110	920	90	110
	Terrace	0	0	0	0	0	0	0	10	10	10	30	0	10
	Subtotal	30	50	110	70	110	90	90	150	130	120	950	100	120
Pukekohe	Stand Alone	70	110	110	130	130	190	240	240	240	190	1,650	170	220
	Terrace	10	0	0	10	10	0	20	50	40	50	190	20	30
	Apartments	0	0	0	0	30	0	0	0	10	0	40	0	0
	Retirement Units	0	0	0	40	60	220	70	0	0	0	390	40	60
	Subtotal	80	110	110	180	230	410	330	290	290	240	2,270	230	310
Tuakau	Stand Alone	10	20	30	40	40	50	20	20	30	70	330	30	40
	Terrace	0	0	10	10	0	0	0	0	0	0	20	0	0
	Apartments	0	0	0	0	0	0	0	0	20	0	20	0	0
	Subtotal	10	20	40	50	40	50	20	20	50	70	370	40	40
Pokeno	Stand Alone	0	30	60	120	180	250	160	200	230	250	1,480	150	220
	Terrace	0	0	0	0	0	0	0	10	20	10	40	0	10
	Subtotal	0	30	60	120	180	250	160	210	250	260	1,520	150	230
Total	Stand Alone	140	270	390	440	550	720	610	700	740	710	5,270	530	700
	Terrace	10	0	10	20	10	0	30	70	90	90	330	30	60
	Apartments	0	0	0	0	30	0	0	0	30	0	60	10	10
	Retirement Units	0	0	0	40	60	220	70	0	0	0	390	40	60
	Total	150	270	400	500	650	940	710	770	860	800	6,050	610	830

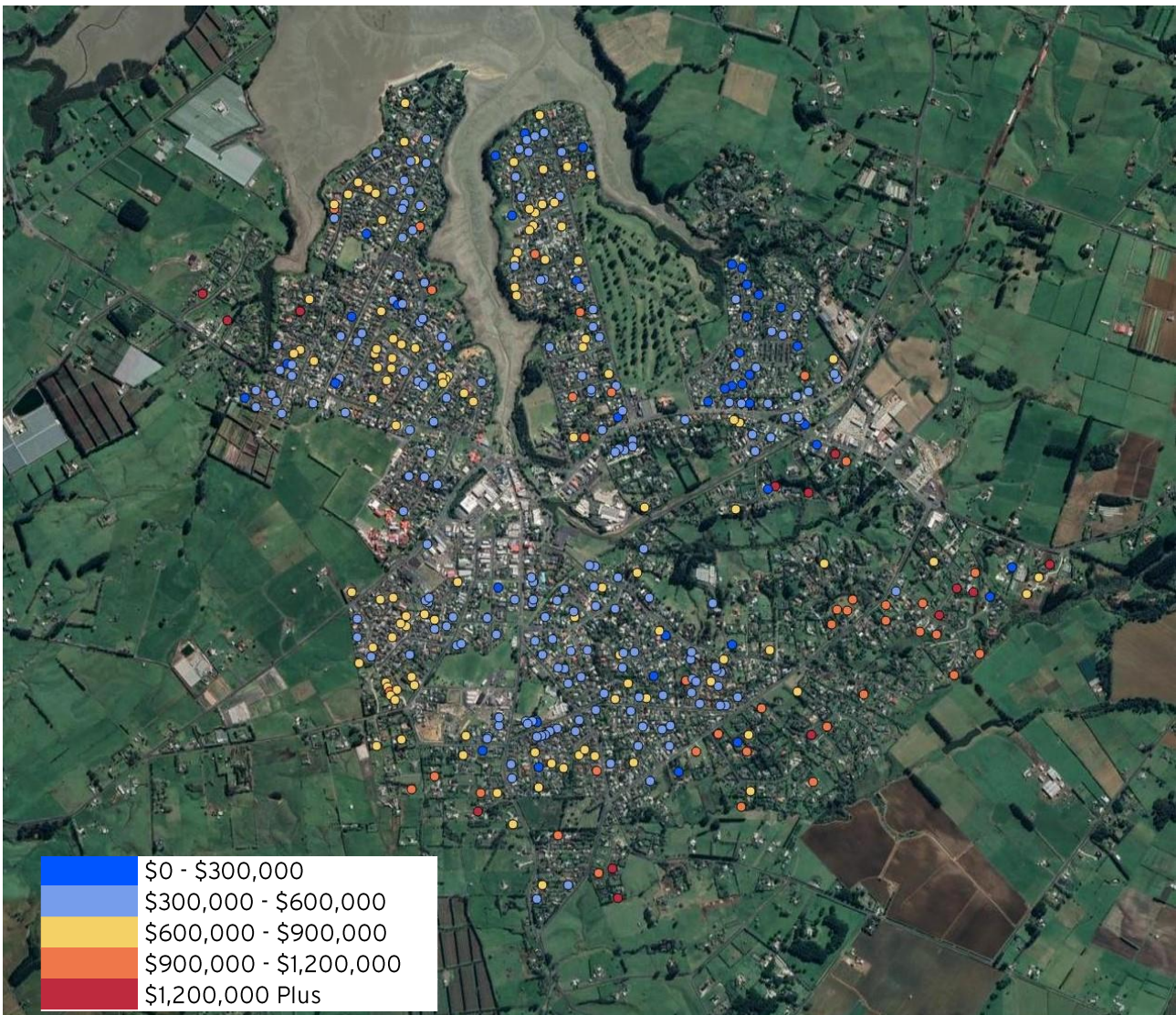
Source: Statistics NZ, Urban Economics



5.6. Recent Sales

Figures 14 - 18 show the price of recent residential sales for rural towns across the catchment. Most properties in Waiuku sold for \$400,000 - \$700,000 which is relatively affordable within the regional market.

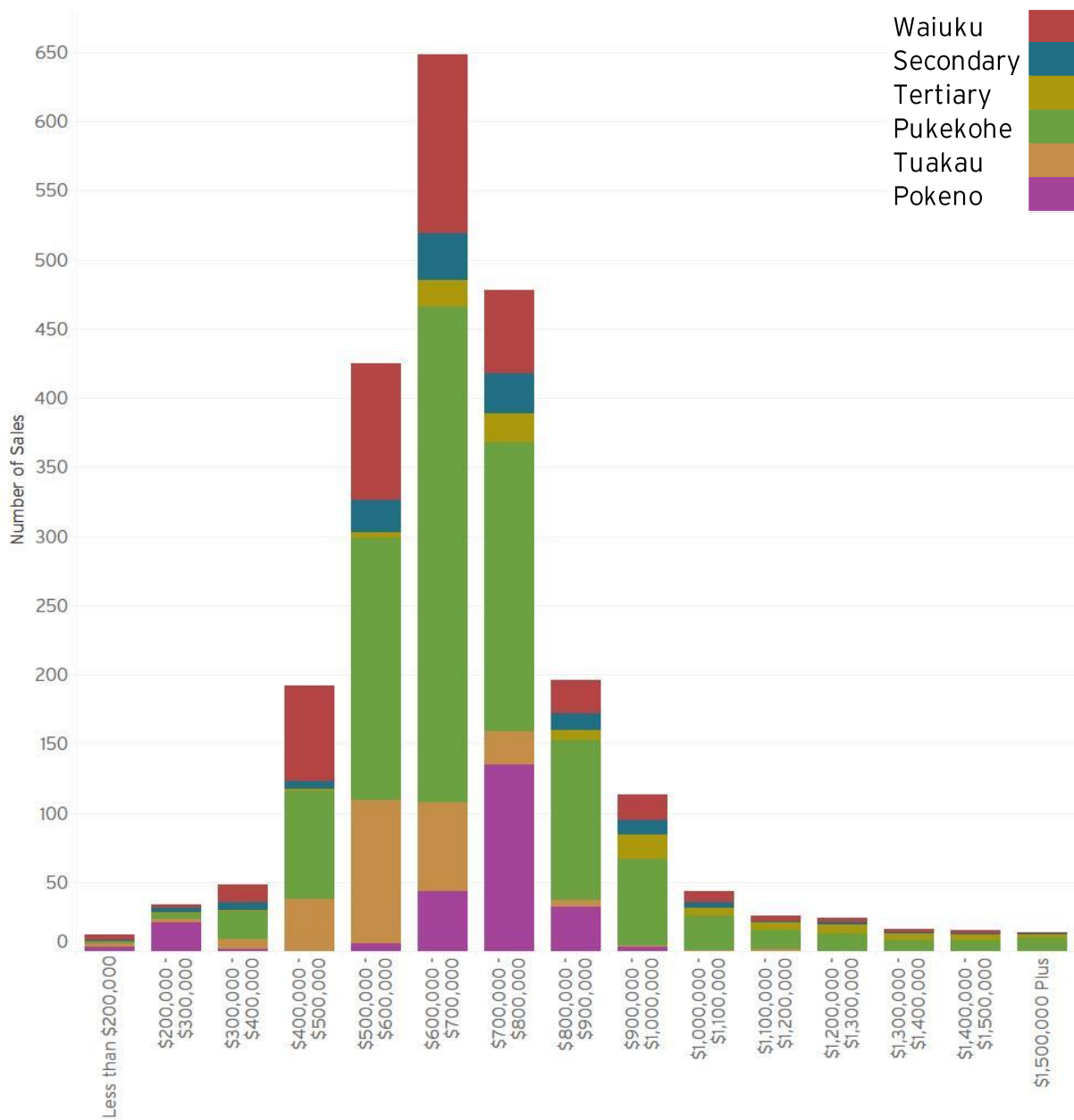
Figure 14: Recent Sales by Price Waiuku Feb 2019 - Feb 2021



Figures 15 - 18 provide detailed sales price data for the catchments. Most sales in Waiuku occurred in the \$400,000 - \$700,000 range with sales across the wider catchment being in the slightly higher \$500,000 - \$800,000 price range. Terraced dwellings achieved lower sales prices with most selling for \$400,000 - \$500,000 in Waiuku, and \$400,000 - \$700,000 across the wider catchment. Sale prices in Waiuku are significantly lower across all dwelling types, and in particular for terraced dwellings. This highlights Waiuku's unique opportunity to produce affordable family housing within both the South Auckland and regional markets.



Figure 15: Recent Sales by Price, Type and Location Feb 2019 - Feb 2021



Source: Corelogic



Figure 16: Recent Sales in Waiuku by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	150	830	3	80	0	1	130	620	4
\$200,000 - \$300,000	180	1,170	3	-	-	-	180	1,170	3
\$300,000 - \$400,000	120	950	6	90	0	7	100	440	13
\$400,000 - \$500,000	100	470	44	100	0	25	100	300	69
\$500,000 - \$600,000	110	650	93	120	0	6	110	610	99
\$600,000 - \$700,000	150	820	125	150	680	4	150	820	129
\$700,000 - \$800,000	190	1,270	60	200	3,030	1	190	1,270	60
\$800,000 - \$900,000	210	2,430	23	-	-	-	210	2,460	24
\$900,000 - \$1,000,000	230	3,210	18	-	-	-	230	3,210	18
\$1,000,000 - \$1,100,000	230	4,140	7	-	-	-	220	3,980	8
\$1,100,000 - \$1,200,000	290	3,060	4	190	2,830	1	290	3,060	4
\$1,200,000 - \$1,300,000	320	2,790	3	-	-	-	320	2,790	3
\$1,300,000 - \$1,400,000	340	2,640	2	-	-	-	340	2,640	2
\$1,400,000 - \$1,500,000	440	4,010	2	-	-	-	440	4,010	2
Total	160	1,140	393	110	190	45	150	1,040	438

Source: Corelogic

Figure 17: Recent Sales in Catchment Area by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Apartment			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	160	730	10	90	0	2	-	-	-	150	630	12
\$200,000 - \$300,000	150	570	34	-	-	-	-	-	-	160	560	34
\$300,000 - \$400,000	130	740	32	80	0	15	60	0	1	140	540	48
\$400,000 - \$500,000	100	520	136	90	20	54	80	0	2	110	410	192
\$500,000 - \$600,000	110	560	347	110	110	74	70	0	4	110	470	425
\$600,000 - \$700,000	140	650	604	130	150	44	-	-	-	140	590	648
\$700,000 - \$800,000	180	740	470	130	150	8	-	-	-	180	700	478
\$800,000 - \$900,000	200	990	194	190	1,630	2	-	-	-	200	930	196
\$900,000 - \$1,000,000	220	1,260	113	-	-	-	-	-	-	220	1,240	113
\$1,000,000 - \$1,100,000	240	1,560	42	190	2,830	1	-	-	-	240	1,490	43
\$1,100,000 - \$1,200,000	270	1,570	26	-	-	-	-	-	-	270	1,540	26
\$1,200,000 - \$1,300,000	270	1,980	24	-	-	-	-	-	-	270	1,940	24
\$1,300,000 - \$1,400,000	270	1,940	16	-	-	-	-	-	-	280	1,930	16
\$1,400,000 - \$1,500,000	310	2,280	15	-	-	-	-	-	-	310	2,280	15
\$1,500,000 Plus	330	1,950	14	-	-	-	-	-	-	280	1,550	14
Total	160	790	2,077	110	110	200	70	0	7	160	700	2,284

Source: Corelogic



Figure 18: Recent Sales Summary Table

	Waiuku	Secondary	Tertiary	Pukekohe	Pokeno	Tuakau
Median Price	\$615,000	\$650,000	\$1,025,000	\$680,000	\$735,000	\$550,000
Average Price	\$630,000	\$655,000	\$1,055,000	\$710,000	\$740,000	\$540,000
Middle 50% of the Market	\$515,000 - \$700,000	\$515,000 - \$780,000	\$810,000 - \$1,175,000	\$600,000 - \$780,000	\$700,000 - \$760,000	\$480,000 - \$630,000

Source: Corelogic, Urban Economics

5.7. Recent House Price Increases 2019-2020

The following figures display information on recent sales trends in the Auckland region. Figure 19 compares the past three months sales in Waiuku with the past three months sales in the year prior, and figure 21 displays the median house price across the Auckland region over the past five years. The key points to note are:

- Prices have risen considerably in the Auckland Region over the past two years with the median house price rising from \$850,000 in May 2019 to \$1,148,000 in May 2021, an increase of \$298,000 or 35%. This confirms Auckland does not have a sufficient supply of land to ensure an efficient market. Consequently, Auckland now has some of the most expensive housing in the world relative to incomes, which places many households under unnecessary financial hardship, reduces economic productivity, and is resulting in an unprecedented exodus from Auckland to the regions. At present, 14,400 New Zealand residents are leaving Auckland annually, and this will likely increase rapidly over the short to medium term if there continues to be a shortage of new affordable family homes.
- This regional price trend has been felt in Waiuku with the proportion of sales decreasing in lower priced brackets and increasing in higher priced brackets. In the December 2019 - February 2020 period, 26% of all sales were for less than \$500,000. In December 2020 - February 2021 period however, only 20% of sales were for less than \$500,000. It is important that Waiuku is able to continue to meet demand in the under \$600,000 price range, as required by the NPS-UD.
- Within the total catchment (figure 20), in the December 2019 - February 2020 period, 32% of all sales were for less than \$600,000. In December 2020 - February 2021 however, 31% of sales were for less than \$600,000.
- Similarly, at the upper end of the range, 41% of sales were for \$700,000 plus in the December 2019 - February 2020 period. In December 2020 - February 2021, 41% of all sales fell into this price bracket.
- These price rises reflect both the regional and local shortage of affordable houses.
- At an international level, New Zealand has one of the most unaffordable housing markets in the OECD with the 5th highest house price-to-income ratio in the fourth quarter of 2020¹. This is an increase of five places over the course of a year with New Zealand having the 10th highest house

¹ OECD Analytical House Price Database last accessed 12.07.2021.



price-to-income ratio in the fourth quarter of 2019.

Figure 19: Waiuku Total Sales 3 Month Comparison Dec - Feb 2019 - 2020 vs Dec - Feb 2020 - 2021



Figure 20: Total Catchment Sales 3 Month Comparison Dec - Feb 2019 - 2020 vs Dec - Feb 2020 - 2021

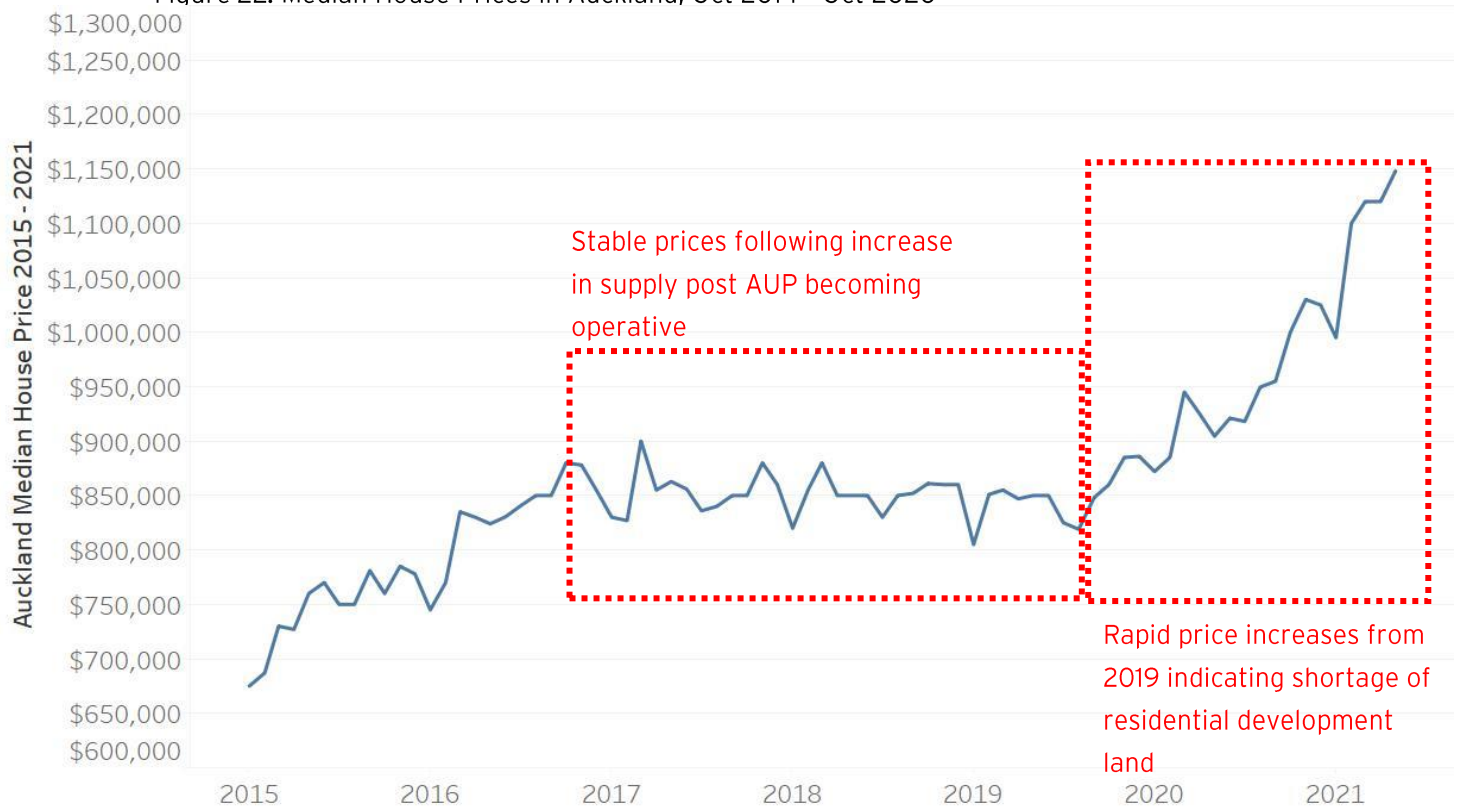




Figure 21: Auckland Total Sales 3 Month Comparison Aug - Oct 2019 vs Aug - Oct 2020



Figure 22: Median House Prices in Auckland, Oct 2014 - Oct 2020



Source: REINZ



6. Supply of Housing

6.1. Current Listings

The following figures display current Trademe listings in Waiuku for existing dwellings, new dwellings and sections. The key points to note are:

- Sections currently available in Waiuku range in price from \$200,000 - \$800,000 with most sections priced less than \$400,000.
- Sections currently available are relatively large with an average size across all price brackets of 2,190m². There are 28 suburban sized land parcels with an average size of 480m². This suggests a shift towards suburban development in Waiuku.
- New stand alone dwellings being offered to the market range in price from \$400,000 - \$1,100,000, with the majority priced between \$700,000 - \$1,000,000.
- There are only 9 listings of smaller dwellings on a typical suburban sized land parcel of around 400m² - 700m². The majority of remaining dwellings (24) offered were all larger dwellings on large lifestyle block sized sections.
- While a wider variety of prices is currently available for existing dwellings, most are also on larger lifestyle block sized sections.
- There is an under-provision of affordable housing types and suburban/urban section sizes in the current market. This lack of product diversity is adversely impacting the rate of new dwellings being supplied to the market, and it not fully meeting demand as required by the NPS-UD.

Figure 23: Current Listings of Sections and Dwellings in Waiuku

Price Bracket (\$000)	Stand Alone		Sections	
	Average Land Area (m ²)	Number of Listings	Average Land Area (m ²)	Number of Listings
Less Than \$400	-	-	480	28
\$400 - \$500	540	2	2,560	1
\$500 - \$600	420	1	10,260	2
\$600 - \$700	510	1	17,540	2
\$700 - \$800	700	5	2,800	1
\$800 - \$900	4,590	8	-	-
\$900 - \$1,000	1,970	5	-	-
\$1,000 - \$1,100	7,810	5	-	-
\$1,100 Plus	36,000	6	-	-
Total	9,310	33	2,190	34

Source: Trademe, Urban Economics



6.2. Feasible Capacity

Figures 24 & 25 display the estimated feasible capacity and reasonably expected feasible capacity in Waiuku across greenfield and infill sites based on the current zoning. Over the next decade, Waiuku has feasible capacity of 810 dwellings and reasonably expected feasible capacity of 309 dwellings.

Figure 24: Infill and Greenfield Capacity by Zone (Current AUP Provisions)

	Zone	Infill	Greenfield	Total
Feasible Capacity	Mixed Housing Urban Zone	53	0	53
	Mixed Housing Suburban	385	331	716
	Single House Zone	17	12	29
	Large Lot Zone	0	12	12
	Total	114	195	810
	Zone	Infill	Greenfield	Total
Reasonably Expected to be Realised	Mixed Housing Urban Zone	13	0	13
	Mixed Housing Suburban	96	182	278
	Single House Zone	4	7	11
	Large Lot Zone	0	7	7
	Total	114	195	309

Source: Urban Economics, Corelogic, Auckland Council

Figures 26 and 27 display the estimated feasible capacity in Waiuku across greenfield and infill sites based on the provisions of the 'Resource Management Enabling Housing Supply and Other Matters Amendment Bill (2021)' (Enabling Housing Act). This amendment allows for residential zones other than Large Lot and Terrace Housing and Apartment Building zones to operate as 'de-facto' Mixed Housing Urban Zones. This increases feasible capacity in Waiuku to 1,529 dwellings, with a reasonably expected feasible capacity for around 536 dwellings when accounting for some owners not wishing to develop. This level of feasible capacity represents a significantly denser development than what has typically occurred in Waiuku historically.

An assessment of the supply of 3-level dwellings has been undertaken in Waiuku for dwellings located in zones that enable a third level. The findings of this assessment are that there is no current supply of 3-level dwellings in Waiuku and can therefore be concluded that of the reasonably expected supply enabled from the Medium Density Residential Standard (MDRS) zoning, 3-level dwellings are unlikely to occur. It should be noted that the recent trend for new terrace dwellings is a preference for a third level to maximise floor space on a smaller site. However, these new developments are exclusively centrally located where the price of dwellings are high (e.g., Greenlane, Parnell etc.).



Figure 25: Infill and Greenfield Feasible Capacity Map (Current AUP Zone Provisions)

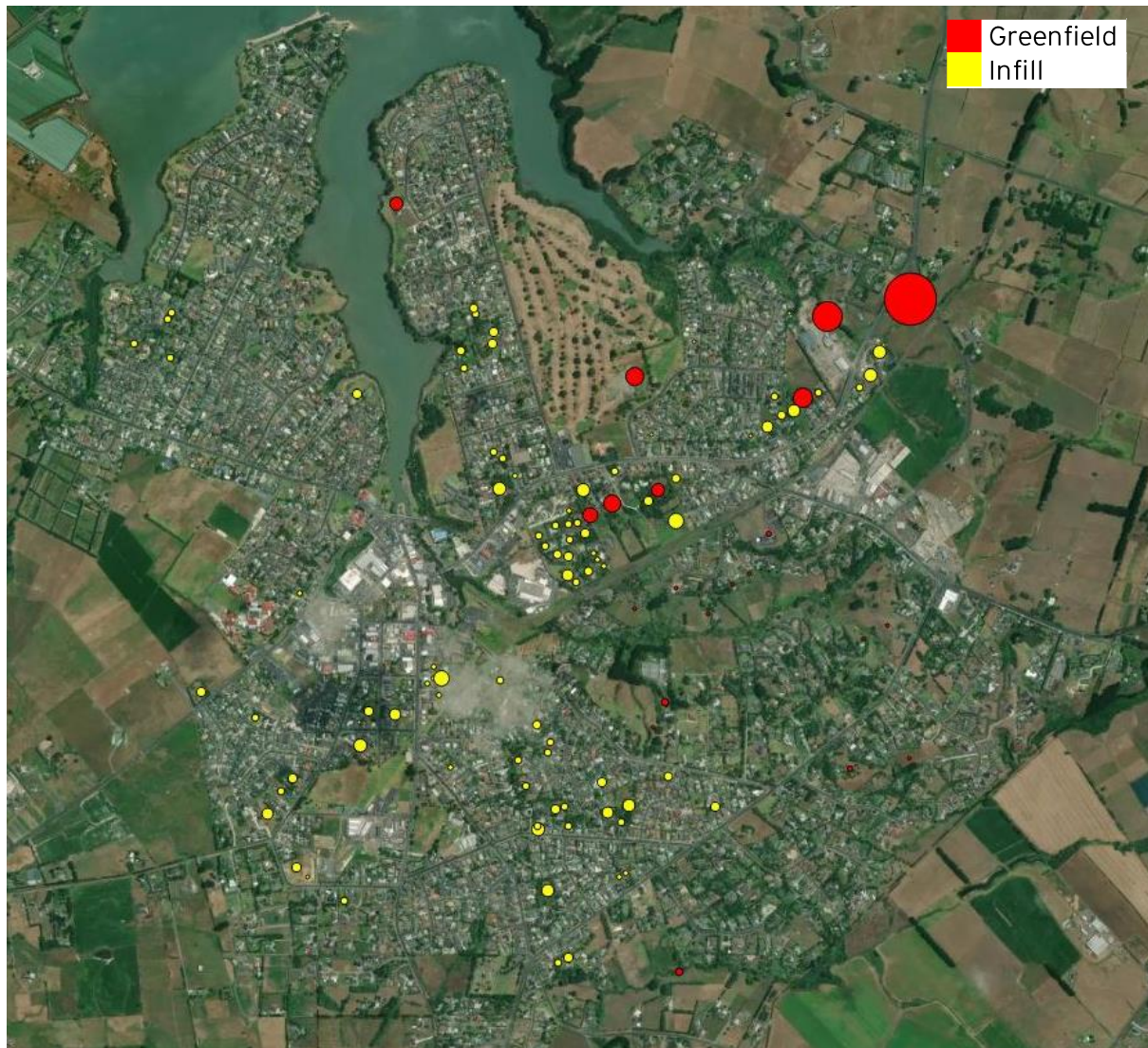


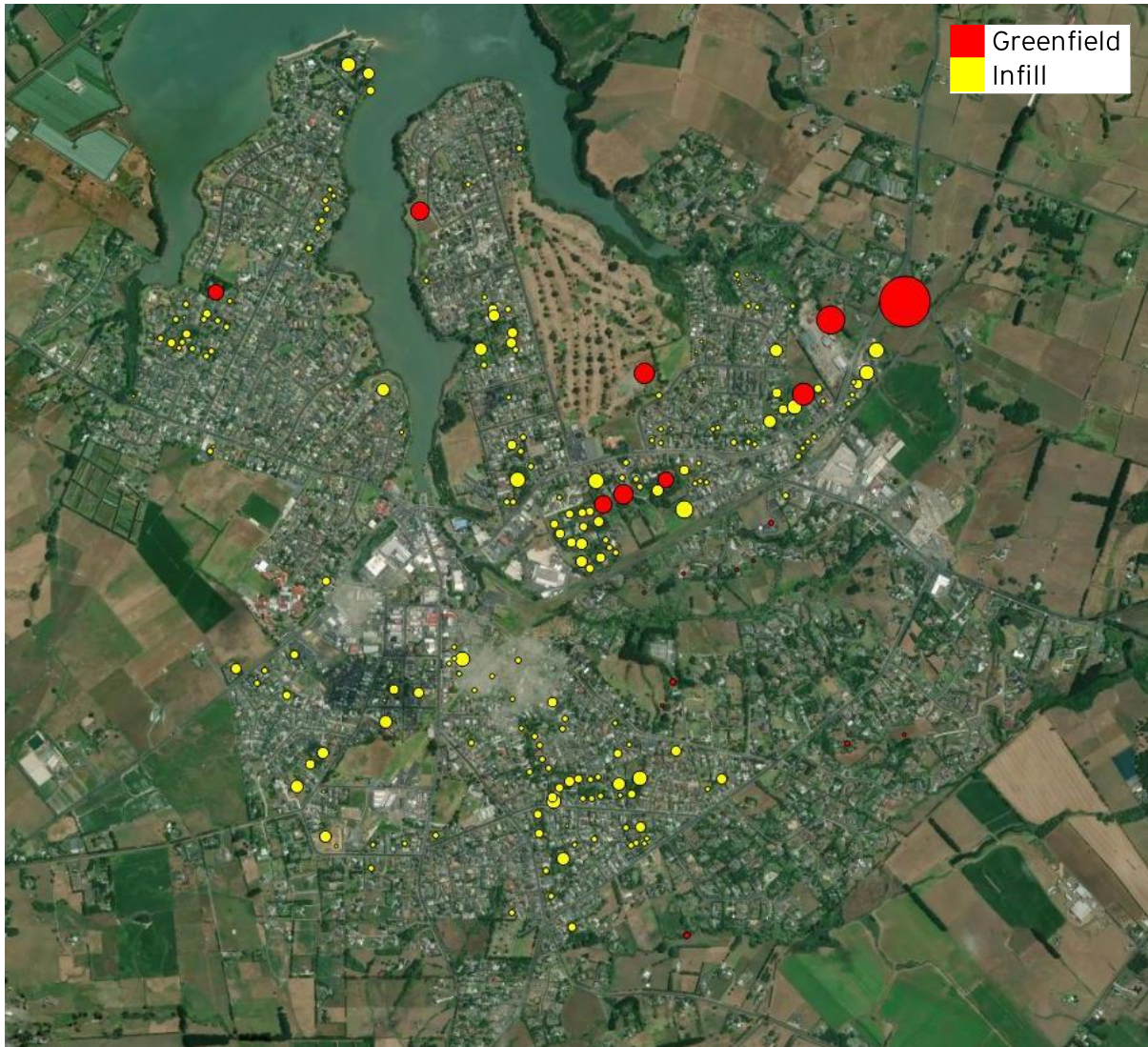
Figure 26: Infill and Greenfield Capacity by Zone (Enabling Housing Act Medium Density Scenario)

Zone	Capacity	Infill	Greenfield	Total
Medium Density Residential	Feasible Capacity	1,039	490	1,529
	Reasonably Expected Capacity	260	270	529
Large Lot Zone	Feasible Capacity	0	12	12
	Reasonably Expected Capacity	0	7	7
Total	Feasible Capacity	1,039	502	1,541
	Reasonably Expected Capacity	260	276	536

Source: Urban Economics, Corelogic, Auckland Council



Figure 27: Infill and Greenfield Feasible Capacity Map (Enabling Housing Act MDRS Zone Provisions)





7. Residential Development Sites

The following figures illustrate existing sites available that are large enough to accommodate a notable residential development in Waiuku, with sites of 4,000m² or greater being included.

There are currently understood to be 12 undeveloped sites zoned for suburban or urban housing densities above 4,000m². These sites have an estimated yield of 154 dwellings.

Figure 28: Waiuku Vacant Residential Development Site Assessment

Address	Zone	Minimum Lot Size (m ²)	Gross Land Area (m ²)	Net Land Area (m ²)	Yield
5J Brights Road	MHS	400	4,300	3,000	8
5 Awaroa Stream Drive	MHS	400	4,300	3,000	8
7 Brights Road	MHS	400	4,700	3,300	8
77 Martyn Street	MHS	400	4,900	3,400	9
83A Victoria Avenue	MHS	400	5,200	3,600	9
11A Campbell Street	MHS	400	5,800	4,100	10
48 Kaiwaka Road	MHS	400	6,000	4,200	11
38 Kitchener Road	MHS	400	7,900	5,500	14
25 Fernleigh Avenue	MHS	400	9,200	6,400	16
2 Hamilton Drive	MHS	400	16,100	11,300	28
44 Collingwood Road	MHS	400	18,800	13,200	33
35A Bowen Street	Local Centre	200	8,900	6,200	31
Total			87,200	61,000	154

Source: CoreLogic, Auckland Council, Urban Economics



Figure 29: Location of Development Sites



8. Retirement Village Supply & Demand

8.1. Retirement Village Demand

The following table displays a summary of current and projected retirement village demand across the catchment. The key points to note are:

- There are currently 810 '70 year' plus households in Waiuku and 290 '65 - 69 year' households. Of these an estimated 170 will choose to live in a retirement home.
- Over the past twenty years, this number is expected to double to 340 households as the population ages.
- The Secondary and Tertiary catchments are mainly rural and represent an additional source of demand for Waiuku in the retirement market. There are 1,400 and 1,200 '65 year' plus households respectively in these catchments. This is set to grow to 3,460 and 2,670 '65 year plus' households by 2040.
- There is currently demand for 1,290 retirement village units across the catchment area. There is demand growth for an additional 1,560 retirement village units over the next twenty years.
- In total there is demand for 2,850 retirement village units across the catchment area over the next



twenty years.

Figure 30: Retiree Household Projections 2020 - 2040

		Household Projections									
	Age Bracket	2020	2025	2030	2035	2040	10 year growth	20 year growth	10 year growth per annum	20 year growth per annum	
Waiuku	65 - 69	290	350	390	400	380	100	90	10	10	
	70 Plus	810	1,010	1,200	1,410	1,590	390	780	40	80	
Subtotal		1,100	1,360	1,590	1,810	1,970	490	870	50	90	
Secondary	65 - 69	450	590	680	710	680	230	230	20	20	
	70 Plus	950	1,390	1,840	2,330	2,780	890	1,830	90	180	
Subtotal		1,400	1,980	2,520	3,040	3,460	1,120	2,060	110	200	
Tertiary	65 - 69	370	410	480	500	510	110	140	10	10	
	70 Plus	830	990	1,360	1,770	2,160	530	1,330	50	130	
Subtotal		1,200	1,400	1,840	2,270	2,670	640	1,470	60	140	
Pukekohe	65 - 69	670	810	960	1,130	1,210	290	540	30	50	
	70 Plus	2,380	2,930	3,390	3,950	4,610	1,010	2,230	100	220	
Subtotal		3,050	3,740	4,350	5,080	5,820	1,300	2,770	130	270	
Pokeno and Tuakau	65 - 69	410	460	530	610	660	120	250	10	30	
	70 Plus	960	1,130	1,480	1,850	2,240	520	1,280	50	130	
Subtotal		1,370	1,590	2,010	2,460	2,900	640	1,530	60	160	
Total		8,120	10,070	12,310	14,660	16,820	4,190	8,700	410	860	

Source: Statistics NZ, Urban Economics

Figure 31: Retirement Village Unit Demand Projections 2020 - 2040

		Demand									
	Age Bracket	2020	2025	2030	2035	2040	10 year growth	20 year growth	10 year growth per annum	20 year growth per annum	
Waiuku	65 - 69	10	20	20	20	20	10	10	0	0	
	70 Plus	160	200	240	280	320	80	160	10	20	
Subtotal		170	220	260	300	340	90	170	10	20	
Secondary	65 - 69	20	30	30	40	30	10	10	0	0	
	70 Plus	190	280	370	470	560	180	370	20	40	
Subtotal		210	310	400	510	590	190	380	20	40	
Tertiary	65 - 69	20	20	20	30	30	0	10	0	0	
	70 Plus	170	200	270	350	430	100	260	10	30	
Subtotal		190	220	290	380	460	100	270	10	30	
Pukekohe	65 - 69	30	40	50	60	60	20	30	0	0	
	70 Plus	480	590	680	790	920	200	440	20	40	
Subtotal		510	630	730	850	980	220	470	20	40	
Pokeno and Tuakau	65 - 69	20	20	30	30	30	10	10	0	0	
	70 Plus	190	230	300	370	450	110	260	10	30	
Subtotal		210	250	330	400	480	120	270	10	30	
Total		1,290	1,630	2,010	2,440	2,850	720	1,560	70	160	

Source: Statistics NZ, Urban Economics



8.2. Retirement Village Supply

The following figures display key information on the current supply of retirement village units across the catchment area. The key points to note are:

- There is one retirement village in the Waiuku Catchment - Waiuku Home & Hospital. This village offers hospital and rest home care and has 59 units with 4 current vacancies.
- There is one retirement village in the Secondary Catchment - Glenbrook Rest Home. This village offers rest home care and has 22 units with no current vacancies.
- There are four retirement villages in the Pukekohe catchment with a combined total of 310 units with 2 current vacancies.
- Only two villages in the catchment offer independent living, Possum Bourne Retirement Village and Palms Life Care.
- The total vacancy rate across the catchments is low 2.6%, indicating a shortage of supply relative to demand.
- There are no publicly available plans for new retirement villages or the expansion of existing villages within the catchment area.

Figure 32: Retirement Village Competitor Breakdown

Catchment	Village Name	Care Type	Units	Planned Units	Vacant	Total Units
Waiuku	Waiuku Home & Hospital	Hospital Care	49	0	3	49
		Rest Home Care	10	0	1	10
		Subtotal	59	0	4	59
	Franklin	Dementia Care	18	0	0	18
		Rest Home Care	26	0	0	26
		Subtotal	44	0	0	44
Pukekohe	Palms Life Care	Independent Living	59	0	3	59
		Rest Home & Hospital Care	60	0	5	60
		Subtotal	119	0	8	119
	Lakeside Retirement Lodge	Rest Home Care	30	0	1	30
Pukekohe	Lakeside Retirement Lodge	Subtotal	30	0	1	30
		Care Centre	30	0	0	30
		Rest Home Care	40	0	2	40
	Possum Bourne Retirement Village	Dementia Care	40	0	0	40
		Hospital Care	40	0	0	40
		Independent Living	160	0	0	160
		Subtotal	310	0	2	310
Secondary	Glenbrook Rest Home	Rest Home Care	22	0	0	22
		Subtotal	22	0	0	22
Total			584	0	15	584

Source: Eldernet, Village Websites



Figure 33: Retirement Village Map



8.3. Conclusion

The following figure displays the current and projected supply and demand balance across the catchments. The key points to note are:

- There are currently 60 retirement village units in Waiuku and estimated demand for 170 units. There is therefore unmet demand of 110 units in the current market. This is projected to grow to 280 units over the next twenty years.
- There are currently 20 retirement village units in the Secondary catchment and estimated demand for 210 units. There is therefore unmet demand of 190 units in the current market. This is projected to grow to 570 units over the next twenty years.
- There are currently no retirement village units in the Tertiary catchment and estimated demand for 190 units. There is therefore unmet demand of 190 units in the current market. This is projected to grow to 460 units over the next twenty years.
- There are currently 500 retirement village units in Pukekohe and estimated demand for 510 units. There is therefore unmet demand of 10 units in the current market. This is projected to grow to 480 units over the next twenty years.
- There are currently no retirement village units in Pokeno and Tuakau, and estimated demand for 210 units. There is therefore unmet demand of 210 units in the current market. This is projected to grow to 480 units over the next twenty years.
- Across the whole catchment area there are currently 580 retirement village units and estimated demand for 1,290 units. There is therefore unmet demand of 710 units. This is projected to grow to 2,270 units over the next twenty years.
- There is currently unmet demand for a 300 unit retirement village in Waiuku and demand for a



larger 400 - 500 unit village over the next 5 - 10 years. The proposal site presents a unique opportunity to meet this unmet demand, as required under the NPS-UD.

Figure 34: Retirement Market Supply & Demand Balance

Catchment	Supply 2020	Demand					Supply Surplus/Shortfall				
		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040
Waiuku	60	170	220	260	300	340	-110	-160	-200	-240	-280
Secondary	20	210	310	400	510	590	-190	-290	-380	-490	-570
Tertiary	0	190	220	290	380	460	-190	-220	-290	-380	-460
Pukekohe	500	510	630	730	850	980	-10	-130	-230	-350	-480
Pokeno and Tuakau	0	210	250	330	400	480	-210	-250	-330	-400	-480
Total	580	1,290	1,630	2,010	2,440	2,850	-710	-1,050	-1,430	-1,860	-2,270

Source: Urban Economics, Statistics NZ, Eldernet

9. Benefits of Masterplanned Developments

Enabling large masterplanned developments in Waiuku has a number of notable benefits, most notably:

1. Developers have a market incentive to produce a high-quality development as they need to sell a large number of dwellings over an extended, long term period. By contrast, smaller developments, of 100-200 dwellings, often have a more basic design as there is no requirement for ongoing sales.
2. Large developments often enable a more diverse housing stock, as some buyers are willing to purchase a smaller town/terrace house in order to live in a highly regarded development. This is evident in large developments in Auckland over the past decade, which have started with larger stand-alone homes, and then over time introduced smaller terrace and town houses.
3. The housing design and road layout is better managed over a wider area.

One of the most notable benefits of large masterplanned developments is that they enable a diverse range of housing, in particular, high-density terrace and town houses. This is due to the quality of the environment that can be created with good urban design. Consequently, many buyers choose a terrace or town house in a large masterplanned development, rather than a conventional stand-alone house in a smaller development, even if the price is similar.

This trend is evident in Auckland with the large majority (around three quarters) of terrace houses being built in large masterplanned developments since the AUP became operative, which is perhaps one of the most interesting housing market trends to note at present, particularly in regard to new developments making a significant contribution to the compact city objective. This is shown in the figure below, with 1,150 terrace houses being built in 'greenfield' locations in 2017 and only 240 being built in 'infill' locations.



Figure 35: Dwelling Completions for 2015-2017 by Infill and Greenfield

Typology	2015			2017		
	Greenfield	Infill	Total	Greenfield	Infill	Total
Stand Alone	2,740	1,380	4,120	3,150	1,510	4,660
Terrace	580	60	640	1,150	240	1,390
Apartment	170	340	510	340	650	990
Total	3,490	1,780	5,270	4,640	2,400	7,040
Stand Alone	52%	26%	78%	45%	21%	66%
Terrace	11%	1%	12%	16%	3%	20%
Apartment	3%	6%	10%	5%	9%	14%
Total	66%	34%	100%	66%	34%	100%

Source: Auckland Council, Urban Economics

The proposal is on a large site, and would enable around 390-970 dwellings (refer Figure 38). At this scale it would be a notable development, of a scale similar to the other well-known masterplanned developments. It is anticipated that a significant proportion, in the order of 50% of dwellings in the proposal, would be on smaller lots of around 200 - 250m² (i.e terrace or retirement units). It would also enable a significant additional supply of dwellings in the \$560,000 - \$625,000 price range, which has wider social and economic benefits.

It should be noted that as a general principle, buyers of dwellings near the urban periphery, such as Waiuku, prefer larger houses. Historically, very few terrace or town houses have been built in Waiuku, and other similar places, such as Pokeno, only offer 'large affordable sections'. Given the historic trends, the opportunity for large masterplanned developments is likely to be one of the primary factors that will enable higher density housing in Waiuku over the next 1-2 decades.

The following figure places the proposal within the context of Auckland's largest masterplanned developments. It is also worth noting that these developments have achieved a significant proportion of terrace/town houses and apartments, which represent in the order of 17-55% of all dwellings. This is significantly higher than the regional average and highlights the important of large masterplanned developments in achieving the compact city objective.

Figure 36: Large Development Dwelling Types Consented

Development	Stand Alone	Terrace	Apartm ents	Terrace + Apartments	Total	Stand Alone	Terrace	Apartm ents	Terrace + Apartments
Gulf Harbour	1,720	420	0	420	2,140	80%	20%	0%	20%
Hobsonville Point	670	610	210	820	1,490	45%	41%	14%	55%
Karaka	2,250	410	50	460	2,710	83%	15%	2%	17%
Millwater	1,770	380	50	430	2,200	80%	17%	2%	20%
Flat Bush	6,090	1,210	0	1,210	7,300	83%	17%	0%	17%
Stonefields	770	140	570	710	1,480	52%	9%	39%	48%
Total	13,270	3,170	880	4,050	17,320	77%	18%	5%	23%

Source: Statistics NZ



10. Zoning Options

The following table displays key details about different zones available under the Auckland Unitary Plan. Three zones have been analysed, Single House Zone, Mixed Housing Suburban and Mixed Housing Urban. The key points to note are:

- Single House (SH) zone is the most restrictive zone with a two-storey height limit and a low minimum lot coverage. It also has the largest minimum lot size at 600m². Due to the large lot size, low coverage ratio and low height limit this zone produces the highest priced dwellings per m² of floorspace on average. Integrated Residential development, which is required for provision of a retirement village or medium density terrace development is a discretionary activity in this zone.
- The Mixed Housing Suburban (MHS) zone has a lower minimum lot size and allows a larger maximum building coverage when compared to the SH zone. This zone enables lower priced dwellings and more choice in development outcomes than the SH zone. Integrated Residential development is a restricted discretionary activity in this zone.
- The Mixed Housing Urban (MHU) zone has the lowest minimum lot size of the three zones at 300m². It also allows the largest building coverage and enables an additional floor of building height when compared to the other two zones. This zone provides the most flexibility in development outcomes and is able to provide the most affordable dwellings. Integrated Residential development is a restricted discretionary activity in this zone.

The development scenarios analysed in sections 10 and 11 compare the dwelling yields and impact on the local economy that occurs under each zone.

Figure 37: Residential Zone Comparison Table

Zone	Minimum Lot Size (Sqm)	Maximum Building Coverage	Maximum Building Height (Floors)	Integrated Residential Development Activity Status	Likely Development Outcomes
Single House	600	35%	2	Discretionary	Mainly Stand-alone, low density developments. Large lots and smaller site coverage result in higher prices.
Mixed Housing Suburban	400	40%	2	Restricted Discretionary	Mix of low and medium density development. A larger site coverage and smaller minimum lot size provides potential for lower prices.
Mixed Housing Urban	300	45%	3	Restricted Discretionary	Most flexible zone with the most potential for affordable dwellings. This zone has the greatest flexibility for providing a range of dwelling types and prices to the market. The larger enabled site coverage, lower minimum lot size and higher maximum building height provide more flexibility in development outcomes. Mainly medium density development.

Source: Urban Economics, Auckland Council



11. Enabling a Diverse & Affordable Housing Stock

The following figure displays the indicative lot yield from the site under the three different residential zones analysed. The key points to note are:

- The SH zone yields between 390 - 475 lots with an average lot size of 470m² - 570m². It has the highest average section prices at \$300,000 - \$310,000.
- The MHS zone yields between 590 - 625 lots with an average lot size of 355m² - 375m². It also produces a substantially lower average section price at \$280,000 - \$285,000.
- The MHS zone produces the highest yield at 790 - 970 lots with an average lot size of 230m² - 280m². It also produces the cheapest priced lots at \$265,000 - \$270,000.

Appendix 2 provides a more detailed lot yield for the proposed development.

Figure 38: Indicative Lot Yield of Proposed Development

	10% Terrace, 90% Stand Alone				10% Terrace, 40% Stand Alone, 50% Retirement Village			
	Number of Lots	Average Lot Size (m ²)	Average Section Price (\$000)	Average Dwelling Price (\$000)	Number of Lots	Average Lot Size (m ²)	Average Section Price (\$000)	Average Dwelling Price (\$000)
Single House	390	570	\$310	\$590	475	470	\$300	\$625
Mixed Housing Suburban	590	375	\$285	\$565	685	355	\$280	\$615
Mixed Housing Urban	790	280	\$270	\$560	970	230	\$265	\$580

Source: Urban Economics

12. Kiwibuild Considerations

Housing affordability is an important consideration which the Kiwibuild program seeks to address. The following figure assesses the Mixed Housing Urban zone proposed lot yield supplied under each of the Kiwibuild price caps for different product (e.g. three-bedroom Kiwibuild product is capped at \$650,000 and one-bedroom product is capped at \$500,000). The key points to note are:

- Under the two different development scenarios, the proposal would supply between 57% and 66% of dwellings below the Kiwibuild maximum price cap of \$650,000. This equates to a supply of between 523 and 552 Kiwibuild qualified dwellings.
- Under the two different development scenarios, the proposal would supply between 28% and 35% of dwellings below the two-bedroom price cap of \$600,000. This is notable for lower income and retiree households.



Figure 39: Proposal Kiwibuild Supply

Kiwibuild Price Caps	Mixed Housing Urban			
	10% Terrace, 90% Stand Alone		10% Terrace, 40% Stand Alone, 50% Retirement Village	
	Supply	%	Supply	%
\$500,000	303	38%	210	22%
\$600,000	220	28%	342	35%
\$650,000	523	66%	552	57%

Source: Kiwibuild, Urban Economics

13. Employment Impact

Figure 40 displays the employment impact of the construction of new dwellings under the proposal. The key points to note, for the 10% Terrace / 90% Stand Alone housing option, are:

- The construction of new dwellings is estimated to create 70 - 150 FTE jobs in the construction sector over the life of the project. As the project has a construction period of 11 years, this translates to 7 - 13 FTE jobs per annum.
- The proposed site contains 29 hectares of land classified by Corelogic as dairy farmland. The opportunity cost of the proposal is therefore the jobs in the dairy industry that may be displaced by the conversion of 29 hectares of farmland to housing. The proposal is estimated to displace approximately 1 FTE jobs in the dairy industry². This is equivalent to 8 - 11 FTE jobs over the life of the project.
- The proposal therefore represents a net addition of 6 - 12 FTE jobs per annum over the life of the project. This is an economic benefit.

Figure 40: Employment Impact

Zone	10% Terrace, 90% Stand Alone		10% Terrace, 40% Stand Alone, 50% Retirement Village		
	Full Time Equivelant Workers		Full Time Equivelant Workers		
	Per Annum	Total	Per Annum	Total	
Construction	Mixed Housing Urban	13	150	32	200
	Mixed Housing Suburban	13	105	33	125
	Single House	7	70	26	100
Dairy Farming	Mixed Housing Urban	1	11	1	6
	Mixed Housing Suburban	1	8	1	4
	Single House	1	10	1	4

Source: Urban Economics, Statistics NZ

² This figure is an estimate based on employment and land use numbers in Market Economics report *Economic Aspects of Rural Subdivision*, dated 24 August 2020.



Figure 41 outlines the employment to houses ratio for Waiuku rural town. Some of the key points to note are as below:

- The employment to dwellings ratio in Waiuku of 1.1:1 is above the ratio anticipated in the Auckland Plan 2012 of 1:1 for rural towns. By comparison, the regional average is currently 1.4:1. This indicates that Waiuku has a relatively high degree of employment self-sufficiency,
- Given the increase in employment anticipated in the town and its notable emerging industrial node (70 hectares) the employment to dwellings ratio in Waiuku is expected to increase to 1.8 in 2032 and to 2.3 in 2042. This is substantially higher than the level anticipated in rural towns and reflects the unusually large industrial node.
- An important implication is that Waiuku will require an increase in population to provide efficient access to a local workforce to support this industrial node.

Figure 41: Waiuku Forecast Self-Sufficiency 2022-2042

	2022	2027	2032	2037	2042
Employment	1,192	1,252	1,312	1,372	1,432
Industrial Employment	0	543	1,085	1,628	2,170
Employment Total	1,192	1,795	2,397	3,000	3,602
Houses	1,103	1,223	1,343	1,463	1,583
Ratio	1.1	1.5	1.8	2.0	2.3

Source: Urban Economics, Statistics NZ

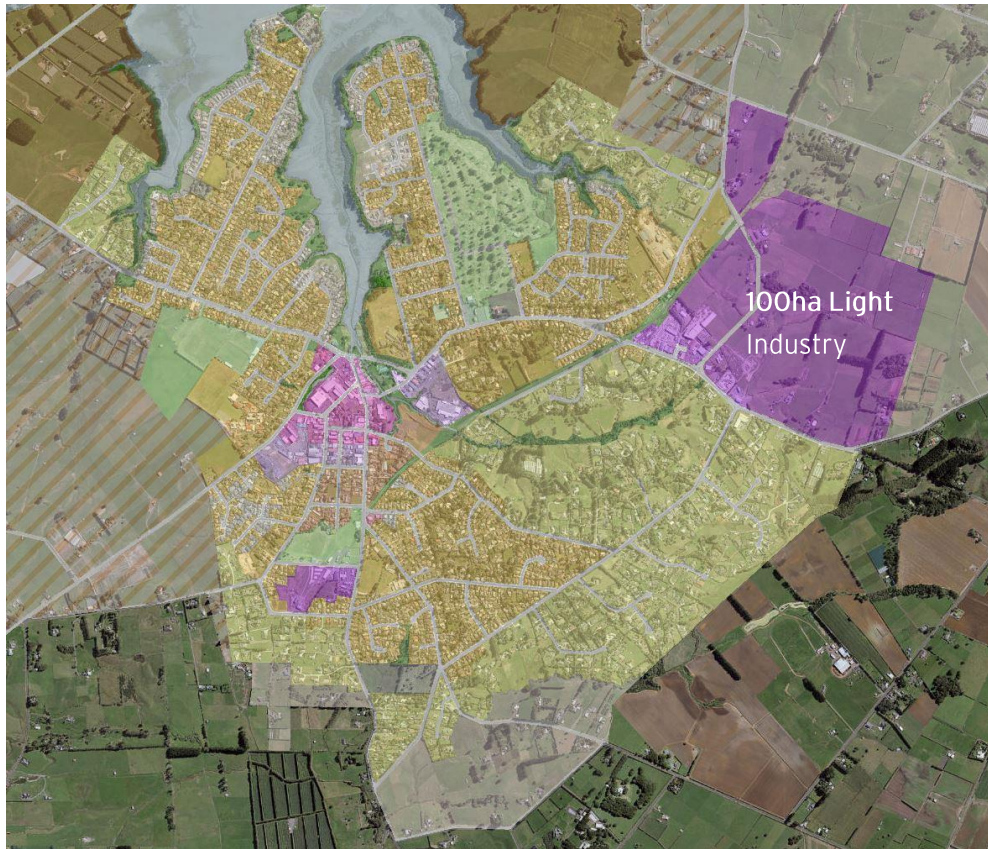
14. Waiuku Industrial Land Capacity

Waiuku has 100 hectares of undeveloped Light Industry zoned land. This is a substantial quantity of land within a sub-regional context, particularly given that the other main centres (Pukekohe, Drury, etc.) have very little remaining industrial land capacity.

Given the shortage of industrial land within the region, this land is likely to be developed in the short term, and would provide a significant increase to the local employment base. A site of 100 hectares would typically enable approximately 1,400 jobs (20 employees per hectare, 70 hectares net). Many of these will be filled by Waiuku residents, and those that prefer to work and live within the local area, which has notable economic benefits in terms of reduces transportation costs.



Figure 42: Waiuku Light Industry Zone Land



Source: Auckland Council

14.1. Industrial Area Case Studies

In addition to the regional employment assessment based on the regional average of circa 20 employees per hectare, it is also useful to prepare estimates based on the local employment densities. The following figures display the location and characteristics of similar industrial areas to Waiuku.

Figure 43 displays details on the industrial areas analysed. Figures 44 - 45 map the industrial areas analysed and figure 46 displays the expected range of employment outcomes in the Waiuku industrial area. Similar industrial areas to the 100ha of vacant industrial land in Waiuku have been chosen to be analyzed. Each of these industrial areas largely provide employment to those who live locally due to their peripheral location in relation to the larger industrial hubs (Mt. Wellington, Manukau City, North Shore etc.).

The key points to note are:

- Silverdale had the highest employee density with an employee count of 3,370 on 57ha of utilised land, equating to an employees per hectare ratio of 84 per hectare.
- Glenbrook has the highest utilised land supply but has the lowest employee density, with an employee count of 1,440 on 356ha of utilised land, equating to an employees per hectare ratio of 6 per hectare. This is due to the land extensive nature of the operation, or to some extent, the



availability of the unutilised land for further development.

- Most industrial areas analyzed achieved employee per hectare ratios of 15 – 50.
- As shown in figure 46, based on the employment per hectare proportion of the case studies above, the Waiuku industrial area can be expected to employ 350 people at the low end, 2,170 at the median, and 4,060 at the high end. This equates to 5 employees per hectare at the low end, 31 at the median, and 58 at the high end. This is similar to the previous estimate of 1,200, however shows the potential range that can be expected.

Figure 43: Local Light Industrial Zone Case Studies

Industrial Area	Land Supply (Ha)	Utilised Land (Ha)	Vacant Land (Ha)	Employee Count	Employees per Ha
Glenbrook	358	356	2	1,440	6
Papakura Industrial	124	101	23	2,370	34
Pukekohe North West	28	24	4	840	51
Drury	258	255	3	1,300	7
Warkworth	110	102	8	1,260	18
Silverdale	108	57	51	3,370	84
Kumeu	57	45	12	1,110	35
Helensville	32	25	7	252	14

Source: Auckland Council, Corelogic, StatsNZ, Urban Economics

Figure 44: Map of Industrial Zone Case Studies South

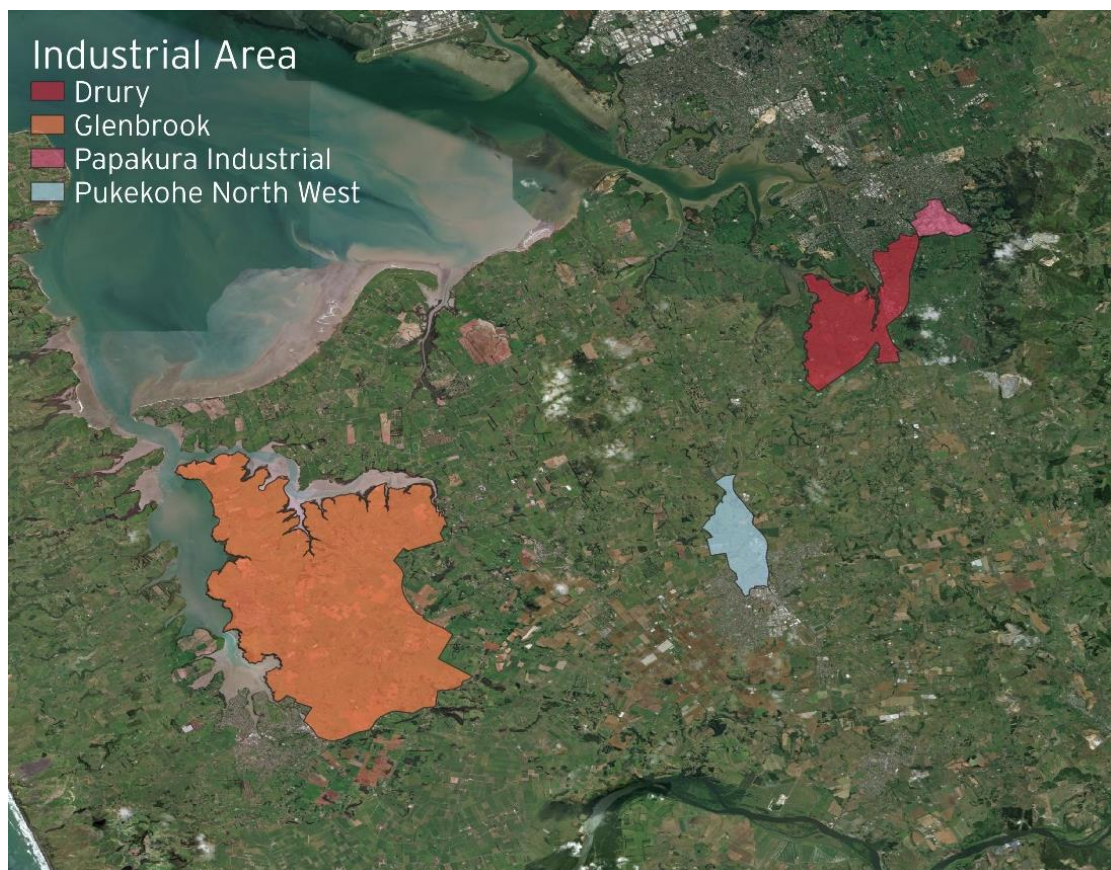




Figure 45: Map of Industrial Zone Case Studies North

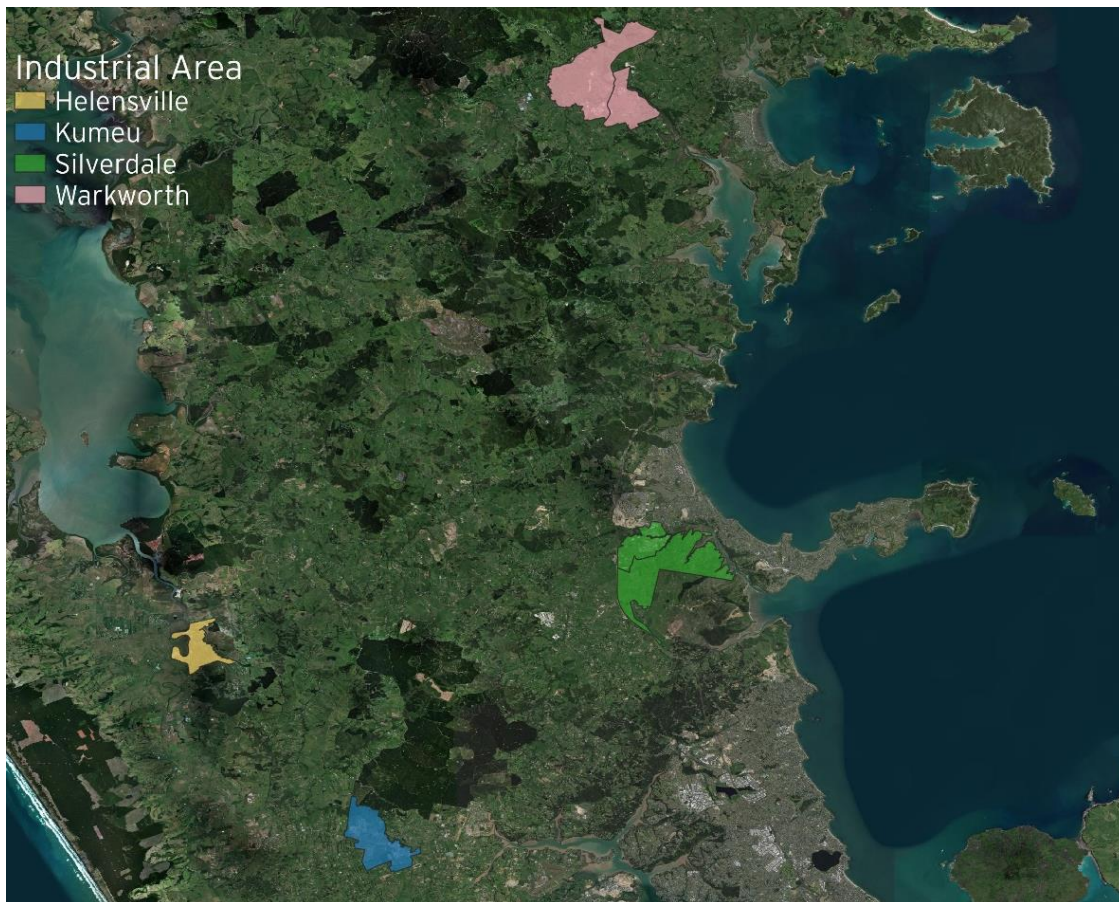


Figure 46: Employment Scenario

Industrial Area	Gross Land Area (Ha)	Net Land Area (Ha)	Employment per Ha			Employment Provided		
			Low	Mid	High	Low	Mid	High
Waiuku	100	70	5	31	58	350	2,170	4,060

Source: Statistics NZ, Urban Economics

15. Rural Land Use Surrounding Waiuku

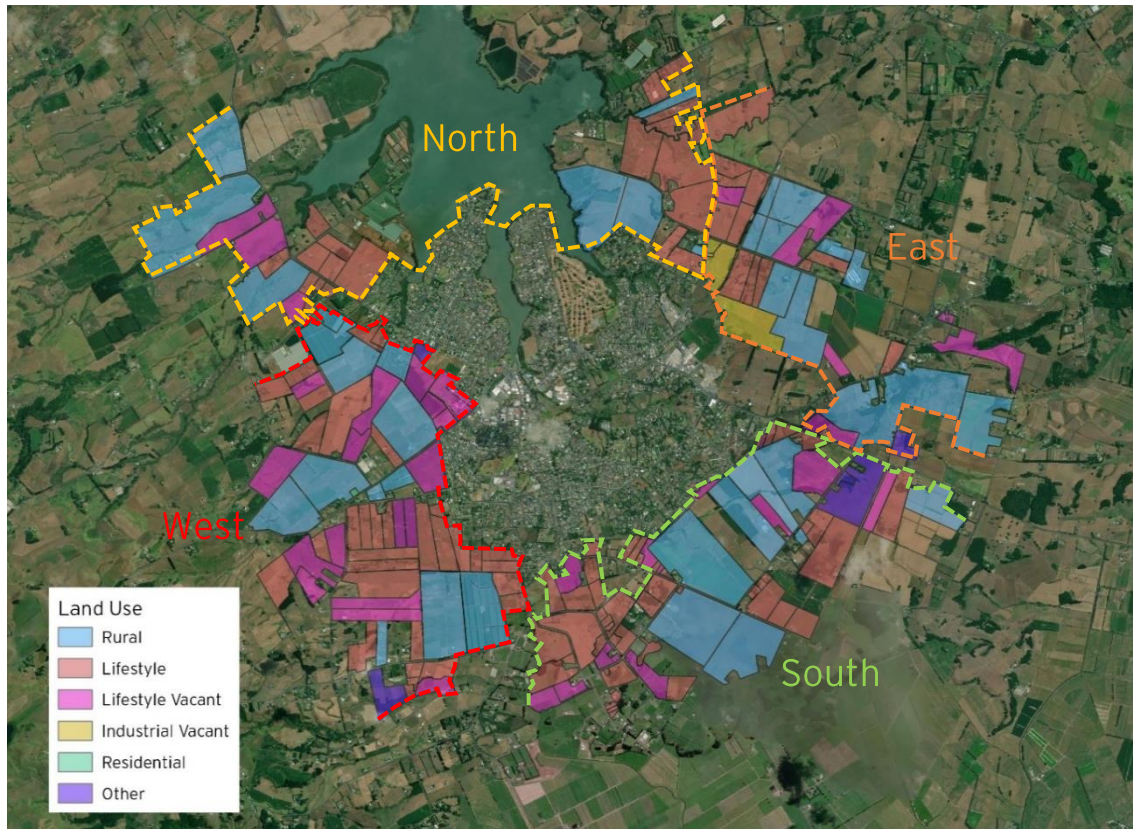
The surrounding rural land uses around Waiuku have been assessed to evaluate the implications for the expansion of the town. Properties within 1.5km's of the town's urban boundary have been evaluated using Core Logic property data, as shown in Figure 47. This data is considered indicative only, as it is difficult to differentiate between rural and lifestyle properties.

Approximately half of the land surrounding the town is in rural use, and approximately half is in lifestyle use. This reduces the opportunity for expansion of the town, as lifestyle blocks are more difficult to aggregate and development for residential use. The proposal is a relatively large rural site that is able to



accommodate a large master planned development on the edge of the town.

Figure 47: Land Uses Surrounding Waiuku (within 1.5km)



Source: Corelogic



Figure 48: Land Uses Adjacent to Waiuku (within 1.5km)

Direction	Land Use	Land Area (Ha)	%	Count	%
North	Rural	147	49%	6	19%
	Lifestyle	152	51%	22	71%
	Other	0.4	0%	3	10%
	Sub-total	300	100%	31	100%
East	Rural	291	62%	13	28%
	Lifestyle	151	32%	28	60%
	Other	30	6%	6	13%
	Sub-total	472	100%	47	100%
South	Rural	185	50%	8	13%
	Lifestyle	183	50%	53	85%
	Other	1	0%	1	2%
	Sub-total	369	100%	62	100%
West	Rural	225	41%	13	18%
	Lifestyle	294	54%	52	71%
	Other	24	4%	8	11%
	Sub-total	543	100%	73	100%
Rural Total		848	50%	40	19%
Lifestyle Total		781	46%	155	73%
Other Total		56	3%	18	8%
Total		1,685	100%	213	100%

Source: Corelogic, Urban Economics

16. Local Economy Impact

16.1. 10% Terrace, 90% Stand Alone Development

The following figure displays the estimated impact of the 10% Terrace, 90% Stand Alone development proposal on the local economy. The key points to note are:

- The proposal would result in the construction of 390 - 790 dwellings over 8 - 11 years, at an estimated total cost of \$108.2 - \$230.8 million. This translates to a total value added per annum figure of \$3.3 - 6.0 million to the construction industry or a present value (PV) of \$21.3 - \$117.2 million.
- After dwellings have been constructed, they provide accommodation services to new residents³.

³ Only the proportion of growth applicable to migration from other areas is included in estimates on the value of accommodation services and household expenditure in order to avoid double counting existing residents. This has been determined through examination of census migration data and reinforced through real estate agent interview answers on buyer origin.



Based on a rental yield of 4% per annum, this is valued at \$9.2 - \$17.8 million per annum once all dwellings are built, or a PV of \$64.4 - \$117.2 million over the next thirty years.

- New residents spend money across a wide array of sectors including but not limited to: retail trade, recreation, health services, utilities and education. The value added to these sectors as a result of the proposal is \$8.1 - \$16.8 million per annum or a PV of \$99.4 - \$192.7 million over the course of thirty years.
- The proposal displaces 24.9 ha of dairy farming land, this carries an estimated value added of \$58,950 per annum, or a PV over 30 years of \$0.9 million.
- The PV of the benefits of the proposal is \$183.3 - \$354.0 million and the PV of the costs of the proposal is \$0.9 million. The net present value (NPV) of the proposal is \$184.2 - \$354.9 million. The economic benefits in other sectors of the economy significantly outweigh the cost to the dairy industry.

Figure 49: Economic Impact of the 10% Terrace, 90% Stand Alone Development proposal

Single House Zone, 10% Terrace 90% Stand Alone Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period
Proposal Benefits	Construction Period	House Construction	\$3.3	\$21.3	9.8
	Ongoing Benefits	Household Expenditure	\$8.1	\$99.4	30
		Accommodation Services	\$9.2	\$64.4	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$184.2	30

Mixed Housing Suburban Zone, 10% Terrace 90% Stand Alone Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period (Years)
Proposal Benefits	Construction Period	House Construction	\$5.8	\$35.9	8.4
	Ongoing Benefits	Household Expenditure	\$12.1	\$156.2	30
		Accommodation Services	\$13.4	\$98.8	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$290.0	30

Mixed Housing Urban Zone, 10% Terrace 90% Stand Alone Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period
Proposal Benefits	Construction Period	House Construction	\$6.0	\$45.8	11.3
	Ongoing Benefits	Household Expenditure	\$16.8	\$192.7	30
		Accommodation Services	\$17.8	\$117.2	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$354.9	30

Source: Statistics NZ, Urban Economics



16.2. 10% Terrace, 40% Stand Alone, 50% Retirement Village Development

The following figure displays the estimated impact of the proposal on the local economy. The key points to note are:

- The proposal would result in the construction of 475 - 970 dwellings over 4 - 6 years, at an estimated total cost of \$155.7 - \$308.6 million. This translates to a total value added per annum figure of \$11.7 - \$15.2 million to the construction industry or a PV of \$38.8 - \$71.7 million.
- After dwellings have been constructed, they provide accommodation services to new residents⁴. Based on a rental yield of 4% per annum, this is valued at \$9.2 - \$17.8 million per annum once all dwellings are built, or a PV of \$64.4 - \$117.2 million over the next thirty years.
- New residents spend money across a wide array of sectors including but not limited to: retail trade, recreation, health services, utilities and education. The value added to these sectors as a result of the proposal is \$9.3 - \$19.6 million per annum or a PV of \$146.1 - \$277.6 million over the course of thirty years.
- The proposal displaces 24.9 ha of dairy farming land, this carries an estimated value added of \$58,950 per annum, or a PV over 30 years of \$0.9 million.
- The PV of the benefits of the proposal is \$273.5 - \$506.8 million and the PV of the costs of the proposal is \$0.9 million. The NPV of the proposal is \$274.4 - \$507.7 million. The economic benefits in other sectors of the economy significantly outweigh the cost to the dairy industry.
- The proposal is able to achieve a shorter construction period than the 10% Terrace, 90% Stand Alone development by meeting untapped demand in the retirement village market. This means that the benefits of the proposal occur earlier as development occurs more quickly. Consequentially, the proposal has a higher NPV across all zone options when compared to the 10% Terrace, 90% Stand Alone development.

⁴ Only the proportion of growth applicable to migration from other areas is included in estimates on the value of accommodation services and household expenditure in order to avoid double counting existing residents. This has been determined through examination of census migration data and reinforced through real estate agent interview answers on buyer origin.



Figure 50: Economic Impact of the 10% Terrace, 40% Stand Alone, 50% Retirement Village Development proposal

Single House Zone, 10% Terrace 40% Stand Alone, 50% Retirement Village Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period
Proposal Benefits	Construction Period	House Construction	\$11.7	\$38.8	3.9
	Ongoing Benefits	Household Expenditure	\$9.3	\$146.1	30
		Accommodation Services	\$9.7	\$90.5	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$274.4	30

Single House Zone, 10% Terrace 40% Stand Alone, 50% Retirement Village Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period (Years)
Proposal Benefits	Construction Period	House Construction	\$15.2	\$49.0	3.8
	Ongoing Benefits	Household Expenditure	\$12.2	\$189.3	30
		Accommodation Services	\$14.5	\$131.7	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$369.1	30

Single House Zone, 10% Terrace 40% Stand Alone, 50% Retirement Village Development Impact			Value Added per Annum (\$M)	Present Value (\$M)	Time Period
Proposal Benefits	Construction Period	House Construction	\$14.8	\$71.7	6.1
	Ongoing Benefits	Household Expenditure	\$19.6	\$277.6	30
		Accommodation Services	\$19.1	\$159.3	30
Proposal Costs	Agricultural	Dairy Farming	\$0.1	\$0.9	30
Net Present Value			-	\$507.7	30

Source: Statistics NZ, Urban Economics

17. Future Housing Scenarios

The following figures examine future housing scenarios for Waiuku for the Current (existing stock), Current + Reasonably Expected Feasible Capacity (REFC), and Current + REFC + Proposal scenarios.

The first is the **Current** scenario (the status quo). Under this scenario only 45% of dwellings are priced at \$600,000 or less.

The second is the **Current + Reasonably Expected Feasible Capacity (REFC)** scenario. This is the scenario that would eventuate under the currently District Plan provisions, which has some capacity for additional housing development. Under this scenario only 41% of dwellings would be priced at \$600,000 or less.

The third is the **Current + REFC + Proposal** scenario. This is the scenario that would occur if the proposed zone is applied to the subject properties. Under this scenario a significant 50% of dwellings would be priced at \$600,000 or less (under the MHS scenario). This would have a wide range of social and economic benefits, most notably there would be more diversity in the housing stock, in terms of size and price, and this would enable more households to meet their housing needs. This is particularly important for the



retirement village sector, which is currently underprovided.

Figure 51: Future Housing Scenarios for Waiuku

Price Bracket (\$)	Current	Current + Reasonably Expected Feasible Capacity (REFC)	Current + REFC + Proposal					
			10% Terrace 90% Stand Alone			10 % Terrace 40 % Stand Alone 50% Retirement Village		
			SH	MHS	MHU	SH	MHS	MHU
Less Than \$300,000	110	110	110	110	110	110	110	110
\$300,000 - \$400,000	150	150	150	180	200	150	150	150
\$400,000 - \$500,000	770	770	810	990	1,020	820	1,010	980
\$500,000 - \$600,000	930	940	1,120	1,160	1,200	1,140	1,270	1,330
\$600,000 - \$700,000	980	1,390	2,060	2,110	2,220	2,110	2,110	2,370
\$700,000 - \$800,000	430	430	530	430	430	540	430	430
\$800,000 - \$900,000	270	270	270	270	270	270	270	270
\$900,000 - \$1,000,000	250	250	250	250	250	250	250	250
\$1,000,000 Plus	440	450	460	460	460	460	460	460
Grand Total	4,330	4,760	5,760	5,960	6,160	5,850	6,060	6,350

Source: Urban Economics, Corelogic, Auckland Council

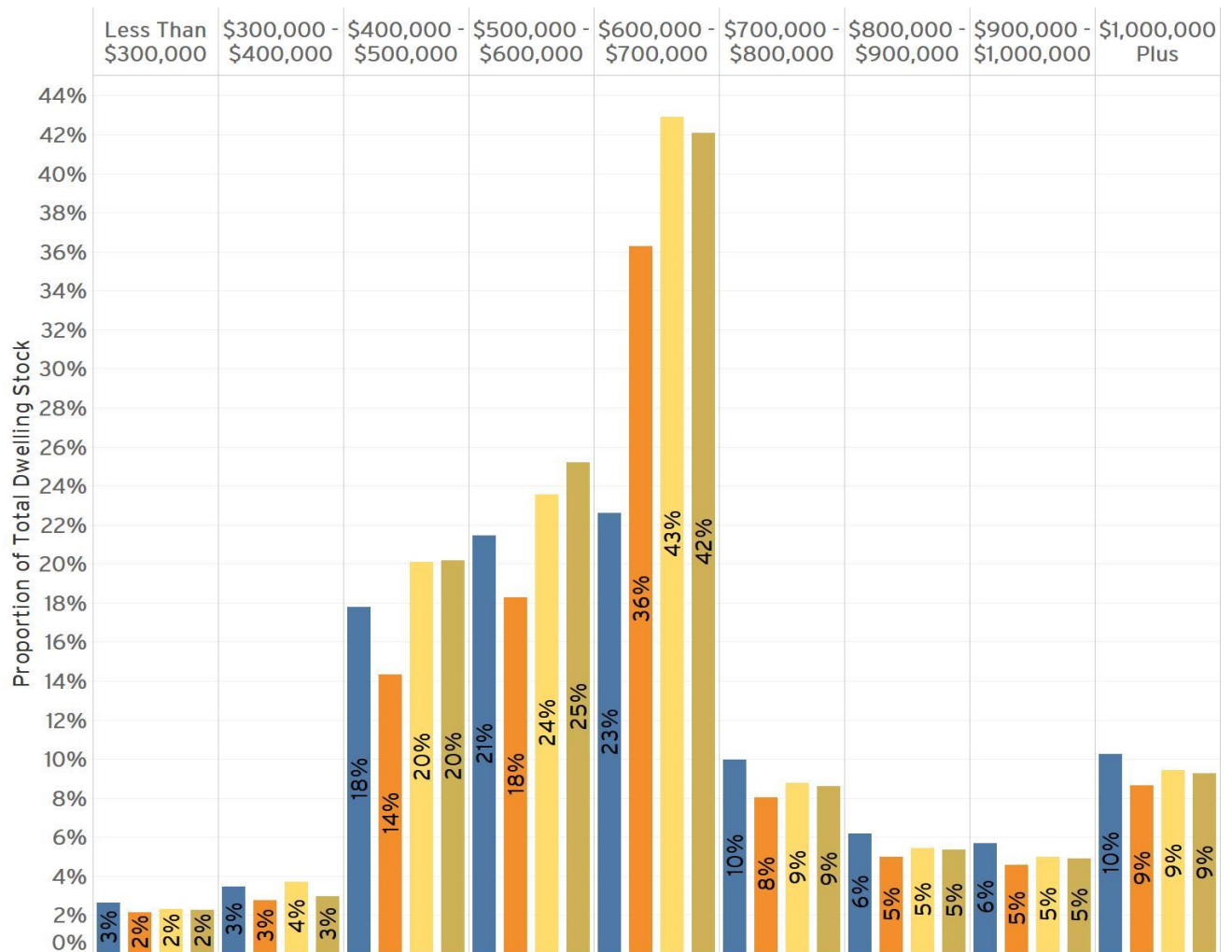
Price Bracket (\$)	Current	Current + Reasonably Expected Feasible Capacity (REFC)	Current + REFC + Proposal					
			10% Terrace 90% Stand Alone			10 % Terrace 40 % Stand Alone 50% Retirement Village		
			SH	MHS	MHU	SH	MHS	MHU
Less Than \$300,000	3%	2%	2%	2%	2%	2%	2%	2%
\$300,000 - \$400,000	3%	3%	3%	4%	4%	3%	3%	3%
\$400,000 - \$500,000	18%	16%	17%	20%	20%	17%	18%	20%
\$500,000 - \$600,000	21%	20%	24%	23%	24%	24%	25%	25%
\$600,000 - \$700,000	23%	29%	44%	43%	43%	44%	45%	42%
\$700,000 - \$800,000	10%	9%	11%	8%	9%	11%	8%	9%
\$800,000 - \$900,000	6%	6%	6%	5%	5%	6%	5%	5%
\$900,000 - \$1,000,000	6%	5%	5%	5%	5%	5%	5%	5%
\$1,000,000 Plus	10%	9%	10%	9%	9%	10%	9%	9%
Grand Total	100%	100%	100%	100%	100%	100%	100%	100%

Source: Urban Economics, Corelogic, Auckland Council

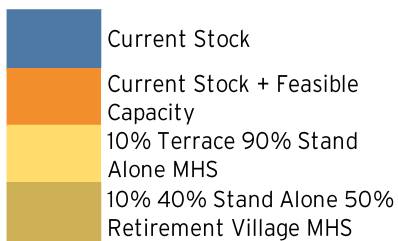


Figure 52 provides a graphical representation of the three scenarios. It is worth noting the increase in housing priced under \$600,000 for the proposal.

Figure 52: Future Housing Scenarios for Mixed Housing Suburban, Waiuku



Source: Urban Economics, Corelogic, Auckland Council





18. Infrastructure Investment

This section analyses the feasibility of Watercare's planned investments in infrastructure in Waiuku. This includes a sub-regional wastewater treatment plant and an upgrade of the water supply network in Waiuku to accommodate growth, with an estimated cost of \$209m.

The net present value (NPV) calculation incorporates:

- Urban Economics' capacity scenarios based on current zonings, medium density residential zone (MDRZ), and MDRZ plus proposal
- Population Growth Scenarios as estimated by Urban Economics', Watercare, Auckland Council and Statistics NZ.

The NPV modelling applies a discount rate of 5% per annum when estimating annual revenues from usage charges, fixed fees and one-off connection charges. Detailed NPV tables can be found in Appendix 3. Figure 53 illustrates the NPV of the infrastructure investment under different capacity and population growth scenarios.

The key points to note are:

- The NPV for Watercare's planned investment in infrastructure is negative across all capacity and growth scenarios over a 30-year period. This is predominantly a result of insufficient potential supply of residential dwellings in Waiuku.
- Under the UE Current Zoning capacity scenario and population growth projections, the reasonably expected to be realised (RER) capacity in Waiuku amounts to 309 dwellings, resulting in the total discounted revenue of \$61.8m and a NPV -\$147.5m in 2051. In all other growth scenarios, total discounted revenue is lower, resulting in higher negative NPV values.
- Under the UE MDRZ capacity scenario and population growth projections, RER capacity in Waiuku amounts to 536 dwellings, resulting in the total discounted revenue of \$69.1m and a NPV -\$140.2m in 2051. In all other growth scenarios, total discounted revenue is lower, resulting in higher negative NPV values.
- Under the UE MDRZ + Proposal capacity scenario and population growth projections, RER capacity in Waiuku amounts to 1,446 dwellings, resulting in the total discounted revenue of \$91.7m and a NPV -\$117.6m in 2051. In all other growth scenarios, total discounted revenue is lower, resulting in higher negative NPV values.
- Of the three capacity scenarios assessed in this study, "UE MDRZ + Proposal" is the optimal economic outcome due to better total discounted revenue and lower negative NPV values.
- This indicates that the significant infrastructure investment Watercare has planned for Waiuku, of \$209m over the next two decades, will not achieve sufficient revenue to cover its cost under either the current or proposed scenarios. The main reason for this is there is insufficient capacity remaining, of only 536 dwellings, however the planned investment would require several thousand



new dwellings to be built to achieve sufficient revenue pay for the investment. It appears to be the case that Watercare’s planned infrastructure investment relies on the capacity estimates prepared by Auckland Councils RIMU team, however as discussed below, these capacity estimates do not appear to be a reliable basis for understanding capacity for new dwellings to be built in Waiuku.

Figure 53: NPV of Infrastructure Project Under Capacity and Population Growth Scenario

Population Growth Scenario	Capacity Scenario											
	UE Current Zoning				UE MDRZ				UE MDRZ+ Proposal			
	Dwellings	Revenue	Cost	Net Present Value	Dwellings	Revenue	Cost	Net Present Value	Dwellings	Revenue	Cost	Net Present Value
2051	\$m			2051	\$m			2051	\$m			
Urban Economics	3,756	\$61.8	\$209.3	-\$147.5	\$3,983	\$69.1	\$209.3	-\$140.2	\$4,893	\$91.7	\$209.3	-\$117.6
Watercare	3,772	\$61.4	\$209.3	-\$147.9	\$3,999	\$67.7	\$209.3	-\$141.6	\$4,909	\$83.2	\$209.3	-\$126.1
Auckland Council	3,601	\$58.0	\$209.3	-\$151.3	\$3,828	\$62.9	\$209.3	-\$146.4	\$4,423	\$69.6	\$209.3	-\$139.7
Statistics NZ	3,652	\$59.6	\$209.3	-\$149.7	\$3,879	\$65.7	\$209.3	-\$143.6	\$4,789	\$80.4	\$209.3	-\$128.9

Source: Urban Economics

Revenue: Total Discounted Revenue

Cost: Infrastructure Project Cost

18.1. Population Growth Scenarios Summary

The following figure displays Urban Economics, Watercare and Auckland Council population growth scenarios that are applied in the above infrastructure Investment analysis. The key points to note are:

- Capacity provided by Auckland Council in the ‘Waiuku - Planning Scoping Report’ does not appear to consider the commercial feasible or reasonably expected to be realised capacity (and only consider the plan enabled capacity) and should not be relied upon as a basis for planning or infrastructure investment decision (refer to NPS-UD). This report estimates infill capacity for 1,550 dwellings and redevelopment capacity for over 8,000 dwellings. A site-by-site commercial feasibility assessment and consideration of demand for various dwellings by type and size would need to be provided by Auckland Council to enable these estimates to be verified, however when compared to the Urban Economics estimates, they do not appear to withstand scrutiny.
- Watercare have not provided an estimate of the capacity in Waiuku however have provided a demand estimate. The population growth is estimated to be 16,000 by 2050 as outlined in a letter addressed to Sean Finnigan on 15 December 2021. It is expected that in future consultation, the above analysis can be tested against Watercare capacity figures, once known.
- Therefore, the infrastructure investment analysis relied on Urban Economics reasonably expected to be realised capacity figures in determining which scenario provides the optimal economic outcome.



Figure 54: Population Growth Scenario Key Information

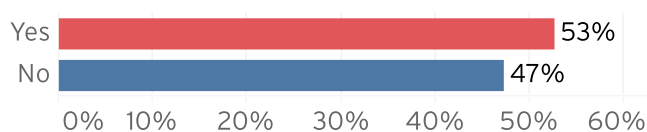
	Feasible Capacity	Reasonably Expected to be Realised	Demand p.a. (including 20% Buffer)	Years of Demand	Comments
Urban Economics (Current AUP Provisions)	810	309	145	2.1	Urban Economics have estimated reasonably expected to be realised capacity based on the current zone provisions to be 309 dwellings. Based on the estimated demand of 145 dwellings p.a., this equates to 2.1 years of demand.
Urban Economics (Medium Density Residential Provisions)	1,541	536	145	3.7	Urban Economics have estimated reasonably expected to be realised capacity based on the provisions of the latest RMA Amendment Bill 2021, which increases capacity to 536 dwellings. At a demand of 145 dwellings p.a., this equates to 3.7 years of demand.
Urban Economics (Medium Density Residential Provisions Plus Proposal)	1,541	1446	145	10.0	Urban Economics have estimated reasonably expected to be realised capacity based on the provisions of the latest RMA Amendment Bill 2021 plus proposal, which increases capacity to 1446 dwellings. At a demand of 145 dwellings p.a., this equates to 10 years of demand.
Auckland Council	1,550	-	39	-	Auckland Council has estimated the infill capacity for Waiuku to be 1,550*, however it is unclear if this capacity is reasonably expected to be realised. Without confirmation of this, capacity cannot be relied upon for our analysis of the NPV of the South West Wastewater project. It is unlikely plan enabled feasible capacity is completely realised due to commercial limitations and possible land banking. *Source: Waiuku - Planning Scoping Study 2020
Watercare	-	-	67	-	Watercare have not considered feasible capacity in Waiuku, and rely on their estimated population growth estimates to support the project (16,000 by 2050*). An estimate of reasonably expected to be realised capacity is required to determine if this population is supportable. *Source: Letter addressed to Sean Finnigan, dated 15 December 2021.

Source: Urban Economics, Auckland Council, Watercare

19. Aucklander Relocation Survey

Urban Economics commissioned a survey⁵ to identify the relocation intentions of Aucklanders. Respondents were asked if they had considered leaving Auckland in the past 2 years. Overall, 53% of people indicated they are considering leaving Auckland.

Figure 55: Have You Considered Leaving Auckland in the Past Two Years?



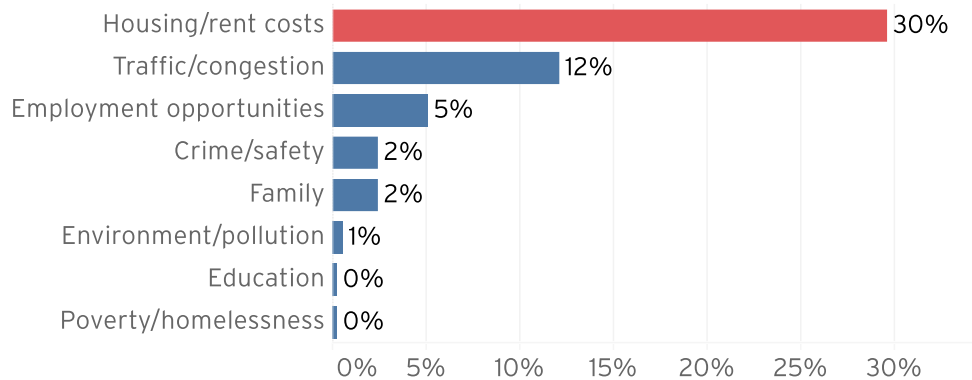
Source: Research Now, Urban Economics

Respondents were then asked about the main reason why they are considering leaving Auckland. Of all Aucklanders, 30% are considering leaving due to high housing/rent costs. The two other main reasons for considering leaving are traffic/congestion (12%) and employment opportunities (5%).

⁵ Survey undertaken by Research Now Ltd in July 2018 (419 respondents).



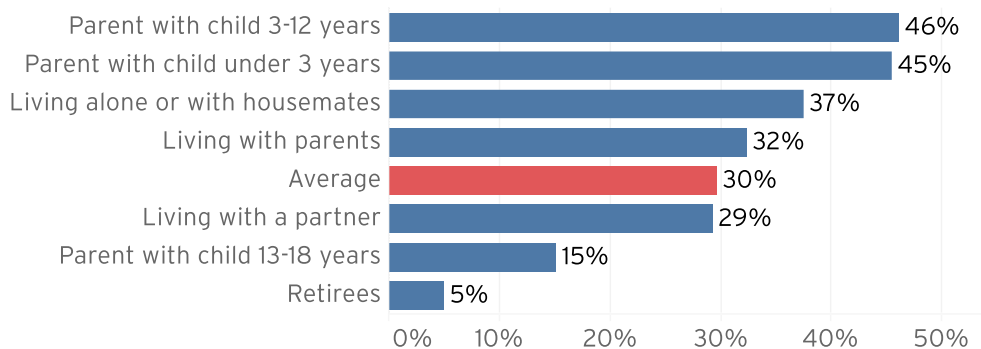
Figure 56: What is the Main Reason for Considering Leaving Auckland



Source: Research Now, Urban Economics

Figure 57 provides a closer look at the types of households considering leaving Auckland as a result of high housing/rent costs. It is most notable that nearly half of all young families are considering leaving as a result of high housing/rent costs.

Figure 57: Household Types Considering Leaving Auckland Due to House Prices



Source: Research Now, Urban Economics

The recent exodus of Aucklanders, combined with the results of this survey and the trends seen in similar cities to Auckland overseas, indicate that there will be a continued exodus from Aucklanders to the regions driven by a lack of affordable housing in Auckland.



20. Economic Impact of Relocation Inefficiencies

Recent work in the United States has found that high housing costs in highly productive cities (in particular New York, San Jose and San Francisco) has reduced GDP by 9.5% over the 1964 - 2015 period⁶. The practical implication of these high housing costs is that less American workers are able to access highly productive cities instead opting to locate in lower cost, less productive centres. While a similar study has not been done in the New Zealand context, the large net internal migration outflow from Auckland analyzed in section 5.2 and high housing costs being identified as the number one reason people consider leaving Auckland, provide a strong indication that a similar situation is occurring in New Zealand. If Auckland is unable to provide affordable housing to the market then a large reduction in national GDP may occur. This is a significant economic cost.

21. NPS-UD

The key provisions of the NPS-UD that relates to efficient residential land markets is as follows:

NPS-UD: *"Objective 2: Planning decisions improve housing affordability by supporting competitive land and development markets."*

"Policy 1: Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum: have or enable a variety of homes that:

(i) meet the needs, in terms of type, price, and location, of different households..."

"Policy 2: Tier 1, 2, and 3 local authorities, at all times, provide at least sufficient development capacity to meet expected demand for housing and for business land over the short term [1 to 3 years], medium term [3 to 10 years], and long term. [11 to 30 years]"

"Policy 8: Local authority decisions affecting urban environments are responsive to plan changes that would add significantly to development capacity and contribute to well functioning urban environments"

The following figure compares the estimated capacity for housing with the estimated demand for housing across the short, medium and long term. The key points to note are:

- Dwelling demand in Waiuku is expected to be 145 dwellings per annum including 20% buffer.
- Under the current zoning, the reasonably expected to be realised (RER) capacity is estimated to be 309 dwellings, suppling 2.1 years of capacity.
- Under the medium density residential zone (MDRZ), the RER capacity is estimated to be 536 dwellings, supplying 3.7 years of capacity.
- Under the MDRZ plus proposal, the RER capacity is estimated to be 1,446 dwellings, suppling 10.0 years of capacity. While the NPS-UD requirements in the long term are still not met, the proposal

⁶ Hsieh, Chang-Tai and Moretti, Enrico, "Why Do Cities Matter? Local Growth and Aggregate Growth" (2015). Kreisman Working Paper Series in Housing Law and Policy. 36



enables Waiuku to meet its medium-term requirements.

- There is no FUZ land in Waiuku and no additional capacity is outlined in the Auckland 2050 Plan. The long-term capacity therefore is equivalent to the medium-term capacity.
- It is the responsibility of the Council to define 'significant development capacity'. This has not yet been done and it is understood that the Council is still working on proposed new policy and plan changes to give effect to the NPS-UD.
- The proposal represents a significant development. If an area is unable to meet the requirements of Policy 1 then developments that enable this policy to be met should be considered significant. The proposal would result in the provision of considerable affordable housing in the \$400,000 - \$500,000 and \$500,000 - \$600,000, which is currently undersupplied. Under the AUP as it stands, these brackets will remain undersupplied.

Figure 58: NPS-UD Considerations

UE Current Zoning		Value	
Dwelling Capacity	Infill 'Reasonably Expected' Capacity	109	
	Greenfield 'Reasonably Expected' Capacity	200	
Total Capacity		309	
Demand per annum (including 20% buffer)		145	
Years Supply		2.1	
NPS-UD	Land Provision Requirements	Short (0-3 year)	Met
		Medium (3-10 year)	Not Met
		Long (10-30 year)	Not Met
UE Medium Density Residential Zone (MDRZ)			
Dwelling Capacity	Infill 'Reasonably Expected' Capacity	260	
	Greenfield 'Reasonably Expected' Capacity	276	
Total Capacity		536	
Demand per annum (including 20% buffer)		145	
Years Supply		3.7	
NPS-UD	Land Provision Requirements	Short (0-3 year)	Met
		Medium (3-10 year)	Not Met
		Long (10-30 year)	Not Met
UE MRDZ+Proposal			
Dwelling Capacity	Infill 'Reasonably Expected' Capacity	260	
	Greenfield 'Reasonably Expected' Capacity	276	
	Proposal	910	
Total Capacity		1,446	
Demand per annum (including 20% buffer)		145	
Years Supply		10.0	
NPS-UD	Land Provision Requirements	Short (0-3 year)	Met
		Medium (3-10 year)	Met
		Long (10-30 year)	Not Met

Source: Urban Economics, Auckland Unitary Plan



22. Summary of Economic Costs and Benefits

The following costs and benefits have been identified in this report:

- The proposal would enable an efficient housing market. Currently Waiuku has a shortage of land to meet residential demand. The proposal would enable sufficient years supply to meet the market. This increases market efficiency. This is an economic benefit.
- The proposal would enable affordable housing. The proposal supplies a significant number of dwellings below \$600,000. Enabling dwellings to be constructed below this price point, enables supply to meet demand. This creates a more efficient market, and affordable housing that suits people's preferences can be supplied. This is a significant economic benefit.
- The proposal would enable additional housing diversity. By enabling more diversity in housing choices, the market is more easily able to meet people's individual preferences for housing. This is an economic benefit.
- The proposal would produce additional employment opportunities. The proposal produces between 70 - 200 FTE jobs per annum over the life of the project. This is a significant economic benefit.
- The proposal would have a positive impact on the local economy. The proposal has a net present value of \$184.2 - \$507.7 million with regards to the impact of the proposal on the value-added portion of local GDP. This is a significant economic benefit.
- The proposal would displace a small amount of dairy farming activity but considering the significant benefits, this is a very small economic cost.
- There is an obvious tension between increasing demand for housing and the correspondingly lack of supply and the rezoning of rural land for residential growth.
- New Zealand has the greatest quantum of food production per person in the OECD but also has one of the most unaffordable house markets in the OECD ranking fifth out of thirty-seven countries, and with a 27% increase in the median house price in Auckland in the 12 months from May 2020 - May 2021.
- While the importance of food production is accepted, there needs to be a balanced wider acknowledgment of the decreasing ability of Auckland to affordably house its residents. Unaffordable housing creates significant adverse social outcomes, economic costs, and negatively affects personal wellbeing and health and safety.
- With such high levels of housing unaffordability in Auckland, it is considered that the benefits from providing more affordable housing choices outweighs the lost food production. This is particularly relevant given the recent housing valuations (2022) have shown a decline in the number of affordable houses in Auckland.

23. Conclusion

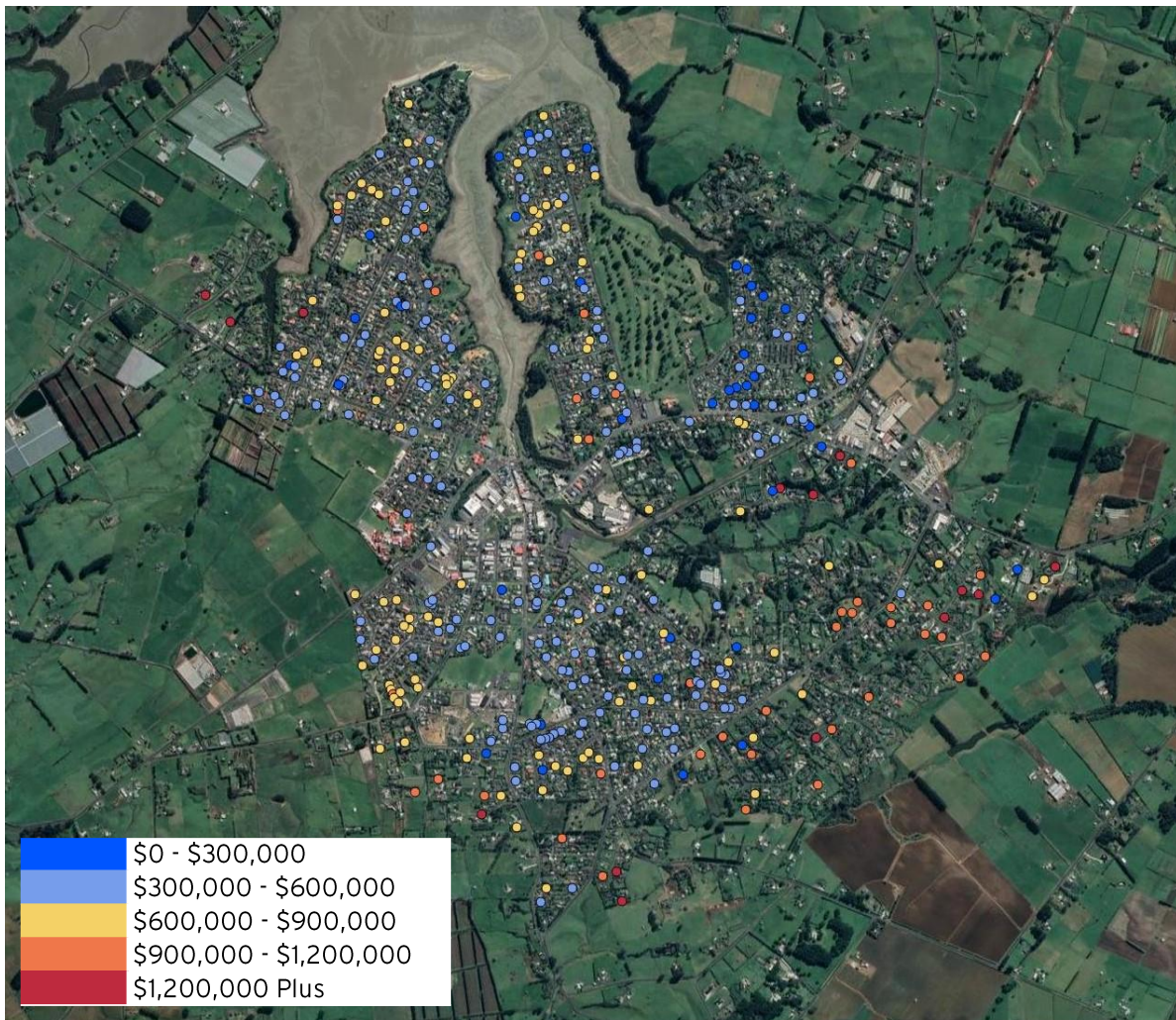
The proposal has economic benefits that outweigh the economic costs and is recommended for approval.



24. Appendix 1: Recent Sales

Figures 59-66 show the price of recent residential sales for urban areas across the catchment. Most properties in Waiuku sold for \$400,000 - \$700,000. With higher priced properties along the coast and in the form of larger lifestyle blocks on the periphery.

Figure 59: Recent Sales by Price, Waiuku, Feb 2019 - Feb 2021

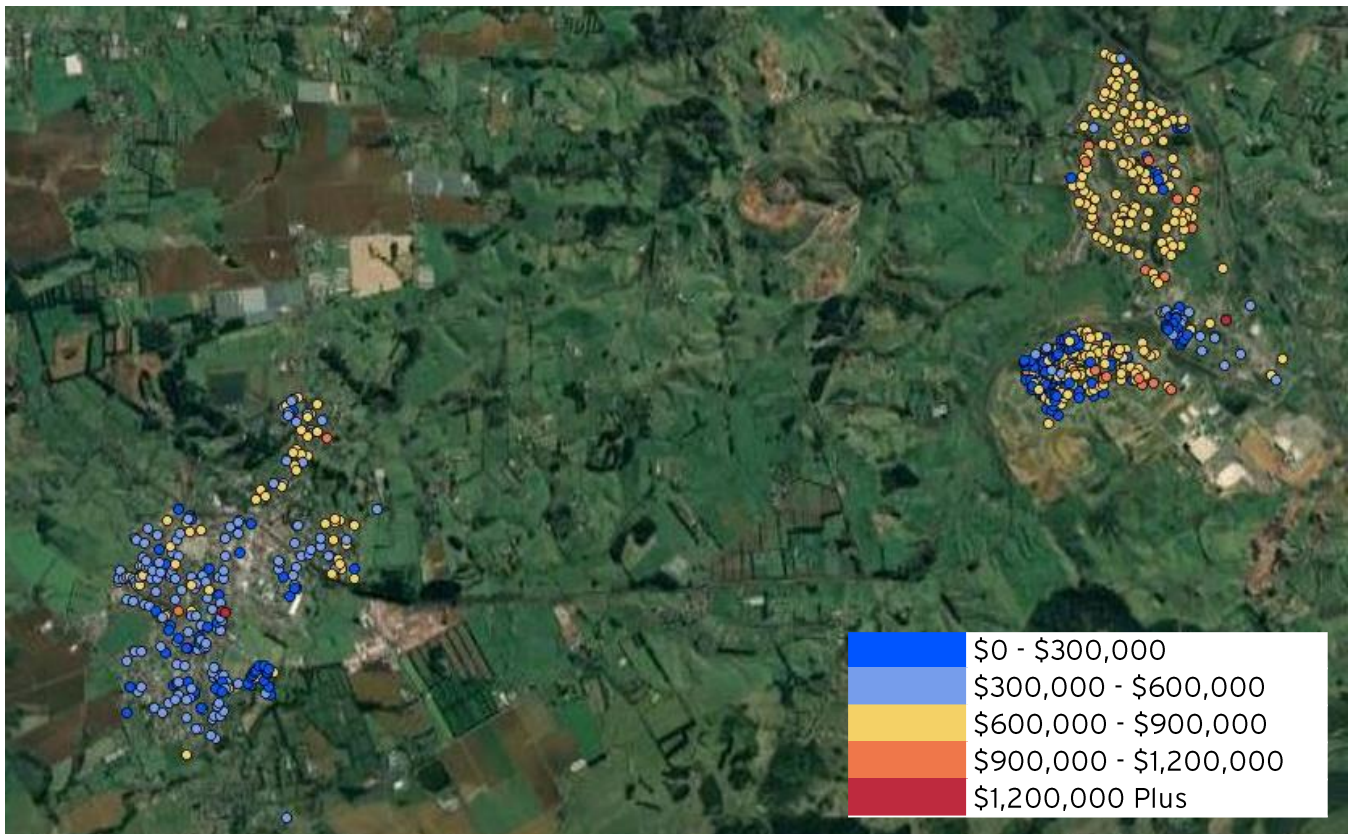


Source: Corelogic



Most properties in Tuakau sold for \$300,000 - \$600,000 and most properties in Pokeno sold for \$600,000 - \$900,000. Sections in new subdivisions sold in the \$0 - \$300,000 range in both towns.

Figure 60: Recent Sales by Price, Pokeno and Tuakau, Feb 2019 - Feb 2021

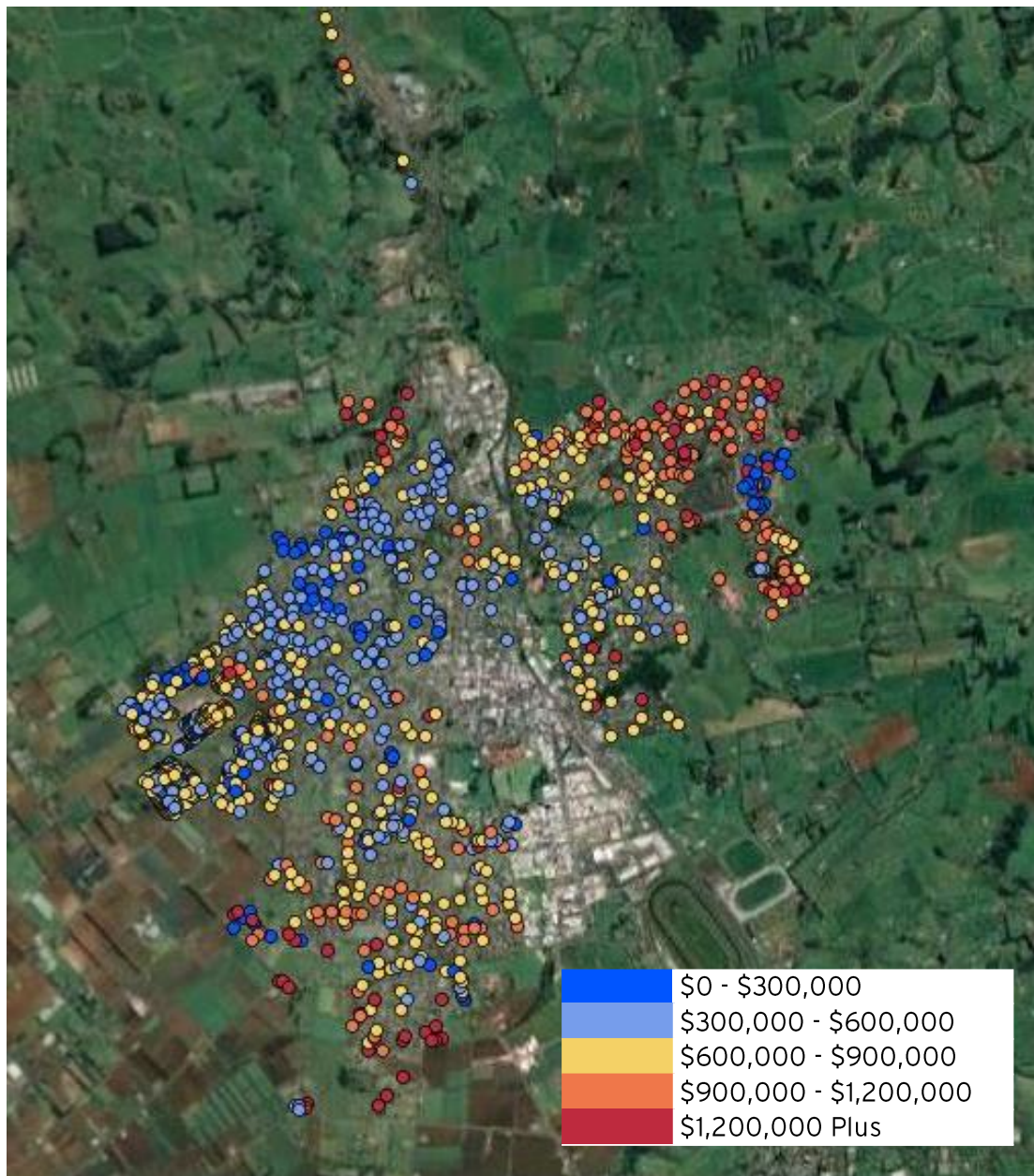


Source: Corelogic



Most properties in Pukekohe sold for between \$300,000 - \$1,200,000. With most sales in the \$300,000 - \$600,000 bracket occurring in the north-west and sales in the \$600,000 - \$900,000 bracket occurring in the south, east and south-west. Sales above \$900,000 were mostly clustered in new development areas in the north-east and south.

Figure 61: Recent Sales by Price, Pukekohe, Feb 2019 - Feb 2021



Source: Corelogic



Figure 62: Recent Sales in Waiuku by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	150	830	3	80	0	1	130	620	4
\$200,000 - \$300,000	180	1,170	3	-	-	-	180	1,170	3
\$300,000 - \$400,000	120	950	6	90	0	7	100	440	13
\$400,000 - \$500,000	100	470	44	100	0	25	100	300	69
\$500,000 - \$600,000	110	650	93	120	0	6	110	610	99
\$600,000 - \$700,000	150	820	125	150	680	4	150	820	129
\$700,000 - \$800,000	190	1,270	60	200	3,030	1	190	1,270	60
\$800,000 - \$900,000	210	2,430	23	-	-	-	210	2,460	24
\$900,000 - \$1,000,000	230	3,210	18	-	-	-	230	3,210	18
\$1,000,000 - \$1,100,000	230	4,140	7	-	-	-	220	3,980	8
\$1,100,000 - \$1,200,000	290	3,060	4	190	2,830	1	290	3,060	4
\$1,200,000 - \$1,300,000	320	2,790	3	-	-	-	320	2,790	3
\$1,300,000 - \$1,400,000	340	2,640	2	-	-	-	340	2,640	2
\$1,400,000 - \$1,500,000	440	4,010	2	-	-	-	440	4,010	2
Total	160	1,140	393	110	190	45	150	1,040	438

Source: Corelogic

Figure 63: Recent Sales in the Secondary and Tertiary Catchments by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	-	-	-	-	-	-	-	-	-
\$200,000 - \$300,000	130	640	3	-	-	-	130	640	3
\$300,000 - \$400,000	120	1,070	6	-	-	-	120	1,070	6
\$400,000 - \$500,000	120	1,230	7	-	-	-	120	1,230	7
\$500,000 - \$600,000	90	980	24	110	0	3	90	870	27
\$600,000 - \$700,000	120	850	52	-	-	-	120	830	53
\$700,000 - \$800,000	150	870	50	-	-	-	150	870	50
\$800,000 - \$900,000	180	1,000	19	-	-	-	180	1,000	19
\$900,000 - \$1,000,000	200	1,070	28	-	-	-	200	1,070	28
\$1,000,000 - \$1,100,000	220	1,460	9	-	-	-	220	1,460	9
\$1,100,000 - \$1,200,000	290	2,170	7	-	-	-	290	2,170	7
\$1,200,000 - \$1,300,000	230	2,440	8	-	-	-	230	2,440	8
\$1,300,000 - \$1,400,000	260	2,350	6	-	-	-	260	2,350	6
\$1,400,000 - \$1,500,000	310	2,660	5	-	-	-	310	2,660	5
\$1,500,000 Plus	340	1,850	4	-	-	-	340	1,850	4
Total	160	1,140	228	110	0	3	160	1,120	232

Source: Corelogic



Figure 64: Recent Sales in Pukekohe by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Apartment			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	140	850	1	90	0	1	-	-	-	110	420	2
\$200,000 - \$300,000	130	370	5	70	0	6	-	-	-	140	350	5
\$300,000 - \$400,000	140	570	13	90	40	23	60	0	1	150	490	20
\$400,000 - \$500,000	100	440	53	110	90	50	80	0	2	110	390	78
\$500,000 - \$600,000	110	420	136	130	100	38	70	0	4	110	330	190
\$600,000 - \$700,000	130	530	320	130	150	8	-	-	-	130	470	358
\$700,000 - \$800,000	170	600	201	170	240	1	-	-	-	170	550	209
\$800,000 - \$900,000	200	750	115	-	-	-	-	-	-	200	740	116
\$900,000 - \$1,000,000	220	810	63	-	-	-	-	-	-	230	810	63
\$1,000,000 - \$1,100,000	250	870	25	-	-	-	-	-	-	250	840	25
\$1,100,000 - \$1,200,000	270	970	13	-	-	-	-	-	-	270	960	13
\$1,200,000 - \$1,300,000	280	1,510	13	-	-	-	-	-	-	280	1,470	13
\$1,300,000 - \$1,400,000	260	1,460	8	-	-	-	-	-	-	260	1,420	8
\$1,400,000 - \$1,500,000	290	1,610	8	-	-	-	-	-	-	290	1,610	8
\$1,500,000 Plus	330	1,990	10	-	-	-	-	-	-	260	1,460	10
Total	160	630	984	110	90	127	70	0	7	160	550	1,118

Source: Corelogic

Figure 65: Recent Sales in Pokeno by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	190	600	3	-	-	-	190	600	3
\$200,000 - \$300,000	160	530	21	-	-	-	160	530	21
\$300,000 - \$400,000	170	580	2	-	-	-	170	580	2
\$400,000 - \$500,000	140	620	3	-	-	-	140	390	6
\$500,000 - \$600,000	160	670	43	140	160	3	160	670	43
\$600,000 - \$700,000	190	640	135	-	-	-	190	640	135
\$700,000 - \$800,000	200	730	32	-	-	-	200	730	32
\$800,000 - \$900,000	250	890	4	-	-	-	250	890	4
\$900,000 - \$1,000,000	130	1,530	1	-	-	-	130	1,530	1
Total	180	660	244	140	160	3	180	650	247

Source: Corelogic

Figure 66: Recent Sales in Tuakau by Type and Price, Feb 2019 - Feb 2021

Price Bracket	Stand Alone			Terrace			Total		
	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales	Floor Area (m ²)	Land Area (m ²)	Total Sales
Less than \$200,000	150	720	3	-	-	-	150	720	3
\$200,000 - \$300,000	160	450	2	-	-	-	160	450	2
\$300,000 - \$400,000	110	580	5	70	0	2	100	410	7
\$400,000 - \$500,000	100	570	32	80	40	6	90	490	38
\$500,000 - \$600,000	120	580	91	130	230	12	120	540	103
\$600,000 - \$700,000	150	720	64	220	0	1	150	710	65
\$700,000 - \$800,000	200	900	24	-	-	-	200	900	24
\$800,000 - \$900,000	260	1,380	5	-	-	-	260	1,380	5
\$900,000 - \$1,000,000	-	-	-	-	-	-	-	-	-
\$1,000,000 - \$1,100,000	-	-	-	-	-	-	-	-	-
\$1,100,000 - \$1,200,000	120	380	2	-	-	-	120	380	2
Total	140	670	228	110	140	21	130	620	249

Source: Corelogic



25. Appendix 2: Proposed Development Lot Yield

		Dwelling Type	Land Area (m ²)	Floor Area (m ²)	Total Lots	Lot Price (\$)	Dwelling Price (\$)
10% Terrace, 90% Stand Alone	Single House	Terrace	300	80	20	274,000	434,000
			300	100	20	274,000	474,000
		Stand Alone	600	100	140	316,000	516,000
			600	150	110	316,000	616,000
			600	200	100	316,000	716,000
	Total	570	140	390	310,000	590,000	
	Mixed Housing Suburban	Terrace	150	70	33	252,000	392,000
			150	90	25	252,000	432,000
		Stand Alone	400	100	194	288,000	488,000
			400	150	177	288,000	588,000
			400	200	162	288,000	688,000
	Total	375	140	590	285,000	565,000	
	Mixed Housing Urban	Terrace	100	70	53	245,000	385,000
			100	90	27	245,000	425,000
		Stand Alone	300	100	223	274,000	474,000
300			150	220	274,000	574,000	
300			200	270	274,000	674,000	
Total	280	145	790	270,000	560,000		
10% Terrace, 40% Stand Alone, 50% Retirement Village	Single House	Terrace	300	80	20	274,000	434,000
			300	100	30	274,000	474,000
		Stand Alone	600	100	40	316,000	516,000
			600	150	35	316,000	616,000
			600	200	110	316,000	716,000
		Retirement Village	400	200	120	288,000	688,000
			400	150	120	288,000	588,000
	Total	470,000	165	475	300,000	625,000	
	Mixed Housing Suburban	Terrace	150	80	40	252,000	412,000
			150	100	30	252,000	452,000
		Stand Alone	400	100	172	288,000	488,000
			400	150	60	288,000	588,000
			400	200	40	288,000	688,000
		Retirement Village	265	200	120	269,100	669,100
			265	150	222	269,100	569,100
	Total	355,000	140	684	280,000	615,000	
	Mixed Housing Urban	Terrace	100	80	50	245,000	405,000
			100	100	50	245,000	445,000
		Stand Alone	300	100	110	274,000	474,000
			300	150	110	274,000	574,000
300			200	165	274,000	674,000	
Retirement Village		200	200	250	259,000	659,000	
		200	150	232	259,000	559,000	
Total	230,000	160	970	265,000	580,000		

Source: Urban Economics, Corelogic, Auckland Council



26. Appendix 3: Net Present Value Methodology

26.1. UE Current Zoning Capacity Scenario

Urban Economics Growth Scenario			Revenue (\$m)						
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,447	603,856	\$0.98	\$1.34	\$0.81			\$3.13
2	2023	3,567	624,880	\$0.97	\$1.32	\$0.80	\$2.77	\$0.14	\$5.99
3	2024	3,687	645,904	\$0.95	\$1.30	\$0.79	\$2.64	\$0.13	\$5.81
4	2025	3,756	657,993	\$0.92	\$1.26	\$0.76	\$1.45	\$0.07	\$4.46
5	2026	3,756	657,993	\$0.88	\$1.20	\$0.73	\$0.00	\$0.00	\$2.81
6	2027	3,756	657,993	\$0.84	\$1.14	\$0.69	\$0.00	\$0.00	\$2.67
7	2028	3,756	657,993	\$0.80	\$1.09	\$0.66	\$0.00	\$0.00	\$2.55
8	2029	3,756	657,993	\$0.76	\$1.04	\$0.63	\$0.00	\$0.00	\$2.42
9	2030	3,756	657,993	\$0.72	\$0.99	\$0.60	\$0.00	\$0.00	\$2.31
10	2031	3,756	657,993	\$0.69	\$0.94	\$0.57	\$0.00	\$0.00	\$2.20
11	2032	3,756	657,993	\$0.66	\$0.90	\$0.54	\$0.00	\$0.00	\$2.09
12	2033	3,756	657,993	\$0.63	\$0.85	\$0.52	\$0.00	\$0.00	\$1.99
13	2034	3,756	657,993	\$0.60	\$0.81	\$0.49	\$0.00	\$0.00	\$1.90
14	2035	3,756	657,993	\$0.57	\$0.77	\$0.47	\$0.00	\$0.00	\$1.81
15	2036	3,756	657,993	\$0.54	\$0.74	\$0.45	\$0.00	\$0.00	\$1.72
16	2037	3,756	657,993	\$0.51	\$0.70	\$0.42	\$0.00	\$0.00	\$1.64
17	2038	3,756	657,993	\$0.49	\$0.67	\$0.40	\$0.00	\$0.00	\$1.56
18	2039	3,756	657,993	\$0.47	\$0.64	\$0.39	\$0.00	\$0.00	\$1.49
19	2040	3,756	657,993	\$0.44	\$0.61	\$0.37	\$0.00	\$0.00	\$1.42
20	2041	3,756	657,993	\$0.42	\$0.58	\$0.35	\$0.00	\$0.00	\$1.35
21	2042	3,756	657,993	\$0.40	\$0.55	\$0.33	\$0.00	\$0.00	\$1.29
22	2043	3,756	657,993	\$0.38	\$0.52	\$0.32	\$0.00	\$0.00	\$1.22
23	2044	3,756	657,993	\$0.37	\$0.50	\$0.30	\$0.00	\$0.00	\$1.17
24	2045	3,756	657,993	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.11
25	2046	3,756	657,993	\$0.33	\$0.45	\$0.27	\$0.00	\$0.00	\$1.06
26	2047	3,756	657,993	\$0.32	\$0.43	\$0.26	\$0.00	\$0.00	\$1.01
27	2048	3,756	657,993	\$0.30	\$0.41	\$0.25	\$0.00	\$0.00	\$0.96
28	2049	3,756	657,993	\$0.29	\$0.39	\$0.24	\$0.00	\$0.00	\$0.91
29	2050	3,756	657,993	\$0.27	\$0.37	\$0.23	\$0.00	\$0.00	\$0.87
30	2051	3,756	657,993	\$0.26	\$0.35	\$0.21	\$0.00	\$0.00	\$0.83
Total 2051		3,756	657,993	\$17.10	\$23.34	\$14.13	\$6.86	\$0.34	\$61.76
Total Infrastructure Cost									\$209.30
Net Present Value									-\$147.54



Watercare Growth Scenario				Revenue (\$m)					
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,463	606,653	\$0.99	\$1.35	\$0.81			\$3.15
2	2023	3,530	618,391	\$0.96	\$1.31	\$0.79	\$1.55	\$0.08	\$4.68
3	2024	3,597	630,130	\$0.93	\$1.27	\$0.77	\$1.47	\$0.07	\$4.51
4	2025	3,664	641,868	\$0.90	\$1.23	\$0.74	\$1.40	\$0.07	\$4.35
5	2026	3,731	653,606	\$0.87	\$1.19	\$0.72	\$1.34	\$0.07	\$4.19
6	2027	3,772	660,790	\$0.84	\$1.15	\$0.70	\$0.78	\$0.04	\$3.50
7	2028	3,772	660,790	\$0.80	\$1.09	\$0.66	\$0.00	\$0.00	\$2.56
8	2029	3,772	660,790	\$0.76	\$1.04	\$0.63	\$0.00	\$0.00	\$2.43
9	2030	3,772	660,790	\$0.73	\$0.99	\$0.60	\$0.00	\$0.00	\$2.32
10	2031	3,772	660,790	\$0.69	\$0.94	\$0.57	\$0.00	\$0.00	\$2.21
11	2032	3,772	660,790	\$0.66	\$0.90	\$0.54	\$0.00	\$0.00	\$2.10
12	2033	3,772	660,790	\$0.63	\$0.86	\$0.52	\$0.00	\$0.00	\$2.00
13	2034	3,772	660,790	\$0.60	\$0.82	\$0.49	\$0.00	\$0.00	\$1.91
14	2035	3,772	660,790	\$0.57	\$0.78	\$0.47	\$0.00	\$0.00	\$1.82
15	2036	3,772	660,790	\$0.54	\$0.74	\$0.45	\$0.00	\$0.00	\$1.73
16	2037	3,772	660,790	\$0.52	\$0.70	\$0.43	\$0.00	\$0.00	\$1.65
17	2038	3,772	660,790	\$0.49	\$0.67	\$0.41	\$0.00	\$0.00	\$1.57
18	2039	3,772	660,790	\$0.47	\$0.64	\$0.39	\$0.00	\$0.00	\$1.49
19	2040	3,772	660,790	\$0.45	\$0.61	\$0.37	\$0.00	\$0.00	\$1.42
20	2041	3,772	660,790	\$0.42	\$0.58	\$0.35	\$0.00	\$0.00	\$1.36
21	2042	3,772	660,790	\$0.40	\$0.55	\$0.33	\$0.00	\$0.00	\$1.29
22	2043	3,772	660,790	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.23
23	2044	3,772	660,790	\$0.37	\$0.50	\$0.30	\$0.00	\$0.00	\$1.17
24	2045	3,772	660,790	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.12
25	2046	3,772	660,790	\$0.33	\$0.45	\$0.28	\$0.00	\$0.00	\$1.06
26	2047	3,772	660,790	\$0.32	\$0.43	\$0.26	\$0.00	\$0.00	\$1.01
27	2048	3,772	660,790	\$0.30	\$0.41	\$0.25	\$0.00	\$0.00	\$0.96
28	2049	3,772	660,790	\$0.29	\$0.39	\$0.24	\$0.00	\$0.00	\$0.92
29	2050	3,772	660,790	\$0.27	\$0.37	\$0.23	\$0.00	\$0.00	\$0.87
30	2051	3,772	660,790	\$0.26	\$0.36	\$0.22	\$0.00	\$0.00	\$0.83
Total 2051		3,772	660,790	\$17.09	\$23.33	\$14.13	\$6.54	\$0.32	\$61.42
Total Infrastructure Cost									\$209.30
Net Present Value									-\$147.88



Auckland Council Growth Scenario			Revenue (\$m)						
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,292	576,829	\$0.94	\$1.28	\$0.77			\$2.99
2	2023	3,331	583,662	\$0.90	\$1.23	\$0.75	\$0.90	\$0.04	\$3.83
3	2024	3,370	590,494	\$0.87	\$1.19	\$0.72	\$0.86	\$0.04	\$3.68
4	2025	3,409	597,327	\$0.84	\$1.14	\$0.69	\$0.82	\$0.04	\$3.53
5	2026	3,448	604,160	\$0.81	\$1.10	\$0.67	\$0.78	\$0.04	\$3.39
6	2027	3,487	610,993	\$0.78	\$1.06	\$0.64	\$0.74	\$0.04	\$3.26
7	2028	3,526	617,826	\$0.75	\$1.02	\$0.62	\$0.71	\$0.03	\$3.13
8	2029	3,565	624,658	\$0.72	\$0.98	\$0.60	\$0.67	\$0.03	\$3.01
9	2030	3,601	630,966	\$0.69	\$0.95	\$0.57	\$0.59	\$0.03	\$2.83
10	2031	3,601	630,966	\$0.66	\$0.90	\$0.55	\$0.00	\$0.00	\$2.11
11	2032	3,601	630,966	\$0.63	\$0.86	\$0.52	\$0.00	\$0.00	\$2.01
12	2033	3,601	630,966	\$0.60	\$0.82	\$0.50	\$0.00	\$0.00	\$1.91
13	2034	3,601	630,966	\$0.57	\$0.78	\$0.47	\$0.00	\$0.00	\$1.82
14	2035	3,601	630,966	\$0.54	\$0.74	\$0.45	\$0.00	\$0.00	\$1.73
15	2036	3,601	630,966	\$0.52	\$0.71	\$0.43	\$0.00	\$0.00	\$1.65
16	2037	3,601	630,966	\$0.49	\$0.67	\$0.41	\$0.00	\$0.00	\$1.57
17	2038	3,601	630,966	\$0.47	\$0.64	\$0.39	\$0.00	\$0.00	\$1.50
18	2039	3,601	630,966	\$0.45	\$0.61	\$0.37	\$0.00	\$0.00	\$1.43
19	2040	3,601	630,966	\$0.43	\$0.58	\$0.35	\$0.00	\$0.00	\$1.36
20	2041	3,601	630,966	\$0.41	\$0.55	\$0.34	\$0.00	\$0.00	\$1.29
21	2042	3,601	630,966	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.23
22	2043	3,601	630,966	\$0.37	\$0.50	\$0.30	\$0.00	\$0.00	\$1.17
23	2044	3,601	630,966	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.12
24	2045	3,601	630,966	\$0.33	\$0.46	\$0.28	\$0.00	\$0.00	\$1.07
25	2046	3,601	630,966	\$0.32	\$0.43	\$0.26	\$0.00	\$0.00	\$1.01
26	2047	3,601	630,966	\$0.30	\$0.41	\$0.25	\$0.00	\$0.00	\$0.97
27	2048	3,601	630,966	\$0.29	\$0.39	\$0.24	\$0.00	\$0.00	\$0.92
28	2049	3,601	630,966	\$0.27	\$0.37	\$0.23	\$0.00	\$0.00	\$0.88
29	2050	3,601	630,966	\$0.26	\$0.36	\$0.22	\$0.00	\$0.00	\$0.83
30	2051	3,601	630,966	\$0.25	\$0.34	\$0.21	\$0.00	\$0.00	\$0.79
Total 2051		3,601	630,966	\$16.19	\$22.10	\$13.38	\$6.07	\$0.30	\$58.05
Total Infrastructure Cost									\$209.30
Net Present Value									-\$151.25



Statistics NZ Growth Scenario				Revenue (\$m)					
Period Year		Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,343	585,752	\$0.95	\$1.30	\$0.79			\$3.04
2	2023	3,406	596,790	\$0.92	\$1.26	\$0.76	\$1.46	\$0.07	\$4.47
3	2024	3,469	607,827	\$0.90	\$1.22	\$0.74	\$1.39	\$0.07	\$4.31
4	2025	3,532	618,865	\$0.87	\$1.19	\$0.72	\$1.32	\$0.06	\$4.16
5	2026	3,595	629,902	\$0.84	\$1.15	\$0.70	\$1.26	\$0.06	\$4.01
6	2027	3,652	639,889	\$0.81	\$1.11	\$0.67	\$1.08	\$0.05	\$3.74
7	2028	3,652	639,889	\$0.78	\$1.06	\$0.64	\$0.00	\$0.00	\$2.48
8	2029	3,652	639,889	\$0.74	\$1.01	\$0.61	\$0.00	\$0.00	\$2.36
9	2030	3,652	639,889	\$0.70	\$0.96	\$0.58	\$0.00	\$0.00	\$2.25
10	2031	3,652	639,889	\$0.67	\$0.91	\$0.55	\$0.00	\$0.00	\$2.14
11	2032	3,652	639,889	\$0.64	\$0.87	\$0.53	\$0.00	\$0.00	\$2.04
12	2033	3,652	639,889	\$0.61	\$0.83	\$0.50	\$0.00	\$0.00	\$1.94
13	2034	3,652	639,889	\$0.58	\$0.79	\$0.48	\$0.00	\$0.00	\$1.85
14	2035	3,652	639,889	\$0.55	\$0.75	\$0.46	\$0.00	\$0.00	\$1.76
15	2036	3,652	639,889	\$0.53	\$0.72	\$0.43	\$0.00	\$0.00	\$1.68
16	2037	3,652	639,889	\$0.50	\$0.68	\$0.41	\$0.00	\$0.00	\$1.60
17	2038	3,652	639,889	\$0.48	\$0.65	\$0.39	\$0.00	\$0.00	\$1.52
18	2039	3,652	639,889	\$0.45	\$0.62	\$0.37	\$0.00	\$0.00	\$1.45
19	2040	3,652	639,889	\$0.43	\$0.59	\$0.36	\$0.00	\$0.00	\$1.38
20	2041	3,652	639,889	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.31
21	2042	3,652	639,889	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.25
22	2043	3,652	639,889	\$0.37	\$0.51	\$0.31	\$0.00	\$0.00	\$1.19
23	2044	3,652	639,889	\$0.36	\$0.49	\$0.29	\$0.00	\$0.00	\$1.13
24	2045	3,652	639,889	\$0.34	\$0.46	\$0.28	\$0.00	\$0.00	\$1.08
25	2046	3,652	639,889	\$0.32	\$0.44	\$0.27	\$0.00	\$0.00	\$1.03
26	2047	3,652	639,889	\$0.31	\$0.42	\$0.25	\$0.00	\$0.00	\$0.98
27	2048	3,652	639,889	\$0.29	\$0.40	\$0.24	\$0.00	\$0.00	\$0.93
28	2049	3,652	639,889	\$0.28	\$0.38	\$0.23	\$0.00	\$0.00	\$0.89
29	2050	3,652	639,889	\$0.27	\$0.36	\$0.22	\$0.00	\$0.00	\$0.85
30	2051	3,652	639,889	\$0.25	\$0.34	\$0.21	\$0.00	\$0.00	\$0.81
Total 2051		3,652	639,889	\$16.54	\$22.57	\$13.67	\$6.50	\$0.32	\$59.59
Total Infrastructure Cost									\$209.30
Net Present Value									-\$149.71



26.2. UE MDRZ Capacity Scenario

Urban Economics Growth Scenario			Revenue (\$m)						
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,447	603,856	\$0.98	\$1.34	\$0.81			\$3.13
2	2023	3,567	624,880	\$0.97	\$1.32	\$0.80	\$2.77	\$0.14	\$5.99
3	2024	3,687	645,904	\$0.95	\$1.30	\$0.79	\$2.64	\$0.13	\$5.81
4	2025	3,807	666,928	\$0.94	\$1.28	\$0.77	\$2.52	\$0.12	\$5.63
5	2026	3,927	687,952	\$0.92	\$1.26	\$0.76	\$2.40	\$0.12	\$5.45
6	2027	3,983	697,763	\$0.89	\$1.21	\$0.73	\$1.06	\$0.05	\$3.95
7	2028	3,983	697,763	\$0.85	\$1.15	\$0.70	\$0.00	\$0.00	\$2.70
8	2029	3,983	697,763	\$0.81	\$1.10	\$0.67	\$0.00	\$0.00	\$2.57
9	2030	3,983	697,763	\$0.77	\$1.05	\$0.63	\$0.00	\$0.00	\$2.45
10	2031	3,983	697,763	\$0.73	\$1.00	\$0.60	\$0.00	\$0.00	\$2.33
11	2032	3,983	697,763	\$0.70	\$0.95	\$0.58	\$0.00	\$0.00	\$2.22
12	2033	3,983	697,763	\$0.66	\$0.90	\$0.55	\$0.00	\$0.00	\$2.12
13	2034	3,983	697,763	\$0.63	\$0.86	\$0.52	\$0.00	\$0.00	\$2.01
14	2035	3,983	697,763	\$0.60	\$0.82	\$0.50	\$0.00	\$0.00	\$1.92
15	2036	3,983	697,763	\$0.57	\$0.78	\$0.47	\$0.00	\$0.00	\$1.83
16	2037	3,983	697,763	\$0.55	\$0.74	\$0.45	\$0.00	\$0.00	\$1.74
17	2038	3,983	697,763	\$0.52	\$0.71	\$0.43	\$0.00	\$0.00	\$1.66
18	2039	3,983	697,763	\$0.49	\$0.68	\$0.41	\$0.00	\$0.00	\$1.58
19	2040	3,983	697,763	\$0.47	\$0.64	\$0.39	\$0.00	\$0.00	\$1.50
20	2041	3,983	697,763	\$0.45	\$0.61	\$0.37	\$0.00	\$0.00	\$1.43
21	2042	3,983	697,763	\$0.43	\$0.58	\$0.35	\$0.00	\$0.00	\$1.36
22	2043	3,983	697,763	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.30
23	2044	3,983	697,763	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.24
24	2045	3,983	697,763	\$0.37	\$0.50	\$0.31	\$0.00	\$0.00	\$1.18
25	2046	3,983	697,763	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.12
26	2047	3,983	697,763	\$0.33	\$0.46	\$0.28	\$0.00	\$0.00	\$1.07
27	2048	3,983	697,763	\$0.32	\$0.44	\$0.26	\$0.00	\$0.00	\$1.02
28	2049	3,983	697,763	\$0.30	\$0.41	\$0.25	\$0.00	\$0.00	\$0.97
29	2050	3,983	697,763	\$0.29	\$0.39	\$0.24	\$0.00	\$0.00	\$0.92
30	2051	3,983	697,763	\$0.28	\$0.38	\$0.23	\$0.00	\$0.00	\$0.88
Total 2051		3,983	697,763	\$17.90	\$24.43	\$14.79	\$11.39	\$0.56	\$69.07
Total Infrastructure Cost									\$209.30
Net Present Value									-\$140.23



Watercare Growth Scenario		Revenue (\$m)							
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,463	606,653	\$0.99	\$1.35	\$0.81			\$3.15
2	2023	3,530	618,391	\$0.96	\$1.31	\$0.79	\$1.55	\$0.08	\$4.68
3	2024	3,597	630,130	\$0.93	\$1.27	\$0.77	\$1.47	\$0.07	\$4.51
4	2025	3,664	641,868	\$0.90	\$1.23	\$0.74	\$1.40	\$0.07	\$4.35
5	2026	3,731	653,606	\$0.87	\$1.19	\$0.72	\$1.34	\$0.07	\$4.19
6	2027	3,798	665,345	\$0.85	\$1.16	\$0.70	\$1.27	\$0.06	\$4.04
7	2028	3,865	677,083	\$0.82	\$1.12	\$0.68	\$1.21	\$0.06	\$3.89
8	2029	3,932	688,822	\$0.80	\$1.09	\$0.66	\$1.16	\$0.06	\$3.75
9	2030	3,999	700,560	\$0.77	\$1.05	\$0.64	\$1.10	\$0.05	\$3.61
10	2031	3,999	700,560	\$0.73	\$1.00	\$0.61	\$0.00	\$0.00	\$2.34
11	2032	3,999	700,560	\$0.70	\$0.95	\$0.58	\$0.00	\$0.00	\$2.23
12	2033	3,999	700,560	\$0.67	\$0.91	\$0.55	\$0.00	\$0.00	\$2.12
13	2034	3,999	700,560	\$0.63	\$0.87	\$0.52	\$0.00	\$0.00	\$2.02
14	2035	3,999	700,560	\$0.60	\$0.82	\$0.50	\$0.00	\$0.00	\$1.93
15	2036	3,999	700,560	\$0.57	\$0.78	\$0.48	\$0.00	\$0.00	\$1.83
16	2037	3,999	700,560	\$0.55	\$0.75	\$0.45	\$0.00	\$0.00	\$1.75
17	2038	3,999	700,560	\$0.52	\$0.71	\$0.43	\$0.00	\$0.00	\$1.66
18	2039	3,999	700,560	\$0.50	\$0.68	\$0.41	\$0.00	\$0.00	\$1.58
19	2040	3,999	700,560	\$0.47	\$0.65	\$0.39	\$0.00	\$0.00	\$1.51
20	2041	3,999	700,560	\$0.45	\$0.61	\$0.37	\$0.00	\$0.00	\$1.44
21	2042	3,999	700,560	\$0.43	\$0.59	\$0.35	\$0.00	\$0.00	\$1.37
22	2043	3,999	700,560	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.30
23	2044	3,999	700,560	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.24
24	2045	3,999	700,560	\$0.37	\$0.51	\$0.31	\$0.00	\$0.00	\$1.18
25	2046	3,999	700,560	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.13
26	2047	3,999	700,560	\$0.34	\$0.46	\$0.28	\$0.00	\$0.00	\$1.07
27	2048	3,999	700,560	\$0.32	\$0.44	\$0.26	\$0.00	\$0.00	\$1.02
28	2049	3,999	700,560	\$0.30	\$0.42	\$0.25	\$0.00	\$0.00	\$0.97
29	2050	3,999	700,560	\$0.29	\$0.40	\$0.24	\$0.00	\$0.00	\$0.93
30	2051	3,999	700,560	\$0.28	\$0.38	\$0.23	\$0.00	\$0.00	\$0.88
Total 2051		3,999	700,560	\$17.76	\$24.23	\$14.67	\$10.51	\$0.52	\$67.69
Total Infrastructure Cost									\$209.30
Net Present Value									-\$141.61



Auckland Council Growth Scenario		Revenue (\$m)							
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,292	576,829	\$0.94	\$1.28	\$0.77			\$2.99
2	2023	3,331	583,662	\$0.90	\$1.23	\$0.75	\$0.90	\$0.04	\$3.83
3	2024	3,370	590,494	\$0.87	\$1.19	\$0.72	\$0.86	\$0.04	\$3.68
4	2025	3,409	597,327	\$0.84	\$1.14	\$0.69	\$0.82	\$0.04	\$3.53
5	2026	3,448	604,160	\$0.81	\$1.10	\$0.67	\$0.78	\$0.04	\$3.39
6	2027	3,487	610,993	\$0.78	\$1.06	\$0.64	\$0.74	\$0.04	\$3.26
7	2028	3,526	617,826	\$0.75	\$1.02	\$0.62	\$0.71	\$0.03	\$3.13
8	2029	3,565	624,658	\$0.72	\$0.98	\$0.60	\$0.67	\$0.03	\$3.01
9	2030	3,604	631,491	\$0.69	\$0.95	\$0.57	\$0.64	\$0.03	\$2.89
10	2031	3,643	638,324	\$0.67	\$0.91	\$0.55	\$0.61	\$0.03	\$2.77
11	2032	3,682	645,157	\$0.64	\$0.88	\$0.53	\$0.58	\$0.03	\$2.66
12	2033	3,721	651,990	\$0.62	\$0.85	\$0.51	\$0.55	\$0.03	\$2.56
13	2034	3,760	658,822	\$0.60	\$0.81	\$0.49	\$0.53	\$0.03	\$2.45
14	2035	3,799	665,655	\$0.57	\$0.78	\$0.47	\$0.50	\$0.02	\$2.36
15	2036	3,828	670,736	\$0.55	\$0.75	\$0.45	\$0.36	\$0.02	\$2.13
16	2037	3,828	670,736	\$0.52	\$0.72	\$0.43	\$0.00	\$0.00	\$1.67
17	2038	3,828	670,736	\$0.50	\$0.68	\$0.41	\$0.00	\$0.00	\$1.59
18	2039	3,828	670,736	\$0.48	\$0.65	\$0.39	\$0.00	\$0.00	\$1.52
19	2040	3,828	670,736	\$0.45	\$0.62	\$0.37	\$0.00	\$0.00	\$1.45
20	2041	3,828	670,736	\$0.43	\$0.59	\$0.36	\$0.00	\$0.00	\$1.38
21	2042	3,828	670,736	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.31
22	2043	3,828	670,736	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.25
23	2044	3,828	670,736	\$0.37	\$0.51	\$0.31	\$0.00	\$0.00	\$1.19
24	2045	3,828	670,736	\$0.35	\$0.48	\$0.29	\$0.00	\$0.00	\$1.13
25	2046	3,828	670,736	\$0.34	\$0.46	\$0.28	\$0.00	\$0.00	\$1.08
26	2047	3,828	670,736	\$0.32	\$0.44	\$0.27	\$0.00	\$0.00	\$1.03
27	2048	3,828	670,736	\$0.31	\$0.42	\$0.25	\$0.00	\$0.00	\$0.98
28	2049	3,828	670,736	\$0.29	\$0.40	\$0.24	\$0.00	\$0.00	\$0.93
29	2050	3,828	670,736	\$0.28	\$0.38	\$0.23	\$0.00	\$0.00	\$0.89
30	2051	3,828	670,736	\$0.26	\$0.36	\$0.22	\$0.00	\$0.00	\$0.84
Total 2051		3,828	670,736	\$16.66	\$22.74	\$13.77	\$9.25	\$0.45	\$62.88
Total Infrastructure Cost									\$209.30
Net Present Value									-\$146.42



Statistics NZ Growth Scenario			Revenue (\$m)						
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,343	585,752	\$0.95	\$1.30	\$0.79			\$3.04
2	2023	3,406	596,790	\$0.92	\$1.26	\$0.76	\$1.46	\$0.07	\$4.47
3	2024	3,469	607,827	\$0.90	\$1.22	\$0.74	\$1.39	\$0.07	\$4.31
4	2025	3,532	618,865	\$0.87	\$1.19	\$0.72	\$1.32	\$0.06	\$4.16
5	2026	3,595	629,902	\$0.84	\$1.15	\$0.70	\$1.26	\$0.06	\$4.01
6	2027	3,658	640,940	\$0.82	\$1.11	\$0.67	\$1.20	\$0.06	\$3.86
7	2028	3,721	651,978	\$0.79	\$1.08	\$0.65	\$1.14	\$0.06	\$3.72
8	2029	3,784	663,015	\$0.77	\$1.04	\$0.63	\$1.09	\$0.05	\$3.58
9	2030	3,847	674,053	\$0.74	\$1.01	\$0.61	\$1.03	\$0.05	\$3.45
10	2031	3,879	679,659	\$0.71	\$0.97	\$0.59	\$0.50	\$0.02	\$2.80
11	2032	3,879	679,659	\$0.68	\$0.93	\$0.56	\$0.00	\$0.00	\$2.16
12	2033	3,879	679,659	\$0.65	\$0.88	\$0.53	\$0.00	\$0.00	\$2.06
13	2034	3,879	679,659	\$0.61	\$0.84	\$0.51	\$0.00	\$0.00	\$1.96
14	2035	3,879	679,659	\$0.59	\$0.80	\$0.48	\$0.00	\$0.00	\$1.87
15	2036	3,879	679,659	\$0.56	\$0.76	\$0.46	\$0.00	\$0.00	\$1.78
16	2037	3,879	679,659	\$0.53	\$0.72	\$0.44	\$0.00	\$0.00	\$1.70
17	2038	3,879	679,659	\$0.51	\$0.69	\$0.42	\$0.00	\$0.00	\$1.61
18	2039	3,879	679,659	\$0.48	\$0.66	\$0.40	\$0.00	\$0.00	\$1.54
19	2040	3,879	679,659	\$0.46	\$0.63	\$0.38	\$0.00	\$0.00	\$1.46
20	2041	3,879	679,659	\$0.44	\$0.60	\$0.36	\$0.00	\$0.00	\$1.39
21	2042	3,879	679,659	\$0.42	\$0.57	\$0.34	\$0.00	\$0.00	\$1.33
22	2043	3,879	679,659	\$0.40	\$0.54	\$0.33	\$0.00	\$0.00	\$1.26
23	2044	3,879	679,659	\$0.38	\$0.52	\$0.31	\$0.00	\$0.00	\$1.20
24	2045	3,879	679,659	\$0.36	\$0.49	\$0.30	\$0.00	\$0.00	\$1.15
25	2046	3,879	679,659	\$0.34	\$0.47	\$0.28	\$0.00	\$0.00	\$1.09
26	2047	3,879	679,659	\$0.33	\$0.45	\$0.27	\$0.00	\$0.00	\$1.04
27	2048	3,879	679,659	\$0.31	\$0.42	\$0.26	\$0.00	\$0.00	\$0.99
28	2049	3,879	679,659	\$0.30	\$0.40	\$0.24	\$0.00	\$0.00	\$0.94
29	2050	3,879	679,659	\$0.28	\$0.38	\$0.23	\$0.00	\$0.00	\$0.90
30	2051	3,879	679,659	\$0.27	\$0.37	\$0.22	\$0.00	\$0.00	\$0.86
Total 2051		3,879	679,659	\$17.18	\$23.44	\$14.20	\$10.38	\$0.51	\$65.71
Total Infrastructure Cost									\$209.30
Net Present Value									-\$143.59



26.3. UE MDRZ plus Proposal Capacity Scenario

Urban Economics Growth Scenario			Revenue (\$m)						
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,447	603,856	\$0.98	\$1.34	\$0.81			\$3.13
2	2023	3,567	624,880	\$0.97	\$1.32	\$0.80	\$2.77	\$0.14	\$5.99
3	2024	3,687	645,904	\$0.95	\$1.30	\$0.79	\$2.64	\$0.13	\$5.81
4	2025	3,807	666,928	\$0.94	\$1.28	\$0.77	\$2.52	\$0.12	\$5.63
5	2026	3,927	687,952	\$0.92	\$1.26	\$0.76	\$2.40	\$0.12	\$5.45
6	2027	4,047	708,976	\$0.90	\$1.23	\$0.75	\$2.28	\$0.11	\$5.27
7	2028	4,167	730,000	\$0.89	\$1.21	\$0.73	\$2.17	\$0.11	\$5.10
8	2029	4,287	751,024	\$0.87	\$1.18	\$0.72	\$2.07	\$0.10	\$4.94
9	2030	4,407	772,048	\$0.85	\$1.16	\$0.70	\$1.97	\$0.10	\$4.78
10	2031	4,527	793,072	\$0.83	\$1.13	\$0.69	\$1.88	\$0.09	\$4.62
11	2032	4,647	814,096	\$0.81	\$1.11	\$0.67	\$1.79	\$0.09	\$4.47
12	2033	4,767	835,120	\$0.79	\$1.08	\$0.66	\$1.70	\$0.08	\$4.32
13	2034	4,887	856,144	\$0.77	\$1.06	\$0.64	\$1.62	\$0.08	\$4.17
14	2035	4,893	857,195	\$0.74	\$1.01	\$0.61	\$0.08	\$0.00	\$2.44
15	2036	4,893	857,195	\$0.70	\$0.96	\$0.58	\$0.00	\$0.00	\$2.24
16	2037	4,893	857,195	\$0.67	\$0.91	\$0.55	\$0.00	\$0.00	\$2.14
17	2038	4,893	857,195	\$0.64	\$0.87	\$0.53	\$0.00	\$0.00	\$2.04
18	2039	4,893	857,195	\$0.61	\$0.83	\$0.50	\$0.00	\$0.00	\$1.94
19	2040	4,893	857,195	\$0.58	\$0.79	\$0.48	\$0.00	\$0.00	\$1.85
20	2041	4,893	857,195	\$0.55	\$0.75	\$0.46	\$0.00	\$0.00	\$1.76
21	2042	4,893	857,195	\$0.52	\$0.72	\$0.43	\$0.00	\$0.00	\$1.68
22	2043	4,893	857,195	\$0.50	\$0.68	\$0.41	\$0.00	\$0.00	\$1.60
23	2044	4,893	857,195	\$0.48	\$0.65	\$0.39	\$0.00	\$0.00	\$1.52
24	2045	4,893	857,195	\$0.45	\$0.62	\$0.37	\$0.00	\$0.00	\$1.45
25	2046	4,893	857,195	\$0.43	\$0.59	\$0.36	\$0.00	\$0.00	\$1.38
26	2047	4,893	857,195	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.31
27	2048	4,893	857,195	\$0.39	\$0.53	\$0.32	\$0.00	\$0.00	\$1.25
28	2049	4,893	857,195	\$0.37	\$0.51	\$0.31	\$0.00	\$0.00	\$1.19
29	2050	4,893	857,195	\$0.36	\$0.48	\$0.29	\$0.00	\$0.00	\$1.13
30	2051	4,893	857,195	\$0.34	\$0.46	\$0.28	\$0.00	\$0.00	\$1.08
Total 2051		4,893	857,195	\$20.21	\$27.59	\$16.70	\$25.89	\$1.27	\$91.66
Total Infrastructure Cost									\$209.30
Net Present Value									-\$117.64



Watercare Growth Scenario		Revenue (\$m)							
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,463	606,653	\$0.99	\$1.35	\$0.81			\$3.15
2	2023	3,530	618,391	\$0.96	\$1.31	\$0.79	\$1.55	\$0.08	\$4.68
3	2024	3,597	630,130	\$0.93	\$1.27	\$0.77	\$1.47	\$0.07	\$4.51
4	2025	3,664	641,868	\$0.90	\$1.23	\$0.74	\$1.40	\$0.07	\$4.35
5	2026	3,731	653,606	\$0.87	\$1.19	\$0.72	\$1.34	\$0.07	\$4.19
6	2027	3,798	665,345	\$0.85	\$1.16	\$0.70	\$1.27	\$0.06	\$4.04
7	2028	3,865	677,083	\$0.82	\$1.12	\$0.68	\$1.21	\$0.06	\$3.89
8	2029	3,932	688,822	\$0.80	\$1.09	\$0.66	\$1.16	\$0.06	\$3.75
9	2030	3,999	700,560	\$0.77	\$1.05	\$0.64	\$1.10	\$0.05	\$3.61
10	2031	4,066	712,298	\$0.75	\$1.02	\$0.62	\$1.05	\$0.05	\$3.48
11	2032	4,133	724,037	\$0.72	\$0.99	\$0.60	\$1.00	\$0.05	\$3.35
12	2033	4,200	735,775	\$0.70	\$0.95	\$0.58	\$0.95	\$0.05	\$3.23
13	2034	4,267	747,514	\$0.68	\$0.92	\$0.56	\$0.91	\$0.04	\$3.11
14	2035	4,334	759,252	\$0.65	\$0.89	\$0.54	\$0.86	\$0.04	\$2.99
15	2036	4,401	770,990	\$0.63	\$0.86	\$0.52	\$0.82	\$0.04	\$2.88
16	2037	4,468	782,729	\$0.61	\$0.83	\$0.51	\$0.78	\$0.04	\$2.77
17	2038	4,535	794,467	\$0.59	\$0.81	\$0.49	\$0.74	\$0.04	\$2.67
18	2039	4,602	806,206	\$0.57	\$0.78	\$0.47	\$0.71	\$0.03	\$2.57
19	2040	4,669	817,944	\$0.55	\$0.75	\$0.46	\$0.68	\$0.03	\$2.47
20	2041	4,736	829,682	\$0.53	\$0.73	\$0.44	\$0.64	\$0.03	\$2.38
21	2042	4,803	841,421	\$0.52	\$0.70	\$0.43	\$0.61	\$0.03	\$2.29
22	2043	4,870	853,159	\$0.50	\$0.68	\$0.41	\$0.58	\$0.03	\$2.20
23	2044	4,909	859,992	\$0.48	\$0.65	\$0.39	\$0.52	\$0.02	\$1.86
24	2045	4,909	859,992	\$0.45	\$0.62	\$0.38	\$0.00	\$0.00	\$1.45
25	2046	4,909	859,992	\$0.43	\$0.59	\$0.36	\$0.00	\$0.00	\$1.38
26	2047	4,909	859,992	\$0.41	\$0.56	\$0.34	\$0.00	\$0.00	\$1.32
27	2048	4,909	859,992	\$0.39	\$0.54	\$0.32	\$0.00	\$0.00	\$1.25
28	2049	4,909	859,992	\$0.37	\$0.51	\$0.31	\$0.00	\$0.00	\$1.19
29	2050	4,909	859,992	\$0.36	\$0.49	\$0.29	\$0.00	\$0.00	\$1.14
30	2051	4,909	859,992	\$0.34	\$0.46	\$0.28	\$0.00	\$0.00	\$1.08
Total 2051		4,909	859,992	\$19.12	\$26.10	\$15.80	\$21.17	\$1.04	\$83.24
Total Infrastructure Cost									\$209.30
Net Present Value									-\$126.06



Auckland Council Growth Scenario		Revenue (\$m)							
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,292	576,829	\$0.94	\$1.28	\$0.77			\$2.99
2	2023	3,331	583,662	\$0.90	\$1.23	\$0.75	\$0.90	\$0.04	\$3.83
3	2024	3,370	590,494	\$0.87	\$1.19	\$0.72	\$0.86	\$0.04	\$3.68
4	2025	3,409	597,327	\$0.84	\$1.14	\$0.69	\$0.82	\$0.04	\$3.53
5	2026	3,448	604,160	\$0.81	\$1.10	\$0.67	\$0.78	\$0.04	\$3.39
6	2027	3,487	610,993	\$0.78	\$1.06	\$0.64	\$0.74	\$0.04	\$3.26
7	2028	3,526	617,826	\$0.75	\$1.02	\$0.62	\$0.71	\$0.03	\$3.13
8	2029	3,565	624,658	\$0.72	\$0.98	\$0.60	\$0.67	\$0.03	\$3.01
9	2030	3,604	631,491	\$0.69	\$0.95	\$0.57	\$0.64	\$0.03	\$2.89
10	2031	3,643	638,324	\$0.67	\$0.91	\$0.55	\$0.61	\$0.03	\$2.77
11	2032	3,682	645,157	\$0.64	\$0.88	\$0.53	\$0.58	\$0.03	\$2.66
12	2033	3,721	651,990	\$0.62	\$0.85	\$0.51	\$0.55	\$0.03	\$2.56
13	2034	3,760	658,822	\$0.60	\$0.81	\$0.49	\$0.53	\$0.03	\$2.45
14	2035	3,799	665,655	\$0.57	\$0.78	\$0.47	\$0.50	\$0.02	\$2.36
15	2036	3,838	672,488	\$0.55	\$0.75	\$0.46	\$0.48	\$0.02	\$2.26
16	2037	3,877	679,321	\$0.53	\$0.72	\$0.44	\$0.46	\$0.02	\$2.17
17	2038	3,916	686,154	\$0.51	\$0.70	\$0.42	\$0.43	\$0.02	\$2.08
18	2039	3,955	692,986	\$0.49	\$0.67	\$0.41	\$0.41	\$0.02	\$2.00
19	2040	3,994	699,819	\$0.47	\$0.64	\$0.39	\$0.39	\$0.02	\$1.92
20	2041	4,033	706,652	\$0.45	\$0.62	\$0.38	\$0.37	\$0.02	\$1.84
21	2042	4,072	713,485	\$0.44	\$0.60	\$0.36	\$0.36	\$0.02	\$1.77
22	2043	4,111	720,318	\$0.42	\$0.57	\$0.35	\$0.34	\$0.02	\$1.70
23	2044	4,150	727,150	\$0.40	\$0.55	\$0.33	\$0.32	\$0.02	\$1.63
24	2045	4,189	733,983	\$0.39	\$0.53	\$0.32	\$0.31	\$0.02	\$1.56
25	2046	4,228	740,816	\$0.37	\$0.51	\$0.31	\$0.29	\$0.01	\$1.50
26	2047	4,267	747,649	\$0.36	\$0.49	\$0.30	\$0.28	\$0.01	\$1.44
27	2048	4,306	754,482	\$0.34	\$0.47	\$0.28	\$0.27	\$0.01	\$1.38
28	2049	4,345	761,314	\$0.33	\$0.45	\$0.27	\$0.25	\$0.01	\$1.32
29	2050	4,384	768,147	\$0.32	\$0.43	\$0.26	\$0.24	\$0.01	\$1.27
30	2051	4,423	774,980	\$0.31	\$0.42	\$0.25	\$0.23	\$0.01	\$1.22
Total 2051		4,423	774,980	\$17.09	\$23.33	\$14.13	\$14.33	\$0.70	\$69.58
Total Infrastructure Cost									\$209.30
Net Present Value									-\$139.72



Statistics NZ Growth Scenario		Revenue (\$m)							
Period	Year	Dwellings	Water Consumption (million liters p.a.)	Water Use Charge	Waster water Use Charge	Annual Metre Charge	Infrastr ucture Growth Charge	New Meter Install Charge	Revenue
1	2022	3,343	585,752	\$0.95	\$1.30	\$0.79			\$3.04
2	2023	3,406	596,790	\$0.92	\$1.26	\$0.76	\$1.46	\$0.07	\$4.47
3	2024	3,469	607,827	\$0.90	\$1.22	\$0.74	\$1.39	\$0.07	\$4.31
4	2025	3,532	618,865	\$0.87	\$1.19	\$0.72	\$1.32	\$0.06	\$4.16
5	2026	3,595	629,902	\$0.84	\$1.15	\$0.70	\$1.26	\$0.06	\$4.01
6	2027	3,658	640,940	\$0.82	\$1.11	\$0.67	\$1.20	\$0.06	\$3.86
7	2028	3,721	651,978	\$0.79	\$1.08	\$0.65	\$1.14	\$0.06	\$3.72
8	2029	3,784	663,015	\$0.77	\$1.04	\$0.63	\$1.09	\$0.05	\$3.58
9	2030	3,847	674,053	\$0.74	\$1.01	\$0.61	\$1.03	\$0.05	\$3.45
10	2031	3,910	685,090	\$0.72	\$0.98	\$0.59	\$0.99	\$0.05	\$3.32
11	2032	3,973	696,128	\$0.69	\$0.95	\$0.57	\$0.94	\$0.05	\$3.20
12	2033	4,036	707,166	\$0.67	\$0.92	\$0.56	\$0.89	\$0.04	\$3.08
13	2034	4,099	718,203	\$0.65	\$0.89	\$0.54	\$0.85	\$0.04	\$2.97
14	2035	4,162	729,241	\$0.63	\$0.86	\$0.52	\$0.81	\$0.04	\$2.86
15	2036	4,225	740,278	\$0.61	\$0.83	\$0.50	\$0.77	\$0.04	\$2.75
16	2037	4,288	751,316	\$0.59	\$0.80	\$0.49	\$0.74	\$0.04	\$2.65
17	2038	4,351	762,354	\$0.57	\$0.77	\$0.47	\$0.70	\$0.03	\$2.55
18	2039	4,414	773,391	\$0.55	\$0.75	\$0.45	\$0.67	\$0.03	\$2.45
19	2040	4,477	784,429	\$0.53	\$0.72	\$0.44	\$0.64	\$0.03	\$2.36
20	2041	4,540	795,466	\$0.51	\$0.70	\$0.42	\$0.60	\$0.03	\$2.27
21	2042	4,603	806,504	\$0.49	\$0.67	\$0.41	\$0.58	\$0.03	\$2.18
22	2043	4,666	817,542	\$0.48	\$0.65	\$0.39	\$0.55	\$0.03	\$2.10
23	2044	4,729	828,579	\$0.46	\$0.63	\$0.38	\$0.52	\$0.03	\$2.02
24	2045	4,789	839,091	\$0.44	\$0.61	\$0.37	\$0.47	\$0.02	\$1.91
25	2046	4,789	839,091	\$0.42	\$0.58	\$0.35	\$0.00	\$0.00	\$1.35
26	2047	4,789	839,091	\$0.40	\$0.55	\$0.33	\$0.00	\$0.00	\$1.28
27	2048	4,789	839,091	\$0.38	\$0.52	\$0.32	\$0.00	\$0.00	\$1.22
28	2049	4,789	839,091	\$0.37	\$0.50	\$0.30	\$0.00	\$0.00	\$1.17
29	2050	4,789	839,091	\$0.35	\$0.47	\$0.29	\$0.00	\$0.00	\$1.11
30	2051	4,789	839,091	\$0.33	\$0.45	\$0.27	\$0.00	\$0.00	\$1.06
Total 2051		4,789	839,091	\$18.44	\$25.16	\$15.23	\$20.60	\$1.01	\$80.44
Total Infrastructure Cost									\$209.30
Net Present Value									-\$128.86



27. Appendix 4- Waiuku PPC RMA Amendment Bill Commentary

10 March 2022

To Peter Fuller

RE: Waiuku Gardon PPC - RMA Amendment Bill Commentary

This memo addresses the potential economic and capacity implications of the Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill for the proposed Gardon private plan change (PPC) in Waiuku. For the purpose of this memo I have been asked to assume that the existing and proposed residential zoned land in Waiuku will to a large extent become MHU, which broadly aligns with the Medium Density Residential Standard (MDRS) in the Amendment Bill. I understand that it is currently unclear whether the provisions in the Amendment Bill, MHU or MHS, as applied for, will finally be applicable as per the final legislation. This memo is to discuss the implications of the different zoning options as a scenario testing exercise.

The main issues that arise are the estimated yield from the PPC under the MHS zone (as proposed) versus the MHU zone/MDRS (if one of these zones were required) and the additional infill capacity in Waiuku as a result of the existing MHS and Single House zones changing to MHU/MDRS. It is understood there are differences between the MHU and the MDRS provisions, but they are reasonably similar and have not been distinguished for the purpose of this exercise. These issues are addressed as follows.

Under the PPC the MHS zone was estimated to have a 'plan enabled' dwelling yield of 590 and the MHU zone was estimated to have a 'plan enabled' dwelling yield of 790. This reflects a smaller average lot size for the MHU zone.

The Amendment Bill will increase the supply of smaller terrace and town houses across Auckland, and most notably in the Single House zone that is applied to a large amount of the outer suburbs in the main Auckland urban area. In suburbs where there are recognised qualifying matters the Single House zone may be retained, and it is understood that the Council is currently undertaking assessments of heritage and other factors. For the purpose of this memo I have been asked to assume for this exercise that if the Amendment Bill provisions did finally apply then Waiuku zonings would not generally qualify for an exemption from being up-zoned to MHU/MDRS.

In broad terms the Amendment Bill would increase competition for smaller and more affordable dwellings, and for some new greenfield developments will in turn result in fewer smaller lots and dwellings. This is because there would be an increase in centrally located affordable dwellings (i.e. in the Single House zone) and this would compete directly with greenfield developments.

However, some greenfield developments will be able to provide more affordable dwellings, due to their location and economies of scale from development, than new infill dwellings built as a result of the Amendment Bill. It is also clear that many existing potential areas for infill are constrained by a lack of



infrastructure servicing capacity.

The question of whether the Waiuku PPC would be expected to have a greater yield if a MHU zone were applied is therefore difficult to estimate given the number of variables. It is however reasonable to expect that there would be very few, if any, three storey dwellings constructed on the subject site. This is because three storey dwellings have a notably higher construction cost and are generally less desirable due to the need to walk up two flights of stairs. Three storey terrace or town houses are for this reason generally found in upmarket, and more central locations, or in locations where views can be accessed from the upper level. Higher storey construction is also strongly correlated with higher land values, and where outdoor spaces etc become more of a premium. Waiuku, being a small rural town, with comparatively lower land values, would therefore predominantly continue to be built to one and two storey heights and reasonably generous outdoor living spaces.

Therefore, even if the district plan, as a result of the Amendment Bill, enabled three storey buildings on smaller lots in Waiuku, the final built form would most likely be closest to a MHS zoning outcome. In this regard, the assumptions originally made about the number of lots that would be created from the Gardon PPC, being 600-700, are still appropriate in my opinion, even if it were later determined that a higher density zoning, such as MHU/MDRS, must be applied.

The only possible exception is a retirement village. Retirement villages are typically comprised of 4-6 level apartment complexes, particularly in the central and middle suburb locations, and 1-2 level town and terrace houses, particularly in the outer suburbs. In Waiuku, it is anticipated that a retirement village, if built on the PPC site, would include smaller 1 storey stand alone units and a proportion of 2 storey terrace units with a shared lift. It is unlikely that a larger apartment complex would be commercially feasible in Waiuku.

The same issue arises for infill housing that may occur in Waiuku under the Amendment Bill. While there will be increased theoretical 'plan enabled' capacity in Waiuku, a smaller proportion of this may be 'reasonably expected to be realised' due to the additional smaller and more affordable dwellings that will be built in the Single House zone in the outer suburbs of the main urban area. This would potentially mean that there will not be a significant net effect on infill capacity in Waiuku from the Amendment Bill, however there is some uncertainty about making estimates at the current time given the range of factors.

Based on these considerations, Waiuku and the development that would occur if the Gardon PPC is approved, are unlikely to see any material change if the final provisions in the Amendment Bill were to be applied. This is in large part because any additional plan enabled capacity in Waiuku may be offset by the additional construction of smaller, more affordable dwellings, in other parts of Auckland. Construction of 3 storey dwellings is more expensive and 1-2 storey dwellings per square metre, and demand for medium density MHU/MDRS typologies is estimated to be very low in Waiuku compared to MHS typologies.

Adam Thompson