

TASMAN GROWTH PROJECTIONS 2021 – 2051

Summary of Council’s Growth Model as Supporting Information for the Long Term Plan 2021 – 2031



One of Council’s Strategic Priorities is “Enabling positive and sustainable development”.

Council is required by legislation to ensure there is sufficient development capacity to meet Tasman’s expected demand for residential and business land. Enabling housing supply is one way to help address housing affordability issues.

Tasman District Council has developed a Growth Model to inform our plans to provide for growth with sufficient infrastructure and zoned land in the right location at the right time.

The Model is updated every three years as part of developing the LTP (LTP). This summary is provided as supporting information for the LTP 2021-2031. It outlines when and where Council expects new development, based on the LTP’s updated population growth scenario and infrastructure programme.

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EXECUTIVE SUMMARY

The Long Term Plan (LTP) 2021 – 2031 assumes that Tasman District’s population is projected to grow by almost 20,000 between 2021 and 2051. This is based on the medium scenario of updated population projections for Tasman which Council commissioned in 2019¹. Council’s long-term planning aims to determine how best to provide for this projected population growth, and the associated growth in Tasman’s housing and business activity, with sufficient infrastructure and zoned land in the right location at the right time.

Council has developed a Growth Model which provides 30-year demand and supply projections for residential and business development for 20 discrete geographic areas. Every three years, the Council updates its Growth Model, based on the LTP growth assumption, to predict future residential and business development across the Tasman District for the following 30 years.

The key demographic assumptions affecting future demand are:

- ongoing population growth over the next 30 years, driven by net migration gains, with the rate of growth slowing over time
- an ageing population, with population increases in residents aged 65 years and over
- a decline in average household size, mainly due to the ageing population, with an increasing number of people at older ages who are more likely to live in one or two person households.

The overall population of Tasman is expected to increase by 7,700 residents between 2021 and 2031, to reach 64,300 (assuming the medium scenario). Council is planning for 4,300 new dwellings over the next ten years, and a further 7,500 dwellings between 2031 and 2051. Council has planned for 160 new business properties (retail, commercial or industrial) over the next ten years, and a further 335 new properties between 2031 and 2051.

The rollout (supply) in each Growth Model area is the number of new dwellings or business properties we assume can and will be built. This is based on the demand projections, each area’s feasible developable capacity (with any necessary servicing and zoning), and knowledge of forthcoming development proposals and landowner intentions. If an area is unlikely to have enough serviced development capacity to provide sufficient rollout to meet demand, this has been offset by more rollout in other areas. The rollout numbers form the growth assumption for the LTP 2021-2031 and inform other models, including the calculation of Rates and Development Contributions.

Using the Growth Model, Council has assessed that there is sufficient developable residential land capacity to provide enough new dwellings to at least meet demand for the District as a whole for the 30-year period. In terms of specific settlements, Council anticipates that Brightwater and Motueka are unlikely to have sufficient development capacity for all or part of the next ten years. To offset the undersupply in Brightwater and Motueka in Years 1-10, Council has assumed a higher rate of development in Richmond in the short to medium term. A staged suite of infrastructure upgrades for Brightwater will enable some development by Year 4 and will enable sufficient capacity from Year 10. To address the long-term (Years 11-30) undersupply of residential land in Motueka, Council is planning for the development of a significant area of land in Lower Moutere, which was identified in the Nelson Tasman Future Development Strategy (FDS).

Council has planned for the supply of business land to at least meet demand throughout the District for the next ten years.

¹ [Tasman District Projections 2018-2053 provided by Natalie Jackson Demographics Ltd, November 2019](#)

Table 1: LTP Growth Assumption by Area, 2021 – 2031

Growth Model Area	Population Change 2021-2031	Number of New Dwellings	New Business Properties
Brightwater	263	131	4
Collingwood	10	13	2
Kaiteriteri	20	46	
Māpua/Ruby Bay	620	317	7
Mārahau	37	32	
Motueka	657	449	35
Moutere	1,162	569	
Murchison	50	37	3
Pōhara/Ligar/Tata Bay	25	52	6
Richmond	3,671	1,781	81
Riwaka	5	13	1
St Arnaud	16	71	1
Tākaka	56	54	12
Tapawera	18	14	2
Wakefield	535	242	4
Ward Remainder Golden Bay	103	132	
Ward Remainder Lakes Murchison	132	112	
Ward Remainder Motueka	71	78	
Ward Remainder Moutere Waimea	164	140	
Ward Remainder Richmond	73	61	
Total District	7,686	4,344	160

There is always a degree of uncertainty when making assumptions about the future, and the Covid-19 pandemic has created even more uncertainty in the development of this LTP. The model was based on the best information available at the time and is not intended to be an exact forecast of when and where development will actually occur. While the Growth Model and Council’s planning aims to ensure that the availability of serviced, zoned land is not a constraint on housing supply, the actual supply of new dwellings for sale is largely determined by the private sector, including landowners, financial institutions and the construction industry.

It is conventional to see the medium population growth scenario as indicating the most likely scenario. However, the high and low scenarios also need to be considered for potential effects on Council’s financial estimates, infrastructure needs, and zoning requirements. Council will continue to monitor data on construction and population trends. The FDS will be updated in 2022 and the Growth Model will be updated in 2023 to inform the next LTP. For now, based on the infrastructure programme in the LTP 2021-2031, the Growth Model indicates there would still be sufficient serviced and zoned capacity in the urban environment for eight years under the high growth scenario. Council may also consider bringing forward some growth infrastructure projects if growth occurs at a higher rate than forecast.

PLANNING FOR GROWTH

One of Council’s Strategic Priorities for the LTP 2021-2031 (LTP) is “Enabling positive and sustainable development”. This aligns with the sustainable development approach required by the Local Government Act 2002. Council must take into account the social, economic, environmental, and cultural well-being of Tasman, and the reasonably foreseeable needs of future generations². Council is required by legislation to ensure there is sufficient development capacity to meet Tasman’s expected demand for residential and business land³.

Enabling development and infrastructure to provide homes for our community was one of the key topics for consultation on the LTP. Ensuring we have enough serviced and zoned land for housing and business development is a key focus for Council. We know that housing affordability is a real issue for our residents, and also for those wanting to move to our beautiful region. Although Council can’t solve the affordability problem alone, we can be part of the solution. In our LTP we are planning to provide the infrastructure services required (including drinking water, wastewater, stormwater, roads, footpaths, reserves and community facilities) to enable new subdivisions and housing intensification to occur.

HOW THE GROWTH MODEL FITS INTO COUNCIL’S PLANNING

The Growth Model is a District-wide, long term development planning tool. The Model provides 30-year projections of new residential dwellings and new business properties, for 15 settlements and 5 Ward remainder areas.

The latest update of the Growth Model has been guided by the Nelson Tasman Future Development Strategy⁴ (FDS), which is a joint strategy between Tasman District Council and Nelson City Council. The FDS is a high level strategy which identifies future growth areas for various types of housing and business development, including intensification, expansion and rural residential.

The development scenario from the Growth Model sets the strategic direction for the Council’s LTPning framework, to enable the Council to provide for growth with sufficient infrastructure and zoned land in the right location at the right time.

The Growth Model outputs inform the LTP and the Resource Management Plan⁵, as well as supporting documents such as Activity Management Plans, Financial and Infrastructure Strategies, and the Development and Financial Contributions Policy.



² Ss 3, 10 and 14, Local Government Act 2002

³ Ss 30 and 31 of the Resource Management Act 1991; National Policy Statement on Urban Development 2020

⁴ [Future Development Strategy FDS | Tasman District Council](#), adopted by Council in July 2019.

⁵ The Tasman Resource Management Plan is currently being reviewed and will be known as the Tasman Environment Plan

GROWTH MODEL DEFINITIONS

The Growth Model 2021 provides demand and supply projections for 20 discrete Growth Model areas in the District (15 settlements and 5 Ward remainder areas). The 15 settlements are discrete geographic areas where the majority of the District's population is concentrated. The number of residents in each settlement ranges from the largest towns of Richmond and Motueka, to smaller communities such as St Arnaud, Collingwood and Mārahau. The five Ward remainder areas are the rural areas outside of the 15 settlements, where approximately a quarter of Tasman's population reside.

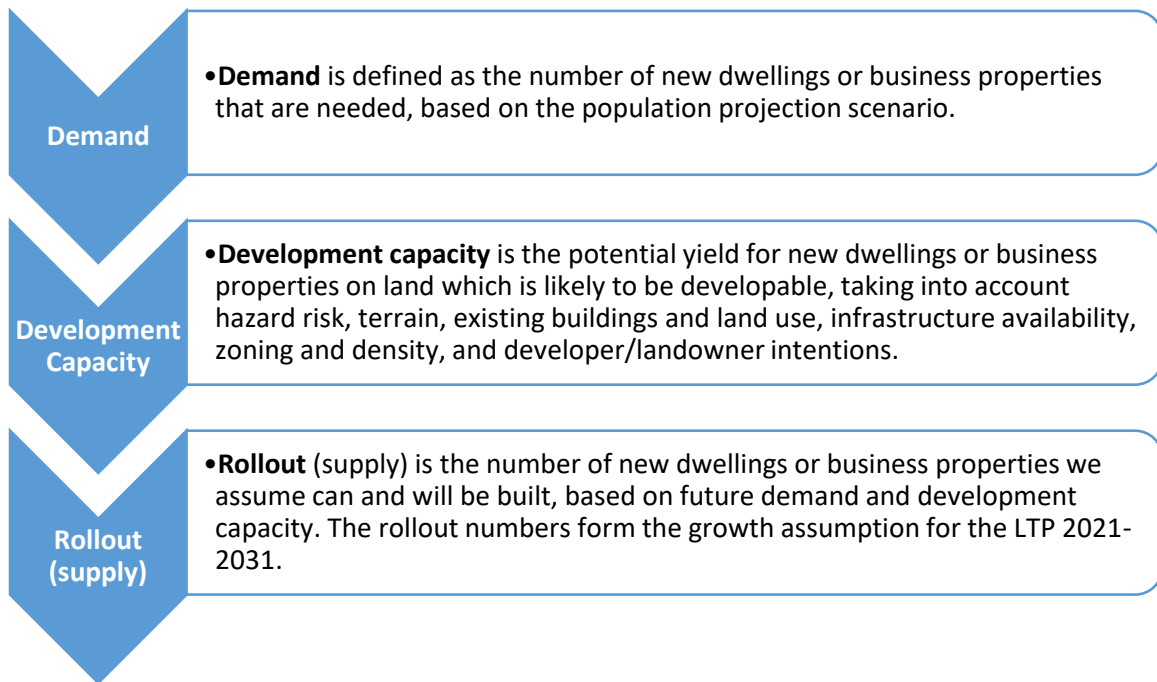


The Model generates outputs for five time periods:

- Pre-LTP Years (2019/2020 and 2020/2021)
- Years 1-3 of LTP (2021/2022 - 2023/2024)
- Years 4-10 (2024/2025 – 2030/2031)
- Years 11-20 (2031/2032 – 2040/2041)
- Years 21-30 (2041/2042 – 2050/2051).

The commentary in this document focuses on Year 1 onwards, unless otherwise stated.

The key concepts of the Growth Model are the **demand**, **capacity** and **rollout** for future development in each Growth Model area (settlements or Ward remainder areas).



Refer to Appendix 1 for further details on the process for updating the Growth Model every 3 years.

The model was based on the best information available at the time and is not intended to be an exact forecast of when and where development will actually occur. There are several factors which are difficult to predict such as population migration patterns; economic activity; developer and landowner decisions; and natural events. While the Growth Model and Council's planning aim to ensure that the availability of serviced, zoned land is not a constraint on housing supply, the actual supply of new dwellings for sale is largely determined by the private sector, including landowners, financial institutions and the construction industry.

DEMAND PROJECTIONS

Updated population projections are used to calculate future demand for new residential dwellings and business properties.

The key demographic assumptions affecting future demand are:

- ongoing population growth over the next 30 years, driven by net migration gains, with the rate of growth slowing over time
- an ageing population, with population increases in residents aged 65 years and over
- a decline in average household size, mainly due to the ageing population with an increasing number of people at older ages who are more likely to live in one or two person households.

Demand for new dwellings

The Growth Model estimates each area's future demand for residential dwellings based on three components: population change, household size, and non-resident dwelling demand, e.g. holiday homes.

Population growth

The overall population of Tasman is expected to increase by 7,700 residents between 2021 and 2031, from 56,600 to 64,300. Most of the overall population growth will be driven by net migration gains (more people moving to Tasman District than leaving). The District will experience ongoing population growth over the next 30 years but the rate of growth will slow over time.

In the absence of up-to-date Stats NZ population projections, Council engaged Natalie Jackson Demographics Ltd (NJD)⁶ to provide District and Ward population and household projections, incorporating Census 2018 data, with low, medium, high scenarios⁷. The projections were based on Tasman's long-term demographic trends (births and deaths) and observed migration trends for 2006-2018. After considering recent estimated population and dwelling growth rates, Council assumed the medium growth scenario for the LTP. This updated growth scenario is significantly higher than the rate assumed in the LTP 2018-2028, which was based on the medium/high scenario of Stats NZ projections based on the 2013 Census.

The following graph shows the three growth scenarios for Tasman's population growth between 2018 and 2053. The graph also shows Stats NZ's population estimates for 2003 to 2018. The three population projections (low, medium, and high growth) incorporate different fertility, mortality, and migration assumptions for Tasman. Further information on the population projections is available in the report available on our website [here](#).

⁶ [Tasman District Projections 2018-2053 provided by Natalie Jackson Demographics Ltd, November 2019](#)

⁷ Due to delays in Census 2018 data, Stats NZ population projections were not updated in time to inform the Growth Model and the LTP.

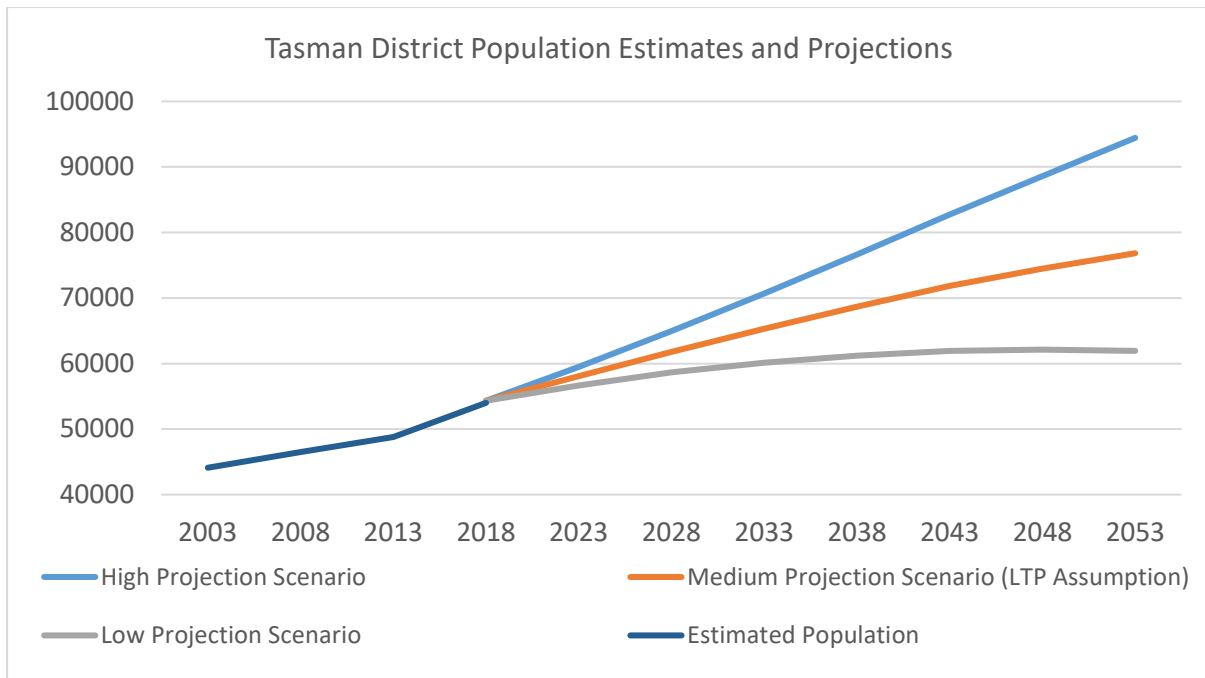


Figure 1: Estimated and projected population series, 2003 – 2053, Tasman District

Under the medium scenario, the Motueka, Moutere-Waimea and Richmond Wards are projected to experience the greatest growth in population. The Golden Bay Ward population is projected to peak in the 2030's and then decline slightly, offsetting some of the growth in 2018-2028. The Lakes-Murchison Ward population is projected to plateau around 2038. These projections reflect each Ward's age structure and its migration trends (net gains/losses) for different age groups.

Positive net migration is the major contributor to the District's growth and increasingly offsets natural decrease (more deaths than births). All Wards are expected to experience natural decrease at some point during the projection period. The shift reflects Tasman's ageing population, with high proportions at older ages. This situation is projected for a large proportion of New Zealand's local authorities, around 40 per cent of which are projected to be experiencing natural decrease within the next two decades.

The updated population projections from NJD were available by Ward, for five-year periods from 2018-2053. The Ward population projection by NJD were used to estimate population growth in each Growth Model area, for each year set in the Model.

The population growth in each Growth Model areas was based on the following:

- Establishing a baseline 2018 population for each area based on Stats NZ geographic boundaries, Census 2018 data, Stats NZ population estimates as at June 2018, and Council data on residential dwellings (See Appendix 3)
- Allocating a share of each Ward's population growth, taking into consideration demographic trends, development trends (e.g. building consents), and future development capacity.

Population projections for each area have then been calculated based on the model's growth and development scenario. The population growth at the District level is consistent with the 30-year projections provided by NJD, based on demographic trends. However, Council's projections at the Ward level may differ slightly to NJD, based on our assumptions of the location and timing of new residential dwellings.

Table 2: Summary of Population Projections

Growth Model Area	Total Population (as at 30 June)				
	2019	2021	2031	2041	2051
Brightwater	2,294	2,391	2,654	2,975	3,307
Collingwood	270	273	283	274	247
Kaiteriteri	367	371	391	404	415
Māpua/Ruby Bay	2,657	2,779	3,399	4,005	4,500
Mārahau	142	149	186	212	177
Motueka	8,027	8,306	8,962	9,803	9,409
Moutere	5,682	5,908	7,069	8,936	11,386
Murchison	479	491	541	555	542
Pōhara/Ligar/Tata Bay	600	606	632	633	612
Richmond	15,169	15,606	19,277	21,388	23,255
Riwaka	617	620	625	597	575
St Arnaud	114	120	136	132	118
Tākaka	1,387	1,402	1,458	1,449	1,396
Tapawera	305	309	327	330	324
Wakefield	2,453	2,528	3,063	3,382	3,662
Ward Remainder Golden Bay	3,148	3,177	3,280	3,257	3,167
Ward Remainder Lakes Murchison	2,863	2,892	3,024	3,076	3,049
Ward Remainder Motueka	1,844	1,904	1,975	2,217	2,474
Ward Remainder Moutere Waimea	4,258	4,333	4,497	4,697	4,884
Ward Remainder Richmond	2,403	2,418	2,491	2,558	2,611
Total District	55,076	56,583	64,269	70,881	76,110

Ageing population

Under the medium scenario, all age groups in Tasman are projected to experience growth. However, the highest growth continues to be in the 65+ age group, whose proportion is projected to increase from 21% in 2018 to 34% in 2048. This increase, known as structural ageing, means that total population growth rates are projected to slow down over time. Once a population has more than 20% aged 65 years and over, it is usually approaching the end of natural increase.

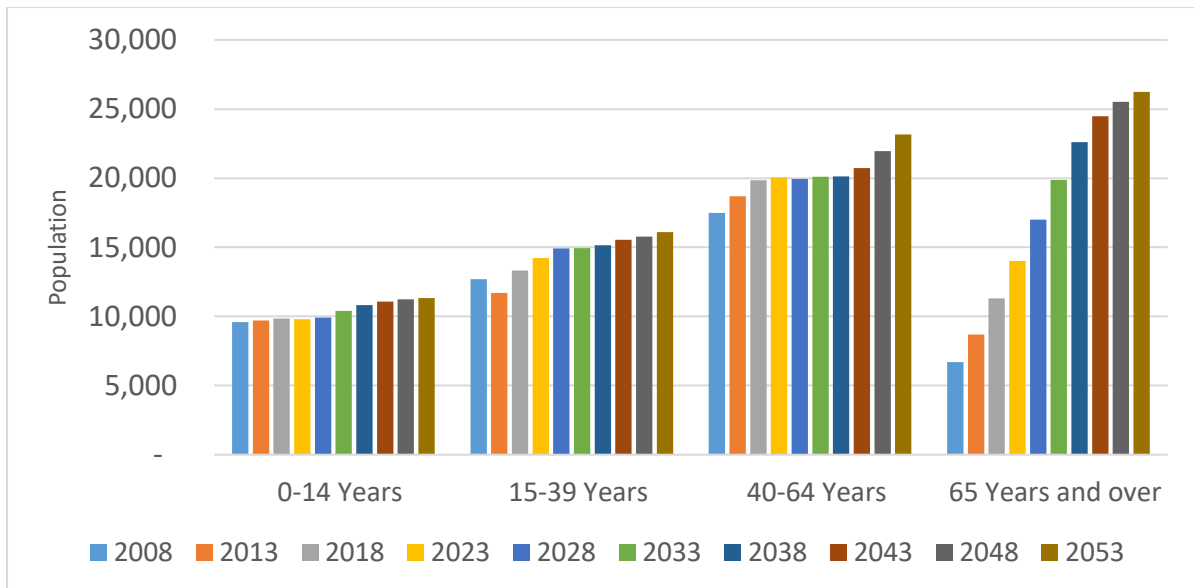


Figure 2: Estimated and projected population by age group, 2008-2053, Tasman District

In 2018, the proportion aged 65+ years ranged from 17.2 per cent for Lakes-Murchison Ward to 23.0 per cent for Motueka Ward. By 2048, these proportions are projected to be somewhat higher under all projection scenarios, with Lakes-Murchison maintaining the youngest age structure throughout, and the oldest being variously shared by Golden Bay Ward and Richmond Ward.

Table 3: Percentage of population aged 65+ years, by Ward, 2018-2048

Ward	Projected percentage aged 65+ years, medium scenario, by Ward		
	2018	2033	2048
Golden Bay	22.5	34.4	37.0
Lakes-Murchison	17.2	27.8	29.1
Motueka	23.0	29.2	31.6
Moutere-Waimea	18.0	29.4	34.0
Richmond	21.8	31.4	37.0
TASMAN	20.8	30.4	34.3

Refer to the full report from NJD⁸ for age group projections by Ward.

At this stage, projections by age group are only available by Ward and are used as a proxy for the Growth Model areas within each Ward (see Appendix 4).

Household size

The ageing population is driving a change in the average household size, projected to decrease from 2.5 residents per household in 2018, to 2.4 in 2028 and 2.3 in 2038. The numbers of one-person households and couple-without-children households are projected to increase. Refer to Appendix 2 for further details on household size projections in the Growth Model.

Holiday homes and other dwellings for non-residents

The Growth Model also considers non-resident demand for holiday home properties or temporary

⁸ [Tasman District Projections 2018-2053 provided by Natalie Jackson Demographics Ltd, November 2019](#)

worker accommodation and assumes that each settlement will maintain the current proportion of dwellings which are used for these purposes.

There is a significant proportion of holiday homes, and a corresponding increase in the population during holiday seasons, in the following communities: St Arnaud (80%), Kaiteriteri (60%), Mārahau (30%), and Pōhara/Ligar/Tata (50%).

Refer to Appendix 2 for further details on holiday home projections in the Growth Model.

Business land projections

Business growth is measured by the number of new retail, commercial and industrial properties. Council assumes there will be continued growth in demand for business land. This is based on a 2016 business land forecasting model from consultants, Property Economics, using the medium growth scenario for Tasman⁹ and Nelson¹⁰. The forecasting model incorporates national and regional economic trends, employment projections, and employment-to-land ratios. Further details on the business land projections are available in Appendix 2. Council is in the process of procuring an updated business land forecasting model, which will inform the next LTP.

CAPACITY ESTIMATES

The amount of feasible developable capacity and the sequencing of rollout (supply) across the District, for both residential and business development, are based on the following information and assumptions:

- recommendations from the FDS for future growth areas
- an initial assessment of developability, taking into account land use factors such as hazard risk, network services and settlement form
- geo-spatial data on developable land area, including terrain and existing buildings
- future zoning and density, including average lot size
- excluding land required for other uses, such as infrastructure, roads, community facilities or open space
- building consents, subdivision consents and applications, and approved Special Housing Areas
- knowledge of forthcoming development proposals and landowner intentions
- the location and timing of infrastructure capital works programme in the LTP 2021-2031, including the Infrastructure Strategy.

The Growth Model assumes that zoning rules will be in place to enable the types of development identified in the FDS.

⁹ [Tasman District Projections 2018-2053 provided by Natalie Jackson Demographics Ltd, November 2019](#)

¹⁰ Stats NZ Subnational Population Projections 2013(base)-2043 update (released 22 February 2017)

ROLLOUT STRATEGY AND GROWTH MODEL OUTPUTS

Rollout (supply) is the number of new dwellings or business properties we assume can and will be built, based on the demand projections and development capacity estimates. If a settlement is unlikely to have enough development capacity to provide sufficient rollout to meet demand, this has been offset by more rollout in other settlements which do have capacity. The rollout numbers form the growth assumption for the LTP 2021-2031.

We have generally aimed for rollout to equal demand District-wide, and then by Ward and for most individual settlements based on the following rollout and infrastructure strategy:

- Enable development in Richmond and Māpua to meet their demand (Y1-30), with excess capacity in Richmond enabled to provide for partial undersupply in Brightwater and Motueka in Years 1 - 10.
- Enable all Motueka's development capacity (Y1-20), noting this only partly meets demand.
- A staged suite of infrastructure upgrades for Brightwater over 30 years, enabling some development by Year 4 and sufficient capacity enabled from Year 10.
- Enable development in Moutere (Years 11-30) to address Motueka undersupply from approximately 2038 (in the Lower Moutere Hills area identified in the FDS).
- Golden Bay and Lake-Murchison generally have sufficient land supply to enable enough new dwellings to meet demand, without requiring further Council growth-related infrastructure.

By aiming for rollout to equal demand District-wide in Tasman, we have assumed that Nelson City will provide adequately for growth with a sufficient supply of new residential dwellings and business properties which is in line with recent population growth trends.

For Years 10-30, we estimate rollout based on an assumption that the new Resource Management Plan (Tasman Environment Plan) rules will enable the types of development identified in the FDS, and will stop development in hazard risk areas.

Residential Growth

Council has planned for 4,300 new dwellings over the next ten years, and a further 7,500 dwellings between 2031 and 2051. As shown in Table 3, Council has identified sufficient capacity to enable enough new dwellings to at least meet the demand (as forecast by the model) District wide. At the individual area level, some settlements are providing for others, as outlined above.

Council anticipates that Brightwater and Motueka are unlikely to have sufficient development capacity for all or part of the next ten years. Some development in Brightwater will be enabled by Year 4, once the Waimea Community Dam and new pump station construction are complete, enabling a sufficient water supply. Further infrastructure investment in Brightwater from Year 10 will enable sufficient development capacity. Motueka's development is constrained by a combination of servicing and zoning. Council is planning sufficient infrastructure servicing in Years 1 to 20 to enable development of all the residential land in Motueka, especially the western side of High St. However, development in the other parts of Motueka will remain limited, due to natural hazard risks in the east and a preference to avoid expansion into productive land on Motueka's outskirts.

To offset the undersupply in Brightwater and Motueka in Years 1-10, Council has assumed a higher rate of development in Richmond in the short to medium term. To address the long-term (Years 11-30) undersupply of residential land in Motueka, Council is planning for the development of a significant area of land in Lower Moutere. This area was identified in the FDS as Lower Moutere Hills, an expansion area for medium to low density development with potential yield of 1,360 dwellings between 2039 – 2048.

Council has not planned to enable increased capacity in Riwaka as this land is flood prone. This does not prevent new houses from being built in this area but it does signal that Council's preference is for this demand to be taken up elsewhere in the Motueka Ward area.

Table 4: Summary of Residential Demand and Rollout Projections

Growth Model Area	Dwellings			
	Demand	Rollout	Demand	Rollout
	Years 1-10 (2021-2031)		Years 11-30 (2032-2051)	
Brightwater	210	131	358	360
Collingwood	13	13	2	2
Kaiteriteri	46	46	77	73
Māpua/Ruby Bay	314	317	628	628
Mārahau	32	32	60	29
Motueka	744	449	1,576	580
Moutere	569	569	1,130	2,130
Murchison	37	37	25	25
Pōhara/Ligar/Tata Bay	52	52	33	33
Richmond	1,170	1,781	2,345	2,339
Riwaka	17	13	33	-
St Arnaud	74	71	17	15
Tākaka	54	54	25	25
Tapawera	14	14	10	10
Wakefield	174	242	328	328
Ward Remainder Golden Bay	132	132	74	74
Ward Remainder Lakes Murchison	109	112	120	122
Ward Remainder Motueka	165	78	305	325
Ward Remainder Moutere Waimea	210	140	331	307
Ward Remainder Richmond	61	61	124	124
Total District	4,197	4,344	7,560	7,529

Business Growth

Business growth is measured in the number of new business properties (retail, commercial, industrial). Council has planned for 160 new business properties over the next ten years, and a further 353 new lots between 2031 and 2051.

Council has planned for rollout to at least meet demand throughout the District for the next ten years. Rollout (supply) estimates are based on an assessment of each settlement's feasible developable capacity and knowledge of forthcoming development proposals and landowner intentions.

Table 5: Summary of Business Demand and Rollout Projections

	Business Properties			
	Demand	Rollout	Demand	Rollout
Settlement	Years 1-10		Years 11-30	
Brightwater	4	4	9	9
Collingwood	2	2	2	2
Māpua/Ruby Bay	7	7	12	12
Motueka	35	37	68	74
Murchison	3	3	4	4
Pōhara/Ligar/Tata Bay	6	6	10	10
Richmond	81	81	205	205
Riwaka	3	1	6	-
St Arnaud	1	1	2	2
Tākaka	12	12	23	6
Tapawera	2	2	4	2
Wakefield	4	4	8	9
	160	160	353	335

While there is generally sufficient business land to meet future demand District wide, further work is planned to assess the demand and capacity beyond Year 10 for the specific types of business land (retail, commercial, industrial). Council is in the process of procuring an updated business land forecasting model. However, based on current data, there appears to be a potential shortfall after Year 10 of retail/commercial business land in Brightwater and Wakefield, offset by a surplus of land zoned for industrial use. Council has also identified a potential shortfall of all types of business land in Tākaka from around Year 15. Council will investigate the provision of further business land in the review of the FDS and new zoning when developing the Tasman Environment Plan.

Council has not planned to enable increased capacity in Riwaka as this land is flood prone. Council assumes the future shortfall in business land in Riwaka will be offset by extra development in Motueka.

The Growth Model has assumed some of the projected demand for business land can be met from undeveloped land for existing vacant or underused business properties, but has not accounted for potential capacity from vacant commercial or industrial buildings. This means actual capacity is likely to be higher in reality and the shortfall is likely to lower, compared with the model's estimates.

CONSIDERATION OF OTHER SCENARIOS

The model was based on the best information available at the time and is not intended to be an exact forecast of when and where development will actually occur. There is always a degree of uncertainty when making assumptions about the future. There are several factors which are difficult to predict such as population migration (either to/from overseas or within New Zealand); the proportion of dwellings used as holiday houses; developer and landowner activity; and natural events. Positive net migration is the major contributor to the District's population growth and could be affected by housing supply, house prices and incomes in other regions and countries.

The Covid-19 pandemic has created even more uncertainty in the development of this LTP. Migration patterns could be affected by international border restrictions or an increase in the number of returning New Zealanders.

Natalie Jackson Demographics Ltd provided three sets of projections, 'high', 'medium' and 'low', and noted "changing economic, political and social circumstances can have an impact on the underlying assumptions regarding births, deaths, and especially migration, and cause trends to fluctuate between the upper and lower bounds."

It is conventional to see the medium scenario as indicating the most likely scenario. However, the high and low scenarios also need to be considered for potential effects on Council's financial estimates, infrastructure needs, and zoning requirements.

If population growth is higher than assumed, debt incurred by Council to fund the growth related portion of infrastructure will be repaid more quickly than assumed through the collection of Development Contributions. However, higher growth than planned could also result in an insufficient amount of serviced land (including infrastructure) for development and a potential worsening of housing affordability. Council may be required to undertake further plan changes to the Tasman Resource Management Plan or Tasman Environment Plan, and/or increase its investment in infrastructure to make more land for development available. For now, the Growth Model is indicating there is sufficient serviced and zoned capacity to meet demand under the medium scenario for 30 years and under the high growth scenario, in the urban environment, for at least eight years.

If population growth is lower than assumed it may take longer for Development Contributions to pay off debt incurred to fund growth related infrastructure. Council may need to revise its capital works programme for growth related infrastructure. The forecast increases in rates and development contributions may be smaller than anticipated.

Council acknowledges that there is unmet latent, or residual, demand in some parts of the District. While the Growth Model doesn't quantify or include this in future demand projections, it reinforces why Council needs to plan for growth, ensure sufficient developable land capacity with extra capacity margins, and consider a higher growth scenario.

Council will continue to monitor data on construction and population trends. The FDS will be reviewed in 2021/2022 and the Growth Model will be updated in 2023 to inform the next LTP (2024 – 2034).

Additional development capacity margins

The National Policy Statement on Urban Development (NPS-UD) also requires Council to provide an additional margin of feasible development capacity in urban areas which is 20% above the projected demand for the next ten years, and 15% above the demand projected for 2031 – 2051.

Under the NPS-UD, Nelson and Tasman is a tier 2 Urban Environment. The two Councils have agreed that the urban environment for Nelson and Tasman comprises Richmond (including Hope), Brightwater, Wakefield, Māpua and Motueka – in Tasman, and in Nelson: the city itself and all suburbs, extending to Hira and Cable Bay.

An assessment of the development capacity in the urban environment of Tasman indicates that we will meet the NPS-UD's requirement for the additional margin of feasible development capacity.

QUALITY ASSURANCE

This is the sixth iteration of the Growth Model and the model is continuously reviewed and improved.

Before the latest update of the Growth Model, Council engaged Utility Limited to conduct a peer review and to identify potential improvements. The most significant changes to the Model were:

- Consistent definitions and interpretation of Demand and Rollout outputs of the Growth Model, to meet the requirements of the Ratings Model and Development Contributions Model.
- Use of a top-down approach to population projections by Growth Model area, based on demographics, development trends and developable capacity.
- Estimates of household size change for each Growth Model area use percentage change, rather than an absolute decrease.
- Review of Growth Model area boundaries to more closely align with new Stats NZ boundaries and with FDS growth areas.
- Use of consistent conversion rates for business land, from hectares to lots, for demand and rollout.

There is an internal quality assurance process of the pre-work calculations and inputs, including the population, household size, and business land projections by Growth Model area.

The inputs and outputs of the Growth Model have also been checked against recent trends in population and dwelling growth, and against Stats NZ projections.

In recent years, Tasman has experienced relatively high rates of population growth. The average annual population increase over the three years to June 2020 was 2.0% per annum, while the annual average over the last ten years was 1.6% (which included an increase in 2011 following the Canterbury earthquakes).

The Growth Model projects annual population growth of 1.3% for 2021-2031, based on the medium growth scenario. In the report on Tasman's population projections¹¹, it was noted that the projections result in relatively modest annual average growth rates when compared with recent years, but advised against assuming growth would continue at a high level unabated. It was also noted that the projections already assumed relatively high net migration compared with previous Stats NZ projections, and growth rates are also likely to decline over time as structural ageing

¹¹ Report, page 20

increases. The rates for the medium scenario aligned well with the average growth over 2006 – 2018.

In recent years, Tasman has also experienced increasing numbers of consented new dwellings. The average annual increase in the three years to June 2020 was for 419 new dwellings. The average over the last ten years was 340 new dwellings a year.

The Growth Model projects an average of 451 new dwellings a year for Years 1-3 (2021 – 2024), dropping to 427 a year for 2024 – 2031.

As with population growth, dwelling demand is projected to slow down over time.

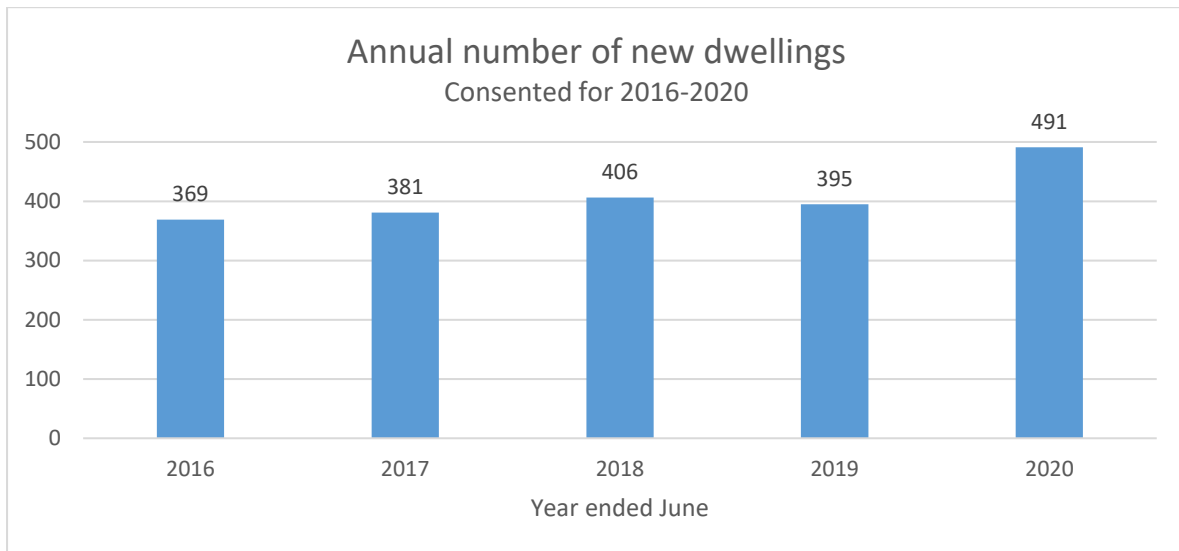


Figure 3: Annual number of new dwellings consented, 2016-2020, Tasman District

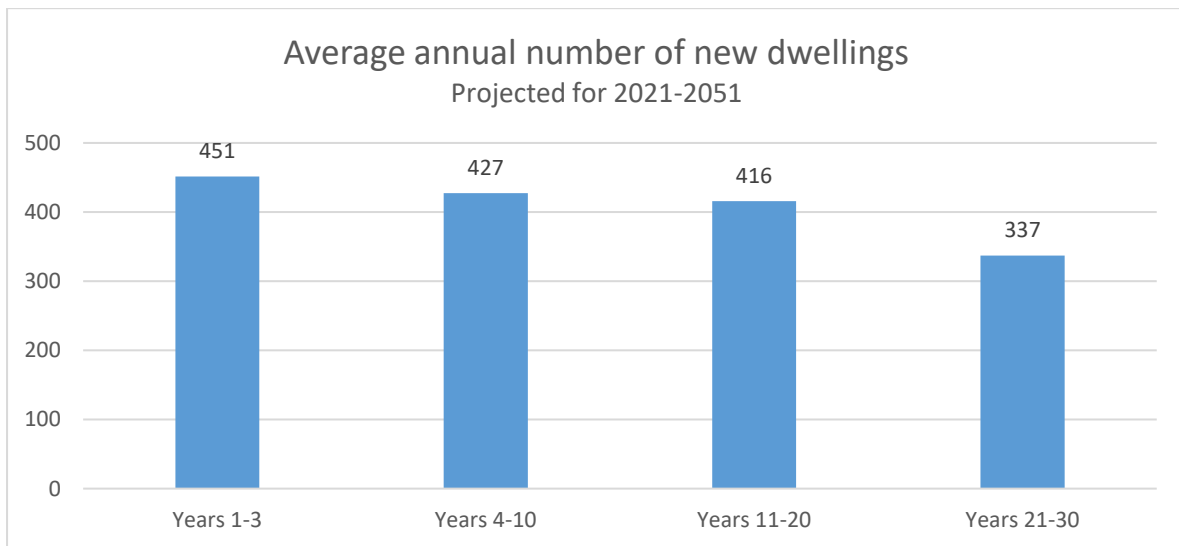


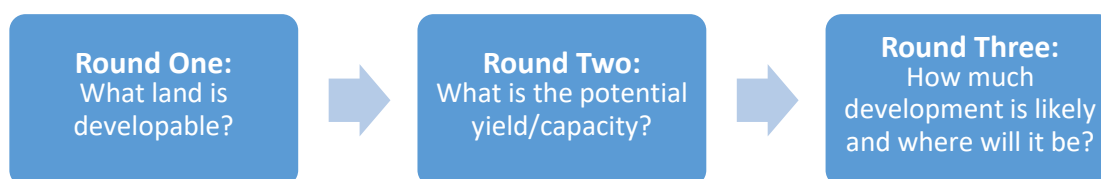
Figure 4: Annual average number of new dwellings projected, 2021-2051, Tasman District

Appendix 1: The Growth Model Process

Every three years, the Council updates its Growth Model to predict future residential and business development across the Tasman District for the following 30 years.

Updated population projections are used to calculate future demand for new residential dwellings and business properties.

Each update of the Growth Model involves three rounds of staff workshops involving a multi-disciplinary team, including engineers, planners and resource scientists. Development capacity and rollout is calculated for Growth Model areas by splitting the area into smaller sections, known as Development Areas (DA). The boundaries of Growth Model areas and DA's have been reviewed to align with the FDS, which has identified growth areas (e.g. intensification, expansion).



In the first round of workshops, each DA is assessed for developability, taking into account land use constraints and opportunities such as infrastructure availability and zoning. Preference is given to land which minimises hazard risks and avoids productive land.

In the second round of workshops, the potential yield of each DA is calculated in terms of existing vacant lots and potential new lots. Council's GIS team provide spatial data on the total developable area and staff estimate the following variables for each DA:

- average lot size once developed
- the proportion needed for roads, other infrastructure, greenspace, and community buildings
- the extent that a DA's terrain will affect its potential for development
- the proportion of properties which are realistically likely to subdivide or redevelop over the next 30 years.

In the third round of workshops, staff estimate the location and timing of new development (rollout) for 2021-2051, in line with the population growth scenario (demand).

This is based on the:

- potential yield of each DA (from Round 2)
- availability of infrastructure
- current zoning or potential rezoning
- past development trends
- current or planned subdivisions
- developer or landowner intentions.

The development rollout has also been guided by the FDS which identifies growth areas (e.g. intensification, expansion).

Following the workshops there is a reconciliation process to ensure there is sufficient rollout to meet the total projected demand for Tasman. If a settlement is unlikely to have enough rollout to meet demand, this has been offset by more rollout in other settlements which have capacity.

Appendix 2: Data for Demand Projections

Household size

Initial values for each Growth Model area were based on Census 2013¹² data on the average number of residents in occupied dwellings, for relevant Statistical Areas (SA2) or Area Units. Household size projections for Tasman show a declining trend and it is assumed that all Growth Model areas experience a decline at the same rate, based on Stats NZ and NJD household size projections.

Table 6: Household Size Projections by Growth Model Areas

Growth Model Area	2021	2031	2041	2051
Brightwater	2.73	2.62	2.5	2.42
Collingwood	2.18	2.09	2	1.94
Kaiteriteri	2.2	2.11	2.02	1.95
Māpua/Ruby Bay	2.42	2.32	2.22	2.15
Mārahau	2.2	2.11	2.02	1.95
Motueka	2.41	2.31	2.21	2.14
Moutere	2.59	2.48	2.38	2.3
Murchison	2.02	1.94	1.85	1.79
Pōhara/Ligar/Tata Bay	2.25	2.16	2.06	2
Richmond	2.57	2.46	2.35	2.28
Riwaka	2.4	2.3	2.2	2.13
St Arnaud	2.13	2.04	1.95	1.89
Tākaka	2.26	2.16	2.07	2
Tapawera	2.41	2.31	2.21	2.14
Wakefield	2.84	2.72	2.6	2.51
Ward Remainder Golden Bay	2.18	2.09	2	1.94
Ward Remainder Lakes Murchison	2.35	2.25	2.15	2.08
Ward Remainder Motueka	2.37	2.27	2.17	2.1
Ward Remainder Moutere Waimea	2.64	2.52	2.41	2.34
Ward Remainder Richmond	2.83	2.72	2.6	2.51

Holiday homes and other dwellings for non-residents

The proportion of holiday homes in each area is estimated using Council's dwellings counts dataset. This dataset was initially based on dwelling numbers from Council's rating database for a previous iteration of the Growth Model. The rating database was not designed to provide this information and therefore it is a source of uncertainty through limited accuracy. However, the dataset has been progressively updated using building consents for new dwellings and estimates the base year count of dwellings for each area.

¹² This was consistent with the approach taken by Natalie Jackson Demographics Ltd, who noted that lower quality occupancy data for Census 2018 was producing anomalous results.

Subtracted from that count is the estimated number of dwellings occupied by residents, based on estimated resident population and household size. The remaining number of dwellings provides the proportion of dwellings for non-residents, which the Growth Model assumes to be constant in future years.

Business land projections

Demand for business land has been modelled using the medium growth scenario for Tasman¹³ and Nelson¹⁴. The Nelson-Tasman business land forecasting model, provided in 2016 by Property Economics, estimates future land requirements for three different types of business land (industrial, office, retail). The model incorporates national and regional economic and demographic trends, employment projections, and employment to land ratios. The land requirements assume that development will be 'at grade', i.e. single storey.

The model considers the wider economic catchment and retail network of both Nelson and Tasman, and assumes the geographic distribution of the existing retail network in the commercial centre hierarchy across both regions is maintained.

The Property Economics estimates future land requirements in five-year periods to 2038 and this has been extrapolated to 2053 assuming the same growth rates as the 2033 – 2038 year set.

The Property Economics model produces projected demand for business land in hectares while the Growth Model requires demand to be expressed as the number of lots. The projections are converted from hectares to lots using an average lot size, by type, by Growth Model area. The average lot sizes are based on a field survey conducted over summer 2018/2019, of developed, zoned business land lots.

The business land projections for each Growth Model area¹⁵ are based on the distribution of zoned land across the District. However, the Property Economics Model report noted that, under the zoned distribution scenario, Brightwater has an elevated industrial land demand due to the Carter Holt Harvey Mill being zoned industrial. This is a 'one off' anomaly and the estimated land requirements for Brightwater are more appropriately added to Richmond's future requirements (the adjacent town with significantly more growth). The future demand for industrial land in Brightwater has been assumed to be the same as Wakefield, as the two areas have similar population, location and settlement form.

Council is in the process of procuring an updated business land forecasting model, which will inform the next LTP.

¹³ [Tasman District Projections 2018-2053 provided by Natalie Jackson Demographics Ltd, November 2019](#)

¹⁴ Stats NZ Subnational Population Projections 2013(base)-2043 update (released 22 February 2017)

¹⁵ Refer to Appendix 5 for the conversion of the Property Economics model projections to Growth Model areas.

Appendix 3: Stats NZ Areas used to calculate baseline population for Growth Model Areas

Deriving the population growth for each Growth Model area requires a baseline population. The baseline 2018 population for each area is based on Stats NZ geographic boundaries, Census 2018 data, Stats NZ population estimates as at June 2018, and Council data on residential dwellings.

This table identifies which Stats NZ geographic areas are used to establish the baseline population for each Growth Model area.

* The boundaries for Growth Model areas marked with an asterisk do not perfectly align with Stats NZ boundaries. Therefore, the Stats NZ population for these areas has been adjusted using the ratio between Census dwelling counts for the relevant Stats NZ area and Council's GIS dwelling count data for the Growth Model area.

Table 7: Stats NZ areas used to calculate Growth Model areas population

Growth Model Area	Stats NZ Geographic Area for baseline population (Statistical Area 2 (SA2) or Urban-Rural Area)
Brightwater	Brightwater SA2
Collingwood	Collingwood Rural Settlement
Kaiteriteri	Kaiteriteri Rural Settlement
Māpua/Ruby Bay*	Ruby-Mapua SA2
Mārahau*	Marahau Rural Settlement
Motueka*	Motueka North SA2, Motueka East SA2, Motueka West SA2
Moutere*	Lower Moutere SA2 and Moutere Hills SA2
Murchison	Murchison Rural Settlement
Pōhara/Ligar Bay/Tata Beach*	Pohara and Ligar Bay Rural Settlements
Richmond	Richmond West SA2, Richmond Central SA2, Ben Cooper Park SA2, Wilkes Park SA2, Templemore SA2, Easby Park SA2, Fairrose SA2
Riwaka*	Riwaka Rural Settlement
St Arnaud	St Arnaud Rural Settlement
Tākaka	Takaka SA2
Tapawera*	Tapawera Rural Settlement
Wakefield*	Wakefield SA2
Ward Remainders	Ward Areas, less the population in relevant settlements

Appendix 4: Growth Model Areas by Ward

This table shows which Growth Model areas belong to each Ward.

Ward	Growth Model Areas
Golden Bay	Tākaka, Pōhara/Ligar Bay/Tata Beach, Collingwood, Ward Remainder
Lakes-Murchison	Murchison, Tapawera, St Arnaud, Ward Remainder
Motueka	Motueka, Moutere (part), Riwaka, Kaiteriteri, Mārahau, Ward Remainder
Moutere-Waimea	Moutere (part), Māpua/Ruby Bay, Brightwater, Wakefield, Ward Remainder
Richmond	Richmond, Ward Remainder

The Moutere area is assumed have 60% of its baseline population in the Moutere-Waimea Ward, and 40% in the Motueka Ward. However, for the first ten years of the LTP, the majority of growth in Moutere will be in the Moutere-Waimea Ward portion. In later years (Years 21-30), with development planned in the Lower Moutere Hills area identified in the FDS, the majority of Moutere's development will be in the Motueka Ward portion.

Appendix 5: Conversion of Business Demand forecasts to Growth Model Areas

The Property Economics model projections are for larger geographic areas than some Growth Model areas. For those areas that do not align, the Property Economics projections have been apportioned to the Growth Model areas based on population share. For Richmond/Māpua, we have assumed a greater share will be in Richmond, due to the relatively higher share of zoned business land.

Property Economics Model Area	Growth Model Areas
Tākaka	Tākaka, Pōhara/Ligar Bay/Tata Beach
Richmond	Richmond, Māpua/Ruby Bay
Motueka	Motueka, Riwaka