Housing Development Capacity Assessment 2021 Technical Report

Queenstown Lakes District

26 August 2021 – Final

m.e consulting

Otago Regional Council

QUEENSTOWN LAKES DISTRICT COUNCIL

Housing Development Capacity Assessment Technical Report

Queenstown Lakes District

Prepared for

Queenstown Lakes District Council
and
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1 Introduction

This report contains the supporting technical information (i.e., appendices) for the Housing Development Capacity Assessment ("HBA") 2021 for Queenstown Lakes District ("QLD"). It should be read in conjunction with the Main Report as it is not a standalone document.

To assist with cross referencing to the Main Report, this document is organised according to the same three parts – being the Housing Market Assessment (Part 1), Housing Capacity Assessment (Part 2), and Conclusions (Part 3). Not all sections in the Main Report required additional information to be included in this Technical Report. As such, the structure within each part will not be the same. However, the same headings have been used where applicable to aid navigation.

PART 1 – HOUSING MARKET ASSESSMENT

2 Housing Demand

This section provides a brief explanation of the approach used to model housing demand in the HBA and then talks about the Council's July 2020 growth projections in more detail. This includes discussion on why the high growth scenario is the preferred growth future. Explanation is provided on how Council's growth projections are further split by urban and rural environment growth projections and by dwelling type. Total urban dwelling projections for the medium (5 year lag) growth scenario are included to complement Section 2.6 (Housing Demand by Location) in the Main Report.

2.1 Approach - Housing Demand Model

The analysis utilises the M.E *Housing Demand Model (2021)* which provides detail on the quantum and structure of current and projected housing demand in the district.[1] The quantum of demand is in terms of numbers of households, while structure is examined in terms of household types, dwelling types, and dwelling tenure, and in relation to household incomes as one important determinant of housing affordability.

Demand is identified in terms of numbers of resident households, allowing for one dwelling per household.[2] Projected future demand for housing is based on the QLD projected future resident households and also projected future total dwellings, inclusive of holiday houses (demand projections dated 30th July 2020, discussed further below).

Demand for resident housing varies among different segments in the community, and so demand is estimated according to the numbers of resident households of each type, size, age, and income, and then with further breakdown according to ethnicity. That draws from detailed analysis of Census 2018 data at the district level, and projections of households in each segment.

The housing demand from each segment is then further examined according to dwelling tenure – owners and renters – and by type of dwelling – detached and attached. This structure meets the requirements of the NPS-UD, including the consideration of "*different groups in the community*".

This socio-demographic structure also provides the demand-side basis for assessing housing affordability primarily for non-owner households (Section 4 of the Main Report).

The assessment focuses on usually resident households, who occupy dwellings in the district. Resident households account for at least 95% of demand for private dwellings, according to Census 2018. Demand from non-resident households - those who are not "usually resident" in the district as per the Census definition - is a significant part of overall demand for dwellings, and is estimated separately.[3] Non-resident owners are not usually identified from Census information (since they are residents of other cities or

[1] This is consistent with Policy 1, also 3.2(1), 3.10, HBA 3.19, 3.23(3) of the NPS-UD.

[2] As per NPS-UD 3.34(4)

[3] Clause 3.23(2) of the NPS-UD.

districts in New Zealand, or reside overseas) and an important indication of the number of such dwellings is the estimates of empty dwellings (commonly holiday homes) at Census night.

Section 2 of the Main Report examine a logical sequence, considering first the population and household base, and the future outlook for households as the core driver of demand for housing capacity, then examining current housing demand in more detail, by household types, incomes and ethnicities. The focus then turns to projected demand for housing, taking account of demographic changes (especially the ageing of the population, and any shifts in the ethnic structure of the household sector).

2.2 Council's Preferred Growth Projections

Leading up to the COVID-19 pandemic, the district was experiencing exceptionally high growth. This was driven by an unprecedented level of migration with over 2,000 people per year moving to the district to live. COVID-19 has however had a profound impact on QLD.

In light of COVID-19 the Council reviewed its demand projections in July 2020 . The QLDC methodology incorporates additional information which provides for a more robust, localised and multi-dimensional model that has proven to be more accurate.[4] The approach considers a range of data sources including Stats NZ, census data, resource and building consents, Housing and Business Capacity Assessments, migration data, Data Ventures information,[5] Infometrics projections (including those produced by Waka Kotahi) and tourism and visitor accommodation projections. The projections were prepared in a time of unprecedented uncertainty as the COVID-19 situation was unfolding.

A number of demand projection options were considered which included:

1. Different journey to 2018 projections but same end point (a.k.a. Change the Path) (High Growth)
2. 5-year delay (Medium Growth)
3. 10-year delay (Low Growth)

Key assumptions that informed the Council's demand projections were:

1. Migration – the district will continue to attract people to stay and come back to. Historically net migration has been 100 (2012) to 3,150 (2018) with a long term average from 1997 to 2020 of approximately 1,110 per annum.[6] Post recovery the long run average is projected to be approximately 1,100 per annum;
2. Visitors will return. The district remains a beautiful place to live, work and visit. COVID-19 has also proven that remote working is possible. Following COVID-19, visitor growth is projected to be 1-2% p.a.

[4] Demonstrated by cross-checks with Qrious mobile phone usage data for QLD.

[5] Data Ventures create near real time electronic card spend insights to help inform resident / visitor information and is an input into the demand projections.

[6] https://ecoprofile.infometrics.co.nz/queenstown-lakes%2bdistrict/Population/Source

Overall, it is believed that QLD will continue to grow strongly, as it remains an attractive place to live, work and visit. This is the key assumption that has underpinned the Council's demand projections and the selection of the Change the Path (High Growth) scenario as the preferred growth future.

The July 2020 projections are utilised across Council in all workstreams, which includes: The Queenstown Lakes Draft Spatial Plan, Ten Year Plan, 30 Year Infrastructure Strategy, Proposed District Plan, Annual Plan, Development Contribution Policy, Business Cases, Masterplans and Strategies / Policies. The projections are reviewed on a 6-monthly basis. This is a critical step in the process to make sure QLDC is using most up to date projections. It also allows for an agile response to any variance in growth rates and the utilisation of most recent data.

Figures 2.1 and 2.2 graph the Council's July 2020 projections for total dwellings and resident houses respectively by scenario.

Figure 2.1 – Total Dwelling Growth Projections 2020-2050 by Scenario (QLDC)

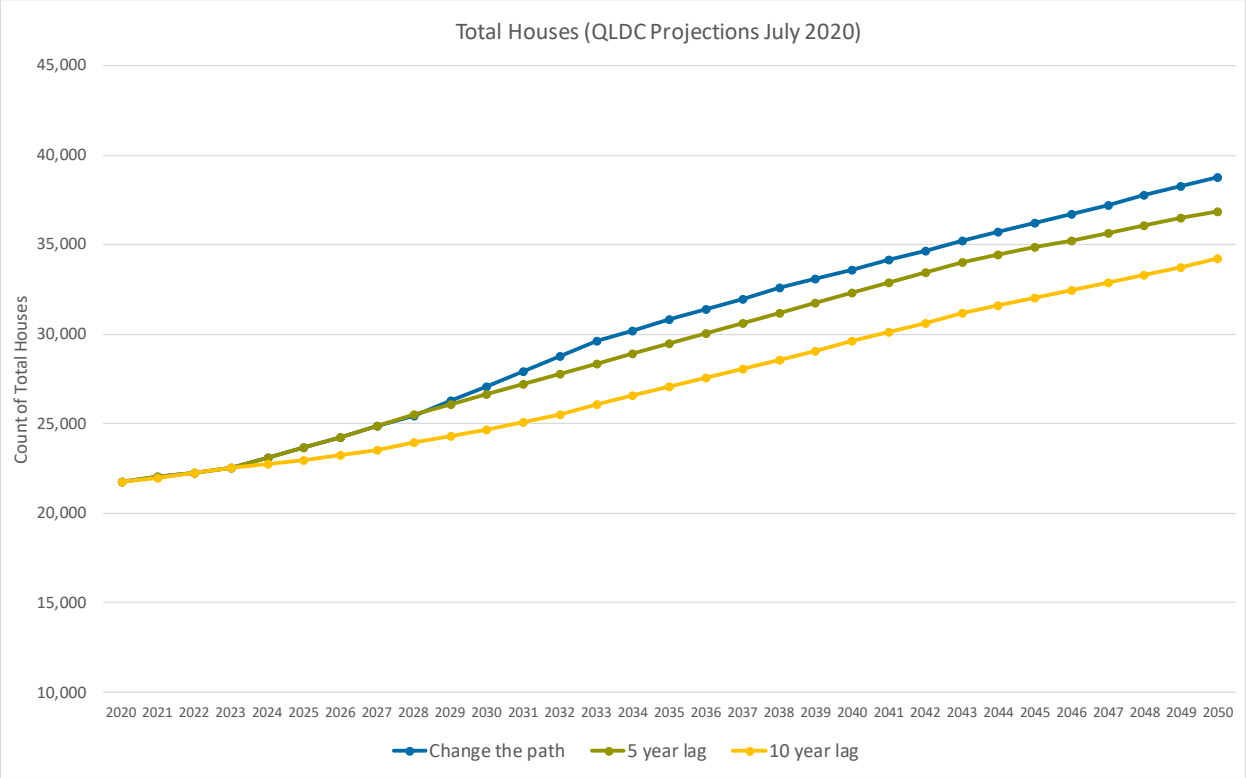
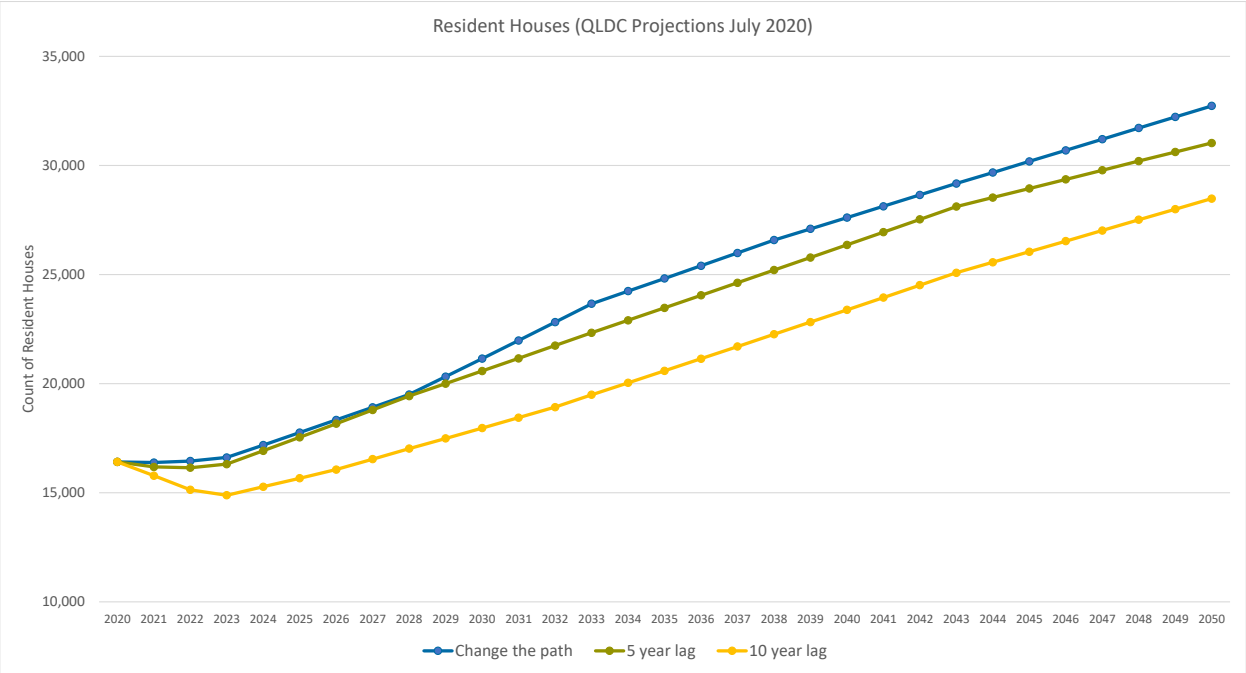


Figure 2.2 – Resident Dwelling Growth Projections 2020-2050 by Scenario (QLDC)



2.3 Housing Demand by Location

2.3.1 Housing Demand by Ward

Council's projections provide a breakdown of housing growth by Ward. Ward boundaries for the purpose of this HBA are illustrated in Figure 2.3. We note that QLD comprises the Wānaka Ward, Arrowtown Ward and Queenstown-Wakatipu Ward as defined by Statistics NZ. We have aggregated Arrowtown and Queenstown-Wakatipu wards and referred to that combined area as the "Wakatipu Ward".

Table 2.1 shows estimates of Council's total dwelling growth projections (includes resident housing and holiday homes) split according to ward for each growth scenario (the preferred Change the Path future, and alternate futures).

Figure 2.3 – Ward Boundaries Adopted for the HBA 2021

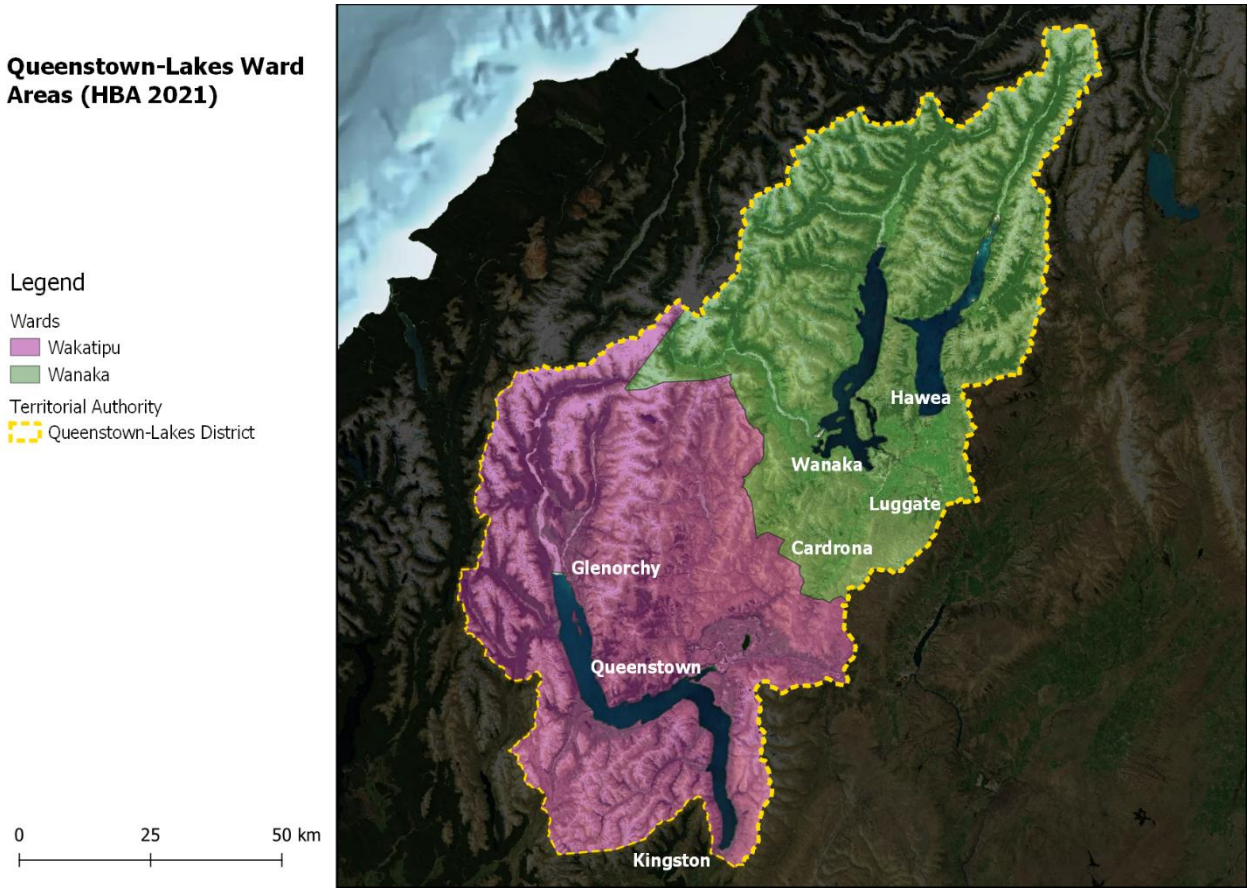


Table 2.1 - QLDC Total Dwelling Growth Projections by Ward and Scenario 2020-2050

Ward	2020	2023	2030	2050	2020-23	2020-23 %	2020-30	2020-30 %	2020-50	2020-50 %
Change the Path										
Wakatipu Ward	13,325	13,810	16,560	23,599	485	4%	3,235	24%	10,274	77%
Wanaka Ward	8,423	8,743	10,557	15,200	320	4%	2,134	25%	6,777	80%
District	21,748	22,553	27,117	38,799	805	4%	5,369	25%	17,051	78%
5 Year Lag										
Wakatipu Ward	13,325	13,806	16,275	22,450	481	4%	2,950	22%	9,125	68%
Wanaka Ward	8,423	8,740	10,369	14,442	317	4%	1,946	23%	6,019	71%
District	21,748	22,546	26,644	36,892	798	4%	4,896	23%	15,144	70%
10 Year Lag										
Wakatipu Ward	13,325	13,791	15,105	20,837	466	3%	1,780	13%	7,512	56%
Wanaka Ward	8,423	8,730	9,596	13,378	307	4%	1,173	14%	4,955	59%
District	21,748	22,521	24,701	34,215	773	4%	2,953	14%	12,467	57%

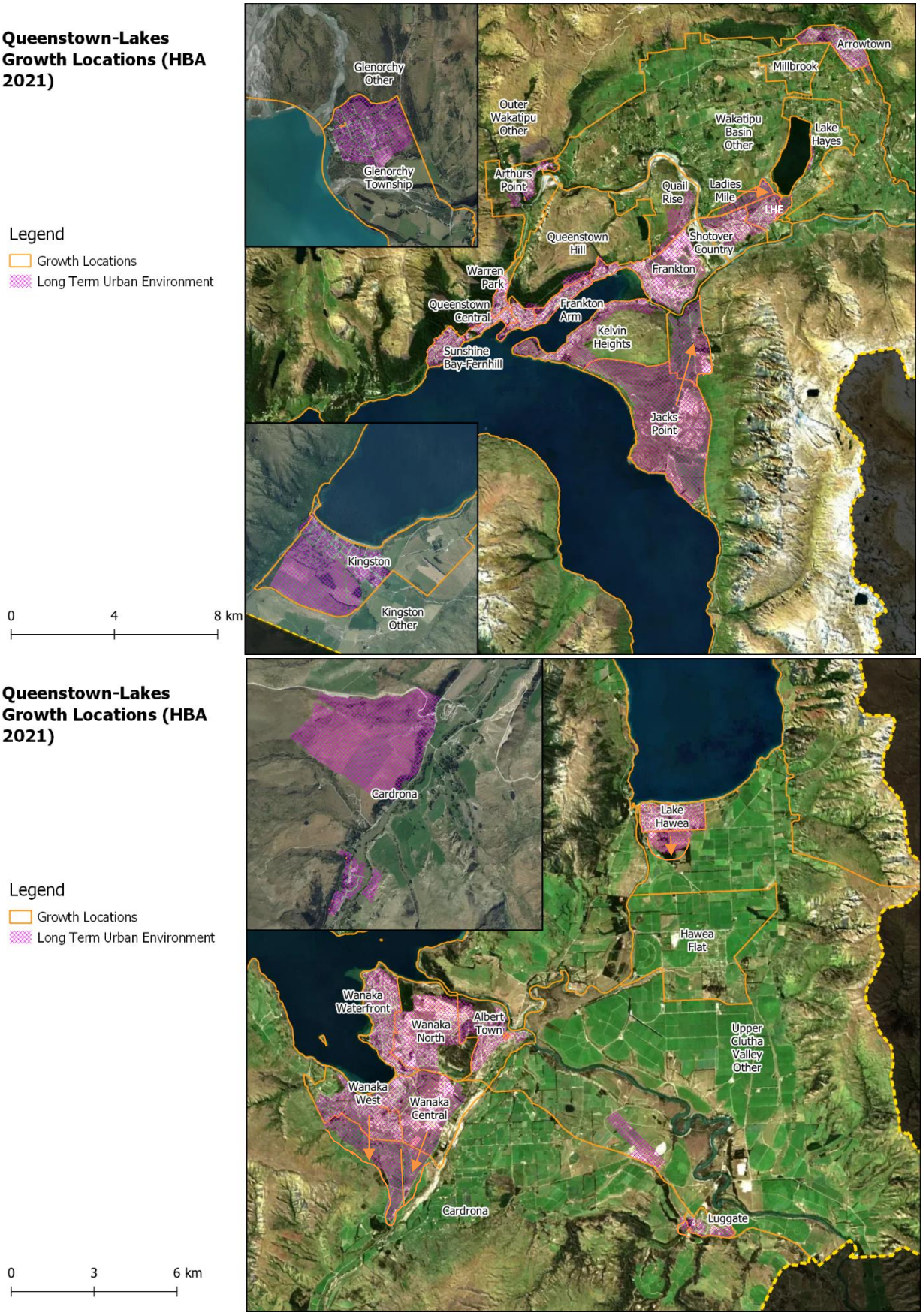
Source: QLDC July 2020 Projections - Total Dwellings

Table 2.2 summaries QLDC's Change the Path total dwelling projections by geographic area (mapped in Figure 2.4). This is the full level of detail that Council's projections are supplied at. The same breakdown is available for resident housing and holiday homes (as well as population).

Table 2.2 – Total Dwelling Projections by Geographic Area – Change the Path Future

Geographic Area	2020	2023	2020-23	2020-23 %	2030	2020-30	2020-30 %	2050	2020-50	2020-50 %
Wakatipu Ward	**13,325**	**13,810**	**485**	**4%**	**16,560**	**3,235**	**24%**	**23,599**	**10,273**	**77%**
Glenorchy Other	75	76	1	1%	80	5	7%	91	16	22%
Glenorchy Township	219	223	3	2%	242	22	10%	291	71	32%
Outer Wakatipu Other	335	339	4	1%	362	27	8%	419	84	25%
Gibbston Valley	102	104	2	2%	118	16	16%	153	52	51%
Kingston	235	249	15	6%	332	97	41%	543	308	131%
Arthurs Point	482	490	8	2%	536	54	11%	653	172	36%
Wakatipu Basin Other	616	619	3	0%	636	20	3%	681	65	11%
Millbrook	260	262	2	1%	273	13	5%	302	42	16%
Ladies Mile	58	132	74	127%	550	492	846%	1,620	1,562	2686%
Queenstown Hill	7	15	8	115%	61	54	767%	179	172	2436%
Warren Park	487	501	14	3%	581	94	19%	785	298	61%
Sunshine Bay-Fernhill	1,226	1,227	1	0%	1,231	5	0%	1,242	16	1%
Arrowtown	1,410	1,415	6	0%	1,447	38	3%	1,529	120	9%
Quail Rise	313	343	29	9%	509	196	62%	936	622	198%
Queenstown Central	435	452	17	4%	548	112	26%	792	356	82%
Queenstown East	944	952	8	1%	997	53	6%	1,113	168	18%
Frankton Arm	1,135	1,142	7	1%	1,183	48	4%	1,287	152	13%
Frankton	1,512	1,608	96	6%	2,153	642	42%	3,550	2,038	135%
Lake Hayes	253	253	0	0%	255	2	1%	259	6	3%
Kelvin Heights	686	706	20	3%	820	135	20%	1,113	428	62%
Shotover Country	909	910	1	0%	915	5	1%	926	16	2%
Lake Hayes Estate	699	700	0	0%	703	3	0%	709	10	1%
Jacks Point	927	1,092	165	18%	2,028	1,102	119%	4,426	3,499	378%
Wanaka Ward	**8,423**	**8,743**	**320**	**4%**	**10,557**	**2,134**	**25%**	**15,200**	**6,778**	**80%**
Outer Wanaka	238	239	2	1%	248	10	4%	270	32	14%
Upper Clutha Valley Othe	107	109	1	1%	116	9	9%	136	29	27%
Luggate	230	244	14	6%	326	96	42%	534	305	132%
Hawea Flat	214	215	2	1%	224	10	5%	246	32	15%
Cardrona	487	504	17	4%	602	115	24%	853	366	75%
Wanaka Waterfront	1,661	1,668	7	0%	1,708	47	3%	1,810	149	9%
Wanaka North	1,408	1,447	39	3%	1,669	261	19%	2,237	829	59%
Wanaka West	1,353	1,469	115	9%	2,122	768	57%	3,793	2,440	180%
Albert Town	1,045	1,068	24	2%	1,204	159	15%	1,550	505	48%
Wanaka Central	934	989	54	6%	1,298	363	39%	2,088	1,153	123%
Lake Hawea	746	790	44	6%	1,041	295	40%	1,682	936	126%
Other	-	-	-	0%	-	-	0%	-	-	0%
District	**21,748**	**22,553**	**805**	**4%**	**27,117**	**5,369**	**25%**	**38,799**	**17,051**	**78%**

Figure 2.4 – Map of Council Growth Projection Geographic Areas – Wakatipu and Wānaka Wards



2.3.2 Approach to Split Housing Projections by Urban and Rural Environment

Table 2.3 contains M.E's assumptions around the current split of total dwellings according to the area of urban and rural environment in each geographic area. Where the area contained both urban and rural environments, M.E considered the share of estimated 2020 dwellings in each part using a spatial analysis of rating property data relative to area and urban environment boundaries in GIS. This was cross checked against Council data on existing dwellings in the rural environment based on a spatial analysis by zone.

The table also contains M.E's assumptions around the estimated split of future growth in each geographic area between the urban and rural environment areas. In many cases, the allocation is considered likely to reflect current patterns. In a few areas, M.E has assumed that a greater share of future growth will be oriented to the urban environment areas, than there exists presently.

Table 2.3 – M.E Assumptions on 2020 and Future Growth Urban-Rural Environment Splits

Reporting Area Concordance	Geographic Area	Geographic Area Contains area of Urban Env.	Geographic Area Contains area of Rural Env.	2020 Urban Env. Share (%)	2020 Rural Env. Share (%)	2020 Urban Env. Share (%)	2020 Rural Env. Share (%)
Wakatipu Ward	**Wakatipu Ward**						
Outer Wakatipu	Glenorchy Other	-	1	0.0%	100.0%	0.0%	100.0%
Small Township - Wakatipu	Glenorchy Township	1	1	87.9%	12.1%	87.9%	12.1%
Outer Wakatipu	Outer Wakatipu Other	-	1	0.0%	100.0%	0.0%	100.0%
Small Township - Wakatipu	Gibbston Valley	-	1	0.0%	100.0%	0.0%	100.0%
Small Township - Wakatipu	Kingston	1	1	100.0%	0.0%	100.0%	0.0%
Arthurs Point	Arthurs Point	1	1	92.2%	7.8%	92.2%	7.8%
Outer Wakatipu	Wakatipu Basin Other	-	1	0.0%	100.0%	0.0%	100.0%
Outer Wakatipu	Millbrook	-	1	0.0%	100.0%	0.0%	100.0%
Eastern Corridor	Ladies Mile	1	1	100.0%	0.0%	100.0%	0.0%
Queenstown Town Centre	Queenstown Hill	1	1	97.0%	3.0%	100.0%	0.0%
Queenstown Town Centre	Warren Park	1	-	100.0%	0.0%	100.0%	0.0%
Queenstown Town Centre	Sunshine Bay-Fernhill	1	-	100.0%	0.0%	100.0%	0.0%
Arrowtown	Arrowtown	1	1	100.0%	0.0%	100.0%	0.0%
Quail Rise	Quail Rise	1	1	73.5%	26.5%	95.0%	5.0%
Queenstown Town Centre	Queenstown Central	1	-	100.0%	0.0%	100.0%	0.0%
Queenstown Town Centre	Queenstown East	1	-	100.0%	0.0%	100.0%	0.0%
Queenstown Town Centre	Frankton Arm	1	-	100.0%	0.0%	100.0%	0.0%
Frankton	Frankton	1	-	100.0%	0.0%	100.0%	0.0%
Eastern Corridor	Lake Hayes	1	1	25.3%	74.7%	25.3%	74.7%
Kelvin Heights	Kelvin Heights	1	1	99.3%	0.7%	99.3%	0.7%
Eastern Corridor	Shotover Country	1	1	95.2%	4.8%	95.2%	4.8%
Eastern Corridor	Lake Hayes Estate	1	1	98.4%	1.6%	98.4%	1.6%
Southern Corridor	Jacks Point	1	1	97.1%	2.9%	99.5%	0.5%
Wanaka Ward	**Wanaka Ward**						
Outer Wanaka	Outer Wanaka	-	1	0.0%	100.0%	0.0%	100.0%
Outer Wanaka	Upper Clutha Valley Other	-	1	0.0%	100.0%	0.0%	100.0%
Luggate	Luggate	1	1	88.0%	12.0%	88.0%	12.0%
Outer Wanaka	Hawea Flat	-	1	0.0%	100.0%	0.0%	100.0%
Cardrona	Cardrona	1	1	11.3%	88.7%	95.0%	5.0%
Wanaka Town Centre	Wanaka Waterfront	1	-	100.0%	0.0%	100.0%	0.0%
Wanaka Town Centre	Wanaka North	1	1	98.7%	1.3%	100.0%	0.0%
Wanaka Town Centre	Wanaka West	1	1	98.7%	1.3%	99.2%	0.8%
Wanaka Town Centre	Albert Town	1	1	92.4%	7.6%	92.4%	7.6%
Wanaka Town Centre	Wanaka Central	1	1	95.0%	5.0%	97.1%	2.9%
Lake Hawea	Lake Hawea	1	-	100.0%	0.0%	100.0%	0.0%
District	**District**						

Source: QLDC and M.E assumptions. Percentage Splits based on demand for that urban/rural envionment part of each location and is not limited to demand for urban and rural living.

These assumptions applied, for example, when the urban environment contained areas with potential for intensification, existing zoned greenfield land and/or indicative long term urban expansion areas identified in the Draft Spatial Plan - all of which would see a greater quantum of future dwellings in the urban environment parts of each area such that the percentage distribution of dwellings between urban and rural environments would be different in the future than it is now.

While this approach relies on assumptions by M.E, these are limited only to those geographic areas where assumptions are required, with many geographic areas wholly urban environment or wholly rural environment where the Council's projections can be adopted unmodified. The sensitivity of any results as a consequence of these assumptions is therefore considered to be minor. The geographic areas where a greater share of demand is assumed by M.E to be for the urban environment in future include Quail Rise (which includes the greenfield residential and businesses areas along the northern side of Five Mile), Jack's Point, Cardrona, Wānaka West and Wānaka Central. The change in Cardrona is estimated to be significant, with urban demand growth responding to significant urban capacity starting to be realised in the Mount Cardrona Special Zone. That is, we anticipate that the Council's projected growth in the Cardrona area (which covers the rural west and south of the Wānaka Ward) intended this growth to be concentrated in the Cardrona settlement area not true rural growth spread throughout the Rural Zone.

We note that there is insufficient data to identify specific urban-rural environment location trends for resident dwellings versus holiday homes in those geographic areas that contain both environments. As such, the allocation assumptions above are assumed to be applicable for all dwelling growth, including holiday home and resident dwelling growth.

2.3.3 Total Housing Demand by Rural and Urban Environment

Table 2.3 also contains the concordance of Council's geographic areas to HBA reporting areas. Note, reporting area boundaries are contained in the Main Report in Figure 1.9. The following table provides the results of total dwellings by urban and rural environment at the reporting area level (Table 2.4). For the purpose of the Main Report, rural environment dwelling growth is aggregated to the ward level only. An estimated 58% share of long term dwelling growth in the rural environment is in the Wakatipu Ward, and the remaining 42% is in the Wānaka Ward. Outer Wakatipu accounts for an estimated 36% of total dwelling growth in the rural environment over the long term (+207 dwellings). We note that this area includes Millbrook Special Zone and the Wakatipu Basin. A further 16% of long term dwelling growth in the rural environment is in Outer Wānaka (+96 dwellings, which includes Hawea Flat, Dublin Bay and Makarora). 16% (+91 dwellings) is also estimated for Wānaka Town Centre by 2050, which includes the Rural Residential and Rural Lifestyle zones south of Albert Town and south of the town centre along Riverbank Road (and other pockets within the UGB).

Urban environment projections (including by dwelling type) are discussed in more detail in the Main Report.

Table 2.4 – Total Dwellings by Location & Environment 2020-2050 (Change the Path Future)

Reporting Area	2020		2023		2030		2050	
	Urban Env.	Rural Env.	Urban Env.	Rural Env.	Urban Env.	Rural Env.	Urban Env.	Rural Env.
Arrowtown	1,410	-	1,415	-	1,447	-	1,529	-
Arthurs Point	444	38	452	38	494	42	602	51
Eastern Corridor	1,676	244	1,751	244	2,176	245	3,264	249
Frankton	1,512	-	1,608	-	2,153	-	3,550	-
Kelvin Heights	681	5	701	5	814	6	1,105	8
Outer Wakatipu	-	1,286	-	1,296	-	1,351	-	1,493
Quail Rise	230	83	258	85	416	93	821	114
Queenstown Town Centre	4,235	0	4,290	0	4,601	0	5,398	0
Small Township - Wakatipu	428	128	445	131	544	147	798	189
Southern Corridor	900	27	1,064	28	1,996	33	4,381	44
Wakatipu Ward	11,515	1,811	11,984	1,827	14,643	1,917	21,449	2,149
Cardrona	55	432	71	433	165	438	403	450
Lake Hawea	746	-	790	-	1,041	-	1,682	-
Luggate	202	28	215	29	287	39	470	64
Outer Wanaka	-	559	-	563	-	588	-	653
Wanaka Town Centre	6,239	162	6,474	167	7,809	191	11,224	254
Wanaka Ward	7,242	1,181	7,551	1,192	9,300	1,256	13,779	1,421
Total District	18,757	2,991	19,534	3,019	23,943	3,174	35,229	3,570

Source: QLD Projections 2020. M.E urban-rural environment estimates by location. *Change to Path Future*

2.3.4 Approach to Split Housing Projections by Attached and Detached

The projections of future dwellings by type took account of the current mix of dwellings, and consent data showing the trend toward attached and away from detached dwellings observed in QLD across the last 10 years, allowing for that broad trend to continue into the long term. The projected trend was moderated so as to not assume an over-estimate of attached dwellings in the long term. The observed relationships between dwelling type and household type identified from Census 2018 were the base point, with the broader trend toward attached dwellings assumed to apply across all types of households over time. That approach was applied at the district level, as the data on the trends is its most reliable at that level.

The district-wide trend was then applied to the urban and rural environment projections on a pro rata basis, as there is not sufficient data to indicate differences in recent growth within the district.

The district-wide trend was also broadly applied by reporting area within the district, to indicate the changes in dwelling mix over time, using a broad concordance between reporting areas and SA2s in the 2018 Census data as the starting point. The assessment does indicate the likely split between attached and detached and does indicate the likely geographic distribution of future growth, as required by the NPS-UD.

However, the analysis did not seek to apply projections specific to each locality beyond that broad trend, as there is not sufficient data to support such location-specific projections, nor is there requirement to do so in the NPS-UD.

2.3.5 Total Housing Demand – 5 Year Lag Scenario

Table 2.5 and Table 2.6 provide the detailed urban total dwelling projections by location and dwelling type, with rural sub-totals for the 5 Year Lag (Medium Growth) scenario. These mirror the results in the Main Report for the preferred Change the Path (High Growth) scenario.

Table 2.5 – Total Dwellings by Location and Type 2020-2050 (5 Year Lag Future)

Reporting Area	2020			2023			2030			2050		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Arrowtown	1,208	202	1,410	1,211	204	1,415	1,147	297	1,444	1,078	438	1,516
Arthurs Point	348	96	444	357	95	452	350	140	490	356	228	585
Eastern Corridor	1,443	233	1,676	1,522	229	1,750	1,698	434	2,132	2,144	943	3,087
Frankton	1,233	279	1,512	1,290	317	1,607	1,587	510	2,097	2,187	1,135	3,322
Kelvin Heights	603	78	681	619	82	700	662	140	802	774	283	1,058
Outer Wakatipu	-	-	-	-	-	-	-	-	-	-	-	-
Quail Rise	215	15	230	233	25	258	333	67	400	555	200	755
Queenstown Town Centre	3,370	865	4,235	3,411	878	4,289	3,335	1,233	4,569	3,321	1,946	5,268
Small Township - Wakatipu	378	50	428	383	63	445	415	120	534	488	269	757
Southern Corridor	788	112	900	904	158	1,063	1,693	207	1,899	2,882	1,110	3,992
Wakatipu Ward Urban Env.	9,585	1,929	11,515	9,929	2,050	11,980	11,220	3,147	14,367	13,785	6,553	20,338
Wakatipu Ward Rural Env.			1,811			1,827			1,908			2,111
Wakatipu Ward Total			13,325			13,806			16,275			22,450
Cardrona	50	5	55	63	8	71	126	29	155	263	101	364
Lake Hawea	651	94	746	676	113	790	799	216	1,015	1,092	485	1,577
Luggate	194	9	202	202	13	215	236	43	279	318	122	440
Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka Town Centre	5,348	891	6,239	5,501	971	6,472	6,161	1,509	7,671	7,556	3,111	10,667
Wanaka Ward Urban Env.	6,243	999	7,242	6,443	1,105	7,548	7,322	1,797	9,119	9,229	3,819	13,048
Wanaka Ward Rural Env.			1,181			1,192			1,250			1,394
Wanaka Ward Total			8,423			8,740			10,369			14,442
District Urban Env.	15,828	2,929	18,757	16,372	3,156	19,528	18,542	4,944	23,486	23,015	10,372	33,386
District Rural Env.			2,991			3,018			3,158			3,506
District Total			21,748			22,546			26,644			36,892
	Detached %	Attached %	Total %	Detached %	Attached %	Total %	Detached %	Attached %	Total %	Detached %	Attached %	Total %
Arrowtown	86%	14%	100%	86%	14%	100%	79%	21%	100%	71%	29%	100%
Arthurs Point	78%	22%	100%	79%	21%	100%	71%	29%	100%	61%	39%	100%
Eastern Corridor	86%	14%	100%	87%	13%	100%	80%	20%	100%	69%	31%	100%
Frankton	82%	18%	100%	80%	20%	100%	76%	24%	100%	66%	34%	100%
Kelvin Heights	89%	11%	100%	88%	12%	100%	83%	17%	100%	73%	27%	100%
Outer Wakatipu	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%
Quail Rise	93%	7%	100%	90%	10%	100%	83%	17%	100%	73%	27%	100%
Queenstown Town Centre	80%	20%	100%	80%	20%	100%	73%	27%	100%	63%	37%	100%
Small Township - Wakatipu	88%	12%	100%	86%	14%	100%	78%	22%	100%	64%	36%	100%
Southern Corridor	88%	12%	100%	85%	15%	100%	89%	11%	100%	72%	28%	100%
Wakatipu Ward Urban Env.	83%	17%	100%	83%	17%	100%	78%	22%	100%	68%	32%	100%
Cardrona	91%	9%	100%	89%	11%	100%	81%	19%	100%	72%	28%	100%
Lake Hawea	87%	13%	100%	86%	14%	100%	79%	21%	100%	69%	31%	100%
Luggate	96%	4%	100%	94%	6%	100%	85%	15%	100%	72%	28%	100%
Outer Wanaka	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%
Wanaka Town Centre	86%	14%	100%	85%	15%	100%	80%	20%	100%	71%	29%	100%
Wanaka Ward Urban Env.	86%	14%	100%	85%	15%	100%	80%	20%	100%	71%	29%	100%
Total District Urban Env.	**84%**	**16%**	100%	**84%**	**16%**	100%	**79%**	**21%**	100%	**69%**	**31%**	100%

Source: QLD Projections 2020. M.E urban-rural environment estimates by location. *5 Year Lag Future*

Table 2.6 – Change in Total Dwellings by Location and Type 2020-2050 (5 Year Lag Future)

Reporting Area	Detached			Attached			Total		
	2020-2023	2020-2030	2020-2050	2020-2023	2020-2030	2020-2050	2020-2023	2020-2030	2020-2050
Arrowtown	4	-60	-130	2	95	236	6	34	106
Arthurs Point	9	2	8	-1	44	133	7	45	141
Eastern Corridor	79	255	701	-4	201	710	74	456	1,411
Frankton	57	355	954	38	230	856	95	585	1,810
Kelvin Heights	16	60	172	4	62	205	20	122	377
Outer Wakatipu	-	-	-	-	-	-	-	-	-
Quail Rise	18	117	340	10	52	185	28	170	525
Queenstown Town Centre	41	-35	-49	14	369	1,082	54	334	1,033
Small Township - Wakatipu	4	36	110	13	70	219	17	106	329
Southern Corridor	117	905	2,094	46	95	998	163	1,000	3,092
Wakatipu Ward Urban Env.	344	1,635	4,200	121	1,218	4,624	465	2,853	8,824
Wakatipu Ward Rural Env.							16	97	301
Wakatipu Ward Total			4,200			4,624	481	2,950	9,124
Cardrona	13	76	213	3	24	96	16	100	309
Lake Hawea	25	147	441	19	121	391	44	269	832
Luggate	8	43	124	5	34	114	13	77	238
Outer Wanaka	-	-	-	-	-	-	-	-	-
Wanaka Town Centre	154	813	2,208	80	618	2,220	233	1,431	4,428
Wanaka Ward Urban Env.	200	1,079	2,986	106	798	2,820	306	1,877	5,806
Wanaka Ward Rural Env.							11	69	213
Wanaka Ward Total			2,986			2,820	317	1,946	6,020
District Urban Env.	544	2,714	7,186	227	2,016	7,443	771	4,730	14,630
District Rural Env.							27	166	514
District Total			7,186			7,443	798	4,896	15,144

Source: QLD Projections 2020. M.E urban-rural environment estimates by location. *5 Year Lag Future*

3 Housing Supply

This section provides a brief explanation of the approach used to model housing supply in the HBA and includes additional analysis tables and graphs to complement Section 3.4 (Future Dwelling Estate) in the Main Report, according to the Council's medium (5 Year Lag) growth scenario.

3.1 Housing Supply Model Approach

The approach is based on the ME *Housing Supply Model (2021)* which draws on recent trends in new housing development, together with the ageing of the existing estate into the medium and long term. This Model is used to identify the size and nature of the current and future dwelling estates, including typology and values. It provides the supply-side platform for the Housing Affordability assessment.

There are three components to the housing supply analysis – the current dwelling estate (2020), the expected new estate to be built over the short, medium, and long terms, and the total future estate at each NPS-UD time horizon. Note that the projections take into account the existing estate and the projected new estate, but do not seek to separate out replacement dwellings, or net out existing dwellings which are replaced by new developments as sites are intensified. Key reasons for this included the relatively young age of much of the dwelling estate, and the dominance of greenfield development, which meant that estimating the numbers and value bands of replaced dwellings was not feasible.

The current dwelling estate is examined in terms of the numbers of dwellings (residential properties) by main dwelling type (based on Corelogic categories) and each value band. This shows the current housing price structure in the district and the dimensions of the existing dwelling estate. It draws on the most recent value and price trends (to June 2020) to identify the distribution of QLD housing values for dwellings of each type in each value ventile (20^{th}). It also offers broad indicators including mean and median values. This is one basis for the current Affordability assessment, together with current and projected income levels in the district.

More generally, the assessment of the QLD housing market is based on examination of key parameters, including housing values through time and by dwelling type, the development patterns of dwellings and land, and consideration of QLD alongside observed national trends and with patterns throughout New Zealand, including comparison across all Tier 1 and Tier 2 urban areas. This offers a sound basis for assessing the QLD market. An important aspect is evidence of consistency in patterns over time, and across the country, to understand how the QLD market may differ from the national picture and also conform with patterns evident across the country. That assessment also takes account of the broader societal and economic conditions, to consider whether current QLD patterns consistent with the nature of demand, and the economic and tax conditions of the New Zealand market. Of note, QLD prices are higher than the national average, with that difference evident over many years and largely reflecting the popularity of the district as a place to invest in property and/or own a holiday dwelling, as well as a place to live.

3.2 Future Dwelling Estate

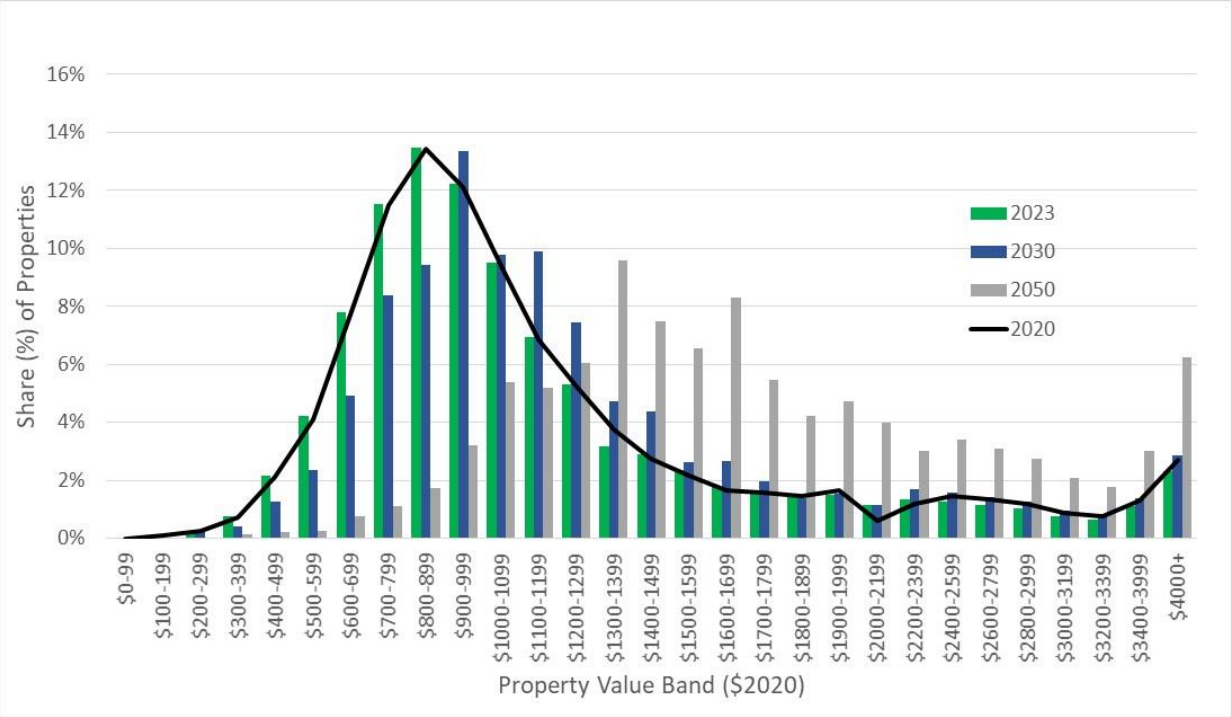
3.2.1 Current Estate : Values 2020-2050

Table 3.1 – Total Current Estate Dwellings by Value Band ($000) – QLD 2020 to 2050

Queenstown-Lakes District	5 Year Lag Growth Future				Includes Lifestyle		
Value Band ($000, $2020)	LV Trend 3.5%		IV Trend				(all %pa)
	2020	2023	2030	2050	2020-23	2020-30	2020-50
$0-99	-	-	-	-	-	-	-
$100-199	20	10	10	-	-10	-10	-20
$200-299	60	50	30	10	-10	-30	-50
$300-399	160	90	70	10	-70	-90	-150
$400-499	460	280	130	20	-180	-330	-440
$500-599	890	510	340	20	-380	-550	-870
$600-699	1,680	1,070	570	80	-610	-1,110	-1,600
$700-799	2,500	1,900	910	70	-600	-1,590	-2,430
$800-899	2,920	2,050	1,780	140	-870	-1,140	-2,780
$900-999	2,630	2,830	1,460	210	200	-1,170	-2,420
$1000-1099	2,040	2,130	2,710	390	90	670	-1,650
$1100-1199	1,480	2,150	2,160	530	670	680	-950
$1200-1299	1,140	1,620	1,940	610	480	800	-530
$1300-1399	820	1,220	1,520	840	400	700	20
$1400-1499	600	780	1,160	1,100	180	560	500
$1500-1599	470	680	1,220	1,320	210	750	850
$1600-1699	360	440	750	1,480	80	390	1,120
$1700-1799	340	430	560	1,540	90	220	1,200
$1800-1899	320	300	450	1,490	-20	130	1,170
$1900-1999	360	320	370	840	-40	10	480
$2000-2199	130	250	290	1,740	120	160	1,610
$2200-2399	260	370	350	1,330	110	90	1,070
$2400+	2,100	2,250	2,970	7,960	150	870	5,860
Total	**21,740**	**21,730**	**21,750**	**21,730**	-	-	-
Under $400K	1%	1%	1%	0%			
$400-599K	6%	4%	2%	0%			
$600-799K	19%	14%	7%	1%			
$800-999K	26%	22%	15%	2%			
$1000-1499K	28%	36%	44%	16%			
Over $1500K	20%	23%	32%	81%			

Source: ME Housing Demand Model 2021

Figure 3.1 – Properties by Value QLD 2020-2050 – Existing Estate (5 Year Lag)



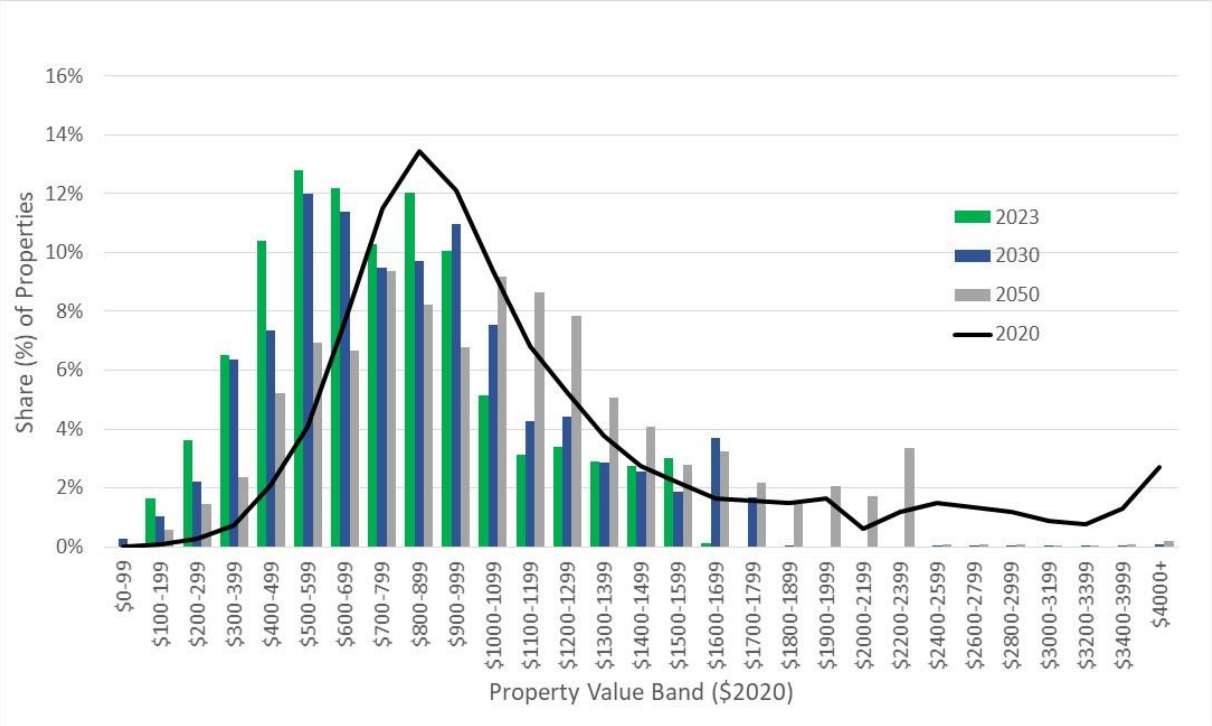
3.2.2 "New" Estate Values Over Time

Table 3.2 – New Estate by Value Band – QLD 2020 to 2050 – 5 Year Lag

Queenstown-Lakes District	5 Year Lag Growth Future		
Value Band ($000)($2020)	LV Trend	3.5%	1.0%
	2020-23	2020-30	2020-50
$0-99	-	13	10
$100-199	12	24	60
$200-299	24	131	210
$300-399	60	225	230
$400-499	81	414	350
$500-599	85	454	710
$600-699	98	469	1,020
$700-799	102	554	910
$800-899	81	457	1,030
$900-999	86	442	1,280
$1000-1099	48	416	960
$1100-1199	33	309	1,330
$1200-1299	23	236	1,000
$1300-1399	24	171	600
$1400-1499	18	117	1,200
$1500-1599	28	100	1,050
$1600-1699	10	86	300
$1700-1799	-	177	610
$1800-1899	-	82	300
$1900-1999	-	2	380
$2000-2199	-	-	230
$2200-2399	-	-	320
$2400+	-	13	1,050
Total	**810**	**4,890**	**15,140**
Under $400K	12%	8%	3%
$400-599K	20%	18%	7%
$600-799K	25%	21%	13%
$800-999K	21%	18%	15%
$1000-1499K	18%	26%	34%
Over $1500K	5%	9%	28%

Source: ME Housing Demand Model 2021

Figure 3.2 – Properties by Value 2020-2050 – New Estate in the 5 Year Lag Growth Future



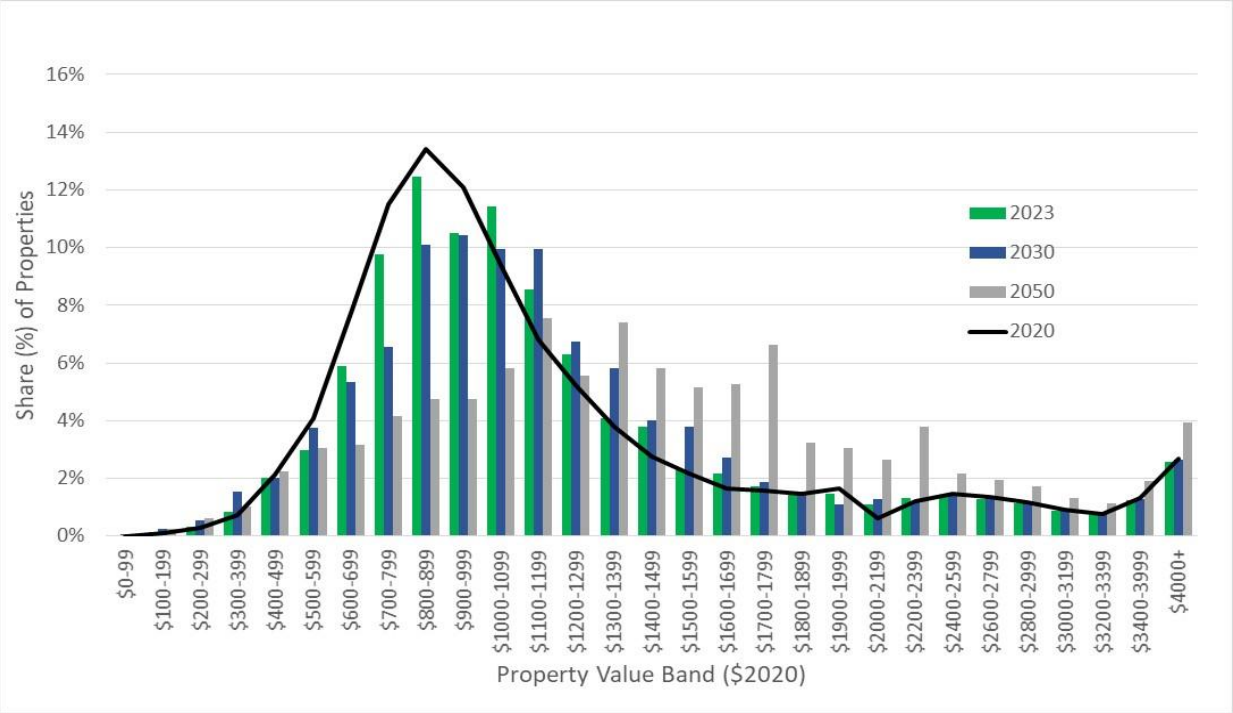
3.2.3 Total Future Dwelling Estate

Table 3.3 – Total Estate by Value Band – QLD 2020 to 2050 5 Year Lag Future

Queenstown-Lakes District	5 Year Lag Growth Future				Includes Lifestyle		
Value Band ($000, $2020)	LV Trend	2.4%	IV Trend	0.4%			(all %pa)
	2020	2023	2030	2050	2020-23	2020-30	2020-50
$0-99	-	-	-	-	-	-	-
$100-199	20	20	10	-	-	-10	-20
$200-299	60	40	40	10	-20	-20	-50
$300-399	160	140	100	20	-20	-60	-140
$400-499	460	370	180	30	-90	-280	-430
$500-599	890	570	410	80	-320	-480	-810
$600-699	1,680	1,230	870	160	-450	-810	-1,520
$700-799	2,500	2,120	1,280	120	-380	-1,220	-2,380
$800-899	2,920	2,710	2,220	500	-210	-700	-2,420
$900-999	2,630	2,290	2,240	720	-340	-390	-1,910
$1000-1099	2,040	2,530	2,280	760	490	240	-1,280
$1100-1199	1,480	1,900	2,440	1,470	420	960	-10
$1200-1299	1,140	1,390	1,580	860	250	440	-280
$1300-1399	820	900	1,410	1,960	80	590	1,140
$1400-1499	600	830	940	1,530	230	340	930
$1500-1599	470	500	920	1,480	30	450	1,010
$1600-1699	360	490	540	1,450	130	180	1,090
$1700-1799	340	390	420	2,120	50	80	1,780
$1800-1899	320	350	410	960	30	90	640
$1900-1999	360	330	290	810	-30	-70	450
$2000-2199	130	250	340	720	120	210	590
$2200-2399	260	300	310	890	40	50	630
$2400+	2,100	2,090	2,530	5,090	-10	430	2,990
Total	**21,740**	**21,740**	**21,760**	**21,740**	-	-	-
Under $400K	1%	1%	1%	0%			
$400-599K	6%	4%	3%	1%			
$600-799K	19%	15%	10%	1%			
$800-999K	26%	23%	20%	6%			
$1000-1499K	28%	35%	40%	30%			
Over $1500K	20%	22%	26%	62%			

Source: ME Housing Demand Model 2021

Figure 3.3 – Properties by Value 2020-2050 – Total Future Estate 5 Year Lag (Base Case)



4 Current Housing Affordability

This section provides a brief explanation of the approach used to model housing affordability in the HBA and includes more detailed analysis tables to complement Section 4.2.2 (Ownership by Household Income and Ethnicity) in the Main Report.

4.1 Approach to Understanding Affordability

Housing affordability is examined here through the M.E *Housing Affordability Model (2021).* The Model brings together the demand side *and* the supply side of housing affordability, currently and into the short, medium, and long term future.

It examines the current affordability situation for the QLD community, and potential changes as the dwelling estate grows and ages (supply side aspects as discussed above) including in response to the community development, growth and changes.

4.1.1 Affordability Indicators

Housing affordability cannot easily be condensed to a single measure, and so it is useful to consider a number of indicators. A key assumption in this report is that households which currently own a dwelling are able to afford that dwelling, even though they may not be able to afford a higher-priced dwelling than what they already have. This also highlights that current dwelling prices are not always a good indicator of affordability for all of the community, as many households would have purchased at different time periods when dwelling prices, individual household circumstances or income where quite different from the present.

This puts the focus of housing affordability analysis on current and expected future non-owner households, and their assessed ability to afford a dwelling at the time they want acquire it. If these households were to attempt to buy a home, they would be, in effect, first home buyers. The Model uses detail on their demography and socio-economic circumstances and estimates of their ability to access finance to enable dwelling ownership, and service loans. Census 2018 data is used to show how dwelling tenure currently varies by demography, ethnicity, and income, as well as relationships between ownership and rental patterns, and dwelling types.

A standard affordability calculation is used to estimate what value of dwelling non-owner households may afford to own or to rent. For potential ownership, this allows for 35% of gross household income to service a loan assuming a 30-year mortgage period, and with a 20% deposit paid. That allows calculation of the maximum value of dwelling which is 'affordable', for a household of any given income level, though we would note that the percentage of income measure of affordability is generally more appropriate to use for lower income households (as households' fixed and non-discretionary costs commonly consume a relatively high share of income). Households with higher incomes commonly use a smaller share of income on fixed and no-discretionary spend, so have a wider range of consumption choices including housing.

The future affordability situation is examined using the demographic projections to track changes in the household mix, and economic projections to account for real income growth. This is compared with the

estimated supply of dwellings in each value band. That draws from the projections (described in Section 3) to take into account dwelling supply in each value band.

It is important to understand how affordability varies within the community. The modelling examines affordability across the range of household income bands, and also across the range of dwelling value bands. This provides a more nuanced and fine-grained assessment across the community than more simplistic median-multiple or other similar indicators. This is because it is important to understand what households in each income band, *especially* the lower and lower-middle income bands, may be able to afford.

This means the analysis usefully shows what households in each income band may afford, compared with dwellings in each value band – for instance, whether households in the lower-middle income bands could afford dwellings at the 15th value percentile, or at the 30th value percentile. It is important also to understand how many dwellings there are in each of those value bands. That detail provides a clearer understanding of affordability in terms of the demand and supply sides at each price and income band together and in combination.

4.1.2 Future Affordability

Affordability changes over time, with local, national and global influences having effect directly and indirectly. It is also important to recognise that dwelling values are not static, nor are household incomes as a key driver of affordability. This means that estimates of future affordability trends need to take account of how values may change over time, as well as likely trends in incomes.

Section 4 of the Main Report examines current affordability, and establishes the platform for examining future affordability, which is discussed in Section 10.3 of the Main Report.

4.2 Dwelling Tenure and Affordability Patterns 2020

4.2.1 Ownership by Household Income and Ethnicity

The following provides a more detailed analysis of dwelling ownership for each ethnic group than summarised in the Main Report (Section 4.2.2), and from that, patterns of housing affordability.

The upper part of each table shows the simple dwelling ownership level (% of households who own a dwelling). The lower part of each table shows the relative incidence of ownership for each segment according to household ethnicity, compared with the 2020 Queenstown Lakes average for each segment. A value of 1.0 indicates the ownership level for households of that ethnicity (for that type and income) is the same as the Queenstown Lakes average. Values below 1.0 indicate relatively lower levels of ownership for that ethnicity, with high-lighted red numbers being substantially lower.

Values of greater than 1.0 show relatively higher levels of ownership for that ethnicity, with blue highlighted numbers showing ownership is substantially higher than average (+15%). The un-shaded cells indicate an ownership rate which is broadly close to the Queenstown Lakes average for that household type and income combination. The individual numbers are informative, however given the level of detail it is the overall pattern which is most useful.

Among Māori households, dwelling ownership rates are generally lower for almost all segments of the community (Table 4.1), and substantially lower for many segments. Overall, 46% of households of Māori ethnicity are dwelling owners, compared with 64% across all ethnicities. Within that pattern, ownership rates are generally highest for the higher income households, especially for middle and higher income couples, as is the case for all ethnicities.

However, across most segments (type by income) households of Māori ethnicity show a lower level of dwelling ownership. That is especially low among households in the middle to lower income bands and for single persons. There is substantially lower ownership for 1-parent families, and households in the middle-lower income bands. The table shows relatively high ownership for some segments, however that is relative to the Queenstown Lakes pattern, and the raw ownership rates are generally low (less than 50%) in all of those cohorts.

Table 4.1 – Dwelling Ownership by Household Type and Income – Māori Ethnicity 2020

Household Type	Household income Band									
	<$20,000	$20-30,000	$30-40,000	$40-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000 +	Total
One Person Hhld	25%	40%	33%	33%	35%	30%	33%	0%	50%	36%
Couple Hhld	50%	**67%**	56%	56%	44%	42%	56%	57%	48%	50%
2 Parents 1-2chn	0%	**67%**	50%	50%	38%	63%	63%	62%	**80%**	**65%**
2 Parents 3+chn	0%	0%	0%	0%	25%	50%	60%	**67%**	55%	60%
1 Parent Family	13%	0%	30%	30%	14%	36%	14%	0%	45%	25%
Multi-Family Hhld	0%	0%	0%	0%	0%	0%	40%	33%	43%	33%
Non-Family Hhld	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	33%	33%	33%	33%	38%	45%	55%	57%	53%	46%
One Person Hhld	**0.37**	**0.60**	**0.51**	**0.51**	**0.55**	**0.44**	**0.56**	-	**0.56**	**0.54**
Couple Hhld	**0.66**	0.90	**0.71**	**0.71**	**0.58**	**0.65**	0.88	0.90	**0.68**	**0.72**
2 Parents 1-2chn	-	**1.75**	1.12	1.07	**0.71**	0.99	0.88	0.87	1.01	0.93
2 Parents 3+chn	-	-	-	-	**0.75**	**0.73**	0.88	0.98	**0.68**	0.83
1 Parent Family	**0.45**	-	**0.66**	**0.68**	**0.29**	**0.74**	**0.25**	-	**0.79**	**0.54**
Multi-Family Hhld	-	-	-	-	-	-	1.12	0.93	0.90	**0.78**
Non-Family Hhld	-	-	-	-	-	-	-	-	-	-
Total	**0.54**	**0.53**	**0.52**	**0.52**	**0.60**	**0.74**	0.89	0.93	**0.78**	**0.73**

Source: ME Housing Demand Model 2021

In contrast, among households of European and Other ethnicity, dwelling ownership rates are generally higher than the Queenstown Lakes average, as shown in the upper part of Table 4.2. Overall, 67% of households of European and Other ethnicity are dwelling owners, compared with 64% across all ethnicities, and in common with all ethnicities ownership rates are generally highest for the middle to higher income households ($70,000 and above), and for couples of all income bands. The incidence of dwelling ownership is relatively high across almost all segments. An important feature is that ownership rates are most obviously relatively high for households in the middle and lower income bands, especially family households. That indicates that housing ownership affordability is relatively less of an issue compared with households of European and other ethnicities in those income and type segments.

Table 4.2 – Dwelling Ownership by Household Type & Income – European & Other Ethnicity 2020

Household Type	Household income Band									
	<$20,000	$20-30,000	$30-40,000	$40-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000 +	Total
One Person Hhld	64%	71%	64%	64%	63%	69%	69%	69%	81%	67%
Couple Hhld	75%	79%	80%	80%	76%	67%	65%	65%	71%	70%
2 Parents 1-2chn	64%	61%	62%	62%	60%	71%	76%	76%	83%	76%
2 Parents 3+chn	80%	0%	75%	75%	64%	65%	74%	74%	83%	75%
1 Parent Family	44%	43%	57%	57%	56%	49%	61%	61%	71%	55%
Multi-Family Hhld	0%	0%	0%	0%	30%	29%	46%	43%	48%	46%
Non-Family Hhld	25%	0%	26%	26%	34%	31%	32%	32%	25%	29%
Total	62%	70%	67%	67%	66%	64%	66%	66%	71%	67%
One Person Hhld	0.95	1.06	0.98	0.97	1.00	1.01	1.16	1.07	0.91	1.00
Couple Hhld	0.99	1.06	1.03	1.03	1.00	1.02	1.02	1.03	1.01	1.01
2 Parents 1-2chn	1.56	1.60	1.38	1.32	1.14	1.12	1.06	1.06	1.05	1.08
2 Parents 3+chn	1.20	-	1.20	1.31	1.92	0.95	1.09	1.08	1.03	1.04
1 Parent Family	1.56	1.53	1.26	1.31	1.12	0.99	1.08	1.03	1.23	1.19
Multi-Family Hhld	-	-	-	-	0.90	2.94	1.28	1.21	1.00	1.07
Non-Family Hhld	0.38	-	1.34	1.52	1.98	1.08	1.25	1.24	1.57	1.29
Total	1.01	1.10	1.04	1.04	1.05	1.05	1.07	1.07	1.05	1.05

Source: ME Housing Demand Model 2021

A different pattern is clear for households of Pacific ethnicity, where dwelling ownership rates are lower than the Queenstown Lakes average (Table 4.3). Some 40% of households of Pacific ethnicity are dwelling owners, significantly lower than the average for all ethnicities. The numbers of households of Pacifica ethnicity is too low to generate meaningful comparison here.

Table 4.3 – Dwelling Ownership by Household Type and Income – Pacific Ethnicity 2020

Household Type	Household income Band									
	<$20,000	$20-30,000	$30-40,000	$40-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000 +	Total
One Person Hhld	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Couple Hhld	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2 Parents 1-2chn	0%	0%	0%	0%	0%	0%	42%	41%	42%	44%
2 Parents 3+chn	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1 Parent Family	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Multi-Family Hhld	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non-Family Hhld	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	33%	50%	40%	40%
One Person Hhld	-	-	-	-	-	-	-	-	-	-
Couple Hhld	-	-	-	-	-	-	-	-	-	-
2 Parents 1-2chn	-	-	-	-	-	-	0.59	0.58	0.53	0.64
2 Parents 3+chn	-	-	-	-	-	-	-	-	-	-
1 Parent Family	-	-	-	-	-	-	-	-	-	-
Multi-Family Hhld	-	-	-	-	-	-	-	-	-	-
Non-Family Hhld	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	0.54	0.81	0.59	0.63

Source: ME Housing Demand Model 2021

The pattern is similar for households of Asian ethnicity, with dwelling ownership rates much lower than the Queenstown Lakes average (Table 4.4). Some 35% of households of Asian ethnicity are dwelling owners, again significantly lower than the average for all ethnicities. While ownership rates are somewhat higher in

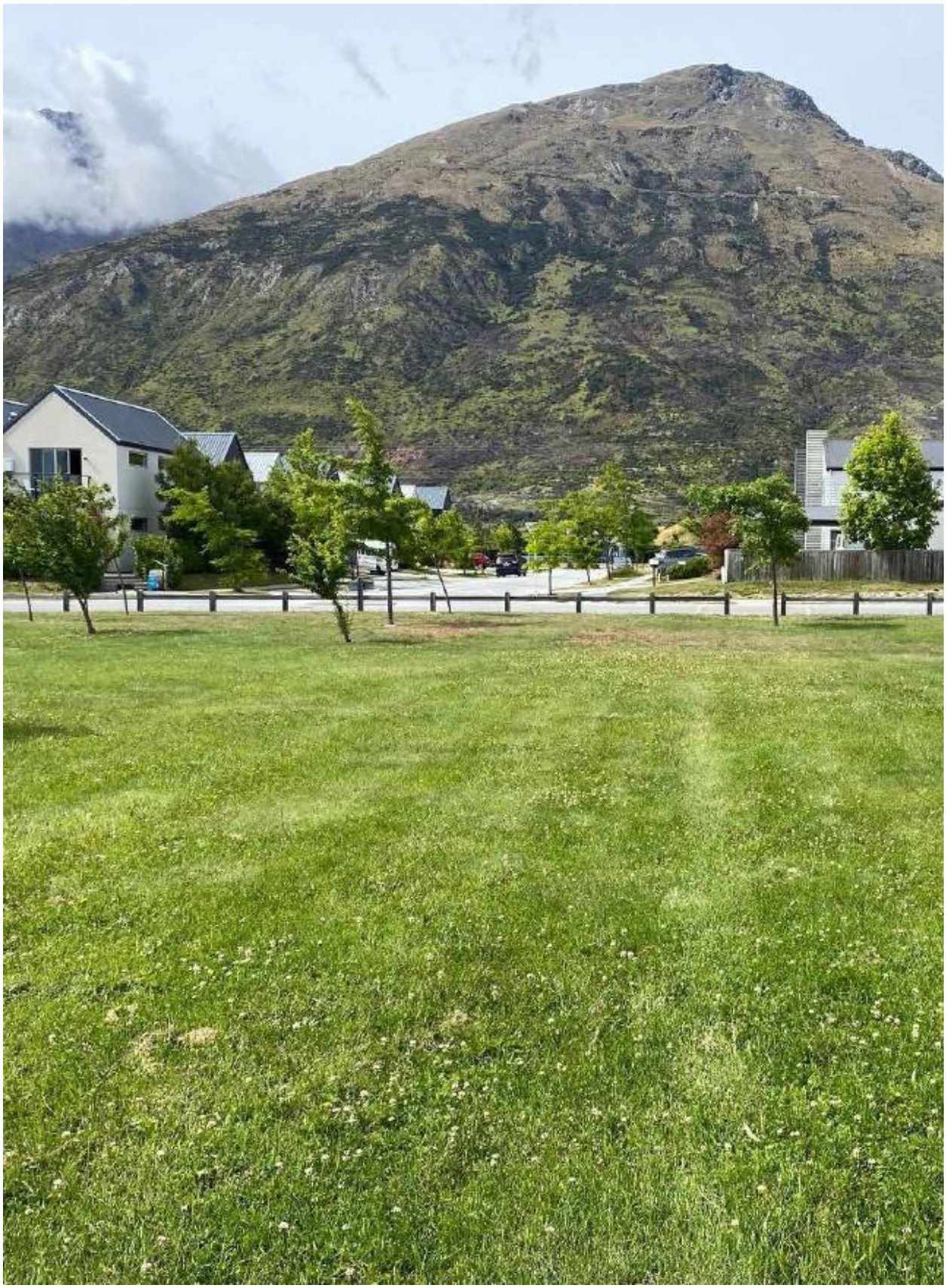
the middle to higher income bands and for couples, the overall incidence of dwelling ownership is relatively low across almost all segments, and significantly below the Queenstown Lakes pattern for many segments.

Table 4.4 – Dwelling Ownership by Household Type and Income – Asian Ethnicity 2020

Household Type	Household income Band									
	<$20,000	$20-30,000	$30-40,000	$40-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person Hhld	38%	50%	35%	35%	44%	50%	29%	25%	**67%**	39%
Couple Hhld	44%	**67%**	44%	44%	35%	29%	45%	44%	34%	36%
2 Parents 1-2chn	0%	33%	43%	43%	32%	34%	37%	36%	48%	36%
2 Parents 3+chn	0%	0%	0%	0%	33%	50%	0%	0%	43%	50%
1 Parent Family	20%	25%	21%	21%	60%	44%	33%	0%	0%	33%
Multi-Family Hhld	0%	0%	0%	0%	0%	15%	9%	13%	17%	13%
Non-Family Hhld	0%	0%	50%	50%	33%	32%	20%	21%	28%	29%
Total	40%	50%	38%	38%	36%	31%	33%	33%	33%	34%
One Person Hhld	**0.57**	**0.75**	**0.53**	**0.53**	**0.71**	**0.73**	**0.48**	**0.39**	**0.75**	**0.58**
Couple Hhld	**0.59**	0.90	**0.57**	**0.57**	**0.45**	**0.44**	**0.72**	**0.71**	**0.49**	**0.53**
2 Parents 1-2chn	-	0.88	0.96	0.92	**0.60**	**0.53**	**0.52**	**0.50**	**0.61**	**0.52**
2 Parents 3+chn	-	-	-	-	1.00	**0.73**	-	-	**0.53**	**0.69**
1 Parent Family	**0.71**	0.88	**0.47**	**0.49**	1.20	0.91	**0.59**	-	-	**0.72**
Multi-Family Hhld	-	-	-	-	-	**1.54**	**0.26**	**0.35**	**0.36**	**0.29**
Non-Family Hhld	-	-	**2.57**	**2.92**	**1.93**	1.14	**0.78**	0.81	**1.74**	**1.25**
Total	**0.65**	**0.79**	**0.59**	**0.59**	**0.57**	**0.50**	**0.54**	**0.54**	**0.49**	**0.54**

Source: ME Housing Demand Model 2021

PART 2 – HOUSING CAPACITY ASSESSMENT



5 Capacity Modelling Structure

This section provides a brief overview of the approach used to assess housing capacity for the 2021 HBA in order to meet the requirements of the NPS-UD. It outlines the sequence of key steps as well as some of the relevant terminology. Sections 6-8 of this Technical Report expand further on this overview.

5.1 Overview

Detailed modelling has been undertaken to estimate the residential dwelling capacity of the QLD urban environment. In accordance with the NPS-UD requirements, the assessment calculates the capacity that is measured against a range of different development process layers. The measures of capacity are:

i. Plan enabled capacity – the dwelling capacity that is enabled by land zoning within the relevant district plan or spatial plan.

ii. Commercially feasible capacity – plan enabled capacity where it is feasible for a commercial developer to construct a dwelling.

iii. Infrastructure serviced capacity – the dwelling capacity that is served by infrastructure at each assessment point in time. In this assessment, this is a sub-set of the plan enabled and commercially feasible capacity. Infrastructure catchment limits have been applied to take into account the maximum dwelling capacity across the combined areas of the existing urban area and potential future areas of greenfield expansion.

iv. Reasonably expected to be realised capacity – this is measured as a sub-set of the commercially feasible and infrastructure-served capacity that could reasonably be realised to accommodate future dwellings. The approach to reasonably expected to be realised capacity is outlined in Section 8 of this Technical Report.

The 2020/2021 analysis builds upon the 2017/2018 models that calculate the potential capacity for dwellings upon each property parcel.[7] This section provides an overview of the key stages of the assessment approach. Further detailed information on the structure of the models is contained in the following Part 2 sections of the Technical Report.

Capacity is calculated across Queenstown's urban environment both within the existing urban areas (intensification) as well as further outward expansion within greenfield areas. Capacity can be categorised as:

[7] While aspects of the approach are the same, some changes have been made to take account of changes in the requirements of the NPS-UD compared to the NPS-UDC and other improvements to the model. Further, the extent of the urban environment differs between the two HBA (partly because of growth planning which would be an expected change between HBA and meaningful to a comparison, but also to take a more comprehensive approach to including areas that were urban in character. The latter makes it difficult to directly compare capacity results at the total urban level as there is a change in scope (as opposed to planning).

i. Infill capacity – this refers to the number of additional dwellings that can be constructed within the existing urban area without the removal or demolition of any existing dwellings. It includes development on vacant (titled) lots as well as the construction of additional dwellings on the vacant areas of parcels (e.g. constructing an additional dwelling in a large back yard area of an already developed property parcel).

ii. Redevelopment capacity – this refers to the number of additional dwellings that can be constructed within the existing urban area through the redevelopment of sites. It involves the demolition or removal of existing dwellings on a site and the subsequent construction of a greater number of dwellings on the same site (without changes to the lot boundary).

iii. Greenfield capacity – this refers to the outward expansion of the urban edge to form new areas of urban residential development. It typically occurs on areas that are zoned for future urban use and requires the geographic extension of infrastructure at different points in time to enable the urbanisation of these areas. There are also some areas within the geographic extent of the existing urban edge that are classified as greenfield development as they are sizeable new areas of urbanisation not previously subdivided.

Greenfield capacity can be added to infill capacity or redevelopment capacity, but all three are not additive. The capacity results also include maximums of infill and redevelopment capacity within the existing urban area. Here, the model returns the greatest yield for each parcel out of the infill and redevelopment capacity options which is able to be added to greenfield capacity (this is reported as 'Greenfield, Infill + Redevelopment' in the results tables. Under the plan enabled capacity, the redevelopment option will always represent the greatest yield. However, under the commercially feasible capacity often only one of the development options (e.g. standalone infill dwelling) will be feasible (with the option differing between parcels), meaning that the model selects the option that is most feasible.

5.2 Defining Development Options and Planning Spatial Requirements

The first stage of the assessment identifies the potential development options that can occur on each property parcel. These refer to the types of dwellings that can be constructed (e.g. standalone, duplex/terrace, apartments) on each site and their corresponding spatial requirements. Development options are determined through the district plan provisions with different zones allowing different types of development. In some cases, a property parcel yield (i.e., potential number of additional dwellings) can vary depending on the type of dwelling option constructed and, within the existing urban area, whether infill or redevelopment is undertaken.

The different development pathways provided for under the Plan are also incorporated within this stage. These include development via a land use consent, or a subdivision consent. Higher densities can be achieved within some zones if dwellings are constructed as part of an integrated development, with subdivision occurring subsequently to individual sites. To remain conservative, this development pathway has only been modelled for sites containing up to four dwellings (with the larger per site land areas required for development at a larger scale).

The capacity results also include a maximum yield for each type of development path (infill vs. redevelopment vs. greenfield) which is the aggregation of the maximum capacity across all enabled dwelling types within each of the development options. The maximums are produced for both plan enabled and commercially feasible capacity. For example, under the district plan, a particular property parcel could be developed to contain either two standalone houses or four duplex dwellings. The maximum yield would be four under the plan enabled capacity. However, it may only be commercially feasible to develop the site into standalone dwellings, in which case the maximum feasible yield would be two in that model.

5.3 Alignment with the Spatial Framework

The capacity modelling has been aligned with the Spatial Framework developed for Queenstown's urban environment.[8] Each property parcel has been linked spatially to a base zone, as well as any sub-zones, precincts, or sub-areas.[9] This identifies, for example, visitor accommodation sub-zones, or whether the parcel is in a building restriction area or a commercial overlay area. Through the detailed zoning, areas are classified as Residential Only, Business Only, Business and Residential, or Other Urban (i.e., areas where the parcels don't qualify as housing or business development areas and are excluded from plan enabled capacity. Each property parcel has also been linked spatially to the urban environment boundary, reporting areas and further classifications (by type and value) within the reporting areas. This enables the parcel level results in Residential Only and Business and Residential areas to be aggregated up to the urban environment by reporting areas, providing capacity totals for each area by dwelling typology and type.

Alignment with the area types within the reporting area is a key input to the feasibility modelling. It allows the model to generate and test development patterns that reflect the localised dwelling markets. Local differences in the type and nature of dwellings constructed within the planning provisions are captured within this process through the ratios of floorspace to site sizes for each area. Differences in sales prices by dwelling typology and size are also produced at these local spatial scales.

5.4 Modelled Growth Scenarios

The NPS-UD requires that capacity is modelled under a current prices scenario, with the 'option' to include further modelled growth scenarios. Our assessment has modelled capacity under the current prices and current costs scenario only. As the sufficiency results showed that, at an aggregate level, there is sufficient long term capacity to meet long term demand, running scenarios where costs and prices are adjusted over time was considered unnecessary (although the capability to run alternative scenarios for costs, prices and incomes is built into the feasibility and affordability models and is therefore available to Council).

The current costs and prices scenario means that the feasible capacity across the current and future urban area reflects the current 2020 market and remains constant through time. It assumes that no further

[8] The HBA 2021 Spatial Framework refers to the integration of multiple spatial layers, including the detailed zoning, parcel boundaries, urban growth boundaries, growth projection geographic areas, reporting areas, draft Spatial Plan Indicative Urban Expansion Areas, Ward boundaries, SA2 boundaries and the Long Term Urban Environment. This master 'spatial concordance' underpins both demand and capacity side modelling to ensure consistent analysis and an ability for data to be aggregated and disaggregated as needed.

[9] No further detail is included in the Spatial Framework for Special Zones. Structure Plans for these zones were not available from Council at the time of drafting.

currently zoned development opportunities will become feasible (or more feasible) through time. It does not take account of changes in the feasibility of the current and future zoned/infrastructure served opportunity and assumes their future feasibility is equivalent to the current 2020 market.

Increases in reasonably expected to be realised capacity within this scenario are therefore, within the modelling, entirely a function of zoning changes (intensification and expansion) and increases in the geographical extent and total capacity of infrastructure provision through time. Beyond the current modelling inputs, the reasonably expected to be realised capacity may also be affected by other factors such as developer or landowner decisions (if they differ to the indicated intentions supplied for the modelling), or policy/planning changes within Council or other agencies with a jurisdictional role within the area. While reasonably expected to be realised capacity can be influenced beyond the factors included within the modelling, this is beyond the scope of the modelling, where the core focus is instead to estimate the effect of the existing planning factors.

5.5 Structure of Capacity Modelling Outputs

The Main HBA Report contains the results of the residential capacity modelling for QLD's urban environment. Capacity outputs are provided for each of the reporting areas within the spatial framework. Results are reported separately for the short, medium, and long-term, and then summarised across all three time periods in the final part of each sub-section.

Capacity estimates are presented for each of the key stages of capacity modelling. Each assessment layer is a sub-set of the previous stage:

i. Plan enabled capacity with no infrastructure constraints.

ii. Commercially feasible capacity. This includes the plan enabled development options that are estimated to be commercially feasible assuming no infrastructure constraints.

iii. Reasonably expected to be realised and infrastructure-served capacity (RER). This includes the commercially feasible capacity expected to be developed over time, accounting for demand and supply trends (based on recent market conditions) and taking account of known infrastructure constraints and their planned resolution (on non-resolution) over time.

An assessment of the commercially feasible capacity that is served by infrastructure is incorporated into the RER calculation stage. The sequencing of the infrastructure assessment is important because the infrastructure constraints apply at a catchment level that includes both areas that are already urbanised as well as areas for potential future urban expansion. The infrastructure constraint correspondingly occurs through a combination of intensification within existing areas together with urban expansion rather than only an assessment of the future urban areas served by infrastructure. It is therefore appropriate to apply the infrastructure constraint to capacity once the combined levels of development have been estimated through the reasonably expected to be realised capacity as the infrastructure ready capacity of each area is dependent upon the level of take up across the catchment overall.

Within each set of results, the following measures of capacity are provided:

i. Max Infill – this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from infill development. Parcels may contain multiple yield options where different dwelling typologies and corresponding spatial requirements are enabled under the Plan.

ii. Max Redevelopment - this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from redevelopment. Parcels may contain multiple yield options where different dwelling typologies and corresponding spatial requirements are enabled under the Plan. The yields are expressed as net additional dwellings as the outputs subtract any existing dwellings. Infill and redevelopment yields are not additive – the following measure provides the maximum combination of these two development options.

iii. Max Infill or Redevelopment – this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from either infill or redevelopment.

iv. Greenfield – this is the number of additional dwellings within the greenfield areas. These are areas of urban expansion beyond the existing urban area but within the defined long term urban environment.

v. Greenfield and Infill – this is the greenfield and Max infill yields combined and can be broadly used to define a lower range of capacity.[10]

vi. Greenfield and Max Infill or Redevelopment – this is the greenfield yield plus the Maximum Infill and Redevelopment yield, as specified above. It defines the maximum potential capacity across the combined existing urban area and greenfield areas of urban expansion. This HBA relies on this estimate of development capacity for the sufficiency assessment.

The following sections outline the key technical aspects of each stage of the capacity assessment.

[10] Although is not included in the sufficiency assessment for this HBA.

6 Plan Enabled Capacity

This section provides further detail on the analysis of plan enabled capacity, specifically the modelling of infill, redevelopment and greenfield capacity as set out in Section 5 of the 2021 HBA Main Report. It should be read in conjunction with the text in the Main Report.

6.1 Approach

This stage of the assessment calculates the capacity that is enabled by the Plan (and aspects of the Draft Spatial Plan). It identifies the number of dwellings that can theoretically be constructed on each parcel through applying the planning parameters. Once the potential development options have been identified (i.e., typology enabled by zone), the assessment then calculates whether each development option could be constructed on each site. This is assessed entirely in relation to the planning requirements[11] on each site. It is conducted at the property parcel level to assess whether additional dwellings could theoretically be constructed on each site.

Within the existing urban area, the plan enabled capacity assessment is undertaken through geometric modelling within FME software. The model applies the relevant spatial requirements of the Plan to each property parcel. To calculate infill capacity, the geometric process is carried out on each parcel around the existing building footprint on the site. Detailed technical information on the geometric process undertaken in FME is available in the appendices of the 2017 Housing Development Capacity Assessment (and remains directly applicable to this 2021 assessment). [12]

Plan enabled capacity is calculated in greenfield areas through a sequential prioritisation process to obtain the yield information that reflects the likely development urban form densities. If subdivision yields, structure plans or growth cell yield information is available from Council (via landowners), then these are applied in the first instance to the corresponding greenfield parcels. In the absence of this information, plan enabled yields are calculated through applying developable land yields and site size assumptions. Developable area yields are estimated by removing a share (usually around 32%) of the land area to account for roads and reserves. The remainder of the area is then divided by the plan enabled lot size to estimate the total lots from each parcel.

Finally, the capacity outputs were calculated as a net increase in total dwellings on each site, taking account of the existing dwelling stock. Analysis of the QLDC Ratings Database, building consents and CCC data were undertaken to estimate the number of existing dwellings on each property parcel. These were subtracted, at the parcel level, from the total gross plan enabled redevelopment capacity calculations to provide a net increase in dwelling capacity on each site.

The outputs of the plan enabled capacity approach are the number of net additional dwellings that are potentially able to be constructed on each site as a function of the planning provisions.

[11] These typically include minimum site size, building setbacks, site shape factors, building platforms, outdoor living space and driveway access requirements.

[12] Housing Development Capacity Assessment 2017 – Queenstown Lakes District. Market Economics, November 2018.

A further set of outputs from the plan enabled modelling approach are then produced to form the inputs to the commercial feasibility modelling. The same approach is undertaken, except with the application of lot sizes that are larger than the Plan minimum sizes within some local areas. These reflect local development patterns where the market is currently delivering lot sizes larger than the Plan minimums, thus producing a slightly lower capacity output in some areas. These parcel level outputs then form the inputs to the commercial feasibility stage of the analysis where the modelling estimates whether it is commercially feasible to construct each dwelling development option at the adjusted lot sizes. The modelling uses these inputs in selected areas (where a significant difference exists) as it provides a more accurate estimate of the level of capacity that is commercially feasible.

6.2 Relationship to 2020 Spatial Plan Capacity Analysis

M.E undertook detailed capacity modelling during 2020 for QLDC to estimate the capacity enabled under the PDP and early Spatial Plan scenarios. The 2020 assessment was conducted at the property parcel level and updated the parcel level analysis already undertaken for the NPS-UDC assessment in 2017.

As no further building footprint information was available since the 2017 assessment, the 2020 analysis updated changes in capacity at the property parcel level using a combination of parcel level CCC[13] and building consent data. The analysis removed capacity on all parcels that had a CCC issued since 2017, as well as on parcels that had a building consent completed since 2017 (where the CCC or building consent related to a new dwelling). This attempts to account for development changes since the 2017 building footprints. However, this approach is likely to have produced conservative results of capacity on some sites, as the CCC/building consent information does not identify the location on site of the new dwelling or whether the additional dwelling(s) had taken up all remaining capacity on a parcel[14].

As requested by Council, the 2020 parcel level capacity analysis was used as a base input to the 2021 HBA capacity assessment. Since the 2020 assessment, QLDC made adjustments to the underlying long term zoning pattern in some locations, including the extent of the indicative urban expansion areas in the Draft Spatial Plan. Where this occurred, the model was re-run, as requested, to recalculate the plan enabled capacity based on the updated long term base zoning inputs and the 2021 urban environment boundary. Therefore, the long term 2021 results are consistent with the 2020 assessment where the base zoning inputs are equal (and they fell within the 2021 long term urban environment) and differs where zoning inputs have been updated (and reflects the most up to date Draft Spatial Plan zoning information at the time of modelling).[15]

Importantly, the capacity modelling for the Draft Spatial Plan is at a very high level and it is anticipated that further detailed analysis will take place to get more accurate figures.

While the 2020 capacity modelling tested dwelling capacity as a result of intensification scenarios in the existing urban area (i.e. separate from the indicative urban expansion areas), the decision was made to exclude any long term 'up zoning' or indicative long term zone changes from the 2021 HBA (and retain only

[13] Code of Compliance Certificate – issued after building completion if the dwelling has passed all inspections.

[14] This approach was undertaken for property parcels that were at the final individual dwelling lot sizes. Adjustments in the model were instead made for larger parcels that would be likely to be subdivided to include at least several further dwellings.

[15] It is noted that the final Spatial Plan had not been released at the time of HBA modelling.

the high level zoning in the indicative urban expansion areas) as such scenarios will be superseded by the Council's more robust intensification plan change required under the NPS-UD in 2022.[16] This means that the long term plan enabled capacity results are the same as the medium term plan enabled capacity results, with the exception of the indicative urban expansion areas identified in the Draft Spatial Plan which add greenfield capacity.

[16] The net additional capacity enabled by that future plan change will be captured in the next HBA update (and no later than 2024).

7 Commercially Feasible Capacity

This section provides further detail on the analysis of commercially feasible capacity, as set out in Section 6 of the HBA Main Report. It should be read in conjunction with the text in the main report.

7.1 Approach

The commercial feasibility stage of the assessment tests the commercial feasibility of the development options on each parcel identified within the plan enabled stage of the assessment. It estimates whether it is commercially feasible for a profit-driven commercial developer to construct the identified dwelling options.

Detailed property parcel level commercial feasibility models were used to test the feasibility of each development option on each parcel that was identified as able to be constructed under the planning provisions. The 2017/2018 assessment model formed the starting point for the analysis and was updated and improved to reflect the current market situation and 2020/2021 assessment spatial framework. Detailed technical information on the structure of the model is available in the appendices of the 2017 assessment.[17]

The modelling approach takes into account the costs of development to bring a house to market. It compares these costs to the estimated sales price of the constructed dwelling to determine the profit margin that may occur.

Detailed analysis has been undertaken to inform the ranges of costs and prices within the feasibility model. These reflect 2020 values (and are discussed further below).

In accordance with the NPS-UDC technical guidance, this assessment has assumed that developments with a margin of 20% or greater[18] are commercially feasible to construct for a commercial developer. Dwelling typology/size and density combinations are deemed to be commercially feasible if they achieve at least this margin in the assessment.

Further information was sought from commercial developers active in the housing sector in the district to, in part, inform the feasibility modelling. Limited information was supplied on the developer costs, although some developers indicated that developments with lower margins (than the modelled 20%) were sometimes undertaken and depended on the type/scale/risk of development, while others indicated that a higher profit margin was necessary to deal with development risk (particularly time frames for approval and infrastructure). This reflects a lenders financial risk (and therefore offered rate of interest) and follows a model of risk being a function of size, scale, infrastructure and consenting issues, meaning generally that larger, more complex and/or more intensive projects undertaken over longer time frames would potentially need to demonstrate higher returns in order to be financed at reasonable rates. Detailed results

[17] Housing Development Capacity Assessment 2017 – Queenstown Lakes District. Market Economics, November 2018.

[18] The margin refers to the profit margin made by a commercial developer through selling a house and land package. It is the margin after tax, between the sales prices and the total costs of development.

from the developer survey is contained in Section 9 of this Technical Report. A margin of 20% was considered appropriate given the range of feedback provided (over a relatively small sample).

In the greenfield areas, the feasibility assessment models the feasibility of house and land package options where a developer sells a dwelling on a piece of land to a private buyer. The same development pathway is modelled within the existing urban area for redevelopment capacity. This reflects much of the urban intensification occurring within the district's urban areas where developers purchase full sites (or in some cases contiguous, amalgamated sites), then redevelop the sites at a higher density and sell off a larger number of smaller lots.

The infill modelling, where further dwellings are added to a site, applied another development pathway where households purchase a site and then commission a private developer to construct a dwelling. This models the feasibility for a commercial developer to construct a dwelling on a site owned by a private individual. This development pathway was applied to the infill standalone dwellings.

The outputs of the commercial feasibility modelling are the number of dwellings on each site (and within each greenfield area) that are estimated to be commercially feasible to construct.

The following sub-sections provide further detail on the analysis undertaken to generate the local patterns of development and their associated costs within the model and the approaches to their estimation.

7.2 Local Development Patterns

Once the number of potential additional dwelling units on each parcel has been established, the model estimates the nature of the dwelling that may be constructed on each parcel. This forms the basis for the calculation of construction costs to build each dwelling option.

Detailed spatial analysis was undertaken to estimate the likely dwelling size on each parcel for each typology and local area. The size of each dwelling constructed varies by parcel size, typology and location. It is important to determine the relativities between these different development options as the relative ability for a site to accommodate different types of dwellings changes with size, with consequent effects on feasibility. For instance, attached dwellings can often achieve larger floorspace sizes (and therefore, sometimes higher sales prices) on smaller sites than detached dwellings.

Data from the Ratings Database was used to establish the floor area ratio (FAR) by section size for each dwelling combination in each location. Data from recent sales of relatively newly constructed dwellings and analysis of aerial photography of newer areas of residential development were used to calibrate the estimations of FAR curves by section size. A different curve was produced for each dwelling typology and location, with further spatial divisions within some reporting areas to reflect differences in development patterns with an area.

7.3 Estimation of Cost Parameters within the Model

A range of costs have been captured within the feasibility model as part of the development process. The following list contains the costs and provides an overview of the stages taken in their estimation.

- **Land costs:** These have been estimated from QLDC Ratings Database information and have been inflated to 2020 dollar values.[19] Individual property data was analysed spatially, taking account of existing zoning patterns and degree of land preparation, to generate the relationship between land parcel size and price within each local area. Further data from sales listings were used to calibrate these estimations.

- **Existing dwelling costs:** The cost of any existing dwellings on each site were included within the redevelopment feasibility assessment. These were obtained from the Ratings Database information, inflated to 2020 dollar values.

- **Other site preparation costs:** These include any demolition of existing dwellings, any costs associated with physically securing the site for development (e.g. fencing), and a contingency of 25% of these costs.

- **Construction costs:** These include costs associated with the physical construction of the dwelling, together with any costs associated with other construction on the site (e.g. landscaping and driveway construction). Base building rates (including a contingency) were obtained from a combination of the QV Cost Builder, building consent data and other construction cost information, where available, from the commercial developers. The relationship between average construction cost rates and dwelling size were incorporated during this stage for each dwelling typology. Base construction rates were then applied to the dwelling size estimated for each parcel to provide an overall construction cost.

  The base construction costs per m2 of dwelling floorspace are shown in Table 7.1. These are displayed by dwelling typology, type of location and the height of apartment buildings (which also includes non-residential uses). These are the base construction build rates only – they do not represent the total cost of construction and do not include finance costs. The source of these estimates is a combination of QV Cost Builder, desk top research and developer feedback from past projects. As there is a range of costs across sources, M.E has developed an average cost per sqm that is considered representative. The costs per square meter increase substantially between 2 and 3 stores as this reflects the transition from walk-up apartments for example, to buildings requiring lift access (and other associated changes in the building code). Once the build includes a lift, there are economies of scale with subsequent floors, hence costs decrease slightly.

  Construction costs were further adjusted across the district's urban area to take account of the topography. GIS analysis, consistent with the 2017 assessment, was undertaken to identify the degree of slope on each property parcel. Building costs were increased by up to around 30% on the steepest parcels, with smaller increases on parcels with shallower gradients. Sloping sites is a relevant consideration, particularly in parts of Wakatipu Ward.

[19] The latest rateable valuations are for 2017 (the 2020 re-valuation was postponed by Council).

Table 7.1: Base Construction Costs per Square Metre of Dwelling Floorspace

TYPOLOGY	AREA TYPE/STOREYS	Base Build Cost per M2[1] Min	Max
Standalone	Group 1	$1,850	$2,600
	Group 2	$1,900	$2,600
	Group 3	$1,950	$2,700
	Group 4	$2,050	$2,800
	Group 5	$2,100	$2,850
Duplex/Terrace		$2,000	$2,650
Apartments	1 Storey	$2,000	$3,000
	2 Storeys	$2,000	$3,000
	3 Storeys	$3,200	$4,200
	4 Storeys	$3,000	$4,000
	6 Storeys	$3,000	$4,000

Source: M.E QLD Residential Capacity Model, 2021.

1 Note: Costs include only the base build cost per m2. They do not represent the total dwelling construction cost per m2. Finance cost excluded.

A range of ancillary costs were also incorporated in the feasibility model. These include:

- Resource consent fees.
- Building consent fees.
- Council development contributions.
- Utilities connections.
- Professional services associated with the development and sales process.

Finance costs are included in each component of the model as applicable (see Table 7-4 below).

7.4 Estimation of Sales Prices

Analysis was undertaken to generate estimates of sales prices for each of the dwelling development options potentially able to occur on each property parcel. A series of sales price curves were generated for each area, to capture the relationship between dwelling size and sales price (with the relationship between dwelling size and section size already captured through the process of establishing FARs within an earlier modelling stage). A sales price curve was produced for each dwelling typology within each local reporting area (with further divisions in some areas to reflect differences in dwelling value patterns).

Property parcel level sales price data was used to establish the sales price estimates by dwelling size and typology within each area. Data was obtained from QLDC on individual sales records across district, which was spatially integrated into the assessment Spatial Framework. Further data was obtained from recent sales listings and other online model estimates to calibrate the estimated sales price curves.

The final sales price estimation within the model takes account of the dwelling typology, size and location (including type of location within each reporting area). It also takes into account whether the dwelling is a suburban dwelling, or whether it reflects a larger lifestyle property.

The estimated sales prices (incl. GST) for new dwellings are shown in Table 7.2 and Table 7.3. They show the estimated sales price for each dwelling typology for each location at selected dwelling floorspace sizes (with the model calculating from a full range of dwelling sizes). Areas containing ranges within a dwelling size group occur where a location has been disaggregated into different location types to reflect local spatial variations in value.

Table 7.2: Sales Price by Dwelling Size and Typology – Standalone and Duplex/Terrace Dwellings

	Estimated Sales Prices for New Dwellings at Selected Dwelling Sizes								
	Standalone Dwellings			Duplex Dwellings			Lifestyle Dwellings		
LOCATION	150m2	250m2	350m2	90m2	120m2	220m2	250m2	300m2	400m2
Albert Town	$755k to $873k	$880k to $1.03m		$598k to $654k	$641k to $709k	$761k to $862k	$1.27m	$1.33m	$1.45m
Cardrona	$697k	$893k		$499k	$566k	$754k			
Hawea	$773k to $1.42m	$933k to $1.58m	$1.72m	$591k to $1.18m	$646k to $1.23m	$799k to $1.38m	$1.07m	$1.13m	$1.25m
Luggate	$767k	$963k		$499k	$566k	$754k			
Wanaka	$1.04m to $1.57m	$1.17m to $1.98m	$1.92m to $2.35m	$841k to $1.16m	$888k to $1.29m	$1.02m to $1.68m	$1.34m to $2.26m	$1.61m to $2.52m	$3.01m
Arrowtown	$985k to $1.29m	$1.48m		$796k to $1.04m	$843k to $1.11m	$974k to $1.28m			
Arthurs Point	$997k to $1.10m	$1.36m to $1.52m	$1.90m	$676k to $742k	$790k to $869k	$1.13m to $1.26m			
Frankton	$997k to $1.42m	$1.37m to $1.77m	$2.08m	$676k to $1.07m	$790k to $1.18m	$1.13m to $1.50m			
Frankton Arm	$1.05m to $1.47m	$1.41m to $1.82m	$2.13m	$721k to $1.11m	$835k to $1.22m	$1.18m to $1.55m			
Jacks Point	$1.05m to $1.10m	$1.41m to $1.46m		$721k to $766k	$835k to $880k	$1.18m to $1.22m			
Kelvin Heights	$1.10m to $1.55m	$1.46m to $1.91m	$2.25m	$766k to $1.17m	$880k to $1.29m	$1.22m to $1.63m			
Lake Hayes	$1.65m	$2.01m		$1.17m	$1.29m	$1.63m		$3.06m	$3.49m
Lake Hayes Estate	$911k	$1.21m		$610k	$697k	$957k			
Lower Shotover	$911k	$1.21m		$583k	$670k	$930k			
Quail Rise	$906k	$1.18m		$646k	$733k	$993k			
Queenstown Central	$1.27m to $1.61m	$1.47m to $2.22m	$2.79m	$1.01m to $1.09m	$1.08m to $1.27m	$1.28m to $1.84m			
Sunshine Bay-Fernhill	$769k to $919k	$1.12m to $1.73m	$2.63m	$695k	$764k	$960k to $1.30m			
Glenorchy	$854k	$1.10m		$546k	$629k	$867K			
Kingston	$815k	$950k		$571K	$618K	$749K			

Source: M.E QLD Residential Capacity Model, 2021.

Table 7.3: Sales Price by Dwelling Size and Typology – Apartment Dwellings in Mixed Residential/Commercial Zones

ZONE	REPORTING AREA	Estimated Sales Prices for New Apartment Dwellings at Selected Dwelling Sizes 50m2	80m2	120m2	200m2
Arrowtown Residential Historic Management Zone	Arrowtown	$669k	$843k	$1.06m	$1.45m
Business Mixed Use	Cardrona	$410k	$516k	$647k	$889k
	Frankton	$712k	$897k	$1.12m	$1.54m
	Lake Hawea	$454k	$572k	$718k	$986k
	Luggate	$410k	$516k	$647k	$889k
	Queenstown Town Centre	$496k to $847k	$625k to $1.07m	$784k to $1.34m	$1.08m to $1.84m
	Wanaka Town Centre	$717k to $754k	$903k to $950k	$1.13m to $1.19m	$1.55m to $1.64m
Community Shopping Centre	Arrowtown	$669k	$843k	$1.06m	$1.45m
	Frankton	$712k	$897k	$1.12m	$1.54m
	Lake Hawea	$454k	$572k	$718k	$986k
	Queenstown Town Centre	$496k to $532k	$625k to $671k	$784k to $842k	$1.08m to $1.16m
	Wanaka Town Centre	$478k to $754k	$603k to $950k	$756k to $1.19m	$1.04m to $1.64m
Local Neighbourhood Centres	Arrowtown	$669k	$843k	$1.06m	$1.45m
	Cardrona	$410k	$516k	$647k	$889k
	Frankton	$712k	$897k	$1.12m	$1.54m
	Kelvin Heights	$783k	$986k	$1.24m	$1.70m
	Lake Hawea	$454k	$572k	$718k	$986k
	Queenstown Town Centre	$496k to $741k	$625k to $934k	$784k to $1.17m	$1.08m to $1.61m
	Wanaka Town Centre	$478k to $754k	$603k to $950k	$756k to $1.19m	$1.04m to $1.64m
Rural Visitor	Arthurs Point	$617k	$777k	$975k	$1.34m
	Cardrona	$410k	$516k	$647k	$889k
Town Centre	Arrowtown	$669k	$843k	$1.06m	$1.45m
	Queenstown Town Centre	$830k to $847k	$1.05m to $1.07m	$1.31m to $1.34m	$1.80m to $1.84m
	Wanaka Town Centre	$754k	$950k	$1.19m	$1.64m
Township (Operative)	Luggate	$410k	$516k	$647k	$889k

Source: M.E QLD Residential Capacity Model, 2021.

7.5 Financial Assumptions

The commercial feasibility model applies the following financial rate assumptions to the above costs within the model (Table 7-4).

Table 7.4 Financial Rate Assumptions

Component	Rate
GST	15.00%
Corporate Tax Rate	28.00%
Capital Rate	6.90%

8 Reasonable Expected to be Realised Capacity

This section provides further detail on the analysis of reasonable expected to be realised ("RER") capacity, as set out in Section 8 of the HBA Main Report. It should be read in conjunction with the text in the main report.

8.1 Approach

The final stage of the capacity assessment estimates the share of commercially feasible capacity that is reasonably expected to be realised and served by infrastructure. In this stage, the amount of feasible capacity is reduced (or spread over time) to reflect the level and scale of development which is ' likely to be delivered' by applying the current (or recent) market preferences and development rates. The assessment recognises that the nature and type of development delivered may not achieve the densities (and therefore, capacity) that are enabled by the Plan (or Draft Spatial Plan). This stage also constrains otherwise feasible development to reflect various identified development infrastructure limits across different areas of the district, some of which will be resolved over time.

The modelling structure means that some of the difference between feasible RER and plan enabled capacity is effectively captured in earlier stages of the capacity modelling and therefore has also been removed from plan enabled capacity. This occurs where site specific constraints are applied during the plan enabled modelling. These constraints may either remove whole parcels or parts of parcels. Types of constraints include geographic/topographic constraints which effectively add costs, and existing land use constraints (e.g. current use as an un-zoned reserved or education purposes, etc) which mean these sites are assumed to be unavailable for residential development despite their underlying zoning.

The first part of this stage calculates the distribution of RER across the urban environment (greenfield and existing urban) without infrastructure constraints. Infrastructure constraints are then applied at the catchment level in the second part of this stage, with most catchments including both existing urban and greenfield areas. The approach applied for infrastructure ready capacity is discussed within the Main Report (Section 7). RER capacity is constrained to the infrastructure limits across each area, with RER capacity rebalanced across the urban environment following the application of infrastructure constraints.

The final output of infrastructure-constrained RER capacity produces a pattern of capacity that reflects the observed distribution of development across greenfield vs. existing urban areas at the total urban environment level, within the infrastructure limits of each area. Within the existing urban areas, the distribution of RER capacity then reflects the relative distribution of commercially feasible capacity

The following sub-sections describe our further approach to estimate the share of feasible capacity that is reasonably expected to be realised in the greenfield and existing urban areas prior to the application of infrastructure constraints.

8.2 Greenfield RER

The analysis estimates the reasonably expected to be realised yield on the greenfield areas that are projected to be feasible to develop. It recognises that the likely densities may not reflect the densities enabled by the Plan, with areas often developed at lower densities. In the first instance, the model incorporates developer information to apply any known subdivision yields on specific sites as supplied by developers. It also applies any planning yield caps or structure plan estimates for specific sites. This predominantly results in a lower yield than is enabled by the relevant district plan provisions that apply to those areas.

The RER capacity across the remaining greenfield areas (where the above information is unavailable) is calculated through applying an average lot size that reflects the local development market (following more recent supply patterns). This is also typically substantially larger than the Plan minimum lot size, resulting in a lower yield that is likely to be achieved across the feasible areas.

GIS analysis was undertaken to estimate the existing development patterns in the market on the distribution of average greenfield lot sizes across different areas within the urban environment. Where greenfield development patterns are not currently present, or where a difference in zoning provisions occurs in the future zoning patterns, then potential lot sizes were estimated based on the existing relativities between different areas across other zones.

This process produced the underlying patterns of RER development, which were subsequently constrained by infrastructure limits applied collectively across both the existing urban and greenfield areas within each catchment.

8.3 Existing Urban RER

The share of the existing urban area commercially feasible plan enabled capacity that is reasonably expected to be realised was also estimated. As a first stage, in areas of higher density that enabled vertical patterns of apartment development, the model assumed a lower number of storeys would be developed than enabled under the Plan. This approach was applied within the Queenstown and Wānaka town centre mixed commercial and residential areas, and other smaller urban centres containing a mixture of commercial and residential uses.

The RER component of feasible capacity across the remaining suburban residential areas of the urban environment area were estimated through analysis of the geographic patterns of residential development through time. Data on CCCs[20] were analysed spatially in relation to the existing urban edge[21] through time across the urban environment. The analysis identified the relative share of development occurring as greenfield development or development within the existing urban area through time.

These were combined with the greenfield RER capacities to estimate the relative share of RER development within the existing urban areas based on the observed spatial patterns of growth through time together with the distribution of commercially feasible capacity. Further calculations were then undertaken to

[20] Individual CCC records were supplied by Queenstown Lakes District Council.

[21] The location of the urban edge through time was determined through the LINZ property title data.

triangulate the estimated existing urban share of RER in relation to the total feasible capacity estimated within the existing urban area. This process applied limits within the calculations to ensure that the model did not result in unreasonably large shares of feasible capacity being developed. This produces a conservative result where development across the existing urban area is limited by any capacity constraints within the greenfield area.

This process produced the underlying patterns of RER development, which were subsequently constrained by infrastructure limits applied collectively across both the existing urban and greenfield areas within each catchment.

8.4 Density of Development Patterns in Relation to Planning Parameters

The results of RER capacity are set out and discussed in the Main Report (Section 8). This section contains further commentary on the density of potential future development patterns across QLD's urban environment in relation to the planning provisions. This provides an indication of the likely effect of the planning capacity provisions on the land value share of new development where land value share is related to density. Higher density development is likely to result in lower shares of total dwelling value as land, and lower density development with higher shares of dwelling value as land.

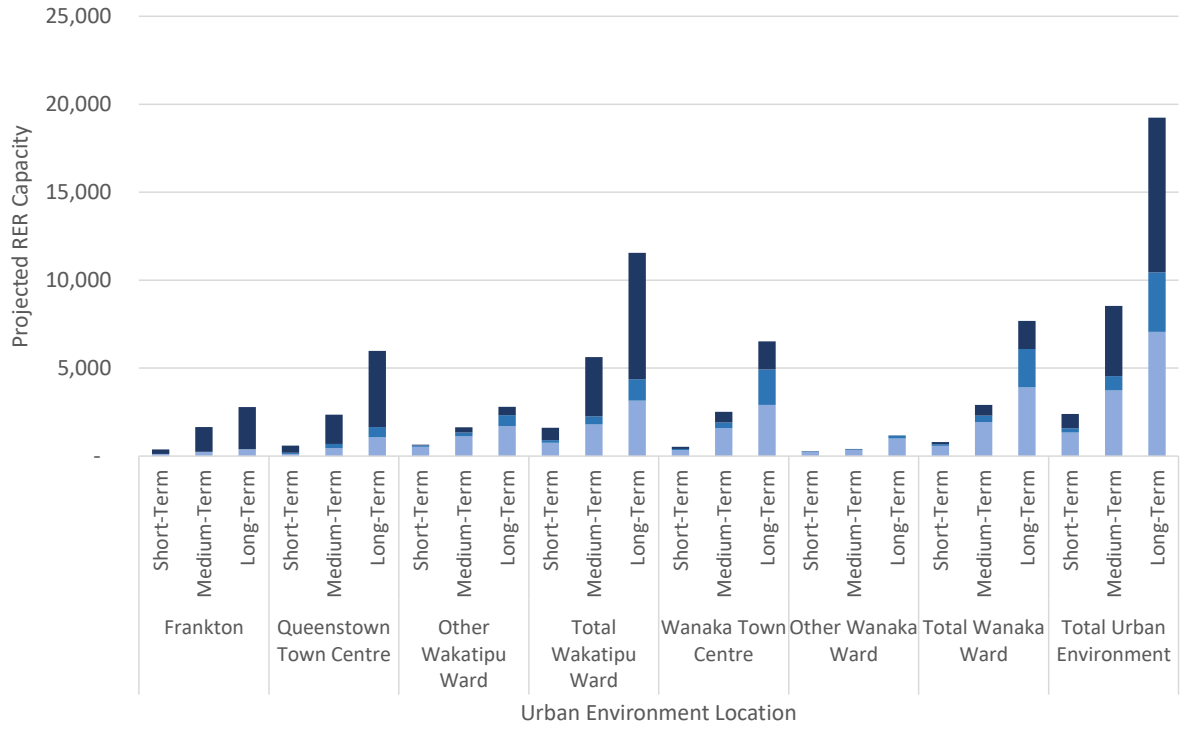
Development patterns in Wānaka are typically larger than minimum lot sizes, and to a lesser extent, in the Lake Hayes Estate and Shotover Country, where some development is occurring at (or below) the minimum lot sizes. There is evidence of a previous constraint in Albert Town where much of the urban expansion has occurred under the previous Township Zone, with minimum lot size (800m2) relative to that being delivered by the market for standalone dwellings in other comparable locations with different zoning (i.e., Low Density Residential Zone).

While standalone dwelling lot sizes have been delivered larger than the Plan minimums across much of Queenstown's recent greenfield areas, it is important to note that there has been limited incentive for higher density development in many of these areas. A large proportion of the greenfield areas have a Lower Density Residential base zone, which generally does not include reasonable provision for the construction of higher density typologies (e.g. duplexes or terraced housing) that could be achieved on the smaller site sizes ostensibly allowed for in the density rules. That is, bulk and location controls (HIRB[22], setbacks, parking and outdoor space type rules) are possible constraints precluding the realisation of capacity to the densities that are otherwise enabled by the minimum lot size or density limits.

The following figures (Figure 8.1 and Figure 8.2) contain an analysis of the likely densities of the RER capacity in the short, medium, and long-term across the existing urban and greenfield areas.

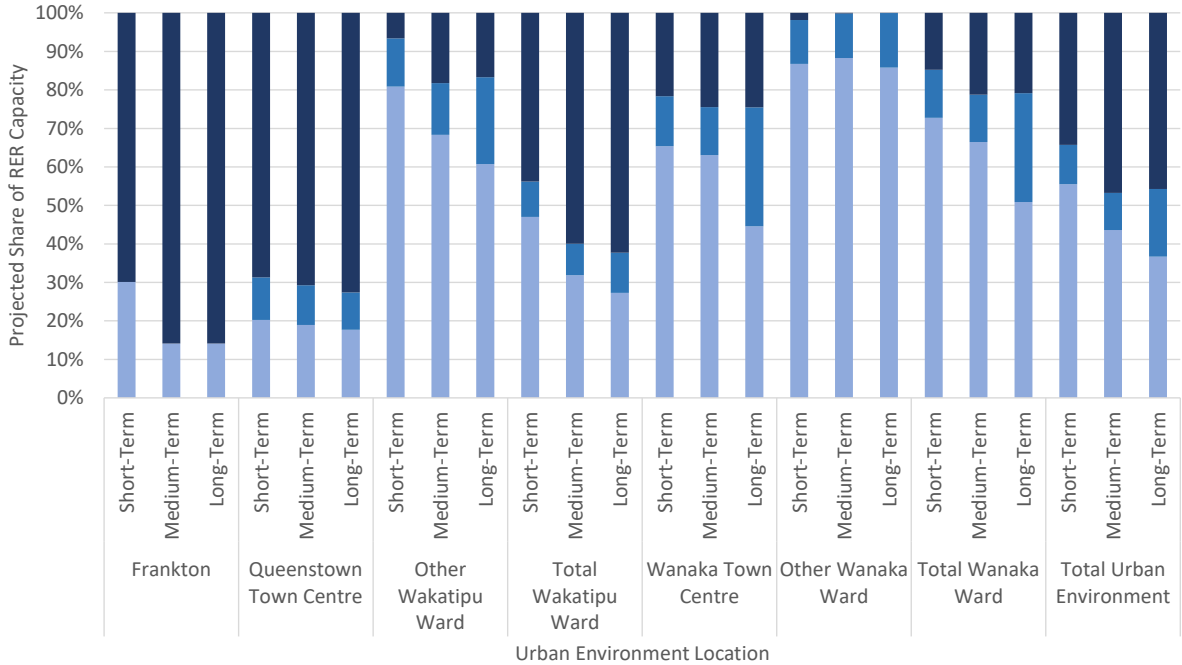
[22] Height in relation to boundary.

Figure 8.1 – Projected RER Capacity by Likely Development Density and Location



Source: M.E QLD Capacity Model, 2021. Low Density Medium Density High Density

Figure 8.2 – Projected Share of RER Capacity by Likely Development Density and Location



Source: M.E QLD Capacity Model, 2021. Low Density Medium Density High Density

The figures show the amount and share of RER capacity within each location and time period within the different broad levels of density[23]. While the figures do not assess the changes in site sizes within typologies, they show the distribution of capacity across different zones as they correspond to dwelling typologies and differences in site sizes between zones[24]. The amount and shares of capacity are shown for the main areas of RER capacity within each ward (as well as the remainder of each ward), and ward and district urban environment totals.

In the short-term, a relatively large share (60%; 910 dwellings) of the greenfield RER capacity occurs within the lower density zones, which are characterised by standalone dwellings on individual lots. When RER capacity within the existing urban environment is taken into account, the share decreases to 56% (1,300 dwellings) with the inclusion of higher density intensification within central urban areas. Greater shares (76% of greenfield and 73% of total) of the Wānaka Ward capacity occur within lower density zones than within Wakatipu Ward (52% greenfield and 47% total) reflecting differences in the development patterns across these locations.

There is potential for substantial changes in the structure of long term capacity across the district's urban environment according to the adopted zoning scenario of indicative urban expansion areas[25] in the Draft Spatial Plan. Higher shares of the capacity are indicatively concentrated into higher density development typologies in those long term greenfield growth areas. If realised, this is likely to have a negative effect on the land value share of total dwelling value, thus positively contributing to housing affordability within the district.

Around two-thirds (66%; 11,100 dwellings) of the additional RER capacity added between the short and long term occurs within medium to higher density development typologies. In the long-term, this results in nearly two-thirds (63%) of the long-term RER in medium to higher density development typologies. Within this, almost half (47%) of the short to long-term capacity increase is within high density development opportunities.

The share is higher in Wakatipu Ward where over three-quarters (76%) of the RER capacity increase between the short and long-term is in medium to higher density development opportunities, and 65% in higher density.

These long term outcomes are however based on an indicative scenario of zoning in the Draft Spatial Plan, that is subject to further change.

[23] Low density development generally includes capacity within the Lower Density Suburban Residential and Large Lot Residential zones, and standalone dwellings within the Special Zones. Medium density refers to development within the Medium Density Residential Zone and duplexes within the Special Zones. High density refers to development within the High Density Residential Zone, apartments within the Special Zones and apartment development within the zones that also contain commercial uses.

[24] For example, the analysis does not show the likely gradual decrease in average site sizes within the lower density zones (e.g. Low Density Residential Zone, which has a minimum site size of 300m2/450m2). However, it shows the relative share of capacity within lower density zones compared to higher density zones (e.g. High Density Residential, with a 115m2 min land area per dwelling), which have a direct impact on site sizes.

[25] Shown in the Main Report in Figure 1.2.

8.5 RER Capacity by Dwelling Type

The following tables complement those in the Main Report on RER capacity that is feasible, infrastructure ready and reasonably expected to be realised in the short, medium, and long term. They show the calculations within the model that estimate the maximum RER between infill or redevelopment within each dwelling type. That is, it calculates (at a parcel level) the maximum RER between infill or redevelopment for attached housing outcomes and detached housing outcomes. This can then be combined with greenfield attached and detached capacity respectively. Attached and detached totals are additive and match the totals in the Main Report RER tables.

The tables show that in the short term (Table 8.1), when considering greenfield with maximum redevelopment or infill capacity, nearly 1,450 detached dwellings are infrastructure serviced and reasonably expected to be realised, along with nearly 950 attached dwellings. Greenfield areas account for 67% of the RER for detached housing and 58% of attached housing. Just over half of the detached housing RER is located in the Wakatipu Ward, but an estimated 82% of the attached housing capacity in the short term is located in the Wakatipu Ward (with capacity for just 166 attached dwelling units feasible, service and expected in the Wanaka Ward by 2023).

In the medium term (Table 8.2) nearly 4,180 detached dwellings are infrastructure serviced and reasonably expected to be realised, along with nearly 4,360 attached dwellings – i.e., RER capacity for attached dwellings is slightly greater than RER capacity for detached dwellings by 2030. Greenfield areas account for 63% of the RER for detached housing and 68% of attached housing. Just under half of the detached housing RER is located in the Wakatipu Ward (49%), but an estimated 82% of the attached housing capacity in the medium term is located in the Wakatipu Ward (with capacity for nearly 790 attached dwelling units feasible, service and expected in the Wanaka Ward by 2030).

In the long term (Table 8.8) just over 9,830 detached dwellings are infrastructure serviced and reasonably expected to be realised, along with approximately 9,400 attached dwellings – i.e., RER capacity for attached dwellings drops slightly below RER capacity for detached dwellings by 2050. Greenfield areas account for 68% of the RER for detached housing and 64% of attached housing. An estimated 42% of the detached housing RER is located in the Wakatipu Ward (58% in the Wanaka Ward), but an estimated 79% of the attached housing capacity in the medium term is located in the Wakatipu Ward (with capacity for nearly 1,960 attached dwelling units feasible, service and expected in the Wanaka Ward by 2050).

Table 8.1 - Short Term Serviced, Feasible and RER Urban Dwelling Capacity – Maximums by Type

		RER						RER					
		DETACHED						**ATTACHED**					
		EXISTING URBAN			**GREEN-FIELD**	**COMBINED**		EXISTING URBAN			**GREEN-FIELD**	**COMBINED**	
Ward	Reporting Area	Max Infill	Max Redevelop-ment	Max Infill or Redevelop-ment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelop-ment	Max Infill	Max Redevelop ment	Max Infill or Redevelop ment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelop ment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	28	39	44	21	50	65	1	-	1	-	1	1
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	20	83	98	12	31	109	16	24	31	227	243	258
Wakatipu	Kelvin Heights	3	48	50	28	31	78	8	10	10	-	8	10
Wakatipu	Outer Wakatipu	-	-	-	7	7	7	-	-	-	-	-	-
Wakatipu	Quail Rise	-	-	-	0	0	0	-	-	-	17	17	17
Wakatipu	Queenstown Town Centre	66	73	88	97	162	184	161	271	299	105	265	404
Wakatipu	Small Township - Wakatipu	-	-	-	59	59	59	-	-	-	16	16	16
Wakatipu	Southern Corridor	-	-	-	323	323	323	-	-	-	73	73	73
Wakatipu Ward Sub-Total		**117**	**244**	**279**	**547**	**664**	**825**	**186**	**305**	**341**	**438**	**623**	**779**
Wanaka	Cardrona	-	-	-	124	124	124	-	-	-	31	31	31
Wanaka	Lake Hawea	-	-	-	21	21	21	4	3	5	-	4	5
Wanaka	Luggate	4	4	4	87	91	91	-	-	-	-	-	-
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	111	173	198	189	300	387	47	34	54	76	124	130
Wanaka Ward Sub-Total		**116**	**177**	**202**	**421**	**537**	**623**	**51**	**37**	**59**	**108**	**158**	**166**
Total Urban Environment		**233**	**421**	**481**	**968**	**1,200**	**1,448**	**237**	**342**	**400**	**545**	**782**	**945**

Source: M.E QLD Capacity Model 2021

Short Term

Table 8.2 - Medium Term Serviced, Feasible and RER Urban Dwelling Capacity – Maximums by Type

		RER						RER					
		DETACHED						ATTACHED					
		EXISTING URBAN			GREEN-FIELD	COMBINED		EXISTING URBAN			GREEN-FIELD	COMBINED	
Ward	Reporting Area	Max Infill	Max Redevelopment	Max Infill or Redevelopment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelopment	Max Infill	Max Redevelopment	Max Infill or Redevelopment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	24	31	34	96	120	130	6	17	17	-	6	17
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	38	161	189	41	79	230	32	47	60	1,358	1,390	1,419
Wakatipu	Kelvin Heights	4	59	61	109	113	170	10	12	13	-	10	13
Wakatipu	Outer Wakatipu	-	-	-	11	11	11	-	-	-	-	-	-
Wakatipu	Quail Rise	-	-	-	3	3	3	-	-	-	244	244	244
Wakatipu	Queenstown Town Centre	227	254	304	384	612	688	555	939	1,035	625	1,181	1,660
Wakatipu	Small Township - Wakatipu	-	-	-	316	316	316	-	-	-	103	103	103
Wakatipu	Southern Corridor	-	-	-	511	511	511	-	-	-	116	116	116
Wakatipu Ward Sub-Total		**294**	**505**	**588**	**1,471**	**1,765**	**2,058**	**603**	**1,014**	**1,125**	**2,447**	**3,050**	**3,572**
Wanaka	Cardrona	-	-	-	180	180	180	-	-	-	45	45	45
Wanaka	Lake Hawea	5	8	9	24	29	33	1	0	1	-	1	1
Wanaka	Luggate	4	4	4	127	131	131	-	-	-	-	-	-
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	554	827	962	815	1,369	1,776	223	151	253	487	711	741
Wanaka Ward Sub-Total		**564**	**840**	**975**	**1,146**	**1,709**	**2,121**	**224**	**151**	**254**	**532**	**757**	**787**
Total Urban Environment		**858**	**1,345**	**1,563**	**2,616**	**3,474**	**4,179**	**827**	**1,165**	**1,379**	**2,979**	**3,806**	**4,358**

Source: M.E QLD Capacity Model 2021

Medium Term

Table 8.3 - Long Term Serviced, Feasible and RER Urban Dwelling Capacity – Maximums by Type

		RER						RER					
		DETACHED						ATTACHED					
		EXISTING URBAN			GREEN-FIELD	COMBINED		EXISTING URBAN			GREEN-FIELD	COMBINED	
Ward	Reporting Area	Max Infill	Max Redevelopment	Max Infill or Redevelopment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelopment	Max Infill	Max Redevelopment	Max Infill or Redevelopment	Green-field	Greenfield and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	159	202	219	193	352	412	39	108	111	-	39	111
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	67	284	333	56	122	389	56	82	106	2,284	2,340	2,390
Wakatipu	Kelvin Heights	12	166	171	397	408	568	27	33	35	-	27	35
Wakatipu	Outer Wakatipu	-	-	-	13	13	13	-	-	-	-	-	-
Wakatipu	Quail Rise	-	-	-	3	3	3	-	-	-	244	244	244
Wakatipu	Queenstown Town Centre	591	659	789	853	1,444	1,642	1,443	2,440	2,689	1,652	3,095	4,341
Wakatipu	Small Township - Wakatipu	-	-	-	580	580	580	-	-	-	199	199	199
Wakatipu	Southern Corridor	-	-	-	505	505	505	-	-	-	122	122	122
Wakatipu Ward Sub-Total		**829**	**1,311**	**1,512**	**2,599**	**3,428**	**4,112**	**1,566**	**2,663**	**2,942**	**4,501**	**6,067**	**7,442**
Wanaka	Cardrona	-	-	-	600	600	600	-	-	-	150	150	150
Wanaka	Lake Hawea	5	8	9	25	30	34	1	0	1	-	1	1
Wanaka	Luggate	6	6	6	373	379	379	-	-	-	-	-	-
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	891	1,357	1,574	3,135	4,026	4,708	359	242	407	1,401	1,760	1,808
Wanaka Ward Sub-Total		**902**	**1,372**	**1,589**	**4,132**	**5,034**	**5,721**	**360**	**243**	**408**	**1,551**	**1,911**	**1,959**
Total Urban Environment		**1,731**	**2,684**	**3,102**	**6,731**	**8,462**	**9,833**	**1,926**	**2,905**	**3,349**	**6,052**	**7,978**	**9,401**

Source: M.E QLD Capacity Model 2021

Long Term

9 Housing Stakeholder Survey

To implement clause 3.21(a) of the NPS-UD local authorities must seek information and comment from expert or experienced people in the development sector. This section sets out the detailed feedback gathered from a survey of stakeholders in the QLD residential development sector. A synthesis of these results is included in the Main Report where relevant to the text.

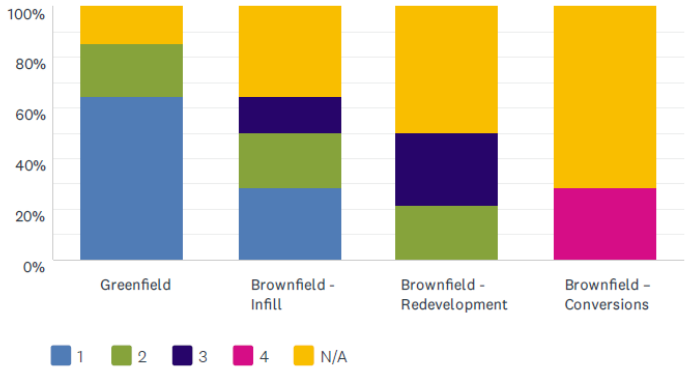
9.1 Approach

An online survey was prepared in collaboration with QLDC and ORC to capture feedback and comments on a range of issues relevant to the HBA. This included an understanding of the type and nature of developer activities in QLD, the markets within which they operate/target, factors which influence commercial feasibility of residential development, and medium term trends/anticipated shifts in residential development supply. The survey was sent to a list over just over 20 stakeholders identified by Council that represented a mix of local land developers, housing developers and land and housing developers (including their representatives). A total of 14 responses were received (although two were only partially completed in the time available).

9.2 Results by Question

Q6 What sort of development does your company (or the company you represent) do the most of? Please rank the following from the most to the least (1 being most, 4 being least), or select N/A if it is not something your company (or the company you represent) does.

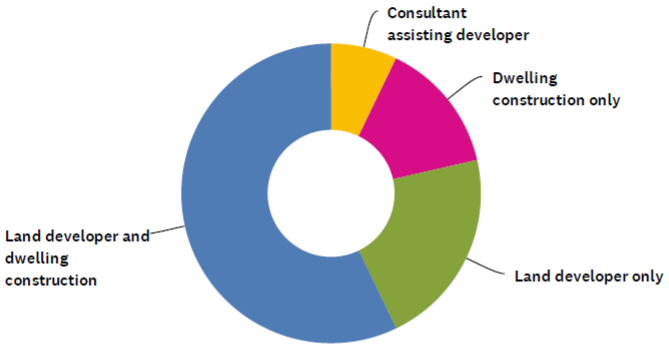
Answered: 14 Skipped: 0



	1	2	3	4	N/A	TOTAL	SCORE
Greenfield	64.29% 9	21.43% 3	0.00% 0	0.00% 0	14.29% 2	14	3.75
Brownfield - Infill	28.57% 4	21.43% 3	14.29% 2	0.00% 0	35.71% 5	14	3.22
Brownfield - Redevelopment	0.00% 0	21.43% 3	28.57% 4	0.00% 0	50.00% 7	14	2.43
Brownfield – Conversions	0.00% 0	0.00% 0	0.00% 0	28.57% 4	71.43% 10	14	1.00

Q7 Please identify your role in the housing development market?

Answered: 14 Skipped: 0



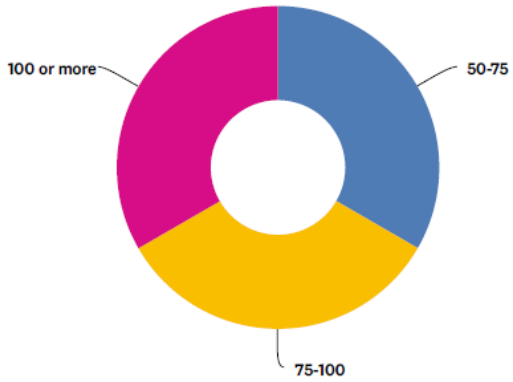
ANSWER CHOICES	RESPONSES	
Other	0%	0
Consultant assisting developer	7%	1
Dwelling construction only	14%	2
Land developer only	21%	3
Land developer and dwelling construction	57%	8
TOTAL		14

9.2.1 Land Development Companies Only

Of those stakeholders that are only land developers (3 respondents), three different moderate to large scales of operation were reported, ranging from 50-75 lots per annum to over a 100 lots per annum. None of the respondents to the survey therefore operate at a small-moderate scale within QLD in terms of delivering sections to the market.

Q8 On average, in Queenstown Lakes District, how many residential lots do you (or the developer you represent) deliver each year? Tick only one.

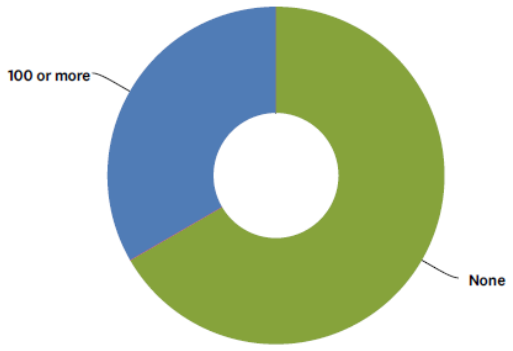
Answered: 3 Skipped: 11



Only one of the three land developers also operated elsewhere in the country, delivering more than 100 lots per annum.

Q9 On average, across the rest of New Zealand, how many residential lots do you (or the developer you represent) deliver each year? Tick only one.

Answered: 3 Skipped: 11



9.2.2 Dwelling Construction Companies Only

Of those stakeholders that are only involved in housing construction (2 respondents), two different scales of operation were reported, ranging from a moderate 30-40 dwellings per annum to a more significant 75-100 dwelling per annum. None of the respondents to the survey therefore operate at a small commercial

scale within QLD in terms of delivering dwellings to the market. Both companies are likely to benefit from economies of scale (i.e. bulk buying) which may help reduce costs of construction.

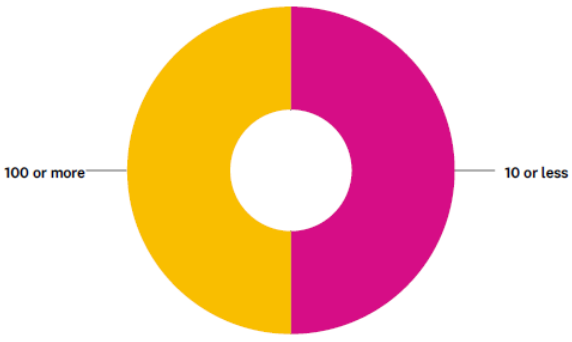
Q10 On average, in Queenstown Lakes District, how many residential dwelling units do you (or the developer you represent) deliver each year? Tick only one.

Answered: 2 Skipped: 12

Both dwelling construction companies also operate elsewhere in New Zealand. For one, the dwellings they deliver within QLD is the largest share of their work (with 10 or less being built elsewhere), while for the other, QLD is less than the total dwellings they deliver elsewhere (which is a 100 plus), although this is spread over a range of locations, so QLD may still be the largest single location of development.

Q11 On average, across the rest of New Zealand, how many residential dwelling units do you (or the developer you represent) deliver each year? Tick only one.

Answered: 2 Skipped: 12



Both dwelling construction respondents have only delivered standalone dwellings in QLD in the last two years. Between them, 206 standalone homes have been built (an average of 103 per annum between both companies).

Q12 What is the breakdown (count) of total dwellings you have built in Queenstown Lakes District over the last 2 years? Please enter a value else enter 0 (zero).

Answered: 2 Skipped: 12

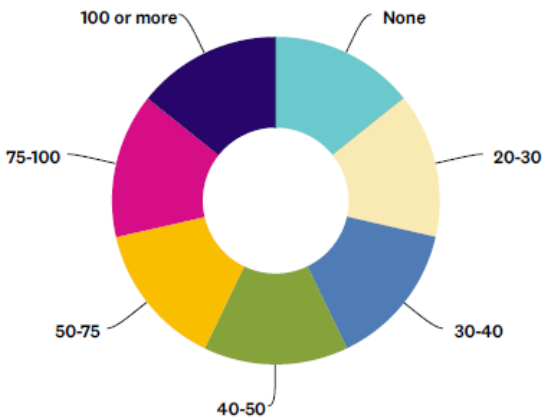
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Stand alone	103	206	2
Duplex	0	0	1
Terrace (horizontally attached)	0	0	1
Apartments (vertically attached)	0	0	1
Total Respondents: 2			

9.2.3 Land Developers and Dwelling Construction Companies

Of those stakeholders that are both land and dwelling developers (8 respondents including one consultant responding on behalf of one such company), a broad range of scales of operation are represented. One respondent has not yet delivered sections or dwelling in QLD (but has been active in the rest of New Zealand and (we assume) expects to be active in the QLD market in the future). The rest of companies deliver between 20-30 sections per annum (bottom end of the scale) and 100 plus sections per annum in the district. The graph below excludes one respondent, who also delivers over 100 residential sections a year.

Q13 On average, in Queenstown Lakes District, how many residential lots do you (or the developer you represent) deliver each year? Tick only one.

Answered: 7 Skipped: 7

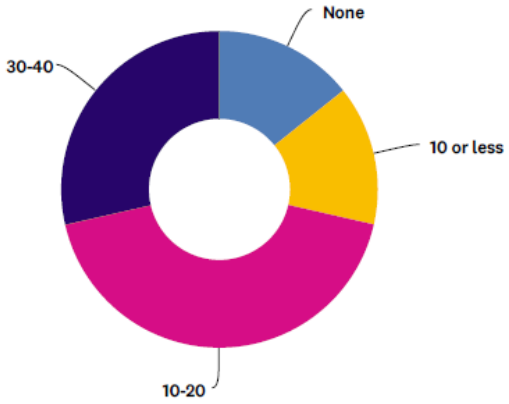


Those same companies deliver between '10 or less' and 30-40 dwellings per annum in QLD. The one response not included in the graph below, also delivers 10 or less dwellings per annum. The survey shows that only one company delivers the same number of dwellings as they deliver sections. Interestingly, they have only delivered terraced housing in the past two years in the district, and it is therefore logical that that they are also the dwelling construction company as such housing cannot be realised if vacant sections

are sold to individual owners. For the rest of the companies that deliver both sections and dwellings, dwelling construction makes up for a much smaller part of their activity. I.e., while they sell some house and land packages, the majority of sections created are sold as vacant sections.

Q14 On average, in Queenstown Lakes District, how many residential dwelling units do you (or the developer you represent) deliver each year? Tick only one.

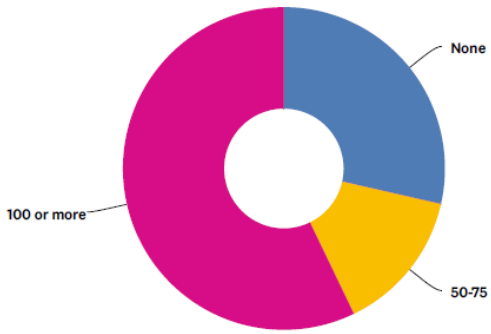
Answered: 7 Skipped: 7



Three of the land and dwelling developer companies, including one not shown in the following graph, are not developing elsewhere in the country. Most (5/8) however do and deliver more than a 100 residential lots per annum, with one developing between 50-75 per annum (more in total than they develop in QLD).

Q15 On average, across the rest of New Zealand, how many residential lots do you (or the developer you represent) deliver each year? Tick only one.

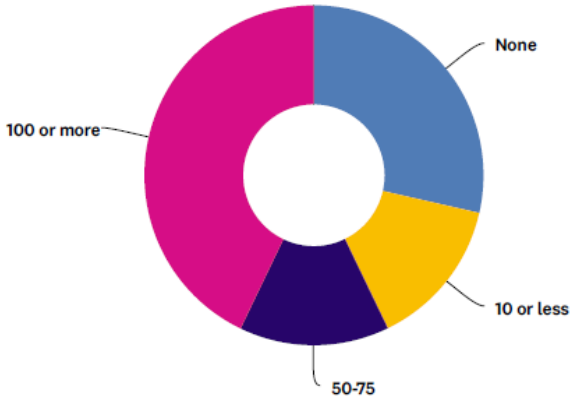
Answered: 7 Skipped: 7



Of the five land and dwelling developer companies active in the rest of the country, most (3/5) deliver over a 100 dwellings per annum and one builds 50-75 dwellings per annum (all considerably more than those companies are building in QLD). One builds 10 or less dwellings elsewhere, which is lower than the number of dwellings they build in the district.

Q16 On average, across the rest of New Zealand, how many residential dwelling units do you (or the developer you represent) deliver each year? Tick only one.

Answered: 7 Skipped: 7



Six survey respondents that were both land and dwelling developers (including one not shown in the table) below provided a breakdown of the dwellings they have delivered in QLD in the last two years by type. This question was not applicable for one company in this group (not yet active in the district according to the response provided) and one respondent did not provide any values (so the table reflects only the values from 5 responses in this group even though the survey software suggests that 7 respondents answered this question).

The majority of respondents that answered this question, delivered only standalone dwellings over the past two years. One delivered only terrace housing. One delivered a mix of standalone, duplex and terraced housing. Little weight should be given to the annual averages in the following table as it inflates the actual response count. On average, those companies delivering standalone dwellings, delivered 11 per annum each over the last two years (87 spread over 2 years spread over 4 responses). The company delivering duplex houses delivered on average 4 units per annum over the last two years. The companies delivering terraced housing delivered on average 19 units per annum each over the last two years. None of the companies surveyed delivered any apartments in the last two years.

Q17 What is the breakdown of total dwellings you have built in Queenstown Lakes District over the last 2 years? Please enter a value else enter 0 (zero).

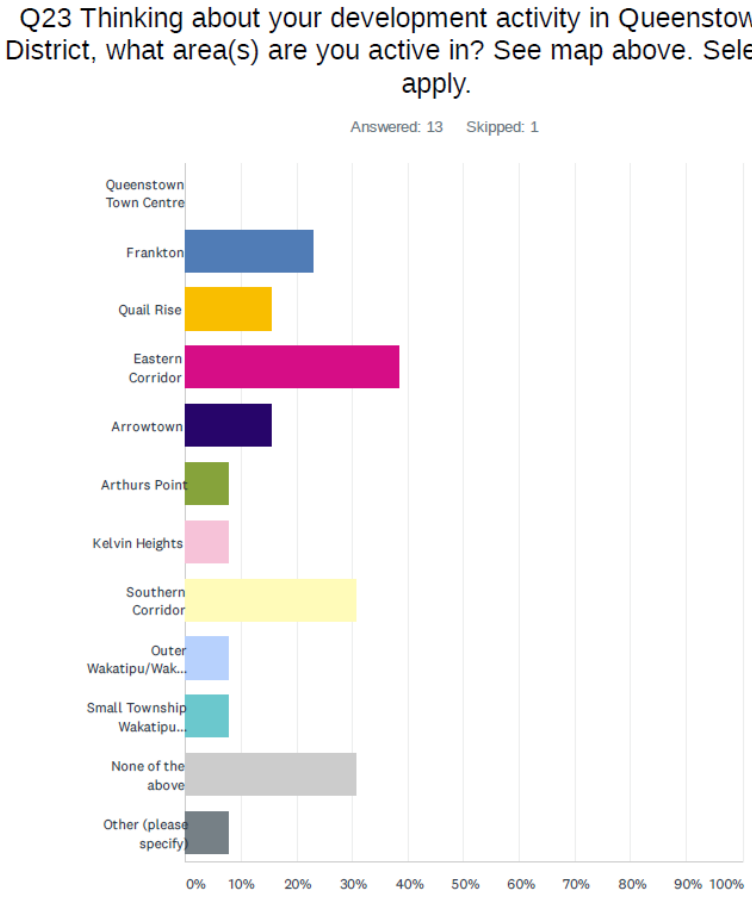
Answered: 7 Skipped: 7

ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Stand alone	15	87	6
Duplex	2	8	4
Terrace (horizontally attached)	15	76	5
Apartments (vertically attached)	0	0	3
Total Respondents: 7			

9.2.4 All Respondents

Wakatipu Ward Development Activity

Of all survey respondents, 9 have been active in the residential development market (land and or dwellings) in the Wakatipu Ward (and 4 of those were also active in the Wānaka Ward). In Wakatipu, most had been active in the Eastern Corridor, followed by the Southern Corridor (i.e., Jacks Point Special Zone), and then Frankton. None had been active in the extensive area defined as Queenstown Town Centre[26].

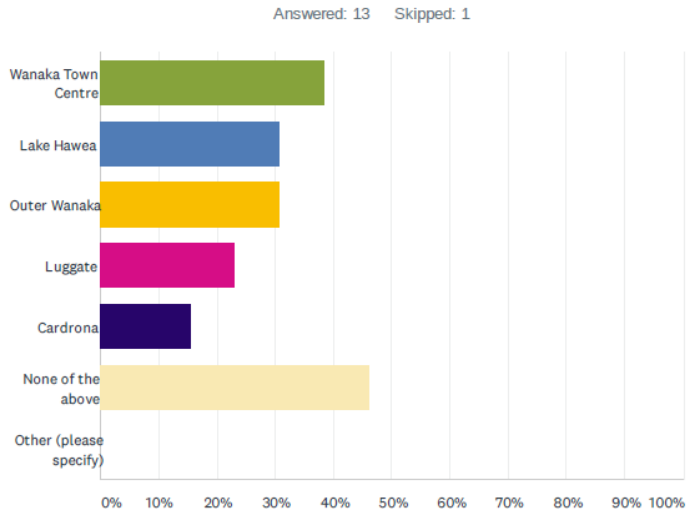


Wānaka Ward Development Activity

Of all survey respondents, 7 have been active in the residential development market (land and or dwellings) in the Wānaka Ward (and 4 of those we also active in the Wakatipu Ward). In Wānaka, most had been active in the Wānaka Town Centre (which captures a range of greenfield growth areas), followed by Lake Hawea and Outer Wānaka, and then Luggate. Two respondents were active in Cardrona.

[26] For reporting area boundaries, see Figure 1.9 in the Main report.

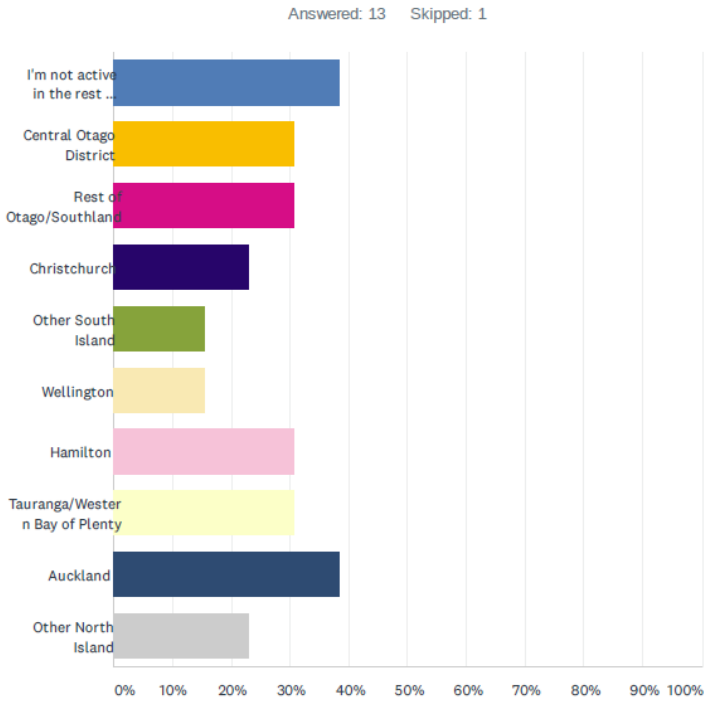
Q24 Thinking about your development activity in Queenstown Lakes District, what area(s) are you active in? See map above. Select all that apply.



Rest of New Zealand Development Activity

6 respondents were not also developing elsewhere in New Zealand (i.e., are local developers only), but of those that did develop in the rest of the country (n=7), most were active in multiple locations. One was only active in Auckland (in addition to QLD), 1 was only active in neighbouring Central Otago District and 1 was only active in the Rest of Otago/Southland.

Q25 If you are active in the rest of New Zealand, please indicate where in the rest of New Zealand you also develop? Select all that apply.

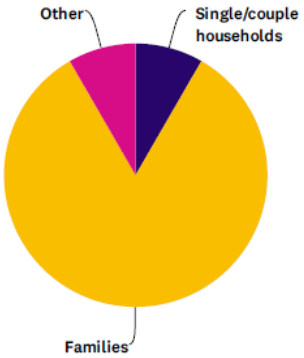


When asked what the respondent's target household type was (when selling to the market), the significant majority of responses were family households (see graph below). Only one most commonly targeted single

or couple households (later clarified as retirement buyers). One response stated 'other' but did not specify what household type that was.

Q26 Who is typically the most common household type you target within Queenstown Lakes District, as it applies to your developments. (select one only).

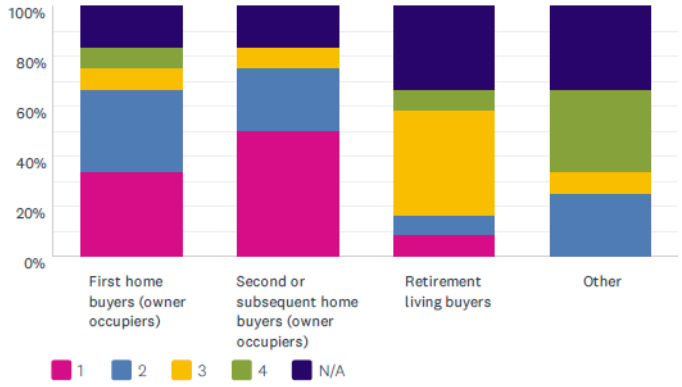
Answered: 12 Skipped: 2



With regards to target or most common buyers that they sell to, just 4 stakeholders ranked 'first home buyers' as their main market (rank 1). 6 stakeholders ranked 'second or subsequent home buyers (owner occupiers)' as their main market (rank 1). One respondent ranked 'retirement living buyers' as their main market (rank 1). 'First Home Buyers' was not an applicable buyer market for two respondents (although this includes one developer not yet active in QLD). As many respondents ranked this market 2nd as ranked it 1st. One respondent ranked it 3rd and one ranked it 4th. Targeting retirement buyers was not applicable for 4 respondents (although this again includes one developer not yet active in QLD).

Q27 Who is typically your target or most common buyer within Queenstown Lakes District? Rank the following as it applies to your developments. Please rank buyers from 1 being the largest share of buyers to 4 for the group making up the smallest share of buyers. Please select N/A if you do not target that particular group at all.

Answered: 12 Skipped: 2



	1	2	3	4	N/A	TOTAL	SCORE
First home buyers (owner occupiers)	33.33% 4	33.33% 4	8.33% 1	8.33% 1	16.67% 2	12	3.10
Second or subsequent home buyers (owner occupiers)	50.00% 6	25.00% 3	8.33% 1	0.00% 0	16.67% 2	12	3.50
Retirement living buyers	8.33% 1	8.33% 1	41.67% 5	8.33% 1	33.33% 4	12	2.25
Other	0.00% 0	25.00% 3	8.33% 1	33.33% 4	33.33% 4	12	1.88

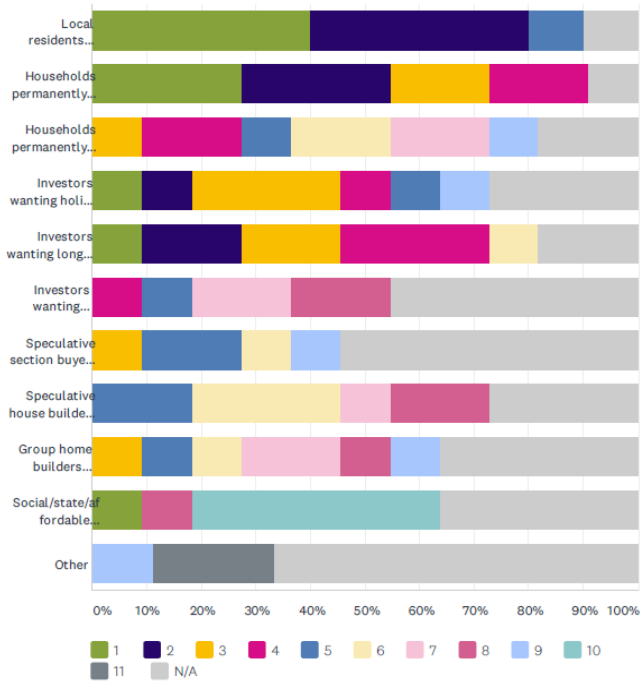
Question 28 asked all respondents to rank their known purchasers from a choice of 11 options. Based on average rank scores, the purchaser that ranked highest overall was 'local residents moving within the district'. Four respondents ranked this as their top ranking purchase group and four as their second ranked group. This is followed by 'households permanently moving into the district from elsewhere in NZ'. Three respondents ranked this as their top ranking purchase group and three as their second ranked group.

The next most common group of purchasers (including targeted buyers) is 'investors wanting long term rentals'. One respondent ranked this group first, two ranked it second and most others ranked it third or fourth. 'Investors wanting holiday homes' was applicable to 8 respondents and it was the next highest ranking market. In descending order after that is 'speculative section buyers' (one respondent ranked this their 3rd highest market), 'households moving into the district from overseas' (one respondent ranked this their 3rd highest market and one their 4th highest), 'speculative house builders' and 'group home builders' (one respondent ranked this their 3rd highest market).

The second least popular/targeted market at present is 'Investors wanting residential visitor accommodation' although one respondent ranked this their 4th largest market. The least popular/targeted market was 'Social/state/affordable housing providers/occupants'. While one respondent ranked this their main market (1st), most ranked it 8th or 10th (or not applicable at all).

Q28 Who is typically your target or most common purchaser within Queenstown Lakes District? Rank the following as it applies to your developments from 1 being the largest share of buyers to 11 for the group making up the smallest share of buyers. Please select N/A if you do not target that particular group at all.

Answered: 11 Skipped: 3



	1	2	3	4	5	6	7	8	9	10	11	N/A	TOTAL	SCORE
Local residents moving within the district	40% 4	40% 4	0% 0	0% 0	10% 1	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	10% 1	10	10.11
Households permanently moving into the district from elsewhere in NZ	27% 3	27% 3	18% 2	18% 2	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	9% 1	11	9.70
Households permanently moving into the district from overseas	0% 0	0% 0	9% 1	18% 2	9% 1	18% 2	18% 2	0% 0	9% 1	0% 0	0% 0	18% 2	11	6.33
Investors wanting holiday homes	9% 1	9% 1	27% 3	9% 1	9% 1	0% 0	0% 0	0% 0	9% 1	0% 0	0% 0	27% 3	11	8.25
Investors wanting long term rentals	9% 1	18% 2	18% 2	27% 3	0% 0	9% 1	0% 0	0% 0	0% 0	0% 0	0% 0	18% 2	11	8.78
Investors wanting residential visitor accommodation	0% 0	0% 0	0% 0	9% 1	9% 1	0% 0	18% 2	18% 2	0% 0	0% 0	0% 0	45% 5	11	5.50
Speculative section buyers (buy off plans and resell before/after title)	0% 0	0% 0	9% 1	0% 0	18% 2	9% 1	0% 0	0% 0	9% 1	0% 0	0% 0	55% 6	11	6.40
Speculative house builders (build and sell new dwelling)	0% 0	0% 0	0% 0	0% 0	18% 2	27% 3	9% 1	18% 2	0% 0	0% 0	0% 0	27% 3	11	5.63
Group home builders (buying sections then selling house/land packages)	0% 0	0% 0	9% 1	0% 0	9% 1	9% 1	18% 2	9% 1	9% 1	0% 0	0% 0	36% 4	11	5.57
Social/state/affordable housing providers/occupants	9% 1	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	9% 1	0% 0	45% 5	0% 0	36% 4	11	3.57
Other	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	11% 1	0% 0	22% 2	67% 6	9	1.67

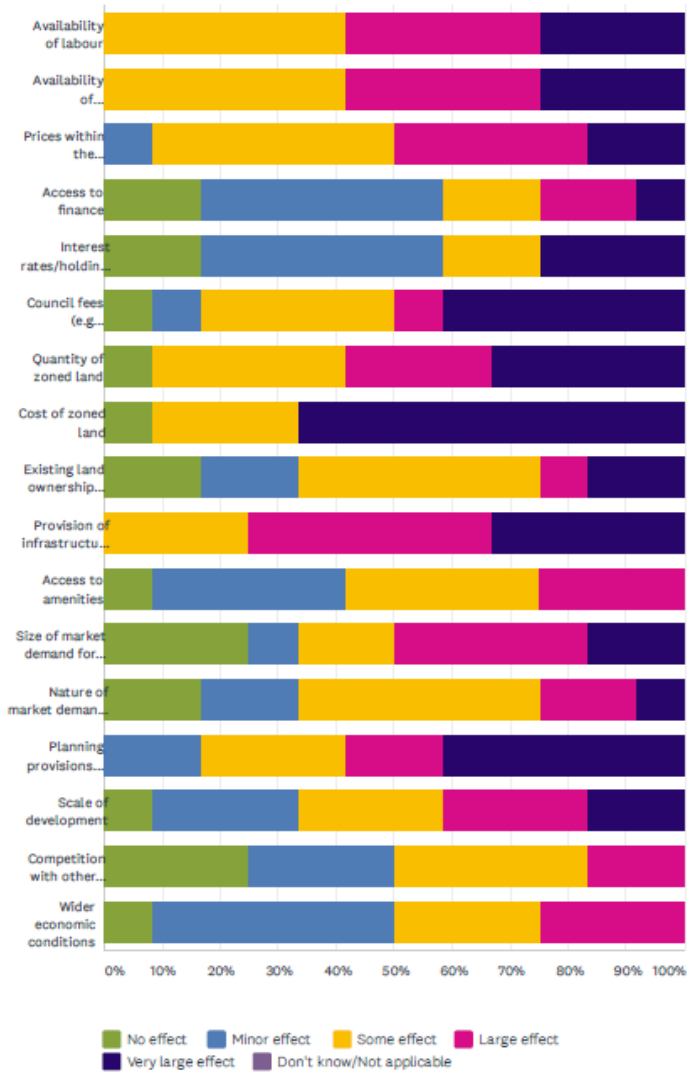
Question 29 asked stakeholders to comment on the degree of effect of different factors on the commercial feasibility of residential development in the district.

- Availability of labour: This relates to their ability to find skilled and unskilled staff. Everyone agreed that this had more than a minor effect. 42% felt it had some effect (more than minor) but 58% felt it had a large or very large effect on feasibility.
- Availability of sub-contractors: This relates particularly to the capacity of suppliers and ability to get suppliers in a timely manner without undue delays. 42% felt it had some effect (more than minor) but 58% felt it had a large or very large effect on feasibility.
- Construction prices (materials and labour): Around 50% of responses felt that construction costs had a minor or some (moderate) effect on feasibility. A third felt it had a large effect but only 17% felt it had a very large effect. This may reflect a situation where there is little difficulty passing those costs on to the buyers (through higher prices), given the strong demand in the residential market in recent years.
- Access to finance and interest rates/holding costs: Given that interest rates are very low at present, it is not surprising that 17% of respondents felt that access to finance and interest rates had no effect on feasibility and a further 59% felt it had a minor-moderate effect only.
- Council fees: 42% of respondents said this had a very large effect on feasibility (second equal only to the effect of existing land ownership structures). In total 50% said council fees (which included development contributions and consent costs) had a large or very large effect on the feasibility of their developments/projects. Only 16% felt it had a no more than minor effect.
- Quantity of zoned land: This relates to how much plan enabled capacity is provided at any one time. 58% of respondents felt that this had a large or very large effect on the commercial feasibility of development. A further 33% said it had some effect (i.e., a moderate effect).
- Cost of zoned land (land prices, particularly land already zoned for urban development): This was the most significant factor in overall commercial feasibility, with 67% of respondents saying it had a very large effect. This is not an unsurprising result given the way in which development feasibility is calculated and the relatively high cost of residential land in the district.
- Existing land ownership structures: 75% of respondents felt that the effect of land ownership structures in the district has a moderate or lessor effect on commercial feasibility. The balance, 25%, said it had a large or very large effect.
- Provision of infrastructure: this relates to the costs of providing both three waters and land transport infrastructure on commercial feasibility. When combining the large and very large effect (75%), this factor was the most significant effect on commercial feasibility and exceeds the response on the cost of zoned land (although the responses to this factor are split between large and very large effects, whereas the cost of zoned land was very large only at 67%). A further 25% of responses said that infrastructure provision had some/a moderate effect.
- Access to amenities: This includes open space, reserves, community and recreational facilities, walking/cycling tracks, shops etc. 75% said this had no more than a moderate effect on feasibility.

	NO EFFECT	MINOR EFFECT	SOME EFFECT	LARGE EFFECT	VERY LARGE EFFECT	DON'T KNOW/NOT APPLICABLE	TOTAL
Availability of labour	0.00% 0	0.00% 0	41.67% 5	33.33% 4	25.00% 3	0.00% 0	12
Availability of sub-contractors	0.00% 0	0.00% 0	41.67% 5	33.33% 4	25.00% 3	0.00% 0	12
Prices within the construction sector (materials & labour)	0.00% 0	8.33% 1	41.67% 5	33.33% 4	16.67% 2	0.00% 0	12
Access to finance	16.67% 2	41.67% 5	16.67% 2	16.67% 2	8.33% 1	0.00% 0	12
Interest rates/holding costs	16.67% 2	41.67% 5	16.67% 2	0.00% 0	25.00% 3	0.00% 0	12
Council fees (e.g development contributions, consent fees)	8.33% 1	8.33% 1	33.33% 4	8.33% 1	41.67% 5	0.00% 0	12
Quantity of zoned land	8.33% 1	0.00% 0	33.33% 4	25.00% 3	33.33% 4	0.00% 0	12
Cost of zoned land	8.33% 1	0.00% 0	25.00% 3	0.00% 0	66.67% 8	0.00% 0	12
Existing land ownership structures	16.67% 2	16.67% 2	41.67% 5	8.33% 1	16.67% 2	0.00% 0	12
Provision of infrastructure (three waters/transport)	0.00% 0	0.00% 0	25.00% 3	41.67% 5	33.33% 4	0.00% 0	12
Access to amenities	8.33% 1	33.33% 4	33.33% 4	25.00% 3	0.00% 0	0.00% 0	12
Size of market demand for dwellings	25.00% 3	8.33% 1	16.67% 2	33.33% 4	16.67% 2	0.00% 0	12
Nature of market demand for dwellings (e.g. type, size and location of dwellings)	16.67% 2	16.67% 2	41.67% 5	16.67% 2	8.33% 1	0.00% 0	12
Planning provisions (e.g. minimum site sizes, dwelling typologies, building heights)	0.00% 0	16.67% 2	25.00% 3	16.67% 2	41.67% 5	0.00% 0	12
Scale of development	8.33% 1	25.00% 3	25.00% 3	25.00% 3	16.67% 2	0.00% 0	12
Competition with other developers	25.00% 3	25.00% 3	33.33% 4	16.67% 2	0.00% 0	0.00% 0	12
Wider economic conditions	8.33% 1	41.67% 5	25.00% 3	25.00% 3	0.00% 0	0.00% 0	12

Q29 To what extent do the following factors affect the commercial feasibility of residential development in Queenstown Lakes District? Select one in each row.

Answered: 12 Skipped: 2



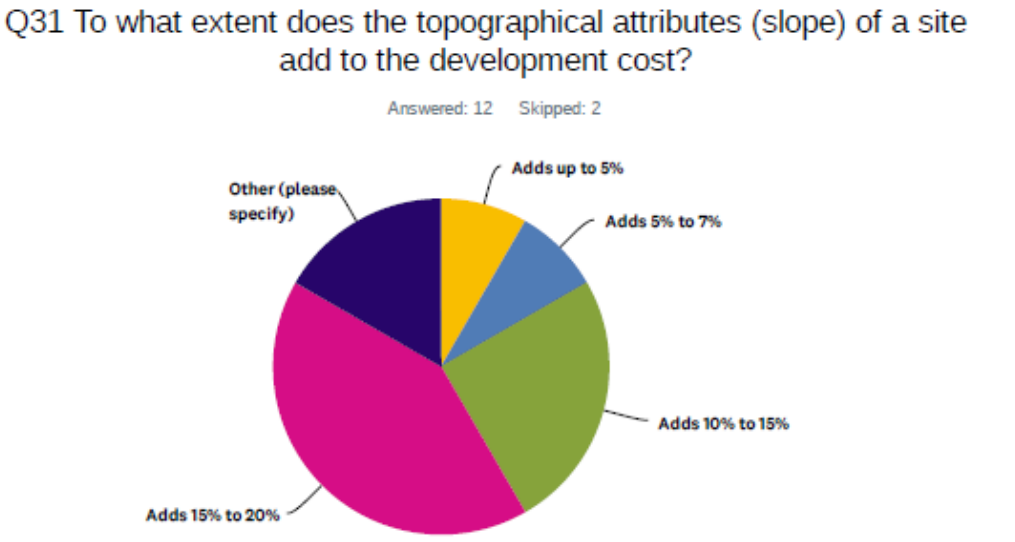
- Size of market demand for dwellings: This relates to the overall volume of demand in the district. This was split between no effect and a large effect. Overall, 50% said it had a more than moderate effect and 50% said it had a moderate or lessor effect on feasibility.
- Nature of market demand for dwellings (i.e., type, size and location of dwellings): few responses felt this had a large (17%) or very large (8%) effect on feasibility. This implies that developers are able to meet those demands and be commercially feasible.
- Planning provisions (e.g. minimum site sizes, dwelling typologies, building heights etc): This was another strong effect on commercial feasibility in the responses. 42% felt this had a very large effect and a further 17% felt it had a large effect. Only 17% felt that planning provisions had a no more than minor effect on feasibility. It is relevant to note that some developers in the district are likely to have had input to the planning provisions affecting their developments where these relate to special zones.
- Scale of development: This relates to economies of scale and how this influences commercial feasibility. There were very mixed responses on this question, ranging from no effect to a very large effect. There is no clear trend.
- Competition with other developers: No respondents felt that competition had a very large effect on commercial feasibility. 83% said that competition had no more than a moderate effect (some effect), with 25% saying it had no effect at all.
- Wider economic conditions: This is a broad question and subjective as to what it relates to. However, most respondents (42%) said it had a minor effect on commercial feasibility in QLD. In total 75% said any effect was no more than moderate.

Respondents were asked to comment further on any factors that they felt had a very large effect on commercial feasibility for residential development. Selected responses are as follows:

- "Limited access to large parcels of land, the cost of this land, and complications which we need to deal with in developing it have the biggest impact."
- "Cost of land is just extraordinary and driven by multiple factors. This has to have the single biggest impact on the final housing product which comes to market."
- "There is clearly a shortage of zoned land for greenfield development in Queenstown. In a healthy market people should have various options of completed or soon to be complete sections at reasonable prices to choose from. That is not the case."
- "Availability of land and costs of land development is the starting point, if that doesn't work nothing starts. The cost of construction is reasonably consistent across the board, that's in terms of market conditions, competitors etc...however land development can vary widely."
- "Queenstown seems to have a very small pool of quality Subcontractors and they all work across multiple projects. So, ensuring access to these Subbies is hard."
- "Prices across the sector continue to escalate. Materials availability is also a major concern. Access to suitably qualified and available labour - skilled and semi-skilled is a pressing issue currently."

- "Council charges, capacity, competence have a continued impact on how we evaluate risk. Inconsistencies in the way that QLDC operates, and the hurdles that are continually put in front of development for no obvious reason elongate timeframes and add a real cost as risk is priced in."
- "Our working estimate is that Council adds up to $100,000 to the price of every new dwelling currently produced."

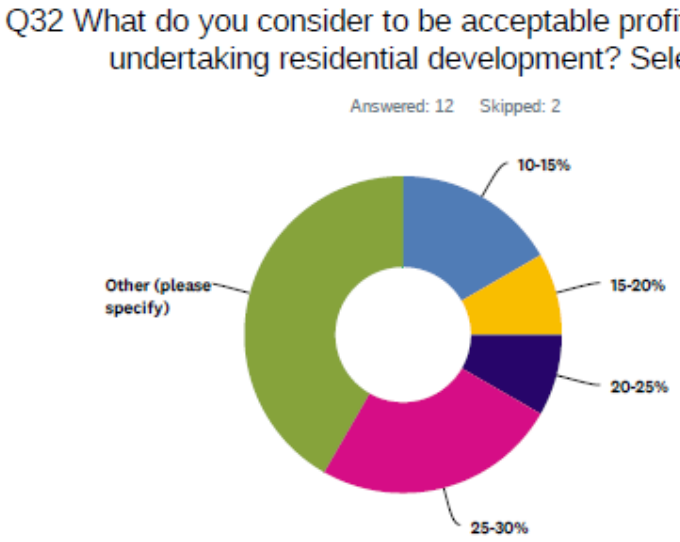
The following graph reports results of a questioned targeted at the impact of slope (steep sites) on development costs. This question is relevant to modelling of commercially feasible capacity in the HBA. 25% of respondents indicated a cost premium of 10-15%, but the majority suggested an additional 15-20% cost. Some respondents commented that the ground underneath a site determines the additional development cost rather than the slope alone (i.e., Geotech issues), while another developer stated that in some cases a sloped site can increase costs by more than 30% over a flat site.



ANSWER CHOICES	RESPONSES	
Doesn't make any difference	0.00%	0
Adds up to 5%	8.33%	1
Adds 5% to 7%	8.33%	1
Adds 8% to 10%	0.00%	0
Adds 10% to 15%	25.00%	3
Adds 15% to 20%	41.67%	5
Other (please specify)	16.67%	2
TOTAL		12

Question 32 sought guidance from respondents on acceptable profit margins in residential development in the district (or generally). The results varied significantly and there were not clear trends between developer types. Two respondents (17%) indicated that 10-15% was appropriate. One stated 15-20% (8%), one stated 20-25% (8%). Most (3 or 25%) stated 25-30%. Five respondents did not select any of those options (i.e., chose 'other'). One respondent was not driven by profit margins and so the question was not applicable. Another comment was that it depends on the type of building/structure (suggesting that different profit margins apply to standalone, duplex, terrace and apartment buildings). Another comment

was that "*if its within QLDC area you need more margin as getting a title out takes twice as long as it should*", implying perhaps that there is more risk and uncertainty of developing in QLD than in some other locations.



When asked how scale of development affected profit margins, selected respones included:

- "Larger scale means can work to lower margins"
- "density vs amenity - balancing act and effects margin considerably"
- "Large impact if land size is not suitable"
- "Margins increase with scale"
- "We don't see significant impact on margin based on scale".

When asked how the type of development affected profit margins, selected respones included:

- "Not really affected"
- "2 and 3 bedroom terraced seem to work best, however type will be dictated by the market."
- "High end development has huge margins"
- "Land development with no build seems to yield better margin"

When asked how the location of development affected profit margins, selected respones included:

- "Not really affected"
- "topography and services are important , but can be planned for"
- "Location is critical. Many projects are not viable because of poor location"
- "Location has huge impact on profit"
- "Location and the market of buyer go hand in hand to get the profit".

When asked if there were any other factors affecting commercial feasibility in QLD, selected responses were (refer also to the discussion in the main report which provides a synthesis of all responses to this question):

- “uncertainty with infrastructure is a concern”
- “Processing times on resource consents and EAs is a concern, particularly when QLDC enforces strict seasonal limits on civil construction (sealing)”
- “lack of forward planning. Presently there is only one true residential sub-division choice in QT for mainstream families....it will be 2 years before there is another option. That is causing house prices to be so high...ie a lack of supply”.
- “every step of the process [with council] is now fraught with delay red tape”
- “Zoning. Uncertainty from a planning/zoning perspective and local conditions (post covid)”
- “Like most locations, weather (winter) has an impact”
- ‘Speed and efficiency of QLDC - right across the organisation, and in particular the silo approach between different arms of the organisation”
- “Infrastructure investment opening up land for development is the single largest issue and next in line is land rezoning to provide for growth”
- “QLDC's timeliness”

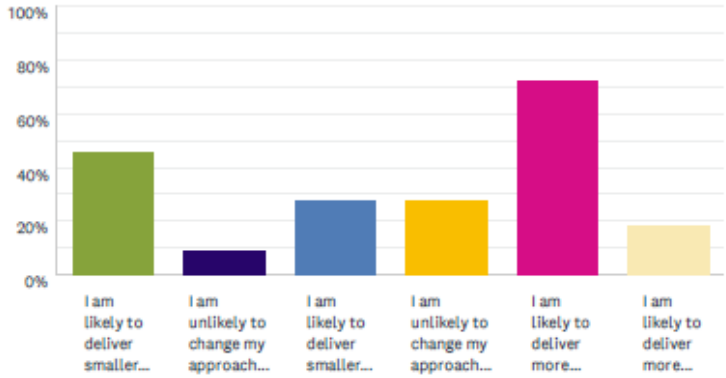
The following graph (question 35) asks respondents to anticipate what changes they expect to deliver through their developments in the short-medium term. 45% of respondents (n=5) answering the question said that smaller sized lots were likely, nobody responded that they would deliver larger lots than currently, and 1 respondent said they would keep lot sizes the same. Three respondents (27%) indicated that they saw their dwelling size decreasing, nobody responded that they would deliver larger dwellings than currently, 3 respondents said they would keep dwelling sizes the same. A significant 8 respondents (73%) anticipated delivering more attached housing (duplex/terrace style) and 2 respondents (18%) anticipated delivering more apartment dwelling units over the medium term.

Some additional comments were provided on potential future changes in their supply:

- “Section sizes are getting ridiculously small, we are actively resisting this race to the bottom.”
- “We will continue to develop a mix of different type of projects”
- “We are targeting affordable housing at very entry level, so need to get end cost down by reducing floor areas and sections sizes, but increasing quality”

Q35 How do you see the dwellings/lots you deliver in Queenstown Lakes District changing over the short-term (to 2023) or medium term (to 2030), in terms of lot size and/or dwelling typology? Select all that apply.

Answered: 11 Skipped: 3



ANSWER CHOICES	RESPONSES	
I am likely to deliver smaller lots	45.45%	5
I am unlikely to change my approach to lot sizes	9.09%	1
I am likely to deliver smaller dwellings	27.27%	3
I am unlikely to change my approach to dwelling sizes	27.27%	3
I am likely to deliver more duplex/terrace dwellings	72.73%	8
I am likely to deliver more apartments	18.18%	2
Total Respondents: 11		

The survey then asked respondents the following: Outside of your own developments, are there any other residential development changes/trends that you have started to observe in QLD that will influence what we might expect to see in the short term (to 2023) or medium term (to 2030)? And what are the drivers for those? Selected responses included:

- "Infrastructure investment needed. Council should be prioritising new zonings"
- "More duplex/Terraced housing" driven by "changing demographics"
- "Duplex, terraced. Height restrictions should be lifted in places like Gorge Road"
- "Poor housing on small sections , a disaster for the future" driven by "developers motivated by profit over quality"
- "Careful consideration is required for high density residential area - that these areas don't become undesirable in the future".
- "Access to finance post COVID will inhibit entry level development" because "Banks are far too conservative post COVID".
- "COVID has had a large impact, but the demand for housing in QT will still be there, it will just take a little bit of time to steady itself"
- "Infrastructure capacity, and historical underspend in this area".
- "High cost of labour and materials" driven by "Skilled shortage due to immigration policy and material supplier cartels/not enough competition"

The survey gave respondents a final opportunity to share any further thoughts. Selected responses included:

- [to council] “please get better at working with developers”
- “Accelerating the Ladies Mile plan change to improve certainty and ensuring the master plan reduces traffic impacts (e.g. large town centre) is important for this part of Queenstown. We also feel dedicated recreational area/playing fields are important for the local community there.”
- “We enjoy developing in Queenstown and look forward to the market stabilizing so that we can continue with the development”.
- “The QLDC has a lot of high quality officers, but many are overworked often leading to a lack of timeliness. Nationally, councils seem to have junior and/or conservative officers responsible for planning decisions and policy. Seems to be a lack of boldness, for whatever reasons, meaning it's expensive and time-consuming for developers to rezone land. The lack of vision and pragmatism bears major responsibility for the cost of land in NZ.”

PART 3 – CONCLUSIONS

10 Sufficiency of Capacity

This section provides the alternative sufficiency results by location and type using the Council's medium growth scenario (5 Year Lag future), instead of the Council's preferred high growth scenario (Change the Path) which is presented in the Main Report.

10.1 Urban Sufficiency by Location – 5 Year Lag Growth Future

Table 10.1 – Short Term Urban Sufficiency of RER Dwelling Capacity (5 Yr Lag)

Reporting Area	Future Urban Demand (incl. margin)			Potential Future Urban Dwelling Estate (RER Capacity + Existing Estate)			Sufficiency (Potential Dwellings)		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Arrowtown	1,200	200	1,400	1,200	200	1,400	0	0	-10
Arthurs Point	360	90	450	410	100	510	50	0	60
Eastern Corridor	1,500	230	1,800	1,400	230	1,700	-90	10	-90
Frankton	1,300	320	1,600	1,300	540	1,900	40	210	250
Kelvin Heights	620	80	700	680	90	770	60	10	60
Outer Wakatipu	-	-	-	10	-	10	10	0	10
Quail Rise	240	30	260	220	30	250	-20	0	-20
Queenstown Town Centre	3,400	880	4,300	3,600	1,300	4,800	140	390	520
Small Township - Wakatipu	380	70	450	440	70	500	50	0	50
Southern Corridor	930	170	1,100	1,100	190	1,300	180	20	200
Wakatipu Ward Urban Env.	**10,000**	**2,100**	**12,100**	**10,400**	**2,700**	**13,100**	**410**	**630**	**1,000**
Cardrona	70	10	70	170	40	210	110	30	140
Lake Hawea	680	120	800	670	100	770	-10	-20	-30
Luggate	200	10	220	290	10	290	80	-10	80
Outer Wanaka	-	-	-	-	-	-	0	0	0
Wanaka Town Centre	5,500	990	6,500	5,700	1,000	6,800	200	30	240
Wanaka Ward Urban Env.	**6,500**	**1,100**	**7,600**	**6,900**	**1,200**	**8,000**	**380**	**40**	**420**
Total Urban Environment	**16,500**	**3,200**	**19,700**	**17,300**	**3,900**	**21,200**	**800**	**670**	**1,500**

Source: M.E QLD Capacity Model 2021 and M.E Housing Demand Model, 2021.

Table 10.2 – Medium Term Urban Sufficiency of RER Dwelling Capacity (5 Yr Lag)

Reporting Area	Future Demand (incl. margin)			Potential Future Estate (RER Capacity + Existing Estate)			Sufficiency		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Arrowtown	1,100	320	1,500	1,200	200	1,400	70	-110	-40
Arthurs Point	350	150	500	480	110	590	130	-40	90
Eastern Corridor	1,700	470	2,200	1,400	230	1,700	-310	-240	-550
Frankton	1,700	560	2,200	1,500	1,700	3,200	-200	1,100	950
Kelvin Heights	670	150	830	770	90	860	100	-60	40
Outer Wakatipu	-	-	-	10	-	10	10	0	10
Quail Rise	360	80	430	220	260	480	-140	180	40
Queenstown Town Centre	3,300	1,300	4,600	4,100	2,500	6,600	730	1,200	1,900
Small Township - Wakatipu	420	130	560	690	150	850	270	20	290
Southern Corridor	1,900	230	2,100	1,300	230	1,500	-580	0	-570
Wakatipu Ward Urban Env.	**11,500**	**3,400**	**14,900**	**11,600**	**5,500**	**17,100**	**100**	**2,100**	**2,200**
Cardrona	140	30	170	230	50	280	90	20	110
Lake Hawea	830	240	1,100	680	100	780	-140	-140	-290
Luggate	240	50	290	320	10	330	80	-40	40
Outer Wanaka	-	-	-	-	-	-	0	0	0
Wanaka Town Centre	6,300	1,600	8,000	7,100	1,600	8,800	800	0	800
Wanaka Ward Urban Env.	**7,500**	**2,000**	**9,500**	**8,400**	**1,800**	**10,100**	**830**	**-170**	**650**
Total Urban Environment	**19,100**	**5,300**	**24,400**	**20,000**	**7,300**	**27,300**	**920**	**1,900**	**2,900**

Source: M.E QLD Capacity Model 2021 and M.E Housing Demand Model, 2021.

Table 10.3 – Long Term Urban Sufficiency of RER Dwelling Capacity (5 Yr Lag)

Reporting Area	Future Demand (incl. margin)			Potential Future Estate (RER Capacity + Existing Estate)			Sufficiency		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Arrowtown	1,100	480	1,500	1,200	200	1,400	150	-280	-120
Arthurs Point	360	250	610	760	210	970	400	-40	360
Eastern Corridor	2,300	1,100	3,300	1,400	230	1,700	-820	-830	-1,600
Frankton	2,300	1,300	3,600	1,600	2,700	4,300	-730	1,400	670
Kelvin Heights	800	320	1,100	1,200	110	1,300	370	-200	160
Outer Wakatipu	-	-	-	10	-	10	10	0	10
Quail Rise	610	230	840	220	260	480	-390	30	-360
Queenstown Town Centre	3,300	2,100	5,400	5,000	5,200	10,200	1,700	3,100	4,800
Small Township - Wakatipu	510	310	810	960	250	1,200	450	-60	400
Southern Corridor	3,200	1,300	4,500	1,300	230	1,500	-1,900	-1,000	-3,000
Wakatipu Ward Urban Env.	**14,500**	**7,300**	**21,800**	**13,700**	**9,400**	**23,100**	**-800**	**2,100**	**1,300**
Cardrona	300	120	420	650	150	800	350	40	390
Lake Hawea	1,200	550	1,700	680	100	780	-480	-450	-940
Luggate	340	140	480	570	10	580	230	-130	100
Outer Wanaka	-	-	-	-	-	-	0	0	0
Wanaka Town Centre	7,900	3,500	11,400	10,100	2,700	12,800	2,100	-780	1,400
Wanaka Ward Urban Env.	**9,700**	**4,300**	**14,000**	**12,000**	**3,000**	**14,900**	**2,200**	**-1,300**	**910**
Total Urban Environment	**24,200**	**11,600**	**35,800**	**25,700**	**12,300**	**38,000**	**1,400**	**740**	**2,200**

Source: M.E QLD Capacity Model 2021 and M.E Housing Demand Model, 2021.

Table 10.4 – Summary of Urban Sufficiency - RER & Commercially Feasible Capacity (5 Yr Lag)

Reporting Area	SHORT TERM SUFFICIENCY		MEDIUM TERM SUFFICIENCY		LONG TERM SUFFICIENCY	
	RER	Commercially Feasible	RER	Commercially Feasible	RER	Commercially Feasible
Arrowtown	-10	90	-40	60	-120	-20
Arthurs Point	60	630	90	970	360	860
Eastern Corridor	-90	70	-550	-380	-1,600	1,400
Frankton	250	2,400	950	3,100	670	2,400
Kelvin Heights	60	2,700	40	2,600	160	2,300
Outer Wakatipu *	10	10	10	10	10	10
Quail Rise	-20	2,000	40	1,900	-360	1,500
Queenstown Town Centre	520	6,900	1,900	7,000	4,800	6,500
Small Township - Wakatipu	50	580	290	800	400	730
Southern Corridor	200	1,800	-570	2,400	-3,000	6,500
Wakatipu Ward Urban Env.	**1,000**	**17,300**	**2,200**	**18,500**	**1,300**	**22,200**
Cardrona	140	320	110	480	390	390
Lake Hawea	-30	320	-290	1,000	-940	2,300
Luggate	80	360	40	290	100	100
Outer Wanaka **	0	0	0	0	0	0
Wanaka Town Centre	240	6,200	800	6,200	1,400	9,300
Wanaka Ward Urban Env.	**420**	**7,200**	**650**	**8,000**	**910**	**12,100**
Total Urban Environment	**1,500**	**24,500**	**2,900**	**26,400**	**2,200**	**34,300**

Source: M.E QLD Capacity Model 2021 and M.E Housing Demand Model, 2021.

** This reporting area is almost entirely in the rural environment. ** This reporting area is totally in the rural environment.*

10.3 Rural Environment Sufficiency – 5 Year Lag Results

Total housing growth (not total estate)

Table 10.5 – Total Dwelling Sufficiency - Rural Environment by Ward – 5 Year Lag

Ward	Demand for Additional Dwellings			Plan Enabled Capacity	Sufficiency of Dwelling Capacity		
	2020-2023	2020-2030	2020-2050		Short-Term	Medium-Term	Long-Term
Wakatipu Ward Rural Env.	20	100	300	720	710	620	420
Wanaka Ward Rural Env.	10	70	210	280	270	210	70
Total Rural Environment	**30**	**170**	**510**	**1,000**	**970**	**830**	**490**

Source: QLD Council Growth Projections July 2020, M.E QLD Dwelling Demand Model 2021, Council capacity estimates (as at 2021). All rural capacity is assumed to be feasible. Infrastructure Ready capacity has not been applied in this summary table, although some areas in the Rural Environment have 3 waters infrastructure, and some fall within main bridge catchments that have dwelling growth constraints. Capacity may be overstated to a small degree for these reasons. Capacity is based on Long Term Rural Environment, so excludes capacity in areas identified for long term urban expansion. No competitiveness margin is applied to dwelling demand in the rural environment.

10.4 Total District Sufficiency – 5 Year Lag Results

Table 10.6 – Total District Dwelling Sufficiency by Ward – 5 Year Lag

Ward	Demand for Additional Dwellings			Urban Env. Serviced, Feasible, RER + Rural Env. Plan Enabled			Sufficiency of Dwelling Capacity		
	2020-2023	2020-2030	2020-2050	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term
Wakatipu Ward Total	570	3,500	10,600	2,300	6,400	12,300	1,800	2,800	1,700
Wanaka Ward Total	380	2,300	7,000	1,100	3,200	8,000	690	860	970
Total District	**950**	**5,800**	**17,600**	**3,400**	**9,500**	**20,200**	**2,400**	**3,700**	**2,700**

*Source: QLD Council Growth Projections July 2020, M.E QLD Dwelling Demand Model 2021, M.E QLD Capacity Model 2021. * Competitiveness Margin included for Urban demand component only. Rural environment capacity included in the table is not infrastructure constrained.*

11 Impact of Planning and Infrastructure

This section offers more detail on the impact of planning and infrastructure on housing affordability and competitiveness. It extends the discussion on the Competitive Urban Land Markets (CULM) and sets out the conceptual basis of the approach used by M.E to evaluate the key impacts.

11.1 Urban Economies and Planning

A core requirement for understanding the effects of planning and infrastructure on housing affordability and competitiveness is to distinguish between the effects of planning and infrastructure provision by Council, and the effects of other influences on housing affordability and development.

It is also critical to recognise that the CULM concept is one component of the wider urban economy. It is not the sole influence on how well or efficiently urban economies and their land and property markets are functioning. Accordingly, the CULM and other competitive aspects of markets need to be examined alongside other key influences. It is also important to consider how urban spatial economies function.

That is the context in which council planning may directly and indirectly affect urban economies and land markets, and therefore the potential influence of planning and infrastructure on the CULM.

11.1.1 Characteristics of urban spatial economies

Urban economies are spatial by their nature. They are characterised by multiple activities, with many flow-on and feed-back effects, which occur through time, and across space. The driving force of cities is the benefits of co-locating activity. People and activities group together because it makes sense to do so, with the accessibility and scale economies available in towns and cities generally offering efficiencies and relatively low costs, and generally offering greater sustainability than if activity is more widely spread. That said, people and activities require their own space (land is a factor of production) and there are trade-offs between occupying one's own space (land) while also benefiting from proximity to others. People and activities compete for space and for location, and that competition and co-operation are essential elements of how cities function and grow.

Cities are characterised by many externalities, which arise especially because the co-location and spatial concentration of activity places people and entities in close contact. And while co-location and spatial concentration offer relatively lower transaction costs because of their relatively good accessibility, urban activities incur substantial transaction costs - particularly the costs of movement (transport and travel) to enable business and social interactions.

In most instances, the urban economy itself is the hub of a wider spatial economy which encompasses city and hinterland. Location and time are critical influences on urban function, and urban growth.

It is also important to understand the significance of time and location within urban economies, which mean that development opportunity continually evolves as a city grows. Cities are characterised by equilibrium-seeking economic processes (rather than equilibrium conditions) and that dynamic has

substantial effect on how land and development markets function. While cities may tend toward some spatial equilibrium, they almost never reach such equilibrium. Most importantly for council planning, such equilibrium would require conditions of nil growth and nil change, currently and into the future. If such conditions did exist, then critical aspects of urban land markets which council planning must make provision for would be absent. That would include the expectations by the development sector and others of future demand for land and housing which drive most land purchase and development decisions, and of course competition in the market.

The patterns of urban growth are strongly influenced by city dynamics. The underlying drivers which attract activities to co-locate are constantly in play. The benefits of co-location mean the strongest demand is for central locations, with the best accessibility, but also the highest land values. Characteristically, the most attractive location for new urban development is immediately adjacent the existing urban edge, as that is the most accessible location among the yet-to-be urbanised options. Since urbanisation is expensive, and there are considerable scale economies in development especially of infrastructure, there is pressure to accommodate growth through the addition of the minimum extra land area. The generally lower cost of fully developing urban-capable (that is, already with infrastructure) land rather than extending capacity further outward, in combination with the greater attractiveness of that more central land, acts to focus new development to utilise the existing urban-capable land before adding more urban-capable land in a location further from the city centre. Most commonly, new development is a combination of greenfield outward expansion at or close to the established urban edge, and intensification within the already urbanised area, through infill and redevelopment. Redevelopment is more common in larger cities, where the larger size of the economy means land is generally more valuable than in smaller cities, and the economics of redeveloping is often more attractive.

A major consequence of this urbanisation path is that urban land values are many times higher than surrounding non-urban values. This is largely because its urban capability means the land can be used many times more intensively than non-urban land – generating much higher returns. This means that where a city is expanding efficiently and taking up the minimum additional land area required to accommodate its growth, there is a very strong difference in land values either side of the urban edge.

These dynamics commonly produce what appears to be a mis-match between initiatives to constrain or lower housing costs, and the uplift in land values which result from urbanisation. However, the much higher land values per hectare for urban land compared with non-urban land typically translate to lower land costs per dwelling for urban land because of the much greater intensity of land use, with 20-30 times as many dwellings per urban hectare as per non-urban hectare. A key feature of urban land is that as its value increases, the feasibility of intensification improves, where more dwellings per hectare are sustainable, and the land value per dwelling is less than for non-urban, or low density urban sites.

Outside the urban edge, at any point in time there is characteristically a value gradient because the non-urban land closest to the urban edge is valued more highly than non-urban land further away. This is in anticipation of the opportunity for future value uplift when the land becomes urbanised. This pattern is evident around all New Zealand cities and main towns, at least.

That value differential is a key feature of the equilibrium-seeking nature of urban economies. If the urban economy had somehow reached an equilibrium, then there would be no expectation of future value uplift in the land, and the value gradient outside the urban edge would not be present.

The same applies for already urbanised land within the urban edge, where there is potential for future value gain if the land can be further developed or redeveloped to be used more intensively. That potential is typically higher for sites where the current improvements are older and/or smaller and/or of lower quality than the market would currently sustain or is expected to sustain in the future. Such potential for intensification is a critical driver of urbanisation, and urban growth. Again, it reflects the importance of understanding equilibrium-seeking nature of urban economies. If the urbanised land were in equilibrium with the market, then there would be no potential for the land to be used more intensively.

A critical feature of all urban markets in New Zealand is the potential for further intensification of the currently urbanised area. For example, in the central isthmus of Auckland over 85% of sites have plan-enabled potential for further development through infill or intensification. While on the great majority of lots that potential does not yet translate into commercially feasible development, the proportion which is feasible to re-develop will continue to increase over time as the economy grows, the existing estate ages, and more intensive modes of development become plan-enabled in response. The key drivers of this potential are growth in the size of the urban economy – which means land especially in more central areas can be or will be able to be viably intensified – while the ongoing actual or relative depreciation of the existing built estate means that the cost of such redevelopment typically reduces over time. This combination means that potential for intensification tends to increase progressively over time, with the realisation of this intensification potential being driven especially by the rate of growth in population and economy.

There is nothing remarkable about this. However, the dynamics show clearly that the generally most efficient and sustainable growth path for cities is through the combination of outward expansion at or adjacent the urban edge, together with intensification of already developed land especially in locations (relatively) close to the city centre. That is also consistent with the most efficient provision of infrastructure (especially Three Waters) because existing capacity is centred on the established city, and there are major scale economies so that adding incrementally to existing capacity is in most instances less costly than establishing another network.

Those core drivers are commonly recognised in local authorities' plans and growth strategies, at least in concept.

11.1.2 How Planning may affect land and housing values

There are two main routes through which statutory "planning" affects the affordability of housing and the competitiveness of urban land markets. Both arise through planning's role in enabling and supporting land use. The direct provision for land capacity for growth is identified above, and is explicitly recognised in the sufficiency assessment, as well as both arms of the CULM assessment (as per Randerson).

The other route arises from the relative efficiency of an urban economy, driving from the nature, scale and location of land uses. This is broadly urban form, where patterns of land use are core to the efficiency and sustainability of that economy. Planning (including infrastructure planning) has a key role in enabling where and when activity (land use) may occur. The spatial (and temporal) efficiency of that land use and related economic activity is a critical influence on productive efficiency and sustainability. It is also a major influence on the costs of living in the urban environment. Travel is a major cost for households, and this is affected strongly by accessibility and access. Travel costs accrue over time, and it is important to consider the 'whole

of lifetime' costs of urban living which include but are not limited to the costs of housing. A common trade-off for households is between the higher price of dwellings in more accessible locations – generally, closer to the centre – and the higher costs of travel from living in less accessible locations.

Hence the influence of planning on affordability includes provision not just of sufficient capacity, but sufficient capacity in appropriate locations. The most common approach for this is by – acknowledging the dynamics of cities and their infrastructure – providing for growth capacity close to the existing urban edge and developing incrementally outward. This commonly aligns with consumer demand for housing, to live as close as is practicable and affordable to the existing urban area and its centre. It also tends to align with the economics of land development and housing construction, where properties close to the existing urban land generally command higher prices and lower costs. Planning provisions are made in expectation that the commercial market will take up the development opportunity, there is not scope for local authorities to require development of land or housing capacity.

Hence, district planning decisions can generally be expected to contribute to affordability (including housing affordability) by providing for sufficient capacity in appropriate locations and for an urbanisation sequence which allows for cost efficient provision of infrastructure. That does not mean urban development be limited to one or a few "most efficient" locations, however it does highlight that there are important cost and affordability trade-offs between incremental outward growth and developing simultaneously on multiple fronts and in areas which are not contiguous with the urban land.

These trade-offs arise because of the dynamics of urban spatial economies, and the effects of location, timing and distance on the costs of urban growth.

These matters are covered in the assessment of capacity for growth in the Main Report, which indicates capacity in a range of locations and for a mix of dwelling typologies and enabling a range of property values.